Met-Ed/Penelec/Penn Power/West Penn
Statement No. 9

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

METROPOLITAN EDISON COMPANY
DOCKET NO. R-2014-2428745

PENNSYLVANIA ELECTRIC COMPANY
DOCKET NO. R-2014-2428743

PENNSYLVANIA POWER COMPANY
DOCKET NO. R-2014-2428744

WEST PENN POWER COMPANY
DOCKET NO. R-2014-2428742

Direct Testimony
of
Michael J. Vilbert

List of Topics Addressed

Cost of Common Equity Capital

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DIRECT TESTIMONY
OF
MICHAEL J. VILBERT

I. INTRODUCTION AND SUMMARY

Q. Please state your name and address for the record.

A. My name is Michael J. Vilbert. My business address is The Brattle Group, 201 Mission Street, Suite 2800, San Francisco, CA 94105, USA.

Q. Please summarize your background and experience.

A. I am a Principal of The Brattle Group ("Brattle"), an economic, environmental and management consulting firm with offices in Cambridge, Washington, London, San Francisco, Madrid, Rome, and New York City. My work concentrates on financial and regulatory economics. I hold a B.S. from the U.S. Air Force Academy and a Ph.D. in finance from the Wharton School of Business at the University of Pennsylvania. Appendix A provides more detail on my qualifications.

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

A. I have been asked by Metropolitan Edison Company ("Met-Ed"), Pennsylvania Electric Company ("Penelec"), Pennsylvania Power Company ("Penn Power"), and West Penn Power Company ("West Penn") (together the "Companies") to estimate the cost of capital for the Companies. Specifically, I provide return on equity ("ROE") estimates derived from a sample of comparable risk, regulated electric utility companies ("electric utilities"). I also consider the relative risk of the Companies' proposed capital structure ratios to arrive at my recommended range for allowed ROE.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring Met-Ed/Penelec/Penn Power/West Penn Exhibit MJV-1 which includes the following tables:

Table No.	Description
MJV-1	Table of Contents
MJV-2	Classification of Companies by Assets
MJV-3	Market Value of the Electric Sample
MJV-4	Capital Structure Summary of the Electric Sample
MJV-5	Estimated Growth Rates of the Electric Sample
MJV-6	DCF Cost of Equity of the Electric Sample
MJV-7	Overall DCF Cost of Capital of the Electric Sample
MJV-8	DCF Cost of Equity at the Companies' Proposed Capital Structures
MJV-9	Interest Rate Forecasts
MJV-10	Risk Positioning Cost of Equity of the Electric Sample
MJV-11	Overall Risk Positioning Cost of Capital of the Electric Sample
MJV-12	Risk Positioning Cost of Equity at the Companies' Proposed Capital Structures

Q. Were these exhibits and schedules prepared by you or under your direction?

A. Yes, they were.

Q. Can you summarize the parts of your background and experience that are particularly relevant to your testimony on these matters?

A. *Brattle's* specialties include financial economics, regulatory economics, and the gas, water and electric industries. I have worked in the areas of cost of capital, investment

risk and related matters for many industries, regulated and unregulated alike, in many forums. A partial list of the regulators before which I have testified or filed cost of capital testimony include the Arizona Corporation Commission, the Pennsylvania Public Utility Commission, the Public Service Commission of West Virginia, the Public Utilities Commission of Ohio, the Tennessee Regulatory Authority, the Public Service Commission of Wisconsin, the South Dakota Utilities Commission, the California Public Utilities Commission, the Michigan Public Service Commission, and the Federal Energy Regulatory Commission ("FERC"). I have also testified in Canada before the Canadian National Energy Board, the Alberta Energy and Utilities Board, the Ontario Energy Board, the Quebec Régie de l'énergie, and the Labrador & Newfoundland Board of Commissioners of Public Utilities. Appendix A contains more information on my professional qualifications.

Q. What are the steps in your analysis?

A. To estimate the Companies' cost of capital, I analyzed a sample of electric utilities, identified as being in the same line of business as Met-Ed, Penelec, Penn Power, and West Penn, specifically the regulated electric utility business. I estimate the ROE for each sample company using both the risk positioning and the discounted cash flow ("DCF") approaches. The risk positioning approach consists of analyses based upon the Capital Asset Pricing Model ("CAPM") and the Empirical CAPM ("ECAPM"). The ROE estimates from both models are then combined with the market value capital structure information and the market costs of debt and preferred stock for each sample company to compute each firm's overall cost of capital, i.e., its after-tax weighted-average cost of capital ("ATWACC").

Q. What is the result of the cost of capital estimation process?

A. The result of this process is a sample average ATWACC for each cost of equity estimation method. I then report the cost of equity consistent with the sample's average estimated ATWACC as if the sample's average market-value capital structure had been one with a 50.0 percent equity ratio, which closely approximates the equity ratios Met-Ed, Penelec, Penn Power, and West Penn have proposed in this case. This procedure results in a ROE that is consistent with the financial risk inherent in the Companies' proposed capital structures and the market-determined information on the sample's average overall cost of capital.

Q. How does the ongoing uncertainty in the financial markets affect the cost of capital for a regulated utility?

A. The equity risk premium (or the premium of the cost of equity capital over the cost of debt) remains higher than it was before the start of the financial crisis in about mid-2008. Although economic conditions have improved substantially since the height of the crisis, some uncertainty remains in the capital markets due, in part, to the disappointing rate of economic growth, not only in the U.S., but also worldwide. Economic growth in Europe remains anemic with the ongoing fallout from the sovereign debt crisis. There is increasing uncertainty of the effects of the conflict in the Ukraine and in Iraq, and there are also concerns about the sustainability of credit growth in China. A persistently high rate of unemployment and contracting fiscal spending has led the Federal Reserve Bank ("Fed") to continue purchasing Treasury bonds and agency securities, as announced at the FOMC meeting in June 2014, the

subsequent aspects of which I will discuss later in *Section III*.[1] Although long-term government bond yields have increased over the past year, they remain at low levels by historical standards as shown in Figure 2 below.

As a result, there has been a substantial increase in yield spreads,2 both for riskier assets as well as for less risky investments such as investment grade-rated utility debt. Although the capital market indices have returned to their pre-crisis levels, the recovery remains fragile and could easily stall if any of the fears mentioned above come to pass. I discuss the effect of the credit crisis on the cost of capital and its various components, including the long-term risk-free interest rate, in more detail in *Section III* below.

This uncertainty in the financial markets also affects the results of the estimation models, because both the risk positioning model and the DCF model are based upon the assumption that economic conditions are stable. That assumption is not currently met, so estimating the cost of capital under current conditions is more complicated than it would normally be.

Q. Do you adjust your analyses to account for the remaining market uncertainty?

A. Yes. Because the uncertainty in the financial markets affects the cost of capital for all companies, including regulated utilities such as Met-Ed, Penelec, Penn Power, and West Penn, I modified the parameters of the risk positioning model to recognize the

[1] FOMC June 19, 2014 Press Release, The Board of Governors of the Federal Reserve System, Accessed at: http://www.federalreserve.gov/newsevents/press/monetary/20140618a.htm, on July 18, 2014.

[2] The yield spread in this case is the difference between the yield on a risky security and the yield on U.S. Treasury debt of comparable maturity.

effect of the increased volatility in the capital markets as well as the overall decline in long-term risk-free interest rates on the cost of capital. Specifically, I analyzed scenarios using two different estimates of the market risk premium ("MRP") and risk-free interest rate for use in the risk positioning model. These scenarios are discussed in more detail below. Further, given the current economic uncertainty and the downward bias it creates in the CAPM model results, I also place more weight than I normally would on the results of the DCF analyses in determining the range of reasonableness for the ROE, for reasons explained later in this testimony.

Q. Can you summarize your findings about the electric sample's costs of capital?

A. The sample ROE estimates range from a low of 8.7 percent to a high of 10.9 percent, but I believe that the estimates at the lower end of the range are not reliable because they do not consider the effect of the current uncertainty in the financial markets and the downward pressure on the risk-free interest rate. Conversely, the estimates at the upper end of the range reflect the adjustment for the ongoing uncertainty in the capital market and are more reliable. For an electric utility company of average business risk and with an equity ratio of approximately 50 percent the best estimate of the range for the cost of equity is from 9.3 percent to 10.9 percent.

Q. What ROE are the Companies requesting in this proceeding?

A. Mr. Staub testifies that the Companies are requesting an ROE of 10.9 percent. This is within the range 9.3 percent to 10.9 percent that I recommend for electric utilities of Metropolitan Edison Company's, Pennsylvania Electric Company's, Pennsylvania Power Company's, and West Penn Power Company's financial and business risk.

Q. How is your testimony organized?

A. *Section II* formally defines the cost of capital and touches on the principles relating to estimating the cost of capital and the effect of capital structure on the cost of equity. *Section III* discusses the impact of the fragile recovery from the credit crisis on the cost of capital. *Section IV* discusses the selection of the electric sample, and *Section V* presents the methods used to estimate the cost of capital for the sample; provides the associated numerical analyses; and explains the basis of my conclusions for the sample's overall costs of capital (ATWACC). *Section VI* concludes my testimony. The calculations supporting my analyses are provided in Exhibit MJV-1.

II. COST OF CAPITAL THEORY

A. Cost of Capital and Risk

Q. How is the "cost of capital" formally defined?

A. The cost of capital is defined as the expected rate of return in capital markets on alternative investments of equivalent risk. In other words, it is the rate of return investors require based on the risk-return alternatives available in competitive capital markets. The cost of capital is a type of opportunity cost: it represents the rate of return that investors could expect to earn elsewhere without bearing more risk. "Expected" is used in the statistical sense: the mean of the distribution of possible outcomes. The terms "expect" and "expected," as in the definition of the cost of capital itself, refer to the probability-weighted average over all possible outcomes.

The definition of the cost of capital recognizes a tradeoff between risk and return that can be represented by the "security market risk-return line," or "Security Market

Line" for short. This line is depicted in Figure 1. The higher the risk, the higher the cost of capital required.

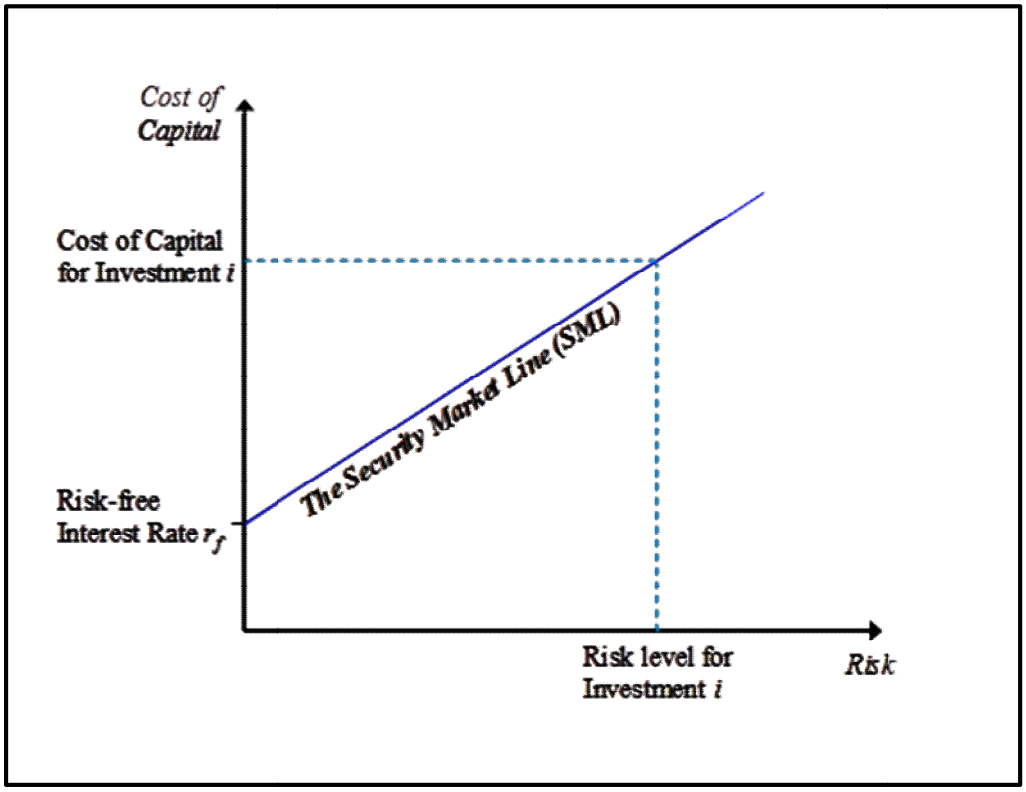

Figure 1: The Security Market Line

Q. Why is the cost of capital relevant in rate regulation?

A. It has become routine in U.S. rate regulation to accept the "cost of capital" as the right expected rate of return on utility investments.[3] That practice is viewed as consistent with the U.S. Supreme Court's opinions in *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923), and *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

[3] A formal link between the cost of capital as defined by financial economics and the right expected rate of return for utilities is set forth by Stewart C. Myers, *Application of Finance Theory to Public Utility Rate Cases, Bell Journal of Economics & Management Science* 3:58-97 (1972).

From an economic perspective, rate levels that give investors a fair opportunity to earn the cost of capital are the lowest levels that compensate investors for the risks they bear. Over the long run, an expected return above the cost of capital makes customers overpay for service. Regulatory commissions normally try to prevent such outcomes unless there are offsetting benefits (*e.g.*, from incentive regulation that reduces future costs). At the same time, an expected return below the cost of capital does a disservice not just to investors but, importantly, to customers as well. Such a return denies the company the ability to attract capital, to maintain its financial integrity, and to expect a return commensurate with that of other enterprises attended by corresponding risks and uncertainties.

More important for customers, however, are the broader economic consequences of providing an inadequate return to the company's investors. In the short run, deviations from the expected rate of return on the rate base from the cost of capital may seemingly create a "zero-sum game"—investors gain if customers are overcharged, and customers gain if investors are shortchanged. But in fact, in the short run, such actions may adversely affect the utility's ability to provide stable and favorable rates because some potential efficiency investments may be delayed or because the company is forced to file more frequent rate cases. Moreover, in the long run, inadequate returns are likely to cost customers—and society generally—far more than may be saved in the short run. Inadequate returns lead to inadequate investment, whether for maintenance or for new plant and equipment. Without access to investor capital, the company may be forced to forgo opportunities to maintain, upgrade, and expand its systems and facilities in ways that decrease long run costs. Indeed, the

cost to consumers of an undercapitalized industry can be far greater than any short-run gains from shortfalls in the cost of capital. This is especially true in capital-intensive industries (such as the electric utility industry), which feature systems that take a long time to decay. Such long-lived infrastructure assets cannot be repaired or replaced overnight, because of the time necessary to plan and construct the facilities. Thus, it is in the customers' interest not only to make sure the return investors expect does not exceed the cost of capital, but also to make sure that the return does not fall short of the cost of capital.

Of course, the cost of capital cannot be estimated with perfect certainty, and other aspects of the way the revenue requirement is set may mean investors expect to earn more or less than the cost of capital, even if the allowed rate of return equals the cost of capital exactly. However, a commission that sets rates so investors expect to earn the cost of capital on average treats both customers and investors fairly, and acts in the long-run interests of both groups.

B. Relationship between Capital Structure and the Cost of Equity

Q. What did you mean by the "ATWACC" mentioned earlier?

A. The ATWACC is calculated as the weighted average of the after-tax cost of debt capital and the cost of equity. Specifically, the following equation pertains:[4]

$$ATWACC = r_D \times (1 - T_C) \times \%\ D + r_E \times \%\ E \qquad (1)$$

[4] The equation is shown with only debt and common equity. If the capital structure has preferred equity, add the following term ($r_P \times \%\ P$) to the right-hand side of the equation.

where r_D = market cost of debt,
r_E = market cost of equity,
T_C = corporate income tax rate,
%*D* = percent debt in the capital structure, and
%*E* = percent equity in the capital structure

The ATWACC is commonly referred to as the WACC in financial textbooks and is used in investment decisions.[5] The return on equity consistent with the sample's overall cost of capital estimate (the ATWACC), the market cost of debt, the corporate income tax rate, and the amount of debt and common equity in the capital structure can be determined by solving equation (1) for r_E. Alternatively, if r_E is given and the capital structure is not, one can solve for %*E* instead. Having determined the ATWACC for the sample companies, I can apply that same ATWACC or an ATWACC adjusted for risk differences to the regulated entity, in this case Met-Ed, Penelec, Penn Power, and West Penn.[6]

Q. Why is the ATWACC relevant to these proceedings?

A. The ATWACC is one of several procedures in my analysis; it is important because it allows a comparison between the sample companies' costs of capital estimates and the cost of capital for Met-Ed, Penelec, Penn Power, and West Penn. Two otherwise identical companies with different capital structures will typically have different costs of equity because the risks to equity holders depend on the financial leverage (i.e., the amount of debt in the capital structure of the company). This makes it difficult to

[5] See, for example, Brealey, Myers and Allen (2011), *Principles of Corporate Finance, 10th Edition*, McGraw-Hill Irwin, New York, pp. 471-486.

[6] I refer to the ATWACC to distinguish it from the WACC used in regulatory proceedings which is the weighted-average of the after-tax cost of equity and the *pre-tax* cost of debt instead of the after-tax cost of debt.

compare cost-of-equity estimates among companies that have different capital structures. The effect of varying financial leverage on the risk-return tradeoffs of companies means that simply averaging individual cost-of-equity estimates across a sample generally does not provide meaningful information about an appropriate representative cost of capital for the industry. Thus it is generally incorrect to compute a sample average return on equity when estimating the cost of capital. However, two otherwise identical companies with different capital structures will generally have comparable ATWACC values. The "apples to apples" comparability of ATWACC across companies with different capital structures makes it a consistent measure of the representative cost of capital in an industry.

Q. How does the ATWACC approach differ from procedures where the cost of equity and the regulatory capital structure are determined separately?

A. The ATWACC approach avoids inconsistencies that could arrive from estimating the cost of equity for each of the sample firms without explicit consideration of the financial risk inherent in the market-value capital structure underlying those costs. If the sample's average cost of equity is used to estimate the cost of equity for the company in question, inconsistencies are likely to arise, because this method makes no adjustment for any differences among the capital structures of the sample firms used to estimate the cost of equity and the regulatory capital structure used to set rates. Consequently, the sample's estimated return on equity does not necessarily correspond to the financial risk faced by investors in the subject companies, in this case Met-Ed, Penelec, Penn Power, and West Penn. If the sample's estimated cost of

equity were adopted without consideration of differences in financial risk, it could lead to an unjust and inappropriate rate of return.

Q. Why is it necessary to consider the sample companies' capital structures as well as the regulatory capital structure in your analysis?

A. Briefly, the cost of equity and the capital structure are inextricably entwined in that the use of debt increases the financial risk of the company and therefore increases the cost of equity. The more debt, the higher is the cost of equity for a given level of business risk. Rate regulation has in the past often focused on the individual components of the cost of capital. In particular, it has treated as separate questions what the "right" cost of equity capital and "right" capital structure should be. The cost of capital depends primarily on the business the firm is in, while the costs of the debt and equity components depend not only on the business risk, but also on the distribution of revenues between debt and equity. The cost of capital is thus the more basic concept. Although the overall cost of capital is constant (ignoring taxes and costs of excessive debt), the distribution of the costs among debt and equity is not. Reporting the average cost of equity estimates from the sample without consideration of the differences in financial risk may result in material errors in the allowed return for Met-Ed, Penelec, Penn Power, and West Penn.

Q. What is the basis for the development of the ATWACC method?

A. Computing the ATWACC—called the weighted-average cost of capital in textbooks—is the fundamental method used by financial economists to measure the cost of capital. It is a standard topic taught in graduate level courses in corporate

finance and is based upon the work of Professors Franco Modigliani and Merton Miller. Each separately won the Nobel Prize in Economics, in part, for developing the theories underlying the method. It is critical to keep in mind that the ATWACC method is one useful tool to assist in the analysis of the cost of capital. All cost of capital witnesses estimate the cost of equity using the DCF or the risk positioning models, and all must interpret the results relative to the risk of the regulated company at issue. The purpose of the ATWACC method is to allow an "apples to apples" comparison of the results of the sample companies by adjusting for differences in financial risk due to differences in capital structure. The ATWACC is sometimes mischaracterized in regulatory proceedings and incorrectly criticized, possibly because the critics do not like the method's results, but it is the standard methodology in finance. It is consistent with the use of rate base measured on the basis of book value, and does not require a regulator to "rubber stamp" the current market value of the regulated company's stock as is sometimes asserted.

III. IMPACT OF THE RECENT ECONOMIC UNCERTAINTY

Q. What is the topic of this section of your testimony?

A. This section addresses the effect of the current economic situation on the cost of capital and the adjustments to my standard procedures required to estimate the cost of capital more accurately.

Q. Do you believe that capital markets are "back to normal"?

A. No. Although the volatility in the financial markets has lessened and economic conditions have improved markedly, I do not believe that capital markets (and the broader economy) are back to normal as compared to their pre-crisis status.

Q. What are the major remaining uncertainties?

A. Although unemployment has been declining, it remains high by historic standards and in fact it would be much higher except that the labor force participation rate[7] has declined from 66.1 percent in January 2004 to 63.4 percent recently.[8] This low level of labor force participation has not been observed since 1978, and may reflect the fact that many people who would otherwise be counted as unemployed have become discouraged and given up looking for work.

Additionally, while the Fed has begun scaling back (i.e., "tapering") its asset purchasing program, it is doing so gradually. Specifically, the Fed reduced purchases to $75 billion per month in January of 2014,[9] and announced a further reduction to $35 billion starting in July 2014.[10] This still represents a high level of continuing purchases of financial assets, and although the rate of accumulation is slowing, the Fed is still actively increasing its already massive inventory. Not only must the Fed

[7] Labor force participation is the percentage of the working age population with a job or seeking one.

[8] See Bureau of Labor Statistics, Labor Force Statistics from Current Population Survey, data extracted July 18, 2014.

[9] Federal Reserve Bank of New York, "Statement Regarding Purchases of Treasury Securities and Agency Mortgage-Backed Securities," December 18, 2013.

[10] Federal Reserve Bank of New York, "Statement Regarding Purchases of Treasury Securities and Agency Mortgage-Backed Securities," June 18, 2014.

reduce its ongoing purchases, but it must also reduce this inventory of Treasury bonds and agency mortgage backed securities, which it accumulated in an effort to stimulate capital markets and keep interest rates low. The Fed's inventory of bonds increased from less than $869 billion in August 2007 to over $4 trillion at the end of 2013.[11] Unwinding this position will be a gradual process, and substantial effects of the taper on capital markets and interest rates will not (and have not) materialize overnight.

Furthermore, budget deficits at all levels of government are at high and unsustainable levels, and the potential exists for higher inflation as a result of deficit spending by the U.S. government and further liquidity injected into the capital markets by the Fed.

Q. What is the purpose of the Fed's asset purchases?

A. The Fed purchases bonds and other financial assets to stimulate the economy, reassure the capital markets, and keep interest rates low. The primary purpose of the asset purchase program was to drive down long-term interest rates, and in this regard it has been successful. The effectiveness of this policy is evidenced by the fact that U.S. Treasury Bond yields remain low by historical standards. Long-term and short-term interest rates were driven to historic lows[12] before beginning to increase with the start of tapering. The goal of the programs was to spur economic activity by making it cheaper to borrow funds for new investment or to purchase durable assets such as houses and automobiles.

[11] *Bloomberg News*, "Fed Assets Reach Record $4 Trillion on Unprecedented Bond Buying," by Jeff Kearns, December 19, 2013.

[12] See for example, the "long term stock, bond, interest rate and consumption data" provided at Professor Robert Shiller's website: http://www.econ.yale.edu/~shiller/data.htm

Q. What effects did the Fed's purchases have on equity and other markets?

A. During the crisis and its aftermath, the Fed's purchases supported the stock market by depressing the expected returns to bond investors. In times of economic uncertainty (such as the financial crisis), investors seek to reduce their exposure to market risk. This precipitates a so-called "flight to safety," wherein demand for low-risk government bonds rises at the expense of demand for stocks. If yields on bonds are extraordinarily low, however, any investor seeking a higher expected return must choose alternative investments such as stocks, real estate, or gold or collectibles. Of course, all of these investments are riskier than government bonds, and investors still demand a risk premium (perhaps an especially high one in times of economic uncertainty) for investing in them. But short of accepting meager returns, investors simply have few alternatives to returning to the stock market. Thus, the Fed's bond purchases somewhat mitigate the effect of the "flight to safety" on equities and other investments. Utility stocks in particular benefit from this phenomenon because of their dividends. Emerging market countries benefited too, as investors sought higher returns. Sales of houses also improved because of record low mortgage rates, and automobile sales have been at high levels as well.

Q. What has been the effect of the start of tapering?

A. Interest rates have increased since the possibility of tapering was first discussed in June 2013. (See Figure 2 below.) However, the pace of that increase slowed toward the end of last year, and rates have decreased only slightly so far in 2014. This may indicate that bond markets have adjusted somewhat to the Fed's reduced rate of purchases. Although they have recovered somewhat from their lows in 2012 and

early 2013, long-term U.S. treasury yields remain well below their pre-crisis and long-term average levels.

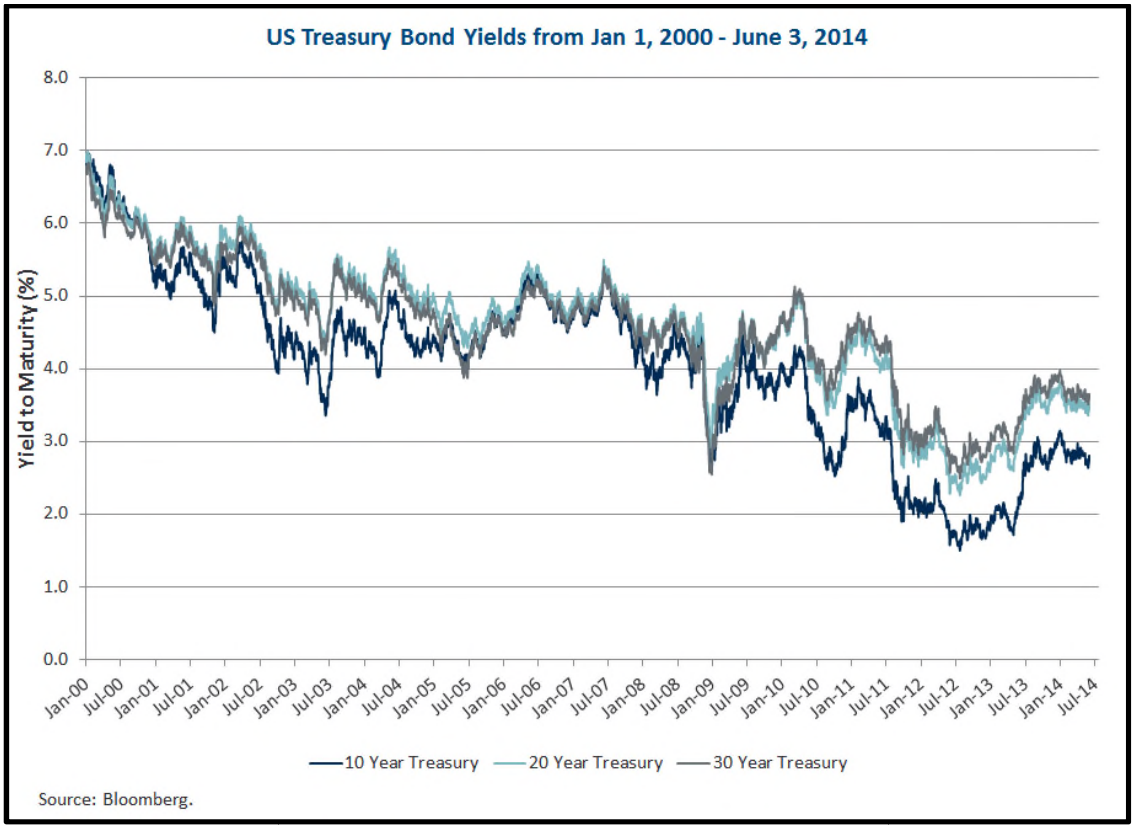

Figure 2

Investor uncertainty is illustrated by the flow of funds into and out of mutual funds. (See Figure 5, later in my testimony.) Transfers out of bond mutual funds spiked when the Fed first discussed tapering, and stayed high through the end of 2013. This was likely driven by the possibility of rising interest rates, which would lead to falling bond prices. However, the half of 2014 saw positive and increasing net flows into bond funds, reflecting a shift in expectations about interest rates: market participants are less convinced that rates will rise in the near term. Flows into equity mutual funds, meanwhile, have been somewhat erratic, with recent outflows suggesting that investors may not have fully regained their appetite for risky stock investments.

Q. Has the yield spread between government and utility bonds changed since the start of the credit crisis?

A. Yes. Although the yield on utility bonds had declined somewhat from the height of the crisis (and has decreased since the start of the taper), it has been higher during most of the past two years than it was prior to the credit crisis. As shown in Figure 3 below, since the last major peak in November 2008 the spread between the yield on BBB-rated 20-year utility bonds and the yield on 20-year government bonds has ranged from a low of 138 basis points to a high of 418 basis points, compared to a historical average of approximately 150 basis points.[13]

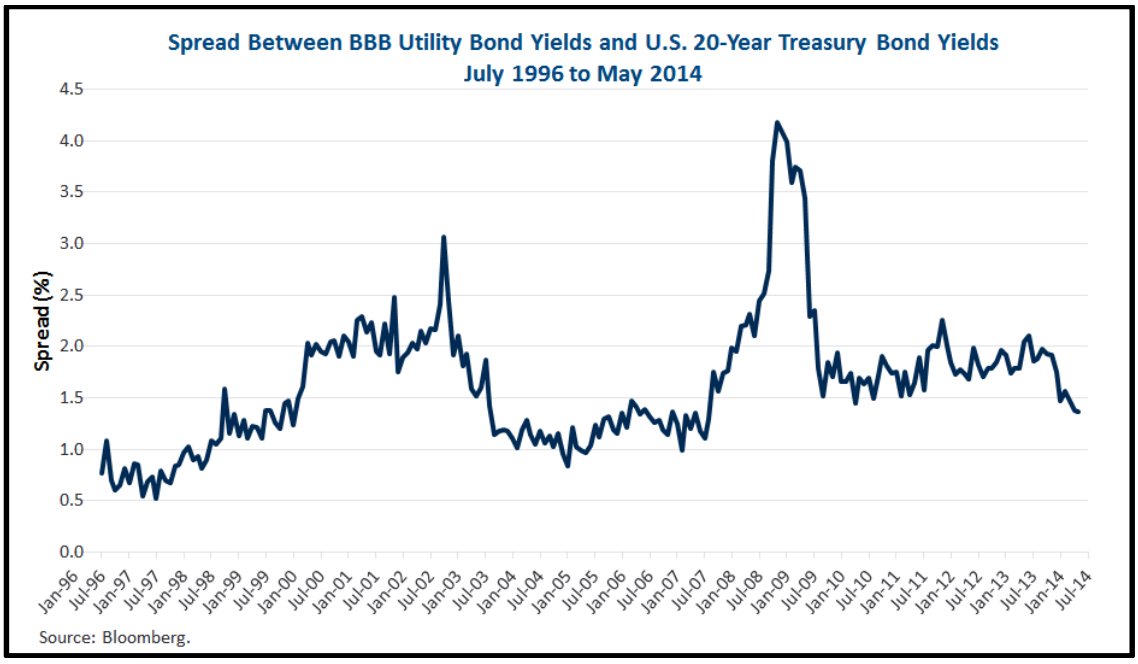

Figure 3

[13] For the 10-year period ending October 31, 2008, the average spread was 161 basis points and for the 10-year period ending October 31, 2007, the average spread was 148 basis points.

Table 1 below presents the yield spreads for 20-year utility bonds over several historical periods. Yield spreads have begun to increase again in the most recent period compared to the long-term pre-crisis average measured from 1991-2007.

Spreads between US Utility Bond (20 year maturity) and US Treasury Bond (20 year maturity) - %			
Periods	A-Rated Utility and Treasury	BBB-Rated Utility and Treasury	Notes
Period 1 - Average April 1991 - 2007	0.93	1.23	[1]
Period 2 - Average Aug-2008 - May-2014	1.58	2.07	[2]
Period 3 - Average May-2014	1.04	1.57	[3]
Period 4 - Average 15-Day (May 13, 2014 to Jun 03, 2014)	1.18	1.44	[4]
Spread Increase between Period 2 and Period 1	0.65	0.84	[5] = [2] - [1].
Spread Increase between Period 3 and Period 1	0.11	0.34	[6] = [3] - [1].
Spread Increase between Period 4 and Period 1	**0.25**	**0.21**	[7] = [4] - [1].
Sources and Notes:			
Spreads for the periods are calculated from Bloomberg's yield data.			
Average monthly yields for the indices were retrieved from Bloomberg as of June 3, 2014.			

Table 1

Q. What is the implication of higher than normal yield spreads?

A. A higher than normal yield spread is one indication of the higher risk premium prevailing in the capital markets. Investors consider a risk-return tradeoff (like the one displayed in Figure 1 above) and select investments based upon the desired level of risk. Higher yield spreads reflect the fact that the return on corporate debt (i.e., the cost of debt) is higher relative to government bond yields than is normally the case, even for regulated utilities. Because debt is less risky than equity, this means that the cost of equity must also be higher relative to government bond yields than is usually observed. If this fact is not recognized, then the traditional cost of capital estimation models will underestimate the cost of capital prevailing in the capital markets.

Q. Are the higher than normal yield spreads an indication of investors' "flight to safety"?

A. Yes. When investors become concerned about the economy, they frequently seek to reduce their exposure to investment risk. U.S. government debt is generally considered the least risky available investment—in effect it is regarded as the closest thing to a risk-free asset. Thus U.S. government debt is in high demand during times of economic uncertainty. This implies in turn that the yields on U.S. government bonds are likely to be relatively lower during periods of economic turmoil. Moreover, the U.S. Fed's continued bond purchase programs have further increased the demand for medium- and long-term U.S. government bonds, thus depressing the yields on those bonds.

Q. What evidence can you provide that U.S. medium- and long-term government bond yields are currently depressed?

A. Over the past few years, the annual yields on long-term U.S. government bonds have dropped dramatically and remain depressed. For instance, the historical average of annual yields on long-term government bonds was 5.16 percent from 1926 to 2012, but long-term government bond yields were 2.48 percent in 2011 and 2.41 percent in 2012.[14] However, the easing of the pace of Fed bond purchases and some recent outflows from bond funds have translated to a modest rise in bond yields. As a result, the current yield is up slightly from the recent lows, at 3.10 percent (based on the 15-

[14] 2013 Ibbotson Associates, Stocks Bonds Bills (SBBI) and Inflation monthly paper reports.

day average of long-term government bond yields as of June 3, 2014).[15] But this is still substantially below the long-term historical average.

Forecasted medium-term yields also suggest that current yields are depressed. *Blue Chip Economic Indicators* dated March 10, 2014 reports the consensus economic projections for the yield on 10-year U.S. Treasury notes to be 4.1 percent in 2016 and 4.5 percent in 2017. These consensus forecasts suggest that 10-year Treasury note yields will trend upward to 4.6 percent on average for 2016-2020 and 4.8 percent on average for 2021-2025.[16] These forecasts are substantially higher than the recent 2.5 percent average yield on 10-year U.S. government notes,[17] and highlight the fact that current long-term and medium-term U.S. government bond yields are low both relative to historical levels, as well as compared to consensus forecasts of future rates. The currently depressed level of long-term government bond yields must be considered when evaluating the results of the risk-positioning model, because the downward bias in the long-term risk-free interest rate will inappropriately lower the sample companies' ROE estimates that would result from mechanically calculating the CAPM.

Q. Do regulated companies benefit from the flight to safety?

A. Yes, to some degree. Regulated companies are of lower relative risk than the average company in the market, and so investors may prefer to invest in them rather than in

[15] See Table No. MJV-9.

[16] See *Blue Chip Economic Indicators*, dated March 10, 2014, page 15.

[17] As of June 3, 2014, See Table No. MJV-9.

riskier companies during bad times. However, the required return for *all* types of risky investments, including regulated utilities, increases during a time of flight to safety, since corporate and (especially) "risk free" government bonds are in turn much less risky than even the equity of regulated companies. This was borne out amidst the recent turmoil: prices of regulated companies fell along with the broader market, although not as much in percentage terms as the market, but that is to be expected because regulated companies are of lower risk. The risk-positioning models predict that companies with lower betas, i.e., companies with lower relative risk, will move with the market, but with lower volatility. The prices of regulated companies recovered faster than the market, in part because of the flight to safety, but have now been surpassed by the general market, again as expected by the predictions of the risk-positioning models.

Q. Why is it important to consider the stock market's volatility?

A. Academic research finds that investors expect a higher risk premium during more volatile periods. The higher the risk premium, the higher is the required return on equity. For example, French, Schwert, and Stambaugh (1987) find a positive relationship between the expected market risk premium ("MRP") and volatility:

> We find evidence that the expected market risk premium (the expected return on a stock portfolio minus the Treasury bill yield) is positively related to the predictable volatility of stock returns. There is also evidence that unexpected stock returns are negatively related to the unexpected change in the volatility of stock returns. This negative

relation provides indirect evidence of a positive relation between expected risk premiums and volatility.[18]

One implication of this finding is that the MRP tends to increase when market volatility is up, even when investors' level of risk aversion remains unchanged. Recently, market expectations for the volatility of the S&P 500 index have been lower than their long-term average of approximately 20 percent.[19] However, as can be seen in Figure 4, the variability in monthly stock market volatility has itself been quite high over the past 6 months, with occasional spikes indicating periods of increased uncertainty about likely market outcomes.

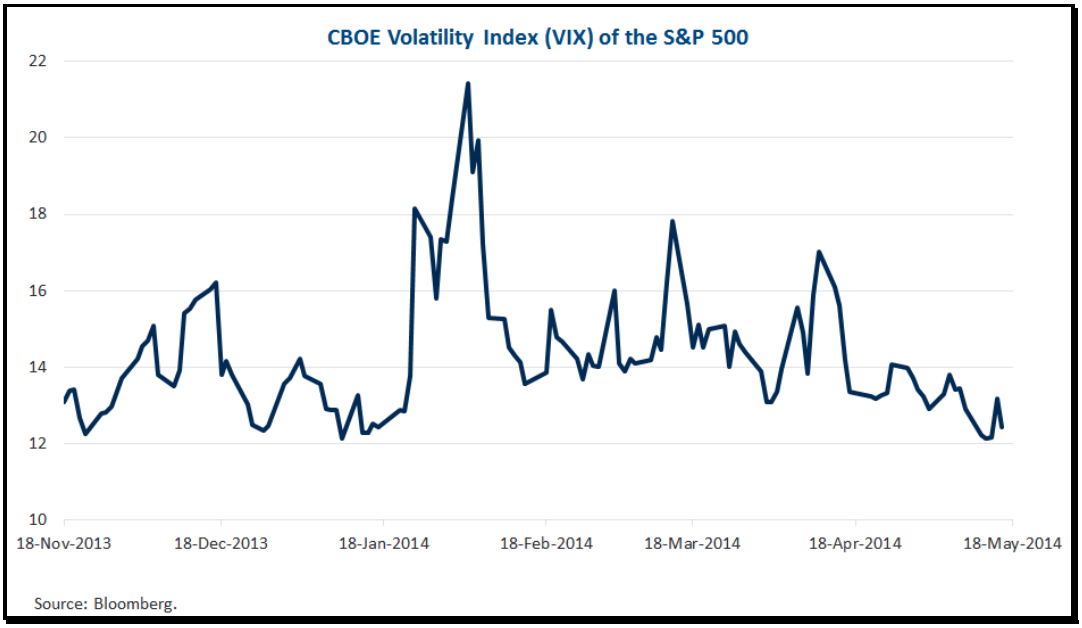

Figure 4

[18] K. French, W. Schwert and R. Stambaugh (1987), "Expected Stock Returns and Volatility," *Journal of Financial Economics*, Vol. 19, p. 3.

[19] As measured by the CBOE Volatility Index (VIX) which measures market expectations for (annualized) 30-day volatility of the S&P 500 stock index based on implied volatility of options on the S&P 500. The average closing index value for the VIX from January 2004 to May 2014 was 20.0. See http://www.cboe.com/micro/vix/historical.aspx.

Q. What do you mean by the term "risk aversion"?

A. Risk aversion is the recognition that investors dislike risk, which means that for any given level of risk, investors must expect to earn a higher return to be induced to invest. An increase in risk aversion means that investors require an even greater return for a given level of risk.

Q. Do you have any evidence that the return premium demanded by investors for taking risk is higher than it was prior to the crisis?

A. Yes. In response to the crisis, investors began allocating much larger shares of their portfolios to lower risk investments. In fact, many investors have left their money in cash or low-yielding Treasuries rather than investing in stocks. For example, Figure 5 below compares monthly net new mutual fund flows into U.S. domestic equities versus total net flows into bonds. Figure 5 shows that net cash flow into domestic equities was predominantly negative from mid-2010 through the end of 2012, reaching almost $30 billion in outflows in July 2011. On the other hand, net flows into bonds were consistently positive throughout the crisis and its aftermath, with monthly inflows reaching nearly $35 billion at several points in 2012 and early 2013.

As discussed above, the latter trend reversed sharply in the second half of 2013—likely in response to the Fed's announcement in June 2013 regarding the tapering of its quantitative easing program.[20] This announcement led to a dramatic global bond sell-off, headlined by $60 billion in outflows from U.S. bond mutual funds as of June

[20] "Fed message gets through to markets, sort of", Alister Bull, July 16, 2013, *Reuters*.

2013.[21] Through the latter half of 2013, bond yields climbed as demand for bonds dipped,[22] reflecting expectations that interest rates would finally rise after remaining so low for so long. At the start of 2014, many traders held short positions in U.S. Treasury bonds—effectively betting that government bond prices would fall as the interest rates rose in response to a growing economy. However, these expectations failed to materialize. Instead, the first five months of 2014 saw a rally in bond buying (see Figure 5). By the end of May, Treasury yields were trading near their lowest levels since before the Fed's June 2013 tapering announcement.[23] This bond rally has surprised many market observers, since U.S. economic indicators have shown modest improvement and most forecasters continue to expect higher interest rates in the medium term.[24] Nevertheless, investors who bet against bonds at the end of 2013 moved back into safe debt investments when predicted interest rate rises failed to materialize.

Additionally, U.S. Treasury bonds are especially appealing in 2014 when compared to European sovereign debt, for which yields are being driven down by slow economic growth and resulting monetary stimulus from the European Central Bank ("ECB"). In June of 2014, the ECB made history by establishing a negative bank deposit rate—effectively charging banks money for depositing their money in the

[21] *Ibid.*

[22] Bond yields rise when prices fall, since face value and coupon payments are fixed.

[23] "Treasurys Rally, Sending 10-yr Yield to 2014 Low", Cynthia Lin, May 28, 2014, *The Wall Street Journal.*

[24] See, for example, *Consensus Forecasts*® June, 2014 survey, which predicts 10-Year Treasury Bond yields will increase from 2.6% as of the survey to 4.1% by the end of 2015.

central bank rather than lending it to consumers and businesses.[25] This accommodative stance by the ECB reflects a low interest rate outlook for European markets, perhaps driving bond investors to seek potential upside in the U.S. debt market.

The U.S. stock market has generally performed well in 2013 and 2014, but net flows for U.S. equity mutual funds have not exhibited a consistent trend. Although the uniform outflows observed in the early part of this decade are no longer manifest, there is not a clear indication in the data that investors are ready to move their money back into equities. Indeed, the short term trend of increasing outflows observed in April and May of 2014 (see Figure 6)—together with the increased demand for bonds—suggests that a clear preference for lower-risk assets currently prevails in financial markets.

In general, these trends are consistent with my observation that the average investor's risk aversion remains elevated. Additionally, the particular circumstances leading to the current low bond yields may be short-term phenomena, suggesting that current yields may underestimate the long-term risk-free interest rate. As discussed in greater detail below, a higher-than-normal equity risk premium and an underestimated risk-free rate may lead to a downward bias in cost of capital estimates based on the CAPM and ECAPM.

[25] "ECB Unveils Rate Cuts, Lending Package", June 5, 2014, *The Wall Street Journal.*

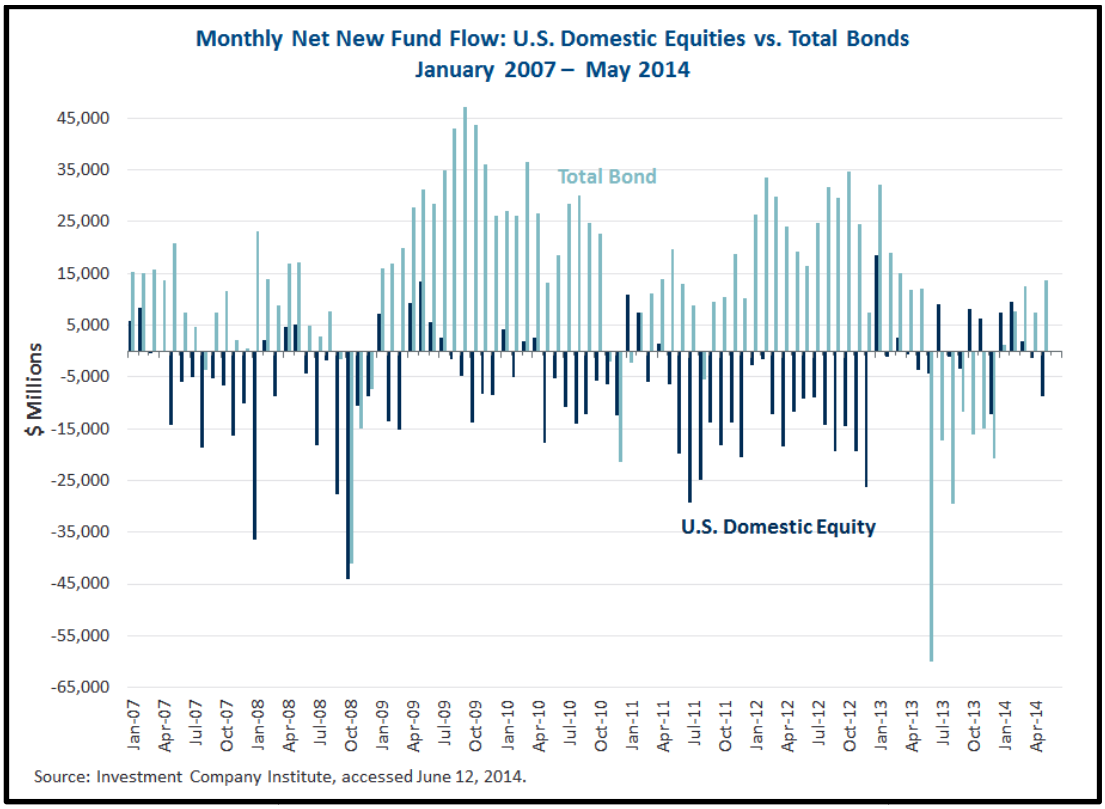

Figure 5

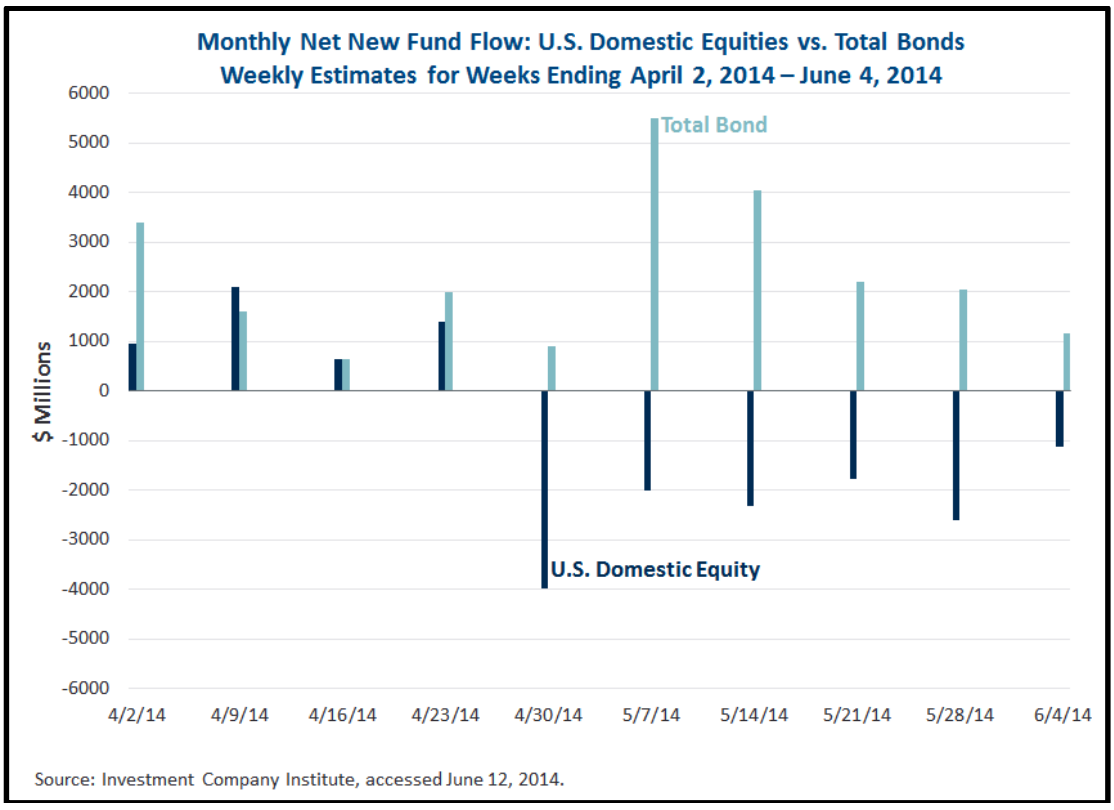

Figure 6

Q. Do you believe that the increase in the market risk premium is a short-term or a long-term phenomenon?

A. I believe that it is a long-term phenomenon. Even when market conditions return to normal, investors' risk aversion is likely to remain higher until their confidence fully returns, which is likely to be well into the recovery period. It could easily be years before investors regain the level of confidence that prevailed prior to the crisis. For a sizable group of investors, the stock market collapse of 2008-2009 has had a much more fundamental impact than wiping out a large part of their savings. In fact, it changed their perception of risk and their appetites for taking on risk again. For many investors, it changed their lifestyle. Some cannot retire as soon as expected, and others have had to sell their homes in a down market, or have lost their homes. This negative shock to investors' confidence and risk preferences is likely to have a sustained impact on their portfolio allocation choices and may persist for some time. If investors have fundamentally changed their attitude towards risk as the evidence suggests, then the required reward for investing in the stock market, i.e., the MRP, must have gone up and is likely to stay at a higher-than-normal level for the foreseeable future. An increase in the MRP results in an increase in the cost of capital for all risky investments including regulated utilities.

Q. Given that much of the economic crisis was rooted in the housing market, has the housing market in the U.S. fully recovered?

A. No. Figure 7 demonstrates that while nation-wide housing prices have begun to recover, they remain lower than they were pre-crisis.

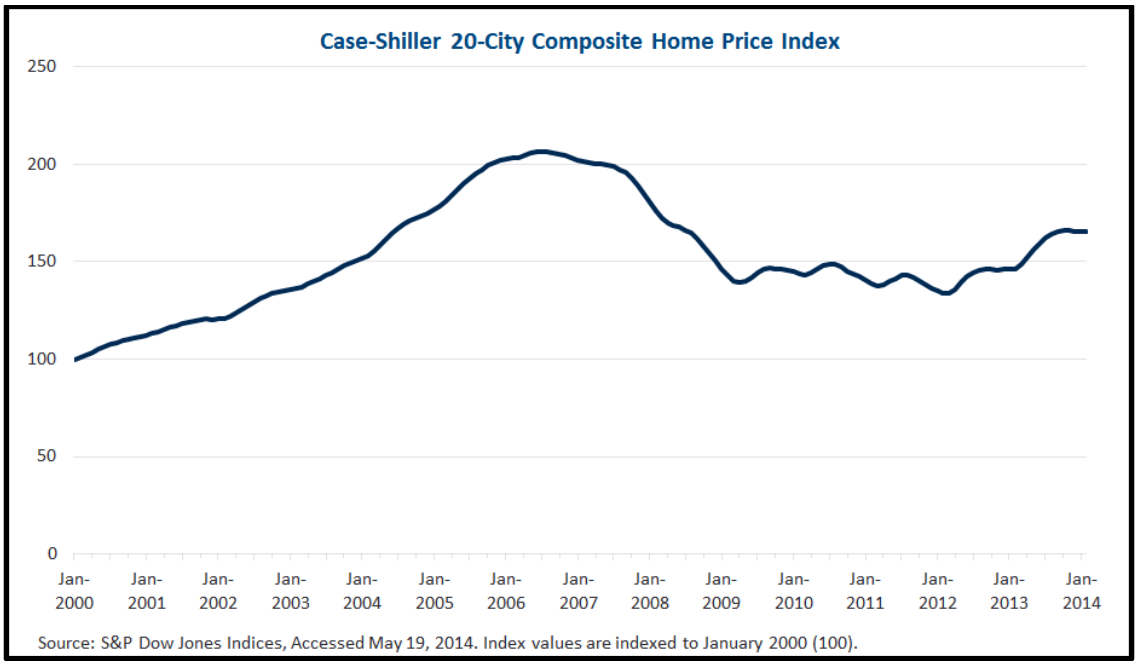

Figure 7

The decline in housing prices, which started in 2006, was a leading indicator of the decline in the financial markets because so much of the economy is dependent on the housing sector. Not only do individuals have a substantial amount of their wealth tied up in their homes, but financial institutions also have significant exposure to mortgage-backed securities. Accordingly, falling prices for homes affect much of the rest of the economy. As of the first quarter of 2013, more than 25 percent of the population had home equity value that was negative,[26] and as shown in figure 6, national home prices have not improved substantially since that time. Throughout most of the country, home prices remain far below pre-crisis levels, despite the recent improvements. As a result, borrowing and household consumption remain constrained.

[26] "Millions Remain Trapped by 'Effective' Negative Equity in Q1, Even if They're Not Underwater," Zillow Real Estate Research, Accessed August 8, 2013.

Q. What do other macroeconomic indicators suggest about the status of the recovery?

A. Unemployment is also an important issue for the health of the overall economy since it affects consumer spending and consumer confidence. Figure 8 below displays the national unemployment rate from 1990 to today. It is clear that unemployment has declined materially from its peak (around 10 percent) during the crisis and is following a sustained downward trend. However, the national unemployment rate remained at approximately 6.3 percent in May 2014,[27] which is higher than it has been since the early 1990s. Even though the unemployment rate is declining, the number of jobs created in the private sector has still been below expectations. Labor force participation remains at its lowest level since the 1970s, suggesting that many discouraged workers without jobs may not even be counted in the current unemployment rate. Overall, the U.S. labor market appears stronger than during the crisis, but does not suggest consumer and investor confidence are truly "back to normal."

[27] http://research.stlouisfed.org/fred2/graph/?id=UNRATE

Figure 8

Q. What are your thoughts on the possible effect of the budget deficit on the economy?

A. In dollar terms, the federal budget deficit was $680 billion in fiscal year 2013, down substantially from more than $1 trillion in fiscal year 2012. This improvement may result partially from the budget sequestration that went into effect in early 2013. However, the 2013 fiscal year deficit was still approximately 50 percent higher than that of 2008 and well above the average level in the years leading up to the crisis. The U.S. Congressional Budget Office estimates that the budget deficit will represent approximately 3 percent of the Gross Domestic Product ("GDP") in 2014 and will

remain high relative to economic output over the foreseeable future (see Figure 9 below).[28]

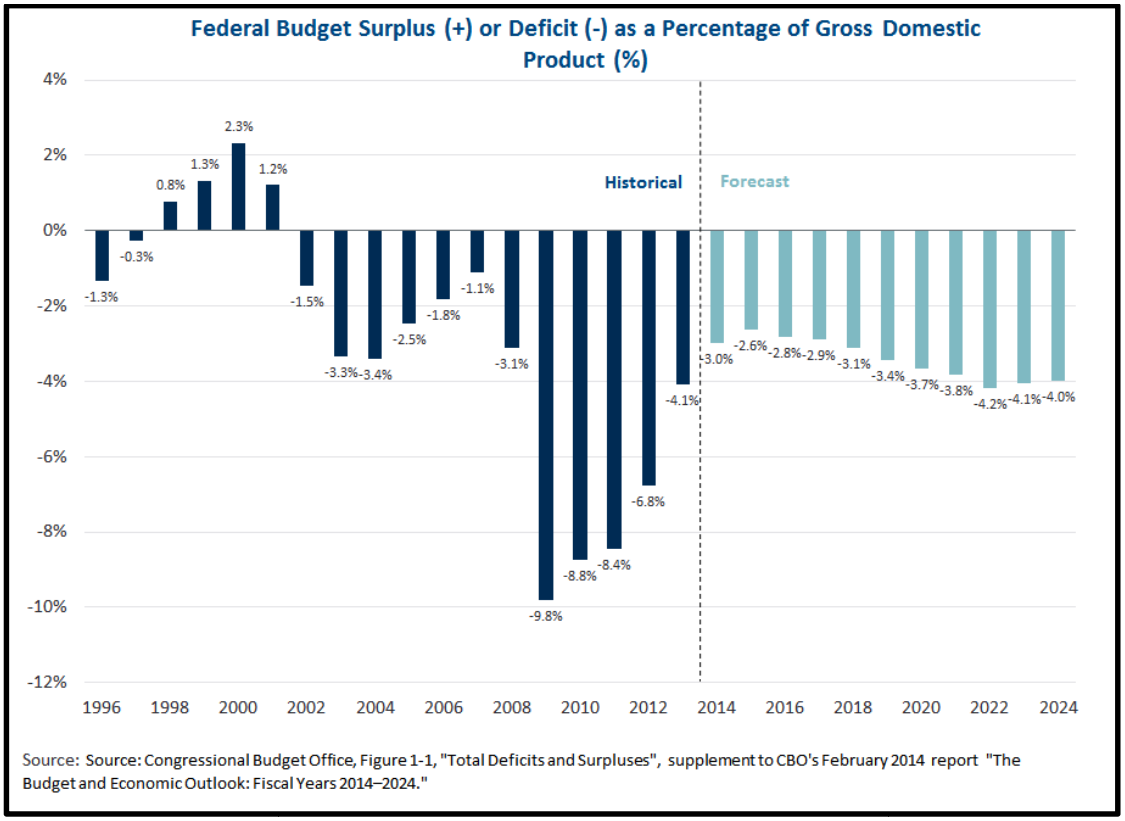

Figure 9

Maintaining such a high deficit is unsustainable, especially if buyers of U.S. debt lose confidence in the U.S. economy and demand higher interest rates in return. This suggests that going forward, the U.S. will have to be more fiscally conservative, and limit the stimulus funds it provides to the economy. Although inflation is not currently an issue, it is also quite likely that the magnitude of the federal budget deficit will affect U.S. inflation going forward. The Fed now holds approximately

[28] Congressional Budget Office: http://www.cbo.gov/.

$1,656 billion in mortgage-backed securities.[29] It is unclear how the unwinding of these positions will affect financial markets, which creates additional uncertainty.

Q. Can you summarize how the economic developments discussed above have affected the return on equity and debt that investors require?

A. Companies such as Met-Ed, Penelec, Penn Power, and West Penn rely on investors in capital markets to support efficient business operations. These investors have been dramatically affected by the credit crisis, and while there have been material improvements in capital markets and the macro-economy since the height of the financial crisis, there is evidence that investors' confidence remains low and their risk aversion remains elevated relative to pre-crisis periods.

Many lost their jobs, their homes or their savings in the crisis; many cannot retire as early as hoped or planned. Even though the economy is improving, the speed and duration of that recovery remains highly uncertain. Likewise, the effects of the federal budget deficit and the Fed's unwinding of its involvement in providing credit may have substantial but uncertain effects on the economy and financial markets. Finally, due to increased risk-aversion on the part of investors, as well as continued bond-purchase programs initiated by the Fed, long-term U.S. government bond yields (along with forecasts of future interest rates) have been pushed down to extremely low levels by historical standards. As a result, yield spreads on utility debt, including top-rated instruments, have remained elevated. The evidence presented above demonstrates that the equity risk premium is higher today than it was prior to the

[29] Federal Reserve Statistical Release as of May 22, 2014. (http://www.federalreserve.gov/releases/h41/).

crisis for all risky investments. This is true even for investments of lower-than-average risk, such as the equity of regulated utilities.

Q. How do you adjust your cost of capital estimation methods to correct for current economic conditions?

A. I make no adjustment to the DCF method, for two reasons. First, the DCF method is based on forward-looking inputs and so is less likely to be biased by estimated parameters from time periods that do not reflect current market sentiment. Second, it is difficult to make an appropriate adjustment.

For the risk positioning method, I recognize the unusually large yield spreads on utility debt by adding a "yield spread adjustment" to the current long-term risk-free rate. This has the effect of increasing the intercept of the Security Market Line displayed in Figure 1 above. I also present results from the risk positioning model by increasing the MRP over the 6.5 percent that I normally use. This has the effect of increasing the slope of the Security Market Line displayed in Figure 1. I present sensitivity tests of the effect of an increase in the MRP to 7.5 percent and yield spread adjustments to the risk-free rate of 25 basis points ("bps"). Table 4 below lists the parameters of these two scenarios.

Q. How do you estimate the increase in MRP needed to adjust for the increased cost of capital stemming from the current market turmoil?

A. Estimating the MRP is always imprecise and controversial. Measuring the change in MRP due to the current economic situation is likely to be no different, but it is still necessary to estimate the MRP as carefully as possible given the change in economic

conditions. Fortunately, there is a way to provide a quantitative benchmark for the required increase in MRP based upon a paper by Edwin J. Elton, et al., which documents that the yield spread on corporate bonds is normally a combination of a default premium, a tax premium, and a systematic risk premium.[30] As displayed in Table 1 above, the yield spreads for A-rated and BBB-rated utility debt have increased substantially compared to the average for the period 1991-2007.

Q. How do you use the information concerning the increase in yield spreads to estimate the increase in the MRP?

A. Table 1 above shows that yield spread for A-rated has increased by about 25 bps for 20-year maturities. This means that investors require a higher return on investment grade utility debt relative to the return on U.S. Government debt than before the credit crisis. Some of the increase in yield spread for A-rated debt may be due to an increase in default risk, but this is more likely to be a factor for BBB-rated utility bond yields.[31] The increase in the default risk premium for A-rated debt is undoubtedly very small because A-rated utility debt has not been at the center of the wave of defaults based upon collateralized mortgage debt. This means that the vast majority—if not all—of the increase in A-rated yield spreads is due to a combination of the increased systematic risk premium and the downward pressure on the yields of government debt caused by the flight to safety. In other words, either the market risk premium has increased or the risk-free rate is underestimated, or both. Therefore, I

[30] "Explaining the Rate Spread on Corporate Bonds," Edwin J. Elton, Martin J. Gruber, Deepak Agarwal, and Christopher Mann, *The Journal of Finance*, February 2001, pp. 247-277.

[31] Although there is no increase in tax premium due to coupon payments, there may be some increase due to a small tax effect resulting from the probability of increased capital gains taxes when the debt matures.

consider possible allocations of the 25 bps increase in A-rated utility spreads between an increase in the MRP (which drives the increase in systematic risk premium on A-rated debt), or downward pressure on the risk-free rate.

Q. How do you allocate the increase in the yield spread to the increase in systematic risk or to the under estimation of the risk-free rate due to downward pressure on government bond yields?

A. There is no precise way to allocate the increase in yield spread between the increase in systematic risk and the underestimation of the risk-free rate arising from downward pressure on government bond yields. However, assuming a beta of 0.25 for A-rated debt[32] means that an increase in the MRP of one percentage point translates into a ¼ percentage point increase in the risk premium on A-rated debt (i.e. 0.25 (beta) times 1 percentage point (increase in MRP) = ¼ percentage point increase in yield spread). The relationship among the increased yield spread for A-rated utilities ($\Delta\, spread$), the underestimation of the risk-free rate (Δr_f), and the required adjustment to the market risk premium ($\Delta\, MRP$) can be represented as follows.

$$\Delta\, spread - \Delta r_f = 0.25 \cdot\ \Delta\, MRP$$

A 25 bps increase in the yield spread is therefore consistent with a 1 percentage point increase in the MRP if there is no underestimation of the risk-free rate (i.e., 25 bps – 0 bps = 25 bps/.25 = 1.0). Alternatively, the 25 bps increase in the yield spread could

[32] Elton, *et al*. estimates the average beta on BBB-rated corporate debt as 0.26 over the period of their study, and A-rated debt will have a slightly lower beta than BBB-rated debt.

be consistent with a ¼ percentage point underestimation of the risk-free rate, with no adjustment to the MRP required (i.e., 25 bps less 25 bps = 0 bps/.25 = 0.0).

The greater the increase in yield spread assumed to be attributed to an increase in systematic risk, the larger must be the corresponding increase in the MRP and the smaller the assumed effect of downward pressure on the risk-free rate. As illustrated above, if all of the non-default increase in the yield spread were due to the increase in systematic risk, then the MRP would have to increase by 1.0 percentage point to explain the 25 bps change. Alternatively, a 25 bps increase in the yield spread is also consistent with a 25 bps underestimation of the risk-free rate, assuming that none of the change in yield spread is driven by an increase in systematic risk. These are the two scenarios I implement in my analyses.[33] The former (labeled "Scenario 2") attributes the increased yield spread entirely to an increase in systematic risk and an attendant increase in the premium required by investors for taking market risk (i.e., the MRP). Meanwhile, the latter ("Scenario 1") attributes the entire yield spread increase to the temporarily depressed government bond yields caused by the actions of the Fed and the "flight to safety" in the wake of the financial crisis.

Q. Would the estimate of the effect of an increase in the MRP be different if the estimate of the beta of an A-rated bond were different?

A. Yes. If the beta of an A-rated bond were higher, then the increase in the systematic risk premium in the yield spread for each one percentage point increase in the MRP

[33] See Exhibit MJV-1. Results for the two scenarios are presented in Panels A ("Scenario 1") and B ("Scenario 2") of Table No. MJV-10 and Table No. MJV-11. The results for both scenarios are summarized in Table No. MJV-12.

would be smaller and vice versa. However, I believe that a beta estimate of 0.25 for A-rated utility debt is reasonable, because the debt of any company is less risky than its equity. A beta estimate of 0.25 for A-rated utility debt is likely quite conservative, especially when compared to an average estimated beta of 0.78 (*Value Line* betas) for the equity of the full electric sample, given that equity is much riskier than debt. (See Table 3 later in my testimony for the estimated betas of the electric sample). Moreover, the average estimated beta for BBB-rated debt was 0.26 at the time of the Elton, et al. study, which should be higher than the estimated beta for A-rated debt, given that lower rated debt is naturally more sensitive to market risk. Even if the average beta for BBB-rated debt is higher today than at the time of the Elton, et al. study, it is likely that an estimate of 0.25 for A-rated debt is on the high end of a reasonable range. Such an estimate is also conservative in the sense that a relatively higher estimate of beta allows the increased yield spread to be explained by a relatively smaller increase in the systematic risk premium.

Q. Would you provide a graph of how the scenarios you consider affect the Security Market Line?

A. Yes, see Figure 10 below. Scenario 1 attributes the entire increase in the yield spread on A-rated utility debt to underestimation of the risk free rate by shifting the Security Market line up in parallel fashion by 25 bps ($R_1^F - R_0^F$). Scenario 2 attributes the entire increase in the yield spread to an increase in the market risk premium by increasing the slope of the line by 1.0 percentage point (ΔMRP).

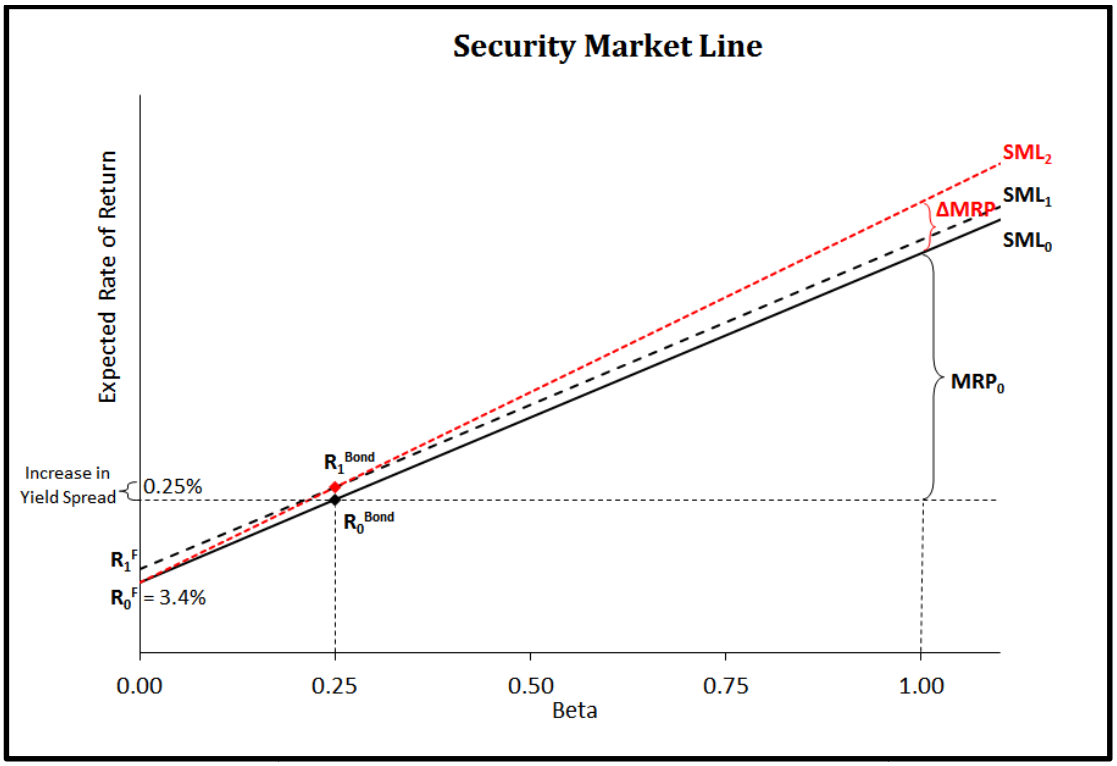

Figure 10

Q. Can you summarize your thoughts with regard to the MRP and the financial crisis?

A. Yes. There remain serious concerns of a very slow growth recovery. Banks continue to fail or are stressed in countries around the world, in an increasingly global economy. It defies logic to believe that the MRP has not increased from its level in more normal times, whether there is any particular agreed model for how to calculate the increase or not.

In light of these circumstances and the calculations described above, I submit that a 100 bps increase in the MRP presents a reasonable adjustment that might be made. As discussed in the Empirical CAPM estimation below, I have two scenarios with alternative adjustments to the risk-free rate and the MRP. These scenarios recognize

the simple reality that while the financial uncertainty and interventions by the Fed and the U.S. government have made it more difficult to measure the cost of equity accurately, the required return on equity has not decreased as much as mechanical implementation of the models might suggest.

IV. SAMPLE SELECTION

A. The Electric Sample

Q. What factors do you consider in selecting a proxy group?

A. The cost of capital for any part of a company depends on the risk of the lines of business in which the *part* is engaged, *not* on the overall risk of the parent company on a consolidated basis. According to financial theory, the overall risk of a diversified company equals the market-value weighted average of the risks of its components, so selecting a sample concentrated in the regulated company's line of business is important. Met-Ed, Penelec, Penn Power, and West Penn are regulated electric companies, and there is currently available a relatively large sample of publicly-traded electric utilities whose primary business is in the regulated electric industry under cost of service regulation.

Q. Can you summarize how you selected the electric sample?

A. I formed the sample from the universe of publicly traded electric utilities as classified by the *Value Line Investment Survey Plus Edition*.[34] This resulted in an initial group of 51 companies. I then eliminated companies by applying additional selection

[34] The 51 companies are from *Value Line Investment Analyzer*, Accessed as of June 3, 2014.

criteria designed to remove companies with unique circumstances which may bias the cost of capital estimates.

Q. What additional selection criteria did you apply?

A. The companies must own substantial regulated assets, must not exhibit any signs of financial distress, and must not be involved in any substantial merger and acquisition ("M&A") activities[35] that could bias the estimation process. In general, this requires that companies have an investment grade credit rating, a high percentage of regulated electric assets (greater than 50 percent),[36] no significant merger activity in the past five years (dated from the point of analysis), no dividend cuts during the past five years, and no other activity that could cause the growth rates or beta estimates to be biased. I also require that each of the sample companies has more than $300 million in reported revenue in the past year (dated from the end of fiscal quarter used for capital structure data). Finally, I require that data from S&P or Moody's, *Value Line*, and Bloomberg—each widely known and utilized by investors—be available for all sample companies.

[35] This includes pending (but announced) M&A activity, but adjusts for M&A activity that does not appear to bias the beta estimates substantively, (such as small, spaced-out transactions, transactions involving multiple parties or parent drop-downs).

[36] I use the Edison Electric Institute's classification of electric utilities as Regulated (greater than 80 percent of total assets are regulated), Mostly Regulated (50 to 80 percent of total assets are regulated) or Diversified (less than 50% of total assets are regulated). My sample includes only electric utilities classified by EEI as Regulated or Mostly Regulated.

Q. Do any of the companies in your electric sample have a revenue decoupling mechanism?

A. Yes. Several of the companies in my comparable sample have a decoupling mechanism in place.[37] This means that these companies benefit from regulatory provisions allowing them to recover their fixed costs independently of volumetric charges: if the utilities' customers use less electricity than was forecast, the decoupling mechanism ensures that the utilities can recover their cost despite the decrease in variable revenues.

B. Characteristics of the Electric Sample Companies

Q. What are the characteristics of the sample of electric utility companies you have chosen?

A. The electric sample is comprised of regulated companies whose primary source of revenues and majority of assets are in the regulated portion of the electric industry. The final sample consists of the 33 electric utilities listed in Table 2 below.

Q. How does the sample compare to Met-Ed, Penelec, Penn Power, and West Penn?

A. The Table 2 below reports the sample companies' total annual revenues in 2013 and the percentage of their assets devoted to regulated electric operations according to EEI's classifications of electric utilities as being either regulated ("R"), having greater than 80 percent regulated electric assets or mostly regulated ("MR"), having 50-80 percent regulated electric assets. Table 2 also displays the Market Capitalization, the

[37] See Edison Electric Institute, "Alternative Regulation for Evolving Utility Challenges: An Updated Survey," January 2013 for a compilation of decoupling mechanisms by company and state.

S&P Credit Rating in 2014, and the average long-term (5-year) earnings growth rate estimate from Bloomberg for all of the companies in the electric sample.

The Companies averaged revenue of approximately $1.1 billion in 2013.[38] In comparison, the average sample company had $6.6 billion in revenue in 2013; the median company in the sample had $4.5 billion in revenue.[39] Met-Ed, Penelec, Penn Power, and West Penn's parent company, FirstEnergy Corp., had $14.9 billion in revenue for 2013. Thus, while the Companies individually are somewhat smaller than the average sample company, their status as subsidiaries of a larger firm mitigates any additional risk of financial distress that their size might otherwise pose relative to the sample.

FirstEnergy Corp., Met-Ed, Penelec, Penn Power, and West Penn all have S&P credit ratings of BBB-, which is slightly lower than the sample's average credit rating.[40]

[38] Ibid.

[39] The revenue figures in **Error! Reference source not found.** are the reported annual revenue in the calendar year ending December 31st, 2013.

[40] Table 2 reports the credit rating without the +/- designation that S&P assigns to some companies.

Electric Sample

Company	Annual Revenue (Year End, 2013) ($MM)	Regulated Assets	Market Cap. (2013) ($MM)	S&P Credit Rating (2014)	Long Term Growth Est
[1]	[2]	[3]	[4]	[5]	[6]
ALLETE Inc	1,018	R	2,006	BBB	6.0%
Ameren Corp	5,838	R	8,561	BBB	7.3%
American Electric Power Co Inc	15,357	R	22,132	BBB	5.7%
Black Hills Corp	1,276	R	2,258	BBB	7.0%
CMS Energy Corp	6,566	R	6,930	BBB	5.7%
Cleco Corp	1,097	R	2,760	BBB	7.0%
CenterPoint Energy Inc	8,106	MR	9,669	A	5.0%
Dominion Resources Inc/VA	13,120	MR	36,632	A	6.1%
DTE Energy Co	9,661	R	11,582	BBB	5.5%
Consolidated Edison Inc	12,354	R	15,703	A	3.8%
El Paso Electric Co	890	R	1,379	BBB	5.3%
Edison International	12,581	R	14,789	BBB	3.7%
Entergy Corp	11,391	R	10,809	BBB	0.1%
Great Plains Energy Inc	2,446	R	3,644	BBB	5.0%
Hawaiian Electric Industries Inc	3,237	MR	2,535	BBB	3.4%
IDACORP Inc	1,246	R	2,582	BBB	4.0%
Alliant Energy Corp	3,277	R	5,597	A	5.0%
MGE Energy Inc	591	MR	1,280	AA	4.0%
NextEra Energy Inc	15,136	MR	35,919	A	6.5%
OGE Energy Corp	2,868	MR	6,611	A	5.0%
Otter Tail Corp	893	MR	1,035	BBB	6.0%
PG&E Corp	15,598	R	18,154	BBB	5.8%
Public Service Enterprise Group Inc	9,968	MR	15,840	BBB	5.2%
Pinnacle West Capital Corp	3,455	R	5,721	A	4.5%
Portland General Electric Co	1,810	R	2,305	BBB	6.8%
SCANA Corp	4,495	MR	6,542	BBB	5.0%
Southern Co/The	17,087	R	35,237	A	3.9%
Sempra Energy	10,557	MR	21,283	BBB	6.9%
Integrys Energy Group Inc	5,635	R	4,191	A	5.0%
Vectren Corp	2,491	MR	2,820	A	4.5%
Wisconsin Energy Corp	4,519	R	9,131	A	4.7%
Westar Energy Inc	2,371	R	3,996	BBB	4.1%
Xcel Energy Inc	10,915	R	13,692	A	5.0%

Sources and Notes:
[2] Bloomberg as of June 3, 2014
[3] Key R - Regulated (More than 80% of assets regulated)
MR - Mostly Regulated (50%-80% of assets regulated)
Source: EEI. See Table MJV-2
[4] See Table MJV-3, Panels A through AG
[5] Bloomberg as of June 3, 2014
[6] See Table MJV-5

Table 2

Like many of the sample companies, Met-Ed, Penelec, Penn Power, and West Penn benefit from certain regulatory policies that reduce regulatory lag, including a quarterly adjustment and true-up mechanism for default service power prices.[41] The Companies, for the most part, are not permitted to include construction work in progress (CWIP) in rate base,[42] but have received approval from the PUC for a dedicated Smart Meter Technologies Charge to recover capital expenditures associated with the mandatory installation of advanced metering infrastructure (AMI) within their service territories.[43] Cost-tracking mechanisms such as these also have precedents in states affecting several of the sample companies.[44] However, unlike some of the sample companies, Met-Ed, Penelec, Penn Power, and West Penn do not have revenue decoupling mechanisms or lost revenue adjustment mechanisms (LRAM) in place; nor do they operate in a jurisdiction that employs "fixed variable" pricing for rate design, as some sample companies do.[45]

Q. How does the business risk of Met-Ed, Penelec, Penn Power, and West Penn compare to that of the sample companies?

A. Like the sample companies, the Companies' business is concentrated in regulated electric service, and Met-Ed, Penelec, Penn Power, and West Penn also have some

[41] SNL Regulatory Research Associates

[42] Edison Electric Institute, "Alternative Regulation for Evolving Utility Challenges: An Updated Survey," January 2013.

[43] SNL Regulatory Research Associates

[44] Edison Electric Institute, "Alternative Regulation for Evolving Utility Challenges: An Updated Survey," January 2013.

[45] Ibid.

regulatory mechanisms in place that are comparable to those of the proxy group companies.

The Companies' operations focus predominantly on electric distribution, and unlike many of the sample companies, Met-Ed, Penelec, Penn Power, and West Penn do not own generation assets. However, since their distribution service is cost-of-service regulated, and they are permitted to true-up their purchase power costs, they are of similar business risk to the sample.

In terms of risk factors that increase the Companies' business risks relative to the sample, I have already noted that all have S&P corporate credit ratings of BBB-, below the median of 'BBB' for the sample, indicating an elevated credit risk. I have likewise noted that Met-Ed, Penelec, Penn Power, and West Penn are individually smaller—both in terms of revenue and assets—than the average sample company. Smaller companies typically have a higher cost of capital, even after adjusting for their level of systematic market risk (as measured by beta in the CAPM and ECAPM).

Regulatory policy also plays a role in the business risk of the Companies. In the current environment of low electric demand growth, the fact that Met-Ed, Penelec, Penn Power, and West Penn do not have a revenue decoupling mechanism or a fixed variable pricing policy places them at increased risk of under-recovering their cost of service relative to some sample companies that benefit from such mechanisms. This risk is especially acute for the Companies because Pennsylvania allows competitive retail choice, which could potentially decrease the variable revenues of electric

distribution companies such as Met-Ed, Penelec, Penn Power, and West Penn. Pennsylvania also has Energy Efficiency Resource Standards that require electric distribution utilities to reduce energy consumption by 2.3 percent cumulatively over the 2014-2016 period.[46] Thus, to the extent that the Companies recover some of their fixed costs through per-kWh charges to their customers (i.e., do not benefit from decoupling or fixed-variable pricing), they will be at substantial risk for under-recovery.

In consideration of these and other factors, I believe Met-Ed, Penelec, Penn Power, and West Penn are of somewhat higher than average business risk relative to the sample companies.

C. Capital Structure

Q. What regulatory capital structure are the Companies requesting in this proceeding?

A. Met-Ed, Penelec, Penn Power, and West Penn have each proposed a regulatory capital structure consisting of approximately 50 percent equity and 50 percent debt,[47] as further explained by Mr. Steven R. Staub in Met-Ed/Penelec/Penn Power/ West Penn Statement No. 10. This capital structure is consistent with the book value capital structures of my sample companies. The sample averages about 49 percent equity and 51 percent debt on a book basis. The highest percentage of book equity for the companies in the sample is 60 percent equity (MGE Energy Inc.) and the

[46] American Council for an Energy-Efficient Economy State and Local Policy Database. http://database.aceee.org/state/pennsylvania

[47] By regulatory capital structure, I mean the capital structure used to set rates in this proceeding.

lowest is 31 percent equity (CMS Energy Corp.). My recommended range for ROE is a function of the requested capital structure, the sample average ATWACC estimates and the relative risk of the Companies compared to the sample.

V. COST OF CAPITAL ESTIMATES

Q. How do you estimate the sample companies' costs of equity?

A. As noted earlier, I apply two general methodologies—risk positioning and DCF—both of which are standard ways of estimating a company's cost of equity. For my CAPM (risk positioning) based estimates, I consider a range of sensitivities to reflect well-documented empirical deficiencies in the CAPM when used in conjunction with an equity market index. These sensitivities are called the Empirical CAPM. I also report results generated by two versions of the DCF approach: the single-stage and the multistage DCF models.

A. The CAPM-Based Estimates

Q. Can you explain the CAPM?

A. Modern models of capital market equilibrium express the cost of equity as the sum of a risk-free rate and a market risk premium. The CAPM is the longest-standing and most widely used of these theories. To implement the model requires specification of (1) the current values of the benchmarks that determine the Security Market Line (see Figure 1 above); (2) the relative risk of a security or investment; and (3) how the benchmarks combine to produce the Security Market Line. Given these specifications, the company's cost of capital can be calculated based on its relative

risk. Specifically, the CAPM states that the cost of capital for an investment, *S* (e.g., a particular common stock), is given by the following equation:

$$r_S = r_f + \beta_S \times MRP \qquad (2)$$

where r_s is the cost of capital for investment *S*; r_f is the risk-free rate; β_S is the beta risk measure for the investment *S*; and *MRP* is the market risk premium. The CAPM relies on the empirical fact that investors price risky securities to offer a higher expected rate of return than safe securities. It says that the Security Market Line starts at the risk-free interest rate (that is the return on a zero-risk security, the y-axis intercept in Figure 1, equals the risk-free interest rate). Further, it says that the risk premium of a security over the risk-free rate equals the product of the beta of that security and the risk premium on a value-weighted portfolio of all investments, which by definition has average risk.

1. The Risk-free Interest Rate

Q. What interest rates do your procedures require?

A. Modern capital market theories of risk and return (e.g., the theoretical version of the CAPM as originally developed) use the short-term risk-free rate of return as the starting benchmark, but regulatory bodies frequently use a version of the risk positioning model that is based upon the long-term risk-free rate. In this proceeding, I rely upon the long-term version of the risk positioning model. Accordingly, the implementation of my procedures requires use of long-term U.S. Treasury bond interest rates. I obtain this information from the 15-day average yield on long-term Treasury bonds as reported by Bloomberg for the period ending June 3, 2014.

Q. Why didn't you use the version of the CAPM that relies on the short-term risk-free rate in this proceeding?

A. Short-term Treasury bill yields remain at artificially low levels due to the efforts of the Fed to stimulate the economy. As a result, the risk positioning required ROE estimates using the short-term Treasury bill yields as the risk-free interest rate are unreasonably low. For example, the estimates are sometimes less than the corresponding company's current market cost of debt, which is unreasonable. A company's equity is always riskier than its debt and requires a higher return, because debt holders are always paid before equity holders in the event of bankruptcy or other financial distress.

2. The Market Risk Premium

Q. Why is a risk premium necessary?

A. Experience (e.g., the recent credit crisis in stock markets worldwide and the U.S. market's October Crash of 1987) demonstrates that shareholders, even well diversified shareholders, are exposed to enormous risks. By investing in stocks instead of risk-free government Treasury bills, investors subject themselves not only to the risk of earning a return well below that which they expected in any year but also to the risk that they might lose much of their initial capital. This is fundamentally why investors demand a risk premium.

Q. Has the estimate of the MRP been controversial over the recent past?

A. Yes. Historically, it was generally accepted that the appropriate method to estimate the MRP was to consider the historical average realized return on the market minus

the return on a risk-free asset over as long a series of time as possible; however, this procedure came under attack during the period of time generally referred to as the "tech bubble" when the stock markets in the U.S. reached very high valuation levels relative to traditional metrics of value. The period of the tech bubble also resulted in the average realized return on the market increasing to a very high level. Attempts to explain the high stock market valuation levels centered on the hypothesis that the MRP must be dramatically lower than previously believed, but this hypothesis conflicted with the fact that realized returns over the period were very high. The result was an academic debate on the level of the forward-looking MRP and how best to estimate it—a debate that has still not been fully resolved. As discussed in *Section III*, the effects of the recession still affect investors' required returns through a MRP that remains higher than the historical average realized return on the market minus the return on the risk-free asset prior to the crisis.

Q. How do these factors affect the cost of capital for the Companies?

A. The Companies invest in long-lived assets which cannot be easily liquidated (they are hard physical assets that once put in place cannot be moved). Investment is a voluntary activity, and investors generally require a return that is consistent with the risk they take on; therefore, it could damage the ability to access capital if investors view the allowed rate of return as lower than the required rate of return. The problem is not avoided for companies that are 100 percent owned subsidiaries because the parent company must consider the opportunity cost of capital when making investments. Investors expect managers to invest in projects which provide expected returns at least equal to the cost of capital.

Q. What is your conclusion regarding the MRP?

A. Historically, much of the controversy over market risk premium centered on various reasons that it may not be as high as frequently estimated. Although none of the arguments was completely persuasive in and of itself, I generally gave some weight to these issues in past testimony and reduced my estimate of the MRP. Conversely, recent events have strongly suggested an increase in the MRP from its previous levels. I would typically consider an MRP of 6.5 percent over the long-bond rate as reasonable based on my review of the relevant academic literature. However, current market conditions suggest that a value of 7.5 percent could be more appropriate at this time. Therefore, I include two analyses: one using an MRP of 6.5 and the other using an MRP of 7.5 percent.

3. Beta

Q. Can you more fully explain beta?

A. The basic idea behind beta is that risks that cannot be diversified away in large portfolios matter more than those that can be eliminated by diversification. Beta is a measure of the risks that cannot be eliminated by diversification. That is, it measures the "systematic" risk of a stock—the extent to which a stock's value fluctuates more or less than average when the market fluctuates.

Diversification is a vital concept in the study of risk and return. (Harry Markowitz won a Nobel Prize for work showing just how important it was.) Over the long run, the rate of return on the stock market has a very high standard deviation, on the order

of 20 percent per year.[48] Many individual stocks have much higher standard deviations than this. The stock market's standard deviation is "only" about 15-20 percent because when stocks are combined into portfolios, some of the risk of individual stocks is eliminated by diversification. Some stocks go up when others go down, and the average portfolio return—whether positive or negative—is usually less extreme than that of many individual stocks within it. The fact that the market's actual annual standard deviation is so large means that, in practice, the returns on stocks are positively correlated with one another, and to a material degree. The reason is that many factors that make a particular stock go up or down also affect other stocks. Examples include the state of the economy, the balance of trade, and inflation. Thus some risk is "non-diversifiable" in that even a well-diversified portfolio of stocks will experience changes in value caused by these shared risk factors. Single-factor equity risk premium models (such as the CAPM) are based upon the assumption that all of the systematic factors that affect stock returns can be considered simultaneously, through their impact on one factor: the market portfolio. Other models derive somewhat less restrictive conditions under which several factors might be individually relevant.

Again, the basic idea behind all of these models is that risks that cannot be diversified away in large portfolios matter more than those that can be eliminated by diversification, because there are a large number of large portfolios whose managers

[48] See Brealey, Myers and Allen (2011), *Principles of Corporate Finance, 10th Edition*, McGraw-Hill Irwin, New York, p. 166.

actively seek the best risk-reward tradeoffs available. (Of course, undiversified investors would like to get a premium for bearing diversifiable risk, but they cannot.)

Q. What does a particular value of beta signify?

A. By definition, a stock with a beta equal to 1.0 has average non-diversifiable risk: it goes up or down by 10 percent on average when the market goes up or down by 10 percent. Stocks with betas above 1.0 exaggerate the swings in the market: stocks with betas of 2.0 tend to fall 20 percent when the market falls 10 percent, for example. Stocks with betas below 1.0 are less volatile than the market. A stock with a beta of 0.5 will tend to rise 5 percent when the market rises 10 percent.

Q. How is beta measured?

A. The usual approach to calculating beta is a statistical comparison of the sensitivity of a stock's (or a portfolio's) return to the market's return. Many investment services report betas, including Bloomberg and the *Value Line Investment Survey*. Betas are not always calculated in precisely the same way, and therefore must be used with a degree of caution. However, the basic principle that a high beta indicates a risky stock has long been widely accepted by both financial theorists and investment professionals, and is universally reflected in all calculations of beta. In my analyses for these proceedings, I present results using the beta estimates reported by *Value Line*.

Q. What are the betas that you used for the sample companies?

A. Table 3 below lists the *Value Line* betas I used to calculate my risk-positioning estimates of the cost of capital for the sample of regulated electric utilities.

Valueline Betas	
Company	**Value Line Betas**
ALLETE Inc	0.80
Ameren Corp	0.85
American Electric Power Co Inc	0.70
Black Hills Corp	0.90
CMS Energy Corp	0.70
Cleco Corp	0.70
CenterPoint Energy Inc	0.85
Dominion Resources Inc/VA	0.75
DTE Energy Co	0.85
Consolidated Edison Inc	0.65
El Paso Electric Co	0.70
Edison International	0.80
Entergy Corp	0.75
Great Plains Energy Inc	0.90
Hawaiian Electric Industries Inc	0.85
IDACORP Inc	0.80
Alliant Energy Corp	0.80
MGE Energy Inc	0.70
NextEra Energy Inc	0.75
OGE Energy Corp	0.85
Otter Tail Corp	0.95
PG&E Corp	0.60
Public Service Enterprise Group Inc	0.80
Pinnacle West Capital Corp	0.75
Portland General Electric Co	0.80
SCANA Corp	0.75
Southern Co/The	0.60
Sempra Energy	0.80
Integrys Energy Group Inc	1.05
Vectren Corp	0.75
Wisconsin Energy Corp	0.70
Westar Energy Inc	0.80
Xcel Energy Inc	0.65
Average	0.78
Sources and Notes: From Valueline Investment Analyzer as of June 3, 2014.	

Table 3

4. The Empirical CAPM

Q. What other equity risk premium model do you use?

A. Empirical research has long shown that the CAPM tends to overstate the actual sensitivity of the cost of capital to beta: low-beta stocks tend to have higher risk premiums than predicted by the CAPM and high-beta stocks tend to have lower risk premiums than predicted. A number of variations on the original CAPM theory have been proposed to explain this finding, but the observation itself can also be used to estimate the cost of capital directly, using beta to measure relative risk by making a direct empirical adjustment to the CAPM.

This second model makes use of these empirical findings. It estimates the cost of capital with the equation,

$$r_S = r_f + \alpha + \beta_S \times (MRP - \alpha) \qquad (3)$$

where α is the "alpha" adjustment of the risk-return line, a constant, and the other symbols are defined as above. I label this model the Empirical Capital Asset Pricing Model, or "ECAPM." The alpha adjustment has the effect of increasing the intercept but reducing the slope of the Security Market Line in Figure 1 earlier in my testimony which results in a Security Market Line that more closely matches the results of empirical tests. In other words, the ECAPM produces more accurate predictions of eventual realized risk premiums than does the CAPM.

Q. Why is it appropriate to use the Empirical CAPM?

A. The CAPM has not generally performed well as an empirical model, but its shortcomings are directly addressed by the ECAPM. Specifically, the ECAPM recognizes the consistent empirical observation that the CAPM underestimates (overestimates) the cost of capital for low (high) beta stocks. In other words, the ECAPM is based on recognizing that the actual observed risk-return line is flatter and has a higher intercept than that predicted by the CAPM. The alpha parameter (α) in the ECAPM adjusts for this fact, which has been established by repeated empirical tests of the CAPM. The difference between the CAPM and the type of relationship identified in the empirical studies is depicted in Figure 11 below.

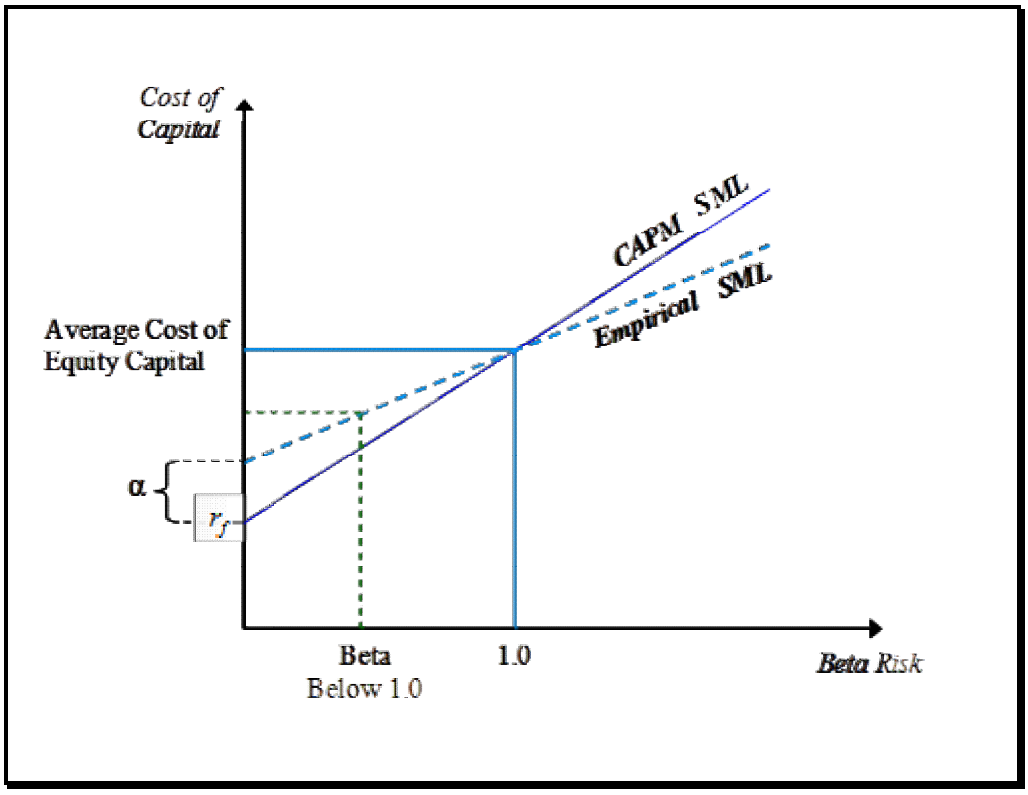

Figure 11: The Empirical Security Market Line

Q. What are the parameters of the two scenarios you considered in your risk positioning analyses?

A. The parameters for the two scenarios are displayed in Table 4 below. The motivation for the scenarios is the empirical observation that the yield spread is higher than normal. The increased yield spread could be the result of an increase in the MRP or downward pressure on the yield of risk-free bonds due to a flight to quality or a combination of the two factors. Therefore, I reduce the risk-free rate for use with a higher estimate of the MRP as illustrated in Table 4**.** In other words, the approximately 25 bps increase in the yield spread is allocated between an increase in the MRP and the downward pressure on the risk-free rate according to the method described above. The more of the bps increase in yield spread that is allocated to the under estimation of the risk-free rate, the less that the MRP is increased and vice versa.

Parameters for Scenarios in Risk Positioning Analyses

	Scenario 1	Scenario 2
Risk-Free Interest Rate	3.35%	3.10%
Market Risk Premium	6.50%	7.50%

Table 4

Q. Can you summarize the results from applying the CAPM and ECAPM methodologies to the sample?

A. The results of the risk positioning analyses (the CAPM and the ECAPM) are presented in Table 5 using *Value Line's* estimated betas for the sample of electric companies. (The underlying calculations are also presented in Exhibit MJV-1.) For the ECAPM, there are two sensitivities: $\alpha = 0.5$ percent and $\alpha = 1.5$ percent. The

columns display the scenario results for MRP estimates of 6.5, and 7.5 percent. The long-term risk-free interest rate as of June 3, 2014 was 3.10 percent before adjustments for the downward pressure on government yields due to the flight to safety. The ROE estimates in Table 5 reflect the ATWACC estimates adjusted for differences in capital structure between the sample companies and the Companies. Specifically, the ROE associated with each method and a capital structure with 50 percent equity is displayed in Table 5.

Return on Equity Summary and Sensitivity Analysis
Using Value Line Betas

Estimated Return on Equity	Scenario 1 [1]	Scenario 2 [2]
Full Sample		
CAPM	8.7%	9.2%
ECAPM (α = 0.5%)	8.8%	9.3%
ECAPM (α = 1.5%)	9.0%	9.6%

Sources and Notes:
Scenario 1: Long-Term Risk Free Rate of 3.35%, Long-Term Market Risk Premium of 6.50%.
Scenario 2: Long-Term Risk Free Rate of 3.10%, Long-Term Market Risk Premium of 7.50%.

Table 5

Q. What conclusions do you draw from the equity risk premium results (i.e., CAPM and ECAPM)?

A. Of the equity risk premium results, the CAPM values deserve the least weight, because this method does not adjust for the empirical finding that the cost of capital is less sensitive to beta than predicted by the CAPM (which my testimony and exhibits consider by using the ECAPM). Conversely, the ECAPM numbers deserve more weight, because this method adjusts for the empirical findings. The results for

Scenario 1 do not fully adjust for the still-elevated market risk premium in the capital markets and deserve less weight than those for Scenario 2. Focusing on the ECAPM results for the sample, the results range from 8.8 percent to 9.6 percent.

B. The DCF Based Estimates

Q. Can you describe the discounted cash flow approach to estimating the cost of equity?

A. The DCF model takes the first approach to cost of capital estimation described above, i.e., to attempt to estimate the cost of capital in one step instead of estimating the cost of capital for the entire market and then determining the cost of capital for an individual investment. The DCF method assumes that the market price of a stock is equal to the present value of the dividends that its owners expect to receive. The method also assumes that this present value can be calculated by the standard formula for the present value of a cash flow stream:

$$P = \frac{D_1}{(1+r)} + \frac{D_2}{(1+r)^2} + \frac{D_3}{(1+r)^3} + \cdots + \frac{D_T}{(1+r)^T} \qquad (4)$$

where "*P*" is the market price of the stock; "D_i" is the dividend cash flow expected at the end of period *i*; "*r*" is the cost of capital; and "*T*" is the last period in which a dividend cash flow is to be received. The formula just says that the stock price is equal to the sum of the expected future dividends, each discounted for the time and risk between now and the time the dividend is expected to be received.

Most DCF applications go even further, and make very strong assumptions that yield a simplification of the standard formula, which then can be rearranged to estimate the

cost of capital. Specifically, if investors expect a dividend stream that will grow *forever* at a steady rate, then the market price of the stock will be given by a very simple formula,

$$P = \frac{D_1}{(r - g)} \qquad (5)$$

where "D_1" is the dividend expected at the end of the first period, "g" is the perpetual growth rate, and "P" and "r" are the market price and the cost of capital, as before. Equation (5) is a simplified version of equation (4) that can be solved to yield the well-known "DCF formula" for the cost of capital:

$$\begin{aligned} r &= \frac{D_1}{P} + g \\ &= \frac{D_0 \times (1+g)}{P} + g \end{aligned} \qquad (6)$$

where "D_0" is the current dividend, which investors expect to increase at rate g by the end of the next period, and the other symbols are defined as before. Equation (6) says that if equation (5) holds, the cost of capital equals the expected dividend yield plus the (perpetual) expected future growth rate of dividends. I refer to this as the simple DCF model. Of course, the "simple" model is simple because it relies on very strong assumptions.[49]

Q. Are there other versions of the DCF models in addition to the "simple" one?

A. Yes. One such alternative version is the multistage DCF model. In its "simple" or constant growth rate formulation, the DCF model requires that dividends and earnings

[49] In this context "strong" means assumptions that are unlikely to reflect reality but that also are not expected to have a large effect on the estimate.

grow at a constant rate for companies that earn their cost of capital on average.[50] It is inconsistent with the theory on which this formulation is based to have varying growth rates in earnings and dividends. If, however, the growth rates for dividends and earnings were expected to vary over some number of years before settling down into a constant growth period, then it would be appropriate to utilize a multistage DCF model. In the multistage model, earnings and dividends can grow at different rates, but must grow at the same rate in the final, constant growth rate period.

Q. What is your assessment of the DCF model?

A. The DCF approach is grounded in solid finance theory. It is widely accepted by regulatory commissions and provides useful insight regarding the cost of capital based on forward-looking metrics. DCF estimates of the cost of capital complement those of the CAPM and the ECAPM because the two methods rely on different inputs and assumptions. The DCF method is particularly valuable in the current economic environment, because of the effects on capital market conditions of the Fed's efforts to maintain interest rates at historically low levels which bias the CAPM and ECAPM estimates downward.

However, I recognize that the DCF model, like most models, relies upon assumptions that do not always correspond to reality. For example, the DCF approach assumes

[50] Why must the two growth rates be equal in a steady-growth DCF model? Think of earnings as divided between reinvestment, which funds future growth, and dividends. If dividends grow faster than earnings, then there is less investment and slower growth each year. Sooner or later dividends will equal earnings. At that point, growth is zero because nothing is being reinvested (dividends are constant). If dividends grow more slowly than earnings, each year a bigger fraction of earnings are reinvested. That makes for ever faster growth. Both scenarios contradict the steady-growth assumption. So if you observe a company with different expectations for dividend and earnings growth, you know the company's stock price and its dividend growth forecast are inconsistent with the assumptions of the steady-growth DCF model.

that the variant of the present value formula that is used matches the variations in investor expectations for the growth of dividends, and that the growth rate(s) used in that formula match current investor expectations. Less frequently noted conditions, such as the value of real options incorporated in a company's market price, may create issues that the DCF model does not incorporate. Nevertheless, under current economic conditions, because of its forward looking nature, the strengths of the DCF method far outweigh any weaknesses the method may have.

Q. What growth rate information do you use?

A. The first step in my DCF analysis (either constant growth or multistage formulations) is to examine a sample of investment analysts' forecasted earnings growth rates from Bloomberg and from *Value Line* for companies in the electric sample. For the long-term growth rate for the final, constant-growth stage of the multistage DCF estimates, I use the most recent long-run GDP growth forecast from Blue Chip Economic Indicators.[51]

Q. How do these growth rates correspond to the theoretical criteria you discuss above?

A. The constant-growth formulation of the DCF model, in principle, requires forecasted growth rates, but it is also necessary that the growth rates used go far enough out into the future so that it is reasonable to believe that investors expect a stable growth path afterwards. Under current economic conditions, I believe the forecasted growth rates of investment analysts provide the best available representation of the longer term, steady-state growth rate expectations of investors. Therefore, I feel these growth

[51] Blue Chip Economic Indicators, March 10, 2014.

parameters available to apply to the simple, constant-growth DCF model provide useful estimates of the cost of capital.

Q. Does the multistage DCF improve upon the simple DCF?

A. Potentially, but the multistage method assumes a particular smoothing pattern and a long-term growth rate afterwards. These assumptions may not be a more accurate representation of investor expectation than those of the simple DCF. The smoother growth pattern, for example, might be not be representative of investor expectations, in which case the multistage model would not increase the accuracy of the estimates. Indeed, amidst uncertainty in capital markets, assuming a simple constant growth rate may be preferable to attempting to model growth patterns in greater detail over multiple stages. While it is difficult to determine which set of assumptions comprises a closer approximation of the actual conditions of capital markets, I believe both forms of the DCF model provide useful information about the cost of capital.

Q. What are the relative strengths and weaknesses of the DCF and risk-positioning methodologies?

A. Current market conditions affect all cost of capital estimation models to some degree, but the DCF model has at least one advantage over the risk positioning models. Specifically, the DCF model reflects current market conditions more quickly because the market price of a company's stock changes daily. Dividend yields increase when market prices fall and reflect the increased cost of capital. The challenge for the DCF model is that the model requires forecasts of earnings growth rates that are based upon stable economic conditions which are required to satisfy the constant dividend

growth rate assumption. Although the dividend yield quickly reacts to changes in the market, the growth rate estimates may be less precise during times of market uncertainty because future growth rates may be more volatile. Nevertheless, because dividend yields and forecast growth rates change quickly, the DCF model is likely to better reflect investors' current cost of capital expectations than the CAPM and ECAPM which relies upon 5 years of historical data.

Q. What are the DCF estimates for the sample?

A. The corresponding DCF estimates for the sample are presented in Table 6. The ROE estimate is 10.9 percent for the single-stage model and 9.8 percent for the multistage model.

DCF Return on Equity Summary		
	DCF	
	Simple	Multi-stage
Full Sample		
Cost of Equity	10.9%	9.8%

Table 6

Q. What conclusions do you draw from the DCF analysis?

A. Although I made no adjustment for the current market turmoil for the DCF model, the DCF estimates are slightly higher than the upper end of the range of estimates from the risk positioning model displayed above in Table 5. (Recall that the ECAPM risk positioning estimates range from 8.8 percent to 9.6 percent when using *Value Line's* estimated betas). At this time, I believe that the DCF estimates indicate that the

estimates from Scenario 2 for the risk positioning model are more reliable than those from Scenario 1.

VI. CONCLUSIONS

Q. Can you summarize the evidence from the sample regarding the ROE for an electric utility of average risk?

A. Table 5 and Table 6 summarize the results of the analyses for the risk positioning and DCF models for the sample of electric utilities. The results from the CAPM are less reliable than the results from the ECAPM because they do not consider the consistent empirical evidence that the CAPM underestimates the cost of capital for low beta companies, such as Met-Ed, Penelec, Penn Power, and West Penn. Similarly, the results for Scenario 1 are not as reliable as those for Scenario 2 because Scenario 1 ignores the increased MRP resulting from the ongoing uncertainty in the capital markets. Based on the sample's cost of capital estimates, I believe a company of the Companies' business and financial risk should have an allowed ROE in the range 9.3 percent to 10.9 percent.

Q. What is your recommendation range of the ROE for the Companies?

A. For companies of comparable risk to Met-Ed, Penelec, Penn Power, and West Penn at a capital structure with approximately 50 percent equity, the cost of equity falls in the range of 9.3 percent to 10.9 percent. Because the upper end of the range is established by the estimates from the DCF model, I believe that the upper end of the range is more reliable at this time.

Q. Why doesn't your recommended range for the samples cover all of the estimates displayed in Table 5 and Table 6?

A. I provide an estimate of a reasonable range of required ROE for the sample, and the range of uncertainty is based upon all of the analyses I have done, placing relatively more weight on more reliable methodologies and estimates. I do not try to include all of the resulting estimates in the range because I regard some of the estimates as more reliable than others. For example, the estimates based upon the CAPM are not as reliable as those based upon the ECAPM because the CAPM estimates do not account for the empirical observation that low beta stocks have higher costs of capital than estimated by the CAPM, high beta stocks have lower costs of capital. Nor is it likely that the lowest estimates in the tables are as reliable as those in the upper end of the range because those estimates do not adequately consider the continued uncertainty in the financial markets.

Q. Is there any other reason to support an allowed ROE in the upper end of the 9.3 percent to 10.9 percent range?

A. Yes. It is important to maintain Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company's access to capital, and maintaining a solid credit rating and outlook is one important aspect to maintaining access to capital. Credit rating agencies are concerned about cash flows. A reduction in the allowed return on equity would signal a likely reduction in cash flow and put downward pressure on Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company's credit metrics, which are already on the borderline of investment

grade.[52] Maintaining a strong credit rating is particularly critical during a period forecast to have substantial capital investment for infrastructure. In addition, as the Fed continues to taper its bond purchases, one can expect that the cost of capital will increase although the pace of such an increase cannot be predicted with certainty. This means that estimates at the upper end of the range are more representative of the cost of capital expected over the next three years.

Q. Does this conclude your direct testimony?

A. Yes, it does.

[52] Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company are rated Baa3 by Moodys, BBB by Fitch, and BBB- by S&P. These are the corporate (S&P) / issuer (Moody's and Fitch) credit ratings for the Companies.

APPENDIX A:

QUALIFICATIONS OF MICHAEL J. VILBERT

Dr. Michael J. Vilbert is Office Director of The Brattle Group's San Francisco office and has 20 years of experience as an economic consultant. He is an expert in cost of capital, financial planning and valuation who has advised clients on these matters in the context of a wide variety of investment and regulatory decisions. In the area of regulatory economics, he has testified or submitted testimony on the cost of capital for regulated companies in the water, electric, natural gas and petroleum industries in the U.S. and Canada. His testimony has addressed the effect of regulatory policies such as decoupling or must-run generation on a regulated company's cost of capital and the appropriate way to estimate the cost of capital for companies organized as Master Limited Partnerships. He analyzed issues associated with situations imposing asymmetric risk on utilities, the prudence of purchased power contracts, the economics of energy conservation programs, the appropriate incentives for investment in electric transmission assets and the effect of long-term purchased power agreements on the financial risk of a company. He has served as a neutral arbitrator in a contract dispute and analyzed the effectiveness of a company's electric power supply auction. He has also estimated economic damages and analyzed the business purpose and economic substance of tax related transactions, valued assets in arbitration for purchase at the end of the contract, estimated the stranded costs of resulting from the deregulation of electric generation and from the municipalization of an electric utility's distribution assets and addressed the appropriate regulatory accounting for depreciation and goodwill.

He received his Ph.D. in Financial Economics from the Wharton School of the University of Pennsylvania, an MBA from the University of Utah, an M.S. from the Fletcher School of Law and Diplomacy, Tufts University, and a B.S. degree from the United States Air Force Academy. He joined The Brattle Group in 1994 after a career as an Air Force officer, where he served as a fighter pilot, intelligence officer, and professor of finance at the Air Force Academy. .

REPRESENTATIVE CONSULTING EXPERIENCE

- Dr. Vilbert served as the consulting expert in several cases for the U.S. Department of Justice and the Internal Revenue Service regarding the business purpose and economic substance of a series of tax related transactions. These projects required the analysis of a complex series of financial transactions including the review of voluminous documentary evidence and required expertise in financial theory, financial market as well as accounting and financial statement analysis.

- In a securities fraud case, Dr. Vilbert designed and created a model to value the private placement stock of a drug store chain as if there had been full disclosure of the actual financial condition of the firm. He analyzed key financial data and security analysts''

reports regarding the future of the industry in order to recreate pro forma balance sheet and income statements under a variety of scenarios designed to establish the value of the firm.

- For pharmaceutical companies rebutting price-fixing claims in antitrust litigation, Dr. Vilbert was a member of a team that prepared a comprehensive analysis of industry profitability. The analysis replicated, tested and critiqued the major recent analyses of drug costs, risks and returns. The analyses helped develop expert witness testimony to rebut allegations of excess profits.

- For an independent electric power producer, Dr. Vilbert created a model that analyzed the reasonableness of rates and costs filed by a natural gas pipeline. The model not only duplicated the pipeline's rates, but it also allowed simulation of a variety of "what if" scenarios associated with cost recovery under alternative time patterns and joint cost allocations. Results of the analysis were adopted by the intervenor group for negotiation with the pipeline.

- For the CFO of an electric utility, Dr. Vilbert developed the valuation model used to support a stranded cost estimation filing. The case involved a conflict between two utilities over the responsibility for out-of-market costs associated with a power purchase contract between them. In addition, he advised and analyzed cost recovery mechanisms that would allow full recovery of the stranded costs while providing a rate reduction for the company's rate payers.

- Dr. Vilbert has testified as well as assisted in the preparation of testimony and the development of estimation models in numerous cost-of-capital cases for natural gas pipeline, water utility and electric utility clients before the Federal Energy Regulatory Commission ("FERC") and state regulatory commissions. These have spanned standard estimation techniques (e.g., Discounted Cash Flow and Risk Positioning models). He has also developed and applied more advanced models specific to the industries or lines of business in question, e.g., based on the structure and risk characteristics of cash flows, or based on multi-factor models that better characterize regulated industries.

- Dr. Vilbert has valued several large, residual oil-fired generating stations to evaluate the possible conversion to natural gas or other fuels. In these analyses, the expected pre- and post-conversion station values were computed using a range of market electricity and fuel cost conditions.

- For a major western electric utility, Dr. Vilbert helped prepare testimony that analyzed the prudence of QF contract enforcement. The testimony demonstrated that the utility had not been compensated in its allowed cost of capital for major disallowances stemming from QF contract management.

- Dr. Vilbert analyzed the economic need for a major natural gas pipeline expansion to the Midwest. This involved evaluating forecasts of natural gas use in various regions of the United States and the effect of additional supplies on the pattern of natural gas pipeline

use. The analysis was used to justify the expansion before the FERC and the National Energy Board of Canada.

- For a Public Utility Commission in the Northeast, Dr. Vilbert analyzed the auction of an electric utility's purchase power agreements to determine whether the outcome of the auction was in the ratepayers' interest. The work involved the analysis of the auction procedures as well as the benefits to ratepayers of transferring risk of the PPA payments to the buyer.

- Dr. Vilbert led a team tasked to determine whether bridge tolls were "just and reasonable" for a non-profit port authority. Determination of the cost of service for the authority required estimation of the value of the authority's assets using the trended original cost methodology as well as evaluation of the operations and maintenance budgets. Investment costs, bridge traffic information and inflation indices covering a 75 year period were utilized to estimate the value of four bridges and a passenger transit line valued in excess of $1 billion.

- Dr. Vilbert helped a recently privatized railroad in Brazil develop an estimate of its revenue requirements, including a determination of the railroad's cost of capital. He also helped evaluate alternative rate structures designed to provide economic incentives to shippers as well as to the railroad for improved service. This involved the explanation and analysis of the contribution margin of numerous shipper products, improved cost analysis and evaluation of bottlenecks in the system.

- For a utility in the Southeast, Dr. Vilbert quantified the company's stranded costs under several legislative electric restructuring scenarios. This involved the evaluation of all of the company's fossil and nuclear generating units, its contracts with Qualifying Facilities and the prudence of those QF contracts. He provided analysis concerning the impact of securitizing the company's stranded costs as a means of reducing the cost to the ratepayers and several alternative designs for recovering stranded costs.

- For a recently privatized electric utility in Australia, Dr. Vilbert evaluated the proposed regulatory scheme of the Australian Competition and Consumer Commission for the company's electric transmission system. The evaluation highlighted the elements of the proposed regulation which would impose uncompensated asymmetric risks on the company and the need to either eliminate the asymmetry in risk or provide additional compensation so that the company could expect to earn its cost of capital.

- For an electric utility in the Southwest, Dr. Vilbert helped design and create a model to estimate the stranded costs of the company's portfolio of Qualifying Facilities and Power Purchase contracts. This exercise was complicated by the many variations in the provisions of the contracts that required modeling in order to capture the effect of changes in either the performance of the plants or in the estimated market price of electricity.

- Dr. Vilbert helped prepare the testimony responding to a FERC request for further

comments on the appropriate return on equity for electric transmission facilities. In addition, Dr. Vilbert was a member of the team that made a presentation to the FERC staff on the expected risks of the unbundled electric transmission line of business.

- Dr. Vilbert and Mr. Frank C. Graves, also of The Brattle Group, prepared testimony evaluating an innovative Canadian stranded cost recovery procedure involving the auctioning of the output of the province's electric generation plants instead of the plants themselves. The evaluation required the analysis of the terms and conditions of the long-term contracts specifying the revenue requirements of the plants for their entire forecasted remaining economic life and required an estimate of the cost of capital for the plant owners under this new stranded cost recovery concept.

- Dr. Vilbert served as the neutral arbitrator for the valuation of a petroleum products tanker. The valuation required analysis of the Jones Act tanker market and the supply and demand balance of the available U.S. constructed tanker fleet.

- Dr. Vilbert evaluated the appropriate "bareboat" charter rate for an oil drilling platform for the renewal period following the end of a long-term lease. The evaluation required analysis of the market for oil drilling platforms around the world including trends in construction and labor costs and the demand for platforms in varying geographical environments.

PRESENTATIONS

"Utility Distribution Cost of Capital," *EEI Electric Rates Advanced Course*, Bloomington, IN, 2002, 2003.

"Issues for Cost of Capital Estimation," with Bente Villadsen, *Edison Electric Institute Cost of Capital Conference*, Chicago, IL, February 2004.

"Not Your Father's Rate of Return Methodology," *Utility Commissioners/Wall Street Dialogue*, NY, May 2004.

"Utility Distribution Cost of Capital," *EEI Electric Rates Advanced Course*, Madison, WI, July 2004.

"Cost of Capital Estimation: Issues and Answers," *MidAmerican Regulatory Finance Conference*, Des Moines, IA, April 7, 2005.

"Cost of Capital - Explaining to the Commission - Different ROEs for Different Parts of the Business," *EEI Economic Regulation & Competition Analysts Meeting*, May 2, 2005.

"Current Issues in Cost of Capital," with Bente Villadsen, *EEI Electric Rates Advanced Course*, Madison, WI, 2005.

"Current Issues in Estimating the Cost of Capital," *EEI Electric Rates Advanced Course*, Madison, WI, 2006, 2007, 2008, 2009, 2010 and 2011.

"Revisiting the Development of Proxy Groups and Relative Risk Analysis," Society of Utility and Regulatory Financial Analysts: 39th Financial Forum, April 2007.

"Current Issues in Explaining the Cost of Capital to Utility Commissions" Cost of Capital Seminar, Philadelphia, PA, 2008.

"Impact of the Ongoing Economic Crisis on the Cost of Capital of the U.S. Utility Sector", New York Public Service Commission, Albany, NY, April 20, 2009.

"Impact of the Ongoing Economic Crisis on the Cost of Capital of the U.S. Utility Sector", National Association of Water Companies: New York Chapter, Albany, NY, May 21, 2009.

"Introduction to Retail Rates," presented to California Water Services Company, 18-19 November 2010.

"Point – Counterpoint: The Regulatory Compact and Pipeline Competition," with (Jonathan Lesser, Continental Economics), Energy Bar Association, Western Meeting, February 22, 2013

"An Empirical Study of the Impact of Decoupling on the Cost of Capital," Center for Research in Regulated Industries, Shawnee on Delaware, PA, May 17, 2013.

"The Cost of Capital for Alabama Power Company," Public Service Commission public meeting, July 17, 2013.

ARTICLES

"Flaws in the Proposed IRS Rule to Reinstate Amortization of Deferred Tax Balances Associated with Generation Assets Reorganized in Industry Restructuring," by Frank C. Graves and Michael J. Vilbert, white paper for *Edison Electric Institute* (EEI) to the IRS, July 25, 2003.

"The Effect of Debt on the Cost of Equity in a Regulatory Setting," by A. Lawrence Kolbe, Michael J. Vilbert, Bente Villadsen and The Brattle Group, *Edison Electric Institute*, April 2005.

"Measuring Return on Equity Correctly: Why current estimation models set allowed ROE too low," by A. Lawrence Kolbe, Michael J. Vilbert and Bente Villadsen, *Public Utilities Fortnightly*, August 2005.

"Understanding Debt Imputation Issues," by Michael J. Vilbert, Bente Villadsen and Joseph B. Wharton, *Edison Electric Institute*, August 2008.

"Review of Regulatory Cost of Capital Methodologies," (with Bente Villadsen and Matthew Aharonian), Canadian Transportation Agency, September 2010.

"The Impact of Decoupling on the Cost of Capital – An Empirical Study," Joseph B. Wharton, Michael J. Vilbert, Richard E. Goldberg, and Toby Brown, Discussion Paper, *The Brattle Group*, March 2011.

"Economic Impact on City of Portland of Allocation of Remediation Costs of Portland Harbor Superfund Site," with Professor David Sunding, March 2012.

"Survey of Cost of Capital Practices in Canada," (with Bente Villadsen and Toby Brown), prepared for British Columbia Utilities Commission, May 2012.

"Estimating the Cost of Equity for Regulated Companies," (with P.R. Carpenter, Bente Villadsen, T. Brown, and P. Kumar), prepared for the Australian Pipeline Industry Association and filed with the Australian Energy Regulator and the Economic Regulation Authority, Western Australia, February 2013.

"The Impact of Revenue Decoupling on the Cost of Capital for Electric Utilities: An Empirical Investigation," prepared for The Energy Foundation by Michael J. Vilbert, Joseph B. Wharton, Charles Gibbons, Melanie Rosenberg, and Yang Wei Neo, March 20, 2104.

TESTIMONY

Direct and rebuttal testimony before the Alberta Energy and Utilities Board on behalf of TransAlta Utilities Corporation in the matter of an application for approval of its 1999 and 2000 generation tariff, transmission tariff, and distribution revenue requirement, Docket U99099, October 1998.

Direct testimony before the Federal Energy Regulatory Commission on behalf of Central Maine Power in Docket No. ER00-982-000, December 1999.

Direct testimony before the Alberta Energy and Utilities Board on behalf of TransAlta Utilities Corporation for approval of its 2001 transmission tariff, May 2000.

Direct testimony before the Federal Energy Regulatory Commission on behalf of Mississippi River Transmission Corporation in Docket No. RP01-292-000, March 2001.

Written evidence, rebuttal, reply and further reply before the National Energy Board in the matter of an application by TransCanada PipeLines Limited for orders pursuant to Part I and Part IV of the *National Energy Board Act*, Order AO-1-RH-4-2001, May 2001, Nov. 2001, Feb. 2002.

Written evidence before the Public Utility Board on behalf of Newfoundland & Labrador Hydro - Rate Hearings, October 2001, Order No. P.U.7 (2002-2003), dated June 2002.

Direct testimony (with William Lindsay) before the Federal Energy Regulatory Commission on behalf of DTE East China, LLC in Docket No. ER02-1599-000, April 2002.

Direct and rebuttal reports before the Arbitration Panel in the arbitration of stranded costs for the City of Casselberry, FL, Case No. 00-CA-1107-16-L, July 2002.

Direct reports before the Arbitration Board for Petroleum products trade in the Arbitration of the Military Sealift Command vs. Household Commercial Financial Services, fair value of sale of the Darnell, October 2002.

Direct testimony and hearing before the Arbitration Panel in the arbitration of stranded costs for the City of Winter Park, FL, In the Circuit Court of the Ninth Judicial Circuit in and for Orange County, FL, Case No. C1-01-4558-39, December 2002.

Direct testimony before the Federal Energy Regulatory Commission on behalf of Florida Power Corporation, dba Progress Energy Florida, Inc. in Docket No. SC03-1-000, March 2003.

Direct report before the Arbitration Panel in the arbitration of stranded costs for the Town of Belleair, FL, Case No. 000-6487-C1-007, April 2003.

Direct and rebuttal reports before the Alberta Energy and Utilities Board in the matter of the Alberta Energy and Utilities Board Act, R.S.A. 2000, c. A-17, and the Regulations under it; in the matter of the Gas Utilities Act, R.S.A. 2000, c. G-5, and the Regulations under it; in the matter of the Public Utilities Board Act, R.S.A. 2000, c. P-45, as amended, and the Regulations under it; and in the matter of Alberta Energy and Utilities Generic Cost of Capital Hearing, Application No. 1271597, July 2003, November 2003, Decision 2004-052, dated July 2004.

Written evidence before the National Energy Board in the matter of the National Energy Board Act, R.S.C. 1985, c. N−7, as amended, (Act) and the Regulations made under it; and in the matter of an application by TransCanada PipeLines Limited for orders pursuant to Part IV of the *National Energy Board Act*, for approval of Mainline Tolls for 2004, RH-2-2004, January 2004.

Direct and rebuttal testimony before the Public Service Commission of West Virginia, on Cost of Capital for West Virginia-American Water Company, Case No 04-0373-W-42T, May 2004.

Direct and rebuttal testimony before the Federal Energy Regulatory Commission on Energy Allocation of Debt Cost for Incremental Shipping Rates for Edison Mission Energy, Docket No. RP04-274-000, December 2004 and March 2005.

Direct testimony before the Arizona Corporation Commission, Cost of Capital for Paradise Valley Water Company, a subsidiary of Arizona-American Water Company, Docket No. WS-01303A-05, May 2005.

Written evidence before the Ontario Energy Board, Cost of Capital for Union Gas Limited, Inc., Docket No. EB-2005-0520, January 2006.

Direct and rebuttal testimony before the Pennsylvania Public Utility Commission, Return on Equity for Metropolitan Edison Company, Docket No. R-00061366 and Pennsylvania Electric Company,
Docket No. R-00061367, April 2006 and August 2006.

Expert report in the United States Tax Court, Docket No. 21309-05, 34th Street Partners, DH Petersburg Investment, LLC and Mid-Atlantic Finance, Partners Other than the Tax Matters Partner, Petitioner, v. Commissioner of Internal Revenue, Respondent, July 28, 2006.

Direct and supplemental testimony before the Federal Energy Regulatory Commission, Docket No. ER06-427-003, on behalf of Mystic Development, LLC on the Cost of Capital for Mystic 8 and 9 Generating Plants Operating Under Reliability Must Run Contract, August 2006 and September 2006.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER07-46-000, on behalf of Northwestern Corporation on the Cost of Capital for Transmission Assets, October 2006.

Direct and rebuttal testimony before the Tennessee Regulatory Authority, Case No. 06-00290, on behalf of Tennessee American Water Company, on the Cost of Capital, November, 2006 and April 2007.

Direct and rebuttal testimony before the Public Service Commission of Wisconsin, Docket No. 5-UR-103, on behalf of Wisconsin Energy Corporation, on the Cost of Capital for Wisconsin Electric Power Company and Wisconsin Gas LLC, May 2007 and October 2007.

Rebuttal testimony before the California Public Utilities Commission, Docket No. A. 07-01-036-39, on behalf of California-American Water Company, on the Cost of Capital, May 2007.

Direct testimony before the Public Utilities Commission of the State of South Dakota, Docket No. NG-07-013, on behalf of NorthWestern Corporation, on the Cost of Capital for NorthWestern Energy Company's natural gas operations in South Dakota, June 2007.

Direct, supplemental and rebuttal testimony before the Public Utilities Commission of Ohio, Case No. 07-551-EL-AIR, Case No. 07-552-EL-ATA, Case No. 07-553-EL-AAM, and Case No. 07-554-EL-UNC, on behalf of Ohio Edison Company, The Toledo Edison Company, and The Cleveland Electric Illuminating Company, on the cost of capital for the FirstEnergy Company's Ohio electric distribution utilities, June 2007, January 2008 and February 2008.

Direct testimony before the Public Service Commission of West Virginia, Case No. 07-0998-W-42T, on behalf of West Virginia American Water Company on cost of capital, July 2007.

Direct and rebuttal testimony before the State Corporation Commission of Virginia, Case No. PUE-2007-00066, on behalf of Virginia Electric and Power Company on the cost of capital for its southwest Virginia coal plant, July 2007 and December 2007.

Direct and Supplemental testimony before the Public Utilities Commission of Ohio, Case No. 07-829-GA-AIR, Case No. 07-830-GA-ALT, and Case No. 07-831-GA-AAM, on behalf of Dominion East Ohio Company, on the rate of return for Dominion East Ohio's natural gas distribution operations, September 2007 and June 2008.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER08-92-000 to Docket No. ER08-92-003, on behalf of Virginia Electric and Power Company, on the Cost of Capital for Transmission Assets, October 2007.

Direct and rebuttal testimony before the California Public Utilities Commission, Docket No. A. 07-01-022, on behalf of California-American Water Company, on the Effect of a Water Revenue Adjustment Mechanism on the Cost of Capital, October 2007 and November 2007.

Written direct and reply evidence before the National Energy Board in the matter of the National Energy Board Act, R.S.C. 1985, c. N−7, as amended, and the Regulations made thereunder; and in the matter of an application by Trans Québec & Maritimes PipeLines Inc. ("TQM") for orders pursuant to Part I and Part IV of the *National Energy Board Act*, for determining the overall fair return on capital for tolls charged by TQM, December 2007 and September 2008, Decision RH-1-2008, dated March 2009.

Comments in support of The Interstate Natural Gas Association of America's Additional Initial Comments on the FERC's Proposed Policy Statement with regard to the Composition of Proxy Companies for Determining Gas and Oil Pipeline Return on Equity, Docket No. PL07-2-000, December, 2007.

Direct and rebuttal testimony on the Cost of Capital before the Tennessee Regulatory Authority, Case No. 08-00039, on behalf of Tennessee American Water Company, March and August 2008.

Post-Technical Conference Affidavit on behalf of The Interstate Natural Gas Association of America in response to the Reply Comments of the State of Alaska with regard the FERC's Proposed Policy Statement on to the Composition of Proxy Companies for Determining Gas and Oil Pipeline Return on Equity, Docket No. PL07-2-000, March, 2008

Direct and rebuttal testimony before the California Public Utilities Commission, Docket No. A.08-05-003, on behalf of California-American Water Company, concerning Cost of Capital, May 2008 and August 2008.

Rebuttal testimony on the financial risk of Purchased Power Agreements, before the Public Utilities Commission of the State of Colorado, Docket No. 07A-447E, in the matter of the application of Public Service Company of Colorado for approval of its 2007 Colorado Resource Plan, June 2008.

Direct and rebuttal testimony before the Federal Energy Regulatory Commission, Docket No. RP08-426-000, on behalf of El Paso Natural Gas Company, on the Cost of Capital for Natural Gas Transmission Assets, June 2008 and August 2009.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER08-1207-000, on behalf of Virginia Electric and Power Company, on the incentive Cost of Capital for investment in New Electric Transmission Assets, June 2008
Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER08-1233-000, on behalf of Public Service Electric and Gas Company, on the Cost of Capital for Electric Transmission Assets, July 2008.

Direct and rebuttal testimony before the Public Service Commission of West Virginia, Case No. 08-0900-W-42t, on behalf of West Virginia-American Water Company concerning the Cost of Capital for Water Utility assets, July 2008 and November 2008.

Direct and rebuttal testimony before the Public Utilities Commission of Ohio, Case No. 08-935-EL-SSO, on behalf of Ohio Edison Company, The Toledo Edison Company, and The Cleveland Electric Illuminating Company, with regard to the test to determine Significantly Excessive Earnings within the context of Senate Bill No. 221, September 2008 and October 2008.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER09-249-000, on behalf of Public Service Electric and Gas Company, on the incentive Cost of Capital for Mid-Atlantic Power Pathway Electric Transmission Assets, November 2008.

Direct and rebuttal testimony before the Public Service Commission of West Virginia, Case No. 08-1783-G-PC, on behalf of Dominion Hope Gas Company concerning the Cost of Capital for Gas Local Distribution Company assets, November 2008 and May 2009.

Written Evidence before the Alberta Utilities Commission in the matter of the Alberta Utilities Commission Act, S.A. 2007, c. A-37.2, as amended, and the regulations made thereunder; and IN THE MATTER OF the Gas Utilities Act, R.S.A. 2000, c. G-5, as amended, and the regulations made thereunder; and IN THE MATTER OF the Public Utilities Act, R.S.A. 2000, c. P-45, as amended, and the regulations made thereunder; and IN THE MATTER OF Alberta Utilities Commission 2009 Generic Cost of Capital Hearing, Application No. 1578571/Proceeding No. 85. 2009 Generic Cost of Capital Proceeding on behalf of NGTL, November 2008.

Written and Reply Evidence before the Alberta Utilities Commission in the matter of the Alberta Utilities Commission Act, S.A. 2007, c. A-37.2, as amended, and the regulations made thereunder; and IN THE MATTER OF the Gas Utilities Act, R.S.A. 2000, c. G-5, as amended, and the regulations made thereunder; and IN THE MATTER OF the Public Utilities Act, R.S.A. 2000, c. P-45, as amended, and the regulations made thereunder; and IN THE MATTER OF Alberta Utilities Commission 2009 Generic Cost of Capital Hearing, Application No. 1578571/Proceeding No. 85. 2009 Generic Cost of Capital Proceeding on behalf of AltaGas Utilities Inc., November 2008 and May 2009.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER09-548-000, on behalf of ITC Great Plains, LLC, on the Cost of Capital for Electric Transmission Assets, January 2009.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER09-681-000, on behalf of Green Power Express, LLP, on the Cost of Capital for Electric Transmission Assets, February 2009.
Written evidence before the Régie de l'Énergie on behalf of Gaz Métro Limited Partnership, Cause Tarifaire 2010, R-3690-2009, on the Cost of Capital for natural gas transmission assets, May 2009.

Direct and rebuttal testimony before the Public Service Commission of Wisconsin, Docket No. 6680-UR-117, on behalf of Wisconsin Power and Light Company, on the cost of capital for electric and natural gas distribution assets, May 2009 and September 2009.

Direct and rebuttal testimony before the State of New Jersey Board of Public Utilities in the Matter of the Petition of Public Service Electric and Gas Company for Approval of an Increase in Electric and Gas Rates and for Changes in the Tariffs for Electric and Gas Service, B.P.U.N.J. No. 14 Electric and B.P.U.N.J No. 14 Gas Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and for Approval of a Gas Weather Normalization Clause; a Pension Expense Tracker and for other Appropriate Relief BPU Docket No. GR09050422, June 2009 and December 2009.

Rebuttal testimony before the Florida Public Service Commission in re: Petition for Increase in Rates by Progress Energy Florida, Inc., Docket No. 090079-EI, August 2009.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER10-159-000, on behalf of Public Service Electric and Gas Company, on the incentive Cost of Capital for the Branchburg-Roseland-Hudson 500 kV Line electric transmission project ("BRH Project"), October 2009.

Direct and Rebuttal Testimony before the California Public Utilities Commission regarding cost of service for San Joaquin Valley crude oil pipeline on behalf of Chevron Products Company, Docket Nos. A.08-09-024, C.08-03-021, C.09-02-007 and C.09-03-027, December 2009 and April 2010.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER10-516-000, on behalf of South Caroline Gas and Electric Company, on the Cost of Capital for Electric Transmission Assets, December 2009.

Direct testimony before the Oklahoma Corporation Commission, Cause No. PUD 201000050, on behalf of Public Service Company of Oklahoma, regarding cost of service for a regulated electric utility, June 2010.

Direct testimony before the Michigan Public Service Commission, Case No. U-16400, on behalf of Michigan Consolidated Gas Company, regarding cost of service for natural gas distribution assets, July 15, 2010

Direct testimony before the Public Utilities Commission of Ohio, Case No. 10-1265-EL-UNC, In the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2009 Under the Electric Security Plan of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, September 2010.

Direct and rebuttal testimony before the Federal Energy Regulatory Commission, Docket No. RP10-1398-000, on behalf of El Paso Natural Gas Company, on the Cost of Capital for Natural Gas Transmission Assets, September 2010 and September 2011.

Direct and rebuttal testimony before the Michigan Public Service Commission, In the matter of the application of The Detroit Edison Company, for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority, Case No. U-16472, October 2010 and April 2011.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. RP11-1566-000, on behalf Tennessee Gas Pipeline Company, on the Cost of Capital for Natural Gas Transmission Assets, November 2010.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER11-013-000, on behalf of the Atlantic Wind Connection Companies, on the Cost of Capital and Cost of Capital incentive adders for Electric Transmission Assets, December 2010.

Direct and rebuttal testimony before the Public Utilities Commission of the State of California, Docket No. A.11-05-001, on behalf of California Water Service Company, on the Cost of Capital for Water Distribution Assets, April 2011 and September 2011.

Rebuttal testimony before the Public Utilities Commission of the State of California, Docket No. A.10-09-018, on behalf of California American Water Company, on Application of California American Water Company (U210W) for Authorization to Implement the Carmel River Reroute and San Clemente Dam Removal Project and to Recover the Costs Associated with the Project in Rates, June 2011.

Initial testimony before the Public Utilities Commission of Ohio, Case No. 11-4553-EL-UNC, In the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2010 Under the Electric Security Plan of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, July 2011.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. PA10-13-000, on behalf of ITC Holdings Corp. in response to FERC Staff, Office of Enforcement, Division of Audits, Draft Report on the appropriate accounting for goodwill for the acquisition of ITC Midwest assets from Interstate Power and Light Company, July 2011.

Written direct and reply evidence before the National Energy Board in the matter of the National Energy Board Act, R.S.C. 1985, c. N−7, as amended, and the Regulations made thereunder; and in the matter of an application by TransCanada PipeLines Limited for orders pursuant to Part I and Part IV of the *National Energy Board Act*, for determining the overall fair return on capital in the business and services restructuring and Mainline 2012 – 2013 toll application, RH-003-2011, September 2011 and May 2012.

Report before the Arbitrator on behalf of Canadian National Railway Company in the matter of a Submission by Tolko Marketing and Sales LTD for Final Offer Arbitration of the Freight Rates and Conditions Associated with Respect to the Movement of Lumber by Canadian National Railway Company from High Level, Alberta to Various Destinations in the Vancouver, British Columbia Area, October, 2011.

Rebuttal Evidence before the National Energy Board in the matter of AltaGas Utilities Inc., 2010-2012 GRA Phase I, Application No. 1606694; Proceeding I.D. 904, October, 2011.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER12-296-000, on behalf of Public Service Electric and Gas Company on the Cost of Capital and for Incentive Rate Treatment for the Northeast Grid Reliability Transmission Project, October 2011.

Rebuttal testimony before the Florida Public Service Commission, Docket No. 110138-EL, on behalf of Gulf Power, a Southern Company, on the method to adjust the return on equity for differences in financial risk, November 2011.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. PA10-13-000, on behalf of ITC Holdings Corp. regarding a rehearing for FERC Staff, Office of Enforcement, Division of Audits, Report on the appropriate accounting for goodwill for the acquisition of ITC Midwest assets from Interstate Power and Light Company, February 2012.

Direct and rebuttal testimony before the Michigan Public Service Commission, Case No. U-16999, on behalf of Michigan Consolidated Gas Company, regarding cost of service for natural gas distribution assets, April 2012 and October 2012.

Deposition testimony in *Primex Farms, LLC, Plaintiff, v. Roll International Corporation, Westside Mutual Water Company, LLC, Paramount Farming Company, LLC, Defendants*, April 2012.

Deposition testimony in *Tahoe City Public Utility District, Plaintiff vs. Case No. SCV 27283 Tahoe Park Water Company, Lake Forest Water Company, Defendants*, May 2012.

Direct testimony before the Public Utilities Commission of Ohio, In the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2011 Under the Electric Security Plan of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, Case No. 12-1544-EL-UNC, May 2012.

Joint Rebuttal Testimony before the California Public Utility Commission on behalf of California American Water Company, regarding Application of California-American Water Company (U210W) for Authorization to increase its Revenues for Water Service, Application 10-07-007, and In the Matter of the Application of California-American Water Company (U210W) for an Order Authorizing and Imposing a Moratorium on New Water Service Connections in its Larkfield District, Application 11-09-016, August 2012.

Direct testimony and supporting exhibits on behalf of Transcontinental Gas Pipeline Company, LLC, before the Federal Energy Regulatory Commission, on the Cost of Capital for Interstate Natural Gas Pipeline assets, Docket No. RP12-993-000, August 2012.
Direct Testimony before the North Carolina Utilities Commission on behalf of Cardinal Pipeline Company LLC, regarding the cost of capital for an intrastate natural gas pipeline, Docket G-39, Sub 28, August 2012.

Rebuttal Testimony before the Public Utilities Commission of the State of California on behalf of Southern California Edison regarding Application 12-04-015 of Southern California Edison Company (U 338-E) For Authority to Establish Its Authorized Cost of Capital for Utility Operations for 2013 and to Reset the Annual Cost of Capital Adjustment Mechanism , August 2012.

Direct and Rebuttal testimony before the Public Utilities Commission of the State of Colorado on behalf of Rocky Mountain Natural Gas LLC regarding the cost of capital for an intrastate natural gas pipeline, Docket No. 13AL-143G, with Advice Letter No. 77, January 2013 and October 2013.

Expert Report, with A. Lawrence Kolbe and Bente Villadsen, on cost of equity, non-recovery of operating cost and asset retirement obligations on behalf of the AOSPL oil pipeline in arbitration in the matter of the 1993 AOSPL Pipeline Agreement between: Canadian Oil Sands Partnership #1, Imperial Oil Resources, Suncor Energy Oil & Gas Partnership, Sinopec Oil Sands Partnership, Nexen Oil Sands Partnership, Mocal Energy Limited and Murphy Oil Company Ltd- and - Alberta Oil Sands Pipeline Ltd. in its capacity as General Partner of Pembina Oil Sands Pipeline L.P., April 2013.

Direct testimony before the Public Utilities Commission of Ohio in the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2012 Under the Electric Security Plans of Ohio on behalf of the Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, Case No. 13-1147-EL-UNC, May 2013.

Presentation on behalf of Alabama Power Company with regard to the appropriate cost of capital for the Rate Stabilization and Equalization mechanism, Dockets 18117 and 18416, July 2013.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER13-2412-000, on behalf of Trans Bay Cable LLC, regarding the appropriate ROE to include in the Submission of Revisions to Appendix I of the Trans Bay Transmission Owner Tariff to be Effective 11/23/2013, September 2013.

Direct testimony, rebuttal testimony and sur-surrebuttal testimony before the Arkansas Public Service Commission regarding the appropriate ROE to allow In the Matter of the Application of SourceGas Arkansas Inc., Docket No. 13-079-U for Approval of a General Change in Rates, and Tariffs, September 2013, March 2014, and April 2014.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER14-1332-000, on behalf of DATC Path 15, LLC, regarding the appropriate ROE to include in the

Submission of Revisions to Appendix I in TO Tariff Reflecting Updated TRR to be Effective April 20, 2014, January 2014.

Direct testimony before the Public Utilities Commission of Ohio in the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2012 Under the Electric Security Plans of Ohio on behalf of the Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, Case No. 14-0828-EL-UNC, May 2014.

Direct testimony before the Public Service Commission of West Virginia in the Matter of the Application of Monongahela Power Company and The Potomac Edison Company, Case No. 14-0702-E-42T for approval of a general change in rates and tariffs, June 2014.

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

METROPOLITAN EDISON COMPANY
DOCKET NO. R-2014-2428745

PENNSYLVANIA ELECTRIC COMPANY
DOCKET NO. R-2014-2428743

PENNSYLVANIA POWER COMPANY
DOCKET NO. R-2014-2428744

WEST PENN POWER COMPANY
DOCKET NO. R-2014-2428742

Exhibit MJV-1

List of Topics Addressed

Cost of Common Equity Capital

Table No. MJV-1

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Table No. MJV-5	Estimated Growth Rates
Table No. MJV-6	DCF Cost of Equity of the Electric Sample
Table No. MJV-7	Overall After-Tax DCF Cost of Capital of the Electric Sample
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Table No. MJV-2

Electric Sample

Classification of Companies by Assets

Company	Company Category
ALLETE Inc	R
Ameren Corp	R
American Electric Power Co Inc	R
Black Hills Corp	R
CMS Energy Corp	R
Cleco Corp	R
CenterPoint Energy Inc	MR
Dominion Resources Inc/VA	MR
DTE Energy Co	R
Consolidated Edison Inc	R
El Paso Electric Co	R
Edison International	R
Entergy Corp	R
Great Plains Energy Inc	R
Hawaiian Electric Industries Inc	MR
IDACORP Inc	R
Alliant Energy Corp	R
MGE Energy Inc	MR
NextEra Energy Inc	MR
OGE Energy Corp	MR
Otter Tail Corp	MR
PG&E Corp	R
Public Service Enterprise Group Inc	MR
Pinnacle West Capital Corp	R
Portland General Electric Co	R
SCANA Corp	MR
Southern Co/The	R
Sempra Energy	MR
Integrys Energy Group Inc	R
Vectren Corp	MR
Wisconsin Energy Corp	R
Westar Energy Inc	R
Xcel Energy Inc	R

Sources and Notes:
Edison Electric Institute: "Stock Performance - Q4 2013 Financial Update"
R = Regulated (greater than 80 percent of total assets are regulated).
MR = Mostly Regulated (50 to 80 percent of total assets are regulated).
D = Diversified (less than 50 percent of total assets are regulated).

Table No. MJV-3

Market Value of the Electric Sample

Panel A: ALLETE Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$1,343	$1,343	$1,201	$1,079	$976	$930	$827	[a]
Shares Outstanding (in millions) - Common	41	41	39	38	36	35	33	[b]
Price per Share - Common	$49	$48.45	$38.44	$37	$32	$27	$24	[c]
Market Value of Common Equity	$2,040	$2,006	$1,515	$1,378	$1,139	$966	$776	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$2,040	$2,006	$1,515	$1,378	$1,139	$966	$776	[f]= [d] + [e]
Market to Book Value of Common Equity	1.52	1.49	1.26	1.28	1.17	1.04	0.94	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$307	$307	$273	$277	$240	$226	$252	[j]
Current Liabilities	$230	$230	$283	$163	$159	$133	$151	[k]
Current Portion of Long-Term Debt	$27	$27	$85	$5	$13	$5	$10	[l]
Net Working Capital	$104	$104	$74	$119	$94	$98	$112	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	#N/A N/A	#N/A N/A	#N/A N/A	$1	$1	$2	$6	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$1,083	$1,083	$934	$858	$772	$696	$588	[p]
Book Value of Long-Term Debt	$1,110	$1,110	$1,018	$863	$785	$701	$599	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$1,132	$1,132	$1,144	$966	$797	$735	$562	
Carrying Amount	$1,110	$1,110	$1,018	$863	$785	$701	$599	
Adjustment to Book Value of Long-Term Debt	$22	$22	$126	$103	$12	$34	($37)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$1,132	$1,132	$1,144	$966	$797	$735	$562	[s] = [q] + [r].
Market Value of Debt	$1,132	$1,132	$1,144	$966	$797	$735	$562	[t] = [s].
MARKET VALUE OF FIRM	$3,172	$3,137	$2,658	$2,345	$1,935	$1,701	$1,338	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	64.32%	63.93%	56.98%	58.79%	58.84%	56.79%	58.02%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	35.68%	36.07%	43.02%	41.21%	41.16%	43.21%	41.98%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014.
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel B: Ameren Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$6,544	$6,544	$6,616	$7,919	$7,730	$7,856	$6,963	[a]
Shares Outstanding (in millions) - Common	243	243	243	243	240	238	212	[b]
Price per Share - Common	$39	$35.29	$28.61	$29	$24	$23	$25	[c]
Market Value of Common Equity	$9,441	$8,561	$6,941	$7,070	$5,809	$5,360	$5,213	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$9,441	$8,561	$6,941	$7,070	$5,809	$5,360	$5,213	[f]= [d] + [e]
Market to Book Value of Common Equity	1.44	1.31	1.05	0.89	0.75	0.68	0.75	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$1,972	$1,972	$3,596	$2,295	$2,890	$2,842	$2,608	[j]
Current Liabilities	$2,461	$2,461	$2,686	$1,785	$1,888	$1,711	$3,077	[k]
Current Portion of Long-Term Debt	$534	$534	$355	$179	$155	$204	$380	[l]
Net Working Capital	$45	$45	$1,265	$689	$1,157	$1,335	($89)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$368	$368	$0	$148	$269	$20	$1,174	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$89	[o] = See Sources and Notes.
Long-Term Debt	$5,504	$5,504	$5,802	$6,677	$7,313	$7,941	$6,554	[p]
Book Value of Long-Term Debt	$6,038	$6,038	$6,157	$6,856	$7,468	$8,145	$7,023	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$6,584	$6,584	$7,728	$7,800	$7,661	$7,719	$6,144	
Carrying Amount	$6,038	$6,038	$6,981	$6,856	$7,008	$7,317	$6,934	
Adjustment to Book Value of Long-Term Debt	$546	$546	$747	$944	$653	$402	($790)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$6,584	$6,584	$6,904	$7,800	$8,121	$8,547	$6,233	[s] = [q] + [r].
Market Value of Debt	$6,584	$6,584	$6,904	$7,800	$8,121	$8,547	$6,233	[t] = [s].
MARKET VALUE OF FIRM	$16,025	$15,145	$13,845	$14,870	$13,930	$13,907	$11,446	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	58.92%	56.53%	50.14%	47.54%	41.70%	38.54%	45.55%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	41.08%	43.47%	49.86%	52.46%	58.30%	61.46%	54.45%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel C: American Electric Power Co Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$16,085	$16,085	$15,237	$14,664	$13,622	$13,140	$10,693	[a]
Shares Outstanding (in millions) - Common	488	488	486	483	481	478	426	[b]
Price per Share - Common	$52	$45.37	$40.59	$36	$31	$29	$24	[c]
Market Value of Common Equity	$25,511	$22,132	$19,713	$17,516	$14,752	$13,639	$10,234	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$25,511	$22,132	$19,713	$17,516	$14,752	$13,639	$10,234	[f]= [d] + [e]
Market to Book Value of Common Equity	1.59	1.38	1.29	1.19	1.08	1.04	0.96	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$60	$61	$61	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$60	$61	$61	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$4,310	$4,310	$4,589	$4,182	$5,016	$4,756	$3,775	[j]
Current Liabilities	$6,112	$6,112	$6,823	$6,611	$6,518	$5,327	$6,297	[k]
Current Portion of Long-Term Debt	$1,549	$1,549	$2,171	$1,433	$1,309	$1,741	$447	[l]
Net Working Capital	($253)	($253)	($63)	($996)	($193)	$1,170	($2,075)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$757	$757	$981	$1,650	$1,346	$126	$1,976	[n]
Adjusted Short-Term Debt	$253	$253	$63	$996	$193	$0	$1,976	[o] = See Sources and Notes.
Long-Term Debt	$16,828	$16,828	$15,586	$15,083	$15,502	$15,757	$15,536	[p]
Book Value of Long-Term Debt	$18,630	$18,630	$17,820	$17,512	$17,004	$17,498	$17,959	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$19,672	$19,672	$20,907	$19,259	$18,285	$18,479	$15,113	
Carrying Amount	$18,377	$18,377	$17,757	$16,516	$16,811	$17,498	$15,983	
Adjustment to Book Value of Long-Term Debt	$1,295	$1,295	$3,150	$2,743	$1,474	$981	($870)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$19,925	$19,925	$20,970	$20,255	$18,478	$18,479	$17,089	[s] = [q] + [r].
Market Value of Debt	$19,925	$19,925	$20,970	$20,255	$18,478	$18,479	$17,089	[t] = [s].
MARKET VALUE OF FIRM	$45,436	$42,057	$40,683	$37,771	$33,290	$32,179	$27,384	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	56.15%	52.62%	48.45%	46.37%	44.31%	42.38%	37.37%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	0.18%	0.19%	0.22%	[w] = [i] / [u].
Debt - Market Value Ratio	43.85%	47.38%	51.55%	53.63%	55.51%	57.43%	62.40%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel D: Black Hills Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$1,308	$1,308	$1,233	$1,209	$1,100	$1,085	$1,051	[a]
Shares Outstanding (in millions) - Common	44	44	44	44	39	39	39	[b]
Price per Share - Common	$57	$50.75	$34.52	$30	$27	$22	$20	[c]
Market Value of Common Equity	$2,522	$2,258	$1,526	$1,327	$1,044	$867	$778	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$2,522	$2,258	$1,526	$1,327	$1,044	$867	$778	[f]= [d] + [e]
Market to Book Value of Common Equity	1.93	1.73	1.24	1.10	0.95	0.80	0.74	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$345	$345	$405	$759	$684	$625	$800	[j]
Current Liabilities	$378	$378	$735	$878	$794	$645	$1,254	[k]
Current Portion of Long-Term Debt	$0	$0	$104	$2	$5	$35	$2	[l]
Net Working Capital	($33)	($33)	($226)	($117)	($104)	$15	($452)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$83	$83	$277	$345	$249	$165	$704	[n]
Adjusted Short-Term Debt	$33	$33	$226	$117	$104	$0	$452	[o] = See Sources and Notes.
Long-Term Debt	$1,397	$1,397	$939	$1,280	$1,186	$1,016	$501	[p]
Book Value of Long-Term Debt	$1,430	$1,430	$1,269	$1,400	$1,296	$1,051	$955	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$1,491	$1,491	$1,232	$1,464	$1,291	$1,124	$456	
Carrying Amount	$1,397	$1,397	$1,043	$1,283	$1,191	$1,051	$503	
Adjustment to Book Value of Long-Term Debt	$94	$94	$189	$181	$99	$73	($47)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$1,525	$1,525	$1,457	$1,581	$1,395	$1,124	$908	[s] = [q] + [r].
Market Value of Debt	$1,525	$1,525	$1,457	$1,581	$1,395	$1,124	$908	[t] = [s].
MARKET VALUE OF FIRM	$4,046	$3,783	$2,983	$2,908	$2,439	$1,991	$1,687	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	62.32%	59.70%	51.15%	45.64%	42.81%	43.55%	46.14%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	37.68%	40.30%	48.85%	54.36%	57.19%	56.45%	53.86%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel E: CMS Energy Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$3,454	$3,454	$3,194	$3,028	$2,793	$2,602	$2,476	[a]
Shares Outstanding (in millions) - Common	266	266	264	254	250	228	226	[b]
Price per Share - Common	$29	$26.04	$23.12	$19	$16	$13	$8	[c]
Market Value of Common Equity	$7,798	$6,930	$6,105	$4,932	$4,109	$2,978	$1,755	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$7,798	$6,930	$6,105	$4,932	$4,109	$2,978	$1,755	[f]= [d] + [e]
Market to Book Value of Common Equity	2.26	2.01	1.91	1.63	1.47	1.14	0.71	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$239	$243	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$239	$243	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$2,526	$2,526	$2,422	$2,565	$2,759	$2,742	$2,827	[j]
Current Liabilities	$1,945	$1,945	$1,797	$2,338	$2,021	$1,954	$1,863	[k]
Current Portion of Long-Term Debt	$562	$562	$541	$1,057	$750	$694	$514	[l]
Net Working Capital	$1,143	$1,143	$1,166	$1,284	$1,488	$1,482	$1,478	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$170	$170	$110	$0	$0	$40	$0	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$7,239	$7,239	$6,863	$6,207	$6,636	$6,092	$6,221	[p]
Book Value of Long-Term Debt	$7,801	$7,801	$7,404	$7,264	$7,386	$6,786	$6,735	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$8,368	$8,368	$8,347	$8,025	$7,861	$7,013	$5,962	
Carrying Amount	$7,642	$7,642	$7,229	$7,073	$7,174	$6,567	$6,348	
Adjustment to Book Value of Long-Term Debt	$726	$726	$1,118	$952	$687	$446	($386)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$8,527	$8,527	$8,522	$8,216	$8,073	$7,232	$6,349	[s] = [q] + [r].
Market Value of Debt	$8,527	$8,527	$8,522	$8,216	$8,073	$7,232	$6,349	[t] = [s].
MARKET VALUE OF FIRM	$16,325	$15,457	$14,627	$13,148	$12,182	$10,449	$8,347	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	47.77%	44.83%	41.74%	37.51%	33.73%	28.50%	21.02%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	2.29%	2.91%	[w] = [i] / [u].
Debt - Market Value Ratio	52.23%	55.17%	58.26%	62.49%	66.27%	69.21%	76.07%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel F: Cleco Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$1,586	$1,586	$1,499	$1,420	$1,317	$1,115	$1,060	[a]
Shares Outstanding (in millions) - Common	60	60	60	60	61	60	60	[b]
Price per Share - Common	$51	$45.65	$38.56	$34	$28	$24	$18	[c]
Market Value of Common Equity	$3,104	$2,760	$2,328	$2,065	$1,676	$1,421	$1,090	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$3,104	$2,760	$2,328	$2,065	$1,676	$1,421	$1,090	[f]= [d] + [e]
Market to Book Value of Common Equity	1.96	1.74	1.55	1.45	1.27	1.27	1.03	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$1	$1	$1	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$1	$1	$1	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$474	$474	$447	$457	$609	$494	$466	[j]
Current Liabilities	$243	$243	$295	$321	$478	$242	$361	[k]
Current Portion of Long-Term Debt	$17	$17	$91	$24	$12	$11	$64	[l]
Net Working Capital	$247	$247	$244	$160	$143	$264	$169	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$0	$0	$0	$0	$150	$0	$0	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$1,316	$1,316	$1,257	$1,337	$1,400	$1,320	$1,107	[p]
Book Value of Long-Term Debt	$1,333	$1,333	$1,348	$1,361	$1,412	$1,332	$1,170	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$1,420	$1,420	$1,580	$1,543	$1,462	$1,353	$1,110	
Carrying Amount	$1,331	$1,331	$1,345	$1,355	$1,404	$1,320	$1,173	
Adjustment to Book Value of Long-Term Debt	$89	$89	$234	$188	$58	$34	($63)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$1,422	$1,422	$1,583	$1,550	$1,470	$1,366	$1,108	[s] = [q] + [r].
Market Value of Debt	$1,422	$1,422	$1,583	$1,550	$1,470	$1,366	$1,108	[t] = [s].
MARKET VALUE OF FIRM	$4,525	$4,181	$3,910	$3,615	$3,147	$2,788	$2,198	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	68.59%	66.00%	59.52%	57.13%	53.25%	50.98%	49.57%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	0.03%	0.04%	0.05%	[w] = [i] / [u].
Debt - Market Value Ratio	31.41%	34.00%	40.48%	42.87%	46.72%	48.98%	50.39%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel G: CenterPoint Energy Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$4,329	$4,329	$4,301	$4,222	$3,198	$2,639	$2,022	[a]
Shares Outstanding (in millions) - Common	429	429	428	426	425	391	346	[b]
Price per Share - Common	$24	$22.54	$18.51	$18	$14	$12	$10	[c]
Market Value of Common Equity	$10,226	$9,669	$7,922	$7,603	$5,867	$4,701	$3,322	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$10,226	$9,669	$7,922	$7,603	$5,867	$4,701	$3,322	[f]= [d] + [e]
Market to Book Value of Common Equity	2.36	2.23	1.84	1.80	1.83	1.78	1.64	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$2,658	$2,658	$2,874	$2,337	$2,582	$2,904	$3,035	[j]
Current Liabilities	$3,019	$3,019	$3,575	$2,593	$2,620	$3,038	$2,848	[k]
Current Portion of Long-Term Debt	$497	$497	$1,400	$484	$428	$903	$333	[l]
Net Working Capital	$136	$136	$699	$228	$390	$769	$520	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$43	$43	$38	$62	$53	$55	$153	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$7,817	$7,817	$8,357	$8,641	$9,001	$9,119	$10,181	[p]
Book Value of Long-Term Debt	$8,314	$8,314	$9,757	$9,125	$9,429	$10,022	$10,514	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$8,670	$8,670	$10,807	$10,049	$10,071	$10,413	$9,875	
Carrying Amount	$8,171	$8,171	$9,619	$8,994	$9,303	$9,900	$10,396	
Adjustment to Book Value of Long-Term Debt	$499	$499	$1,188	$1,055	$768	$513	($521)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$8,813	$8,813	$10,945	$10,180	$10,197	$10,535	$9,993	[s] = [q] + [r].
Market Value of Debt	$8,813	$8,813	$10,945	$10,180	$10,197	$10,535	$9,993	[t] = [s].
MARKET VALUE OF FIRM	$19,039	$18,482	$18,867	$17,783	$16,064	$15,236	$13,315	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	53.71%	52.32%	41.99%	42.75%	36.52%	30.86%	24.95%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	46.29%	47.68%	58.01%	57.25%	63.48%	69.14%	75.05%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
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Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel H: Dominion Resources Inc/VA

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$11,642	$11,642	$10,568	$11,446	$11,997	$11,185	$10,077	[a]
Shares Outstanding (in millions) - Common	581	581	576	570	581	599	583	[b]
Price per Share - Common	$69	$63.05	$48.89	$47	$37	$33	$27	[c]
Market Value of Common Equity	$40,110	$36,632	$28,161	$26,812	$21,546	$19,565	$16,024	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$40,110	$36,632	$28,161	$26,812	$21,546	$19,565	$16,024	[f]= [d] + [e]
Market to Book Value of Common Equity	3.45	3.15	2.66	2.34	1.80	1.75	1.59	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$257	$257	$257	$257	$257	$257	$257	[h]
Market Value of Preferred Equity	$257	$257	$257	$257	$257	$257	$257	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$5,940	$5,940	$5,140	$5,430	$5,400	$6,817	$7,661	[j]
Current Liabilities	$6,994	$6,994	$7,763	$6,962	$5,773	$6,833	$7,794	[k]
Current Portion of Long-Term Debt	$1,519	$1,519	$2,223	$1,479	$497	$1,137	$444	[l]
Net Working Capital	$465	$465	($400)	($53)	$124	$1,121	$311	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$1,927	$1,927	$2,412	$1,814	$1,386	$1,295	$2,030	[n]
Adjusted Short-Term Debt	$0	$0	$400	$53	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$19,330	$19,330	$16,851	$17,394	$15,758	$15,481	$14,956	[p]
Book Value of Long-Term Debt	$20,849	$20,849	$19,474	$18,926	$16,255	$16,618	$15,400	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$19,887	$19,887	$19,898	$18,936	$16,112	$15,970	$14,260	
Carrying Amount	$18,396	$18,396	$16,841	$16,264	$14,520	$14,867	$14,334	
Adjustment to Book Value of Long-Term Debt	$1,491	$1,491	$3,057	$2,672	$1,592	$1,103	($74)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$22,340	$22,340	$22,531	$21,598	$17,847	$17,721	$15,326	[s] = [q] + [r].
Market Value of Debt	$22,340	$22,340	$22,531	$21,598	$17,847	$17,721	$15,326	[t] = [s].
MARKET VALUE OF FIRM	$62,707	$59,229	$50,949	$48,667	$39,650	$37,543	$31,607	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	63.96%	61.85%	55.27%	55.09%	54.34%	52.11%	50.70%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	0.41%	0.43%	0.50%	0.53%	0.65%	0.68%	0.81%	[w] = [i] / [u].
Debt - Market Value Ratio	35.63%	37.72%	44.22%	44.38%	45.01%	47.20%	48.49%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
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Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel I: DTE Energy Co

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$7,921	$7,921	$7,373	$7,009	$6,722	$6,278	$5,995	[a]
Shares Outstanding (in millions) - Common	177	177	172	169	169	165	163	[b]
Price per Share - Common	$76	$65.40	$57.73	$49	$39	$36	$27	[c]
Market Value of Common Equity	$13,372	$11,582	$9,950	$8,217	$6,685	$6,005	$4,439	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$13,372	$11,582	$9,950	$8,217	$6,685	$6,005	$4,439	[f]= [d] + [e]
Market to Book Value of Common Equity	1.69	1.46	1.35	1.17	0.99	0.96	0.74	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$2,806	$2,806	$2,915	$3,196	$3,167	$2,877	$3,328	[j]
Current Liabilities	$3,189	$3,189	$2,768	$2,628	$2,749	$2,645	$3,013	[k]
Current Portion of Long-Term Debt	$898	$898	$817	$526	$925	$671	$362	[l]
Net Working Capital	$515	$515	$964	$1,094	$1,343	$903	$677	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$131	$131	$240	$419	$150	$327	$744	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$7,214	$7,214	$7,014	$7,187	$7,089	$7,370	$7,741	[p]
Book Value of Long-Term Debt	$8,112	$8,112	$7,831	$7,713	$8,014	$8,041	$8,103	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$8,475	$8,475	$8,893	$8,800	$8,500	$8,300	$7,700	
Carrying Amount	$8,094	$8,094	$7,813	$7,700	$8,000	$8,000	$8,000	
Adjustment to Book Value of Long-Term Debt	$381	$381	$1,080	$1,100	$500	$300	($300)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$8,493	$8,493	$8,911	$8,813	$8,514	$8,341	$7,803	[s] = [q] + [r].
Market Value of Debt	$8,493	$8,493	$8,911	$8,813	$8,514	$8,341	$7,803	[t] = [s].
MARKET VALUE OF FIRM	$21,865	$20,075	$18,861	$17,030	$15,199	$14,346	$12,242	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	61.16%	57.69%	52.76%	48.25%	43.98%	41.86%	36.26%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	38.84%	42.31%	47.24%	51.75%	56.02%	58.14%	63.74%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
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Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel J: Consolidated Edison Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$12,245	$12,245	$11,869	$11,436	$11,061	$10,249	$9,698	[a]
Shares Outstanding (in millions) - Common	293	293	293	293	292	281	274	[b]
Price per Share - Common	$55	$53.62	$52.57	$55	$43	$37	$30	[c]
Market Value of Common Equity	$15,998	$15,703	$15,396	$16,001	$12,408	$10,444	$8,168	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$15,998	$15,703	$15,396	$16,001	$12,408	$10,444	$8,168	[f]= [d] + [e]
Market to Book Value of Common Equity	1.31	1.28	1.30	1.40	1.12	1.02	0.84	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$213	$213	$213	$213	[h]
Market Value of Preferred Equity	$0	$0	$0	$213	$213	$213	$213	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$3,891	$3,891	$3,451	$3,638	$3,669	$3,214	$3,319	[j]
Current Liabilities	$4,730	$4,730	$3,945	$2,987	$2,530	$2,940	$3,205	[k]
Current Portion of Long-Term Debt	$485	$485	$706	$530	$5	$731	$482	[l]
Net Working Capital	($354)	($354)	$212	$1,181	$1,144	$1,005	$596	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$1,451	$1,451	$539	$0	$0	$0	$363	[n]
Adjusted Short-Term Debt	$354	$354	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$10,490	$10,490	$10,064	$10,145	$10,678	$9,868	$9,249	[p]
Book Value of Long-Term Debt	$11,329	$11,329	$10,770	$10,675	$10,683	$10,599	$9,731	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$12,082	$12,082	$12,935	$12,744	$11,795	$11,009	$9,249	
Carrying Amount	$10,974	$10,974	$10,768	$10,673	$10,676	$10,585	$9,249	
Adjustment to Book Value of Long-Term Debt	$1,108	$1,108	$2,167	$2,071	$1,119	$424	$0	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$12,437	$12,437	$12,937	$12,746	$11,802	$11,023	$9,731	[s] = [q] + [r].
Market Value of Debt	$12,437	$12,437	$12,937	$12,746	$11,802	$11,023	$9,731	[t] = [s].
MARKET VALUE OF FIRM	$28,435	$28,140	$28,333	$28,960	$24,423	$21,680	$18,112	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	56.26%	55.80%	54.34%	55.25%	50.80%	48.17%	45.10%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	0.74%	0.87%	0.98%	1.18%	[w] = [i] / [u].
Debt - Market Value Ratio	43.74%	44.20%	45.66%	44.01%	48.32%	50.84%	53.73%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel K: El Paso Electric Co

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$944	$944	$825	$760	$810	$723	$694	[a]
Shares Outstanding (in millions) - Common	40	40	40	40	65	65	45	[b]
Price per Share - Common	$37	$34.36	$30.48	$32	$26	$19	$16	[c]
Market Value of Common Equity	$1,481	$1,379	$1,220	$1,266	$1,668	$1,208	$729	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$1,481	$1,379	$1,220	$1,266	$1,668	$1,208	$729	[f]= [d] + [e]
Market to Book Value of Common Equity	1.57	1.46	1.48	1.67	2.06	1.67	1.05	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$179	$179	$246	$155	$230	$250	$286	[j]
Current Liabilities	$138	$138	$152	$185	$131	$172	$145	[k]
Current Portion of Long-Term Debt	$0	$0	$0	$33	$5	$42	$24	[l]
Net Working Capital	$41	$41	$94	$3	$104	$119	$164	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$14	$14	$22	$33	$0	$0	$0	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$1,000	$1,000	$1,000	$816	$850	$805	$810	[p]
Book Value of Long-Term Debt	$1,000	$1,000	$1,000	$850	$854	$847	$833	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$1,059	$1,059	$1,182	$1,057	$883	$850	$685	
Carrying Amount	$1,014	$1,014	$1,022	$883	$854	$847	$833	
Adjustment to Book Value of Long-Term Debt	$45	$45	$160	$174	$28	$3	($148)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$1,044	$1,044	$1,160	$1,024	$883	$850	$685	[s] = [q] + [r].
Market Value of Debt	$1,044	$1,044	$1,160	$1,024	$883	$850	$685	[t] = [s].
MARKET VALUE OF FIRM								
	$2,526	$2,424	$2,380	$2,290	$2,551	$2,058	$1,414	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	58.65%	56.91%	51.27%	55.28%	65.39%	58.69%	51.53%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	41.35%	43.09%	48.73%	44.72%	34.61%	41.31%	48.47%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel L: Edison International

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$9,938	$9,938	$9,432	$10,055	$10,583	$9,841	$9,517	[a]
Shares Outstanding (in millions) - Common	326	326	326	326	326	326	326	[b]
Price per Share - Common	$55	$45.39	$43.29	$37	$35	$31	$26	[c]
Market Value of Common Equity	$17,829	$14,789	$14,105	$12,168	$11,324	$10,059	$8,535	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$17,829	$14,789	$14,105	$12,168	$11,324	$10,059	$8,535	[f]= [d] + [e]
Market to Book Value of Common Equity	1.79	1.49	1.50	1.21	1.07	1.02	0.90	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$1,753	$1,753	$1,759	$1,029	$907	$907	$907	[h]
Market Value of Preferred Equity	$1,753	$1,753	$1,759	$1,029	$907	$907	$907	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$3,312	$3,312	$2,672	$4,484	$4,422	$4,430	$7,353	[j]
Current Liabilities	$4,881	$4,881	$3,744	$4,348	$3,952	$3,787	$6,697	[k]
Current Portion of Long-Term Debt	$601	$601	$0	$0	$48	$377	$174	[l]
Net Working Capital	($968)	($968)	($1,072)	$136	$518	$1,020	$830	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$209	$209	$175	$429	$115	$309	$2,367	[n]
Adjusted Short-Term Debt	$209	$209	$175	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$9,825	$9,825	$9,231	$8,834	$12,371	$10,437	$10,950	[p]
Book Value of Long-Term Debt	$10,635	$10,635	$9,406	$8,834	$12,419	$10,814	$11,124	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$11,084	$11,084	$10,944	$14,264	$12,360	$10,452	$10,637	
Carrying Amount	$10,426	$10,426	$9,231	$13,746	$12,419	$10,814	$10,950	
Adjustment to Book Value of Long-Term Debt	$658	$658	$1,713	$518	($59)	($362)	($313)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$11,293	$11,293	$11,119	$9,352	$12,360	$10,452	$10,811	[s] = [q] + [r].
Market Value of Debt	$11,293	$11,293	$11,119	$9,352	$12,360	$10,452	$10,811	[t] = [s].
MARKET VALUE OF FIRM	$30,875	$27,835	$26,983	$22,549	$24,591	$21,418	$20,253	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	57.75%	53.13%	52.27%	53.96%	46.05%	46.97%	42.14%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	5.68%	6.30%	6.52%	4.56%	3.69%	4.23%	4.48%	[w] = [i] / [u].
Debt - Market Value Ratio	36.58%	40.57%	41.21%	41.47%	50.26%	48.80%	53.38%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel M: Entergy Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$9,632	$9,632	$9,197	$8,961	$8,496	$8,613	$7,967	[a]
Shares Outstanding (in millions) - Common	178	178	178	176	179	189	189	[b]
Price per Share - Common	$74	$60.60	$59.35	$64	$60	$67	$63	[c]
Market Value of Common Equity	$13,277	$10,809	$10,553	$11,245	$10,656	$12,649	$11,971	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$13,277	$10,809	$10,553	$11,245	$10,656	$12,649	$11,971	[f]= [d] + [e]
Market to Book Value of Common Equity	1.38	1.12	1.15	1.25	1.25	1.47	1.50	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$305	$305	$281	$281	$311	$311	$311	[h]
Market Value of Preferred Equity	$305	$305	$281	$281	$311	$311	$311	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$3,930	$3,930	$3,683	$3,623	$4,339	$4,534	$5,160	[j]
Current Liabilities	$4,061	$4,061	$4,106	$4,951	$2,776	$3,194	$3,766	[k]
Current Portion of Long-Term Debt	$459	$459	$722	$2,196	$303	$924	$707	[l]
Net Working Capital	$329	$329	$299	$868	$1,866	$2,265	$2,101	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$1,047	$1,047	$796	$108	$154	$30	$55	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$12,171	$12,171	$11,955	$10,082	$11,359	$11,060	$11,517	[p]
Book Value of Long-Term Debt	$12,631	$12,631	$12,677	$12,278	$11,662	$11,984	$12,224	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$12,440	$12,440	$12,849	$12,176	$10,989	$10,728	$10,118	
Carrying Amount	$12,596	$12,596	$12,639	$12,236	$11,617	$11,418	$11,719	
Adjustment to Book Value of Long-Term Debt	($156)	($156)	$210	($60)	($628)	($690)	($1,601)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$12,474	$12,474	$12,888	$12,218	$11,034	$11,295	$10,623	[s] = [q] + [r].
Market Value of Debt	$12,474	$12,474	$12,888	$12,218	$11,034	$11,295	$10,623	[t] = [s].
MARKET VALUE OF FIRM	$26,056	$23,589	$23,721	$23,744	$22,001	$24,255	$22,905	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	50.96%	45.83%	44.49%	47.36%	48.44%	52.15%	52.26%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	1.17%	1.29%	1.18%	1.18%	1.41%	1.28%	1.36%	[w] = [i] / [u].
Debt - Market Value Ratio	47.87%	52.88%	54.33%	51.46%	50.15%	46.57%	46.38%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
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Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel N: Great Plains Energy Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$3,474	$3,474	$3,340	$2,960	$2,886	$2,793	$2,551	[a]
Shares Outstanding (in millions) - Common	154	154	154	136	136	135	119	[b]
Price per Share - Common	$25	$23.68	$19.21	$19	$17	$16	$15	[c]
Market Value of Common Equity	$3,877	$3,644	$2,950	$2,636	$2,288	$2,191	$1,775	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$3,877	$3,644	$2,950	$2,636	$2,288	$2,191	$1,775	[f]= [d] + [e]
Market to Book Value of Common Equity	1.12	1.05	0.88	0.89	0.79	0.78	0.70	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$39	$39	$39	$39	$39	$39	$39	[h]
Market Value of Preferred Equity	$39	$39	$39	$39	$39	$39	$39	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$767	$767	$724	$619	$612	$613	$604	[j]
Current Liabilities	$770	$770	$1,450	$1,635	$1,339	$958	$1,337	[k]
Current Portion of Long-Term Debt	$1	$1	$263	$801	$486	$1	$71	[l]
Net Working Capital	($2)	($2)	($463)	($214)	($242)	($345)	($663)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$292	$292	$716	$384	$368	$439	$584	[n]
Adjusted Short-Term Debt	$2	$2	$463	$214	$242	$345	$584	[o] = See Sources and Notes.
Long-Term Debt	$3,516	$3,516	$2,757	$2,742	$2,943	$3,213	$2,557	[p]
Book Value of Long-Term Debt	$3,519	$3,519	$3,483	$3,758	$3,670	$3,559	$3,212	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$3,700	$3,700	$3,500	$3,900	$3,700	$3,400	$2,200	
Carrying Amount	$3,500	$3,500	$3,000	$3,500	$3,400	$3,200	$2,600	
Adjustment to Book Value of Long-Term Debt	$200	$200	$500	$400	$300	$200	($400)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$3,719	$3,719	$3,983	$4,158	$3,970	$3,759	$2,812	[s] = [q] + [r].
Market Value of Debt	$3,719	$3,719	$3,983	$4,158	$3,970	$3,759	$2,812	[t] = [s].
MARKET VALUE OF FIRM	$7,635	$7,402	$6,971	$6,833	$6,297	$5,989	$4,626	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	50.78%	49.23%	42.31%	38.58%	36.33%	36.58%	38.38%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	0.51%	0.53%	0.56%	0.57%	0.62%	0.65%	0.84%	[w] = [i] / [u].
Debt - Market Value Ratio	48.70%	50.24%	57.13%	60.85%	63.05%	62.77%	60.78%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel O: Hawaiian Electric Industries Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$1,727	$1,727	$1,594	$1,529	$1,484	$1,442	$1,389	[a]
Shares Outstanding (in millions) - Common	101	101	98	96	95	93	91	[b]
Price per Share - Common	$24	$25.04	$23.56	$23	$19	$17	$16	[c]
Market Value of Common Equity	$2,413	$2,535	$2,307	$2,225	$1,796	$1,549	$1,488	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$2,413	$2,535	$2,307	$2,225	$1,796	$1,549	$1,488	[f]= [d] + [e]
Market to Book Value of Common Equity	1.40	1.47	1.45	1.46	1.21	1.07	1.07	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$34	$34	$34	$34	$34	$34	$34	[h]
Market Value of Preferred Equity	$34	$34	$34	$34	$34	$34	$34	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$1,188	$1,188	$1,350	$1,337	$1,276	$1,178	$1,142	[j]
Current Liabilities	$4,962	$4,962	$4,748	$4,613	$4,468	$4,585	$5,045	[k]
Current Portion of Long-Term Debt	$0	$0	$0	$0	$0	$0	$0	[l]
Net Working Capital	($3,773)	($3,773)	($3,398)	($3,277)	($3,192)	($3,407)	($3,903)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$350	$350	$280	$302	$262	$340	$681	[n]
Adjusted Short-Term Debt	$350	$350	$280	$302	$262	$340	$681	[o] = See Sources and Notes.
Long-Term Debt	$1,493	$1,493	$1,423	$1,340	$1,365	$1,365	$1,212	[p]
Book Value of Long-Term Debt	$1,843	$1,843	$1,702	$1,642	$1,627	$1,704	$1,892	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$1,508	$1,508	$1,481	$1,400	$1,346	$1,336	$1,212	
Carrying Amount	$1,493	$1,493	$1,423	$1,340	$1,365	$1,365	$1,212	
Adjustment to Book Value of Long-Term Debt	$15	$15	$58	$60	($19)	($29)	$0	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$1,858	$1,858	$1,761	$1,702	$1,608	$1,676	$1,892	[s] = [q] + [r].
Market Value of Debt	$1,858	$1,858	$1,761	$1,702	$1,608	$1,676	$1,892	[t] = [s].
MARKET VALUE OF FIRM								
	$4,306	$4,428	$4,102	$3,961	$3,439	$3,259	$3,415	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	56.04%	57.26%	56.25%	56.16%	52.24%	47.52%	43.58%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	0.80%	0.77%	0.84%	0.87%	1.00%	1.05%	1.00%	[w] = [i] / [u].
Debt - Market Value Ratio	43.16%	41.97%	42.92%	42.97%	46.76%	51.43%	55.42%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel P: IDACORP Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$1,851	$1,851	$1,742	$1,658	$1,532	$1,397	$1,302	[a]
Shares Outstanding (in millions) - Common	50	50	50	50	49	48	47	[b]
Price per Share - Common	$54	$51.41	$41.55	$38	$33	$27	$24	[c]
Market Value of Common Equity	$2,724	$2,582	$2,084	$1,914	$1,654	$1,316	$1,126	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$2,724	$2,582	$2,084	$1,914	$1,654	$1,316	$1,126	[f]= [d] + [e]
Market to Book Value of Common Equity	1.47	1.40	1.20	1.15	1.08	0.94	0.86	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$477	$477	$367	$311	$464	$310	$266	[j]
Current Liabilities	$250	$250	$351	$368	$449	$218	$396	[k]
Current Portion of Long-Term Debt	$1	$1	$71	$101	$123	$9	$87	[l]
Net Working Capital	$227	$227	$87	$44	$138	$102	($43)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$55	$55	$70	$54	$67	$54	$151	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$43	[o] = See Sources and Notes.
Long-Term Debt	$1,615	$1,615	$1,467	$1,388	$1,488	$1,410	$1,183	[p]
Book Value of Long-Term Debt	$1,616	$1,616	$1,538	$1,489	$1,611	$1,419	$1,313	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$1,600	$1,600	$1,819	$1,738	$1,623	$1,407	$1,200	
Carrying Amount	$1,616	$1,616	$1,538	$1,492	$1,614	$1,422	$1,277	
Adjustment to Book Value of Long-Term Debt	($16)	($16)	$282	$246	$9	($15)	($77)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$1,600	$1,600	$1,819	$1,735	$1,619	$1,404	$1,235	[s] = [q] + [r].
Market Value of Debt	$1,600	$1,600	$1,819	$1,735	$1,619	$1,404	$1,235	[t] = [s].
MARKET VALUE OF FIRM								
	$4,325	$4,183	$3,903	$3,649	$3,274	$2,720	$2,362	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	63.00%	61.74%	53.39%	52.46%	50.53%	48.40%	47.68%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	37.00%	38.26%	46.61%	47.54%	49.47%	51.60%	52.32%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel Q: Alliant Energy Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$3,281	$3,281	$3,135	$3,013	$2,894	$2,773	$2,824	[a]
Shares Outstanding (in millions) - Common	111	111	111	111	111	111	110	[b]
Price per Share - Common	$57	$50.45	$41.96	$39	$32	$25	$23	[c]
Market Value of Common Equity	$6,370	$5,597	$4,658	$4,323	$3,556	$2,815	$2,502	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$6,370	$5,597	$4,658	$4,323	$3,556	$2,815	$2,502	[f]= [d] + [e]
Market to Book Value of Common Equity	1.94	1.71	1.49	1.43	1.23	1.02	0.89	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$200	$200	$205	$205	$244	$244	$244	[h]
Market Value of Preferred Equity	$200	$200	$205	$205	$244	$244	$244	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$1,011	$1,011	$994	$871	$1,093	$1,390	$1,446	[j]
Current Liabilities	$1,433	$1,433	$1,020	$855	$867	$1,077	$1,038	[k]
Current Portion of Long-Term Debt	$359	$359	$2	$1	$1	$102	$136	[l]
Net Working Capital	($64)	($64)	($24)	$17	$227	$415	$544	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$279	$279	$218	$103	$47	$190	$86	[n]
Adjusted Short-Term Debt	$64	$64	$24	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$2,978	$2,978	$3,137	$2,703	$2,703	$2,405	$1,748	[p]
Book Value of Long-Term Debt	$3,400	$3,400	$3,162	$2,705	$2,705	$2,506	$1,885	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$3,712	$3,712	$3,861	$3,325	$2,959	$2,676	$2,107	
Carrying Amount	$3,336	$3,336	$3,138	$2,705	$2,705	$2,506	$1,885	
Adjustment to Book Value of Long-Term Debt	$376	$376	$722	$621	$254	$170	$222	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$3,776	$3,776	$3,885	$3,325	$2,959	$2,676	$2,107	[s] = [q] + [r].
Market Value of Debt	$3,776	$3,776	$3,885	$3,325	$2,959	$2,676	$2,107	[t] = [s].
MARKET VALUE OF FIRM	$10,346	$9,573	$8,747	$7,853	$6,758	$5,734	$4,853	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	61.57%	58.47%	53.25%	55.05%	52.61%	49.09%	51.56%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	1.93%	2.09%	2.34%	2.61%	3.61%	4.25%	5.02%	[w] = [i] / [u].
Debt - Market Value Ratio	36.50%	39.44%	44.41%	42.34%	43.78%	46.66%	43.41%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel R: MGE Energy Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$618	$618	$579	$551	$525	$502	$478	[a]
Shares Outstanding (in millions) - Common	35	35	35	35	35	35	34	[b]
Price per Share - Common	$37	$36.92	$32.77	$28	$26	$21	$17	[c]
Market Value of Common Equity	$1,282	$1,280	$1,136	$982	$887	$713	$599	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$1,282	$1,280	$1,136	$982	$887	$713	$599	[f]= [d] + [e]
Market to Book Value of Common Equity	2.08	2.07	1.96	1.78	1.69	1.42	1.25	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$221	$221	$223	$189	$162	$165	$194	[j]
Current Liabilities	$97	$97	$76	$63	$81	$127	$205	[k]
Current Portion of Long-Term Debt	$4	$4	$3	$3	$2	$2	$0	[l]
Net Working Capital	$128	$128	$150	$129	$83	$39	($11)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$0	$0	$0	$0	$23	$65	$125	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$11	[o] = See Sources and Notes.
Long-Term Debt	$399	$399	$358	$361	$334	$321	$272	[p]
Book Value of Long-Term Debt	$404	$404	$362	$364	$336	$322	$284	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$432	$432	$427	$433	$356	$340	$261	
Carrying Amount	$404	$404	$362	$364	$337	$324	$274	
Adjustment to Book Value of Long-Term Debt	$28	$28	$66	$68	$19	$16	($12)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$432	$432	$427	$432	$355	$339	$272	[s] = [q] + [r].
Market Value of Debt	$432	$432	$427	$432	$355	$339	$272	[t] = [s].
MARKET VALUE OF FIRM								
	$1,713	$1,712	$1,563	$1,414	$1,242	$1,051	$870	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	74.80%	74.78%	72.68%	69.47%	71.39%	67.80%	68.80%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	25.20%	25.22%	27.32%	30.53%	28.61%	32.20%	31.20%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel S: NextEra Energy Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$18,040	$18,040	$16,068	$14,943	$14,392	$12,882	$11,581	[a]
Shares Outstanding (in millions) - Common	435	435	424	416	421	414	409	[b]
Price per Share - Common	$96	$82.57	$66.35	$54	$46	$46	$40	[c]
Market Value of Common Equity	$41,766	$35,919	$28,131	$22,497	$19,216	$19,021	$16,243	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$41,766	$35,919	$28,131	$22,497	$19,216	$19,021	$16,243	[f]= [d] + [e]
Market to Book Value of Common Equity	2.32	1.99	1.75	1.51	1.34	1.48	1.40	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$5,842	$5,842	$5,237	$4,872	$5,258	$4,337	$5,392	[j]
Current Liabilities	$9,189	$9,189	$8,879	$6,719	$6,904	$6,449	$7,689	[k]
Current Portion of Long-Term Debt	$3,766	$3,766	$2,771	$808	$1,920	$569	$1,388	[l]
Net Working Capital	$419	$419	($871)	($1,039)	$274	($1,543)	($909)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$691	$691	$1,411	$1,349	$889	$2,020	$1,865	[n]
Adjusted Short-Term Debt	$0	$0	$871	$1,039	$0	$1,543	$909	[o] = See Sources and Notes.
Long-Term Debt	$23,969	$23,969	$23,177	$20,810	$18,013	$16,300	$13,833	[p]
Book Value of Long-Term Debt	$27,735	$27,735	$26,819	$22,657	$19,933	$18,412	$16,130	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$28,612	$28,612	$28,874	$23,699	$20,756	$17,256	$15,152	
Carrying Amount	$27,728	$27,728	$26,647	$21,614	$19,929	$16,869	$15,221	
Adjustment to Book Value of Long-Term Debt	$884	$884	$2,227	$2,085	$827	$387	($69)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$28,619	$28,619	$29,046	$24,742	$20,760	$18,799	$16,061	[s] = [q] + [r].
Market Value of Debt	$28,619	$28,619	$29,046	$24,742	$20,760	$18,799	$16,061	[t] = [s].
MARKET VALUE OF FIRM	$70,385	$64,538	$57,177	$47,239	$39,976	$37,820	$32,304	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	59.34%	55.66%	49.20%	47.62%	48.07%	50.29%	50.28%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	40.66%	44.34%	50.80%	52.38%	51.93%	49.71%	49.72%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel T: OGE Energy Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$3,037	$3,037	$2,767	$2,563	$2,290	$2,041	$1,897	[a]
Shares Outstanding (in millions) - Common	199	199	198	196	195	194	187	[b]
Price per Share - Common	$36	$33.31	$27.05	$26	$21	$16	$10	[c]
Market Value of Common Equity	$7,149	$6,611	$5,344	$5,016	$4,023	$3,113	$1,933	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$7,149	$6,611	$5,344	$5,016	$4,023	$3,113	$1,933	[f]= [d] + [e]
Market to Book Value of Common Equity	2.35	2.18	1.93	1.96	1.76	1.53	1.02	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$695	$695	$794	$653	$632	$826	$745	[j]
Current Liabilities	$1,094	$1,094	$1,276	$999	$815	$1,276	$888	[k]
Current Portion of Long-Term Debt	$100	$100	$0	$0	$0	$289	$0	[l]
Net Working Capital	($299)	($299)	($482)	($346)	($182)	($160)	($144)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$440	$440	$431	$277	$145	$175	$298	[n]
Adjusted Short-Term Debt	$299	$299	$431	$277	$145	$160	$144	[o] = See Sources and Notes.
Long-Term Debt	$2,300	$2,300	$2,849	$2,737	$2,363	$2,089	$2,162	[p]
Book Value of Long-Term Debt	$2,699	$2,699	$3,280	$3,014	$2,508	$2,539	$2,306	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$2,653	$2,653	$3,397	$3,276	$2,579	$2,477	$2,112	
Carrying Amount	$2,400	$2,400	$2,849	$2,737	$2,363	$2,378	$2,160	
Adjustment to Book Value of Long-Term Debt	$253	$253	$548	$539	$216	$99	($48)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$2,952	$2,952	$3,828	$3,553	$2,724	$2,637	$2,258	[s] = [q] + [r].
Market Value of Debt	$2,952	$2,952	$3,828	$3,553	$2,724	$2,637	$2,258	[t] = [s].
MARKET VALUE OF FIRM	$10,101	$9,563	$9,172	$8,569	$6,747	$5,750	$4,191	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	70.78%	69.13%	58.27%	58.54%	59.62%	54.13%	46.12%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	29.22%	30.87%	41.73%	41.46%	40.38%	45.87%	53.88%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel U: Otter Tail Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$535	$535	$522	$571	$632	$673	$677	[a]
Shares Outstanding (in millions) - Common	36	36	36	36	36	36	35	[b]
Price per Share - Common	$28	$28.53	$23.45	$19	$19	$19	$17	[c]
Market Value of Common Equity	$1,020	$1,035	$848	$695	$693	$692	$601	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$1,020	$1,035	$848	$695	$693	$692	$601	[f]= [d] + [e]
Market to Book Value of Common Equity	1.91	1.93	1.62	1.22	1.10	1.03	0.89	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$16	$16	$16	$16	$16	[h]
Market Value of Preferred Equity	$0	$0	$16	$16	$16	$16	$16	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$251	$251	$324	$475	$514	$350	$393	[j]
Current Liabilities	$233	$233	$173	$192	$285	$207	$305	[k]
Current Portion of Long-Term Debt	$0	$0	$0	$0	$0	$59	$4	[l]
Net Working Capital	$18	$18	$151	$282	$229	$202	$92	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$51	$51	#N/A N/A	#N/A N/A	$79	$8	$135	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$390	$390	$422	$472	$434	$436	$340	[p]
Book Value of Long-Term Debt	$390	$390	$422	$472	$434	$495	$343	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$428	$428	$491	$525	$475	$458	$308	
Carrying Amount	$390	$390	$422	$472	$435	$436	$340	
Adjustment to Book Value of Long-Term Debt	$38	$38	$70	$53	$39	$22	($31)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$428	$428	$491	$525	$473	$517	$312	[s] = [q] + [r].
Market Value of Debt	$428	$428	$491	$525	$473	$517	$312	[t] = [s].
MARKET VALUE OF FIRM	$1,448	$1,463	$1,355	$1,236	$1,182	$1,224	$929	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	70.46%	70.75%	62.59%	56.25%	58.64%	56.50%	64.74%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	1.14%	1.25%	1.31%	1.27%	1.67%	[w] = [i] / [u].
Debt - Market Value Ratio	29.54%	29.25%	36.27%	42.49%	40.05%	42.23%	33.59%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel V: PG&E Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$14,342	$14,342	$13,074	$12,101	$11,282	$10,333	$9,377	[a]
Shares Outstanding (in millions) - Common	457	457	431	412	395	371	336	[b]
Price per Share - Common	$45	$39.75	$38.34	$36	$41	$37	$30	[c]
Market Value of Common Equity	$20,342	$18,154	$16,514	$14,884	$16,341	$13,852	$10,154	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$20,342	$18,154	$16,514	$14,884	$16,341	$13,852	$10,154	[f]= [d] + [e]
Market to Book Value of Common Equity	1.42	1.27	1.26	1.23	1.45	1.34	1.08	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$252	$252	$252	$252	$252	$252	$252	[h]
Market Value of Preferred Equity	$252	$252	$252	$252	$252	$252	$252	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$5,977	$5,977	$5,121	$6,480	$5,542	$5,657	$6,403	[j]
Current Liabilities	$7,493	$7,493	$6,256	$7,749	$7,185	$6,813	$7,626	[k]
Current Portion of Long-Term Debt	$889	$889	$400	$473	$1,213	$728	$970	[l]
Net Working Capital	($627)	($627)	($735)	($796)	($430)	($428)	($253)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$1,174	$1,174	$492	$1,647	$853	$833	$287	[n]
Adjusted Short-Term Debt	$627	$627	$492	$796	$430	$428	$253	[o] = See Sources and Notes.
Long-Term Debt	$12,717	$12,717	$12,517	$11,766	$11,329	$11,208	$10,534	[p]
Book Value of Long-Term Debt	$14,233	$14,233	$13,409	$13,035	$12,972	$12,364	$11,757	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$0	$0	$0	$0	$0	$0	$0	
Carrying Amount	$0	$0	$0	$0	$0	$0	$0	
Adjustment to Book Value of Long-Term Debt	$0	$0	$0	$0	$0	$0	$0	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$14,233	$14,233	$13,409	$13,035	$12,972	$12,364	$11,757	[s] = [q] + [r].
Market Value of Debt	$14,233	$14,233	$13,409	$13,035	$12,972	$12,364	$11,757	[t] = [s].
MARKET VALUE OF FIRM	$34,827	$32,639	$30,175	$28,171	$29,565	$26,468	$22,163	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	58.41%	55.62%	54.73%	52.84%	55.27%	52.33%	45.81%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	0.72%	0.77%	0.84%	0.89%	0.85%	0.95%	1.14%	[w] = [i] / [u].
Debt - Market Value Ratio	40.87%	43.61%	44.44%	46.27%	43.88%	46.71%	53.05%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel W: Public Service Enterprise Group Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$11,608	$11,608	$10,780	$10,270	$9,633	$8,788	$7,771	[a]
Shares Outstanding (in millions) - Common	506	506	506	506	506	506	506	[b]
Price per Share - Common	$38	$31.31	$28.55	$29	$27	$28	$23	[c]
Market Value of Common Equity	$19,046	$15,840	$14,441	$14,451	$13,658	$13,916	$11,388	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$19,046	$15,840	$14,441	$14,451	$13,658	$13,916	$11,388	[f]= [d] + [e]
Market to Book Value of Common Equity	1.64	1.36	1.34	1.41	1.42	1.58	1.47	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$80	$80	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$80	$80	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$3,614	$3,614	$3,869	$3,911	$5,051	$4,290	$3,999	[j]
Current Liabilities	$3,063	$3,063	$3,777	$2,957	$3,485	$3,360	$3,410	[k]
Current Portion of Long-Term Debt	$781	$781	$1,252	$633	$1,121	$521	$1,033	[l]
Net Working Capital	$1,332	$1,332	$1,344	$1,587	$2,687	$1,451	$1,622	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$60	$60	$263	#N/A N/A	$64	$530	$19	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$7,862	$7,862	$6,687	$7,461	$7,819	$7,645	$8,005	[p]
Book Value of Long-Term Debt	$8,643	$8,643	$7,939	$8,094	$8,940	$8,166	$9,038	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$9,061	$9,061	$9,324	$9,283	$9,836	$8,973	$9,159	
Carrying Amount	$8,643	$8,643	$7,939	$8,094	$8,940	$8,166	$9,038	
Adjustment to Book Value of Long-Term Debt	$418	$418	$1,385	$1,189	$896	$807	$121	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$9,061	$9,061	$9,324	$9,283	$9,836	$8,973	$9,159	[s] = [q] + [r].
Market Value of Debt	$9,061	$9,061	$9,324	$9,283	$9,836	$8,973	$9,159	[t] = [s].
MARKET VALUE OF FIRM	$28,107	$24,901	$23,765	$23,734	$23,494	$22,969	$20,627	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	67.76%	63.61%	60.77%	60.89%	58.13%	60.59%	55.21%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	0.35%	0.39%	[w] = [i] / [u].
Debt - Market Value Ratio	32.24%	36.39%	39.23%	39.11%	41.87%	39.07%	44.40%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel X: Pinnacle West Capital Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$4,194	$4,194	$3,973	$3,822	$3,683	$3,316	$3,446	[a]
Shares Outstanding (in millions) - Common	110	110	110	109	109	101	101	[b]
Price per Share - Common	$55	$51.92	$48.46	$43	$36	$30	$23	[c]
Market Value of Common Equity	$6,054	$5,721	$5,319	$4,660	$3,897	$3,081	$2,361	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$6,054	$5,721	$5,319	$4,660	$3,897	$3,081	$2,361	[f]= [d] + [e]
Market to Book Value of Common Equity	1.44	1.36	1.34	1.22	1.06	0.93	0.69	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$1,044	$1,044	$1,006	$956	$1,025	$929	$882	[j]
Current Liabilities	$1,619	$1,619	$1,084	$1,343	$1,450	$1,109	$1,506	[k]
Current Portion of Long-Term Debt	$540	$540	$123	$477	$632	$303	$178	[l]
Net Working Capital	($35)	($35)	$45	$91	$207	$123	($446)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$153	$153	$92	$0	$17	$154	$670	[n]
Adjusted Short-Term Debt	$35	$35	$0	$0	$0	$0	$446	[o] = See Sources and Notes.
Long-Term Debt	$2,796	$2,796	$3,199	$3,019	$3,046	$3,497	$3,032	[p]
Book Value of Long-Term Debt	$3,372	$3,372	$3,322	$3,496	$3,678	$3,800	$3,655	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$3,579	$3,579	$3,875	$3,926	$3,913	$3,774	$2,818	
Carrying Amount	$3,337	$3,337	$3,322	$3,496	$3,678	$3,648	$3,209	
Adjustment to Book Value of Long-Term Debt	$242	$242	$553	$430	$235	$126	($391)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$3,614	$3,614	$3,875	$3,926	$3,913	$3,926	$3,264	[s] = [q] + [r].
Market Value of Debt	$3,614	$3,614	$3,875	$3,926	$3,913	$3,926	$3,264	[t] = [s].
MARKET VALUE OF FIRM	$9,667	$9,334	$9,193	$8,587	$7,809	$7,007	$5,625	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	62.62%	61.29%	57.85%	54.27%	49.90%	43.97%	41.97%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	37.38%	38.71%	42.15%	45.73%	50.10%	56.03%	58.03%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel Y: Portland General Electric Co

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$1,819	$1,819	$1,728	$1,663	$1,592	$1,542	$1,354	[a]
Shares Outstanding (in millions) - Common	78	78	76	75	75	75	63	[b]
Price per Share - Common	$33	$29.52	$25.92	$23	$19	$17	$14	[c]
Market Value of Common Equity	$2,568	$2,305	$1,959	$1,710	$1,451	$1,298	$903	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$2,568	$2,305	$1,959	$1,710	$1,451	$1,298	$903	[f]= [d] + [e]
Market to Book Value of Common Equity	1.41	1.27	1.13	1.03	0.91	0.84	0.67	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$591	$591	$622	$716	$661	$690	$820	[j]
Current Liabilities	$393	$393	$521	$614	$489	$620	$889	[k]
Current Portion of Long-Term Debt	$0	$0	$100	$100	$10	$186	$142	[l]
Net Working Capital	$198	$198	$201	$202	$182	$256	$73	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$0	$0	$17	$30	$19	$0	$203	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$1,916	$1,916	$1,536	$1,635	$1,798	$1,558	$1,164	[p]
Book Value of Long-Term Debt	$1,916	$1,916	$1,636	$1,735	$1,808	$1,744	$1,306	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$2,074	$2,074	$1,949	$2,091	$1,968	$1,818	$1,286	
Carrying Amount	$1,916	$1,916	$1,636	$1,735	$1,808	$1,744	$1,308	
Adjustment to Book Value of Long-Term Debt	$158	$158	$313	$356	$160	$74	($22)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$2,074	$2,074	$1,949	$2,091	$1,968	$1,818	$1,284	[s] = [q] + [r].
Market Value of Debt	$2,074	$2,074	$1,949	$2,091	$1,968	$1,818	$1,284	[t] = [s].
MARKET VALUE OF FIRM	$4,642	$4,379	$3,908	$3,801	$3,419	$3,116	$2,187	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	55.32%	52.64%	50.12%	44.98%	42.44%	41.65%	41.28%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	44.68%	47.36%	49.88%	55.02%	57.56%	58.35%	58.72%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel Z: SCANA Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$4,664	$4,664	$4,154	$3,889	$3,702	$3,408	$3,045	[a]
Shares Outstanding (in millions) - Common	141	141	132	130	127	123	118	[b]
Price per Share - Common	$51	$46.40	$43.65	$40	$35	$31	$27	[c]
Market Value of Common Equity	$7,252	$6,542	$5,780	$5,173	$4,478	$3,830	$3,195	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$7,252	$6,542	$5,780	$5,173	$4,478	$3,830	$3,195	[f]= [d] + [e]
Market to Book Value of Common Equity	1.55	1.40	1.39	1.33	1.21	1.12	1.05	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$106	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$106	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$1,421	$1,421	$1,527	$1,491	$1,631	$1,521	$1,836	[j]
Current Liabilities	$1,442	$1,442	$1,811	$1,642	$1,867	$1,256	$1,155	[k]
Current Portion of Long-Term Debt	$54	$54	$172	$31	$337	$28	$144	[l]
Net Working Capital	$33	$33	($112)	($120)	$101	$293	$825	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$376	$376	$623	$653	$420	$335	$80	[n]
Adjusted Short-Term Debt	$0	$0	$112	$120	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$5,395	$5,395	$4,949	$4,622	$4,152	$4,483	$4,368	[p]
Book Value of Long-Term Debt	$5,449	$5,449	$5,233	$4,773	$4,489	$4,511	$4,512	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$5,916	$5,916	$6,115	$5,479	$4,841	$4,726	$4,592	
Carrying Amount	$5,449	$5,449	$5,121	$4,653	$4,488	$4,511	$4,506	
Adjustment to Book Value of Long-Term Debt	$467	$467	$994	$826	$352	$215	$86	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$5,916	$5,916	$6,227	$5,599	$4,841	$4,726	$4,598	[s] = [q] + [r].
Market Value of Debt	$5,916	$5,916	$6,227	$5,599	$4,841	$4,726	$4,598	[t] = [s].
MARKET VALUE OF FIRM	$13,168	$12,458	$12,007	$10,772	$9,320	$8,556	$7,899	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	55.07%	52.51%	48.14%	48.02%	48.05%	44.76%	40.45%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	1.34%	[w] = [i] / [u].
Debt - Market Value Ratio	44.93%	47.49%	51.86%	51.98%	51.95%	55.24%	58.21%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel AA: Southern Co/The

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$19,008	$19,008	$18,297	$17,578	$16,202	$14,878	$13,276	[a]
Shares Outstanding (in millions) - Common	887	887	868	866	843	820	778	[b]
Price per Share - Common	$43	$39.71	$40.32	$41	$33	$27	$28	[c]
Market Value of Common Equity	$38,447	$35,237	$35,002	$35,091	$27,433	$22,391	$21,662	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$38,447	$35,237	$35,002	$35,091	$27,433	$22,391	$21,662	[f]= [d] + [e]
Market to Book Value of Common Equity	2.02	1.85	1.91	2.00	1.69	1.50	1.63	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$1,131	$1,131	$1,082	$1,082	$1,082	$1,082	$1,082	[h]
Market Value of Preferred Equity	$1,131	$1,131	$1,082	$1,082	$1,082	$1,082	$1,082	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$5,599	$5,599	$6,162	$6,272	$5,883	$5,873	$5,358	[j]
Current Liabilities	$5,536	$5,536	$7,014	$6,577	$6,472	$5,584	$5,226	[k]
Current Portion of Long-Term Debt	$469	$469	$2,335	$1,717	$1,301	$1,113	$617	[l]
Net Working Capital	$532	$532	$1,483	$1,412	$712	$1,402	$749	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$1,482	$1,482	$825	$859	$1,297	$639	$953	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$21,344	$21,344	$19,274	$18,647	$18,154	$18,131	$16,816	[p]
Book Value of Long-Term Debt	$21,813	$21,813	$21,609	$20,364	$19,455	$19,244	$17,433	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$22,197	$22,197	$23,480	$22,144	$20,073	$19,567	$17,114	
Carrying Amount	$21,650	$21,650	$21,530	$20,272	$19,356	$19,145	$17,327	
Adjustment to Book Value of Long-Term Debt	$547	$547	$1,950	$1,872	$717	$422	($213)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$22,360	$22,360	$23,559	$22,236	$20,172	$19,666	$17,220	[s] = [q] + [r].
Market Value of Debt	$22,360	$22,360	$23,559	$22,236	$20,172	$19,666	$17,220	[t] = [s].
MARKET VALUE OF FIRM	$61,938	$58,728	$59,643	$58,409	$48,687	$43,139	$39,964	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	62.07%	60.00%	58.69%	60.08%	56.35%	51.90%	54.20%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	1.83%	1.93%	1.81%	1.85%	2.22%	2.51%	2.71%	[w] = [i] / [u].
Debt - Market Value Ratio	36.10%	38.07%	39.50%	38.07%	41.43%	45.59%	43.09%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel AB: Sempra Energy

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$11,008	$11,008	$10,282	$9,775	$9,027	$9,007	$7,969	[a]
Shares Outstanding (in millions) - Common	244	244	242	240	240	247	243	[b]
Price per Share - Common	$99	$87.22	$68.52	$50	$46	$48	$35	[c]
Market Value of Common Equity	$24,114	$21,283	$16,583	$11,880	$11,138	$11,905	$8,419	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$24,114	$21,283	$16,583	$11,880	$11,138	$11,905	$8,419	[f]= [d] + [e]
Market to Book Value of Common Equity	2.19	1.93	1.61	1.22	1.23	1.32	1.06	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$20	$20	$99	$99	$179	$179	$179	[h]
Market Value of Preferred Equity	$20	$20	$99	$99	$179	$179	$179	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$3,997	$3,997	$3,695	$2,332	$3,353	$2,295	$2,476	[j]
Current Liabilities	$4,369	$4,369	$4,258	$4,152	$3,786	$3,888	$3,612	[k]
Current Portion of Long-Term Debt	$1,147	$1,147	$725	$336	$349	$573	$410	[l]
Net Working Capital	$775	$775	$162	($1,484)	($84)	($1,020)	($726)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$545	$545	$546	$449	$158	$618	$503	[n]
Adjusted Short-Term Debt	$0	$0	$0	$449	$84	$618	$503	[o] = See Sources and Notes.
Long-Term Debt	$11,253	$11,253	$11,621	$10,078	$8,980	$7,460	$6,544	[p]
Book Value of Long-Term Debt	$12,400	$12,400	$12,346	$10,863	$9,413	$8,651	$7,457	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$12,676	$12,676	$13,243	$11,047	$8,883	$8,618	$7,013	
Carrying Amount	$12,022	$12,022	$11,873	$9,826	$8,330	$8,050	$6,962	
Adjustment to Book Value of Long-Term Debt	$654	$654	$1,370	$1,221	$553	$568	$51	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$13,054	$13,054	$13,716	$12,084	$9,966	$9,219	$7,508	[s] = [q] + [r].
Market Value of Debt	$13,054	$13,054	$13,716	$12,084	$9,966	$9,219	$7,508	[t] = [s].
MARKET VALUE OF FIRM	$37,188	$34,357	$30,398	$24,063	$21,283	$21,303	$16,106	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	64.84%	61.95%	54.55%	49.37%	52.33%	55.88%	52.27%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	0.05%	0.06%	0.33%	0.41%	0.84%	0.84%	1.11%	[w] = [i] / [u].
Debt - Market Value Ratio	35.10%	38.00%	45.12%	50.22%	46.83%	43.28%	46.61%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel AC: Integrys Energy Group Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$3,261	$3,261	$3,026	$2,961	$2,906	$2,850	$3,100	[a]
Shares Outstanding (in millions) - Common	79	79	78	78	77	76	76	[b]
Price per Share - Common	$57	$52.76	$49.50	$46	$41	$34	$31	[c]
Market Value of Common Equity	$4,543	$4,191	$3,856	$3,622	$3,183	$2,546	$2,326	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$4,543	$4,191	$3,856	$3,622	$3,183	$2,546	$2,326	[f]= [d] + [e]
Market to Book Value of Common Equity	1.39	1.29	1.27	1.22	1.10	0.89	0.75	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$51	$51	$51	$51	$51	$51	$51	[h]
Market Value of Preferred Equity	$51	$51	$51	$51	$51	$51	$51	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$1,972	$1,972	$1,659	$1,828	$2,050	$3,512	$5,891	[j]
Current Liabilities	$1,622	$1,622	$1,813	$1,674	$1,658	$3,148	$5,714	[k]
Current Portion of Long-Term Debt	$100	$100	$314	$250	$477	$117	$155	[l]
Net Working Capital	$450	$450	$159	$405	$870	$481	$332	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$326	$326	$482	$303	$10	$222	$1,209	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$2,956	$2,956	$1,932	$1,845	$2,162	$2,395	$2,288	[p]
Book Value of Long-Term Debt	$3,056	$3,056	$2,245	$2,095	$2,639	$2,511	$2,443	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$3,032	$3,032	$2,426	$2,282	$2,688	$2,544	$2,276	
Carrying Amount	$3,056	$3,056	$2,245	$2,122	$2,639	$2,511	$2,443	
Adjustment to Book Value of Long-Term Debt	($25)	($25)	$181	$160	$49	$32	($167)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$3,032	$3,032	$2,426	$2,255	$2,688	$2,544	$2,276	[s] = [q] + [r].
Market Value of Debt	$3,032	$3,032	$2,426	$2,255	$2,688	$2,544	$2,276	[t] = [s].
MARKET VALUE OF FIRM	$7,626	$7,274	$6,333	$5,928	$5,922	$5,141	$4,653	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	59.58%	57.62%	60.89%	61.11%	53.75%	49.53%	49.99%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	0.67%	0.70%	0.81%	0.86%	0.86%	0.99%	1.10%	[w] = [i] / [u].
Debt - Market Value Ratio	39.75%	41.68%	38.31%	38.03%	45.38%	49.48%	48.92%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel AD: Vectren Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$1,554	$1,554	$1,526	$1,466	$1,439	$1,397	$1,352	[a]
Shares Outstanding (in millions) - Common	82	82	82	82	82	81	81	[b]
Price per Share - Common	$39	$34.23	$27.92	$26	$22	$20	$19	[c]
Market Value of Common Equity	$3,224	$2,820	$2,295	$2,162	$1,773	$1,627	$1,546	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$3,224	$2,820	$2,295	$2,162	$1,773	$1,627	$1,546	[f]= [d] + [e]
Market to Book Value of Common Equity	2.07	1.81	1.50	1.48	1.23	1.16	1.14	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$0	$0	$0	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$630	$630	$678	$610	$645	$582	$776	[j]
Current Liabilities	$511	$511	$794	$694	$821	$748	$1,120	[k]
Current Portion of Long-Term Debt	$30	$30	$106	$63	$281	$99	$80	[l]
Net Working Capital	$150	$150	($10)	($21)	$105	($67)	($264)	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$69	$69	$279	$227	$118	$214	$520	[n]
Adjusted Short-Term Debt	$0	$0	$10	$21	$0	$67	$264	[o] = See Sources and Notes.
Long-Term Debt	$1,777	$1,777	$1,553	$1,560	$1,435	$1,541	$1,248	[p]
Book Value of Long-Term Debt	$1,807	$1,807	$1,669	$1,643	$1,716	$1,706	$1,593	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$1,895	$1,895	$1,873	$1,804	$1,767	$1,720	$1,251	
Carrying Amount	$1,807	$1,807	$1,660	$1,622	$1,716	$1,643	$1,373	
Adjustment to Book Value of Long-Term Debt	$88	$88	$214	$182	$51	$78	($122)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$1,895	$1,895	$1,883	$1,825	$1,767	$1,784	$1,471	[s] = [q] + [r].
Market Value of Debt	$1,895	$1,895	$1,883	$1,825	$1,767	$1,784	$1,471	[t] = [s].
MARKET VALUE OF FIRM	$5,119	$4,716	$4,178	$3,987	$3,540	$3,411	$3,017	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	62.98%	59.81%	54.93%	54.22%	50.08%	47.70%	51.25%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	-	-	-	[w] = [i] / [u].
Debt - Market Value Ratio	37.02%	40.19%	45.07%	45.78%	49.92%	52.30%	48.75%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
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Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel AE: Wisconsin Energy Corp

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$4,233	$4,233	$4,135	$3,963	$3,802	$3,567	$3,337	[a]
Shares Outstanding (in millions) - Common	226	226	229	230	234	234	234	[b]
Price per Share - Common	$45	$40.41	$35.43	$31	$26	$21	$17	[c]
Market Value of Common Equity	$10,217	$9,131	$8,114	$7,199	$6,134	$4,929	$4,063	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$10,217	$9,131	$8,114	$7,199	$6,134	$4,929	$4,063	[f]= [d] + [e]
Market to Book Value of Common Equity	2.41	2.16	1.96	1.82	1.61	1.38	1.22	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$30	$30	$30	$30	$30	$30	$30	[h]
Market Value of Preferred Equity	$30	$30	$30	$30	$30	$30	$30	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$1,551	$1,551	$1,314	$1,426	$1,331	$1,529	$1,693	[j]
Current Liabilities	$1,496	$1,496	$1,443	$1,365	$1,721	$1,894	$1,735	[k]
Current Portion of Long-Term Debt	$342	$342	$412	$33	$473	$296	$62	[l]
Net Working Capital	$397	$397	$283	$94	$83	($69)	$20	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$537	$537	$395	$670	$658	$825	$602	[n]
Adjusted Short-Term Debt	$0	$0	$0	$0	$0	$69	$0	[o] = See Sources and Notes.
Long-Term Debt	$4,363	$4,363	$4,454	$4,614	$3,932	$3,876	$4,075	[p]
Book Value of Long-Term Debt	$4,705	$4,705	$4,866	$4,647	$4,405	$4,241	$4,137	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$4,912	$4,912	$5,447	$5,180	$4,578	$4,163	$3,712	
Carrying Amount	$4,627	$4,627	$4,773	$4,541	$4,288	$4,050	$4,009	
Adjustment to Book Value of Long-Term Debt	$285	$285	$674	$639	$290	$113	($298)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$4,991	$4,991	$5,540	$5,285	$4,695	$4,353	$3,839	[s] = [q] + [r].
Market Value of Debt	$4,991	$4,991	$5,540	$5,285	$4,695	$4,353	$3,839	[t] = [s].
MARKET VALUE OF FIRM	$15,238	$14,152	$13,685	$12,515	$10,860	$9,313	$7,932	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	67.05%	64.52%	59.29%	57.52%	56.48%	52.93%	51.22%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	0.20%	0.21%	0.22%	0.24%	0.28%	0.33%	0.38%	[w] = [i] / [u].
Debt - Market Value Ratio	32.75%	35.26%	40.48%	42.23%	43.24%	46.75%	48.40%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel AF: Westar Energy Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$3,063	$3,063	$2,896	$2,769	$2,386	$2,249	$2,190	[a]
Shares Outstanding (in millions) - Common	128	128	127	126	112	109	108	[b]
Price per Share - Common	$35	$31.16	$26.87	$25	$22	$18	$15	[c]
Market Value of Common Equity	$4,516	$3,996	$3,400	$3,139	$2,417	$1,932	$1,582	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$4,516	$3,996	$3,400	$3,139	$2,417	$1,932	$1,582	[f]= [d] + [e]
Market to Book Value of Common Equity	1.47	1.30	1.17	1.13	1.01	0.86	0.72	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$21	$21	$21	$21	[h]
Market Value of Preferred Equity	$0	$0	$0	$21	$21	$21	$21	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$707	$707	$643	$634	$602	$629	$743	[j]
Current Liabilities	$955	$955	$846	$827	$783	$682	$872	[k]
Current Portion of Long-Term Debt	$277	$277	$26	$28	$30	$1	$146	[l]
Net Working Capital	$29	$29	($177)	($166)	($151)	($52)	$17	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$135	$135	$339	$286	$227	$243	$175	[n]
Adjusted Short-Term Debt	$0	$0	$177	$166	$151	$52	$0	[o] = See Sources and Notes.
Long-Term Debt	$3,164	$3,164	$3,042	$2,740	$2,777	$2,600	$2,310	[p]
Book Value of Long-Term Debt	$3,441	$3,441	$3,245	$2,934	$2,958	$2,653	$2,457	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$3,294	$3,294	$3,179	$2,624	$2,571	$2,528	$1,749	
Carrying Amount	$3,103	$3,103	$2,703	$2,373	$2,373	$2,374	$2,024	
Adjustment to Book Value of Long-Term Debt	$192	$192	$476	$251	$197	$155	($275)	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$3,633	$3,633	$3,721	$3,185	$3,155	$2,808	$2,182	[s] = [q] + [r].
Market Value of Debt	$3,633	$3,633	$3,721	$3,185	$3,155	$2,808	$2,182	[t] = [s].
MARKET VALUE OF FIRM	$8,149	$7,629	$7,121	$6,345	$5,593	$4,761	$3,785	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	55.42%	52.38%	47.74%	49.47%	43.21%	40.57%	41.80%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	0.34%	0.38%	0.45%	0.57%	[w] = [i] / [u].
Debt - Market Value Ratio	44.58%	47.62%	52.26%	50.19%	56.41%	58.98%	57.64%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-3

Market Value of the Electric Sample

Panel AG: Xcel Energy Inc

($MM)

	DCF Capital Structure	Year End, 2013	Year End, 2012	Year End, 2011	Year End, 2010	Year End, 2009	Year End, 2008	Notes
MARKET VALUE OF COMMON EQUITY								
Book Value, Common Shareholder's Equity	$9,566	$9,566	$8,874	$8,482	$8,084	$7,283	$6,964	[a]
Shares Outstanding (in millions) - Common	498	498	488	486	482	458	454	[b]
Price per Share - Common	$30	$27.50	$25.59	$24	$21	$18	$14	[c]
Market Value of Common Equity	$15,164	$13,692	$12,486	$11,874	$9,936	$8,187	$6,531	[d] = [b] x [c].
Market Value of GP Equity	$0	$0	$0	$0	$0	$0	$0	[e]
Total Market Value of Equity	$15,164	$13,692	$12,486	$11,874	$9,936	$8,187	$6,531	[f]= [d] + [e]
Market to Book Value of Common Equity	1.59	1.43	1.41	1.40	1.23	1.12	0.94	[g] = [f] / [a].
MARKET VALUE OF PREFERRED EQUITY								
Book Value of Preferred Equity	$0	$0	$0	$0	$105	$105	$105	[h]
Market Value of Preferred Equity	$0	$0	$0	$0	$105	$105	$105	[i] = [h].
MARKET VALUE OF DEBT								
Current Assets	$3,218	$3,218	$2,625	$2,983	$2,733	$2,977	$3,016	[j]
Current Liabilities	$3,654	$3,654	$2,937	$3,589	$2,537	$3,090	$3,046	[k]
Current Portion of Long-Term Debt	$281	$281	$258	$1,060	$55	$544	$559	[l]
Net Working Capital	($156)	($156)	($54)	$454	$252	$430	$528	[m] = [j] - ([k] - [l]).
Notes Payable (Short-Term Debt)	$759	$759	$602	$219	$466	$459	$455	[n]
Adjusted Short-Term Debt	$156	$156	$54	$0	$0	$0	$0	[o] = See Sources and Notes.
Long-Term Debt	$10,911	$10,911	$10,144	$8,849	$9,263	$7,889	$7,732	[p]
Book Value of Long-Term Debt	$11,347	$11,347	$10,456	$9,908	$9,319	$8,432	$8,290	[q] = [l] + [o] + [p].
Unadjusted Market Value of Long Term Debt	$11,879	$11,879	$12,208	$11,735	$10,225	$9,026	$8,562	
Carrying Amount	$11,192	$11,192	$10,402	$9,908	$9,319	$8,432	$8,290	
Adjustment to Book Value of Long-Term Debt	$687	$687	$1,806	$1,826	$906	$594	$272	[r] = See Sources and Notes.
Market Value of Long-Term Debt	$12,034	$12,034	$12,262	$11,735	$10,225	$9,026	$8,562	[s] = [q] + [r].
Market Value of Debt	$12,034	$12,034	$12,262	$11,735	$10,225	$9,026	$8,562	[t] = [s].
MARKET VALUE OF FIRM	$27,199	$25,727	$24,748	$23,609	$20,266	$17,319	$15,198	[u] = [f] + [i] + [t].
DEBT AND EQUITY TO MARKET VALUE RATIOS								
Common Equity - Market Value Ratio	55.75%	53.22%	50.45%	50.29%	49.03%	47.28%	42.97%	[v] = [f] / [u].
Preferred Equity - Market Value Ratio	-	-	-	-	0.52%	0.61%	0.69%	[w] = [i] / [u].
Debt - Market Value Ratio	44.25%	46.78%	49.55%	49.71%	50.45%	52.12%	56.34%	[x] = [t] / [u].

Sources and Notes:
Bloomberg as of June 3, 2014
Capital structure from Year End, 2013 calculated using respective balance sheet information and 15-day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2013 balance sheet information and a 15-trading day average closing price ending on 6/3/2014.
Prices are reported in Workpaper #1 to Table No. MJV-6.
[o] =
(1): 0 if [m] > 0.
(2): The absolute value of [m] if [m] < 0 and |[m]| < [n].
(3): [l] if [m] < 0 and |[m]| > [n].
[r]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2013 10-K.

Table No. MJV-4

Electric Sample

Capital Structure Summary

Company	DCF Capital Structure			5-Year Average Capital Structure		
	Common Equity - Value Ratio [1]	Preferred Equity - Value Ratio [2]	Debt - Value Ratio [3]	Common Equity - Value Ratio [4]	Preferred Equity - Value Ratio [5]	Debt - Value Ratio [6]
ALLETE Inc	0.64	0.00	0.36	0.59	0.00	0.41
Ameren Corp	0.59	0.00	0.41	0.47	0.00	0.53
American Electric Power Co Inc	0.56	0.00	0.44	0.47	0.00	0.53
Black Hills Corp	0.62	0.00	0.38	0.49	0.00	0.51
CMS Energy Corp	0.48	0.00	0.52	0.37	0.00	0.62
Cleco Corp	0.69	0.00	0.31	0.57	0.00	0.43
CenterPoint Energy Inc	0.54	0.00	0.46	0.41	0.00	0.59
Dominion Resources Inc/VA	0.64	0.00	0.36	0.56	0.01	0.44
DTE Energy Co	0.61	0.00	0.39	0.49	0.00	0.51
Consolidated Edison Inc	0.56	0.00	0.44	0.53	0.01	0.47
El Paso Electric Co	0.59	0.00	0.41	0.58	0.00	0.42
Edison International	0.58	0.06	0.37	0.50	0.05	0.44
Entergy Corp	0.51	0.01	0.48	0.48	0.01	0.51
Great Plains Energy Inc	0.51	0.01	0.49	0.41	0.01	0.59
Hawaiian Electric Industries Inc	0.56	0.01	0.43	0.54	0.01	0.45
IDACORP Inc	0.63	0.00	0.37	0.53	0.00	0.47
Alliant Energy Corp	0.62	0.02	0.36	0.54	0.03	0.43
MGE Energy Inc	0.75	0.00	0.25	0.71	0.00	0.29
NextEra Energy Inc	0.59	0.00	0.41	0.50	0.00	0.50
OGE Energy Corp	0.71	0.00	0.29	0.60	0.00	0.40
Otter Tail Corp	0.70	0.00	0.30	0.61	0.01	0.38
PG&E Corp	0.58	0.01	0.41	0.54	0.01	0.45
Public Service Enterprise Group Inc	0.68	0.00	0.32	0.61	0.00	0.39
Pinnacle West Capital Corp	0.63	0.00	0.37	0.53	0.00	0.47
Portland General Electric Co	0.55	0.00	0.45	0.46	0.00	0.54
SCANA Corp	0.55	0.00	0.45	0.48	0.00	0.52
Southern Co/The	0.62	0.02	0.36	0.57	0.02	0.41
Sempra Energy	0.65	0.00	0.35	0.55	0.00	0.45
Integrys Energy Group Inc	0.60	0.01	0.40	0.57	0.01	0.43
Vectren Corp	0.63	0.00	0.37	0.53	0.00	0.47
Wisconsin Energy Corp	0.67	0.00	0.33	0.58	0.00	0.42
Westar Energy Inc	0.55	0.00	0.45	0.47	0.00	0.53
Xcel Energy Inc	0.56	0.00	0.44	0.50	0.00	0.50
Average	0.60	0.00	0.39	0.53	0.01	0.47

Sources and Notes:
[1], [4]:Workpaper #1 to Table No. MJV-4.
[2], [5]:Workpaper #2 to Table No. MJV-4.
[3], [6]:Workpaper #3 to Table No. MJV-4.
Values in this table may not add up exactly to 1.0 because of rounding.

Workpaper #1 to Table No. MJV-4

Electric Sample

Calculation of the Average Common Equity - Market Value Ratio

Company	DCF Capital Structure [1]	Year End, 2013 [2]	2012 [3]	2011 [4]	2010 [5]	2009 [6]	5-Year Average [7]
ALLETE Inc	0.64	0.64	0.57	0.59	0.59	0.57	0.59
Ameren Corp	0.59	0.57	0.50	0.48	0.42	0.39	0.47
American Electric Power Co Inc	0.56	0.53	0.48	0.46	0.44	0.42	0.47
Black Hills Corp	0.62	0.60	0.51	0.46	0.43	0.44	0.49
CMS Energy Corp	0.48	0.45	0.42	0.38	0.34	0.28	0.37
Cleco Corp	0.69	0.66	0.60	0.57	0.53	0.51	0.57
CenterPoint Energy Inc	0.54	0.52	0.42	0.43	0.37	0.31	0.41
Dominion Resources Inc/VA	0.64	0.62	0.55	0.55	0.54	0.52	0.56
DTE Energy Co	0.61	0.58	0.53	0.48	0.44	0.42	0.49
Consolidated Edison Inc	0.56	0.56	0.54	0.55	0.51	0.48	0.53
El Paso Electric Co	0.59	0.57	0.51	0.55	0.65	0.59	0.58
Edison International	0.58	0.53	0.52	0.54	0.46	0.47	0.50
Entergy Corp	0.51	0.46	0.44	0.47	0.48	0.52	0.48
Great Plains Energy Inc	0.51	0.49	0.42	0.39	0.36	0.37	0.41
Hawaiian Electric Industries Inc	0.56	0.57	0.56	0.56	0.52	0.48	0.54
IDACORP Inc	0.63	0.62	0.53	0.52	0.51	0.48	0.53
Alliant Energy Corp	0.62	0.58	0.53	0.55	0.53	0.49	0.54
MGE Energy Inc	0.75	0.75	0.73	0.69	0.71	0.68	0.71
NextEra Energy Inc	0.59	0.56	0.49	0.48	0.48	0.50	0.50
OGE Energy Corp	0.71	0.69	0.58	0.59	0.60	0.54	0.60
Otter Tail Corp	0.70	0.71	0.63	0.56	0.59	0.57	0.61
PG&E Corp	0.58	0.56	0.55	0.53	0.55	0.52	0.54
Public Service Enterprise Group Inc	0.68	0.64	0.61	0.61	0.58	0.61	0.61
Pinnacle West Capital Corp	0.63	0.61	0.58	0.54	0.50	0.44	0.53
Portland General Electric Co	0.55	0.53	0.50	0.45	0.42	0.42	0.46
SCANA Corp	0.55	0.53	0.48	0.48	0.48	0.45	0.48
Southern Co/The	0.62	0.60	0.59	0.60	0.56	0.52	0.57
Sempra Energy	0.65	0.62	0.55	0.49	0.52	0.56	0.55
Integrys Energy Group Inc	0.60	0.58	0.61	0.61	0.54	0.50	0.57
Vectren Corp	0.63	0.60	0.55	0.54	0.50	0.48	0.53
Wisconsin Energy Corp	0.67	0.65	0.59	0.58	0.56	0.53	0.58
Westar Energy Inc	0.55	0.52	0.48	0.49	0.43	0.41	0.47
Xcel Energy Inc	0.56	0.53	0.50	0.50	0.49	0.47	0.50

Sources and Notes:
[1] - [6]: Table No. MJV-3; Panels A - AG, [v].
[7]: Average of [2] - [6].

Workpaper #2 to Table No. MJV-4

Electric Sample

Calculation of the Average Preferred Equity - Market Value Ratio

Company	DCF Capital Structure [1]	Year End, 2013 [2]	2012 [3]	2011 [4]	2010 [5]	2009 [6]	5-Year Average
ALLETE Inc	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ameren Corp	0.00	0.00	0.00	0.00	0.00	0.00	0.00
American Electric Power Co Inc	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Black Hills Corp	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CMS Energy Corp	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Cleco Corp	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CenterPoint Energy Inc	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dominion Resources Inc/VA	0.00	0.00	0.01	0.01	0.01	0.01	0.01
DTE Energy Co	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consolidated Edison Inc	0.00	0.00	0.00	0.01	0.01	0.01	0.01
El Paso Electric Co	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Edison International	0.06	0.06	0.07	0.05	0.04	0.04	0.05
Entergy Corp	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Great Plains Energy Inc	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Hawaiian Electric Industries Inc	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IDACORP Inc	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alliant Energy Corp	0.02	0.02	0.02	0.03	0.04	0.04	0.03
MGE Energy Inc	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NextEra Energy Inc	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OGE Energy Corp	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Otter Tail Corp	0.00	0.00	0.01	0.01	0.01	0.01	0.01
PG&E Corp	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Public Service Enterprise Group Inc	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinnacle West Capital Corp	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland General Electric Co	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCANA Corp	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Co/The	0.02	0.02	0.02	0.02	0.02	0.03	0.02
Sempra Energy	0.00	0.00	0.00	0.00	0.01	0.01	0.00
Integrys Energy Group Inc	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Vectren Corp	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wisconsin Energy Corp	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Westar Energy Inc	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Xcel Energy Inc	0.00	0.00	0.00	0.00	0.01	0.01	0.00

Sources and Notes:
[1] - [6]: Table No. MJV-3; Panels A - AG, [w].
[7]: Average of [2] - [6].

Workpaper #3 to Table No. MJV-4

Electric Sample

Calculation of the Average Debt - Market Value Ratio

Company	DCF Capital Structure [1]	Year End, 2013 [2]	2012 [3]	2011 [4]	2010 [5]	2009 [6]	5-Year Average [7]
ALLETE Inc	0.36	0.36	0.43	0.41	0.41	0.43	0.41
Ameren Corp	0.41	0.43	0.50	0.52	0.58	0.61	0.53
American Electric Power Co Inc	0.44	0.47	0.52	0.54	0.56	0.57	0.53
Black Hills Corp	0.38	0.40	0.49	0.54	0.57	0.56	0.51
CMS Energy Corp	0.52	0.55	0.58	0.62	0.66	0.69	0.62
Cleco Corp	0.31	0.34	0.40	0.43	0.47	0.49	0.43
CenterPoint Energy Inc	0.46	0.48	0.58	0.57	0.63	0.69	0.59
Dominion Resources Inc/VA	0.36	0.38	0.44	0.44	0.45	0.47	0.44
DTE Energy Co	0.39	0.42	0.47	0.52	0.56	0.58	0.51
Consolidated Edison Inc	0.44	0.44	0.46	0.44	0.48	0.51	0.47
El Paso Electric Co	0.41	0.43	0.49	0.45	0.35	0.41	0.42
Edison International	0.37	0.41	0.41	0.41	0.50	0.49	0.44
Entergy Corp	0.48	0.53	0.54	0.51	0.50	0.47	0.51
Great Plains Energy Inc	0.49	0.50	0.57	0.61	0.63	0.63	0.59
Hawaiian Electric Industries Inc	0.43	0.42	0.43	0.43	0.47	0.51	0.45
IDACORP Inc	0.37	0.38	0.47	0.48	0.49	0.52	0.47
Alliant Energy Corp	0.36	0.39	0.44	0.42	0.44	0.47	0.43
MGE Energy Inc	0.25	0.25	0.27	0.31	0.29	0.32	0.29
NextEra Energy Inc	0.41	0.44	0.51	0.52	0.52	0.50	0.50
OGE Energy Corp	0.29	0.31	0.42	0.41	0.40	0.46	0.40
Otter Tail Corp	0.30	0.29	0.36	0.42	0.40	0.42	0.38
PG&E Corp	0.41	0.44	0.44	0.46	0.44	0.47	0.45
Public Service Enterprise Group Inc	0.32	0.36	0.39	0.39	0.42	0.39	0.39
Pinnacle West Capital Corp	0.37	0.39	0.42	0.46	0.50	0.56	0.47
Portland General Electric Co	0.45	0.47	0.50	0.55	0.58	0.58	0.54
SCANA Corp	0.45	0.47	0.52	0.52	0.52	0.55	0.52
Southern Co/The	0.36	0.38	0.40	0.38	0.41	0.46	0.41
Sempra Energy	0.35	0.38	0.45	0.50	0.47	0.43	0.45
Integrys Energy Group Inc	0.40	0.42	0.38	0.38	0.45	0.49	0.43
Vectren Corp	0.37	0.40	0.45	0.46	0.50	0.52	0.47
Wisconsin Energy Corp	0.33	0.35	0.40	0.42	0.43	0.47	0.42
Westar Energy Inc	0.45	0.48	0.52	0.50	0.56	0.59	0.53
Xcel Energy Inc	0.44	0.47	0.50	0.50	0.50	0.52	0.50

Sources and Notes:
[1] - [6]: Table No. MJV-3; Panels A - AG, [x].
[7]: Average of [2] - [6].

Table No. MJV-5

Electric Sample

Estimated Growth Rates

Company	Bloomberg Estimate		Value Line			Combined BEst and Value Line Growth Rate
	BEst Long-Term Growth Rate	Number of Estimates	EPS Year 2014 Estimate	EPS Year 2017-2019 Estimate	Annualized Growth Rate	
	[1]	[2]	[3]	[4]	[5]	[6]
ALLETE Inc	6.0%	1	$2.85	$3.75	7.6%	6.8%
Ameren Corp	7.3%	3	$2.35	$3.00	6.7%	7.2%
American Electric Power Co Inc	5.7%	5	$3.30	$4.00	5.3%	5.6%
Black Hills Corp	7.0%	1	$2.65	$3.25	5.6%	6.3%
CMS Energy Corp	5.7%	4	$1.75	$2.25	6.9%	5.9%
Cleco Corp	7.0%	1	$2.75	$3.50	6.6%	6.8%
CenterPoint Energy Inc	5.0%	3	$1.15	$1.50	7.3%	5.6%
Dominion Resources Inc/VA	6.1%	3	$3.45	$4.00	4.0%	5.6%
DTE Energy Co	5.5%	5	$4.50	$5.25	4.2%	5.3%
Consolidated Edison Inc	3.8%	4	$3.70	$4.00	2.1%	3.5%
El Paso Electric Co	5.3%	2	$2.35	$2.75	4.3%	4.9%
Edison International	3.7%	8	$3.40	$4.50	7.8%	4.1%
Entergy Corp	0.1%	4	$4.80	$5.75	4.9%	1.1%
Great Plains Energy Inc	5.0%	4	$1.65	$2.00	5.3%	5.1%
Hawaiian Electric Industries Inc	3.4%	2	$1.60	$2.00	6.1%	4.3%
IDACORP Inc	4.0%	1	$3.50	$3.65	1.1%	2.6%
Alliant Energy Corp	5.0%	1	$3.45	$4.00	4.0%	4.5%
MGE Energy Inc	4.0%	1	$2.30	$3.10	8.3%	6.1%
NextEra Energy Inc	6.5%	4	$5.25	$6.50	5.9%	6.3%
OGE Energy Corp	5.0%	2	$2.00	$2.50	6.1%	5.4%
Otter Tail Corp	6.0%	1	$1.60	$2.20	8.9%	7.4%
PG&E Corp	5.8%	4	$2.20	$3.00	8.6%	6.3%
Public Service Enterprise Group Inc	5.2%	5	$2.50	$2.75	2.6%	4.8%
Pinnacle West Capital Corp	4.5%	5	$3.70	$4.25	3.8%	4.4%
Portland General Electric Co	6.8%	2	$2.05	$2.50	5.4%	6.3%
SCANA Corp	5.0%	1	$3.55	$4.25	4.9%	5.0%
Southern Co/The	3.9%	5	$2.80	$3.25	4.1%	4.0%
Sempra Energy	6.9%	6	$4.45	$6.25	9.5%	7.3%
Integrys Energy Group Inc	5.0%	1	$3.70	$4.50	5.4%	5.2%
Vectren Corp	4.5%	2	$2.25	$2.90	7.0%	5.3%
Wisconsin Energy Corp	4.7%	3	$2.60	$3.25	6.1%	5.1%
Westar Energy Inc	4.1%	3	$2.35	$2.75	4.3%	4.2%
Xcel Energy Inc	5.0%	3	$2.00	$2.50	6.1%	5.3%

Sources and Notes:

[1] - [2]: Bloomberg as of June 3, 2014. IDACORP, MGE Energy Inc, and Otter Tail Corp are from Thomson Reuters as of the same date.

[3] - [4]: From Valueline Investment Analyzer as of June 3, 2014..

[5]: ([4] / [3]) ^ (1/3.75) - 1.

[6]: ([1] x [2] + [5]) / ([2] + 1).

Table No. MJV-6

DCF Cost of Equity of the Electric Sample

Panel A: Simple DCF Method (Quarterly)

Company	Stock Price [1]	Most Recent Dividend [2]	Quarterly Dividend Yield [3]	Combined BEst and Value Line Long-Term Growth Rate [4]	Quarterly Growth Rate [5]	DCF Cost of Equity [6]
ALLETE Inc	$49.27	$0.49	0.99%	6.8%	1.7%	11.1%
Ameren Corp	$38.92	$0.40	1.03%	7.2%	1.7%	11.6%
American Electric Power Co Inc	$52.30	$0.50	0.96%	5.6%	1.4%	9.7%
Black Hills Corp	$56.67	$0.39	0.69%	6.3%	1.5%	9.3%
CMS Energy Corp	$29.30	$0.27	0.92%	5.9%	1.4%	9.9%
Cleco Corp	$51.34	$0.40	0.78%	6.8%	1.7%	10.2%
CenterPoint Energy Inc	$23.84	$0.24	1.00%	5.6%	1.4%	9.8%
Dominion Resources Inc/VA	$69.04	$0.60	0.87%	5.6%	1.4%	9.3%
DTE Energy Co	$75.51	$0.66	0.87%	5.3%	1.3%	9.0%
Consolidated Edison Inc	$54.63	$0.63	1.15%	3.5%	0.9%	8.3%
El Paso Electric Co	$36.90	$0.27	0.72%	4.9%	1.2%	8.0%
Edison International	$54.72	$0.36	0.65%	4.1%	1.0%	6.9%
Entergy Corp	$74.44	$0.83	1.12%	1.1%	0.3%	5.7%
Great Plains Energy Inc	$25.20	$0.23	0.91%	5.1%	1.2%	9.0%
Hawaiian Electric Industries Inc	$23.83	$0.31	1.30%	4.3%	1.1%	9.8%
IDACORP Inc	$54.24	$0.43	0.79%	2.6%	0.6%	5.9%
Alliant Energy Corp	$57.42	$0.51	0.89%	4.5%	1.1%	8.3%
MGE Energy Inc	$36.97	$0.27	0.73%	6.1%	1.5%	9.3%
NextEra Energy Inc	$96.01	$0.73	0.76%	6.3%	1.5%	9.6%
OGE Energy Corp	$36.02	$0.23	0.62%	5.4%	1.3%	8.0%
Otter Tail Corp	$28.13	$0.30	1.08%	7.4%	1.8%	12.1%
PG&E Corp	$44.54	$0.46	1.02%	6.3%	1.5%	10.7%
Public Service Enterprise Group Inc	$37.65	$0.37	0.98%	4.8%	1.2%	8.9%
Pinnacle West Capital Corp	$54.94	$0.57	1.03%	4.4%	1.1%	8.7%
Portland General Electric Co	$32.89	$0.28	0.84%	6.3%	1.5%	9.9%
SCANA Corp	$51.43	$0.53	1.02%	5.0%	1.2%	9.3%
Southern Co/The	$43.33	$0.53	1.21%	4.0%	1.0%	9.1%
Sempra Energy	$98.83	$0.66	0.67%	7.3%	1.8%	10.2%
Integrys Energy Group Inc	$57.19	$0.68	1.19%	5.2%	1.3%	10.3%
Vectren Corp	$39.12	$0.36	0.92%	5.3%	1.3%	9.3%
Wisconsin Energy Corp	$45.22	$0.39	0.86%	5.1%	1.2%	8.8%
Westar Energy Inc	$35.21	$0.35	0.99%	4.2%	1.0%	8.4%
Xcel Energy Inc	$30.45	$0.30	0.99%	5.3%	1.3%	9.5%

Sources and Notes:
[1]: Workpaper #1 to Table No. MJV-6.
[2]: Workpaper #2 to Table No. MJV-6.
[3]: [2] / [1].
[4]: Table No. MJV-5, [6].
[5]: {(1 + [4]) ^ (1/4)} - 1.
[6]: {(([2] / [1]) x (1 + [5]) + [5] + 1) ^ 4} - 1.

Table No. MJV-6

DCF Cost of Equity of the Electric Sample

Panel B: Multi-Stage DCF (Using Blue Chip Long-Term GDP Growth Forecast as the Perpetual Rate)

Company	Stock Price [1]	Most Recent Dividend [2]	Combined BEst and Value Line Long-Term Growth Rate [3]	Growth Rate: Year 6 [4]	Growth Rate: Year 7 [5]	Growth Rate: Year 8 [6]	Growth Rate: Year 9 [7]	Growth Rate: Year 10 [8]	GDP Long-Term Growth Rate [9]	DCF Cost of Equity [10]
ALLETE Inc	$49.27	$0.49	6.8%	6.4%	6.0%	5.6%	5.3%	4.9%	4.5%	9.4%
Ameren Corp	$38.92	$0.40	7.2%	6.7%	6.3%	5.8%	5.4%	4.9%	4.5%	9.6%
American Electric Power Co Inc	$52.30	$0.50	5.6%	5.4%	5.2%	5.0%	4.9%	4.7%	4.5%	8.8%
Black Hills Corp	$56.67	$0.39	6.3%	6.0%	5.7%	5.4%	5.1%	4.8%	4.5%	7.8%
CMS Energy Corp	$29.30	$0.27	5.9%	5.7%	5.5%	5.2%	5.0%	4.7%	4.5%	8.8%
Cleco Corp	$51.34	$0.40	6.8%	6.4%	6.0%	5.7%	5.3%	4.9%	4.5%	8.3%
CenterPoint Energy Inc	$23.84	$0.24	5.6%	5.4%	5.2%	5.0%	4.9%	4.7%	4.5%	9.0%
Dominion Resources Inc/VA	$69.04	$0.60	5.6%	5.4%	5.2%	5.0%	4.9%	4.7%	4.5%	8.4%
DTE Energy Co	$75.51	$0.66	5.3%	5.1%	5.0%	4.9%	4.8%	4.6%	4.5%	8.4%
Consolidated Edison Inc	$54.63	$0.63	3.5%	3.7%	3.8%	4.0%	4.2%	4.3%	4.5%	9.1%
El Paso Electric Co	$36.90	$0.27	4.9%	4.9%	4.8%	4.7%	4.6%	4.6%	4.5%	7.6%
Edison International	$54.72	$0.36	4.1%	4.2%	4.3%	4.3%	4.4%	4.4%	4.5%	7.2%
Entergy Corp	$74.44	$0.83	1.1%	1.7%	2.2%	2.8%	3.4%	3.9%	4.5%	8.3%
Great Plains Energy Inc	$25.20	$0.23	5.1%	5.0%	4.9%	4.8%	4.7%	4.6%	4.5%	8.5%
Hawaiian Electric Industries Inc	$23.83	$0.31	4.3%	4.3%	4.4%	4.4%	4.4%	4.5%	4.5%	10.0%
IDACORP Inc	$54.24	$0.43	2.6%	2.9%	3.2%	3.5%	3.9%	4.2%	4.5%	7.5%
Alliant Energy Corp	$57.42	$0.51	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	8.3%
MGE Energy Inc	$36.97	$0.27	6.1%	5.9%	5.6%	5.3%	5.0%	4.8%	4.5%	8.0%
NextEra Energy Inc	$96.01	$0.73	6.3%	6.0%	5.7%	5.4%	5.1%	4.8%	4.5%	8.1%
OGE Energy Corp	$36.02	$0.23	5.4%	5.2%	5.1%	4.9%	4.8%	4.6%	4.5%	7.3%
Otter Tail Corp	$28.13	$0.30	7.4%	6.9%	6.5%	6.0%	5.5%	5.0%	4.5%	10.0%
PG&E Corp	$44.54	$0.46	6.3%	6.0%	5.7%	5.4%	5.1%	4.8%	4.5%	9.4%
Public Service Enterprise Group Inc	$37.65	$0.37	4.8%	4.7%	4.7%	4.6%	4.6%	4.5%	4.5%	8.7%
Pinnacle West Capital Corp	$54.94	$0.57	4.4%	4.4%	4.4%	4.4%	4.5%	4.5%	4.5%	8.8%
Portland General Electric Co	$32.89	$0.28	6.3%	6.0%	5.7%	5.4%	5.1%	4.8%	4.5%	8.5%
SCANA Corp	$51.43	$0.53	5.0%	4.9%	4.8%	4.7%	4.7%	4.6%	4.5%	9.0%
Southern Co/The	$43.33	$0.53	4.0%	4.0%	4.1%	4.2%	4.3%	4.4%	4.5%	9.5%
Sempra Energy	$98.83	$0.66	7.3%	6.8%	6.3%	5.9%	5.4%	5.0%	4.5%	7.9%
Integrys Energy Group Inc	$57.19	$0.68	5.2%	5.1%	5.0%	4.8%	4.7%	4.6%	4.5%	9.8%
Vectren Corp	$39.12	$0.36	5.3%	5.2%	5.1%	4.9%	4.8%	4.6%	4.5%	8.6%
Wisconsin Energy Corp	$45.22	$0.39	5.1%	5.0%	4.9%	4.8%	4.7%	4.6%	4.5%	8.3%
Westar Energy Inc	$35.21	$0.35	4.2%	4.2%	4.3%	4.3%	4.4%	4.4%	4.5%	8.6%
Xcel Energy Inc	$30.45	$0.30	5.3%	5.2%	5.0%	4.9%	4.8%	4.6%	4.5%	8.9%

Sources and Notes:
[1]: Workpaper #1 to Table No. MJV-6.
[2]: Workpaper #2 to Table No. MJV-6.
[3]: Table No. MJV-5, [6].
[4]: [3] - {([3] - [9])/ 6}.
[5]: [4] - {([3] - [9])/ 6}.
[6]: [5] - {([3] - [9])/ 6}.
[7]: [6] - {([3] - [9])/ 6}.
[8]: [7] - {([3] - [9])/ 6}.
[9]: BlueChip Economic Indicators, March 2014 (U.S.) This number is assumed to be the perpetual growth rate.
[10]: Workpaper #3 to Table No. MJV-6.

Workpaper #1 to Table No. MJV-6

Electric Sample

Common Stock Prices from May 13, 2014 to June 3, 2014

Company	6/3/2014	6/2/2014	5/30/2014	5/29/2014	5/28/2014	5/27/2014	5/23/2014	5/22/2014	5/21/2014	5/20/2014	5/19/2014	5/16/2014	5/15/2014	5/14/2014	5/13/2014	Average
ALLETE Inc	$48.94	$49.32	$49.67	$49.51	$49.83	$50.12	$49.55	$49.26	$48.63	$48.60	$48.73	$49.36	$48.99	$49.30	$49.31	$49.27
Ameren Corp	$39.31	$39.04	$39.35	$38.91	$39.18	$38.91	$38.64	$38.73	$38.05	$38.43	$38.54	$39.22	$39.37	$39.27	$38.81	$38.92
American Electric Power Co Inc	$53.94	$53.48	$53.35	$52.79	$52.94	$52.70	$51.41	$51.49	$51.11	$50.96	$51.02	$52.70	$52.02	$52.36	$52.23	$52.30
Black Hills Corp	$57.39	$57.38	$57.67	$57.20	$57.41	$57.46	$56.73	$56.43	$55.95	$55.87	$56.04	$56.25	$56.01	$56.06	$56.15	$56.67
CMS Energy Corp	$29.78	$29.72	$29.75	$29.46	$29.53	$29.23	$29.30	$29.22	$28.87	$28.95	$28.88	$29.27	$29.23	$29.25	$29.11	$29.30
Cleco Corp	$51.56	$51.63	$52.03	$51.61	$51.88	$51.62	$51.42	$51.19	$50.58	$50.56	$50.61	$51.42	$51.01	$51.40	$51.54	$51.34
CenterPoint Energy Inc	$24.02	$24.08	$24.12	$24.06	$24.01	$23.96	$23.87	$24.03	$23.68	$23.64	$23.51	$23.88	$23.55	$23.70	$23.43	$23.84
Dominion Resources Inc/VA	$69.87	$69.60	$68.96	$68.52	$68.35	$68.82	$68.72	$69.22	$68.36	$68.32	$68.44	$69.72	$69.47	$69.96	$69.20	$69.04
DTE Energy Co	$76.22	$76.18	$76.12	$75.37	$75.36	$75.28	$74.88	$75.15	$74.36	$74.46	$74.70	$76.44	$75.85	$76.15	$76.14	$75.51
Consolidated Edison Inc	$55.00	$55.00	$55.01	$54.65	$54.52	$54.40	$54.13	$54.17	$53.86	$54.08	$54.30	$55.18	$54.96	$55.25	$54.87	$54.63
El Paso Electric Co	$37.37	$37.77	$38.11	$37.81	$37.79	$37.39	$36.82	$36.74	$36.21	$35.79	$35.89	$36.38	$36.07	$36.54	$36.75	$36.90
Edison International	$56.21	$55.67	$55.14	$54.59	$54.36	$54.09	$54.02	$54.36	$53.73	$54.03	$54.04	$55.28	$55.24	$55.10	$54.95	$54.72
Entergy Corp	$76.22	$75.77	$75.42	$75.53	$74.62	$74.11	$74.06	$74.04	$73.65	$73.49	$73.15	$74.52	$74.29	$74.27	$73.41	$74.44
Great Plains Energy Inc	$25.48	$25.39	$25.45	$25.29	$25.25	$25.13	$24.98	$25.01	$24.85	$24.90	$24.99	$25.45	$25.23	$25.35	$25.23	$25.20
Hawaiian Electric Industries Inc	$23.69	$23.84	$24.05	$24.07	$24.18	$23.93	$23.75	$23.74	$23.66	$23.68	$23.68	$23.99	$23.97	$23.63	$23.60	$23.83
IDACORP Inc	$54.24	$54.28	$54.83	$54.85	$55.03	$54.88	$54.00	$53.82	$53.36	$53.47	$53.81	$54.48	$54.15	$54.31	$54.03	$54.24
Alliant Energy Corp	$58.10	$58.21	$58.30	$57.75	$57.94	$57.39	$57.09	$56.98	$56.57	$56.47	$56.68	$57.54	$57.34	$57.57	$57.35	$57.42
MGE Energy Inc	$37.21	$37.21	$37.54	$37.65	$37.56	$37.77	$37.00	$36.67	$36.21	$36.34	$36.68	$36.80	$36.46	$36.59	$36.86	$36.97
NextEra Energy Inc	$97.16	$97.18	$97.36	$96.55	$96.64	$95.81	$95.74	$95.92	$95.56	$95.61	$93.99	$95.88	$95.55	$95.89	$95.36	$96.01
OGE Energy Corp	$36.55	$36.63	$36.73	$36.57	$36.56	$36.17	$35.87	$36.00	$35.35	$35.26	$35.22	$35.64	$35.73	$36.05	$35.91	$36.02
Otter Tail Corp	$28.48	$28.56	$28.58	$28.43	$28.32	$28.40	$28.19	$28.03	$27.98	$27.61	$27.67	$27.80	$27.54	$28.14	$28.27	$28.13
PG&E Corp	$45.64	$45.87	$45.87	$45.68	$45.30	$44.78	$44.72	$44.61	$44.29	$43.63	$43.52	$43.64	$43.63	$43.78	$43.20	$44.54
Public Service Enterprise Group Inc	$38.80	$38.74	$38.59	$38.14	$37.83	$37.00	$37.05	$37.26	$36.91	$36.82	$36.82	$37.44	$37.62	$37.88	$37.86	$37.65
Pinnacle West Capital Corp	$54.99	$55.09	$55.42	$54.86	$55.06	$55.01	$54.82	$54.94	$54.50	$54.52	$54.72	$55.18	$54.93	$55.16	$54.97	$54.94
Portland General Electric Co	$32.94	$32.88	$33.07	$32.99	$33.20	$33.18	$32.75	$32.83	$32.60	$32.87	$32.72	$33.04	$32.79	$32.87	$32.64	$32.89
SCANA Corp	$51.74	$51.88	$52.00	$51.52	$51.59	$51.20	$51.22	$51.37	$50.82	$50.83	$50.86	$51.63	$51.48	$51.69	$51.62	$51.43
Southern Co/The	$43.67	$43.67	$43.78	$43.54	$43.45	$43.16	$43.08	$43.19	$42.84	$42.77	$42.82	$43.51	$43.44	$43.73	$43.31	$43.33
Sempra Energy	$100.52	$100.47	$100.35	$100.05	$99.71	$99.06	$99.14	$98.50	$98.15	$97.16	$97.08	$98.20	$97.84	$98.49	$97.69	$98.83
Integrys Energy Group Inc	$57.85	$57.60	$57.99	$57.34	$57.23	$57.64	$57.14	$57.41	$57.03	$56.67	$56.59	$56.92	$56.62	$57.09	$56.71	$57.19
Vectren Corp	$39.69	$39.74	$39.88	$39.53	$39.59	$39.36	$38.98	$39.00	$38.39	$38.49	$38.65	$38.97	$38.86	$39.15	$38.57	$39.12
Wisconsin Energy Corp	$45.39	$45.45	$45.52	$45.10	$45.32	$45.14	$45.13	$45.11	$44.64	$44.83	$44.79	$45.37	$45.55	$45.79	$45.14	$45.22
Westar Energy Inc	$35.87	$35.69	$35.70	$35.45	$35.48	$35.21	$35.13	$35.15	$34.76	$34.61	$34.62	$35.29	$35.02	$35.14	$35.08	$35.21
Xcel Energy Inc	$30.68	$30.67	$30.76	$30.57	$30.50	$30.37	$30.24	$30.30	$30.04	$30.09	$30.06	$30.50	$30.58	$30.85	$30.57	$30.45

Sources and Notes:
Bloomberg as of June 3, 2014.
Daily prices for the 15-trading day period ending June 3, 2014.

Workpaper #2 to Table No. MJV-6

Electric Sample

Most Recent Paid Dividends

Company	Most Recent Dividend
ALLETE Inc	$0.49
Ameren Corp	$0.40
American Electric Power Co Inc	$0.50
Black Hills Corp	$0.39
CMS Energy Corp	$0.27
Cleco Corp	$0.40
CenterPoint Energy Inc	$0.24
Dominion Resources Inc/VA	$0.60
DTE Energy Co	$0.66
Consolidated Edison Inc	$0.63
El Paso Electric Co	$0.27
Edison International	$0.36
Entergy Corp	$0.83
Great Plains Energy Inc	$0.23
Hawaiian Electric Industries Inc	$0.31
IDACORP Inc	$0.43
Alliant Energy Corp	$0.51
MGE Energy Inc	$0.27
NextEra Energy Inc	$0.73
OGE Energy Corp	$0.23
Otter Tail Corp	$0.30
PG&E Corp	$0.46
Public Service Enterprise Group Inc	$0.37
Pinnacle West Capital Corp	$0.57
Portland General Electric Co	$0.28
SCANA Corp	$0.53
Southern Co/The	$0.53
Sempra Energy	$0.66
Integrys Energy Group Inc	$0.68
Vectren Corp	$0.36
Wisconsin Energy Corp	$0.39
Westar Energy Inc	$0.35
Xcel Energy Inc	$0.30

Sources and Notes:
Bloomberg as of June 3, 2014.

Workpaper #3 to Table No. MJV-6

DCF Cost of Equity of the Electric Sample

Multi - Stage DCF (using Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Growth Rate)

Year	Company	ALLETE Inc	Ameren Corp	American Electric Power Co Inc	Black Hills Corp	CMS Energy Corp	Cleco Corp	CenterPoint Energy Inc	Dominion Resources Inc/VA	DTE Energy Co	Consolidated Edison Inc	El Paso Electric Co
	Current Dividend	$0.49	$0.40	$0.50	$0.39	$0.27	$0.40	$0.24	$0.60	$0.66	$0.63	$0.27
	Current Stock Price	($49.27)	($38.92)	($52.30)	($56.67)	($29.30)	($51.34)	($23.84)	($69.04)	($75.51)	($54.63)	($36.90)
YEAR 2014	Dividend Q3 Estimate	$0.50	$0.41	$0.51	$0.40	$0.27	$0.41	$0.24	$0.61	$0.66	$0.64	$0.27
YEAR 2014	Dividend Q4 Estimate	$0.51	$0.41	$0.51	$0.40	$0.28	$0.41	$0.24	$0.62	$0.67	$0.64	$0.27
YEAR 2015	Dividend Q1 Estimate	$0.51	$0.42	$0.52	$0.41	$0.28	$0.42	$0.25	$0.62	$0.68	$0.65	$0.27
YEAR 2015	Dividend Q2 Estimate	$0.52	$0.43	$0.53	$0.41	$0.29	$0.43	$0.25	$0.63	$0.69	$0.65	$0.28
YEAR 2015	Dividend Q3 Estimate	$0.53	$0.44	$0.54	$0.42	$0.29	$0.43	$0.25	$0.64	$0.70	$0.66	$0.28
YEAR 2015	Dividend Q4 Estimate	$0.54	$0.44	$0.54	$0.43	$0.29	$0.44	$0.26	$0.65	$0.71	$0.66	$0.28
YEAR 2016	Dividend Q1 Estimate	$0.55	$0.45	$0.55	$0.43	$0.30	$0.45	$0.26	$0.66	$0.72	$0.67	$0.29
YEAR 2016	Dividend Q2 Estimate	$0.56	$0.46	$0.56	$0.44	$0.30	$0.46	$0.26	$0.67	$0.73	$0.67	$0.29
YEAR 2016	Dividend Q3 Estimate	$0.57	$0.47	$0.57	$0.45	$0.31	$0.46	$0.27	$0.68	$0.74	$0.68	$0.30
YEAR 2016	Dividend Q4 Estimate	$0.58	$0.48	$0.57	$0.45	$0.31	$0.47	$0.27	$0.69	$0.74	$0.69	$0.30
YEAR 2017	Dividend Q1 Estimate	$0.59	$0.48	$0.58	$0.46	$0.32	$0.48	$0.28	$0.70	$0.75	$0.69	$0.30
YEAR 2017	Dividend Q2 Estimate	$0.60	$0.49	$0.59	$0.47	$0.32	$0.49	$0.28	$0.71	$0.76	$0.70	$0.31
YEAR 2017	Dividend Q3 Estimate	$0.61	$0.50	$0.60	$0.48	$0.33	$0.50	$0.28	$0.72	$0.77	$0.70	$0.31
YEAR 2017	Dividend Q4 Estimate	$0.62	$0.51	$0.60	$0.48	$0.33	$0.50	$0.29	$0.73	$0.78	$0.71	$0.31
YEAR 2018	Dividend Q1 Estimate	$0.63	$0.52	$0.61	$0.49	$0.34	$0.51	$0.29	$0.74	$0.79	$0.72	$0.32
YEAR 2018	Dividend Q2 Estimate	$0.64	$0.53	$0.62	$0.50	$0.34	$0.52	$0.29	$0.75	$0.80	$0.72	$0.32
YEAR 2018	Dividend Q3 Estimate	$0.65	$0.54	$0.63	$0.51	$0.34	$0.53	$0.30	$0.76	$0.81	$0.73	$0.33
YEAR 2018	Dividend Q4 Estimate	$0.66	$0.55	$0.64	$0.51	$0.35	$0.54	$0.30	$0.77	$0.83	$0.73	$0.33
YEAR 2019	Dividend Q1 Estimate	$0.67	$0.56	$0.65	$0.52	$0.35	$0.55	$0.31	$0.78	$0.84	$0.74	$0.33
YEAR 2019	Dividend Q2 Estimate	$0.68	$0.57	$0.66	$0.53	$0.36	$0.56	$0.31	$0.79	$0.85	$0.75	$0.34
YEAR 2019	Dividend Q3 Estimate	$0.69	$0.57	$0.67	$0.54	$0.37	$0.57	$0.32	$0.80	$0.86	$0.75	$0.34
YEAR 2019	Dividend Q4 Estimate	$0.70	$0.58	$0.67	$0.54	$0.37	$0.57	$0.32	$0.81	$0.87	$0.76	$0.35
YEAR 2020	Dividend Q1 Estimate	$0.71	$0.59	$0.68	$0.55	$0.38	$0.58	$0.32	$0.82	$0.88	$0.77	$0.35
YEAR 2020	Dividend Q2 Estimate	$0.72	$0.60	$0.69	$0.56	$0.38	$0.59	$0.33	$0.83	$0.89	$0.77	$0.35
YEAR 2020	Dividend Q3 Estimate	$0.74	$0.61	$0.70	$0.57	$0.39	$0.60	$0.33	$0.84	$0.90	$0.78	$0.36
YEAR 2020	Dividend Q4 Estimate	$0.75	$0.62	$0.71	$0.58	$0.39	$0.61	$0.34	$0.85	$0.91	$0.79	$0.36
YEAR 2021	Dividend Q1 Estimate	$0.76	$0.63	$0.72	$0.58	$0.40	$0.62	$0.34	$0.86	$0.92	$0.80	$0.37
YEAR 2021	Dividend Q2 Estimate	$0.77	$0.64	$0.73	$0.59	$0.40	$0.63	$0.35	$0.87	$0.94	$0.80	$0.37
YEAR 2021	Dividend Q3 Estimate	$0.78	$0.65	$0.74	$0.60	$0.41	$0.64	$0.35	$0.88	$0.95	$0.81	$0.37
YEAR 2021	Dividend Q4 Estimate	$0.79	$0.66	$0.75	$0.61	$0.41	$0.65	$0.35	$0.89	$0.96	$0.82	$0.38
YEAR 2022	Dividend Q1 Estimate	$0.80	$0.67	$0.76	$0.62	$0.42	$0.65	$0.36	$0.90	$0.97	$0.83	$0.38
YEAR 2022	Dividend Q2 Estimate	$0.81	$0.68	$0.76	$0.62	$0.42	$0.66	$0.36	$0.92	$0.98	$0.84	$0.39
YEAR 2022	Dividend Q3 Estimate	$0.82	$0.69	$0.77	$0.63	$0.43	$0.67	$0.37	$0.93	$0.99	$0.85	$0.39
YEAR 2022	Dividend Q4 Estimate	$0.83	$0.70	$0.78	$0.64	$0.43	$0.68	$0.37	$0.94	$1.00	$0.85	$0.40
YEAR 2023	Dividend Q1 Estimate	$0.84	$0.71	$0.79	$0.65	$0.44	$0.69	$0.38	$0.95	$1.02	$0.86	$0.40
YEAR 2023	Dividend Q2 Estimate	$0.85	$0.71	$0.80	$0.66	$0.44	$0.70	$0.38	$0.96	$1.03	$0.87	$0.41
YEAR 2023	Dividend Q3 Estimate	$0.86	$0.72	$0.81	$0.66	$0.45	$0.71	$0.38	$0.97	$1.04	$0.88	$0.41
YEAR 2023	Dividend Q4 Estimate	$0.87	$0.73	$0.82	$0.67	$0.45	$0.72	$0.39	$0.98	$1.05	$0.89	$0.41
YEAR 2024	Dividend Q1 Estimate	$0.89	$0.74	$0.83	$0.68	$0.46	$0.72	$0.39	$0.99	$1.06	$0.90	$0.42
YEAR 2024	Dividend Q2 Estimate	$0.90	$0.75	$0.84	$0.69	$0.46	$0.73	$0.40	$1.01	$1.08	$0.91	$0.42
YEAR 2024 Q3	Year 10 Stock Price	$80.17	$63.67	$83.85	$90.87	$47.11	$82.95	$38.23	$110.45	$120.46	$85.75	$58.54
	Trial COE: Quarterly Rate	2.3%	2.3%	2.1%	1.9%	2.1%	2.0%	2.2%	2.0%	2.0%	2.2%	1.9%
	Trial COE: Annual Rate	9.4%	9.6%	8.8%	7.8%	8.8%	8.3%	9.0%	8.4%	8.4%	9.1%	7.6%
	Cost of Equity	9.4%	9.6%	8.8%	7.8%	8.8%	8.3%	9.0%	8.4%	8.4%	9.1%	7.6%
	(Trial COE - COE) x 100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Sources and Notes:
All Growth Rate Estimates: Table No. MJV-6; Panel B.
Stock Prices and Dividends are from Bloomberg as of June 3, 2014.
1. See Workpaper #1 to Table No. MJV-6 for the average closing stock price obtained from Bloomberg.
2. See Workpaper #2 to Table No. MJV-6 for the for the quarterly dividend obtained from Bloomberg.
3. The Blue Chip Economic Indicator Long-Term GDP Growth Rate is used to calculate the Year 10 Stock Price.
Year 10 Stock Price = {(the Dividend Year 2024 Q3 Estimate) x ((1 + the Perpetual Growth Rate) ^ (1/4) x (1 + Quarterly Rate))} /
{(Quarterly Rate) - ((1 + the Perpetual Growth Rate) ^ (1/4) -1)}.

Workpaper #3 to Table No. MJV-6

DCF Cost of Equity of the Electric Sample

Multi - Stage DCF (using Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Growth Rate)

Year	Company	Edison International	Entergy Corp	Great Plains Energy Inc	Hawaiian Electric Industries Inc	IDACORP Inc	Alliant Energy Corp	MGE Energy Inc	NextEra Energy Inc	OGE Energy Corp	Otter Tail Corp	PG&E Corp
	Current Dividend	$0.36	$0.83	$0.23	$0.31	$0.43	$0.51	$0.27	$0.73	$0.23	$0.30	$0.46
	Current Stock Price	($54.72)	($74.44)	($25.20)	($23.83)	($54.24)	($57.42)	($36.97)	($96.01)	($36.02)	($28.13)	($44.54)
YEAR 2014	Dividend Q3 Estimate	$0.36	$0.83	$0.23	$0.31	$0.43	$0.52	$0.28	$0.74	$0.23	$0.31	$0.47
YEAR 2014	Dividend Q4 Estimate	$0.37	$0.83	$0.24	$0.32	$0.44	$0.52	$0.28	$0.75	$0.23	$0.31	$0.48
YEAR 2015	Dividend Q1 Estimate	$0.37	$0.84	$0.24	$0.32	$0.44	$0.53	$0.28	$0.76	$0.23	$0.32	$0.48
YEAR 2015	Dividend Q2 Estimate	$0.37	$0.84	$0.24	$0.32	$0.44	$0.53	$0.29	$0.77	$0.23	$0.32	$0.49
YEAR 2015	Dividend Q3 Estimate	$0.38	$0.84	$0.24	$0.33	$0.44	$0.54	$0.29	$0.78	$0.24	$0.33	$0.50
YEAR 2015	Dividend Q4 Estimate	$0.38	$0.84	$0.25	$0.33	$0.45	$0.54	$0.30	$0.79	$0.24	$0.34	$0.51
YEAR 2016	Dividend Q1 Estimate	$0.38	$0.85	$0.25	$0.33	$0.45	$0.55	$0.30	$0.81	$0.24	$0.34	$0.51
YEAR 2016	Dividend Q2 Estimate	$0.39	$0.85	$0.25	$0.34	$0.45	$0.56	$0.31	$0.82	$0.25	$0.35	$0.52
YEAR 2016	Dividend Q3 Estimate	$0.39	$0.85	$0.26	$0.34	$0.46	$0.56	$0.31	$0.83	$0.25	$0.36	$0.53
YEAR 2016	Dividend Q4 Estimate	$0.40	$0.85	$0.26	$0.34	$0.46	$0.57	$0.32	$0.85	$0.25	$0.36	$0.54
YEAR 2017	Dividend Q1 Estimate	$0.40	$0.86	$0.26	$0.35	$0.46	$0.58	$0.32	$0.86	$0.26	$0.37	$0.55
YEAR 2017	Dividend Q2 Estimate	$0.40	$0.86	$0.27	$0.35	$0.46	$0.58	$0.32	$0.87	$0.26	$0.38	$0.56
YEAR 2017	Dividend Q3 Estimate	$0.41	$0.86	$0.27	$0.36	$0.47	$0.59	$0.33	$0.89	$0.26	$0.38	$0.56
YEAR 2017	Dividend Q4 Estimate	$0.41	$0.86	$0.27	$0.36	$0.47	$0.60	$0.33	$0.90	$0.27	$0.39	$0.57
YEAR 2018	Dividend Q1 Estimate	$0.42	$0.86	$0.28	$0.36	$0.47	$0.60	$0.34	$0.91	$0.27	$0.40	$0.58
YEAR 2018	Dividend Q2 Estimate	$0.42	$0.87	$0.28	$0.37	$0.48	$0.61	$0.34	$0.93	$0.27	$0.40	$0.59
YEAR 2018	Dividend Q3 Estimate	$0.43	$0.87	$0.28	$0.37	$0.48	$0.62	$0.35	$0.94	$0.28	$0.41	$0.60
YEAR 2018	Dividend Q4 Estimate	$0.43	$0.87	$0.29	$0.37	$0.48	$0.62	$0.36	$0.96	$0.28	$0.42	$0.61
YEAR 2019	Dividend Q1 Estimate	$0.43	$0.87	$0.29	$0.38	$0.48	$0.63	$0.36	$0.97	$0.28	$0.43	$0.62
YEAR 2019	Dividend Q2 Estimate	$0.44	$0.88	$0.29	$0.38	$0.49	$0.64	$0.37	$0.99	$0.29	$0.43	$0.63
YEAR 2019	Dividend Q3 Estimate	$0.44	$0.88	$0.30	$0.39	$0.49	$0.64	$0.37	$1.00	$0.29	$0.44	$0.64
YEAR 2019	Dividend Q4 Estimate	$0.45	$0.88	$0.30	$0.39	$0.49	$0.65	$0.38	$1.01	$0.30	$0.45	$0.65
YEAR 2020	Dividend Q1 Estimate	$0.45	$0.89	$0.31	$0.40	$0.50	$0.66	$0.38	$1.03	$0.30	$0.46	$0.66
YEAR 2020	Dividend Q2 Estimate	$0.46	$0.89	$0.31	$0.40	$0.50	$0.66	$0.39	$1.04	$0.30	$0.46	$0.67
YEAR 2020	Dividend Q3 Estimate	$0.46	$0.90	$0.31	$0.40	$0.51	$0.67	$0.39	$1.06	$0.31	$0.47	$0.67
YEAR 2020	Dividend Q4 Estimate	$0.47	$0.90	$0.32	$0.41	$0.51	$0.68	$0.40	$1.07	$0.31	$0.48	$0.68
YEAR 2021	Dividend Q1 Estimate	$0.47	$0.91	$0.32	$0.41	$0.51	$0.69	$0.40	$1.09	$0.32	$0.49	$0.69
YEAR 2021	Dividend Q2 Estimate	$0.48	$0.91	$0.32	$0.42	$0.52	$0.69	$0.41	$1.10	$0.32	$0.49	$0.70
YEAR 2021	Dividend Q3 Estimate	$0.48	$0.92	$0.33	$0.42	$0.52	$0.70	$0.41	$1.12	$0.32	$0.50	$0.71
YEAR 2021	Dividend Q4 Estimate	$0.49	$0.92	$0.33	$0.43	$0.53	$0.71	$0.42	$1.13	$0.33	$0.51	$0.72
YEAR 2022	Dividend Q1 Estimate	$0.49	$0.93	$0.34	$0.43	$0.53	$0.72	$0.43	$1.15	$0.33	$0.51	$0.73
YEAR 2022	Dividend Q2 Estimate	$0.50	$0.94	$0.34	$0.44	$0.54	$0.73	$0.43	$1.16	$0.33	$0.52	$0.74
YEAR 2022	Dividend Q3 Estimate	$0.50	$0.94	$0.34	$0.44	$0.54	$0.73	$0.44	$1.18	$0.34	$0.53	$0.75
YEAR 2022	Dividend Q4 Estimate	$0.51	$0.95	$0.35	$0.44	$0.55	$0.74	$0.44	$1.19	$0.34	$0.54	$0.76
YEAR 2023	Dividend Q1 Estimate	$0.51	$0.96	$0.35	$0.45	$0.55	$0.75	$0.45	$1.21	$0.35	$0.54	$0.77
YEAR 2023	Dividend Q2 Estimate	$0.52	$0.97	$0.36	$0.45	$0.56	$0.76	$0.45	$1.22	$0.35	$0.55	$0.78
YEAR 2023	Dividend Q3 Estimate	$0.52	$0.98	$0.36	$0.46	$0.56	$0.77	$0.46	$1.24	$0.35	$0.56	$0.79
YEAR 2023	Dividend Q4 Estimate	$0.53	$0.99	$0.36	$0.46	$0.57	$0.78	$0.46	$1.25	$0.36	$0.56	$0.80
YEAR 2024	Dividend Q1 Estimate	$0.54	$1.00	$0.37	$0.47	$0.57	$0.78	$0.47	$1.27	$0.36	$0.57	$0.81
YEAR 2024	Dividend Q2 Estimate	$0.54	$1.01	$0.37	$0.47	$0.58	$0.79	$0.47	$1.28	$0.37	$0.58	$0.82
YEAR 2024 Q3	Year 10 Stock Price	$86.25	$114.11	$40.15	$37.81	$84.53	$90.96	$59.28	$154.31	$57.24	$46.27	$72.15
	Trial COE: Quarterly Rate	1.8%	2.0%	2.1%	2.4%	1.8%	2.0%	1.9%	2.0%	1.8%	2.4%	2.3%
	Trial COE: Annual Rate	7.2%	8.3%	8.5%	10.0%	7.5%	8.3%	8.0%	8.1%	7.3%	10.0%	9.4%
	Cost of Equity	7.2%	8.3%	8.5%	10.0%	7.5%	8.3%	8.0%	8.1%	7.3%	10.0%	9.4%
	(Trial COE - COE) x 100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Sources and Notes:
All Growth Rate Estimates: Table No. MJV-6; Panel B.
Stock Prices and Dividends are from Bloomberg as of June 3, 2014.
1. See Workpaper #1 to Table No. MJV-6 for the average closing stock price obtained from Bloomberg.
2. See Workpaper #2 to Table No. MJV-6 for the for the quarterly dividend obtained from Bloomberg.
3. The Blue Chip Economic Indicator Long-Term GDP Growth Rate is used to calculate the Year 10 Stock Price.
Year 10 Stock Price = {(the Dividend Year 2024 Q3 Estimate) x ((1 + the Perpetual Growth Rate) ^ (1/4) x (1 + Quarterly Rate))} /
{(Quarterly Rate) - ((1 + the Perpetual Growth Rate) ^ (1/4) -1)}.

Workpaper #3 to Table No. MJV-6

DCF Cost of Equity of the Electric Sample

Multi - Stage DCF (using Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Growth Rate)

Year	Company	Public Service Enterprise Group Inc	Pinnacle West Capital Corp	Portland General Electric Co	SCANA Corp	Southern Co/The	Sempra Energy	Integrys Energy Group Inc	Vectren Corp	Wisconsin Energy Corp	Westar Energy Inc	Xcel Energy Inc
	Current Dividend	$0.37	$0.57	$0.28	$0.53	$0.53	$0.66	$0.68	$0.36	$0.39	$0.35	$0.30
	Current Stock Price	($37.65)	($54.94)	($32.89)	($51.43)	($43.33)	($98.83)	($57.19)	($39.12)	($45.22)	($35.21)	($30.45)
YEAR 2014	Dividend Q3 Estimate	$0.37	$0.57	$0.28	$0.53	$0.53	$0.68	$0.69	$0.36	$0.39	$0.35	$0.30
YEAR 2014	Dividend Q4 Estimate	$0.38	$0.58	$0.28	$0.54	$0.54	$0.70	$0.70	$0.37	$0.40	$0.36	$0.31
YEAR 2015	Dividend Q1 Estimate	$0.38	$0.59	$0.29	$0.54	$0.54	$0.71	$0.71	$0.37	$0.40	$0.36	$0.31
YEAR 2015	Dividend Q2 Estimate	$0.39	$0.59	$0.29	$0.55	$0.55	$0.72	$0.72	$0.38	$0.41	$0.36	$0.32
YEAR 2015	Dividend Q3 Estimate	$0.39	$0.60	$0.30	$0.56	$0.55	$0.73	$0.72	$0.38	$0.41	$0.37	$0.32
YEAR 2015	Dividend Q4 Estimate	$0.40	$0.60	$0.30	$0.56	$0.56	$0.75	$0.73	$0.39	$0.42	$0.37	$0.32
YEAR 2016	Dividend Q1 Estimate	$0.40	$0.61	$0.31	$0.57	$0.56	$0.76	$0.74	$0.39	$0.43	$0.38	$0.33
YEAR 2016	Dividend Q2 Estimate	$0.41	$0.62	$0.31	$0.58	$0.57	$0.77	$0.75	$0.40	$0.43	$0.38	$0.33
YEAR 2016	Dividend Q3 Estimate	$0.41	$0.62	$0.32	$0.59	$0.57	$0.79	$0.76	$0.40	$0.44	$0.38	$0.34
YEAR 2016	Dividend Q4 Estimate	$0.42	$0.63	$0.32	$0.59	$0.58	$0.80	$0.77	$0.41	$0.44	$0.39	$0.34
YEAR 2017	Dividend Q1 Estimate	$0.42	$0.64	$0.33	$0.60	$0.58	$0.81	$0.78	$0.42	$0.45	$0.39	$0.35
YEAR 2017	Dividend Q2 Estimate	$0.43	$0.64	$0.33	$0.61	$0.59	$0.83	$0.79	$0.42	$0.45	$0.40	$0.35
YEAR 2017	Dividend Q3 Estimate	$0.43	$0.65	$0.34	$0.61	$0.60	$0.84	$0.80	$0.43	$0.46	$0.40	$0.35
YEAR 2017	Dividend Q4 Estimate	$0.44	$0.66	$0.34	$0.62	$0.60	$0.86	$0.81	$0.43	$0.46	$0.40	$0.36
YEAR 2018	Dividend Q1 Estimate	$0.44	$0.67	$0.35	$0.63	$0.61	$0.87	$0.82	$0.44	$0.47	$0.41	$0.36
YEAR 2018	Dividend Q2 Estimate	$0.45	$0.67	$0.35	$0.64	$0.61	$0.89	$0.83	$0.44	$0.48	$0.41	$0.37
YEAR 2018	Dividend Q3 Estimate	$0.45	$0.68	$0.36	$0.64	$0.62	$0.90	$0.84	$0.45	$0.48	$0.42	$0.37
YEAR 2018	Dividend Q4 Estimate	$0.46	$0.69	$0.36	$0.65	$0.63	$0.92	$0.85	$0.45	$0.49	$0.42	$0.38
YEAR 2019	Dividend Q1 Estimate	$0.46	$0.69	$0.37	$0.66	$0.63	$0.94	$0.86	$0.46	$0.49	$0.42	$0.38
YEAR 2019	Dividend Q2 Estimate	$0.47	$0.70	$0.37	$0.67	$0.64	$0.95	$0.88	$0.47	$0.50	$0.43	$0.39
YEAR 2019	Dividend Q3 Estimate	$0.47	$0.71	$0.38	$0.68	$0.64	$0.97	$0.89	$0.47	$0.51	$0.43	$0.39
YEAR 2019	Dividend Q4 Estimate	$0.48	$0.72	$0.38	$0.68	$0.65	$0.99	$0.90	$0.48	$0.51	$0.44	$0.40
YEAR 2020	Dividend Q1 Estimate	$0.48	$0.73	$0.39	$0.69	$0.66	$1.00	$0.91	$0.48	$0.52	$0.44	$0.40
YEAR 2020	Dividend Q2 Estimate	$0.49	$0.73	$0.40	$0.70	$0.66	$1.02	$0.92	$0.49	$0.52	$0.45	$0.41
YEAR 2020	Dividend Q3 Estimate	$0.49	$0.74	$0.40	$0.71	$0.67	$1.03	$0.93	$0.50	$0.53	$0.45	$0.41
YEAR 2020	Dividend Q4 Estimate	$0.50	$0.75	$0.41	$0.72	$0.68	$1.05	$0.94	$0.50	$0.54	$0.46	$0.42
YEAR 2021	Dividend Q1 Estimate	$0.51	$0.76	$0.41	$0.73	$0.68	$1.07	$0.95	$0.51	$0.54	$0.46	$0.42
YEAR 2021	Dividend Q2 Estimate	$0.51	$0.77	$0.42	$0.74	$0.69	$1.08	$0.97	$0.52	$0.55	$0.47	$0.43
YEAR 2021	Dividend Q3 Estimate	$0.52	$0.77	$0.42	$0.74	$0.70	$1.10	$0.98	$0.52	$0.56	$0.47	$0.43
YEAR 2021	Dividend Q4 Estimate	$0.52	$0.78	$0.43	$0.75	$0.71	$1.11	$0.99	$0.53	$0.56	$0.48	$0.44
YEAR 2022	Dividend Q1 Estimate	$0.53	$0.79	$0.44	$0.76	$0.71	$1.13	$1.00	$0.53	$0.57	$0.48	$0.44
YEAR 2022	Dividend Q2 Estimate	$0.54	$0.80	$0.44	$0.77	$0.72	$1.15	$1.01	$0.54	$0.58	$0.49	$0.45
YEAR 2022	Dividend Q3 Estimate	$0.54	$0.81	$0.45	$0.78	$0.73	$1.16	$1.02	$0.55	$0.58	$0.49	$0.46
YEAR 2022	Dividend Q4 Estimate	$0.55	$0.82	$0.45	$0.79	$0.74	$1.18	$1.04	$0.55	$0.59	$0.50	$0.46
YEAR 2023	Dividend Q1 Estimate	$0.55	$0.83	$0.46	$0.80	$0.74	$1.19	$1.05	$0.56	$0.60	$0.50	$0.47
YEAR 2023	Dividend Q2 Estimate	$0.56	$0.83	$0.46	$0.81	$0.75	$1.21	$1.06	$0.57	$0.60	$0.51	$0.47
YEAR 2023	Dividend Q3 Estimate	$0.57	$0.84	$0.47	$0.81	$0.76	$1.22	$1.07	$0.57	$0.61	$0.51	$0.48
YEAR 2023	Dividend Q4 Estimate	$0.57	$0.85	$0.47	$0.82	$0.77	$1.24	$1.08	$0.58	$0.62	$0.52	$0.48
YEAR 2024	Dividend Q1 Estimate	$0.58	$0.86	$0.48	$0.83	$0.78	$1.25	$1.10	$0.59	$0.62	$0.52	$0.49
YEAR 2024	Dividend Q2 Estimate	$0.59	$0.87	$0.49	$0.84	$0.78	$1.27	$1.11	$0.59	$0.63	$0.53	$0.49
YEAR 2024 Q3	Year 10 Stock Price	$59.86	$87.02	$52.97	$81.98	$68.41	$159.75	$91.63	$62.51	$72.00	$55.65	$48.70
	Trial COE: Quarterly Rate	2.1%	2.1%	2.1%	2.2%	2.3%	1.9%	2.4%	2.1%	2.0%	2.1%	2.2%
	Trial COE: Annual Rate	8.7%	8.8%	8.5%	9.0%	9.5%	7.9%	9.8%	8.6%	8.3%	8.6%	8.9%
	Cost of Equity	8.7%	8.8%	8.5%	9.0%	9.5%	7.9%	9.8%	8.6%	8.3%	8.6%	8.9%
	(Trial COE - COE) x 100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Sources and Notes:
All Growth Rate Estimates: Table No. MJV-6; Panel B.
Stock Prices and Dividends are from Bloomberg as of June 3, 2014.
1. See Workpaper #1 to Table No. MJV-6 for the average closing stock price obtained from Bloomberg.
2. See Workpaper #2 to Table No. MJV-6 for the for the quarterly dividend obtained from Bloomberg.
3. The Blue Chip Economic Indicator Long-Term GDP Growth Rate is used to calculate the Year 10 Stock Price.
Year 10 Stock Price = {(the Dividend Year 2024 Q3 Estimate) x ((1 + the Perpetual Growth Rate) ^ (1/4) x (1 + Quarterly Rate))} /
{(Quarterly Rate) - ((1 + the Perpetual Growth Rate) ^ (1/4) -1)}.

Table No. MJV-7

Overall After-Tax DCF Cost of Capital of the Electric Sample

Panel A: Simple DCF Method (Quarterly)

Company	Full Sample	4th Quarter, 2013 Bond Rating [1]	4th Quarter, 2013 Preferred Equity Rating [2]	DCF Cost of Equity [3]	DCF Common Equity to Market Value Ratio [4]	Cost of Preferred Equity [5]	DCF Preferred Equity to Market Value Ratio [6]	DCF Cost of Debt [7]	DCF Debt to Market Value Ratio [8]	The Companies's Income Tax Rate [9]	Overall After-Tax Cost of Capital [10]
ALLETE Inc	*	BBB	-	11.1%	0.64	-	0.00	4.6%	0.36	41.5%	8.1%
Ameren Corp	*	BBB	-	11.6%	0.59	-	0.00	4.6%	0.41	41.5%	8.0%
American Electric Power Co Inc	*	BBB	-	9.7%	0.56	-	0.00	4.6%	0.44	41.5%	6.6%
Black Hills Corp	*	BBB	-	9.3%	0.62	-	0.00	4.6%	0.38	41.5%	6.8%
CMS Energy Corp	*	BBB	-	9.9%	0.48	-	0.00	4.6%	0.52	41.5%	6.1%
Cleco Corp	*	BBB	-	10.2%	0.69	-	0.00	4.6%	0.31	41.5%	7.8%
CenterPoint Energy Inc	*	A	-	9.8%	0.54	-	0.00	4.3%	0.46	41.5%	6.4%
Dominion Resources Inc/VA	*	A	A	9.3%	0.64	4.3%	0.00	4.3%	0.36	41.5%	6.8%
DTE Energy Co	*	BBB	-	9.0%	0.61	-	0.00	4.6%	0.39	41.5%	6.5%
Consolidated Edison Inc	*	A	-	8.3%	0.56	-	0.00	4.3%	0.44	41.5%	5.8%
El Paso Electric Co	*	BBB	-	8.0%	0.59	-	0.00	4.6%	0.41	41.5%	5.8%
Edison International	*	BBB	BBB	6.9%	0.58	4.6%	0.06	4.6%	0.37	41.5%	~~5.2%~~
Entergy Corp	*	BBB	BBB	5.7%	0.51	4.6%	0.01	4.6%	0.48	41.5%	~~4.2%~~
Great Plains Energy Inc	*	BBB	BBB	9.0%	0.51	4.6%	0.01	4.6%	0.49	41.5%	5.9%
Hawaiian Electric Industries Inc	*	BBB	BBB	9.8%	0.56	4.6%	0.01	4.6%	0.43	41.5%	6.7%
IDACORP Inc	*	BBB	-	5.9%	0.63	-	0.00	4.6%	0.37	41.5%	~~4.7%~~
Alliant Energy Corp	*	A	A	8.3%	0.62	4.3%	0.02	4.3%	0.36	41.5%	6.1%
MGE Energy Inc	*	AA	-	9.3%	0.75	-	0.00	4.1%	0.25	41.5%	7.6%
NextEra Energy Inc	*	A	-	9.6%	0.59	-	0.00	4.3%	0.41	41.5%	6.7%
OGE Energy Corp	*	A	-	8.0%	0.71	-	0.00	4.3%	0.29	41.5%	6.4%
Otter Tail Corp	*	BBB	-	12.1%	0.70	-	0.00	4.6%	0.30	41.5%	9.3%
PG&E Corp	*	BBB	BBB	10.7%	0.58	4.6%	0.01	4.6%	0.41	41.5%	7.4%
Public Service Enterprise Group Inc	*	BBB	-	8.9%	0.68	-	0.00	4.6%	0.32	41.5%	6.9%
Pinnacle West Capital Corp	*	A	-	8.7%	0.63	-	0.00	4.3%	0.37	41.5%	6.4%
Portland General Electric Co	*	BBB	-	9.9%	0.55	-	0.00	4.6%	0.45	41.5%	6.7%
SCANA Corp	*	BBB	-	9.3%	0.55	-	0.00	4.6%	0.45	41.5%	6.3%
Southern Co/The	*	A	A	9.1%	0.62	4.3%	0.02	4.3%	0.36	41.5%	6.6%
Sempra Energy	*	BBB	BBB	10.2%	0.65	4.6%	0.00	4.6%	0.35	41.5%	7.5%
Integrys Energy Group Inc	*	A	A	10.3%	0.60	4.3%	0.01	4.3%	0.40	41.5%	7.1%
Vectren Corp	*	A	-	9.3%	0.63	-	0.00	4.3%	0.37	41.5%	6.8%
Wisconsin Energy Corp	*	A	A	8.8%	0.67	4.3%	0.00	4.3%	0.33	41.5%	6.7%
Westar Energy Inc	*	BBB	-	8.4%	0.55	-	0.00	4.6%	0.45	41.5%	5.8%
Xcel Energy Inc	*	A	-	9.5%	0.56	-	0.00	4.3%	0.44	41.5%	6.4%
Simple Full Sample Average				9.5%	0.61	4.4%	0.00	4.5%	0.39	41.5%	6.8%

Sources and Notes:
[1]: Bloomberg as of June 3, 2014.
[2]: Preferred ratings were assumed equal to debt ratings.
[3]: Table No. MJV-6; Panel A, [6].
[4]: Table No. MJV-4, [1].
[5]: Workpaper #2 to Table No. MJV-11, Panel C.
[6]: Table No. MJV-4, [2].
[7]: Workpaper #2 to Table No. MJV-11, Panel B.
[8]: Table No. MJV-4, [3].
[9]: Provided by The Companies.
[10]: ([3] x [4]) + ([5] x [6]) + {[7] x [8] x (1 - [9])}. A strikethrough indicates the utility was excluded from the full sample average calculation as a result of its cost of equity not exceeding its cost of debt by 250 basis points

Table No. MJV-7

Overall After-Tax DCF Cost of Capital of the Electric Sample

Panel B: Multi-Stage DCF (Using Blue Chip Long-Term GDP Growth Forecast as the Perpetual Rate)

Company	Full Sample	4th Quarter, 2013 Bond Rating [1]	4th Quarter, 2013 Preferred Equity Rating [2]	DCF Cost of Equity [3]	DCF Common Equity to Market Value Ratio [4]	Cost of Preferred Equity [5]	DCF Preferred Equity to Market Value Ratio [6]	DCF Cost of Debt [7]	DCF Debt to Market Value Ratio [8]	The Companies's Income Tax Rate [9]	Overall After-Tax Cost of Capital [10]
ALLETE Inc	*	BBB	-	9.4%	0.64	-	0.00	4.6%	0.36	41.5%	7.0%
Ameren Corp	*	BBB	-	9.6%	0.59	-	0.00	4.6%	0.41	41.5%	6.8%
American Electric Power Co Inc	*	BBB	-	8.8%	0.56	-	0.00	4.6%	0.44	41.5%	6.1%
Black Hills Corp	*	BBB	-	7.8%	0.62	-	0.00	4.6%	0.38	41.5%	5.9%
CMS Energy Corp	*	BBB	-	8.8%	0.48	-	0.00	4.6%	0.52	41.5%	5.6%
Cleco Corp	*	BBB	-	8.3%	0.69	-	0.00	4.6%	0.31	41.5%	6.6%
CenterPoint Energy Inc	*	A	-	9.0%	0.54	-	0.00	4.3%	0.46	41.5%	6.0%
Dominion Resources Inc/VA	*	A	A	8.4%	0.64	4.3%	0.00	4.3%	0.36	41.5%	6.3%
DTE Energy Co	*	BBB	-	8.4%	0.61	-	0.00	4.6%	0.39	41.5%	6.2%
Consolidated Edison Inc	*	A	-	9.1%	0.56	-	0.00	4.3%	0.44	41.5%	6.2%
El Paso Electric Co	*	BBB	-	7.6%	0.59	-	0.00	4.6%	0.41	41.5%	5.6%
Edison International	*	BBB	BBB	7.2%	0.58	4.6%	0.06	4.6%	0.37	41.5%	5.4%
Entergy Corp	*	BBB	BBB	8.3%	0.51	4.6%	0.01	4.6%	0.48	41.5%	5.6%
Great Plains Energy Inc	*	BBB	BBB	8.5%	0.51	4.6%	0.01	4.6%	0.49	41.5%	5.7%
Hawaiian Electric Industries Inc	*	BBB	BBB	10.0%	0.56	4.6%	0.01	4.6%	0.43	41.5%	6.8%
IDACORP Inc	*	BBB	-	7.5%	0.63	-	0.00	4.6%	0.37	41.5%	5.7%
Alliant Energy Corp	*	A	A	8.3%	0.62	4.3%	0.02	4.3%	0.36	41.5%	6.1%
MGE Energy Inc	*	AA	-	8.0%	0.75	-	0.00	4.1%	0.25	41.5%	6.6%
NextEra Energy Inc	*	A	-	8.1%	0.59	-	0.00	4.3%	0.41	41.5%	5.8%
OGE Energy Corp	*	A	-	7.3%	0.71	-	0.00	4.3%	0.29	41.5%	5.9%
Otter Tail Corp	*	BBB	-	10.0%	0.70	-	0.00	4.6%	0.30	41.5%	7.8%
PG&E Corp	*	BBB	BBB	9.4%	0.58	4.6%	0.01	4.6%	0.41	41.5%	6.6%
Public Service Enterprise Group Inc	*	BBB	-	8.7%	0.68	-	0.00	4.6%	0.32	41.5%	6.8%
Pinnacle West Capital Corp	*	A	-	8.8%	0.63	-	0.00	4.3%	0.37	41.5%	6.5%
Portland General Electric Co	*	BBB	-	8.5%	0.55	-	0.00	4.6%	0.45	41.5%	5.9%
SCANA Corp	*	BBB	-	9.0%	0.55	-	0.00	4.6%	0.45	41.5%	6.1%
Southern Co/The	*	A	A	9.5%	0.62	4.3%	0.02	4.3%	0.36	41.5%	6.9%
Sempra Energy	*	BBB	BBB	7.9%	0.65	4.6%	0.00	4.6%	0.35	41.5%	6.1%
Integrys Energy Group Inc	*	A	A	9.8%	0.60	4.3%	0.01	4.3%	0.40	41.5%	6.8%
Vectren Corp	*	A	-	8.6%	0.63	-	0.00	4.3%	0.37	41.5%	6.3%
Wisconsin Energy Corp	*	A	A	8.3%	0.67	4.3%	0.00	4.3%	0.33	41.5%	6.4%
Westar Energy Inc	*	BBB	-	8.6%	0.55	-	0.00	4.6%	0.45	41.5%	6.0%
Xcel Energy Inc	*	A	-	8.9%	0.56	-	0.00	4.3%	0.44	41.5%	6.1%
Multi Full Sample Average				8.6%	0.60	4.5%	0.00	4.5%	0.39	41.5%	6.2%

Sources and Notes:
[1]: Bloomberg as of June 3, 2014.
[2]: Preferred ratings were assumed equal to debt ratings.
[3]: Table No. MJV-6; Panel B, [10].
[4]: Table No. MJV-4, [1].
[5]: Workpaper #2 to Table No. MJV-11, Panel C.
[6]: Table No. MJV-4, [2].
[7]: Workpaper #2 to Table No. MJV-11, Panel B.
[8]: Table No. MJV-4, [3].
[9]: Provided by The Companies.
[10]: ([3] x [4]) + ([5] x [6]) + {[7] x [8] x (1 - [9])}. A strikethrough indicates the utility was excluded from the full sample average calculation as a result of its cost of equity not exceeding its cost of debt by 250 basis points

Table No. MJV-8

DCF Cost of Equity at The Companies' Representative Capital Structure

Electric Sample

	Overall After -Tax Cost of Capital [1]	The Companies' Representative Regulatory % Debt [2]	Representative Cost of BBB-Rated Utility Debt [3]	The Companies's Income Tax Rate [4]	The Companies' Representative Regulatory % Equity [5]	Estimated Return on Equity [6]
Full Sample						
Simple DCF Quarterly	6.8%	50.0%	4.6%	41.5%	50.0%	10.9%
Multi-Stage DCF - Using the Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Rate	6.2%	50.0%	4.6%	41.5%	50.0%	9.8%

Sources and Notes:
[1]: Table No. MJV-7; Panels A-B, [10].
[2]: Provided by The Companies. Note that the 50% debt ratio figure approximates the FE Utilities' proposed debt ratios.
[3]: Based on a BBB rating. Yield from Bloomberg as of June 3, 2014.
[4]: Provided by The Companies.
[5]: Provided by The Companies.
[6]: {[1] - ([2] x [3] x (1 - [4]) + x)} / [5].

Table No. MJV-9 Risk-Free Rates

US Interest Rate Series (All Constant Maturity Series)

	Trading Date	30 Day	90 Day	180 Day	1 Year	2 Year	3 Year	5 Year	7 Year	10 Year	Long Term
	5/13/2014	0.03%	0.03%	0.05%	0.10%	0.39%	0.84%	1.62%	2.16%	2.61%	3.17%
	5/14/2014	0.02%	0.03%	0.05%	0.10%	0.39%	0.81%	1.57%	2.10%	2.54%	3.09%
	5/15/2014	0.01%	0.03%	0.05%	0.09%	0.38%	0.80%	1.55%	2.05%	2.50%	3.05%
	5/16/2014	0.01%	0.03%	0.05%	0.09%	0.38%	0.80%	1.56%	2.08%	2.52%	3.07%
	5/19/2014	0.01%	0.03%	0.05%	0.09%	0.36%	0.79%	1.56%	2.09%	2.54%	3.11%
	5/20/2014	0.04%	0.03%	0.06%	0.09%	0.35%	0.77%	1.53%	2.06%	2.52%	3.10%
	5/21/2014	0.04%	0.04%	0.06%	0.09%	0.37%	0.79%	1.55%	2.08%	2.54%	3.13%
	5/22/2014	0.03%	0.03%	0.05%	0.09%	0.37%	0.80%	1.57%	2.10%	2.56%	3.15%
	5/23/2014	0.04%	0.04%	0.05%	0.10%	0.37%	0.79%	1.55%	2.09%	2.54%	3.12%
	5/27/2014	0.03%	0.04%	0.06%	0.09%	0.39%	0.79%	1.56%	2.08%	2.52%	3.09%
	5/28/2014	0.04%	0.04%	0.05%	0.10%	0.37%	0.76%	1.50%	2.01%	2.44%	3.01%
	5/29/2014	0.05%	0.04%	0.05%	0.10%	0.37%	0.77%	1.52%	2.03%	2.45%	3.03%
	5/30/2014	0.05%	0.04%	0.06%	0.10%	0.37%	0.79%	1.54%	2.06%	2.48%	3.05%
	6/2/2014	0.04%	0.04%	0.06%	0.10%	0.39%	0.83%	1.60%	2.12%	2.54%	3.10%
	6/3/2014	0.04%	0.04%	0.06%	0.10%	0.41%	0.85%	1.65%	2.18%	2.60%	3.17%
[A]	Average:	0.03%	0.04%	0.05%	0.10%	0.38%	0.80%	1.56%	2.09%	2.53%	3.10%

Sources and Notes:

[A]: Average over the last 15 trading days.

Bloomberg as of June 3, 2014. The most recent 15 trading days are used.

Workpaper #1 to Table No. MJV-9 - Risk Premium Forecast

Electric Sample

Panel A: Historical Bond Yield Averages

	Treasury Bill Yield [1]	Intermediate-Term Government Bond Yield [2]	Long-Term Government Bond Yield [3]
1926	3.27%	3.61%	3.54%
1927	3.12%	3.40%	3.17%
1928	3.56%	4.01%	3.40%
1929	4.75%	3.62%	3.40%
1930	2.41%	2.91%	3.30%
1931	1.07%	4.12%	4.07%
1932	0.96%	3.04%	3.15%
1933	0.30%	3.25%	3.36%
1934	0.16%	2.49%	2.93%
1935	0.17%	1.63%	2.76%
1936	0.18%	1.29%	2.55%
1937	0.31%	1.14%	2.73%
1938	-0.02%	1.52%	2.52%
1939	0.02%	0.98%	2.26%
1940	0.00%	0.57%	1.94%
1941	0.06%	0.82%	2.04%
1942	0.27%	0.72%	2.46%
1943	0.35%	1.45%	2.48%
1944	0.33%	1.40%	2.46%
1945	0.33%	1.03%	1.99%
1946	0.35%	1.12%	2.12%
1947	0.50%	1.34%	2.43%
1948	0.81%	1.51%	2.37%
1949	1.10%	1.23%	2.09%
1950	1.20%	1.62%	2.24%
1951	1.49%	2.17%	2.69%
1952	1.66%	2.35%	2.79%
1953	1.82%	2.18%	2.74%
1954	0.86%	1.72%	2.72%
1955	1.57%	2.80%	2.95%
1956	2.46%	3.63%	3.45%
1957	3.14%	2.84%	3.23%
1958	1.54%	3.81%	3.82%
1959	2.95%	4.98%	4.47%
1960	2.66%	3.31%	3.80%
1961	2.13%	3.84%	4.15%
1962	2.73%	3.50%	3.95%
1963	3.12%	4.04%	4.17%
1964	3.54%	4.03%	4.23%
1965	3.93%	4.90%	4.50%
1966	4.76%	4.79%	4.55%
1967	4.21%	5.77%	5.56%
1968	5.21%	5.96%	5.98%
1969	6.58%	8.29%	6.87%
1970	6.52%	5.90%	6.48%
1971	4.39%	5.25%	5.97%
1972	3.84%	5.85%	5.99%
1973	6.93%	6.79%	7.26%
1974	8.00%	7.12%	7.60%
1975	5.80%	7.19%	8.05%
1976	5.08%	6.00%	7.21%

Workpaper #1 to Table No. MJV-9 - Risk Premium Forecast

Electric Sample

Panel A: Historical Bond Yield Averages

	Treasury Bill Yield [1]	Intermediate-Term Government Bond Yield [2]	Long-Term Government Bond Yield [3]
1977	5.12%	7.51%	8.03%
1978	7.18%	8.83%	8.98%
1979	10.38%	10.33%	10.12%
1980	11.24%	12.45%	11.99%
1981	14.71%	13.96%	13.34%
1982	10.54%	9.90%	10.95%
1983	8.80%	11.41%	11.97%
1984	9.85%	11.04%	11.70%
1985	7.72%	8.55%	9.56%
1986	6.16%	6.85%	7.89%
1987	5.47%	8.32%	9.20%
1988	6.35%	9.17%	9.19%
1989	8.37%	7.94%	8.16%
1990	7.81%	7.70%	8.44%
1991	5.60%	5.97%	7.30%
1992	3.51%	6.11%	7.26%
1993	2.90%	5.22%	6.54%
1994	3.90%	7.80%	7.99%
1995	5.60%	5.38%	6.03%
1996	5.21%	6.16%	6.73%
1997	5.26%	5.73%	6.02%
1998	4.86%	4.68%	5.42%
1999	4.68%	6.45%	6.82%
2000	5.89%	5.07%	5.58%
2001	3.83%	4.42%	5.75%
2002	1.65%	2.61%	4.84%
2003	1.02%	2.97%	5.11%
2004	1.20%	3.47%	4.84%
2005	2.98%	4.34%	4.61%
2006	4.80%	4.65%	4.91%
2007	4.66%	3.28%	4.50%
2008	1.60%	1.26%	3.03%
2009	0.10%	2.42%	4.58%
2010	0.12%	1.70%	4.14%
2011	0.04%	0.59%	2.48%
2012	0.06%	0.46%	2.41%

[1] - [3]: Ibbotson Associates Stocks Bonds Bills (SBBI) and Inflation monthly paper reports.

Workpaper #1 to Table No. MJV-9

Electric Sample

Panel B: Calculation of Maturity Premia for Different Bond Series

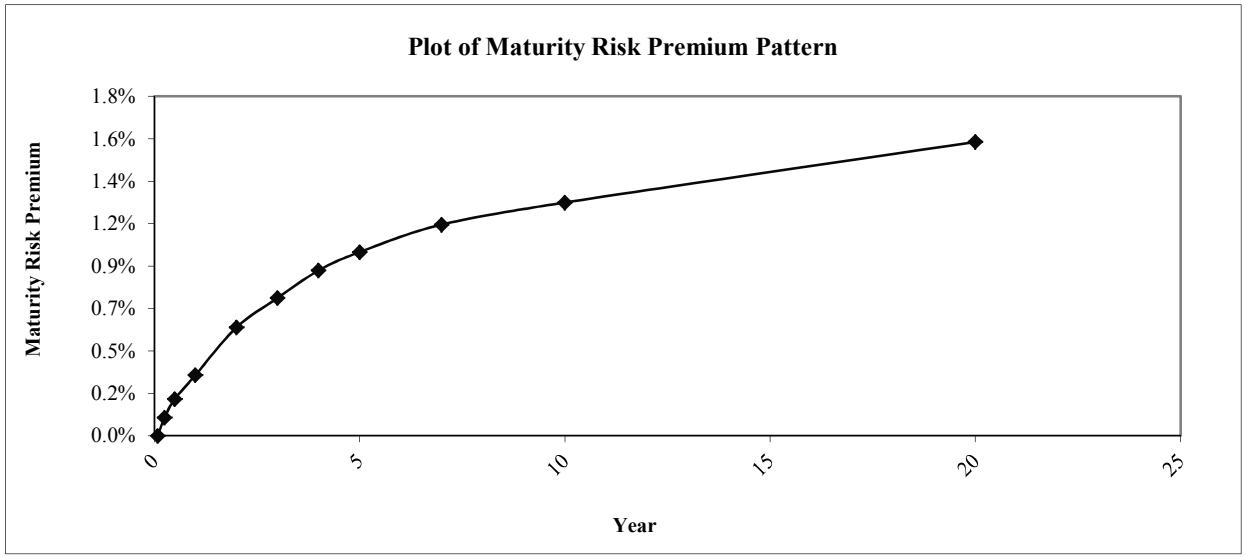
	Annual Historical Average			Maturity Premium Calculation		
	T-Bill Total Return [1]	Intermediate Term Bond Yields [2]	Long-Term Government Bond Yield [3]	T-Bill [4]	Intermediate Term Bond [5]	Long-Term Government [6]
1926 - 2012	3.58%	4.52%	5.16%	0.00%	0.94%	1.58%
1947 - 2012	4.39%	5.29%	5.92%	0.00%	0.90%	1.53%
1947 - 1966	2.20%	3.03%	3.37%	0.00%	0.83%	1.17%
1967 - 1986	7.41%	8.25%	8.57%	0.00%	0.83%	1.16%
1987 - 2012	3.75%	4.76%	5.84%	0.00%	1.02%	2.09%
Current	0.03%	1.56%	3.10%	0.00%	1.53%	3.06%

Sources and Notes:
[1] - [3] : Workpaper #1 to Table No. MJV-9, Panel A.
Maturity Premium is defined as the Average Bond Yield (for each series) less Risk Free Total Return.
[4]: [1] - [1].
[5]: [2] - [1].
[6]: [3] - [1].
Current data from Table No. MJV-9, Panel A.

Workpaper #1 to Table No. MJV-9

Electric Sample

Panel C: Maturity Premium Graph and Calculations (Using Annual Series Data)



Maturity of Bond (Years) [1]	Maturity Risk Premium [2]	Annualized Difference [3]
0.083	0.00%	
0.25	0.10%	0.60%
0.5	0.20%	0.40%
1	0.33%	0.26%
2	0.59%	0.26%
3	0.75%	0.16%
4	0.90%	0.15%
5	**1.00%**	0.10%
7	1.15%	0.08%
10	1.27%	0.04%
20	**1.60%**	0.03%

Sources and Notes:
[1]: The maturity of a bond in years.
[2]: Workpaper #1 to Table No. MJV-9, Panel B; [4] - [6] and MJV Testimony.
[3]: MJV Testimony.

Table No. MJV-10

Risk Positioning Cost of Equity of the Electric Sample

Using Value Line Betas

Panel A: Scenario 1 - Long-Term Risk Free Rate of 3.35%, Long-Term Market Risk Premium of 6.50%

Company	Long-Term Risk-Free Rate [1]	Value Line Betas [2]	Long-Term Market Risk Premium [3]	CAPM Cost of Equity [4]	ECAPM (0.5%) Cost of Equity [5]	ECAPM (1.5%) Cost of Equity [6]
ALLETE Inc	3.35%	0.80	6.50%	8.5%	8.6%	8.8%
Ameren Corp	3.35%	0.85	6.50%	8.9%	8.9%	9.1%
American Electric Power Co Inc	3.35%	0.70	6.50%	7.9%	8.0%	8.3%
Black Hills Corp	3.35%	0.90	6.50%	9.2%	9.2%	9.3%
CMS Energy Corp	3.35%	0.70	6.50%	7.9%	8.0%	8.3%
Cleco Corp	3.35%	0.70	6.50%	7.9%	8.0%	8.3%
CenterPoint Energy Inc	3.35%	0.85	6.50%	8.9%	8.9%	9.1%
Dominion Resources Inc/VA	3.35%	0.75	6.50%	8.2%	8.3%	8.6%
DTE Energy Co	3.35%	0.85	6.50%	8.9%	8.9%	9.1%
Consolidated Edison Inc	3.35%	0.65	6.50%	7.6%	7.7%	8.1%
El Paso Electric Co	3.35%	0.70	6.50%	7.9%	8.0%	8.3%
Edison International	3.35%	0.80	6.50%	8.5%	8.6%	8.8%
Entergy Corp	3.35%	0.75	6.50%	8.2%	8.3%	8.6%
Great Plains Energy Inc	3.35%	0.90	6.50%	9.2%	9.2%	9.3%
Hawaiian Electric Industries Inc	3.35%	0.85	6.50%	8.9%	8.9%	9.1%
IDACORP Inc	3.35%	0.80	6.50%	8.5%	8.6%	8.8%
Alliant Energy Corp	3.35%	0.80	6.50%	8.5%	8.6%	8.8%
MGE Energy Inc	3.35%	0.70	6.50%	7.9%	8.0%	8.3%
NextEra Energy Inc	3.35%	0.75	6.50%	8.2%	8.3%	8.6%
OGE Energy Corp	3.35%	0.85	6.50%	8.9%	8.9%	9.1%
Otter Tail Corp	3.35%	0.95	6.50%	9.5%	9.5%	9.6%
PG&E Corp	3.35%	0.60	6.50%	7.2%	7.4%	7.8%
Public Service Enterprise Group Inc	3.35%	0.80	6.50%	8.5%	8.6%	8.8%
Pinnacle West Capital Corp	3.35%	0.75	6.50%	8.2%	8.3%	8.6%
Portland General Electric Co	3.35%	0.80	6.50%	8.5%	8.6%	8.8%
SCANA Corp	3.35%	0.75	6.50%	8.2%	8.3%	8.6%
Southern Co/The	3.35%	0.60	6.50%	7.2%	7.4%	7.8%
Sempra Energy	3.35%	0.80	6.50%	8.5%	8.6%	8.8%
Integrys Energy Group Inc	3.35%	1.05	6.50%	10.2%	10.1%	10.1%
Vectren Corp	3.35%	0.75	6.50%	8.2%	8.3%	8.6%
Wisconsin Energy Corp	3.35%	0.70	6.50%	7.9%	8.0%	8.3%
Westar Energy Inc	3.35%	0.80	6.50%	8.5%	8.6%	8.8%
Xcel Energy Inc	3.35%	0.65	6.50%	7.6%	7.7%	8.1%

Sources and Notes:
[1]: Vilbert Direct Testimony.
[2]: From Valueline Investment Analyzer as of June 3, 2014.
[3]: Vilbert Direct Testimony.
[4]: [1] + ([2] x [3]).
[5]: ([1] + 0.5%) + [2] x ([3] - 0.5%).
[6]: ([1] + 1.5%) + [2] x ([3] - 1.5%).

Table No. MJV-10

Risk Positioning Cost of Equity of the Electric Sample

Using Value Line Betas

Panel B: Scenario 2 - Long-Term Risk Free Rate of 3.10%, Long-Term Market Risk Premium of 7.50%

Company	Long-Term Risk-Free Rate [1]	Value Line Betas [2]	Long-Term Market Risk Premium [3]	CAPM Cost of Equity [4]	ECAPM (0.5%) Cost of Equity [5]	ECAPM (1.5%) Cost of Equity [6]
ALLETE Inc	3.10%	0.80	7.50%	9.1%	9.2%	9.4%
Ameren Corp	3.10%	0.85	7.50%	9.5%	9.5%	9.7%
American Electric Power Co Inc	3.10%	0.70	7.50%	8.3%	8.5%	8.8%
Black Hills Corp	3.10%	0.90	7.50%	9.8%	9.9%	10.0%
CMS Energy Corp	3.10%	0.70	7.50%	8.3%	8.5%	8.8%
Cleco Corp	3.10%	0.70	7.50%	8.3%	8.5%	8.8%
CenterPoint Energy Inc	3.10%	0.85	7.50%	9.5%	9.5%	9.7%
Dominion Resources Inc/VA	3.10%	0.75	7.50%	8.7%	8.8%	9.1%
DTE Energy Co	3.10%	0.85	7.50%	9.5%	9.5%	9.7%
Consolidated Edison Inc	3.10%	0.65	7.50%	8.0%	8.1%	8.5%
El Paso Electric Co	3.10%	0.70	7.50%	8.3%	8.5%	8.8%
Edison International	3.10%	0.80	7.50%	9.1%	9.2%	9.4%
Entergy Corp	3.10%	0.75	7.50%	8.7%	8.8%	9.1%
Great Plains Energy Inc	3.10%	0.90	7.50%	9.8%	9.9%	10.0%
Hawaiian Electric Industries Inc	3.10%	0.85	7.50%	9.5%	9.5%	9.7%
IDACORP Inc	3.10%	0.80	7.50%	9.1%	9.2%	9.4%
Alliant Energy Corp	3.10%	0.80	7.50%	9.1%	9.2%	9.4%
MGE Energy Inc	3.10%	0.70	7.50%	8.3%	8.5%	8.8%
NextEra Energy Inc	3.10%	0.75	7.50%	8.7%	8.8%	9.1%
OGE Energy Corp	3.10%	0.85	7.50%	9.5%	9.5%	9.7%
Otter Tail Corp	3.10%	0.95	7.50%	10.2%	10.2%	10.3%
PG&E Corp	3.10%	0.60	7.50%	7.6%	7.8%	8.2%
Public Service Enterprise Group Inc	3.10%	0.80	7.50%	9.1%	9.2%	9.4%
Pinnacle West Capital Corp	3.10%	0.75	7.50%	8.7%	8.8%	9.1%
Portland General Electric Co	3.10%	0.80	7.50%	9.1%	9.2%	9.4%
SCANA Corp	3.10%	0.75	7.50%	8.7%	8.8%	9.1%
Southern Co/The	3.10%	0.60	7.50%	7.6%	7.8%	8.2%
Sempra Energy	3.10%	0.80	7.50%	9.1%	9.2%	9.4%
Integrys Energy Group Inc	3.10%	1.05	7.50%	11.0%	10.9%	10.9%
Vectren Corp	3.10%	0.75	7.50%	8.7%	8.8%	9.1%
Wisconsin Energy Corp	3.10%	0.70	7.50%	8.3%	8.5%	8.8%
Westar Energy Inc	3.10%	0.80	7.50%	9.1%	9.2%	9.4%
Xcel Energy Inc	3.10%	0.65	7.50%	8.0%	8.1%	8.5%

Sources and Notes:
[1]: Vilbert Direct Testimony.
[2]: From Valueline Investment Analyzer as of June 3, 2014.
[3]: Vilbert Direct Testimony.
[4]: [1] + ([2] x [3]).
[5]: ([1] + 0.5%) + [2] x ([3] - 0.5%).
[6]: ([1] + 1.5%) + [2] x ([3] - 1.5%).

Workpaper # 1 to Table No. MJV-10

Electric Sample

Value Line Betas

Company	Value Line Betas [1]
ALLETE Inc	0.80
Ameren Corp	0.85
American Electric Power Co Inc	0.70
Black Hills Corp	0.90
CMS Energy Corp	0.70
Cleco Corp	0.70
CenterPoint Energy Inc	0.85
Dominion Resources Inc/VA	0.75
DTE Energy Co	0.85
Consolidated Edison Inc	0.65
El Paso Electric Co	0.70
Edison International	0.80
Entergy Corp	0.75
Great Plains Energy Inc	0.90
Hawaiian Electric Industries Inc	0.85
IDACORP Inc	0.80
Alliant Energy Corp	0.80
MGE Energy Inc	0.70
NextEra Energy Inc	0.75
OGE Energy Corp	0.85
Otter Tail Corp	0.95
PG&E Corp	0.60
Public Service Enterprise Group Inc	0.80
Pinnacle West Capital Corp	0.75
Portland General Electric Co	0.80
SCANA Corp	0.75
Southern Co/The	0.60
Sempra Energy	0.80
Integrys Energy Group Inc	1.05
Vectren Corp	0.75
Wisconsin Energy Corp	0.70
Westar Energy Inc	0.80
Xcel Energy Inc	0.65
Average	0.78

Sources and Notes:
[1]: From Valueline Investment Analyzer as of June 3, 2014.

Table No. MJV-11

Overall After-Tax Cost of Capital of the Electric Sample

Using Value Line Betas

Panel A: CAPM Cost of Equity Scenario 1 - Long-Term Risk Free Rate of 3.35%, Long-Term Market Risk Premium of 6.50%

Company	CAPM Cost of Equity [1]	ECAPM (0.5%) Cost of Equity [2]	ECAPM (1.5%) Cost of Equity [3]	5-Year Average Common Equity to Market Value Ratio [4]	Weighted - Average Cost of Preferred Equity [5]	5-Year Average Preferred Equity to Market Value Ratio [6]	Weighted-Average Cost of Debt [7]	5-Year Average Debt to Market Value Ratio [8]	The Companies's Income Tax Rate [9]	Overall After-Tax Cost of Capital (CAPM) [10]	Overall After-Tax Cost of Capital (ECAPM 0.5%) [11]	Overall After-Tax Cost of Capital (ECAPM 1.5%) [12]
ALLETE Inc	8.5%	8.6%	8.8%	0.59	4.60%	0.00	4.6%	0.41	41.5%	6.2%	6.2%	6.3%
Ameren Corp	8.9%	8.9%	9.1%	0.47	4.60%	0.00	4.6%	0.53	41.5%	5.6%	5.6%	5.7%
American Electric Power Co Inc	7.9%	8.0%	8.3%	0.47	4.60%	0.00	4.6%	0.53	41.5%	5.1%	5.2%	5.3%
Black Hills Corp	9.2%	9.2%	9.3%	0.49	4.60%	0.00	4.6%	0.51	41.5%	5.9%	5.9%	5.9%
CMS Energy Corp	7.9%	8.0%	8.3%	0.37	4.60%	0.00	4.6%	0.62	41.5%	4.6%	4.7%	4.8%
Cleco Corp	7.9%	8.0%	8.3%	0.57	4.60%	0.00	4.6%	0.43	41.5%	5.7%	5.8%	5.9%
CenterPoint Energy Inc	8.9%	8.9%	9.1%	0.41	4.54%	0.00	4.5%	0.59	41.5%	5.2%	5.2%	5.3%
Dominion Resources Inc/VA	8.2%	8.3%	8.6%	0.56	4.28%	0.01	4.3%	0.44	41.5%	5.7%	5.8%	5.9%
DTE Energy Co	8.9%	8.9%	9.1%	0.49	4.60%	0.00	4.6%	0.51	41.5%	5.7%	5.8%	5.8%
Consolidated Edison Inc	7.6%	7.7%	8.1%	0.53	4.28%	0.01	4.3%	0.47	41.5%	5.2%	5.3%	5.5%
El Paso Electric Co	7.9%	8.0%	8.3%	0.58	4.60%	0.00	4.6%	0.42	41.5%	5.7%	5.8%	5.9%
Edison International	8.5%	8.6%	8.8%	0.50	4.60%	0.05	4.6%	0.44	41.5%	5.7%	5.8%	5.9%
Entergy Corp	8.2%	8.3%	8.6%	0.48	4.60%	0.01	4.6%	0.51	41.5%	5.4%	5.4%	5.5%
Great Plains Energy Inc	9.2%	9.2%	9.3%	0.41	4.60%	0.01	4.6%	0.59	41.5%	5.3%	5.4%	5.4%
Hawaiian Electric Industries Inc	8.9%	8.9%	9.1%	0.54	4.60%	0.01	4.6%	0.45	41.5%	6.0%	6.1%	6.2%
IDACORP Inc	8.5%	8.6%	8.8%	0.53	4.60%	0.00	4.6%	0.47	41.5%	5.8%	5.9%	6.0%
Alliant Energy Corp	8.5%	8.6%	8.8%	0.54	4.54%	0.03	4.5%	0.43	41.5%	5.9%	5.9%	6.0%
MGE Energy Inc	7.9%	8.0%	8.3%	0.71	4.11%	0.00	4.1%	0.29	41.5%	6.3%	6.4%	6.6%
NextEra Energy Inc	8.2%	8.3%	8.6%	0.50	4.28%	0.00	4.3%	0.50	41.5%	5.4%	5.4%	5.6%
OGE Energy Corp	8.9%	8.9%	9.1%	0.60	4.54%	0.00	4.5%	0.40	41.5%	6.4%	6.4%	6.5%
Otter Tail Corp	9.5%	9.5%	9.6%	0.61	4.60%	0.01	4.6%	0.38	41.5%	6.9%	6.9%	6.9%
PG&E Corp	7.2%	7.4%	7.8%	0.54	4.60%	0.01	4.6%	0.45	41.5%	5.2%	5.3%	5.5%
Public Service Enterprise Group Inc	8.5%	8.6%	8.8%	0.61	4.60%	0.00	4.6%	0.39	41.5%	6.3%	6.3%	6.4%
Pinnacle West Capital Corp	8.2%	8.3%	8.6%	0.53	4.54%	0.00	4.5%	0.47	41.5%	5.6%	5.7%	5.8%
Portland General Electric Co	8.5%	8.6%	8.8%	0.46	4.60%	0.00	4.6%	0.54	41.5%	5.4%	5.5%	5.5%
SCANA Corp	8.2%	8.3%	8.6%	0.48	4.60%	0.00	4.6%	0.52	41.5%	5.4%	5.4%	5.5%
Southern Co/The	7.2%	7.4%	7.8%	0.57	4.28%	0.02	4.3%	0.41	41.5%	5.3%	5.4%	5.6%
Sempra Energy	8.5%	8.6%	8.8%	0.55	4.60%	0.00	4.6%	0.45	41.5%	5.9%	6.0%	6.1%
Integrys Energy Group Inc	10.2%	10.1%	10.1%	0.57	4.47%	0.01	4.5%	0.43	41.5%	6.9%	6.9%	6.9%
Vectren Corp	8.2%	8.3%	8.6%	0.53	4.28%	0.00	4.3%	0.47	41.5%	5.6%	5.6%	5.8%
Wisconsin Energy Corp	7.9%	8.0%	8.3%	0.58	4.41%	0.00	4.4%	0.42	41.5%	5.7%	5.8%	5.9%
Westar Energy Inc	8.5%	8.6%	8.8%	0.47	4.60%	0.00	4.6%	0.53	41.5%	5.4%	5.5%	5.6%
Xcel Energy Inc	7.6%	7.7%	8.1%	0.50	4.34%	0.00	4.3%	0.50	41.5%	5.1%	5.1%	5.3%
Full Sample Average				0.53	4.51%	0.01	4.5%	0.47	41.5%	5.7%	5.7%	5.9%

Sources and Notes:

[1]: Table No. MJV-10; Panel A, [4].
[2]: Table No. MJV-10; Panel A, [5].
[3]: Table No. MJV-10; Panel A, [6].
[4]: Table No. MJV-4, [4].
[5]: Workpaper #2 to Table No. MJV-11, Panel C.
[6]: Table No. MJV-4, [5].
[7]: Workpaper #2 to Table No. MJV-11, Panel B.
[8]: Table No. MJV-4, [6].
[9]: Provided by The Companies.
[10]: ([1] x [4]) + ([5] x [6]) + {[7] x [8] x (1 - [9])}.
[11]: ([2] x [4]) + ([5] x [6]) + {[7] x [8] x (1 - [9])}.
[12]: ([3] x [4]) + ([5] x [6]) + {[7] x [8] x (1 - [9])}.

[10]-[12] A strikethrough indicates the utility was excluded from the full sample average calculation as a result of its cost of equity not exceeding its cost of debt by 250 basis points

Table No. MJV-11

Overall After-Tax Cost of Capital of the Electric Sample

Using Value Line Betas

Panel B: CAPM Cost of Equity Scenario 2 - Long-Term Risk Free Rate of 3.10%, Long-Term Market Risk Premium of 7.50%

Company	CAPM Cost of Equity [1]	ECAPM (0.5%) Cost of Equity [2]	ECAPM (1.5%) Cost of Equity [3]	5-Year Average Common Equity to Market Value Ratio [4]	Weighted - Average Cost of Preferred Equity [5]	5-Year Average Preferred Equity to Market Value Ratio [6]	Weighted-Average Cost of Debt [7]	5-Year Average Debt to Market Value Ratio [8]	The Companies's Income Tax Rate [9]	Overall After-Tax Cost of Capital (CAPM) [10]	Overall After-Tax Cost of Capital (ECAPM 0.5%) [11]	Overall After-Tax Cost of Capital (ECAPM 1.5%) [12]
ALLETE Inc	9.1%	9.2%	9.4%	0.59	4.60%	0.00	4.6%	0.41	41.5%	6.5%	6.5%	6.7%
Ameren Corp	9.5%	9.5%	9.7%	0.47	4.60%	0.00	4.6%	0.53	41.5%	5.9%	5.9%	6.0%
American Electric Power Co Inc	8.3%	8.5%	8.8%	0.47	4.60%	0.00	4.6%	0.53	41.5%	5.3%	5.4%	5.6%
Black Hills Corp	9.8%	9.9%	10.0%	0.49	4.60%	0.00	4.6%	0.51	41.5%	6.2%	6.2%	6.2%
CMS Energy Corp	8.3%	8.5%	8.8%	0.37	4.60%	0.00	4.6%	0.62	41.5%	4.8%	4.9%	5.0%
Cleco Corp	8.3%	8.5%	8.8%	0.57	4.60%	0.00	4.6%	0.43	41.5%	5.9%	6.0%	6.2%
CenterPoint Energy Inc	9.5%	9.5%	9.7%	0.41	4.54%	0.00	4.5%	0.59	41.5%	5.4%	5.5%	5.5%
Dominion Resources Inc/VA	8.7%	8.8%	9.1%	0.56	4.28%	0.01	4.3%	0.44	41.5%	6.0%	6.0%	6.2%
DTE Energy Co	9.5%	9.5%	9.7%	0.49	4.60%	0.00	4.6%	0.51	41.5%	6.0%	6.0%	6.1%
Consolidated Edison Inc	8.0%	8.1%	8.5%	0.53	4.28%	0.01	4.3%	0.47	41.5%	5.4%	5.5%	5.7%
El Paso Electric Co	8.3%	8.5%	8.8%	0.58	4.60%	0.00	4.6%	0.42	41.5%	5.9%	6.0%	6.2%
Edison International	9.1%	9.2%	9.4%	0.50	4.60%	0.05	4.6%	0.44	41.5%	6.0%	6.1%	6.2%
Entergy Corp	8.7%	8.8%	9.1%	0.48	4.60%	0.01	4.6%	0.51	41.5%	5.6%	5.6%	5.8%
Great Plains Energy Inc	9.8%	9.9%	10.0%	0.41	4.60%	0.01	4.6%	0.59	41.5%	5.6%	5.6%	5.7%
Hawaiian Electric Industries Inc	9.5%	9.5%	9.7%	0.54	4.60%	0.01	4.6%	0.45	41.5%	6.4%	6.4%	6.5%
IDACORP Inc	9.1%	9.2%	9.4%	0.53	4.60%	0.00	4.6%	0.47	41.5%	6.1%	6.2%	6.3%
Alliant Energy Corp	9.1%	9.2%	9.4%	0.54	4.54%	0.03	4.5%	0.43	41.5%	6.2%	6.2%	6.3%
MGE Energy Inc	8.3%	8.5%	8.8%	0.71	4.11%	0.00	4.1%	0.29	41.5%	6.6%	6.7%	7.0%
NextEra Energy Inc	8.7%	8.8%	9.1%	0.50	4.28%	0.00	4.3%	0.50	41.5%	5.6%	5.7%	5.8%
OGE Energy Corp	9.5%	9.5%	9.7%	0.60	4.54%	0.00	4.5%	0.40	41.5%	6.7%	6.8%	6.9%
Otter Tail Corp	10.2%	10.2%	10.3%	0.61	4.60%	0.01	4.6%	0.38	41.5%	7.3%	7.3%	7.3%
PG&E Corp	7.6%	7.8%	8.2%	0.54	4.60%	0.01	4.6%	0.45	41.5%	5.4%	5.5%	5.7%
Public Service Enterprise Group Inc	9.1%	9.2%	9.4%	0.61	4.60%	0.00	4.6%	0.39	41.5%	6.6%	6.6%	6.8%
Pinnacle West Capital Corp	8.7%	8.8%	9.1%	0.53	4.54%	0.00	4.5%	0.47	41.5%	5.9%	6.0%	6.1%
Portland General Electric Co	9.1%	9.2%	9.4%	0.46	4.60%	0.00	4.6%	0.54	41.5%	5.7%	5.7%	5.8%
SCANA Corp	8.7%	8.8%	9.1%	0.48	4.60%	0.00	4.6%	0.52	41.5%	5.6%	5.7%	5.8%
Southern Co/The	7.6%	7.8%	8.2%	0.57	4.28%	0.02	4.3%	0.41	41.5%	5.5%	5.6%	5.8%
Sempra Energy	9.1%	9.2%	9.4%	0.55	4.60%	0.00	4.6%	0.45	41.5%	6.2%	6.3%	6.4%
Integrys Energy Group Inc	11.0%	10.9%	10.9%	0.57	4.47%	0.01	4.5%	0.43	41.5%	7.4%	7.3%	7.3%
Vectren Corp	8.7%	8.8%	9.1%	0.53	4.28%	0.00	4.3%	0.47	41.5%	5.8%	5.9%	6.0%
Wisconsin Energy Corp	8.3%	8.5%	8.8%	0.58	4.41%	0.00	4.4%	0.42	41.5%	5.9%	6.0%	6.2%
Westar Energy Inc	9.1%	9.2%	9.4%	0.47	4.60%	0.00	4.6%	0.53	41.5%	5.7%	5.7%	5.8%
Xcel Energy Inc	8.0%	8.1%	8.5%	0.50	4.34%	0.00	4.3%	0.50	41.5%	5.3%	5.4%	5.5%
Full Sample Average				0.53	4.51%	0.01	4.5%	0.47	41.5%	6.0%	6.0%	6.1%

Sources and Notes:

[1]: Table No. MJV-10; Panel B, [4].
[2]: Table No. MJV-10; Panel B, [5].
[3]: Table No. MJV-10; Panel B, [6].
[4]: Table No. MJV-4, [4].
[5]: Workpaper #2 to Table No. MJV-11, Panel C.
[6]: Table No. MJV-4, [5].
[7]: Workpaper #2 to Table No. MJV-11, Panel B.
[8]: Table No. MJV-4, [6].
[9]: Provided by The Companies.
[10]: ([1] x [4]) + ([5] x [6]) + {[7] x [8] x (1 - [9])}.
[11]: ([2] x [4]) + ([5] x [6]) + {[7] x [8] x (1 - [9])}.
[12]: ([3] x [4]) + ([5] x [6]) + {[7] x [8] x (1 - [9])}.

[10]-[12] A strikethrough indicates the utility was excluded from the full sample average calculation as a result of its cost of equity not exceeding its cost of debt by 250 basis points

Workpaper #1 to Table No. MJV-11

Electric Sample

Panel A: Rating to Yield Conversion

Rating	Bond Yield	Preferred Yield
A	4.28%	4.28%
BBB	4.60%	4.60%

Sources and Notes:
Bond Yields from Bloomberg as of June 03, 2014.
Preferred Yields from matching Bloomberg bond yields as of June 3, 2014.
AA estimated as A - 0.5 * (BBB - A).

Workpaper #1 to Table No. MJV-11

Electric Sample

Panel B: Bond Rating Summary

Company	Year End, June 3, 2014 [1]	2013 [2]	2012 [3]	2011 [4]	2010 [5]	2009 [6]
ALLETE Inc	BBB	BBB	BBB	BBB	BBB	BBB
Ameren Corp	BBB	BBB	BBB	BBB	BBB	BBB
American Electric Power Co Inc	BBB	BBB	BBB	BBB	BBB	BBB
Black Hills Corp	BBB	BBB	BBB	BBB	BBB	BBB
CMS Energy Corp	BBB	BBB	BBB	BBB	BBB	BBB
Cleco Corp	BBB	BBB	BBB	BBB	BBB	BBB
CenterPoint Energy Inc	A	A	BBB	BBB	BBB	BBB
Dominion Resources Inc/VA	A	A	A	A	A	A
DTE Energy Co	BBB	BBB	BBB	BBB	BBB	BBB
Consolidated Edison Inc	A	A	A	A	A	A
El Paso Electric Co	BBB	BBB	BBB	BBB	BBB	BBB
Edison International	BBB	BBB	BBB	BBB	BBB	BBB
Entergy Corp	BBB	BBB	BBB	BBB	BBB	BBB
Great Plains Energy Inc	BBB	BBB	BBB	BBB	BBB	BBB
Hawaiian Electric Industries Inc	BBB	BBB	BBB	BBB	BBB	BBB
IDACORP Inc	BBB	BBB	BBB	BBB	BBB	BBB
Alliant Energy Corp	A	A	BBB	BBB	BBB	BBB
MGE Energy Inc	AA	AA	AA	AA	AA	AA
NextEra Energy Inc	A	A	A	A	A	A
OGE Energy Corp	A	A	BBB	BBB	BBB	BBB
Otter Tail Corp	BBB	BBB	BBB	BBB	BBB	BBB
PG&E Corp	BBB	BBB	BBB	BBB	BBB	BBB
Public Service Enterprise Group Inc	BBB	BBB	BBB	BBB	BBB	BBB
Pinnacle West Capital Corp	A	A	BBB	BBB	BBB	BBB
Portland General Electric Co	BBB	BBB	BBB	BBB	BBB	BBB
SCANA Corp	BBB	BBB	BBB	BBB	BBB	BBB
Southern Co/The	A	A	A	A	A	A
Sempra Energy	BBB	BBB	BBB	BBB	BBB	BBB
Integrys Energy Group Inc	A	A	A	BBB	BBB	BBB
Vectren Corp	A	A	A	A	A	A
Wisconsin Energy Corp	A	A	A	A	BBB	BBB
Westar Energy Inc	BBB	BBB	BBB	BBB	BBB	BBB
Xcel Energy Inc	A	A	A	A	A	BBB

Sources and Notes:
[1] - [6]: Bloomberg as of June 3, 2014.

Workpaper #1 to Table No. MJV-11

Electric Sample

Panel C: Preferred Equity Rating Summary

Company	June 3, 2014 [1]	Year End, 2013 [2]	2012 [3]	2011 [4]	2010 [5]	2009 [6]
ALLETE Inc	BBB	BBB	BBB	BBB	BBB	BBB
Ameren Corp	BBB	BBB	BBB	BBB	BBB	BBB
American Electric Power Co Inc	BBB	BBB	BBB	BBB	BBB	BBB
Black Hills Corp	BBB	BBB	BBB	BBB	BBB	BBB
CMS Energy Corp	BBB	BBB	BBB	BBB	BBB	BBB
Cleco Corp	BBB	BBB	BBB	BBB	BBB	BBB
CenterPoint Energy Inc	A	A	BBB	BBB	BBB	BBB
Dominion Resources Inc/VA	A	A	A	A	A	A
DTE Energy Co	BBB	BBB	BBB	BBB	BBB	BBB
Consolidated Edison Inc	A	A	A	A	A	A
El Paso Electric Co	BBB	BBB	BBB	BBB	BBB	BBB
Edison International	BBB	BBB	BBB	BBB	BBB	BBB
Entergy Corp	BBB	BBB	BBB	BBB	BBB	BBB
Great Plains Energy Inc	BBB	BBB	BBB	BBB	BBB	BBB
Hawaiian Electric Industries Inc	BBB	BBB	BBB	BBB	BBB	BBB
IDACORP Inc	BBB	BBB	BBB	BBB	BBB	BBB
Alliant Energy Corp	A	A	BBB	BBB	BBB	BBB
MGE Energy Inc	AA	AA	AA	AA	AA	AA
NextEra Energy Inc	A	A	A	A	A	A
OGE Energy Corp	A	A	BBB	BBB	BBB	BBB
Otter Tail Corp	BBB	BBB	BBB	BBB	BBB	BBB
PG&E Corp	BBB	BBB	BBB	BBB	BBB	BBB
Public Service Enterprise Group Inc	BBB	BBB	BBB	BBB	BBB	BBB
Pinnacle West Capital Corp	A	A	BBB	BBB	BBB	BBB
Portland General Electric Co	BBB	BBB	BBB	BBB	BBB	BBB
SCANA Corp	BBB	BBB	BBB	BBB	BBB	BBB
Southern Co/The	A	A	A	A	A	A
Sempra Energy	BBB	BBB	BBB	BBB	BBB	BBB
Integrys Energy Group Inc	A	A	A	BBB	BBB	BBB
Vectren Corp	A	A	A	A	A	A
Wisconsin Energy Corp	A	A	A	A	BBB	BBB
Westar Energy Inc	BBB	BBB	BBB	BBB	BBB	BBB
Xcel Energy Inc	A	A	A	A	A	BBB

Sources and Notes:

[1] - [6]: Preferred equity ratings are assumed equal to the company's bond ratings reported in Workpaper #1 to Table No. MJV-11, Panel B.

Workpaper #2 to Table No. MJV-11

Electric Sample

Panel A: 15-Day Average Utility Yields and Mergent Preferred Yields

Date	AA Rated Utility [1]	A Rated Utility [2]	BBB Rated Utility [3]	AA Preferred [4]	A Preferred [5]	BBB Preferred [6]
5/13/2014	-	4.35	4.69	-	-	-
5/14/2014	-	4.29	4.65	-	-	-
5/15/2014	-	4.25	4.60	-	-	-
5/16/2014	-	4.26	4.61	-	-	-
5/19/2014	-	4.30	4.62	-	-	-
5/20/2014	-	4.28	4.62	-	-	-
5/21/2014	-	4.30	4.63	-	-	-
5/22/2014	-	4.31	4.63	-	-	-
5/23/2014	-	4.28	4.60	-	-	-
5/27/2014	-	4.26	4.57	-	-	-
5/28/2014	-	4.19	4.51	-	-	-
5/29/2014	-	4.22	4.52	-	-	-
5/30/2014	-	4.23	4.53	-	-	-
6/2/2014	-	4.28	4.60	-	-	-
6/3/2014	-	4.35	4.67	-	-	-
Average	4.11	4.28	4.60	4.11	4.28	4.60

Sources and Notes:
[1] - [3]: Bloomberg as of June 3, 2014.
[4] - [6]: From matching Bloomberg bond yields as of June 3, 2014.
AA estimated as A - 0.5 * (BBB - A).

Workpaper #2 to Table No. MJV-11

Electric Sample

Panel B: Bond Yield Summary

Company	June 3, 2014 [1]	Year End, 2013 [2]	2012 [3]	2011 [4]	2010 [5]	2009 [6]	5-Year Average [7]
ALLETE Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Ameren Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
American Electric Power Co Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Black Hills Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
CMS Energy Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Cleco Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
CenterPoint Energy Inc	4.28%	4.28%	4.60%	4.60%	4.60%	4.60%	4.54%
Dominion Resources Inc/VA	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
DTE Energy Co	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Consolidated Edison Inc	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
El Paso Electric Co	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Edison International	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Entergy Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Great Plains Energy Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Hawaiian Electric Industries Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
IDACORP Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Alliant Energy Corp	4.28%	4.28%	4.60%	4.60%	4.60%	4.60%	4.54%
MGE Energy Inc	4.11%	4.11%	4.11%	4.11%	4.11%	4.11%	4.11%
NextEra Energy Inc	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
OGE Energy Corp	4.28%	4.28%	4.60%	4.60%	4.60%	4.60%	4.54%
Otter Tail Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
PG&E Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Public Service Enterprise Group Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Pinnacle West Capital Corp	4.28%	4.28%	4.60%	4.60%	4.60%	4.60%	4.54%
Portland General Electric Co	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
SCANA Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Southern Co/The	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
Sempra Energy	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Integrys Energy Group Inc	4.28%	4.28%	4.28%	4.60%	4.60%	4.60%	4.47%
Vectren Corp	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
Wisconsin Energy Corp	4.28%	4.28%	4.28%	4.28%	4.60%	4.60%	4.41%
Westar Energy Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Xcel Energy Inc	4.28%	4.28%	4.28%	4.28%	4.28%	4.60%	4.34%

Sources and Notes:
[1] - [6]: Ratings based on Workpaper #1 to Table No. MJV-11, Panel B. Bond yields from Bloomberg as of June 3, 2014.
[7]: ([2] + [3] + [4] + [5] + [6]) / 5.
AA estimated as A - 0.5 * (BBB - A).

Workpaper #2 to Table No. MJV-11

Electric Sample

Panel C: Preferred Equity Yield Summary

Company	June 3, 2014 [1]	Year End, 2013 [2]	2012 [3]	2011 [4]	2010 [5]	2009 [6]	5-Year Average [7]
ALLETE Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Ameren Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
American Electric Power Co Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Black Hills Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
CMS Energy Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Cleco Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
CenterPoint Energy Inc	4.28%	4.28%	4.60%	4.60%	4.60%	4.60%	4.54%
Dominion Resources Inc/VA	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
DTE Energy Co	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Consolidated Edison Inc	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
El Paso Electric Co	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Edison International	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Entergy Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Great Plains Energy Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Hawaiian Electric Industries Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
IDACORP Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Alliant Energy Corp	4.28%	4.28%	4.60%	4.60%	4.60%	4.60%	4.54%
MGE Energy Inc	4.11%	4.11%	4.11%	4.11%	4.11%	4.11%	4.11%
NextEra Energy Inc	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
OGE Energy Corp	4.28%	4.28%	4.60%	4.60%	4.60%	4.60%	4.54%
Otter Tail Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
PG&E Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Public Service Enterprise Group Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Pinnacle West Capital Corp	4.28%	4.28%	4.60%	4.60%	4.60%	4.60%	4.54%
Portland General Electric Co	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
SCANA Corp	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Southern Co/The	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
Sempra Energy	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Integrys Energy Group Inc	4.28%	4.28%	4.28%	4.60%	4.60%	4.60%	4.47%
Vectren Corp	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%	4.28%
Wisconsin Energy Corp	4.28%	4.28%	4.28%	4.28%	4.60%	4.60%	4.41%
Westar Energy Inc	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Xcel Energy Inc	4.28%	4.28%	4.28%	4.28%	4.28%	4.60%	4.34%

Sources and Notes:
[1] - [6]: See Workpaper #1 to Table No. MJV-11, Panels C. Preferred equity yields are from matching Bloomberg bond yields as of June 3, 2014.
[7]: ([2] + [3] + [4] + [5] + [6]) / 5.
AA estimated as A - 0.5 * (BBB - A).

Table No. MJV-12

Risk Positioning Cost of Equity at The Companies' Representative Capital Structure

Electric Sample

Using Value Line Betas

	Overall After-Tax Cost of Capital (Scenario 1) [1]	Overall After-Tax Cost of Capital (Scenario 2) [2]	The Companies' Representative Regulatory % Debt [3]	Representative Cost of BBB-Rated Utility Debt [4]	The Companies' Income Tax Rate [5]	The Companies' Representative Regulatory % Equity [6]	Estimated Return on Equity (Scenario 1) [7]	Estimated Return on Equity (Scenario 2) [8]
Full Sample:								
CAPM using Value Line Betas	5.7%	6.0%	50.0%	4.6%	41.5%	50.0%	8.7%	9.2%
ECAPM (0.50%) using Value Line Betas	5.7%	6.0%	50.0%	4.6%	41.5%	50.0%	8.8%	9.3%
ECAPM (1.50%) using Value Line Betas	5.9%	6.1%	50.0%	4.6%	41.5%	50.0%	9.0%	9.6%

Sources and Notes:
[1]: Table No. MJV-11; Panel A, [10] - [12].
[2]: Table No. MJV-11; Panel B, [10] - [12].
[3]: Provided by The Companies.
[4]: Based on a BBB rating. Yield from Bloomberg as of June 3, 2014.
[5]: Provided by The Companies.
[6]: Provided by The Companies.
[7]: {[1] - ([3] x [4] x (1 - [5]) + x)}/ [6]
[8]: {[2] - ([3] x [4] x (1 - [5]) + x)}/ [6]

Scenario 1: Long-Term Risk Free Rate of 3.35%, Long-Term Market Risk Premium of 6.50%.
Scenario 2: Long-Term Risk Free Rate of 3.10%, Long-Term Market Risk Premium of 7.50%.