BEFORE THE CORPORATION COMMISSION

OF THE STATE OF KANSAS

IN THE MATTER OF THE APPLICATION OF KANSAS CITY POWER & LIGHT COMPANY TO MAKE CERTAIN CHANGES IN ITS CHARGES FOR ELECTRIC SERVICE.	]]]]]	KCC Docket No. 12-KCPE-764-RTS

DIRECT TESTIMONY OF

DR. J. RANDALL WOOLRIDGE

RE: COST OF CAPITAL

ON BEHALF OF

THE CITIZENS' UTILITY RATEPAYER BOARD

August 22, 2012

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I. IDENTIFICATION OF WITNESS AND PURPOSE OF TESTIMONY

Q. PLEASE STATE YOUR FULL NAME, ADDRESS, AND OCCUPATION.

A. My name is J. Randall Woolridge, and my business address is 120 Haymaker Circle, State College, PA 16801. I am a Professor of Finance and the Goldman, Sachs & Co. and Frank P. Smeal Endowed University Fellow in Business Administration at the University Park Campus of the Pennsylvania State University. I am also the Director of the Smeal College Trading Room and President of the Nittany Lion Fund, LLC. A summary of my educational background, research, and related business experience is provided in Appendix A.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I have been asked by the staff of the Citizens' Utility Ratepayer Board ("CURB") to provide an opinion as to the overall fair rate of return or cost of capital for the Kansas City Power & Light Company ("KCP&L" or the "Company") and evaluate the Company's rate of return testimony in this proceeding.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. First, I review my return on equity ("ROE") recommendation for KCP&L. Second, I provide an assessment of capital costs in today's capital markets. Third, I discuss the selection of a proxy group of electric utility companies ("Electric Proxy Group") for estimating the cost of capital for KCP&L. Fourth, I discuss the KCP&L's capital structure and senior capital cost rates. Fifth, I discuss the concept of the cost of equity capital, and then estimate the equity cost rate for KCP&L. Finally, I provide a critique of KCP&L's rate of return testimony.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS REGARDING THE APPROPRIATE RATE OF RETURN FOR KCP&L.

A. I initially show that capital costs as measured by interest rates are at historically low levels. I show that interest rates on utility bonds have declined by about 150 basis points since the Company's last rate case. To estimate an equity cost rate for KCP&L, I have applied the Discounted Cash Flow Model ("DCF") and the Capital Asset Pricing Model ("CAPM") to my Electric Proxy Group. I recommend an equity cost rate of 8.50%. I have adopted the Company's proposed capital structure and senior capital cost rates. My cost of capital recommendation, which includes an overall cost of capital of 7.58%, is summarized in Exhibit JRW-1.

In terms of the DCF approach, the two major areas of disagreement are (1) the appropriate adjustment to the DCF dividend yield and most significantly, (2) the estimation of the expected growth rate. Dr. Hadaway

has used three different DCF models. As growth rates, he has used: (1) the forecasted earnings per share ("EPS") growth rates of Wall Street analysts and *Value Line*; and (2) an expected Gross Domestic Product ("GDP") growth rate of 5.8%. I provide empirical evidence from new studies that demonstrate the long-term earnings growth rates of Wall Street analysts and *Value Line* are overly optimistic and upwardly-biased. With respect to the GDP growth rate, I show that: (1) there is no evidence that links the earnings and dividend per share growth rates of electric utilities and GDP growth; and (2) an expected GDP growth rate of 5.7% is well above recent GDP growth as well as the long-term projections of economists and the U.S. government. In developing a DCF growth rate, I have used both historic and projected growth rate measures and have evaluated growth in dividends, book value, and earnings per share.

Dr. Hadaway also estimates an equity cost rate using the Risk Premium ("RP") model. The risk premium in his RP model is based on the historical relationship between the yields on Moody's public utility bond yields and authorized returns on equity ("ROEs") for electric utility bonds. This approach overstates the equity cost rate for the Company in two ways. First, the base yield is in excess of investor return requirements. Second, the risk premium is inflated as a measure of investor's required risk premium since the utilities have been selling at a market-to-book ration in excess of 1.0. This indicates that the authorized rates of return have been greater than the return that investors require.

I have used the CAPM approach, which is a form of the RP model. The major issue in using the CAPM is the measurement and the magnitude of the market or equity risk premium. As I highlight in my testimony, there are three procedures for estimating an equity risk premium – historic returns, surveys, and expected return models. I have used an equity risk premium of 5.00%, which (1) uses all three approaches to estimating an equity premium and (2) employs the results of many studies of the equity risk premium. As I note, my market risk premium is consistent with the market risk premiums: (1) discovered in recent academic studies by leading finance scholars; (2) employed by leading investment banks and management consulting firms; and (3) that result from surveys of financial forecasters, analysts, companies, and corporate CFOs.

In the end, the areas of disagreement in measuring the Company's cost of capital are: (1) the DCF dividend yield adjustment; (2) the use of the projected growth rates of Wall Street analysts and *Value Line* to measure expected DCF growth; (3) employing an expected GDP growth rate as a long-term measure of earnings and dividend growth for an electric utility; and (4) the base interest rate and the measurement and magnitude of the equity risk premium used in RP approach.

II. CAPITAL COSTS IN TODAY'S MARKETS

Q. PLEASE DISCUSS CAPITAL COSTS IN U.S. MARKETS.

A. Long-term capital cost rates for U.S. corporations are a function of the required returns on risk-free securities plus a risk premium. The risk-free rate of interest is the yield on long-term U.S Treasury yields. The yields on ten-year U.S. Treasury bonds from 1953 to the present are provided on page 1 of Exhibit JRW-2. These yields peaked in the early 1980s and have generally declined since that time. In the summer of 2003, these yields hit a 60-year low at 3.33%. They subsequently increased and fluctuated between the 4.0% and 5.0% levels over the next four years in response to ebbs and flows in the economy. Ten-year Treasury yields began to decline in mid-2007 at the beginning of the financial crisis. In 2008 Treasury yields declined to below 3.0% as a result of the expansion of the mortgage and subprime market credit crisis, the turmoil in the financial sector, the government bailout of financial institutions, the monetary stimulus provided by the Federal Reserve, and the economic recession. From 2008 until 2011, these rates fluctuated between 2.5% and 3.5%. Over the past six months, the yields on ten-year Treasuries have declined from 2.5% to below 2.0% as economic uncertainties have persisted.

Panel B on page 1 of Exhibit JRW-2 shows the differences in yields between ten-year Treasuries and Moody's Baa rated bonds since the year 2000. This differential primarily reflects the additional risk required by bond investors for the risk associated with investing in corporate bonds. The

difference also reflects, to some degree, yield curve changes over time. The Baa rating is the lowest of the investment grade bond ratings for corporate bonds. The yield differential hovered in the 2.0% to 3.0% area until 2005, declined to 1.5% until late 2007, and then increased significantly in response to the financial crisis. This differential peaked at 6.0% at the height of the financial crisis in early 2009, due to tightening in credit markets, which increased corporate bond yields and the "flight to quality," which decreased treasury yields. The differential subsequently declined and has been in the 2.5% to 3.0% range over the past three years.

As previously noted, the risk premium is the return premium required by investors to purchase riskier securities. The risk premium required by investors to buy corporate bonds is observable based on yield differentials in the markets. The equity risk premium is the return premium required to purchase stocks as opposed to bonds. The equity risk premium is not readily observable in the markets (as are bond risk premiums) since expected stock market returns are not readily observable. As a result, equity risk premiums must be estimated using market data. There are alternative methodologies used to estimate the equity risk premium, and the alternative approaches and equity risk premium results are subject to much debate. One way to estimate the equity risk premium is to compare the mean returns on bonds and stocks over long historical periods. Measured in this manner, the equity risk premium has been in the 5% to 7% range. However, studies by leading academics indicate the forward-looking equity risk premium is actually in the

4.0% to 5.0% range.[1] These lower equity risk premium results are in line with the findings of equity risk premium surveys of CFOs, academics, analysts, companies, and financial forecasters.

Q. PLEASE REVIEW THE FINANCIAL CRISIS THAT BEGAN IN 2007 AND THE RESPONSE OF THE U.S. GOVERNMENT.

A. The mortgage crisis, subprime crisis, credit crisis, economic recession and the restructuring of financial institutions have had tremendous global economic implications. This issue first surfaced in the summer of 2007 as a mortgage crisis. It expanded into the subprime area in late 2008 and led to the collapse of certain financial institutions, notably Bear Stearns, in the first quarter of 2008. Commodity and energy prices peaked and then began to decline in the summer of 2008, as the crisis in the financial markets spread to the global economy. The turmoil in the financial sector peaked in September of 2008 with the failure of several large financial institutions, Bank of America's buyout of Merrill Lynch, and the government takeover of Fannie Mae and Freddie Mac.

In response to the market crisis, the Federal Reserve ("Fed") took extraordinary steps in an effort to stabilize capital markets. Most significantly, the Fed has opened its lending facilities to numerous banking and investment firms to promote credit markets. As a result, the balance sheet of the Federal Reserve grew by hundreds of billions of dollars in support of the financial system. The federal government took a series of measures to shore up the

[1] These studies are discussed later in the testimony in reference to Exhibit JRW-11, page 5.

economy and the markets. The Troubled Asset Relief Program ("TARP") was aimed at providing over $700 billion in government funds to the banking system in the form of equity investments. The federal government spent billions bailing out a number of prominent financial institutions, including AIG, Citigroup, and Bank of America. The government also bailed out other industries, most notably the auto industry. In 2009, President Obama signed into law his $787 billion economic stimulus, which included significant tax cuts and government spending aimed at creating jobs and turning around the economy.

The spillover of the financial crisis to the economy has been ongoing. According to the National Bureau of Economic Research ("NBER"), the economy slipped into a recession in the 4th quarter of 2007. The NBER has indicated that the recession ended in the 2nd quarter of 2009. Nonetheless, the recovery of the economy has lagged the recoveries from previous recessions. Since the 2nd quarter of 2009, economic growth has been only 2.4% per year, and just 1.8% in the first quarter of 2012. Furthermore, the muted economic recovery in the U.S. has been hindered by global economic concerns, especially continuing fiscal and monetary issues in Europe and the prospect of slowing economic growth in China. As a result, the U.S. is still saddled with relatively high unemployment, large government budget deficits, continued housing market issues, and uncertainty about future economic growth. The stalled economic recovery is reflected in the stock market. The stock market bottomed out in March of 2009, and then increased about 100% over the next two years. However, since that time, the stock market advance has been

slowed by the U.S. and global economic uncertainties and concerns.

In summary, the Federal Reserve and the U.S. government have taken extraordinary actions and committed great sums of money to rescue the economy, certain industries, and the capital markets. But the economy is still on an uncertain path.

Q. PLEASE PROVIDE ADDITIONAL INFORMATION ON THE ACTIONS OF THE GOVERNMENT AND THEIR IMPACT ON U. S. CAPITAL COSTS.

A. The yields on United States Treasury securities have declined to levels not seen since the 1950s. The yields on Treasury bills securities decreased significantly at the onset of the financial crisis and have remained very low levels. The decline in interest rates reflects several factors, including: (1) the "flight to quality" in the credit markets as investors sought out low risk investments during the financial crisis; (2) the very aggressive monetary actions of the Federal Reserve, which were aimed at restoring liquidity and faith in the financial system as well as maintaining low interest rates to boost economic growth; and (3) the continuing slow recovery from the recession.

The credit market for corporate and utility debt experienced higher rates due to the credit crisis. The short-term credit markets were initially hit with credit issues, leading to the demise of several large financial institutions. The primary indicator of the short-term credit market is the 3-month London Interbank Offered Rate ("LIBOR"). LIBOR peaked in the third quarter of 2008 at 4.75%. It has since declined to below 0.5% as the short-term credit

markets opened up and U.S. Treasury rates have remained low. The long-term corporate credit markets tightened up during the financial crisis, but have improved significantly since 2009. Interest rates on utility and corporate debt have declined to historically low levels. These low rates reflect the weak economy, as the Federal Reserve has significantly scaled back its aggressive monetary policy actions.

Panel A of page 2 of Exhibit JRW-2 provides the yields on A, BBB+, and BBB rated public utility bonds. These yields peaked in November 2008, and have since declined by nearly 400 basis points. For example, the yields on 'BBB' rated utility bonds, which peaked at about 8.50% in November of 2008, have declined to 4.20% as of August 9, 2012. Panel B of Exhibit JRW-2 provides the yield spreads on A, BBB+, and BBB rated public utility bonds relative to Treasury bonds. These yield spreads increased dramatically in the third quarter of 2008 during the peak of the financial crisis and have decreased significantly since that time. For example, the yield spreads between 30-year U.S. Treasury bonds and 'BBB' rated utility bonds peaked at 4.50% in November of 2008, declined to 1.4% in the summer of 2012, and have since increased to about 1.5%.

In sum, while the economy continues to face significant problems, the actions of the government and Federal Reserve had a large effect on the credit markets. The capital costs for utilities, as measured by the yields on 30-year utility bonds, have declined to below pre-financial crisis levels.

Q. HOW DO CURRENT UTILITY BOND RATES COMPARE TO THE RATES AT THE TIME OF THE COMPANY'S LAST RATE CASE IN 2010.

A. As shown on page 2 of Exhibit JRW-2, long-term BBB utility bond yields were in the 5.5% to 6.0% range in 2010, and in recent months these yields have been in the 4.25% range. Hence, utility bond yields have declined by about 150 basis points in the last two years since the Company's last rate case.

Q. PLEASE DISCUSS THE RECENT PERFORMANCE OF UTILITY STOCKS.

A. Utility stocks have performed quite well during the recent period of uncertainty. Page 1 of Exhibit JRW-3 graphs the performance of the Dow Jones Utility Index versus the S&P 500 over the 2011-1212 time period. When the S&P 500 declined by over 10% in early August of 2011, utility stocks declined by much less. As the S&P 500 recovered in the fourth quarter of 2011, utility stocks continued to increase in value as well. In the first quarter of 2012, the S&P 500 performed much better than the stocks of utilities. However, utility stocks outperformed the S&P 500 during the second quarter of 2012 as the S&P 500 has declined by about 7.0% while utility stocks have appreciated about 2.0%. Overall, since January 1, 2011, utility stocks have increased by about 20%, while the S&P 500 has only increased by 10%.

Overall, utility stocks have proven to be safe havens in volatile markets since utility stocks have low risk relative to the overall stock market.

Utility stocks did not decline as much as the overall market in the market decline of the third quarter of 2011 and second quarter of 2012, and they did not increase in value as much as the overall market in the recovery of the stock market in the first quarter of 2012. The low relative volatility and risk of utility stocks is reflected in their low betas.

Q. OVERALL, WHAT DOES YOUR REVIEW OF THE CAPITAL MARKET CONDITIONS INDICATE ABOUT THE EQUITY COST RATE FOR UTILITIES TODAY?

A. The market data suggests that capital costs for utilities are at relatively low levels. The rates on 30-year utility bonds are at historically low levels. As shown on page 2 of Exhibit JRW-2, the yield on long-term 'BBB' rated utility bonds is only 4.20%. These rates have fallen by about 150 basis points since the Company's last rate case. In addition, utility stocks have proven to be steady performers over the past year relative to the overall market. As such, equity cost rates for utilities are at relatively low levels. As demonstrated later in my testimony, this observation is supported by the DCF and CAPM data for electric utility companies.

III. PROXY GROUP SELECTION

Q. PLEASE DESCRIBE YOUR APPROACH TO DEVELOPING A FAIR RATE OF RETURN RECOMMENDATION FOR KCP&L.

A. To develop a fair rate of return recommendation for KCP&L, I evaluated the return requirements of investors on the common stock of a proxy group of publicly-held electric utility companies ("Electric Proxy Group").

Q. PLEASE DESCRIBE YOUR PROXY GROUP OF COMPANIES.

A. My Electric Proxy Group consists of thirty-four electric utility companies. The selection criteria include the following:

1. Listed as Electric Utility by *Value Line Investment Survey* and listed as an Electric Utility or Combination Electric & Gas company in *AUS Utilities Report*;

2. At least 50% of revenues from regulated electric operations as reported by *AUS Utilities Report;*

3. An investment grade bond rating as reported by *AUS Utilities Report;*

4. Has paid a cash dividend for the past three years, with no cuts or omissions;

5. Not involved in an acquisition of another utility, and/or was not the target of an acquisition, in the past six months; and

6. Analysts' long-term EPS growth rate forecasts available from Yahoo, Reuters, and Zack's.

The Electric Proxy Group includes thirty-four companies. Summary

financial statistics for the proxy group are listed on page 1 of Exhibit JRW-4.[2] The median operating revenues and net plant for the Electric Proxy Group are $4,075.1M and $9,144.0M, respectively. The group receives 77% of revenues from regulated electric operations, has an A-/BBB+ bond rating from Standard & Poor's, a current common equity ratio of 45.3%, and an earned return on common equity over of 9.9%.

The Electric Proxy Group is larger than KCP&L in terms of revenues and has a slightly better credit rating (senior secured bond rating of A-/BBB+ for the Electric Proxy Group versus BBB+ for KCP&L). However, the credit rating for KCP&L appears to be limited by the 'aggressive' financial profile of KCP&L's parent, Great Plains. As shown in Exhibit JRW-4, Great Plains has a current common equity ratio of 41.8%, compared to a common equity ratio of 45.3% for the Electric Proxy Group and the 51.8% common equity ratio that KCP&L is requesting in this case.

IV. CAPITAL STRUCTURE RATIOS AND DEBT COST RATES

Q. WHAT IS KCP&L'S RECOMMENDED CAPITAL STRUCTURE FOR RATEMAKING PURPOSES?

A. KCP&L's recommended capital structure is the consolidated capital structure for KCP&L's parent, Great Plains Energy, and includes 47.57% long-term debt, 0.62% preferred stock, and 51.81% common equity. This is provided in Panel A of Exhibit JRW-5.

[2] In my testimony, I present financial results using both mean and medians as measures of central tendency. However, due to outliers among means, I have used the median as a measure of central tendency.

Q. HOW DOES KCP&L'S RECOMMENDED CAPITAL STRUCTURE COMPARE TO THAT OF ITS PARENT, GREAT PLAINS ENERGY?

A. Panels B and C of Exhibit JRW-5 show Great Plain's average quarterly capitalization over the past year with and without short-term debt. With short-term debt, this average quarterly capital structure includes 15.9% short-term debt, 41.09% long-term debt, 0.56% preferred stock, and 42.45% common equity. Without short-term debt, this average quarterly capital structure includes 48.85% long-term debt, 0.67% preferred stock, and 50.48% common equity. These ratios highlight the fact Great Plains capitalization includes a significant amount of short-term debt. Hence, on a composite basis, Great Plains employs more debt and less equity than KCP&L, however, without short-term debt, the capitalization of Great Plains reflects the capitalization that KCP&L is requesting in this case.

Q. PLEASE DISCUSS THE CAPITAL STRUCTURES OF THE COMPANIES IN THE ELECTRIC PROXY GROUP.

A. Panel D of Exhibit JRW-5 provides the average capitalization ratios for the companies in the Electric Proxy Group. Page 2 of Exhibit JRW-5 provides the supporting company data. The average capitalization ratios for the proxy group are 51.1% long-term debt, 0.6% preferred stock, and 48.3% common equity. These are the capital structure ratios for the holding companies that trade in the markets are used to estimate an equity cost rate for KCP&L. These ratios indicate that the Electric Proxy Group has, on average, a slightly lower common equity ratio than KCP&L and Great Plains.

Q. GIVEN THIS DISCUSSION, WHAT CAPITAL STRUCTURE ARE YOU RECOMMENDING FOR KCP&L?

A. I am adopting the Company's proposed capital structure, as updated for the actual capital structure figures as of June 30, 2012. However, especially given the amount of short-term debt used by Great Plains, and the current cost of short-term debt, I do believe that the Commission should evaluate at some point whether short-term debt should be included as a source of capital in determining the overall cost of capital.

Q. WHAT SENIOR CAPITAL COST RATES ARE YOU USING FOR KCP&L?

A. The Company has recommended long-term debt and preferred stock cost rates of 6.63% and 4.29%. I am using these senior capital cost rates. However, in my opinion, the current long-term debt cost rate is high and the Company and the Commission should evaluate refinancing alternatives.

V. <u>THE COST OF COMMON EQUITY CAPITAL</u>

A. OVERVIEW

Q. WHY MUST AN OVERALL COST OF CAPITAL OR FAIR RATE OF RETURN BE ESTABLISHED FOR A PUBLIC UTILITY?

A. In a competitive industry, the return on a firm's common equity capital is determined through the competitive market for its goods and services. Due to the capital requirements needed to provide utility services and to the economic

benefit to society from avoiding duplication of these services, some public utilities are monopolies. It is not appropriate to permit monopoly utilities to set their own prices because of the lack of competition and the essential nature of the services. Thus, regulation seeks to establish prices that are fair to consumers and, at the same time, are sufficient to meet the operating and capital costs of the utility (i.e., provide an adequate return on capital to attract investors).

Q. PLEASE PROVIDE AN OVERVIEW OF THE COST OF CAPITAL IN THE CONTEXT OF THE THEORY OF THE FIRM.

A. The total cost of operating a business includes the cost of capital. The cost of common equity capital is the expected return on a firm's common stock that the marginal investor would deem sufficient to compensate for risk and the time value of money. In equilibrium, the expected and required rates of return on a company's common stock are equal.

Normative economic models of the firm, developed under very restrictive assumptions, provide insight into the relationship between firm performance or profitability, capital costs, and the value of the firm. Under the economist's ideal model of perfect competition, where entry and exit are costless, products are undifferentiated, and there are increasing marginal costs of production, firms produce up to the point where price equals marginal cost. Over time, a long-run equilibrium is established where price equals average cost, including the firm's capital costs. In equilibrium, total revenues equal total costs, and because capital costs represent investors' required return on

the firm's capital, actual returns equal required returns, and the market value must equal the book value of the firm's securities.

In the real world, firms can achieve competitive advantage due to product market imperfections. Most notably, companies can gain competitive advantage through product differentiation (adding real or perceived value to products) and by achieving economies of scale (decreasing marginal costs of production). Competitive advantage allows firms to price products above average cost and thereby earn accounting profits greater than those required to cover capital costs. When these profits are in excess of that required by investors, or when a firm earns a return on equity in excess of its cost of equity, investors respond by valuing the firm's equity in excess of its book value.

James M. McTaggart, founder of the international management consulting firm Marakon Associates, described this essential relationship between the return on equity, the cost of equity, and the market-to-book ratio in the following manner:[3]

> Fundamentally, the value of a company is determined by the cash flow it generates over time for its owners, and the minimum acceptable rate of return required by capital investors. This "cost of equity capital" is used to discount the expected equity cash flow, converting it to a present value. The cash flow is, in turn, produced by the interaction of a company's return on equity and the annual rate of equity growth. High return on equity (ROE) companies in low-growth markets, such as Kellogg, are prodigious generators of cash flow, while low ROE companies in high-growth markets, such as Texas Instruments, barely generate enough cash flow to finance growth.

[3] James M. McTaggart, "The Ultimate Poison Pill: Closing the Value Gap," *Commentary* (Spring 1988), p. 2.

> A company's ROE over time, relative to its cost of equity, also determines whether it is worth more or less than its book value. If its ROE is consistently greater than the cost of equity capital (the investor's minimum acceptable return), the business is economically profitable and its market value will exceed book value. If, however, the business earns an ROE consistently less than its cost of equity, it is economically unprofitable and its market value will be less than book value.

As such, the relationship between a firm's return on equity, cost of equity, and market-to-book ratio is relatively straightforward. A firm that earns a return on equity above its cost of equity will see its common stock sell at a price above its book value. Conversely, a firm that earns a return on equity below its cost of equity will see its common stock sell at a price below its book value.

Q. PLEASE PROVIDE ADDITIONAL INSIGHTS INTO THE RELATIONSHIP BETWEEN RETURN ON EQUITY AND MARKET-TO-BOOK RATIOS.

A. This relationship is discussed in a classic Harvard Business School case study entitled "A Note on Value Drivers." On page 2 of that case study, the author describes the relationship very succinctly:[4]

> For a given industry, more profitable firms – those able to generate higher returns per dollar of equity – should have higher market-to-book ratios. Conversely, firms which are unable to generate returns in excess of their cost of equity should sell for less than book value.

[4] Benjamin Esty, "A Note on Value Drivers," Harvard Business School, Case No. 9-297-082, April 7, 1997.

Profitability	*Value*
If ROE > K	*then Market/Book > 1*
If ROE = K	*then Market/Book =1*
If ROE < K	*then Market/Book < 1*

To assess the relationship by industry, as suggested above, I performed a regression study between estimated return on equity ("ROE") and market-to-book ratios using natural gas distribution, electric utility and water utility companies. I used all companies in these three industries that are covered by *Value Line* and have estimated ROE and market-to-book ratio data. The results are presented in Panels A-C of Exhibit JRW-6. The average R-squares for the electric, gas, and water companies are 0.52, 0.71, and 0.77, respectively.[5] This demonstrates the strong positive relationship between ROEs and market-to-book ratios for public utilities.

Q. WHAT ECONOMIC FACTORS HAVE AFFECTED THE COST OF EQUITY CAPITAL FOR PUBLIC UTILITIES?

A. Exhibit JRW-7 provides indicators of public utility equity cost rates over the past decade. Page 1 shows the yields on long-term 'A' rated public utility bonds. These yields peaked in the early 2000s at over 8.0%, declined to about 5.0% in 2005, and rose to 6.0% in 2006 and 2007. They stayed in that 6.0% range until the third quarter of 2008 when they spiked to almost 7.5% during the financial crisis. They have since retreated significantly over the past three years and now are below 4.5%.

[5] R-square measures the percent of variation in one variable (e.g., market-to-book ratios) explained by another variable (e.g., expected ROE). R-squares vary between zero and 1.0, with values closer to 1.0 indicating a higher relationship between two variables.

Page 2 of Exhibit JRW-7 provides the dividend yields for the proxy group. The dividend yields for the Electric Proxy Group generally declined slightly over the decade until 2007. They increased in 2008 and 2009 in response to the financial crisis, but declined in 2010 and 2011 and now are about 4.5%.

Average earned returns on common equity and market-to-book ratios for the group are on page 3 of Exhibit JRW-7. The average earned returns on common equity for the Electric Proxy Group were in the 9.0%-12.0% range over the past decade, and have hovered in the 10.0% range for the past three year. The average market-to-book ratio for the group has been in the 1.20X to 1.80X during the decade. The average declined to about 1.20X in 2009, but increased to 1.30X in 2010 and 1.40X in 2011.

Q. WHAT FACTORS DETERMINE INVESTORS' EXPECTED OR REQUIRED RATE OF RETURN ON EQUITY?

A. The expected or required rate of return on common stock is a function of market-wide as well as company-specific factors. The most important market factor is the time value of money as indicated by the level of interest rates in the economy. Common stock investor requirements generally increase and decrease with like changes in interest rates. The perceived risk of a firm is the predominant factor that influences investor return requirements on a company-specific basis. A firm's investment risk is often separated into business and financial risk. Business risk encompasses all factors that affect a

firm's operating revenues and expenses. Financial risk results from incurring fixed obligations in the form of debt in financing its assets.

Q. HOW DOES THE INVESTMENT RISK OF UTILITIES COMPARE WITH THAT OF OTHER INDUSTRIES?

A. Due to the essential nature of their service as well as their regulated status, public utilities are exposed to a lesser degree of business risk than other, non-regulated businesses. The relatively low level of business risk allows public utilities to meet much of their capital requirements through borrowing in the financial markets, thereby incurring greater than average financial risk. Nonetheless, the overall investment risk of public utilities is below most other industries.

Exhibit JRW-8 provides an assessment of investment risk for 100 industries as measured by beta, which according to modern capital market theory, is the only relevant measure of investment risk. These betas come from the *Value Line Investment Survey* and are compiled annually by Aswath Damodoran of New York University.[6] The study shows that the investment risk of utilities is very low. The average beta for electric, water, and gas utility companies are 0.73, 0.66, and 0.66, respectively. These are well below the *Value Line* average of 1.15. As such, the cost of equity for utilities is among the lowest of all industries in the U.S.

[6] *Available* at http://www.stern.nyu.edu/~adamodar.

Q. HOW CAN THE EXPECTED OR REQUIRED RATE OF RETURN ON COMMON EQUITY CAPITAL BE DETERMINED?

A. The costs of debt and preferred stock are normally based on historical or book values and can be determined with a great degree of accuracy. The cost of common equity capital, however, cannot be determined precisely and must instead be estimated from market data and informed judgment. This return to the stockholder should be commensurate with returns on investments in other enterprises having comparable risks.

According to valuation principles, the present value of an asset equals the discounted value of its expected future cash flows. Investors discount these expected cash flows at their required rate of return that, as noted above, reflects the time value of money and the perceived riskiness of the expected future cash flows. As such, the cost of common equity is the rate at which investors discount expected cash flows associated with common stock ownership.

Models have been developed to ascertain the cost of common equity capital for a firm. Each model, however, has been developed using restrictive economic assumptions. Consequently, judgment is required in selecting appropriate financial valuation models to estimate a firm's cost of common equity capital, in determining the data inputs for these models, and in interpreting the models' results. All of these decisions must take into consideration the firm involved as well as current conditions in the economy and the financial markets.

Q. HOW DO YOU PLAN TO ESTIMATE THE COST OF EQUITY CAPITAL FOR THE COMPANY?

A. I rely primarily on the discounted cash flow ("DCF") model to estimate the cost of equity capital. Given the investment valuation process and the relative stability of the utility business, I believe that the DCF model provides the best measure of equity cost rates for public utilities. It is my experience that this Commission has traditionally relied on the DCF method. I have also performed a capital asset pricing model ("CAPM") study, but I give these results less weight because I believe that risk premium studies, of which the CAPM is one form, provide a less reliable indication of equity cost rates for public utilities.

B. DCF ANALYSIS

Q. DESCRIBE THE THEORY BEHIND THE TRADITIONAL DCF MODEL.

A. According to the DCF model, the current stock price is equal to the discounted value of all future dividends that investors expect to receive from investment in the firm. As such, stockholders' returns ultimately result from current as well as future dividends. As owners of a corporation, common stockholders are entitled to a *pro rata* share of the firm's earnings. The DCF model presumes that earnings that are not paid out in the form of dividends are reinvested in the firm so as to provide for future growth in earnings and dividends. The rate at which investors discount future dividends, which

reflects the timing and riskiness of the expected cash flows, is interpreted as the market's expected or required return on the common stock. Therefore, this discount rate represents the cost of common equity. Algebraically, the DCF model can be expressed as:

$$P = \frac{D_1}{(1+k)^1} + \frac{D_2}{(1+k)^2} + \ldots \frac{D_n}{(1+k)^n}$$

where P is the current stock price, D_n is the dividend in year n, and k is the cost of common equity.

Q. IS THE DCF MODEL CONSISTENT WITH VALUATION TECHNIQUES EMPLOYED BY INVESTMENT FIRMS?

A. Yes. Virtually all investment firms use some form of the DCF model as a valuation technique. One common application for investment firms is called the three-stage DCF or dividend discount model ("DDM"). The stages in a three-stage DCF model are presented in Exhibit JRW-9. This model presumes that a company's dividend payout progresses initially through a growth stage, then proceeds through a transition stage, and finally assumes a steady-state stage. The dividend-payment stage of a firm depends on the profitability of its internal investments, which, in turn, is largely a function of the life cycle of the product or service.

1. Growth stage: Characterized by rapidly expanding sales, high profit margins, and abnormally high growth in earnings per share. Because of highly profitable expected investment opportunities, the payout ratio is low.

Competitors are attracted by the unusually high earnings, leading to a decline in the growth rate.

2. Transition stage: In later years increased competition reduces profit margins and earnings growth slows. With fewer new investment opportunities, the company begins to pay out a larger percentage of earnings.

3. Maturity (steady-state) stage: Eventually the company reaches a position where its new investment opportunities offer, on average, only slightly attractive ROEs. At that time its earnings growth rate, payout ratio, and ROE stabilize for the remainder of its life. The constant-growth DCF model is appropriate when a firm is in the maturity stage of the life cycle.

In using this model to estimate a firm's cost of equity capital, dividends are projected into the future using the different growth rates in the alternative stages, and then the equity cost rate is the discount rate that equates the present value of the future dividends to the current stock price.

Q. HOW DO YOU ESTIMATE STOCKHOLDERS' EXPECTED OR REQUIRED RATE OF RETURN USING THE DCF MODEL?

A. Under certain assumptions, including a constant and infinite expected growth rate, and constant dividend/earnings and price/earnings ratios, the DCF model can be simplified to the following:

$$P = \frac{D_1}{k - g}$$

where D_1 represents the expected dividend over the coming year and g is the expected growth rate of dividends. This is known as the constant-growth

version of the DCF model. To use the constant-growth DCF model to estimate a firm's cost of equity, one solves for k in the above expression to obtain the following:

$$k = \frac{D_1}{P} + g$$

Q. IN YOUR OPINION, IS THE CONSTANT-GROWTH DCF MODEL APPROPRIATE FOR PUBLIC UTILITIES?

A. Yes. The economics of the public utility business indicate that the industry is in the steady-state or constant-growth stage of a three-stage DCF. The economics include the relative stability of the utility business, the maturity of the demand for public utility services, and the regulated status of public utilities (especially the fact that their returns on investment are effectively set through the ratemaking process). The DCF valuation procedure for companies in this stage is the constant-growth DCF. In the constant-growth version of the DCF model, the current dividend payment and stock price are directly observable. However, the primary problem and controversy in applying the DCF model to estimate equity cost rates entails estimating investors' expected dividend growth rate.

Q. WHAT FACTORS SHOULD ONE CONSIDER WHEN APPLYING THE DCF METHODOLOGY?

A. One should be sensitive to several factors when using the DCF model to estimate a firm's cost of equity capital. In general, one must recognize the

assumptions under which the DCF model was developed in estimating its components (the dividend yield and expected growth rate). The dividend yield can be measured precisely at any point in time, but tends to vary somewhat over time. Estimation of expected growth is considerably more difficult. One must consider recent firm performance, in conjunction with current economic developments and other information available to investors, to accurately estimate investors' expectations.

Q. PLEASE DISCUSS EXHIBIT JRW-10.

A. My DCF analysis is provided in Exhibit JRW-10. The DCF summary is on page 1 of this Exhibit, and the supporting data and analysis for the dividend yield and expected growth rate are provided on the following pages of the Exhibit.

Q. WHAT DIVIDEND YIELDS ARE YOU EMPLOYING IN YOUR DCF ANALYSIS FOR THE PROXY GROUP?

A. The dividend yields on the common stock for the companies in the proxy group are provided on page 2 of Exhibit JRW-10 for the six-month period ending August 2012. For the DCF dividend yields for the Group, I use the average of the six month and August 2012 dividend yields. The table below shows these dividend yields.

Proxy Group	August 2012 Dividend Yield	6-Month Average Dividend Yield	DCF Dividend Yield
Electric Proxy Group	**4.0%**	**4.2%**	**4.10%**

Q. PLEASE DISCUSS THE APPROPRIATE ADJUSTMENT TO THE SPOT DIVIDEND YIELD.

A. According to the traditional DCF model, the dividend yield term relates to the dividend yield over the coming period. As indicated by Professor Myron Gordon, who is commonly associated with the development of the DCF model for popular use, this is obtained by: (1) multiplying the expected dividend over the coming quarter by 4 and (2) dividing this dividend by the current stock price to determine the appropriate dividend yield for a firm, that pays dividends on a quarterly basis.[7]

In applying the DCF model, some analysts adjust the current dividend for growth over the coming year as opposed to the coming quarter. This can be complicated because firms tend to announce changes in dividends at different times during the year. As such, the dividend yield computed based on presumed growth over the coming quarter as opposed to the coming year can be quite different. Consequently, it is common for analysts to adjust the dividend yield by some fraction of the long-term expected growth rate.

Q. GIVEN THIS DISCUSSION, WHAT ADJUSTMENT FACTOR WILL YOU USE FOR YOUR DIVIDEND YIELD?

A. I will adjust the dividend yield by one-half (1/2) the expected growth so as to reflect growth over the coming year. This is the approach employed by the

[7] *Petition for Modification of Prescribed Rate of Return*, Federal Communications Commission, Docket No. 79-05, Direct Testimony of Myron J. Gordon and Lawrence I. Gould at 62 (April 1980).

Federal Energy Regulatory Commission ("FERC").[8] The DCF equity cost rate ("K") is computed as:

$$K = [(D/P) * (1 + 0.5g)] + g$$

Q. PLEASE DISCUSS THE GROWTH RATE COMPONENT OF THE DCF MODEL.

A. There is much debate as to the proper methodology to employ in estimating the growth component of the DCF model. By definition, this component is investors' expectation of the long-term dividend growth rate. Presumably, investors use some combination of historical and/or projected growth rates for earnings and dividends per share and for internal or book value growth to assess long-term potential.

Q. WHAT GROWTH DATA HAVE YOU REVIEWED FOR THE PROXY GROUP?

A. I have analyzed a number of measures of growth for companies in the Electric Proxy Group. I reviewed *Value Line's* historical and projected growth rate estimates for earnings per share ("EPS"), dividends per share ("DPS"), and book value per share ("BVPS"). In addition, I utilized the average EPS growth rate forecasts of Wall Street analysts as provided by Yahoo, Reuters and Zack's. These services solicit five-year earnings growth rate projections from securities analysts and compile and publish the means and medians of

[8] Opinion No. 414-A, *Transcontinental Gas Pipe Line Corp.*, 84 FERC ¶61,084 (1998).

these forecasts. Finally, I also assessed prospective growth as measured by prospective earnings retention rates and earned returns on common equity.

Q. PLEASE DISCUSS HISTORICAL GROWTH IN EARNINGS AND DIVIDENDS AS WELL AS INTERNAL GROWTH.

A. Historical growth rates for EPS, DPS, and BVPS are readily available to investors and are presumably an important ingredient in forming expectations concerning future growth. However, one must use historical growth numbers as measures of investors' expectations with caution. In some cases, past growth may not reflect future growth potential. Also, employing a single growth rate number (for example, for five or ten years), is unlikely to accurately measure investors' expectations due to the sensitivity of a single growth rate figure to fluctuations in individual firm performance as well as overall economic fluctuations (i.e., business cycles). However, one must appraise the context in which the growth rate is being employed. According to the conventional DCF model, the expected return on a security is equal to the sum of the dividend yield and the expected long-term growth in dividends. Therefore, to best estimate the cost of common equity capital using the conventional DCF model, one must look to long-term growth rate expectations.

Internally generated growth is a function of the percentage of earnings retained within the firm (the earnings retention rate) and the rate of return earned on those earnings (the return on equity). The internal growth rate is computed as the retention rate times the return on equity. Internal growth is

significant in determining long-run earnings and therefore, dividends. Investors recognize the importance of internally generated growth and pay premiums for stocks of companies that retain earnings and earn high returns on internal investments.

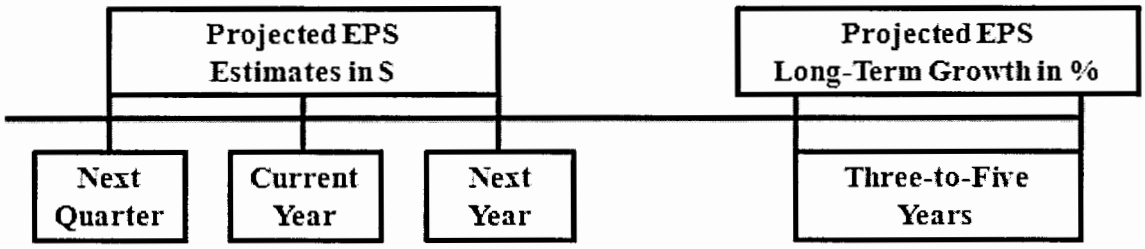
Q. PLEASE DISCUSS THE SERVICES THAT PROVDE ANALYSTS' EPS FORECASTS.

A. Analysts' EPS forecasts for companies are collected and published by a number of different investment information services, including Institutional Brokers Estimate System ("I/B/E/S"), Bloomberg, FactSet, Zack's, First Call and Reuters, among others. Thompson Reuters publishes analysts' EPS forecasts under different product names, including IBES, First Call, and Reuters. Bloomberg, FactSet, and Zack's publish their own set of analysts' EPS forecasts for companies. These services do not reveal: (1) the analysts who are solicited for forecasts; or (2) the actual analysts who actually provide the EPS forecasts that are used in the compilations published by the services. IBES, Bloomberg, FactSet, and First Call are fee-based services. These services usually provide detailed reports and other data in addition to analysts' EPS forecasts. Thompson Reuters and Zack's do provide limited EPS forecasts data free-of-charge on the internet. Yahoo finance (http://finance.yahoo.com) lists Thompson Reuters as the source of its summary EPS forecasts. The Reuters website (www.reuters.com) also publishes EPS forecasts from Thompson Reuters, but with more detail. Zack's (www.zacks.com) publishes its summary forecasts on its website. Zack's estimates are also available on other websites, such as

msn.money (http://money.msn.com).

Q. PLEASE PROVIDE AN EXAMPLE.

A. These services solicit the EPS forecasts of analysts of investment and financial service firms and publish the average EPS estimates for future quarterly and annual time periods as well as the average long-term EPS growth rate forecasts. As shown in the figure below, the projected EPS near-term estimates are usually provided for the next quarter, the current fiscal year, and the next fiscal year. The long-term projected EPS growth rate is for a three-to-five year time period.



Q. PLEASE PROVIDE AN EXAMPLE OF THESE EPS FORECASTS.

A. The following example provides the EPS forecasts compiled by Reuters for American Electric Power (stock symbol "AEP").

Consensus Earnings Estimates
American Electric Power (AEP)
www.reuters.com
June 1, 2012

	# of Estimates	Mean	High	Low
Earnings (per share)				
Quarter Ending Jun-12	9	0.69	0.81	0.64
Quarter Ending Sep-12	9	1.06	1.17	0.94
Year Ending Dec-12	21	3.06	3.18	2.97
Year Ending Dec-13	19	3.18	3.32	3.00
LT Growth Rate (%)	8	3.90	6.00	1.40

These figures can be interpreted as follows. The top line shows that nine analysts have provided EPS estimates for the quarter ending June 30, 2012. The mean, high and low estimates are $0.69, $0.81, and $0.64, respectively. The second line shows the quarterly EPS estimates for the quarter ending September 30, 2012. Lines three and four show the annual EPS estimates for the fiscal years ending December 2012 and December 2013. The quarterly and annual EPS forecasts in lines 1-4 are expressed in dollars and cents. As in the AEP case shown here, it is common for more analysts to provide estimates of annual EPS as opposed to quarterly EPS. The bottom line shows the projected long-term EPS growth rate which is expressed as a percentage. For AEP, eight analysts have provided long-term EPS growth rate forecasts, with mean, high and low growth rates of 3.90%, 6.00%, and 1.40%.

Q. WHICH OF THESE EPS FORECASTS IS USED IN DEVELOPING A DCF GROWTH RATE?

A. The DCF growth rate is the long-term projected growth rate in EPS, DPS, and BVPS. Therefore, in developing an equity cost rate using the DCF model, the projected long-term growth rate is the projection used in the DCF model.

Q. WHY ARE YOU NOT RELYING EXCLUSIVELY ON THE EPS FORECASTS OF WALL STREET ANALYSTS IN ARRIVING AT A DCF GROWTH RATE FOR THE PROXY GROUP?

A. There are several issues with using the EPS growth rate forecasts of Wall Street analysts as DCF growth rates. First, the appropriate growth rate in the DCF model is the dividend growth rate, not the earnings growth rate. Nonetheless, over the very long-term, dividend and earnings will have to grow at a similar growth rate. Therefore, consideration must be given to other indicators of growth, including prospective dividend growth, internal growth, as well as projected earnings growth. Second, a new study by Lacina, Lee, and Xu (2011) has shown that analysts' long-term earnings growth rate forecasts are not more accurate at forecasting future earnings than naïve random walk forecasts of future earnings.[9] Employing data over a twenty year period, these authors demonstrate that using the most recent year's EPS figure to forecast EPS in the next 3-5 years proved to be just as accurate as using the EPS estimates from analysts' long-term earnings growth rate

[9] M. Lacina, B. Lee and Z. Xu, *Advances in Business and Management Forecasting (Vol. 8),* Kenneth D. Lawrence, Ronald K. Klimberg (ed.), Emerald Group Publishing Limited, pp.77-101

forecasts. In the authors' opinion, these results indicate that analysts' long-term earnings growth rate forecasts should be used as inputs for valuation and cost of capital purposes with caution. Finally, and most significantly, it is well-known that the long-term EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased. This has been demonstrated in a number of academic studies over the years. This issue is discussed at length in Appendix B of this testimony. Hence, using these growth rates as a DCF growth rate will provide an overstated equity cost rate. On this issue, a study by Easton and Sommers (2007) found that optimism in analysts' growth rate forecasts leads to an upward bias in estimates of the cost of equity capital of almost 3.0 percentage points.[10]

Q. IS IT YOUR OPINION THAT STOCK PRICES REFLECT THE UPWARD BIAS IN THE EPS GROWTH RATE FORECASTS?

A. Yes, I do believe that investors are well aware of the bias in analysts' EPS growth rate forecasts, and therefore, stock prices reflect the upward bias.

Q. HOW DOES THAT AFFECT THE USE OF THESE FORECASTS IN A DCF EQUITY COST RATE STUDY?

A. According to the DCF model, the equity cost rate is a function of the dividend yield and expected growth rate. Since stock prices reflect the bias, it would affect the dividend yield. In addition, the DCF growth rate needs to be adjusted

[10] Easton, P., & Sommers, G. (2007). Effect of analysts' optimism on estimates of the expected rate of return implied by earnings forecasts. *Journal of Accounting Research*, 45(5), 983–1015.

downward from the projected EPS growth rate to reflect the upward bias.

Q. PLEASE DISCUSS THE HISTORICAL GROWTH OF THE COMPANIES IN THE ELECTRIC PROXY GROUP AS PROVIDED BY *VALUE LINE.*

A. Page 3 of Exhibit JRW-10 provides the 5- and 10- year historical growth rates for the companies in the group, as published in the *Value Line Investment Survey.* The historical growth measures in EPS, DPS, and BVPS for the Electric Proxy Group, as measured by the medians, range from 1.3% to 4.5%, with an average of 3.3%.

Q. PLEASE SUMMARIZE *VALUE LINE'S* PROJECTED GROWTH RATES FOR THE COMPANIES IN THE PROXY GROUP.

A. *Value Line's* projections of EPS, DPS and BVPS growth for the companies in the Electric Proxy Group are shown on page 4 of Exhibit JRW-10. As above, due to the presence of outliers, the medians are used in the analysis. For the group, the medians range from 3.5% to 5.3%, with an average of 4.3%.

Also provided on page 4 of Exhibit JRW-10 is prospective sustainable growth for the proxy group as measured by *Value Line*'s average projected retention rate and return on shareholders' equity. As noted above, sustainable growth is significant in a primary driver of long-run earnings growth. For the Electric Proxy Group, the median prospective sustainable growth rate is 4.0%.

Q. PLEASE ASSESS GROWTH FOR THE PROXY GROUP AS MEASURED BY ANALYSTS' FORECASTS OF EXPECTED LONG-TERM EPS GROWTH.

A. Yahoo, Zack's, and Reuters collect, summarize, and publish Wall Street analysts' long-term EPS growth rate forecasts for the companies in the proxy group. These forecasts are provided for the companies in the proxy group on page 5 of Exhibit JRW-10. The median of analysts' projected EPS growth rates for the Electric Proxy Group is 4.6%.[11]

Q. PLEASE SUMMARIZE YOUR ANALYSIS OF THE HISTORICAL AND PROSPECTIVE GROWTH OF THE PROXY GROUP.

A. Page 6 of Exhibit JRW-10 shows the summary DCF growth rate indicators for the proxy group. A growth rate of 3.3% is indicated by the historic growth rate measures. *Value Line*'s projected growth for EPS, DPS, BVPS is 4.3%, while prospective sustainable growth rate, measured using *Value Line* inputs, is 4.0%. Analysts projected EPS growth is 4.6% for the group. Given these figures, and giving greater weight to projected growth rate measures, an expected DCF growth rate in the range of 4.0% to 4.6% is reasonable for the Electric Proxy Group. I will use the midpoint of the range, 4.3%, as my DCF growth rate for the Electric Proxy Group.

[11] Since there is considerable overlap in analyst coverage between the three services, and not all of the companies have forecasts from the different services, I have averaged the expected five-year EPS growth rates from the three services for each company to arrive at an expected EPS growth rate by company.

Q. BASED ON THE ABOVE ANALYSIS, WHAT ARE YOUR INDICATED COMMON EQUITY COST RATES FROM THE DCF MODEL FOR THE GROUP?

A. My DCF-derived equity cost rate for the group is summarized on page 1 of Exhibit JRW-10.

$$\text{DCF Equity Cost Rate (k)} = \frac{D}{P} + g$$

	Dividend Yield	1 + ½ Growth Adjustment	DCF Growth Rate	Equity Cost Rate
Electric Proxy Group	**4.10%**	**1.02150**	**4.30%**	**8.50%**

C. Capital Asset Pricing Model Results

Q. PLEASE DISCUSS THE CAPITAL ASSET PRICING MODEL ("CAPM").

A. The CAPM is a risk premium approach to gauging a firm's cost of equity capital. According to the risk premium approach, the cost of equity is the sum of the interest rate on a risk-free bond (R_f) and a risk premium (RP), as in the following:

$$k = R_f + RP$$

The yield on long-term Treasury securities is normally used as R_f. Risk premiums are measured in different ways. The CAPM is a theory of the risk

and expected returns of common stocks. In the CAPM, two types of risk are associated with a stock: firm-specific risk or unsystematic risk, and market or systematic risk, which is measured by a firm's beta. The only risk that investors receive a return for bearing is systematic risk.

According to the CAPM, the expected return on a company's stock, which is also the equity cost rate (K), is equal to:

$$K = (R_f) + ß * [E(R_m) - (R_f)]$$

Where:

- K represents the estimated rate of return on the stock;
- $E(R_m)$ represents the expected return on the overall stock market. Frequently, the 'market' refers to the S&P 500;
- (R_f) represents the risk-free rate of interest;
- $[E(R_m) - (R_f)]$ represents the expected equity or market risk premium—the excess return that an investor expects to receive above the risk-free rate for investing in risky stocks; and
- *Beta*—(ß) is a measure of the systematic risk of an asset.

To estimate the required return or cost of equity using the CAPM requires three inputs: the risk-free rate of interest (R_f), the beta (ß), and the expected equity or market risk premium $[E(R_m) - (R_f)]$. R_f is the easiest of the inputs to measure – it is the yield on long-term Treasury bonds. ß, the measure of systematic risk, is a little more difficult to measure because there are different opinions about what adjustments, if any, should be made to historical betas due to their tendency to regress to 1.0 over time. And finally, an even more difficult input to measure is the expected equity or market risk premium $(E(R_m) - (R_f))$. I will discuss each of these inputs below.

Q. PLEASE DISCUSS EXHIBIT JRW-11.

A. Exhibit JRW-11 provides the summary results for my CAPM study. Page 1 shows the results, and the following pages contain the supporting data.

Q. PLEASE DISCUSS THE RISK-FREE INTEREST RATE.

A. The yield on long-term U.S. Treasury bonds has usually been viewed as the risk-free rate of interest in the CAPM. The yield on long-term U.S. Treasury bonds, in turn, has been considered to be the yield on U.S. Treasury bonds with 30-year maturities.

Q. WHAT RISK-FREE INTEREST RATE ARE YOU USING IN YOUR CAPM?

A. The yield on 30-year Treasury bonds has been in the 2.6% to 4.0% range over the last year. These rates are currently at the lower end of this range. Given the recent range of yields, and the prospect of higher rates in the future, I will use 4.0%, as the risk-free rate, or R_f, in my CAPM.

Q. WHAT BETAS ARE YOU EMPLOYING IN YOUR CAPM?

A. Beta (ß) is a measure of the systematic risk of a stock. The market, usually taken to be the S&P 500, has a beta of 1.0. The beta of a stock with the same price movement as the market also has a beta of 1.0. A stock whose price movement is greater than that of the market, such as a technology stock, is riskier than the market and has a beta greater than 1.0. A stock with below average price movement, such as that of a regulated public utility, is less risky

than the market and has a beta less than 1.0. Estimating a stock's beta involves running a linear regression of a stock's return on the market return.

As shown on page 3 of Exhibit JRW-11, the slope of the regression line is the stock's ß. A steeper line indicates the stock is more sensitive to the return on the overall market. This means that the stock has a higher ß and greater than average market risk. A less steep line indicates a lower ß and less market risk.

Several online investment information services, such as Yahoo and Reuters, provide estimates of stock betas. Usually these services report different betas for the same stock. The differences are usually due to: (1) the time period over which the ß is measured; and (2) any adjustments that are made to reflect the fact that betas tend to regress to 1.0 over time. In estimating an equity cost rate for the proxy group, I am using the betas for the companies as provided in the *Value Line Investment Survey*. As shown on page 3 of Exhibit JRW-11, the average beta for the companies in Electric Proxy Group is 0.73.

Q. PLEASE DISCUSS THE ALTERNATIVE VIEWS REGARDING THE EQUITY RISK PREMIUM.

A. The equity or market risk premium - $(E(R_m) - R_f)$ - is equal to the expected return on the stock market (e.g., the expected return on the S&P 500 ($E(R_m)$) minus the risk-free rate of interest (R_f). The equity premium is the difference in the expected total return between investing in equities and investing in "safe" fixed-income assets, such as long-term government bonds. However,

while the equity risk premium is easy to define conceptually, it is difficult to measure because it requires an estimate of the expected return on the market.

Q. PLEASE DISCUSS THE ALTERNATIVE APPROACHES TO ESTIMATING THE EQUITY RISK PREMIUM.

A. Page 4 of Exhibit JRW-11 highlights the primary approaches to, and issues in, estimating the expected equity risk premium. The traditional way to measure the equity risk premium was to use the difference between historical average stock and bond returns. In this case, historical stock and bond returns, also called ex post returns, were used as the measures of the market's expected return (known as the ex ante or forward-looking expected return). This type of historical evaluation of stock and bond returns is often called the "Ibbotson approach" after Professor Roger Ibbotson who popularized this method of using historical financial market returns as measures of expected returns. Most historical assessments of the equity risk premium suggest an equity risk premium of 5-7 percent above the rate on long-term U.S. Treasury bonds. However, this can be a problem because: (1) ex post returns are not the same as ex ante expectations, (2) market risk premiums can change over time, increasing when investors become more risk-averse and decreasing when investors become less risk-averse, and (3) market conditions can change such that ex post historical returns are poor estimates of ex ante expectations.

The use of historical returns as market expectations has been criticized in numerous academic studies.[12] The general theme of these studies is that the large equity risk premium discovered in historical stock and bond returns cannot be justified by the fundamental data. These studies, which fall under the category "Ex Ante Models and Market Data," compute ex ante expected returns using market data to arrive at an expected equity risk premium. These studies have also been called "Puzzle Research" after the famous study by Mehra and Prescott in which the authors first questioned the magnitude of historical equity risk premiums relative to fundamentals.[13]

In addition, there are a number of surveys of financial professionals regarding the equity risk premium. There have been several published surveys of academics on the equity risk premium. *CFO Magazine* conducts a quarterly survey of CFOs which includes questions regarding their views on the current expected returns on stocks and bonds. Usually over 500 CFOs participate in the survey.[14] Questions regarding expected stock and bond returns are also included in the Federal Reserve Bank of Philadelphia's annual survey of financial forecasters which is published as the *Survey of Professional Forecasters*.[15] This survey of professional economists has been published for

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[12] The problems with using ex post historical returns as measures of ex ante expectations will be discussed at length later in my testimony.

[13] R. Mehra and Edward Prescott, "The Equity Premium: A Puzzle," *Journal of Monetary Economics* (1985).

[14] *See,* www.cfosurvey.org.

[15] Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters,* (February 12, 2012). The *Survey of Professional Forecasters* was formerly conducted by the American Statistical Association ("ASA") and the National Bureau of Economic Research ("NBER") and was known as the ASA/NBER survey. The survey, which began in 1968, is conducted each quarter. The Federal Reserve Bank of Philadelphia, in cooperation with the NBER, assumed responsibility for the survey in June 1990.

almost 50 years. In addition, Pablo Fernandez conducts occasional surveys of financial analysts and companies regarding the equity risk premiums they use in their investment and financial decision-making.

Q. PLEASE PROVIDE A SUMMARY OF THE EQUITY RISK PREMIUM STUDIES.

A. Derrig and Orr (2003), Fernandez (2007), and Song (2007) have completed the most comprehensive reviews to date of the research on the equity risk premium.[16] Derrig and Orr's study evaluated the various approaches to estimating equity risk premiums as well as the issues with the alternative approaches and summarized the findings of the published research on the equity risk premium. Fernandez examined four alternative measures of the equity risk premium – historical, expected, required, and implied. He also reviewed the major studies of the equity risk premium and presented the summary equity risk premium results. Song provides an annotated bibliography and highlights the alternative approaches to estimating the equity risk summary.

Page 5 of Exhibit JRW-11 provides a summary of the results of the primary risk premium studies reviewed by Derrig and Orr, Fernandez, and Song, as well as other more recent studies of the equity risk premium. In developing page 5 of Exhibit JRW-11, I have categorized the studies as discussed on page 4 of Exhibit JRW-11. I have also included the results of the

[16] *See* Richard Derrig and Elisha Orr, "Equity Risk Premium: Expectations Great and Small," Working Paper (version 3.0), Automobile Insurers Bureau of Massachusetts, (August 28, 2003); Pablo Fernandez, "Equity Premium: Historical, Expected, Required, and Implied," IESE Business School Working Paper, (2007); Zhiyi Song, "The Equity Risk Premium: An Annotated Bibliography," CFA Institute, (2007).

"Building Blocks" approach to estimating the equity risk premium, including a study I performed, which is presented in Appendix C. The Building Blocks approach is a hybrid approach employing elements of both historic and *ex ante* models.

Q. PLEASE DISCUSS PAGE 5 OF EXHIBIT JRW-11.

A. Page 5 of JRW-11 provides a summary of the results of the equity risk premium studies that I have reviewed. These include the results of: (1) the various studies of the historical risk premium, (2) *ex ante* equity risk premium studies, (3) equity risk premium surveys of CFOs, Financial Forecasters, analysts, companies and academics, and (4) the Building Block approaches to the equity risk premium. There are results reported for over thirty studies, and the median equity risk premium is 5.06%.

Q. PLEASE HIGHLIGHT THE RESULTS OF THE MORE RECENT RISK PREMIUM STUDIES AND SURVEYS.

A. The studies cited on page 5 of Exhibit JRW-11 include all equity risk premium studies and surveys I could identify that were published over the past decade and that provided an equity risk premium estimate. Most of these studies were published prior to the financial crisis of the past two years. In addition, some of these studies were published in the early 2000s at the market peak. It should be noted that many of these studies (as indicated) used data over long periods of time (as long as fifty years of data) and so they were not estimating an equity risk premium as of a point in time (e.g., the year 2001).

To assess the effect of the earlier studies on the equity risk premium, on page 6 of Exhibit JRW-11, I have reconstructed page 5 of Exhibit JRW-11, but I have eliminated all studies dated before January 2, 2010. The median for this subset of studies is 4.96%.

Q. GIVEN THESE RESULTS, WHAT EQUITY RISK PREMIUM ARE YOU USING IN YOUR CAPM?

A. Given these results, I will use an equity risk premium of 5.0%.

Q. IS YOUR *EX ANTE* EQUITY RISK PREMIUM CONSISTENT WITH THE EQUITY RISK PREMIUMS USED BY CFOS?

A. Yes. In the June 2012 CFO survey conducted by *CFO Magazine* and Duke University, the expected 10-year equity risk premium was 4.5%.

Q. IS YOUR *EX ANTE* EQUITY RISK PREMIUM CONSISTENT WITH THE EQUITY RISK PREMIUMS OF PROFESSIONAL FORECASTERS?

A. Yes. The financial forecasters in the previously referenced Federal Reserve Bank of Philadelphia survey project both stock and bond returns. As shown on Panels D and E of page 2 of Exhibit JRW-C1, the mean long-term expected stock and bond returns were 6.80% and 4.0%, respectively. This provides an *ex ante* equity risk premium of 2.80%.

Q. IS YOUR *EX ANTE* EQUITY RISK PREMIUM CONSISTENT WITH THE EQUITY RISK PREMIUMS OF FINANCIAL ANALYSTS AND COMPANIES?

A. Yes. Pablo Fernandez recently published the results of a 2012 survey of financial analysts and companies. This survey included over 7,000 responses. The median equity risk premiums employed by U.S. analysts and companies were 5.0% and 5.5%, respectively

Q. IS YOUR EX ANTE EQUITY RISK PREMIUM CONSISTENT WITH THE EQUITY RISK PREMIUMS USED BY THE LEADING CONSULTING FIRMS?

A. Yes. McKinsey & Co. is widely recognized as the leading management consulting firm in the world. It published a study entitled "The Real Cost of Equity" in which the McKinsey authors developed an *ex ante* equity risk premium for the U.S. In reference to the decline in the equity risk premium, as well as what is the appropriate equity risk premium to employ for corporate valuation purposes, the McKinsey authors concluded the following:

> We attribute this decline not to equities becoming less risky (the inflation-adjusted cost of equity has not changed) but to investors demanding higher returns in real terms on government bonds after the inflation shocks of the late 1970s and early 1980s. We believe that using an equity risk premium of 3.5 to 4 percent in the current environment better reflects the true long-term opportunity cost of equity capital and hence will yield more accurate valuations for companies.[17]

[17] Marc H. Goedhart, *et al.*, "The Real Cost of Equity," *McKinsey on Finance* (Autumn 2002), p. 15.

Q. WHAT EQUITY COST RATE IS INDICATED BY YOUR CAPM ANALYSIS?

A. The results of my CAPM study for the proxy group are provided below:

$$K = (R_f) + ß * [E(R_m) - (R_f)]$$

	Risk-Free Rate	Beta	Equity Risk Premium	Equity Cost Rate
Electric Proxy Group	**4.00%**	**0.73**	**5.00%**	**7.7%**

These results are summarized on page 1 of Exhibit JRW-11.

VI. EQUITY COST RATE SUMMARY

Q. PLEASE SUMMARIZE YOUR EQUITY COST RATE STUDY.

A. The results for my DCF and CAPM analyses for the proxy group are indicated below:

	DCF	CAPM
Electric Proxy Group	**8.5%**	**7.7%**

Q. GIVEN THESE RESULTS, WHAT IS YOUR ESTIMATED EQUITY COST RATE FOR THE GROUP?

A. Given these results, I conclude that the appropriate equity cost rate for Electric Proxy Group is in the 7.7% to 8.5% range. However, since I give greater weight to the DCF model, I am using the upper end of the range as the equity cost rate. Therefore, I conclude that the appropriate equity cost rate for the Electric Proxy Group is 8.50%.

Q. PLEASE INDICATE WHY AN 8.50% RETURN IS APPROPRIATE FOR KCP&L AT THIS TIME.

A. There are several reasons why an 8.50% return on equity is appropriate for the Company in this case. First, as shown on in Exhibit JRW-8, the electric utility industry is *Value Line*'s one of the lowest risk industries in the U.S. as measured by beta. As such, the cost of equity capital for this industry is amongst the lowest in the U.S. according to the CAPM. Second, as shown in Exhibit JRW-3, capital costs for utilities, as indicated by long-term bond yields, have declined to below their pre-financial crisis levels. Third, while the financial markets have recovered significantly in the past year, the economy has not. The economic times are still viewed as being difficult, with nearly ten percent unemployment. As a result, interest rates and inflation are at relatively low levels, and hence the expected returns on financial assets – from savings accounts to Treasury bills to common stocks – are low. Therefore, in my opinion, an 8.50% return is appropriate for a regulated electric utility.

VII. CRITIQUE OF KCP&L'S RATE OF RETURN TESTIMONY

Q. PLEASE SUMMARIZE KCP&L'S OVERALL RATE OF RETURN RECOMMENDATION.

A. KCP&L's return on equity recommendation is provided by Dr. Samuel C. Hadaway. KCP&L's rate of return recommendation is summarized on page 1 of Exhibit JRW-12. KCP&L's recommended capital structure is the

consolidated capital structure for KCP&L's parent, Great Plains Energy, and includes 47.57% long-term debt, 0.62% preferred stock, and 51.81% common equity. Dr. Hadaway recommends long-term debt, preferred stock, and common equity cost rates of 6.63%, 4.29%, and 10.40%. The overall cost of capital recommendation is 8.57%.

Q. WHAT ISSUES DO YOU HAVE WITH THE COMPANY'S COST OF CAPITAL POSITION?

A. The primary areas of disagreement in measuring KCP&L cost of capital are: (1) the DCF dividend yield adjustment; (2) the use of the projected growth rates of Wall Street analysts and *Value Line* to measure expected DCF growth; (3) employing an expected GDP growth rate as a long-term measure of earnings and dividend growth for an electric utility; and (4) the base interest rate and the measurement and magnitude of the equity risk premium used in RP approach.

Q. BEFORE REVIEWING YOUR ISSUES WITH DR. HADAWAYS EQUITY COST RATE ANALYSIS, PLEASE DISCUSS THE PROXY GROUPS USED IN THIS PROCEEDING.

A. Dr. Hadaway's has used a group of twenty-two electric and gas companies. I have used a group of thirty-four electric utilities. The primary difference in the development of the proxy groups are that Dr. Hadaway requires that 70% of revenues are from regulated electric and gas operations, while I require that at least 50% of revenues are from regulated electric operations. In addition, Dr.

Hadaway excludes distribution-only electric utilities. Nonetheless, I do not believe that the appropriate proxy group is a significant factor in explaining the differences in the equity cost rate recommendations.

A. DCF Approach

Q. PLEASE SUMMARIZE DR. HADAWAY'S DCF APPROACHES AND ESTIMATES.

A. On pages 28-32 of his testimony and in Schedules SCH-4 – SCH-6, Dr. Hadaway develops an equity cost rate by applying three versions of the DCF model to his group of electric utility companies. In the first version, which I will call DCFMOD1, he uses a constant-growth DCF model in which growth rate is the average of the long-term EPS growth rate forecasts from *Value Line,* Zack's, and Thompson. In the second version, which I will call DCFMOD2, he uses a constant-growth DCF model in which growth rate is simply an expected GDP growth rate of 5.7%. In the third version, which I will call DCFMOD3, he uses a two-stage DCF model in which the growth rate in stage 1 (years1-5) is projected dividend growth as reported by *Value Line* and the growth in stage 2 (years 6-150) is an expected GDP growth rate of 5.7%. Dr. Hadaway's DCF results are summarized below.

DCF Equity Cost Rate
Twenty-Two *Value Line* Electric Utility Companies

	DCF Model with Analysts Estimates as Growth Rate	Constant-Growth DCF Model with GDP as Growth Rate	Two-Stage DCF Model with GDP as Second-Stage Growth Rate
Adjusted Dividend Yield	4.45%	4.40%	4.50%
Growth	5.65%	5.70%	5.50%
DCF Result	10.10%	10.10%	10.0%

Q. WHAT ISSUES DO YOU HAVE WITH DR. HADAWAY'S DCF APPROACH AND EQUITY COST RATE ESTIMATES?

A. I have three issues with Dr. Hadaway's his DCF approach and estimates. These include: (1) the dividend yield adjustment; (2) the exclusive use of the overly-optimistic and upwardly biased long-term EPS growth rates of Wall Street analysts and *Value Line* in DCFMOD1; and (3) the use of an expected GDP growth rate of 5.70% in as a DCF growth rate in DCFMOD2 and DCFMOD3.

Q. PLEASE DISCUSS DR. HADAWAY'S ADJUSTMENT TO THE DIVIDEND YIELD IN THE DCF MODEL.

A. Dr. Hadaway has adjusted his dividend yield by a full-year of growth. However, as indicated previously, the appropriate dividend yield adjustment for growth in the DCF model is the expected dividend for the next quarter multiplied by four. The problem in applying this adjustment methodology is that companies change their quarterly dividend payments at different times during the year. This means that it is not appropriate to make a full-year adjustment to the dividend yield. Therefore, I have adjusted the dividend yield for the Electric Proxy Group by 1/2 the expected growth rate. This is consistent with the approach used by FERC.

Q. PLEASE DISCUSS DR. HADAWAY'S SOLE RELIANCE ON THE PROJECTED EPS GROWTH RATES OF WALL STREET ANALYSTS AND *VALUE LINE* IN DCFMOD1.

A. In DCFMOD1, Dr. Hadaway has employed the expected EPS growth rates of

Wall Street analysts and *Value Line* as the DCF growth rate. In my opinion, this is erroneous. It seems highly unlikely that investors today would rely excessively on the EPS growth rate forecasts of Wall Street analysts and ignore other growth rate measure in arriving at expected growth. As I previously indicated, the appropriate growth rate in the DCF model is the dividend growth rate, not the earnings growth rate. Hence, consideration must be given to other indicators of growth, including historic growth prospective dividend growth, internal growth, as well as projected earnings growth. In addition, a recent study by Lacina, Lee, and Xu (2011) has shown that analysts' long-term earnings growth rate forecasts are not more accurate at forecasting future earnings than naïve random walk forecasts of future earnings.[18] As such, the weight given to analysts' projected EPS growth rate should be limited. And finally, and most significantly, it is well-known that the long-term EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased.

Q. WHAT IS THE IMPACT OF EMPLOYING THE LONG-TERM EPS GROWTH RATE OF WALL STREET ANALYST AS A DCF GROWTH RATE?

A. Using the long-term EPS growth rate forecasts of Wall Street analysts as a DCF growth rate produces an overstated equity cost rate. A recent study by Easton and Sommers (2007) found that optimism in analysts' growth rate

[18] M. Lacina, B. Lee and Z. Xu, *Advances in Business and Management Forecasting (Vol. 8),* Kenneth D. Lawrence, Ronald K. Klimberg (ed.), Emerald Group Publishing Limited, pp.77-101

forecasts leads to an upward bias in estimates of the cost of equity capital of almost 3.0 percentage points.[19] These issues are addressed in more detail in Appendix B.

Q. PLEASE DISCUSS DR. HADAWAY'S USE OF AN EXTIMATED GDP GROWTH RATE OF 5.7% IN HIS DCFMOD2 AND DCFMOD3 APPROACHES.

A. Dr. Hadaway has used his estimate of long-term GDP growth of 5.70% as a growth rate in his DCFMOD2 and DCFMOD3. This is erroneous for two reasons which are discussed below.

First, and foremost, other than a reference to a textbook and a study on page 38 of his testimony, he has provided no theoretical or empirical support that long-term GDP growth is a reasonable proxy for the expected growth rate of his twenty-four electric utility companies. Furthermore, even the references he cites make no mention that GDP growth is an appropriate proxy for growth in earnings and dividends in the electric utility industry. As such, Dr. Hadaway has provided no empirical evidence to suggest that investors would expect that GDP growth is an appropriate measure of long-term growth for electric utilities. Historic measures of growth for earnings and dividends for my Electric proxy Group of thirty-four electric utilities, as shown on page 3 of Exhibit JRW-10 suggest growth that is well below Dr. Hadaway' 5.70% GDP growth rate.

[19] Easton, P., & Sommers, G. (2007). Effect of analysts' optimism on estimates of the expected rate of return implied by earnings forecasts. *Journal of Accounting Research*, 45(5), 983–1015.

The second error is Dr. Hadaway's long-term GDP growth rate estimate of 5.7%. As developed in Schedule SCH-4 and highlighted in Panel A of Exhibit JRW-14, the 5.7% figure is the average of the mean returns for different time periods computed by Dr. Hadaway over the past 60 years. The numbers in Panel A of Exhibit JRW-14 suggest that GDP growth in more recent decades has slowed and that a figure in the range of 4.0% to 5.0% is more appropriate today for the U.S. economy.

Q. WHAT LONG-TERM GDP GROWTH RATE IS BEING FORECASTED BY ECONOMISTS AND GOVERNMENT AGENCIES?

A. There are several forecasts of annual GDP growth that are available from economists and government agencies. These are listed in Panel B of Exhibit JRW-14. The mean 10-year nominal GDP growth forecast (as of February 2012) by economists in the recent *Survey of Professional Forecasters* is 4.9%. The Energy Information Administration (EIA), in its projections used in preparing *Annual Energy Outlook,* forecasts long-term GDP growth of 4.8% for the period 2009-2035. The Congressional Budget Office, in its forecasts for the period 2012 to 2022, projects a nominal GDP growth rate of 4.8%. These forecasts are much more in line with the slower GDP growth in recent decades as shown in Panel A of Exhibit JRW-14.

Q. WHAT IS THE IMPACT OF THESE LOWER GDP FIGURES ON DR. HADAWAY'S DCF RESULTS?

A. Using these forecasts, which are much consistent with the slower GDP growth in recent decades, would decrease Dr. Hadaway's DCFMOD2 and DCFMOD3 equity cost estimates by about 100 basis points to approximately 9.0%.

Q. PLEASE SUMMARIZE YOUR ASSESSMENT OF DR. HADAWAY'S DCF APPROACH.

A. Dr. Hadaway's DCF results are overstated. He has relied exclusively on the overly-optimistic and upwardly biased long-term EPS growth rates of Wall Street analysts and *Value Line*, to the exclusion of all other growth rate indicators, in DCFMOD1; and (2) he has arbitrarily employed an inflated expected GDP growth rate of 5.70% in as a DCF growth rate for electric utilities in DCFMOD2 and DCFMOD3.

B. Risk Premium Approach

Q. PLEASE REVIEW DR. HADAWAY'S RISK PREMIUM ANALYSES.

A. Dr. Hadaway's risk premium analysis involves an evaluation of the authorized return on equity (ROE) for electric utilities to long-term utility bond rate over the 1980-2011 time period. He adds the risk premium to (1) the projected BBB utility bond yield and (2) the current BBB utility bond yield and arrives at a

range of 9.95% to 10.42% as an equity cost rate for KCP&L. His results are summarized below.

Risk Premium Equity Cost Rate

	Authorized ROEs and Projected Utility Yields	Authorized ROEs and Current Utility Yields
BBB Bond Yield	**5.86%**	**5.05%**
Equity Risk Premium	**4.56%**	**4.90%**
Risk Premium Equity Cost Rate	**10.42%**	**9.95%**

Q. PLEASE DISCUSS THE BASE YIELDS OF DR. HADAWAY'S RISK PREMIUM ANALYSES.

A. The projected base yield of 5.86% is the sum of the forecasted 30-year Treasury yield of 3.85% plus 201 basis points to account for the yield differential between 30-year Treasuries and BBB-rated public utility bonds. The current BBB bond rate of 5.05% is the three month average ending February of 2012 from Moody's Investors Service.

Q. PLEASE EVALUATE THE BASE YIELD OF DR. HADAWAY'S RISK PREMIUM ANALYSES.

A. The projected and current base yields of 5.86% and 5.05% are both excessive for several reasons. First, both yields need to be adjusted downwards as interest rates have declined significantly since February of this year. For example, Dr. Hadaway used 3.85% as the 30-year Treasury yield when he prepared his testimony. The current 30-year Treasury yield is 2.70%. Second, Dr. Hadaway's risk premium analysis is based on presumed yields on BBB rated

utility bonds. Since these bonds are not obligations of the U.S. Treasury, they are subject to credit risk, and this risk is reflected in the bond ratings.. However, employing the yield on long-term risky bonds overstates the required return on equity. This is because the base yield is subject to credit risk and, as a result, its yield-to-maturity includes a premium for default risk and therefore is above its expected return.

Q. PLEASE ALSO ADDRESS DR. HADAWAY'S EXAMINATION OF AUTHORIZED RETURNS ON EQUITY.

A. Dr. Hadaway develops his risk premium provides his evaluation of utility bond yields and authorized ROEs for electric companies in Schedule SCH-6. The risk premium study is erroneous for several reasons. First, Dr. Hadaway's approach involves circular reasoning since the results of other electric rate cases are employed to derive a risk premium in this proceeding. If such an approach is used in this and other jurisdictions, then no one will be testing to evaluate whether the ROE recommendation is above or below investors' required rate of return. Second, Dr. Hadaway has not performed any analysis to examine whether the annual allowed ROEs are above, equal to, or below investors' required return. As discussed above, if a firm's return on equity is above (below) the return that investor's require, the market price of its stock will be above (below) the book value of the stock. Since Dr. Hadaway has not evaluated the market-to-book ratios for electric utilities involved in the annual rate cases, he cannot indicate whether these allowed ROEs are above or below investors' requirements. As shown on page 3 of Exhibit JRW-7, the market-to-

book ratios for the companies in the Electric Proxy Group have been in excess of 1.0 for a decade. This suggests that that the authorized ROEs are above equity cost rates over this time period. Therefore, the risk premium produced from the study is overstated as a measure of investor return requirements and produces an inflated equity cost rate.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

VERIFICATION

COMMONWEALTH OF PENNSYLVANIA)

COUNTY OF CENTRE) ss:

Dr. J. Randall Woolridge, being duly sworn upon his oath, deposes and states that he is a consultant for the Citizens' Utility Ratepayer Board, that he has read the above and foregoing document, and, upon information and belief, states that the matters therein appearing are true and correct.

Dr. J. Randall Woolridge

SUBSCRIBED AND SWORN to before me this 20 day of August, 2012.

Mary L. Hart
Notary Public

My Commission expires:

NOTARIAL SEAL
MARY L HART
Notary Public
STATE COLLEGE BORO., CENTRE COUNTY
My Commission Expires Aug 25, 2013

APPENDIX A

Educational Background, Research, and Related Business Experience

Appendix A
Educational Background, Research, and Related Business Experience
J. Randall Woolridge

J. Randall Woolridge is a Professor of Finance and the Goldman, Sachs & Co. and Frank P. Smeal Endowed Faculty Fellow in Business Administration in the College of Business Administration of the Pennsylvania State University in University Park, PA. In addition, Professor Woolridge is Director of the Smeal College Trading Room and President and CEO of the Nittany Lion Fund, LLC.

Professor Woolridge received a Bachelor of Arts degree in Economics from the University of North Carolina, a Master of Business Administration degree from the Pennsylvania State University, and a Doctor of Philosophy degree in Business Administration (major area-finance, minor area-statistics) from the University of Iowa. He has taught Finance courses including corporation finance, commercial and investment banking, and investments at the undergraduate, graduate, and executive MBA levels.

Professor Woolridge's research has centered on empirical issues in corporation finance and financial markets. He has published over 35 articles in the best academic and professional journals in the field, including the *Journal of Finance,* the *Journal of Financial Economics,* and the *Harvard Business Review.* His research has been cited extensively in the business press. His work has been featured in the *New York Times*, *Forbes, Fortune, The Economist*, *Barron's*, *Wall Street Journal*, *Business Week*, *Investors' Business Daily*, *USA Today*, and other publications. In addition, Dr. Woolridge has appeared as a guest to discuss the implications of his research on CNN's *Money Line*, CNBC's *Morning Call* and *Business Today*, and Bloomberg's *Morning Call.*

Professor Woolridge's stock valuation book, *The StreetSmart Guide to Valuing a Stock* (McGraw-Hill, 2003), was released in its second edition. He has also co-authored *Spinoffs and Equity Carve-Outs: Achieving Faster Growth and Better Performance* (Financial Executives Research Foundation, 1999) as well as a textbook entitled *Basic Principles of Finance* (Kendall Hunt, 2011). Dr. Woolridge is a founder and a managing director of www.valuepro.net - a stock valuation website.

Professor Woolridge has also consulted with corporations, financial institutions, and government agencies. In addition, he has directed and participated in university- and company-sponsored professional development programs for executives in 25 countries in North and South America, Europe, Asia, and Africa.

Over the past twenty-five years Dr. Woolridge has prepared testimony and/or provided consultation services in regulatory rate cases in the rate of return area in following states: Alaska, Arizona, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Indiana, Kansas, Kentucky, Massachusetts, Missouri, Nebraska, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, Texas, Utah, Vermont, Washington, and Washington, D.C. He has also prepared testimony which was submitted to the Federal Energy Regulatory Commission.

APPENDIX B

The Research on Analysts' Long-Term EPS Growth Rate Forecasts

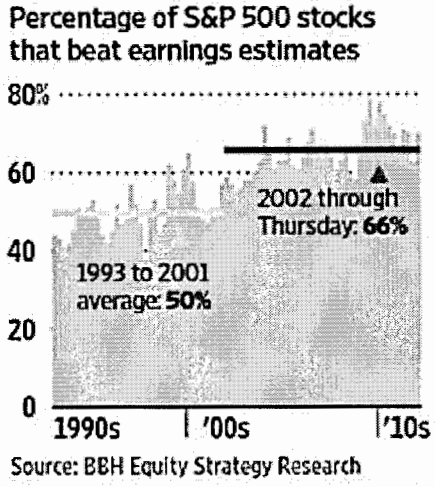
Appendix B
The Research on Analysts' Long-Term EPS Growth Rate Forecasts

Most of the attention given the accuracy of analysts' EPS forecasts comes from media coverage of company's quarterly earnings announcements. When companies announced earnings beat Wall Street's EPS estimates ("a positive surprise"), their stock prices usually go up. When a company's EPS figure misses or is below Wall Street's forecasted EPS ("A negative surprise"), their stock price usually declines, sometimes precipitously so. Wall Street's estimate is the consensus forecast for quarterly EPS made by analysts who follow the stock as of the announcement date. And so Wall Street's estimate is the consensus EPS made in the days leading up to the EPS announcement.

In recent years, it has become more common for companies to beat Wall Street's quarterly EPS estimate. A recent *Wall Street Journal* article summarized the results for the first quarter of 2012: "While this "positive surprise ratio" of 70% is above the 20 year average of 58% and also higher than last quarter's tally, it is just middling since the current bull market began in 2009. In the past decade, the ratio only dipped below 60% during the financial crisis. Look before 2002, though, and 70% would have been literally off the chart. From 1993 through 2001, about half of companies had positive surprises.[1] Figure 1 below provides the record for companies beating Wall Street's EPS estimate on a quarterly basis over the past twenty years.

[1] Spencer Jakab, "Earnings Surprises Lose Punch," *Wall Street Journal* (May 7, 2012), p. C1.

Figure 1
Percent of Companies Beating Wall Street's Quarterly Estimates



A. RESEARCH ON THE ACCURACY OF ANALYSTS' NEAR-TERM EPS ESTIMATES

There is a long history of studies that evaluate how well analysts forecast near-term EPS estimates and long-term EPS growth rates. Most of these studies have evaluated the accuracy of earnings forecasts for the current quarter or year. Many of the early studies indicated that analysts make overly optimistic EPS earnings forecasts for quarter-to-quarter EPS (Stickel (1990); Brown (1997); Chopra (1998)).[2] More recent studies have shown that the optimistic bias tends to be larger for longer-term forecasts and smaller for forecasts made nearer to the EPS announcement date. Richardson, Teoh, and Wysocki (2004) report that the upward bias in earnings growth rates declines in the quarters leading up to the

[2] S. Stickel, "Predicting Individual Analyst Earnings Forecasts," *Journal of Accounting Research*, Vol. 28, 409-417, 1990. Brown, L.D., "Analyst Forecasting Errors: Additional Evidence," *Financial Analysts Journal*, Vol. 53, 81-88, 1997, and Chopra, V.K., "Why So Much Error in Analysts' Earnings Forecasts?" *Financial Analysts Journal*, Vol. 54, 30-37 (1998).

earnings announcement date.[3] They call this result the "walk-down to beatable analyst forecasts." They hypothesize that the walk-down might be driven by the "earning-guidance game," in which analysts give optimistic forecasts at the start of a fiscal year, then revise their estimates downwards until the firm can beat the forecasts at the earnings announcement date.

However, two regulatory developments over the past decade have potentially impacted analysts' EPS growth rate estimates. First, Regulation Fair Disclosure ("Reg FD") was introduced by the Securities and Exchange Commission ("SEC") in October of 2000. Reg FD prohibits private communication between analysts and management so as to level the information playing field in the markets. With Reg FD, analysts are less dependent on gaining access to management to obtain information and therefore, are not as likely to make optimistic forecasts to gain access to management. Second, the conflict of interest within investment firms with investment banking and analyst operations was addressed in the Global Analysts Research Settlements ("GARS"). GARS, as agreed upon on April 23, 2003, between the SEC, NASD, NYSE and ten of the largest U.S. investment firms, includes a number of regulations that were introduced to prevent investment bankers from pressuring analysts to provide favorable projections.

[3] S. Richardson, S. Teoh, and P. Wysocki, "The Walk-Down to Beatable Analyst Forecasts: The Role of Equity Issuance and Insider Trading Incentives," *Contemporary Accounting Research*, pp. 885–924, (2004).

The previously cited *Wall Street Journal* article acknowledged the impact of the new regulatory rules in explaining the recent results:[4] " What changed? One potential reason is the tightening of rules governing analyst contacts with management. Analysts now must rely on publicly available guidance or, gasp, figure things out by themselves. That puts companies, with an incentive to set the bar low so that earnings are received positively, in the driver's seat. While that makes managers look good short-term, there is no lasting benefit for buy-and-hold investors."

These comments on the impact of regulatory developments on the accuracy of short-term EPS estimates was addressed in a study by Hovakimian and Saenyasiri (2010).[5] The authors investigate analysts' forecasts of annual earnings for the following time periods: (1) the time prior to Reg FD (1984-2000); (2) the time period after Reg FD but prior to GARS (2000-2002);[6] and (3) the time period after GARS (2002-2006). For the pre-Reg FD period, Hovakimian and Saenyasiri find that analysts generally make overly optimistic forecasts of annual earnings. The forecast bias is higher for early forecasts and steadily declines in the months leading up to the earnings announcement. The results are similar for the time period after Reg FD but prior to GARS. However, the bias is lower in the later forecasts (the forecasts made just prior to the announcement).

[4] Spencer Jakab, "Earnings Surprises Lose Punch," *Wall Street Journal* (May 7, 2012), p. C1.

[5] A. Hovakimian and E. Saenyasiri, "Conflicts of Interest and Analysts Behavior: Evidence from Recent Changes in Regulation," *Financial Analysts* Journal (July-August, 2010), pp. 96-107.

[6] Whereas the GARS settlement was signed in 2003, rules addressing analysts' conflict of interest by separating the research and investment banking activities of analysts went into effect with the passage of NYSE and NASD rules in July of 2002.

For the time period after GARS, the average forecasts declined significantly, but a positive bias remains. In sum, Hovakimian and Saenyasiri find that: (1) analysts make overly optimistic short-term forecasts of annual earnings; (2) Reg FD had no effect on this bias; and (3) GARS did result in a significant reduction in the bias, but analysts' short-term forecasts of annual earnings still have a small positive bias.

B. RESEARCH ON THE ACCURACY OF ANALYSTS' LONG-TERM EPS GROWTH RATE FORECASTS

There have been very few studies regarding the accuracy of analysts' long-term EPS growth rate forecasts. Cragg and Malkiel (1968) studied analysts' long-term EPS growth rate forecasts made in 1962 and 1963 by five brokerage houses for 185 firms. They concluded find that analysts' long-term earnings growth forecasts are on the whole no more accurate than naive forecasts based on past earnings growth. Harris (1999) evaluated the accuracy of analysts' long-term EPS forecasts over the 1982-1997 time-period using a sample of 7,002 firm-year observations.[7] He concluded the following: (1) the accuracy of analysts' long-term EPS forecasts is very low; (2) a superior long-run method to forecast long-term EPS growth is to assume that all companies will have an earnings growth rate equal to historic GDP growth; and (3) analysts' long-term EPS forecasts are significantly upwardly biased, with forecasted earnings growth exceeding actual earnings growth by seven percent per annum. Subsequent studies by DeChow, P., A. Hutton, and R. Sloan (2000), and Chan, Karceski, and Lakonishok (2003) also

[7] R.D. Harris, "The Accuracy, Bias, and Efficiency of Analysts' Long Run Earnings Growth Forecasts," *Journal of Business Finance & Accounting*, pp. 725-55 (June/July 1999).

conclude that analysts' long-term EPS growth rate forecasts are overly optimistic and upwardly biased.[8] The Chan, Karceski, and Lakonishok (2003) study evaluated the accuracy of analysts' long-term EPS growth rate forecasts over the 1982-98 time period. They reported a median IBES growth forecast of 14.5%, versus a median realized five-year growth rate of about 9%. They also found the IBES forecasts of EPS beyond two years are not accurate. They concluded the following: "Over long horizons, however, there is little forecastability in earnings, and analysts' estimates tend to be overly optimistic."

Lacina, Lee, and Xu (2011) evaluated the accuracy of analysts' long-term earnings growth rate forecasts over the 1983-2003 time period.[9] The study included 27,081 firm year observations, and compare the accuracy of analysts' EPS forecasts to those produced by two naïve forecasting models: (1) a random walk model ("RW") where the long-term EPS (t+5) is simply equal to last year's EPS figure (t-1); (2) a RW model with drift ("RWGDP"), where the drift or growth rate is GDP growth for period t-1. In this model, long-term EPS (t+5) is simply equal to last year's EPS figure (t-1) times (1 + GDP growth (t-1)). The authors conclude that that using the RW model to forecast EPS in the next 3-5 years proved to be just as accurate as using the EPS estimates from analysts' long-term earnings growth rate forecasts. They find that the RWGDP model performs

[8] P. DeChow, A. Hutton, and R. Sloan, "The Relation Between Analysts' Forecasts of Long-Term Earnings Growth and Stock Price Performance Following Equity Offerings," *Contemporary Accounting Research (2000)* and K. Chan, L., Karceski, J., & Lakonishok, J., "The Level and Persistence of Growth Rates," *Journal of Finance* pp. 643−684, (2003).

[9] M. Lacina, B. Lee and Z. Xu, *Advances in Business and Management Forecasting (Vol. 8),* Kenneth D. Lawrence, Ronald K. Klimberg (ed.), Emerald Group Publishing Limited, pp.77-101

better than the pure RW model, and that both perform as well as analysts; in forecasting long-term EPS. They also discover an optimistic bias in analysts long-term EPS forecasts. In the authors' opinion, these results indicate that that analysts' long-term earnings growth rate forecasts should be used with caution as inputs for valuation and cost of capital purposes.

C. ISSUES REGARDING THE SUPERIORITY OF ANALYSTS' EPS FORECASTS OVER HISTORIC AND TIME-SERIES ESTIMATES OF LONG-TERM EPS GROWTH

As highlighted by the classic study by Brown and Rozeff (1976) and the other studies that followed, analysts' forecasts of quarterly earnings estimates are superior to the estimates derived from historic and time-series analyses.[10] This is often attributed to the information and timing advantage that analysts have over historic and time-series analyses. These studies relate to analysts' forecasts of quarterly and/or annual forecasts, and not to long-term EPS growth rate forecasts. The previously cited studies by Harris (1999), Chan, Karceski, and Lakonishok (2003), and Lacina, Lee, and Xu (2011) all conclude that analysts' forecasts are no better than time-series models and historic growth rates in forecasting long-term EPS. Harris (1999) and Lacina, Lee, and Xu (2011) concluded that historic GDP growth was superior to analysts' forecasts for long run earnings growth. These overall results are similar to the findings by Bradshaw, Drake, Myers, and Myers (2009) that discovered that time-series estimates of annual earnings are

[10] L. Brown and M. Rozeff, "The Superiority of Analyst Forecasts as Measures of Expectations: Evidence from Earnings," *The Journal of Finance* 33 (1): pp. 1-16 (1976).

more accurate over longer horizons than analysts' forecasts of earnings. As the authors state, "These findings suggest an incomplete and misleading generalization about the superiority of analysts' forecasts over even simple time-series-based earnings forecasts."[11]

D. STUDY OF THE ACCURACY OF ANALYSTS' LONG-TERM EARNINGS GROWTH RATES

To evaluate the accuracy of analysts' EPS forecasts, I have compared actual 3-5 year EPS growth rates with forecasted EPS growth rates on a quarterly basis over the past 20 years for all companies covered by the I/B/E/S data base. In Panel A of page 1 of Exhibit JRW-B1, I show the average analysts' forecasted 3-5 year EPS growth rate with the average actual 3-5 year EPS growth rate for the past twenty years.

The following example shows how the results can be interpreted. For the 3-5 year period prior to the first quarter of 1999, analysts had projected an EPS growth rate of 15.13%, but companies only generated an average annual EPS growth rate over the 3-5 years of 9.37%. This projected EPS growth rate figure represented the average projected growth rate for over 1,510 companies, with an average of 4.88 analysts' forecasts per company. For the entire twenty-year period of the study, for each quarter there were on average 5.6 analysts' EPS projections for 1,281 companies. Overall, my findings indicate that forecast errors for long-term estimates are predominantly positive, which indicates an upward bias in growth rate estimates. The mean and median forecast errors over the

[11] M. Bradshaw, M. Drake, J. Myers, and L. Myers, "A Re-examination of Analysts' Superiority Over Time-Series Forecasts," Workings paper, (1999), http://ssrn.com/abstract=1528987.

observation period are 143.06% and 75.08%, respectively. The forecasting errors are negative for only eleven of the eighty quarterly time periods: five consecutive quarters starting at the end of 1995 and six consecutive quarters starting in 2006. As shown in Panel A of page 1 of Exhibit JRW-B1, the quarters with negative forecast errors were for the 3-5 year periods following earnings declines associated with the 1991 and 2001 economic recessions in the U.S. Thus, there is evidence of a persistent upward bias in long-term EPS growth forecasts.

The average 3-5 year EPS growth rate projections for all companies provided in the I/B/E/S database on a quarterly basis from 1988 to 2008 are shown in Panel B of page 1 of Exhibit JRW-B1. In this graph, no comparison to actual EPS growth rates is made, and hence, there is no follow-up period. Therefore, since companies are not lost from the sample due to a lack of follow-up EPS data, these results are for a larger sample of firms. Analysts' forecasts for EPS growth were higher for this larger sample of firms, with a more pronounced run-up and then decline around the stock market peak in 2000. The average projected growth rate hovered in the 14.5%-17.5% range until 1995 and then increased dramatically over the next five years to 23.3% in the fourth quarter of the year 2000. Forecasted EPS growth has since declined to the 15.0% range.

The upward bias in analysts' long-term EPS growth rate forecasts appears to be known in the markets. Page 2 of Exhibit JRW-B1 provides an article published in the *Wall Street Journal*, dated March 21, 2008, that discusses the upward bias in

analysts' EPS growth rate forecasts.[12] In addition, a recent *Bloomberg Businessweek* article also highlighted the upward bias in analysts' EPS forecasts, citing a study by McKinsey Associates. This article is provided on pages 3 and 4 of Exhibit JRW-12. The article concludes with the following:[13]

The bottom line: *Despite reforms intended to improve Wall Street research, stock analysts seem to be promoting an overly rosy view of profit prospects.*

E. REGULATORY DEVELOPMENTS AND THE ACCURACY OF ANALYSTS' LONG-TERM EARNINGS GROWTH RATES FORECASTS

Whereas Hovakimian and Saenyasiri evaluated the impact of regulations on analysts' short-term EPS estimates, there is little research on the impact of Reg FD and GARS on the long-term EPS forecasts of Wall Street analysts. My study with Patrick Cusatis did find that the long-term EPS growth rate forecasts of analysts did not decline significantly and have continued to be overly-optimistic in the post Reg FD and GARS period.[14] Analysts' long-term EPS growth rate forecasts before and after GARS are about two times the level of historic GDP growth. These observations are supported by a *Wall Street Journal* article entitled "Analysts Still Coming Up Rosy – Over-Optimism on Growth Rates is Rampant –

[12] Andrew Edwards, "Study Suggests Bias in Analysts' Rosy Forecasts," *Wall Street Journal* (March 21, 2008), p. C6.
[13] Roben Farzad, 'For Analysts, Things are Always Looking Up,' *Bloomberg Businessweek* (June 14, 2010), pp. 39-40.
[14] P. Cusatis and J. R. Woolridge, "The Accuracy of Analysts' Long-Term EPS Growth Rate Forecasts," Working Paper, (July 2008).

and the Estimates Help to Buoy the Market's Valuation." The following quote provides insight into the continuing bias in analysts' forecasts:

> Hope springs eternal, says Mark Donovan, who manages Boston Partners Large Cap Value Fund. "You would have thought that, given what happened in the last three years, people would have given up the ghost. But in large measure they have not.
>
> These overly optimistic growth estimates also show that, even with all the regulatory focus on too-bullish analysts allegedly influenced by their firms' investment-banking relationships, a lot of things haven't changed. Research remains rosy and many believe it always will.[15]

These observations are echoed in a recent McKinsey study entitled "Equity Analysts: Still too Bullish" which involved a study of the accuracy on analysts long-term EPS growth rate forecasts. The authors conclude that after a decade of stricter regulation, analysts' long-term earnings forecasts continue to be excessively optimistic. They made the following observation (emphasis added): [16]

> Alas, a recently completed update of our work only reinforces this view—despite a series of rules and regulations, dating to the last decade, that were intended to improve the quality of the analysts' long-term earnings forecasts, restore investor confidence in them, and prevent conflicts of interest. For executives, many of whom go to great lengths to satisfy Wall Street's expectations in their financial reporting and long-term strategic moves, this is a cautionary tale worth remembering. This pattern confirms our earlier findings that analysts typically lag behind events in revising their forecasts to reflect new economic conditions. When economic growth accelerates, the size of the forecast error declines; when economic

[15] Ken Brown, "Analysts Still Coming Up Rosy – Over-Optimism on Growth Rates is Rampant – and the Estimates Help to Buoy the Market's Valuation," *Wall Street Journal*, p. C1, (January 27, 2003).
[16] Marc H. Goedhart, Rishi Raj, and Abhishek Saxena, "Equity Analysts, Still Too Bullish," *McKinsey on Finance*, pp. 14-17, (Spring 2010).

growth slows, it increases. So as economic growth cycles up and down, the actual earnings S&P 500 companies report occasionally coincide with the analysts' forecasts, as they did, for example, in 1988, from 1994 to 1997, and from 2003 to 2006. Moreover, analysts have been persistently overoptimistic for the past 25 years, with estimates ranging from 10 to 12 percent a year, compared with actual earnings growth of 6 percent. Over this time frame, actual earnings growth surpassed forecasts in only two instances, both during the earnings recovery following a recession. On average, analysts' forecasts have been almost 100 percent too high.

F. ANALYSTS' LONG-TERM EPS GROWTH RATE FORECASTS FOR UTILITY COMPANIES

To evaluate whether analysts' EPS growth rate forecasts are upwardly biased for utility companies, I conducted a study similar to the one described above using a group of electric utility and gas distribution companies. The results are shown on Panels A and B of page 5 of Exhibit JRW-B1. The projected EPS growth rates for electric utilities have been in the 4% to 6% range over the last twenty years, with the recent figures approximately 5%. As shown, the achieved EPS growth rates have been volatile and on average, below the projected growth rates. Over the entire period, the average quarterly 3-5 year projected and actual EPS growth rates are 4.59% and 2.90%, respectively.

For gas distribution companies, the projected EPS growth rates have declined from about 6% in the 1990s to about 5% in the 2000s. The achieved EPS growth rates have been volatile. Over the entire period, the average quarterly 3-5 year projected and actual EPS growth rates are 5.15% and 4.53%, respectively.

Overall, the upward bias in EPS growth rate projections for electric utility and gas distribution companies is not as pronounced as it is for all companies. Nonetheless, the results here are consistent with the results for companies in general -- analysts' projected EPS growth rate forecasts are upwardly-biased for utility companies.

G. *VALUE LINE*'S LONG-TERM EPS GROWTH RATE FORECASTS

To assess *Value Line*'s earnings growth rate forecasts, I used the *Value Line Investment Analyzer*. The results are summarized in Panel A of Page 6 of Exhibit JRW-B1. I initially filtered the database and found that *Value Line* has 3-5 year EPS growth rate forecasts for 2,333 firms. The average projected EPS growth rate was 14.70%. This is high given that the average historical EPS growth rate in the U.S. is about 7%. A major factor seems to be that *Value Line* only predicts negative EPS growth for 43 companies. This is less than two percent of the companies covered by *Value Line*. Given the ups and downs of corporate earnings, this is unreasonable.

To put this figure in perspective, I screened the *Value Line* companies to see what percent of companies covered by *Value Line* had experienced negative EPS growth rates over the past five years. *Value Line* reported a five-year historic growth rate for 2,219 companies. The results are shown in Panel B of page 6 of Exhibit JRW-B1 and indicate that the average 5-year historic growth rate was

3.90%, and *Value Line* reported negative historic growth for 844 firms which represents 38.0% of these companies.

These results indicate that *Value Line*'s EPS forecasts are excessive and unrealistic. It appears that the analysts at *Value Line* are similar to their Wall Street brethren in that they are reluctant to forecast negative earnings growth.

APPENDIX C

Building Blocks Equity Risk Premium

Appendix C
Building Blocks Equity Risk Premium

A. THE BUILDING BLOCKS MODEL

Ibbotson and Chen (2003) evaluate the ex post historical mean stock and bond returns in what is called the Building Blocks approach.[1] They use 75 years of data and relate the compounded historical returns to the different fundamental variables employed by different researchers in building ex ante expected equity risk premiums. Among the variables included were inflation, real EPS and DPS growth, ROE and book value growth, and price-earnings ("P/E") ratios. By relating the fundamental factors to the ex post historical returns, the methodology bridges the gap between the ex post and ex ante equity risk premiums. Ilmanen (2003) illustrates this approach using the geometric returns and five fundamental variables – inflation ("CPI"), dividend yield ("D/P"), real earnings growth ("RG"), repricing gains ("PEGAIN") and return interaction/reinvestment ("INT").[2] This is shown on page 1 of Exhibit JRW-C1. The first column breaks the 1926-2000 geometric mean stock return of 10.7% into the different return components demanded by investors: the historical U.S. Treasury bond return (5.2%), the excess equity return (5.2%), and a small interaction term (0.3%). This 10.7% annual stock return over the 1926-2000 period can then be broken down into the following fundamental elements: inflation (3.1%), dividend yield (4.3%), real earnings growth (1.8%), repricing gains (1.3%) associated with higher P/E ratios, and a small interaction term (0.2%).

[1] Roger Ibbotson and Peng Chen, "Long Run Returns: Participating in the Real Economy," *Financial Analysts Journal*, (January 2003).

[2] Antti Ilmanen, Expected Returns on Stocks and Bonds," *Journal of Portfolio Management*, (Winter 2003), p. 11.

The third column in the graph on page 2 of Exhibit JRW-C1 shows current inputs to estimate an ex ante expected market return. These inputs include the following:

CPI – To assess expected inflation, I have employed expectations of the short-term and long-term inflation rate. Long term inflation forecasts are available in the Federal Reserve Bank of Philadelphia's publication entitled *Survey of Professional Forecasters*. While this survey is published quarterly, only the first quarter survey includes long-term forecasts of gross domestic product ("GDP") growth, inflation, and market returns. In the first quarter 2011 survey, published on February 10, 2012, the median long-term (10-year) expected inflation rate as measured by the CPI was 2.30% (see Panel A of page 3 of Exhibit JRW-C1).

The University of Michigan's Survey Research Center surveys consumers on their short-term (one-year) inflation expectations on a monthly basis. As shown on page 4 of Exhibit JRW-C1, the current short-term expected inflation rate is 3.1%.

As a measure of expected inflation, I will use the average of the long-term (2.3%) and short-term (3.1%) inflation rate measures, or 2.7%.

D/P – As shown on page 5 of Exhibit JRW-C1, the dividend yield on the S&P 500 has fluctuated from 1.0% to almost 3.5% over the past decade. Ibbotson and Chen (2003) report that the long-term average dividend yield of the S&P 500 is 4.3%. As of August 7, 2012, the indicated S&P 500 dividend yield was 2.2%. I will use this figure in my ex ante risk premium analysis.

RG – To measure expected real growth in earnings, I use the historical real earnings growth rate S&P 500 and the expected real GDP growth rate. The S&P 500 was created in 1960 and includes 500 companies which come from ten different sectors of the economy. On page 11 of Exhibit JRW-11, real EPS growth is computed using the CPI as a measure of inflation. The real growth figure over 1960-2010 period for the S&P 500 is 2.8%.

The second input for expected real earnings growth is expected real GDP growth. The rationale is that over the long-term, corporate profits have averaged 5.50% of U.S. GDP.[3] Expected GDP growth, according to the Federal Reserve Bank of Philadelphia's *Survey of Professional Forecasters,* is 2.6% (see Panel B of page 8 of Exhibit JRW-11).

Given these results, I will use 2.70%, for real earnings growth.

PEGAIN – PEGAIN is the repricing gain associated with an increase in the P/E ratio. It accounted for 1.3% of the 10.7% annual stock return in the 1926-2000 period. In estimating an ex ante expected stock market return, one issue is whether investors expect P/E ratios to increase from their current levels. The P/E ratios for the S&P 500 over the past 25 years are shown on page 5 of Exhibit JRW-C1. The run-up and eventual peak in P/Es in the year 2000 is very evident in the chart. The average P/E declined until late 2006, and then increased to higher high levels, primarily due to the decline in EPS as a result of the financial crisis and the recession. As of 6/30/12, the average P/E for the S&P 500 was 15.16, which is in line with the historic average. Since the current figure is near

[3]Marc. H. Goedhart, et al, "The Real Cost of Equity," *McKinsey on Finance* (Autumn 2002), p.14.

the historic average, a PEGAIN would not be appropriate in estimating an ex ante expected stock market return.

Expected Return form Building Blocks Approach - The current expected market return is represented by the last column on the right in the graph entitled "Decomposing Equity Market Returns: The Building Blocks Methodology" set forth on page 1 of Exhibit JRW-C1. As shown, the expected market return of 7.60% is composed of 2.70% expected inflation, 2.20% dividend yield, and 2.70% real earnings growth rate.

This expected return of 7.60% is consistent other expected return forecasts.

1. In the first quarter 2012 *Survey of Financial Forecasters*, published on February 10, 2012 by the Federal Reserve Bank of Philadelphia, the median long-term expected return on the S&P 500 was 6.8% (see Panel D of page 3 of Exhibit JRW-C1).
2. John Graham and Campbell Harvey of Duke University conduct a quarterly survey of corporate CFOs. The survey is a joint project of Duke University and *CFO Magazine.* In the June 2012 survey, the mean expected return on the S&P 500 over the next ten years was 6.3%.[4]

B. THE BUILDING BLOCKS EQUITY RISK PREMIUM

[4] The survey results are available at www.cfosurvey.org.

The current 30-year U.S. Treasury yield is 2.70%. This ex ante equity risk premium is simply the expected market return from the Building Blocks methodology minus this risk-free rate:

Ex Ante Equity Risk Premium = 7.60% - 2.70% = 4.90%

This is only one estimate of the equity risk premium. As shown on page 6 of Exhibit JRW-11, I am also using the results of other studies and surveys to determine an equity risk premium for my CAPM.

EXHIBITS

JRW-1 thru JRW-14

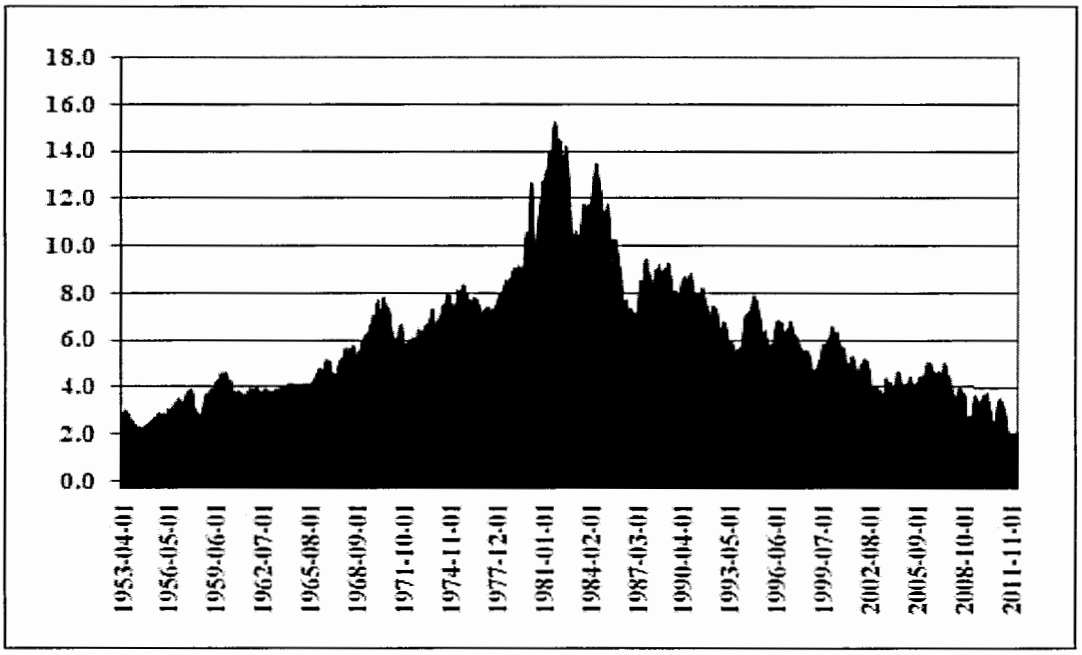
Exhibit JRW-1
Kansas City Power & Light Company
Cost of Capital

Weighted Average Cost of Capital

Capital Source	Capitalization Ratio	Cost Rate	Weighted Cost Rate
Long-Term Debt	47.57%	6.63%	3.15%
Preferred Stock	0.61%	4.29%	0.03%
Common Equity	51.82%	8.50%	4.40%
Total Capital	100.0%		7.58%

Exhibit JRW-2

Panel A
Ten-Year Treasury Yields
1953-Present



Source: http://research.stlouisfed.org/fred2/data/GS10.txt

Panel B
Long-Term Moody's Baa Yields Minus Ten-Year Treasury Yields
2000-Present

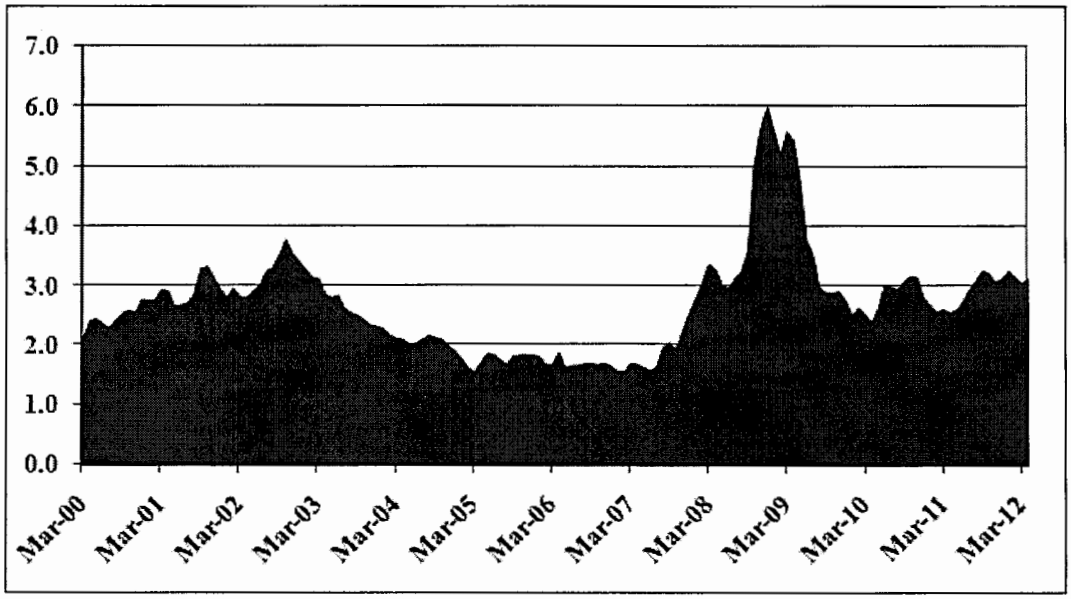
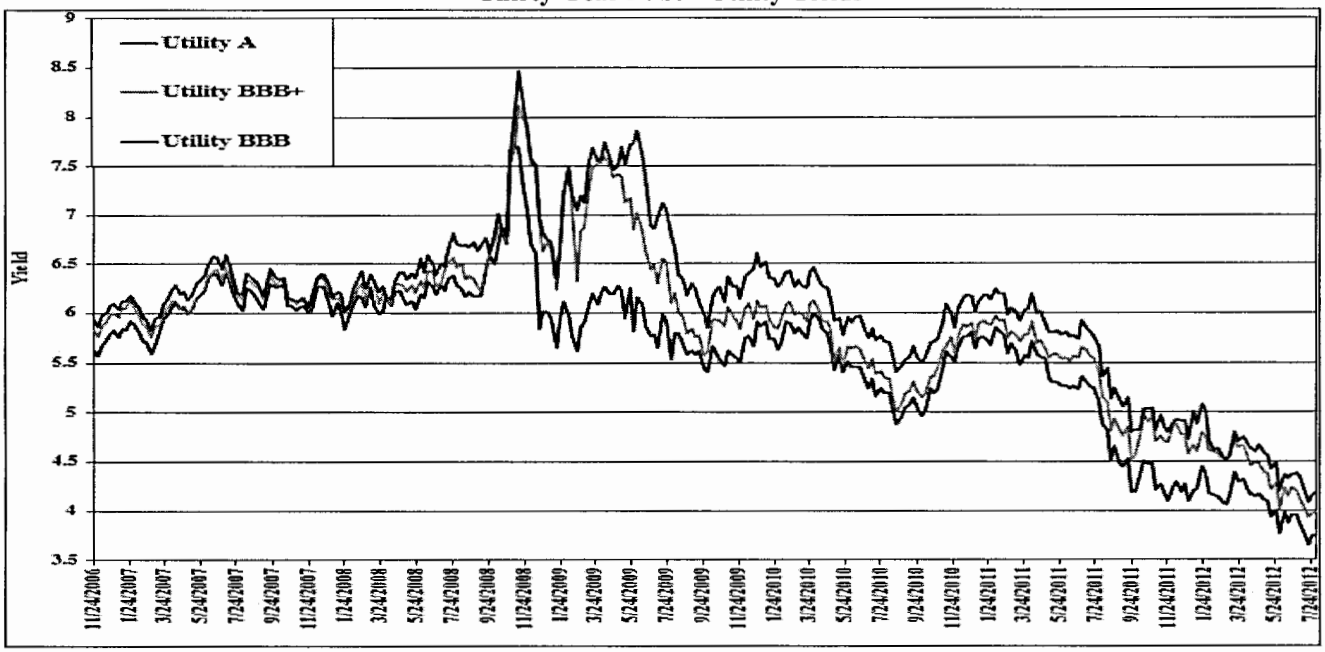


Exhibit JRW-2
Panel A
Thirty-Year Public Utility Yields



Panel B
Thirty-Year Public Utility Yield Spread Over Treasuries

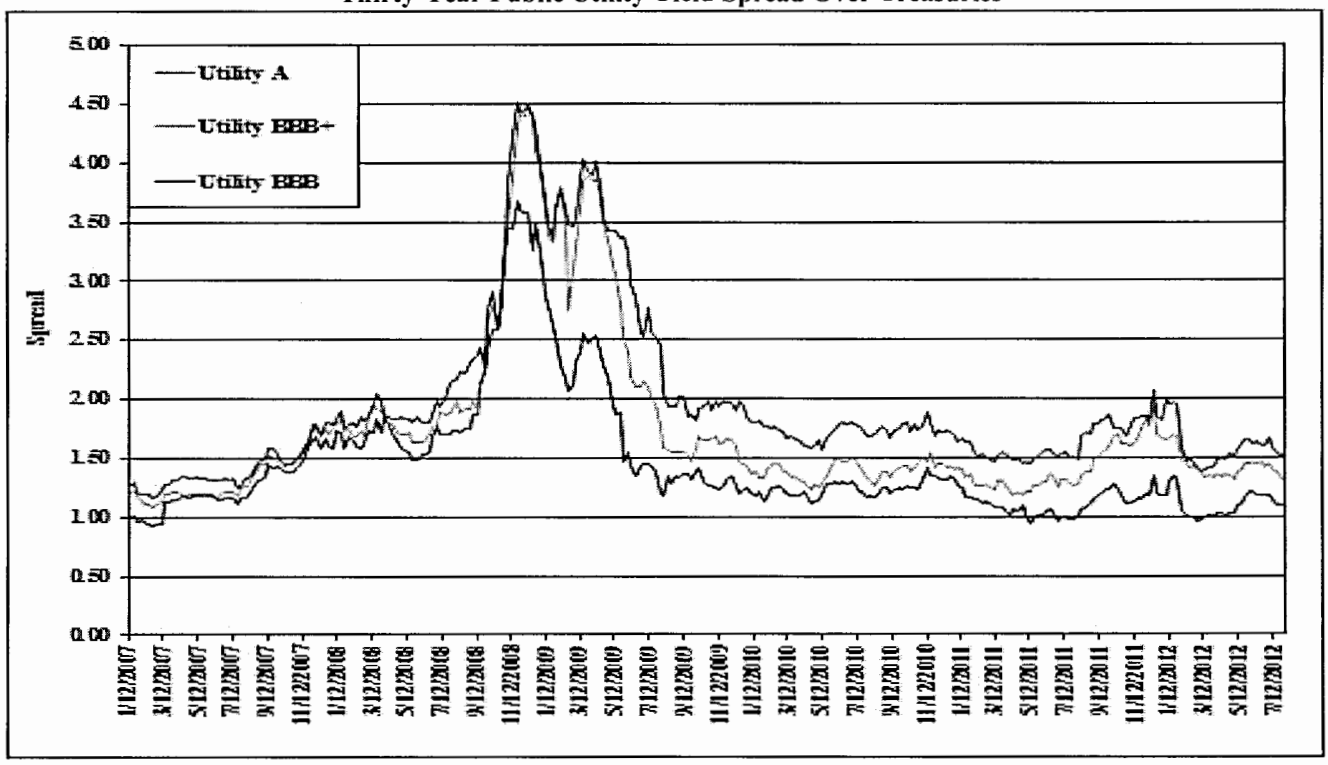


Exhibit JRW-3

Dow Jones Utility Index vs. S&P 500 - 2011-12

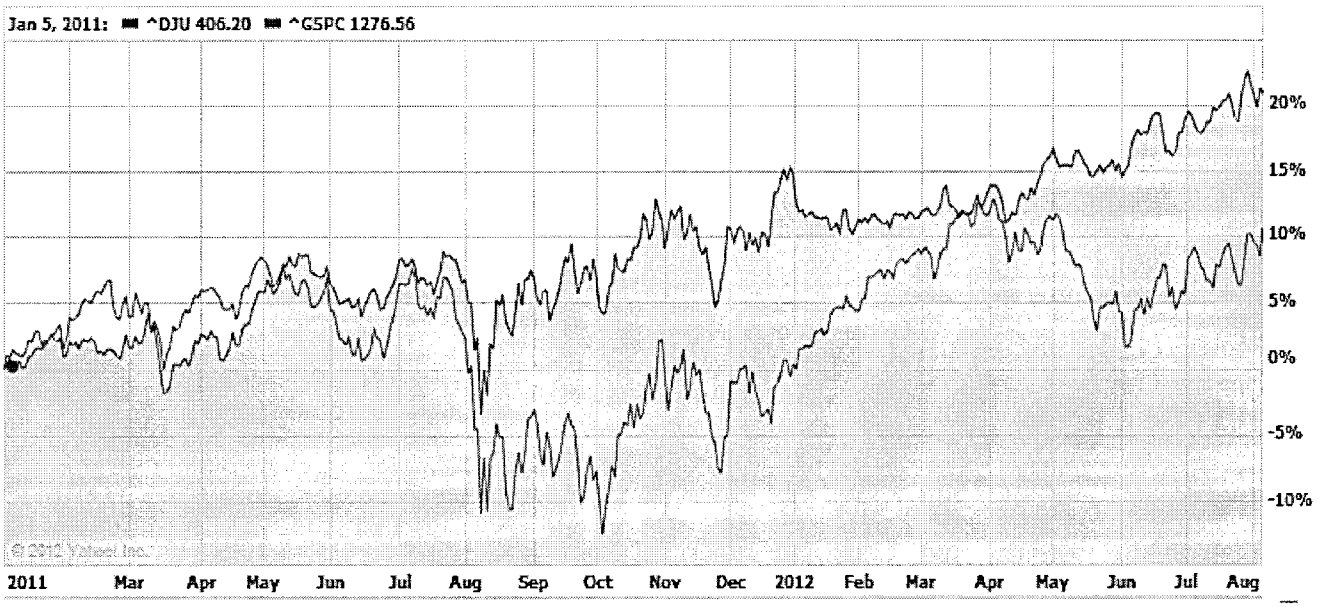


Exhibit JRW-4
Kansas City Power & Light Company
Summary Financial Statistics

Electric Proxy Group

Company	Operating Revenue ($mil)	Percent Elec Revenue	Percent Gas Revenue	Net Plant ($mil)	Market Cap ($mil)	S&P Bond Rating	Moody's Bond Rating	Pre-Tax Interest Coverage	Primary Service Area	Common Equity Ratio	Return on Equity	Market to Book Ratio
ALLETE, Inc. (NYSE-ALE)	926.0	90	0	2,002.8	1,468.4	A-	Baa1	3.9	MN, WI	56.3	7.7	1.32
Alliant Energy Corporation (NYSE-LNT)	3,486.0	74	12	7,081.3	4,825.2	A-/BBB+	A2/A3	3.7	WS,IA,IL,MN	51.2	13.8	1.54
Ameren Corporation (NYSE-AEE)	7,285.0	87	13	17,535.0	7,746.2	BBB-	Baa2	3.1	IL,MO	51	2.1	1.04
American Electric Power Co. (NYSE-AEP)	15,011.0	95	0	37,432.0	18,127.6	BBB	Baa2	3.3	10 States	44.7	14.2	1.22
Avista Corporation (NYSE-AVA)	1,595.5	61	34	2,872.9	1,494.5	A-	Baa1	3.3	WA,OR,ID	44	12.8	1.24
Black Hills Corporation (NYSE-BKH)	1,234.7	50	41	2,819.1	1,393.6	BBB+	A3	1.4	CO,SD,WY,MT	44.8	8.8	1.14
Cleco Corporation (NYSE-CNL)	1,086.4	94	0	2,906.0	2,408.5	BBB	Baa2	3.5	LA	51.9	NM	1.68
CMS Energy Corporation (NYSE-CMS)	6,191.0	62	34	10,755.0	5,837.8	BBB+	A3	2.5	MI	29.6	9.4	1.91
Consolidated Edison, Inc. (NYSE-ED)	12,666.0	70	13	25,255.0	17,184.4	A-	A3/Baa1	3.8	NY,PA	51	11.3	1.49
Dominion Resources, Inc. (NYSE-D)	13,814.0	51	12	30,288.0	29,857.6	A	Baa1/Baa2	3.7	VA,NC	36.7	7.6	2.51
DTE Energy Company (NYSE-DTE)	8,715.0	59	16	13,924.0	9,365.7	A	A2	3.3	MI	47.1	5.4	1.32
Edison International (NYSE-EIX)	12,834.0	84	0	32,680.0	14,276.6	BBB+	A1	2.7	CA	38.2	8.7	1.43
Entergy Corporation (NYSE-ETR)	11,071.5	79	1	25,586.8	11,177.8	A-/BBB+	Baa1	4.5	AK,LA,MS,TX	41.1	8.2	1.24
Exelon Corporation (NYSE-EXC)	18,559.0	51	4	42,105.0	30,956.1	A-	A2/A3	6.7	PA,MD,IL	53.5	4.5	1.41
FirstEnergy Corporation (ASE-FE)	16,760.0	63	0	30,566.0	19,990.0	BBB	Baa1	2.4	OH,PANJ,WV,MD,NY	42.1	35.9	1.50
Great Plains Energy Incorporated (NYSE-GXP)	2,304.8	100	0	7,119.2	2,705.6	BBB	Baa2	2.2	MO,KS	41.8	8.2	0.93
Hawaiian Electric Industries, Inc. (NYSE-HE)	3,346.6	92	0	3,375.7	2,519.6	BBB-	Baa2	3.8	HI	47.7	11.8	1.62
IDACORP, Inc. (NYSE-IDA)	1,016.4	100	0	3,420.6	1,917.8	A-	A2	2.6	ID	51.8	11.7	1.15
MGE Energy, Inc. (NYSE-MGEE)	531.0	72	27	1,006.9	1,048.0	AA-	A1	5.8	WI	60.6	9.9	1.88
Nextera Energy (NYSE-NEE)	15,579.0	68	0	43,968.0	27,105.0	A	Aa3	3.5	FL	38.8	6.5	1.78
OGE Energy Corp. (NYSE-OGE)	3,916.1	57	10	7,704.6	5,199.2	BBB+	Baa1	4.4	OK,AR	42.3	7.6	2.04
Pepco Holdings, Inc. (NYSE-POM)	5,578.0	76	4	8,399.0	4,233.1	A	A3	2.5	DC,MD,VA,NJ	45.3	5.7	0.97
PG&E Corporation (NYSE-PCG)	15,000.0	78	22	34,249.0	18,323.0	BBB	A3	3.5	CA	48.3	9.6	1.46
Pinnacle West Capital Corp. (NYSE-PNW)	3,213.2	100	0	9,889.0	5,234.1	BBB-	Baa2	3.3	AZ	49.8	10.7	1.40
PNM Resources, Inc. (NYSE-PNM)	1,618.3	80	0	3,656.2	1,431.4	BBB/BBB-	Baa2	2.8	NM,TX	45.2	5.2	0.91
Portland General Electric (NYSE-POR)	1,808.0	100	0	4,288.0	1,848.2	A-	A3	2.7	OR	49.3	14.6	1.09
SCANA Corporation (NYSE-SCG)	4,234.0	57	18	10,255.0	5,981.4	A-	A3	2.9	SC,NC,GA	42.1	14.3	1.50
Southern Company (NYSE-SO)	17,249.0	95	0	45,855.0	39,499.4	A	A2/A3	4.9	GA,AL,FL,MS	46.5	14.2	2.15
TECO Energy, Inc. (NYSE-TE)	3,277.3	62	12	5,985.6	3,718.2	BBB+	Baa1	3.2	FL	42.9	12.2	1.64
UIL Holdings Corporation (NYSE-UIL)	1,467.7	54	46	2,605.6	1,655.1	NR	Baa2	3.0	CT	38.8	11.6	1.47
UniSource Energy Corporation (NYSE-UNS)	1,483.6	85	9	3,203.9	1,417.0	BBB+	NR	NA	AZ	33.3	11.6	1.49
Westar Energy, Inc. (NYSE-WR)	2,164.9	100	0	6,884.9	3,456.4	BBB+	Baa1	3.0	KS	45.9	13.2	1.25
Wisconsin Energy Corporation (NYSE-WEC)	4,348.9	74	24	10,235.0	8,461.7	A-	A1	3.7	WI	43.9	9.8	2.07
Xcel Energy Inc. (NYSE-XEL)	10,416.3	83	16	22,672.7	13,272.9	A	A3	3.1	MN,WI,ND,SD,MI	45.5	10.3	1.56
Mean	6,758.5	77	11	15,252.4	9,562.9	A-/BBB+	A3/Baa1	3.4		45.4	10.6	1.48
Median	4,075.1	77	7	9,144.0	5,216.6	A-/BBB+	A3/Baa1	3.3		45.3	9.9	1.47

Data Source: AUS Utility Reports, June, 2012; Pre-Tax Interest Coverage and Primary Service Territory are from Value Line Investment Survey, 2012.

Exhibit JRW-5
Kansas City Power & Light Company
Capital Structure Ratios

Panel A -KCP&L's Proposed Capitalization Ratios

Capital Source	Capitalization Ratio	Cost Rates
Long-Term Debt	47.57%	6.63%
Preferred Stock	0.62%	4.29%
Common Equity	51.81%	10.40%
Total	100.00%	100.00%

Panel B - Great Plains Capitalization Ratios - With Short-Term Debt

	3/31/2012	12/31/2011	9/30/2011	6/30/2011	Mean
Short-Term Debt	14.48%	17.11%	15.82%	16.17%	15.90%
Long-Term Debt	43.16%	39.59%	40.11%	41.49%	41.09%
Preferred Stock	0.56%	0.56%	0.57%	0.57%	0.56%
Common Equity	41.79%	42.73%	43.50%	41.77%	42.45%
Total Capital	100.00%	100.00%	100.00%	100.00%	100.00%

Panel C - Great Plains Capitalization Ratios - Without Short-Term Debt

	3/31/2012	12/31/2011	9/30/2011	6/30/2011	Mean
Long-Term Debt	50.48%	47.77%	47.65%	49.50%	48.85%
Preferred Stock	0.65%	0.68%	0.68%	0.67%	0.67%
Common Equity	48.87%	51.56%	51.68%	49.83%	50.48%
Total Capital	100.00%	100.00%	100.00%	100.00%	100.00%

Panel C - Electric Proxy Group Capitalization Ratios

	3/31/2012	12/31/2011	9/30/2011	6/30/2011	Mean
Short-Term Debt	6.85%	6.90%	6.41%	6.04%	6.55%
Long-Term Debt	47.78%	47.69%	48.04%	48.73%	48.06%
Preferred Stock	0.34%	0.31%	0.39%	0.48%	0.38%
Common Equity	45.03%	45.10%	45.16%	44.75%	45.01%
Total Capital	100.00%	100.00%	100.00%	100.00%	100.00%

Panel D -KCP&L's Actual Capitalization Ratios - 6/30/12

Capital Source	Capitalization Ratio	Cost Rates
Long-Term Debt	47.57%	6.64%
Preferred Stock	0.61%	4.29%
Common Equity	51.82%	10.40%
Total	100.00%	100.00%

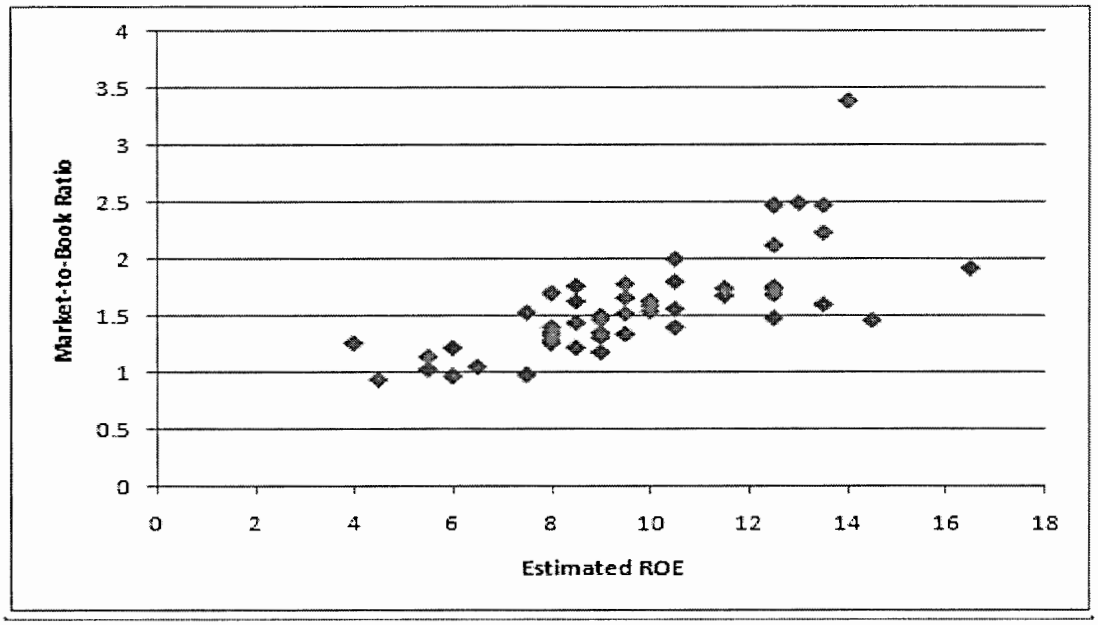
Attachment JRW-5
Kansas City Power & Light Company
Capital Structure Ratios and Debt Cost Rate

Electric Proxy Group

	Long-Term Debt	Preferred Stock	Common Stock	Total Capital
ALLETE	44.3	0.0	55.7	100
Alliant Energy	45.7	3.5	50.9	100
Amer. Elec. Power	50.7	0.0	49.3	100
Ameren Corp.	45.3	1.0	53.7	100
Avista Corp.	51.4	0.0	48.6	100
Black Hills	51.4	0.0	48.6	100
Cleco Corp.	48.5	0.0	51.5	100
CMS Energy Corp.	66.9	0.5	32.6	100
Consol. Edison	46.6	1.0	52.5	100
Dominion Resources	59.8	0.9	39.3	100
DTE Energy	50.6	0.0	49.4	100
Edison Int'l	55.3	4.1	40.6	100
Entergy Corp.	52.2	1.4	46.4	100
Exelon Corp.	45.7	0.3	54	100
FirstEnergy Corp.	54.2	0.0	45.8	100
G't Plains Energy	47.8	0.6	51.6	100
Hawaiian Elec.	44.9	1.2	53.9	100
IDACORP Inc.	45.6	0.0	54.4	100
MGE Energy	39.6	0.0	60.4	100
NextEra Energy	58.2	0.0	41.8	100
OGE Energy	51.6	0.0	48.4	100
Pepco Holdings	49.1	0.0	50.9	100
PG&E Corp.	48.8	1.0	50.2	100
Pinnacle West Capital	44.1	0.0	55.9	100
PNM Resources	51.5	0.4	48.1	100
Portland General	49.6	0.0	50.4	100
SCANA Corp.	54.3	0.0	45.7	100
Southern Co.	50.0	2.9	47.1	100
TECO Energy	54.3	0.0	45.8	100
UIL Holdings	58.6	0.0	41.4	100
UNS Energy	67.8	0.0	32.2	100
Westar Energy	49.6	0.3	50.1	100
Wisconsin Energy	53.6	0.4	46	100
Xcel Energy Inc.	51.1	0.0	48.9	100
Mean	51.1	0.6	48.3	100.0

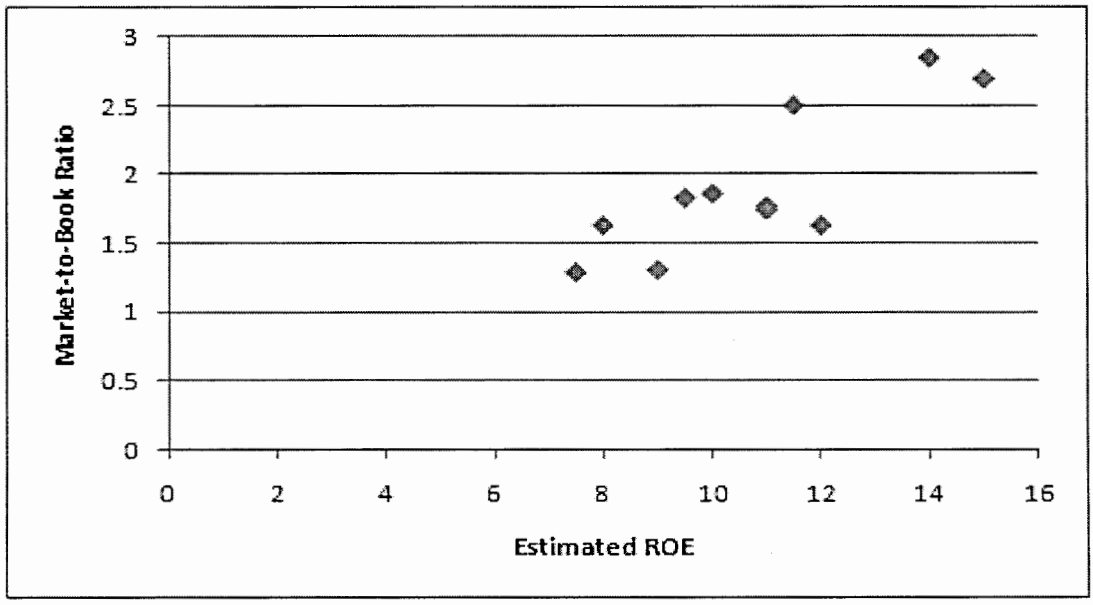
Exhibit JRW-6

Panel A



R-Square = .52, N=51.

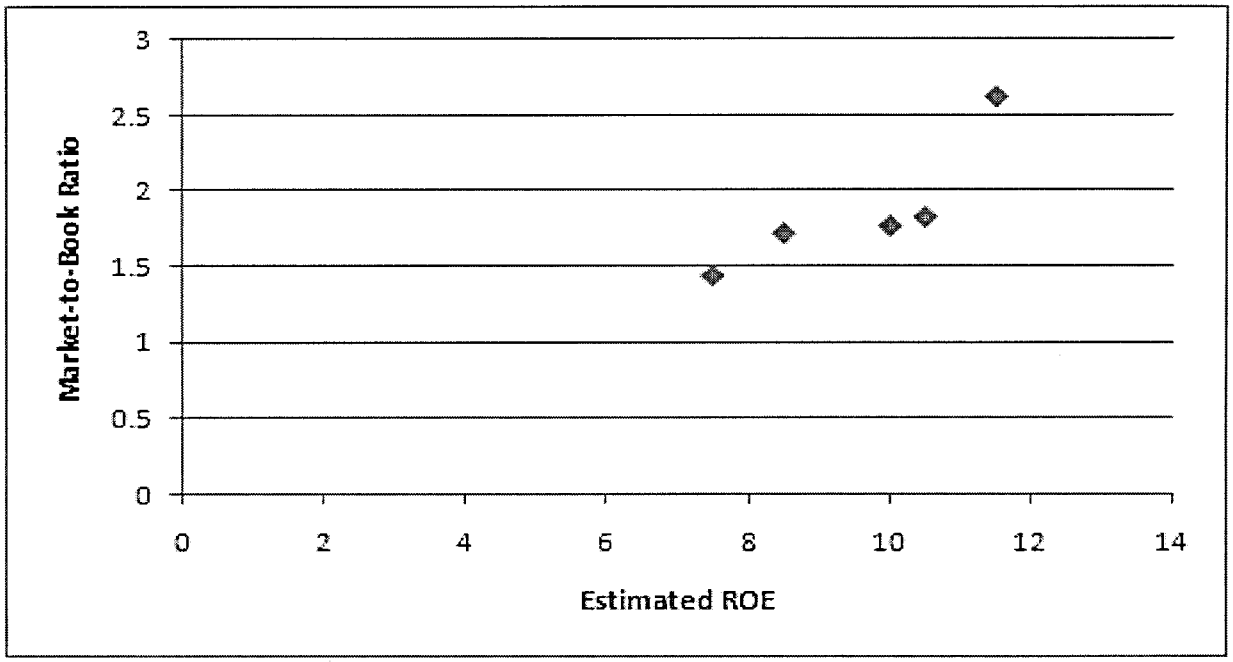
Panel B



R-Square = .71, N=11.

Exhibit JRW-6

Panel C



R-Square = .77, N=5.

Exhibit JRW-7
Long-Term 'A' Rated Public Utility Bonds

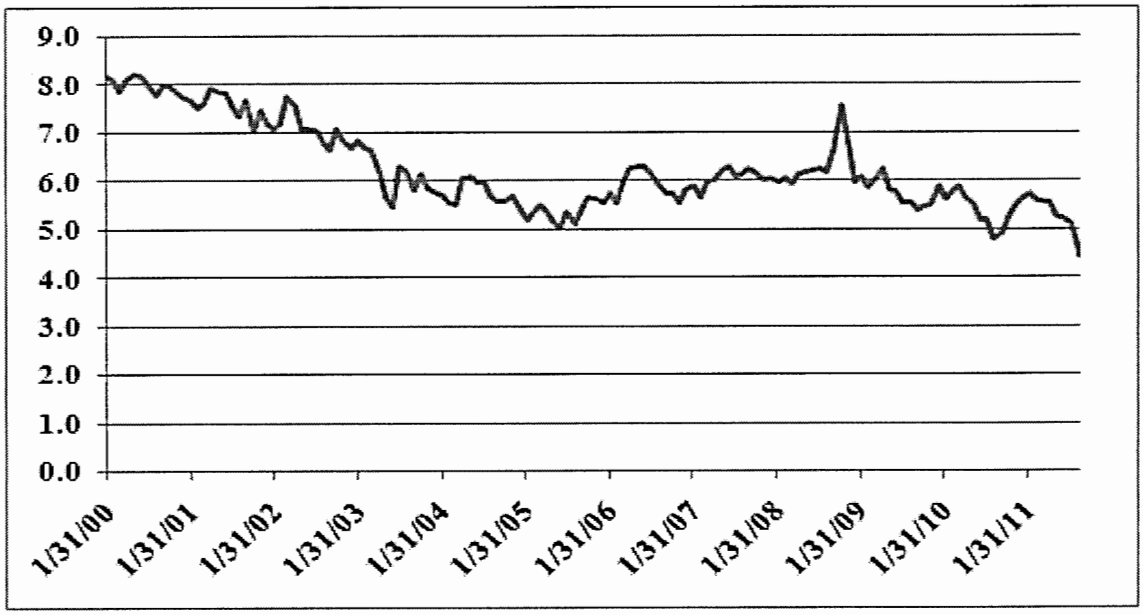
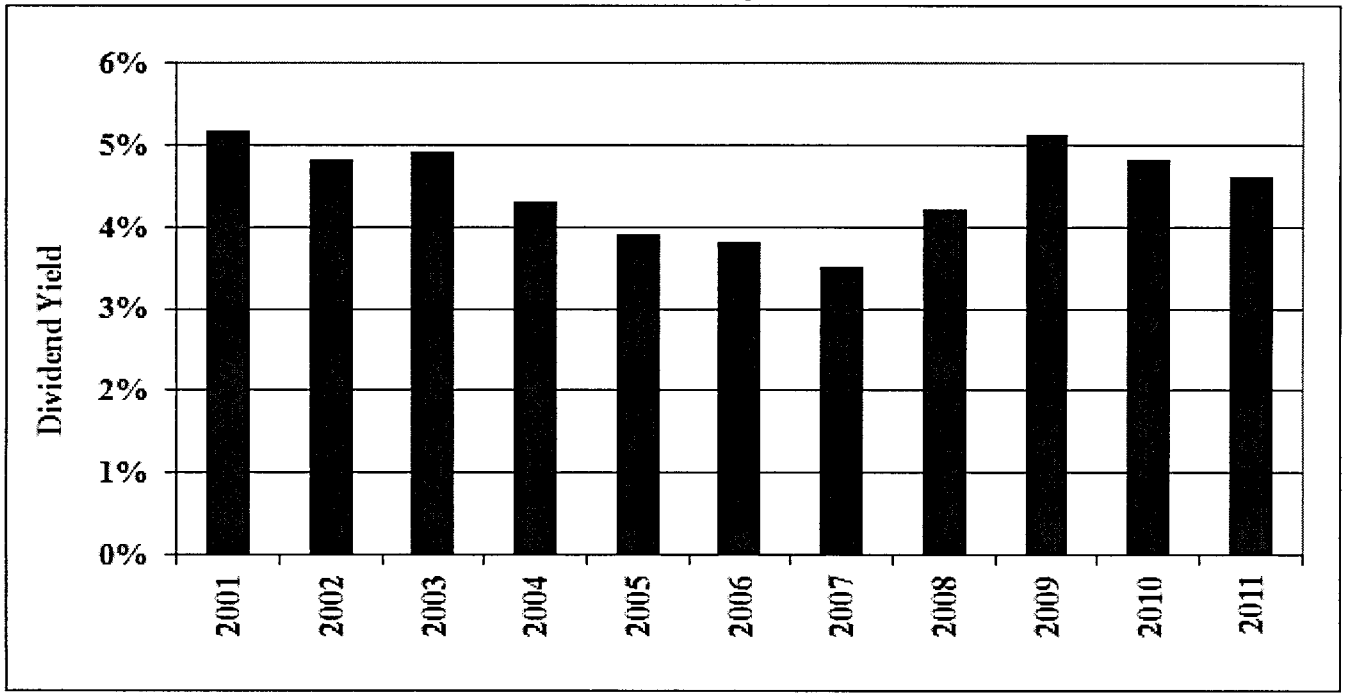


Exhibit JRW-7

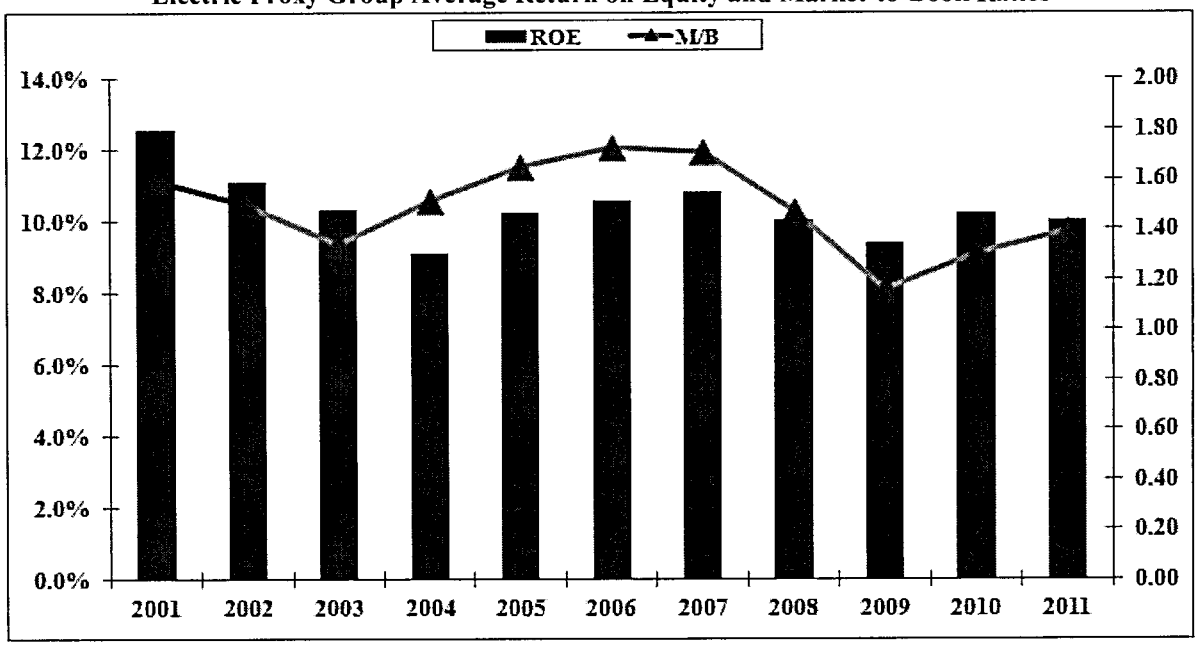
Electric Proxy Group Average Dividend Yield



Data Source: *Value Line Investment Survey.*

Exhibit JRW-7

Electric Proxy Group Average Return on Equity and Market-to-Book Ratios



Data Source: *Value Line Investment Survey.*

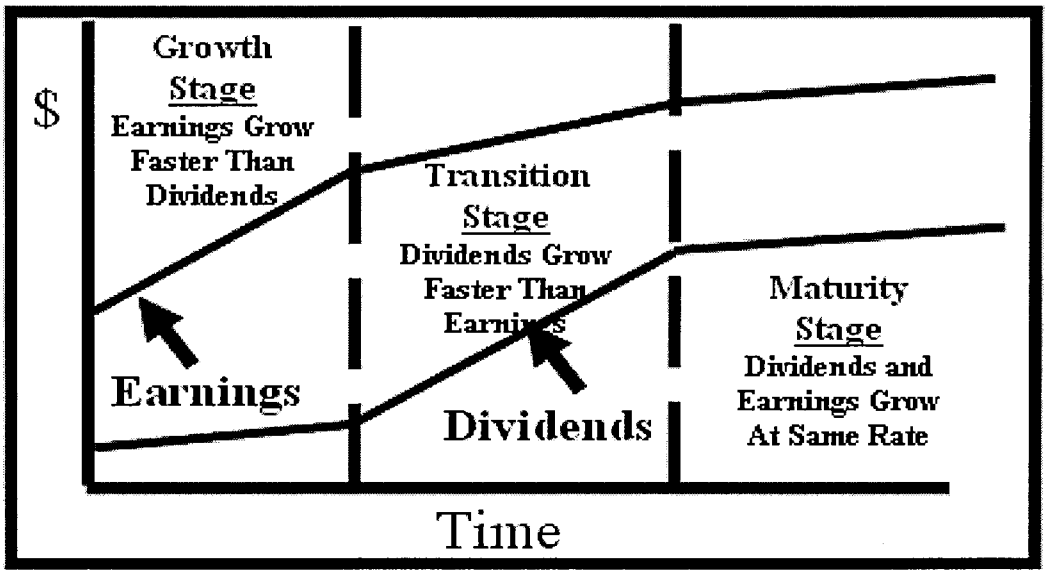
Exhibit JRW-8

Industry Average Betas

Industry Name	No.	Beta	Industry Name	No.	Beta	Industry Name	No.	Beta
Public/Private Equity	11	2.18	Natural Gas (Div.)	29	1.33	IT Services	60	1.06
Advertising	31	2.02	Financial Svcs. (Div.)	225	1.31	Retail Building Supply	8	1.04
Furn/Home Furnishings	35	1.81	Toiletries/Cosmetics	15	1.30	Computer Software	184	1.04
Heavy Truck & Equip	21	1.80	Apparel	57	1.30	Med Supp Non-Invasiv	146	1.03
Semiconductor Equip	12	1.79	Computers/Peripherals	87	1.30	Biotechnology	158	1.03
Retail (Hardlines)	75	1.77	Retail Store	37	1.29	E-Commerce	57	1.03
Newspaper	13	1.76	Chemical (Specialty)	70	1.28	Telecom. Equipment	99	1.02
Hotel/Gaming	51	1.74	Precision Instrument	77	1.28	Pipeline MLPs	27	0.98
Auto Parts	51	1.70	Wireless Networking	57	1.27	Telecom. Services	74	0.98
Steel	32	1.68	Restaurant	63	1.27	Oil/Gas Distribution	13	0.96
Entertainment	77	1.63	Shoe	19	1.25	Utility (Foreign)	4	0.96
Metal Fabricating	24	1.59	Publishing	24	1.25	Industrial Services	137	0.93
Automotive	12	1.59	Trucking	36	1.24	Bank (Midwest)	45	0.93
Insurance (Life)	30	1.58	Human Resources	23	1.24	Reinsurance	13	0.93
Oilfield Svcs/Equip.	93	1.55	Entertainment Tech	40	1.23	Food Processing	112	0.91
Coal	20	1.53	Engineering & Const	25	1.22	Medical Services	122	0.91
Chemical (Diversified)	31	1.51	Air Transport	36	1.21	Insurance (Prop/Cas.)	49	0.91
Building Materials	45	1.50	Machinery	100	1.20	Beverage	34	0.88
Semiconductor	141	1.50	Securities Brokerage	28	1.20	Telecom. Utility	25	0.88
R.E.I.T.	5	1.47	Petroleum (Integrated)	20	1.18	Tobacco	11	0.85
Homebuilding	23	1.45	Healthcare Information	25	1.17	Med Supp Invasive	83	0.85
Recreation	56	1.45	Packaging & Container	26	1.16	Educational Services	34	0.83
Railroad	12	1.44	Precious Metals	84	1.15	Environmental	82	0.81
Retail (Softlines)	47	1.44	Diversified Co.	107	1.14	Bank	426	0.77
Maritime	52	1.40	Funeral Services	6	1.14	Electric Util. (Central)	21	0.75
Office Equip/Supplies	24	1.38	Property Management	31	1.13	Electric Utility (West)	14	0.75
Cable TV	21	1.37	Pharmacy Services	19	1.12	Retail/Wholesale Food	30	0.75
Retail Automotive	20	1.37	Drug	279	1.12	Thrift	148	0.71
Chemical (Basic)	16	1.36	Aerospace/Defense	64	1.10	Electric Utility (East)	21	0.70
Paper/Forest Products	32	1.36	Foreign Electronics	9	1.09	Natural Gas Utility	22	0.66
Power	93	1.35	Internet	186	1.09	Water Utility	11	0.66
Petroleum (Producing)	176	1.34	Information Services	27	1.07	Total Market	5891	1.15
Electrical Equipment	68	1.33	Household Products	26	1.07			
Metals & Mining (Div.)	73	1.33	Electronics	139	1.07			

Source: Damodaran Online 2012 - http://pages.stern.nyu.edu/~adamodar/

Exhibit JRW-9
Three-Stage DCF Model



Source: William F. Sharpe, Gordon J. Alexander, and Jeffrey V. Bailey, Investments (Prentice-Hall, 1995), pp. 590-91.

Exhibit JRW-10

Kansas City Power & Light Company
Discounted Cash Flow Analysis

Electric Proxy Group

Dividend Yield*	4.10%
Adjustment Factor	1.0215
Adjusted Dividend Yield	4.2%
Growth Rate**	4.30%
Equity Cost Rate	8.5%

* Page 2 of Exhibit JRW-10

** Based on data provided on pages 3, 4, 5, and 6 of Exhibit JRW-10

Exhibit JRW-10

Kansas City Power & Light Company
Monthly Dividend Yields

Electric Proxy Group

Company	Mar	Apr	May	Jun	Jul	Aug	Mean
ALLETE, Inc. (NYSE-ALE)	4.5%	4.6%	4.4%	4.8%	4.5%	4.4%	4.5%
Alliant Energy Corporation (NYSE-LNT)	4.2%	4.1%	4.2%	4.1%	4.0%	3.8%	4.1%
Ameren Corporation (NYSE-AEE)	5.1%	5.1%	5.1%	5.0%	4.8%	4.7%	5.0%
American Electric Power Co. (NYSE-AEP)	4.7%	4.9%	4.9%	5.0%	4.8%	4.5%	4.8%
Avista Corporation (NYSE-AVA)	4.3%	4.5%	4.6%	4.6%	4.5%	4.2%	4.5%
Black Hills Corporation (NYSE-BKH)	4.4%	4.5%	4.5%	4.7%	4.6%	4.6%	4.6%
Cleco Corporation (NYSE-CNL)	3.2%	3.2%	3.2%	3.1%	3.1%	2.9%	3.1%
CMS Energy Corporation (NYSE-CMS)	4.5%	4.4%	4.4%	4.2%	4.1%	3.9%	4.3%
Consolidated Edison, Inc. (NYSE-ED)	4.2%	4.2%	4.2%	4.1%	3.9%	3.8%	4.1%
Dominion Resources, Inc. (NYSE-D)	3.9%	4.2%	4.2%	4.0%	3.9%	3.9%	4.0%
DTE Energy Company (NYSE-DTE)	4.4%	4.3%	4.3%	4.3%	4.0%	3.9%	4.2%
Edison International (NYSE-EIX)	3.2%	3.0%	3.0%	3.0%	2.9%	2.8%	3.0%
Entergy Corporation (NYSE-ETR)	4.9%	5.0%	4.9%	5.3%	5.0%	4.7%	5.0%
Exelon Corporation (NYSE-EXC)	5.4%	5.6%	5.4%	4.0%	4.1%	3.9%	4.7%
FirstEnergy Corporation (ASE-FE)	5.1%	4.8%	4.9%	4.6%	4.6%	4.4%	4.7%
Great Plains Energy Incorporated (NYSE-GXP)	4.1%	4.3%	4.2%	4.3%	4.1%	3.8%	4.1%
Hawaiian Electric Industries, Inc. (NYSE-HE)	4.8%	4.9%	4.9%	4.7%	4.4%	4.3%	4.7%
IDACORP, Inc. (NYSE-IDA)	3.2%	3.3%	3.2%	3.4%	3.3%	3.1%	3.3%
MGE Energy, Inc. (NYSE-MGEE)	3.4%	3.5%	3.4%	3.4%	3.3%	3.2%	3.4%
Nextra Energy (NYSE-NEE)	3.7%	3.8%	4.0%	3.7%	3.6%	3.4%	3.7%
OGE Energy Corp. (NYSE-OGE)	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	3.0%
Pepco Holdings, Inc. (NYSE-POM)	5.5%	5.8%	5.6%	5.8%	5.6%	5.5%	5.6%
PG&E Corporation (NYSE-PCG)	4.4%	4.2%	4.2%	4.2%	4.1%	4.0%	4.2%
Pinnacle West Capital Corp. (NYSE-PNW)	4.4%	4.4%	4.5%	4.4%	4.1%	3.9%	4.3%
PNM Resources, Inc. (NYSE-PNM)	2.8%	3.2%	2.7%	3.2%	3.1%	2.8%	3.0%
Portland General Electric (NYSE-POR)	4.3%	4.2%	4.3%	4.3%	4.2%	4.0%	4.2%
SCANA Corporation (NYSE-SCG)	4.3%	4.4%	4.4%	4.3%	4.2%	4.1%	4.3%
Southern Company (NYSE-SO)	4.3%	4.2%	4.3%	4.3%	4.2%	4.1%	4.2%
TECO Energy, Inc. (NYSE-TE)	5.0%	5.0%	5.0%	5.1%	4.9%	4.8%	5.0%
UIL Holdings Corporation (NYSE-UIL)	4.9%	5.1%	5.1%	5.3%	4.9%	4.6%	5.0%
UniSource Energy Corporation (NYSE-UNS)	4.5%	4.8%	4.7%	4.7%	4.5%	4.2%	4.6%
Westar Energy, Inc. (NYSE-WR)	4.6%	4.7%	4.8%	4.8%	4.5%	4.3%	4.6%
Wisconsin Energy Corporation (NYSE-WEC)	3.5%	3.4%	3.5%	3.3%	3.1%	2.9%	3.3%
Xcel Energy Inc. (NYSE-XEL)	4.0%	3.9%	3.9%	3.8%	3.9%	3.7%	3.9%
Mean	4.3%	4.3%	4.3%	4.3%	4.1%	3.9%	4.2%
Median	4.4%	4.4%	4.4%	4.3%	4.1%	4.0%	4.2%

Data Source: AUS *Utility Reports*, monthly issues.

Exhibit JRW-10

Kansas City Power & Light Company
DCF Equity Cost Growth Rate Measures
Value Line Historic Growth Rates

Electric Proxy Group

Company	*Value Line* Historic Growth					
	Past 10 Years			Past 5 Years		
	Earnings	Dividends	Book Value	Earnings	Dividends	Book Value
ALLETE, Inc. (NYSE-ALE)				0.5%	12.0%	5.5%
Alliant Energy Corporation (NYSE-LNT)	2.0%	-3.0%	0.5%	5.0%	8.0%	3.5%
Ameren Corporation (NYSE-AEE)	-1.5%	-5.0%	3.5%	-1.5%	-6.5%	1.0%
American Electric Power Co. (NYSE-AEP)	2.0%	-3.0%	1.0%	1.5%	4.0%	5.0%
Avista Corporation (NYSE-AVA)	5.0%	7.5%	3.5%	9.5%	12.5%	4.0%
Black Hills Corporation (NYSE-BKH)	-4.0%	3.0%	7.5%	-4.0%	2.5%	4.0%
Cleco Corporation (NYSE-CNL)	5.0%	1.5%	8.0%	10.0%	2.0%	10.0%
CMS Energy Corporation (NYSE-CMS)	-5.5%	-7.5%	-4.5%	8.5%		2.0%
Consolidated Edison, Inc. (NYSE-ED)	1.0%	1.0%	4.0%	4.5%	1.0%	4.5%
Dominion Resources, Inc. (NYSE-D)	7.0%	3.5%	3.5%	6.5%	6.5%	3.5%
DTE Energy Company (NYSE-DTE)	2.0%	0.5%	3.5%	5.0%	1.5%	4.0%
Edison International (NYSE-EIX)		7.0%	11.0%	6.0%	5.5%	8.5%
Entergy Corporation (NYSE-ETR)	9.5%	10.0%	4.5%	8.5%	9.0%	4.5%
Exelon Corporation (NYSE-EXC)	8.0%		5.5%	4.5%	7.0%	7.5%
FirstEnergy Corporation (ASE-FE)	0.5%	4.0%	3.0%	-2.0%	4.0%	1.5%
Great Plains Energy Incorporated (NYSE-GXP)	-2.5%	-6.5%	4.5%	-9.5%	-13.0%	5.5%
Hawaiian Electric Industries, Inc. (NYSE-HE)	-2.0%		2.0%	-3.0%		1.5%
IDACORP, Inc. (NYSE-IDA)	-0.5%	-4.5%	3.5%	8.5%		5.0%
MGE Energy, Inc. (NYSE-MGEE)	4.5%	1.0%	6.5%	6.5%	1.5%	6.0%
Nextera Energy (NYSE-NEE)	7.5%	6.5%	8.0%	11.0%	7.5%	9.0%
OGE Energy Corp. (NYSE-OGE)	6.0%	1.0%	6.0%	8.5%	2.0%	8.5%
Pepco Holdings, Inc. (NYSE-POM)	-0.5%		0.5%	-0.5%	1.5%	1.0%
PG&E Corporation (NYSE-PCG)		8.5%	8.0%	3.5%	16.0%	6.5%
Pinnacle West Capital Corp. (NYSE-PNW)	-2.0%	4.0%	2.0%	.01.015		0.5%
PNM Resources, Inc. (NYSE-PNM)	-7.5%	-0.5%	1.5%	-12.0%	-8.0%	-1.0%
Portland General Electric (NYSE-POR)				8.5%		2.0%
SCANA Corporation (NYSE-SCG)	4.5%	4.5%	3.5%	2.0%	4.0%	4.5%
Southern Company (NYSE-SO)	3.0%	3.0%	3.5%	3.0%	4.0%	6.0%
TECO Energy, Inc. (NYSE-TE)	-5.0%	-4.5%	-2.0%	3.5%	1.5%	6.5%
UIL Holdings Corporation (NYSE-UIL)	-2.0%			4.5%		-0.5%
UniSource Energy Corporation (NYSE-UNS)	7.0%	20.0%	7.0%	13.0%	14.5%	5.0%
Westar Energy, Inc. (NYSE-WR)		-4.5%	-3.0%	1.0%	7.0%	6.0%
Wisconsin Energy Corporation (NYSE-WEC)	9.0%	3.0%	6.5%	10.0%	14.0%	7.0%
Xcel Energy Inc. (NYSE-XEL)	-1.0%	-4.0%		4.5%	3.5%	4.5%
Mean	1.7%	1.7%	3.8%	3.8%	4.5%	4.5%
Median	2.0%	1.3%	3.5%	4.5%	4.0%	4.5%
Data Source: *Value Line Investment Survey.*	Average of Median Figures =			3.3%		

Exhibit JRW-10

Kansas City Power & Light Company
DCF Equity Cost Growth Rate Measures
***Value Line* Projected Growth Rates**

Electric Proxy Group

Company	*Value Line* Projected Growth Est'd. '09-'11 to '15-'17			*Value Line* Sustainable Growth		
	Earnings	Dividends	Book Value	Return on Equity	Retention Rate	Internal Growth
ALLETE, Inc. (NYSE-ALE)	7.5%	2.0%	4.0%	10.0%	41.0%	4.1%
Alliant Energy Corporation (NYSE-LNT)	6.0%	5.5%	3.5%	10.5%	33.0%	3.5%
Ameren Corporation (NYSE-AEE)	-1.0%	2.5%	0.5%	7.0%	28.0%	2.0%
American Electric Power Co. (NYSE-AEP)	4.5%	3.5%	4.5%	10.0%	41.0%	4.1%
Avista Corporation (NYSE-AVA)	5.5%	6.5%	3.5%	9.0%	38.0%	3.4%
Black Hills Corporation (NYSE-BKH)	7.0%	2.0%	2.0%	8.5%	38.0%	3.2%
Cleco Corporation (NYSE-CNL)	6.5%	11.5%	6.0%	11.5%	44.0%	5.1%
CMS Energy Corporation (NYSE-CMS)	7.0%	10.0%	5.0%	12.5%	39.0%	4.9%
Consolidated Edison, Inc. (NYSE-ED)	4.0%	1.0%	8.0%	9.5%	43.0%	4.1%
Dominion Resources, Inc. (NYSE-D)	6.5%	6.0%	5.5%	14.5%	35.0%	5.1%
DTE Energy Company (NYSE-DTE)	4.0%	3.5%	3.5%	9.5%	40.0%	3.8%
Edison International (NYSE-EIX)	1.0%	3.0%	4.0%	9.0%	55.0%	5.0%
Entergy Corporation (NYSE-ETR)	-4.5%	1.0%	3.0%	9.5%	37.0%	3.5%
Exelon Corporation (NYSE-EXC)	-2.0%	0.0%	6.0%	12.0%	39.0%	4.7%
FirstEnergy Corporation (ASE-FE)	5.0%	1.5%	4.5%	10.5%	38.0%	4.0%
Great Plains Energy Incorporated (NYSE-GXP)	5.5%	5.0%	2.0%	7.5%	38.0%	2.9%
Hawaiian Electric Industries, Inc. (NYSE-HE)	9.0%	1.0%	5.5%	9.0%	35.0%	3.2%
IDACORP, Inc. (NYSE-IDA)	3.0%	8.0%	5.5%	8.0%	46.0%	3.7%
MGE Energy, Inc. (NYSE-MGEE)	4.5%	3.5%	5.0%	10.5%	24.0%	2.5%
Nextera Energy (NYSE-NEE)	5.0%	8.0%	6.5%	12.5%	47.0%	5.9%
OGE Energy Corp. (NYSE-OGE)	6.0%	4.5%	8.0%	11.5%	59.0%	6.8%
Pepco Holdings, Inc. (NYSE-POM)	7.0%	1.0%	2.0%	8.0%	31.0%	2.5%
PG&E Corporation (NYSE-PCG)	4.5%	2.0%	4.0%	10.5%	47.0%	4.9%
Pinnacle West Capital Corp. (NYSE-PNW)	5.0%	2.5%	3.5%	9.0%	36.0%	3.2%
PNM Resources, Inc. (NYSE-PNM)	15.5%	10.5%	3.0%	9.0%	56.0%	5.0%
Portland General Electric (NYSE-POR)	5.5%	3.5%	4.0%	9.0%	46.0%	4.1%
SCANA Corporation (NYSE-SCG)	4.0%	2.0%	5.5%	9.5%	44.0%	4.2%
Southern Company (NYSE-SO)	5.0%	4.0%	5.5%	12.5%	30.0%	3.8%
TECO Energy, Inc. (NYSE-TE)	7.5%	5.0%	4.5%	13.0%	37.0%	4.8%
UIL Holdings Corporation (NYSE-UIL)	4.0%	0.0%	3.5%	9.5%	29.0%	2.8%
UniSource Energy Corporation (NYSE-UNS)	4.0%	6.0%	3.0%	13.0%	39.0%	5.1%
Westar Energy, Inc. (NYSE-WR)	6.5%	3.0%	4.5%	8.5%	39.0%	3.3%
Wisconsin Energy Corporation (NYSE-WEC)	6.5%	13.5%	3.5%	14.0%	37.0%	5.2%
Xcel Energy Inc. (NYSE-XEL)	6.0%	5.0%	4.5%	10.0%	38.0%	3.8%
Mean	5.0%	4.3%	4.3%	10.2%	39.6%	4.1%
Median	5.3%	3.5%	4.3%	9.8%	38.5%	4.0%
Average of Median Figures =		4.3%				4.0%

Data Source: *Value Line Investment Survey.*

Exhibit JRW-10

Kansas City Power & Light Company
DCF Equity Cost Growth Rate Measures
Analysts Projected EPS Growth Rate Estimates

Electric Proxy Group

Company	Yahoo	Zack's	Reuters	Average
ALLETE, Inc. (NYSE-ALE)	5.0%	5.0%	6.5%	5.5%
Alliant Energy Corporation (NYSE-LNT)	6.3%	6.2%	6.3%	6.3%
Ameren Corporation (NYSE-AEE)	-2.7%	-0.1%	-2.7%	-1.8%
American Electric Power Co. (NYSE-AEP)	3.4%	3.6%	3.4%	3.4%
Avista Corporation (NYSE-AVA)	4.0%	4.7%	4.5%	4.4%
Black Hills Corporation (NYSE-BKH)	6.0%	6.0%	na	6.0%
Cleco Corporation (NYSE-CNL)	3.0%	na	3.0%	3.0%
CMS Energy Corporation (NYSE-CMS)	6.1%	5.6%	6.1%	5.9%
Consolidated Edison, Inc. (NYSE-ED)	3.0%	3.4%	3.2%	3.2%
Dominion Resources, Inc. (NYSE-D)	5.0%	4.7%	5.4%	5.0%
DTE Energy Company (NYSE-DTE)	4.6%	4.9%	4.3%	4.6%
Edison International (NYSE-EIX)	0.3%	3.7%	2.5%	2.2%
Entergy Corporation (NYSE-ETR)	1.0%	-1.6%	1.0%	0.1%
Exelon Corporation (NYSE-EXC)	-9.5%	4.9%	-1.5%	-2.0%
FirstEnergy Corporation (ASE-FE)	2.1%	0.1%	3.3%	1.8%
Great Plains Energy Incorporated (NYSE-GXP)	6.5%	7.8%	6.4%	6.9%
Hawaiian Electric Industries, Inc. (NYSE-HE)	9.2%	6.7%	6.3%	7.4%
IDACORP, Inc. (NYSE-IDA)	4.0%	5.0%	4.5%	4.5%
MGE Energy, Inc. (NYSE-MGEE)	4.0%	4.0%	4.0%	4.0%
Nextera Energy (NYSE-NEE)	5.2%	5.7%	5.7%	5.6%
OGE Energy Corp. (NYSE-OGE)	5.0%	5.6%	5.1%	5.2%
Pepco Holdings, Inc. (NYSE-POM)	4.8%	3.8%	4.8%	4.5%
PG&E Corporation (NYSE-PCG)	0.5%	2.5%	2.7%	1.9%
Pinnacle West Capital Corp. (NYSE-PNW)	6.5%	5.9%	6.3%	6.2%
PNM Resources, Inc. (NYSE-PNM)	2.9%	9.3%	9.5%	7.2%
Portland General Electric (NYSE-POR)	3.5%	4.1%	4.1%	3.9%
SCANA Corporation (NYSE-SCG)	2.3%	4.4%	5.9%	4.2%
Southern Company (NYSE-SO)	5.4%	5.1%	5.4%	5.3%
TECO Energy, Inc. (NYSE-TE)	2.6%	3.3%	4.1%	3.3%
UIL Holdings Corporation (NYSE-UIL)	4.1%	4.5%	4.3%	4.3%
UniSource Energy Corporation (NYSE-UNS)	5.5%	6.3%	5.5%	5.8%
Westar Energy, Inc. (NYSE-WR)	4.6%	6.2%	5.6%	5.5%
Wisconsin Energy Corporation (NYSE-WEC)	6.1%	5.5%	6.9%	6.1%
Xcel Energy Inc. (NYSE-XEL)	5.1%	4.9%	4.9%	4.9%
Mean	3.7%	4.6%	4.5%	4.2%
Median	4.3%	4.9%	4.8%	4.6%

Data Sources: www.reuters.com, www.zacks.com, http://quote.yahoo.com, August 8, 2012.

Exhibit JRW-10

Kansas City Power & Light Company
DCF Growth Rate Indicators

Electric and Proxy Group
Summary Growth Rates

Growth Rate Indicator	Electric Proxy Group
Historic *Value Line* Growth in EPS, DPS, and BVPS	3.3%
Projected *Value Line* Growth in EPS, DPS, and BVPS	4.3%
Sustainable Growth ROE * Retention Rate	4.0%
Projected EPS Growth from Yahoo, Zacks, and Reuters	4.6%
Average of Historic and Projected Growth Rates	4.1%
Average of Sustainable and Projected Growth Rates	4.3%

Exhibit JRW-11

Kansas City Power & Light Company
Capital Asset Pricing Model

Electric Proxy Group

Risk-Free Interest Rate	**4.00%**
Beta*	**0.73**
Ex Ante Equity Risk Premium**	**5.00%**
CAPM Cost of Equity	**7.7%**

* See page 3 of Exhibit JRW-11

** See pages 5 and 6 of Exhibit JRW-11

Exhibit JRW-11

Ten-Year U.S. Treasury Yields
January 2000-Present

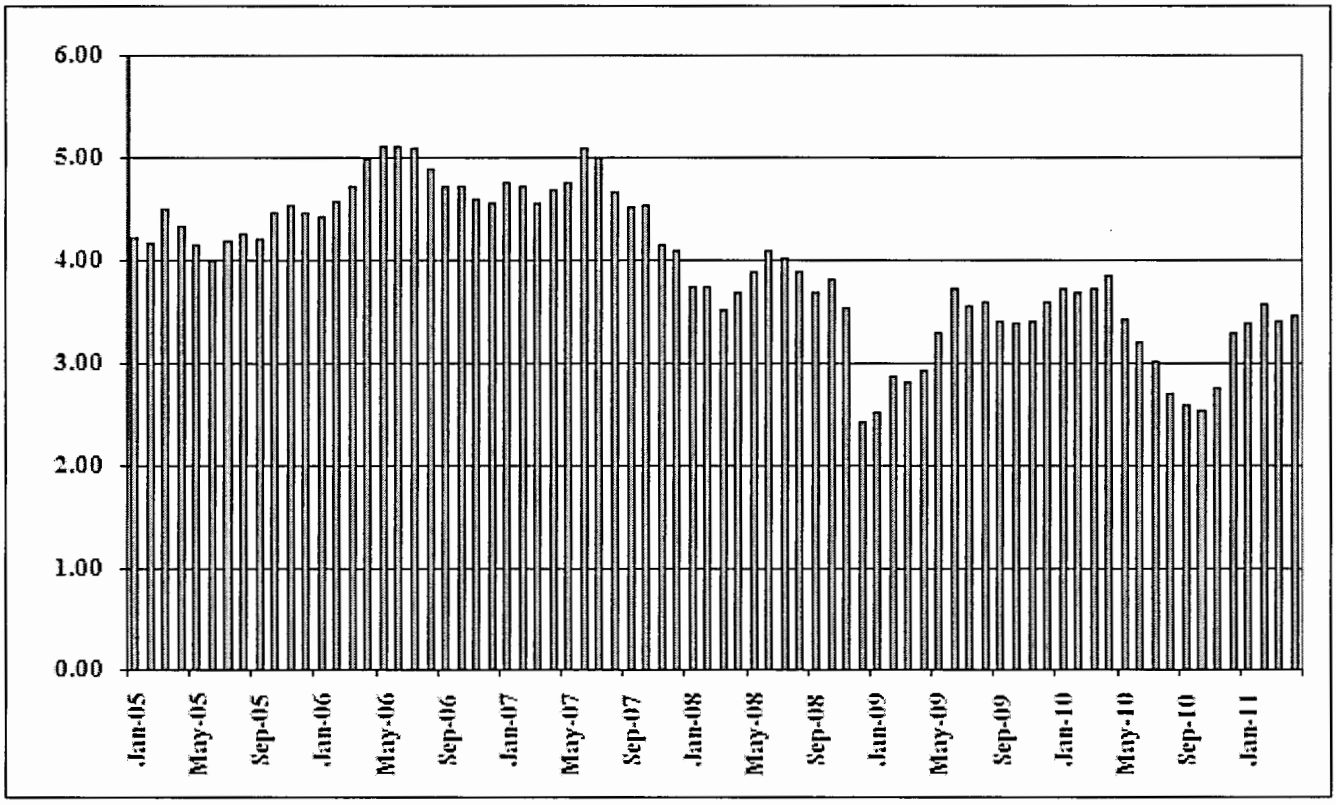
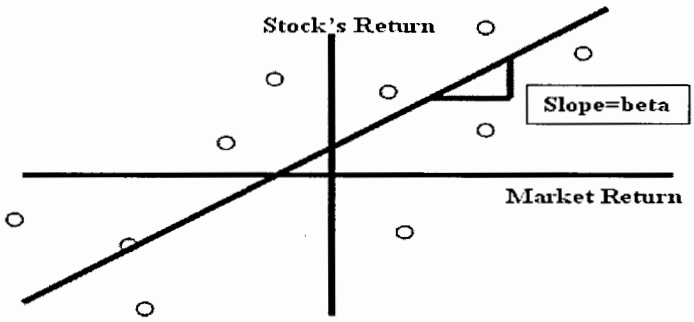


Exhibit JRW-11

Panel A
Betas

Calculation of Beta



Electric Proxy Group

Company Name	Beta
ALLETE, Inc. (NYSE-ALE)	0.70
Alliant Energy Corporation (NYSE-LNT)	0.75
Ameren Corporation (NYSE-AEE)	0.80
American Electric Power Co. (NYSE-AEP)	0.70
Avista Corporation (NYSE-AVA)	0.70
Black Hills Corporation (NYSE-BKH)	0.85
Cleco Corporation (NYSE-CNL)	0.65
CMS Energy Corporation (NYSE-CMS)	0.75
Consolidated Edison, Inc. (NYSE-ED)	0.60
Dominion Resources, Inc. (NYSE-D)	0.70
DTE Energy Company (NYSE-DTE)	0.75
Edison International (NYSE-EIX)	0.80
Entergy Corporation (NYSE-ETR)	0.70
Exelon Corporation (NYSE-EXC)	0.80
FirstEnergy Corporation (ASE-FE)	0.80
Great Plains Energy Incorporated (NYSE-GXP)	0.75
Hawaiian Electric Industries, Inc. (NYSE-HE)	0.70
IDACORP, Inc. (NYSE-IDA)	0.70
MGE Energy, Inc. (NYSE-MGEE)	0.60
Nextera Energy (NYSE-NEE)	0.75
OGE Energy Corp. (NYSE-OGE)	0.80
Pepco Holdings, Inc. (NYSE-POM)	0.75
PG&E Corporation (NYSE-PCG)	0.55
Pinnacle West Capital Corp. (NYSE-PNW)	0.70
PNM Resources, Inc. (NYSE-PNM)	0.95
Portland General Electric (NYSE-POR)	0.75
SCANA Corporation (NYSE-SCG)	0.70
Southern Company (NYSE-SO)	0.55
TECO Energy, Inc. (NYSE-TE)	0.85
UIL Holdings Corporation (NYSE-UIL)	0.70
UniSource Energy Corporation (NYSE-UNS)	0.75
Westar Energy, Inc. (NYSE-WR)	0.75
Wisconsin Energy Corporation (NYSE-WEC)	0.65
Xcel Energy Inc. (NYSE-XEL)	0.65
Mean	0.73
Median	0.73

Data Source: *Value Line Investment Survey, 2012.*

Exhibit JRW-11

Risk Premium Approaches

	Historical Ex Post Excess Returns	Surveys	Ex Ante Models and Market Data
Means of Assessing the Equity-Bond Risk Premium	Historical average is a popular proxy for the ex ante premium – but likely to be misleading	Investor and expert surveys can provide direct estimates of prevailing expected returns/premiums	Current financial market prices (simple valuation ratios or DCF-based measures) can give most objective estimates of feasible ex ante equity-bond risk premium
Problems/Debated Issues	Time variation in required returns and systematic selection and other biases have boosted valuations over time, and have exaggerated realized excess equity returns compared with ex ante expected premiums	Limited survey histories and questions of survey representativeness. Surveys may tell more about hoped-for expected returns than about objective required premiums due to irrational biases such as extrapolation.	Assumptions needed for DCF inputs, notably the trend earnings growth rate, make even these models' outputs subjective. The range of views on the growth rate, as well as the debate on the relevant stock and bond yields, leads to a range of premium estimates.

Source: Antti Ilmanen, Expected Returns on Stocks and Bonds," *Journal of Portfolio Management*, (Winter 2003).

Exhibit JRW-11

Kansas City Power & Light Company
Capital Asset Pricing Model
Equity Risk Premium

Category	Study Autho	Publication Date	Time Period Of Study	Methodology	Return Measure	Range Low	Range High	Midpoint of Range	Mean	Median
Historical Risk Premium										
	Ibbotson	2012	1926-2011	Historical Stock Returns - Bond Returns	Arithmetic				5.70%	
					Geometric				4.10%	
	Bate	2008	1900-2007	Historical Stock Returns - Bond Returns	Geometric				4.50%	
	Shiller	2006	1926-2005	Historical Stock Returns - Bond Returns	Arithmetic				7.00%	
					Geometric				5.50%	
	Damodoran	2006	1926-2005	Historical Stock Returns - Bond Returns	Arithmetic				6.70%	
					Geometric				5.10%	
	Siegel	2005	1926-2005	Historical Stock Returns - Bond Returns	Arithmetic				6.10%	
					Geometric				4.60%	
	Dimson, Mar	2006	1900-2005	Historical Stock Returns - Bond Returns	Arithmetic				5.50%	
	Goyal & Wel	2006	1872-2004	Historical Stock Returns - Bond Returns					4.77%	
	Median									5.50%
Ex Ante Models (Puzzle Research)										
	Claus Thoma	2001	1985-1998	Abnormal Earnings Model					3.00%	
	Arnott and Bo	2002	1810-2001	Fundamentals - Div Yld + Growth					2.40%	
	Constantinide	2002	1872-2000	Historical Returns & Fundamentals - P/D & P/E					6.90%	
	Cornell	1999	1926-1997	Historical Returns & Fundamental GDP/Earnings		3.50%	5.50%	4.50%	4.50%	
	Easton, Taylo	2002	1981-1998	Residual Income Model					5.30%	
	Fama French	2002	1951-2000	Fundamental DCF with EPS and DPS Growth		2.55%	4.32%		3.44%	
	Harris & Mar	2001	1982-1998	Fundamental DCF with Analysts' EPS Growth					7.14%	
	Best & Byrne	2001								
	McKinsey	2002	1962-2002	Fundamental (P/E, D/P, & Earnings Growth)		3.50%	4.00%		3.75%	
	Siegel	2005	1802-2001	Historical Earnings Yield	Geometric				2.50%	
	Grabowski	2006	1926-2005	Historical and Projected		3.50%	6.00%	4.75%	4.75%	
	Maheu & Mc	2006	1885-2003	Historical Excess Returns, Structural Breaks,		4.02%	5.10%	4.56%	4.56%	
	Bostock	2004	1960-2002	Bond Yields, Credit Risk, and Income Volatility		3.90%	1.30%	2.60%	2.60%	
	Bakshi & Ch	2005	1982-1998	Fundamentals - Interest Rates					7.31%	
	Donaldson, K	2006	1952-2004	Fundamental, Dividend yld., Returns,, & Volatility		3.00%	4.00%	3.50%	3.50%	
	Campbell	2008	1982-2007	Historical & Projections (D/P & Earnings Growth)		4.10%	5.40%		4.75%	
	Best & Byrne	2001	Projection	Fundamentals - Div Yld + Growth					2.00%	
	Fernandez	2007	Projection	Required Equity Risk Premium					4.00%	
	DeLong & M	2008	Projection	Earnings Yield - TIPS					3.22%	
	Damodoran	2012	Projection	Fundamentals - Implied from FCF to Equity Model					6.11%	
	Social Security									
	Office of Chief Actuary		1900-1995							
	John Campbe	2001	1860-2000	Historical & Projections (D/P & Earnings Growth)	Arithmetic	3.00%	4.00%	3.50%	3.50%	
			Projected for 75 Years		Geometric	1.50%	2.50%	2.00%	2.00%	
	Peter Diamon	2001	)jected for 75 Ye	Fundamentals (D/P, GDP Growth)		3.00%	4.80%	3.90%	3.90%	
	John Shoven	2001	)jected for 75 Ye	Fundamentals (D/P, P/E, GDP Growth)		3.00%	3.50%	3.25%	3.25%	
	Median									3.75%
Surveys										
	Survey of Fin	2012	0-Year Projectic	About 50 Financial Forecastsers					2.80%	
	Duke - CFO I	2012	0-Year Projectic	Approximately 500 CFOs					4.50%	
	Welch - Acad	2008	0-Year Projectic	Random Academics		5.00%	5.74%	5.37%	5.37%	
	Fernandez - A	2012	Long-Term	Survey of Academics					5.60%	
	Fernandez - A	2012	Long-Term	Survey of Analysts					5.00%	
	Fernandez - C	2012	Long-Term	Survey of Companies					5.50%	
	Median									5.19%
Building Block										
	Ibbotson and	2012	1926-2010	Historical Supply Model (D/P & Earnings Growth)	Arithmetic			5.99%	4.95%	
					Geometric			3.91%		
	Woolridge		2012	Current Supply Model (D/P & Earnings Growth)					4.90%	
	Median									4.93%
Mean										**4.84%**
Median										**5.06%**

Exhibit JRW-11

Kansas City Power & Light Company
Capital Asset Pricing Model
Equity Risk Premium

Summary of 2010-12 Equity Risk Premium Studies

Category	Study Authors	Publication Date	Time Period Of Study	Methodology	Return Measure	Range Low	Range High	Midpoint of Range	Mean	Average
Historical Risk Premium										
	Ibbotson	2012	1926-2011	Historical Stock Returns - Bond Returns	Arithmetic				5.70%	
					Geometric				4.10%	
	Median									4.90%
Ex Ante Models (Puzzle Research)										
	Damodoran	2012	Projection	Fundamentals - Implied from FCF to Equity Model					6.11%	
	Median									6.11%
Surveys										
	Survey of Financial Fore	2012	10-Year Projection	About 50 Financial Forecastsers					2.80%	
	Duke - CFO Magazine S	2012	10-Year Projection	Approximately 500 CFOs					4.50%	
	Fernandez - Academics	2012	Long-Term	Survey of Academics					5.60%	
	Fernandez - Analysts	2012	Long-Term	Survey of Analysts					5.00%	
	Fernandez - Companies	2012	Long-Term	Survey of Companies					5.50%	
	Median									5.00%
Building Block										
	Ibbotson and Chen	2012	1926-2010	Historical Supply Model (D/P & Earnings Growth)	Arithmetic			5.99%	4.95%	
					Geometric			3.91%		
	Woolridge		2012	Current Supply Model (D/P & Earnings Growth)					4.90%	
	Median									4.93%
Mean										**5.23%**
Median										**4.96%**

Exhibit JRW-12

Kansas City Power & Light Company
Company's Proposed Cost of Capital

Capital Source	Capitalization Ratio	Cost Rate	Weighted Cost Rate
Long-Term Debt	47.57%	6.63%	3.15%
Preferred Stock	0.62%	4.29%	0.03%
Common Equity	51.81%	10.40%	5.39%
Total	100.00%	100.00%	8.57%

Panel A
Summary of Dr. Hadaway's Equity Cost Rate Approaches and Results

DCF Analysis	Indicated Cost
Constant Growth (Analysts' Growth)	10.0%-10.1%
Constant Growth (GDP Growth)	10.1%-10.2%
Multistage Growth Model	10.00%
DCF Range	10.0%-10.2%
Equity Risk Premium Analysis	Indicated Cost
Projected Utility Debt Yield + Equity Risk Premium	
Equity Risk Premium ROE (5.86% + 4.56%)	10.42%
Current Utility Debt Yield + Equity Risk Premium	
Equity Risk Premium ROE (5.05% + 4.90%)	9.95%
KCP&L Estimated ROE	10.50%

Panel B
DCF Equity Cost Rate
Electric Utility Proxy Group

	DCF Model with Analysts Estimates as Growth Rate	DCF Model with GDP as Growth Rate	Two-Stage DCF Model with GDP as Second-Stage
Adjusted Dividend Yield	**4.45%**	**4.40%**	**4.50%**
Growth	**5.65%**	**5.70%**	**5.50%**
DCF Result	**10.10%**	**10.10%**	**10.00%**

Panel C
Risk Premium Equity Cost Rate

	Authorized ROEs and Projected Utility Yields	**Authorized and Current Utility Yields**
BBB Bond Yield	**5.86%**	**5.05%**
Equity Risk Premium	**4.56%**	**4.90%**
Risk Premium Equity Cost Rate	**10.42%**	**9.95%**

Panel A
Historic GDP Growth Rates

10-Year Average	4.0%
20-Year Average	4.7%
30-Year Average	5.4%
40-Year Average	6.7%
50-Year Average	6.9%
60-Year Average	6.6%
Average of Periods	5.7%

KCP&L Schedule SCH-4.

Panel B
Projected GDP Growth Rates

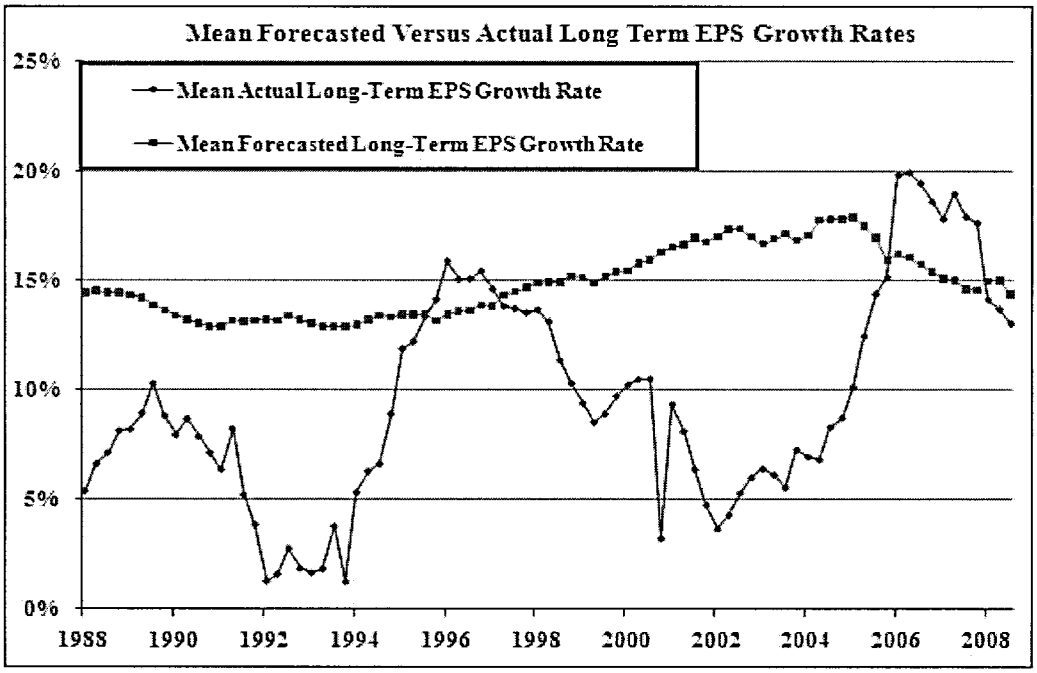
	Time Frame	Projected Nominal GDP Growth Rate
Congressional Budget Office	2012-2022	4.8%
Survey of Financial Forecasters	Ten Year	4.9%
Energy Information Administration	2009-2035	4.8%

Sources:
http://www.cbo.gov/sites/default/files/cbofiles/attachments/02-01-OutlookTestimonyHouse.pdf

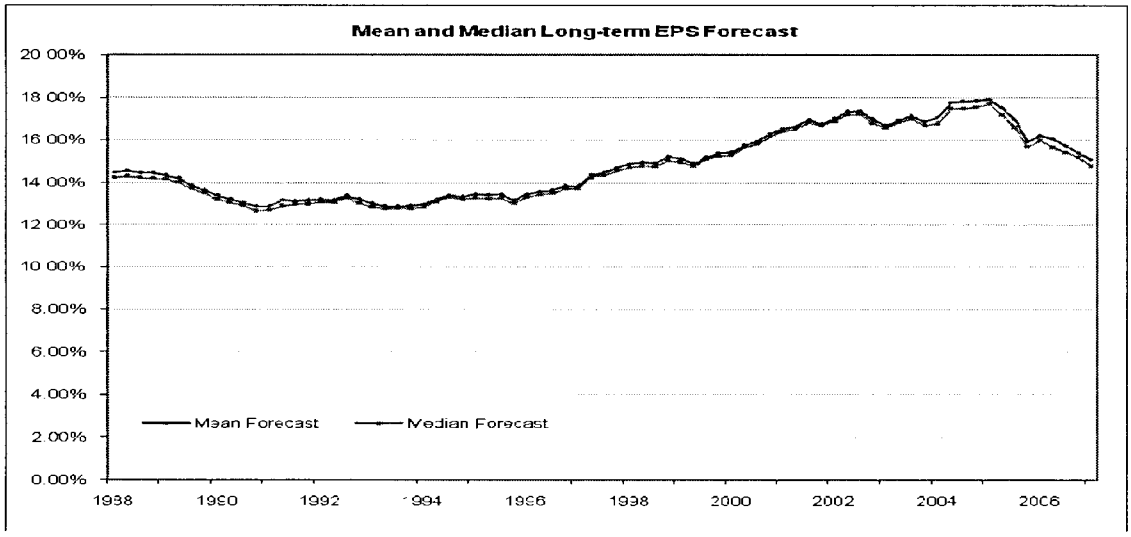
EXHIBITS

JRW-B1
Pages 1 thru 6

Panel A
Long-Term Forecasted Versus Actual EPS Growth Rates
1988-2009



Panel B
Long-Term Forecasted EPS Growth Rates
1988-2007



Source: Patrick J. Cusatis and J. Randall Woolridge, "The Accuracy of Analysts' Long-Term Earnings Per Share Growth Rate Forecasts," (July, 2008).

THE WALL STREET JOURNAL.

Study Suggests Bias in Analysts' Rosy Forecasts

By ANDREW EDWARDS
March 21, 2008; Page C6

Despite an economy teetering on the brink of a recession -- if not already in one -- analysts are still painting a rosy picture of earnings growth, according to a study done by Penn State's Smeal College of Business.

The report questions analysts' impartiality five years after then-New York Attorney General Eliot Spitzer forced analysts to pay $1.5 billion in damages after finding evidence of bias.

"Wall Street analysts basically do two things: recommend stocks to buy and forecast earnings," said J. Randall Woolridge, professor of finance. "Previous studies suggest their stock recommendations do not perform well, and now we show that their long-term earnings-per-share growth-rate forecasts are excessive and upwardly biased."

The report, which examined analysts' long-term (three to five years) and one-year per-share earnings expectations from 1984 through 2006 found that companies' long-term earnings growth surpassed analysts' expectations in only two instances, and those came right after recessions.

Over the entire time period, analysts' long-term forecast earnings-per-share growth averaged 14.7%, compared with actual growth of 9.1%. One-year per-share earnings expectations were slightly more accurate: The average forecast was for 13.8% growth and the average actual growth rate was 9.8%.

"A significant factor in the upward bias in long-term earnings-rate forecasts is the reluctance of analysts to forecast" profit declines, Mr. Woolridge said. The study found that nearly one-third of all companies experienced profit drops over successive three-to-five-year periods, but analysts projected drops less than 1% of the time.

The study's authors said, "Analysts are rewarded for biased forecasts by their employers, who want them to hype stocks so that the brokerage house can garner trading commissions and win underwriting deals."

They also concluded that analysts are under pressure to hype stocks to generate trading commissions, and they often don't follow stocks they don't like.

Write to Andrew Edwards at andrew.edwards@dowjones.com

Markets & Finance June 10, 2010, 5:00PM EST

Bloomberg Businessweek

For Analysts, Things Are Always Looking Up

They're raising earnings estimates for U.S. companies at a record pace

By Roben Farzad

For years, the rap on Wall Street securities analysts was that they were shills, reflexively producing upbeat research on companies they cover to help their employers win investment banking business. The dynamic was well understood: Let my bank take your company public, or advise it on this acquisition, and—wink, wink—I will recommend your stock through thick or thin. After the Internet bubble burst, that was supposed to change. In April 2003 the Securities & Exchange Commission reached a settlement with 10 Wall Street firms in which they agreed, among other things, to separate research from investment banking.

Seven years on, Wall Street analysts remain a decidedly optimistic lot. Some economists look at the global economy and see troubles—the European debt crisis, persistently high unemployment worldwide, and housing woes in the U.S. Stock analysts as a group seem unfazed. Projected 2010 profit growth for companies in the Standard & Poor's 500-stock index has climbed seven percentage points this quarter, to 34 percent, data compiled by Bloomberg show. According to Sanford C. Bernstein (AB), that's the fastest pace since 1980, when the Dow Jones industrial average was quoted in the hundreds and Nancy Reagan was getting ready to order new window treatments for the Oval Office.

Among the companies analysts expect to excel: Intel (INTL) is projected to post an increase in net income of 142 percent this year. Caterpillar, a multinational that gets much of its revenue abroad, is expected to boost its net income by 47 percent this year. Analysts have also hiked their S&P 500 profit estimate for 2011 to $95.53 a share, up from $92.45 at the beginning of January, according to Bloomberg data. That would be a record, surpassing the previous high reached in 2007.

With such prospects, it's not surprising that more than half of S&P 500-listed stocks boast overall buy ratings. It is telling that the proportion has essentially held constant at both the market's October 2007 high and March 2009 low, bookends of a period that saw stocks fall by more than half. If the analysts are correct, the market would appear to be attractively priced right now. Using the $95.53 per share figure, the price-to-earnings ratio of the S&P 500 is a modest 11 as of June 9. If, however, analysts end up being too high by, say, 20 percent, the P/E would jump to almost 14.

If history is any guide, chances are good that the analysts are wrong. According to a recent McKinsey report by Marc Goedhart, Rishi Raj, and Abhishek Saxena, "Analysts have been persistently over-optimistic for 25 years," a stretch that saw them peg earnings growth at 10 percent to 12 percent a year when the actual number was ultimately 6 percent. "On average," the researchers note, "analysts' forecasts have been almost 100 percent too high," even after regulations were enacted to weed out conflicts and improve the rigor of their calculations. As the chart below shows, in most years analysts have been forced to lower their estimates after it became apparent they had set them too high.

While a few analysts, like Meredith Whitney, have made their names on bearish calls, most are chronically bullish. Part of the problem is that despite all the reforms they remain too aligned with the companies they cover. "Analysts still need to get the bulk of their information from companies, which have an incentive to be over-optimistic," says Stephen Bainbridge, a professor at UCLA Law School who specializes in the securities industry. "Meanwhile, analysts don't want to threaten that ongoing access by being too negative." Bainbridge says that with the era of the overpaid, superstar analyst long over, today's job description calls for resisting the urge to be an iconoclast. "It's a matter of herd behavior," he says.

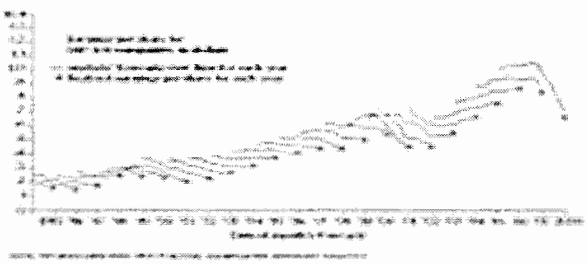
So what's a more plausible estimate of companies' earning power? Looking at factors including the strengthening dollar, which hurts exports, and higher corporate borrowing costs, David Rosenberg, chief economist at Toronto-based investment shop Gluskin Sheff + Associates, says "disappointment looms." Bernstein's Adam Parker says every 10 percent drop in the value of the euro knocks U.S. corporate earnings down by 2.5 percent to 3 percent. He sees the S&P 500 earning $86 a share next year.

As realities hit home, "It's only natural that analysts will have to revise down their views," says Todd Salamone, senior vice-president at Schaeffer's Investment Research. The market may be making its own downward adjustment, as the S&P 500 has already fallen 14 percent from its high in April. If precedent holds, analysts are bound to curb their enthusiasm belatedly, telling us next year what we really needed to know this year.

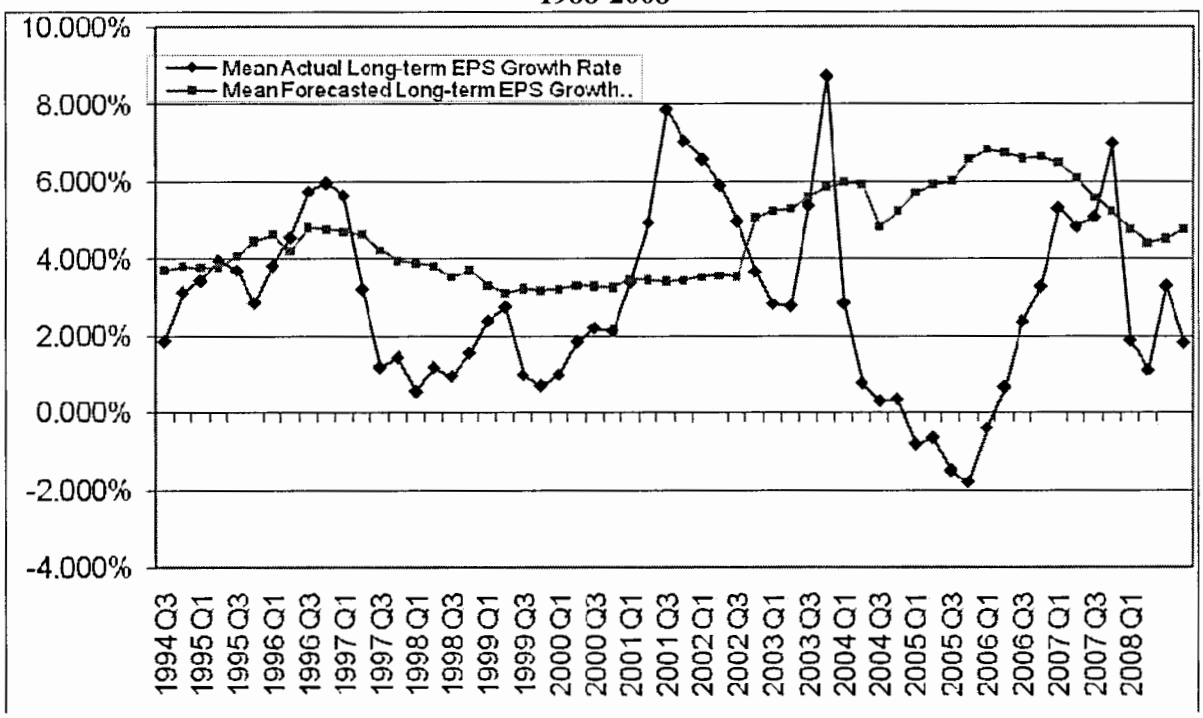
The bottom line: *Despite reforms intended to improve Wall Street research, stock analysts seem to be promoting an overly rosy view of profit prospects.*

Bloomberg Businessweek Senior Writer Farzad covers Wall Street and international finance.

The Earnings Roller Coaster

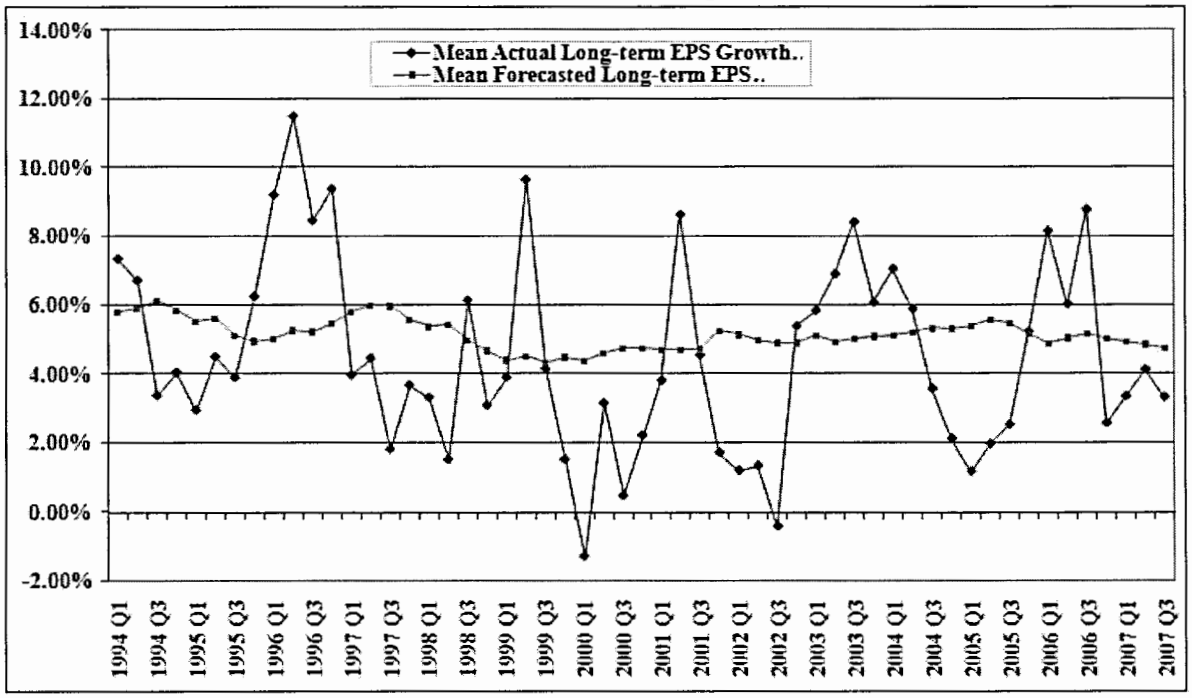


Panel A
Long-Term Forecasted Versus Actual EPS Growth Rates
Electric Utility Companies
1988-2008



Data Source: IBES

Panel B
Long-Term Forecasted Versus Actual EPS Growth Rates
Gas Distribution Companies



Panel A
Value Line 3-5 year EPS Growth Rate Forecasts

	Average Projected EPS Growth rate	Number of Negative EPS Growth Projections	Percent of Negative EPS Growth Projections
2,333 Companies	14.70%	43	1.80%

Value Line Investment Survey, June, 2012

Panel B
Historical Five-Year EPS Growth Rates for Value Line Companies

	Average Historical EPS Growth rate	Number with Negative Historical EPS Growth	Percent with Negative Historical EPS Growth
2,219 Companies	3.90%	844	38.00%

Value Line Investment Survey, June, 2012

EXHIBITS

JRW C1
Pages 1 thru 5

Exhibit JRW-C1

Decomposing Equity Market Returns
The Building Blocks Methodology

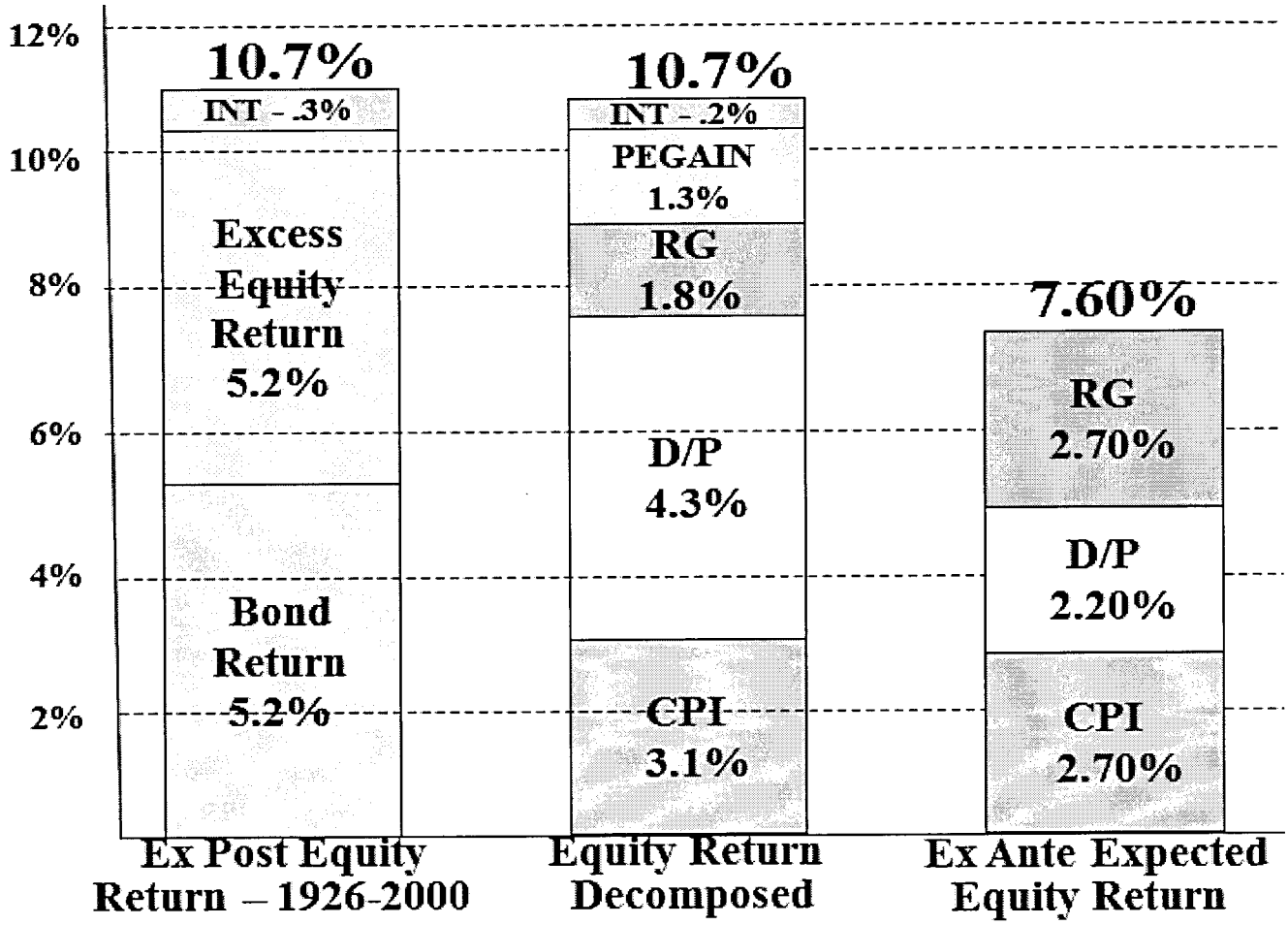


Exhibit JRW-C1

2012 Survey of Professional Forecasters
Philadelphia Federal Reserve Bank
Long-Term Forecasts

Table Seven
LONG-TERM (10 YEAR) FORECASTS

Panel A

SERIES: CPI INFLATION RATE	
STATISTIC	
MINIMUM	0.99
LOWER QUARTILE	2.10
MEDIAN	2.30
UPPER QUARTILE	2.70
MAXIMUM	6.40
MEAN	2.49
STD. DEV.	0.84
N	37
MISSING	8

Panel B

SERIES: REAL GDP GROWTH RATE	
STATISTIC	
MINIMUM	1.90
LOWER QUARTILE	2.50
MEDIAN	2.64
UPPER QUARTILE	2.90
MAXIMUM	3.75
MEAN	2.67
STD. DEV.	0.41
N	37
MISSING	8

Panel C

SERIES: PRODUCTIVITY GROWTH	
STATISTIC	
MINIMUM	1.20
LOWER QUARTILE	1.60
MEDIAN	1.85
UPPER QUARTILE	2.10
MAXIMUM	3.10
MEAN	1.93
STD. DEV.	0.45
N	26
MISSING	19

Panel D

SERIES: STOCK RETURNS (S&P 500)	
STATISTIC	
MINIMUM	4.00
LOWER QUARTILE	5.00
MEDIAN	6.80
UPPER QUARTILE	7.60
MAXIMUM	9.20
MEAN	6.30
STD. DEV.	1.54
N	19
MISSING	26

Panel E

SERIES: BOND RETURNS (10-YEAR)	
STATISTIC	
MINIMUM	-2.00
LOWER QUARTILE	3.40
MEDIAN	4.00
UPPER QUARTILE	4.50
MAXIMUM	8.40
MEAN	3.83
STD. DEV.	1.72
N	26
MISSING	19

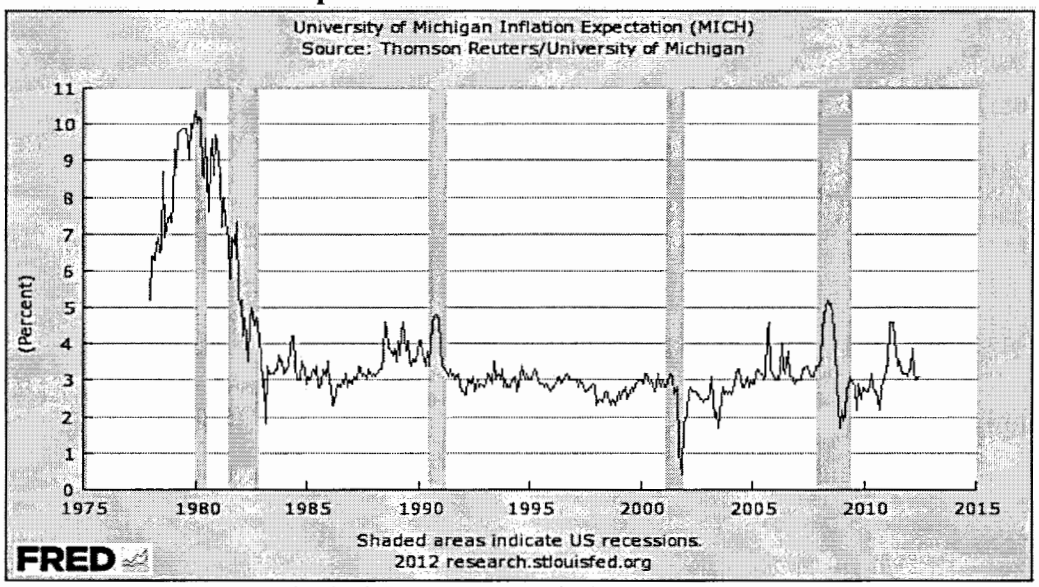
Panel F

SERIES: BILL RETURNS (3-MONTH)	
STATISTIC	
MINIMUM	-2.00
LOWER QUARTILE	2.75
MEDIAN	3.00
UPPER QUARTILE	3.31
MAXIMUM	4.75
MEAN	2.93
STD. DEV.	1.13
N	30
MISSING	13

Source: Philadelphia Federal Researve Bank, Survey of Professional Forecasters, February 10, 2012.

Exhibit JRW-C1

University of Michigan Survey Research Center
Expected Short-Term Inflation Rate

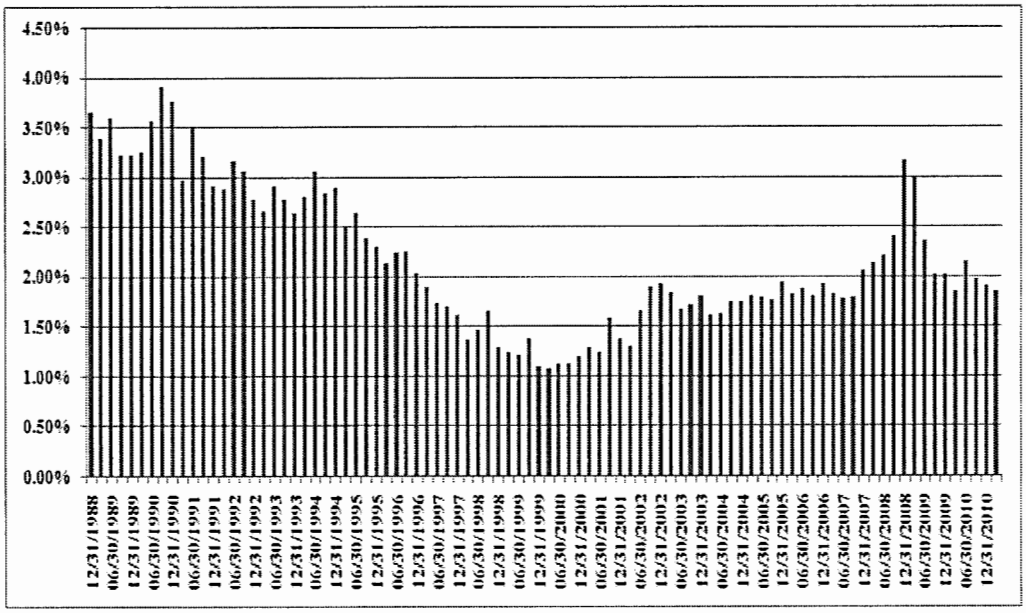


Data Source: http://research.stlouisfed.org/fred2/series/MICH?cid=98

Exhibit JRW-C1

Decomposing Equity Market Returns
The Building Blocks Methodology

S&P 500 Dividend Yield



S&P 500 P/E Ratio

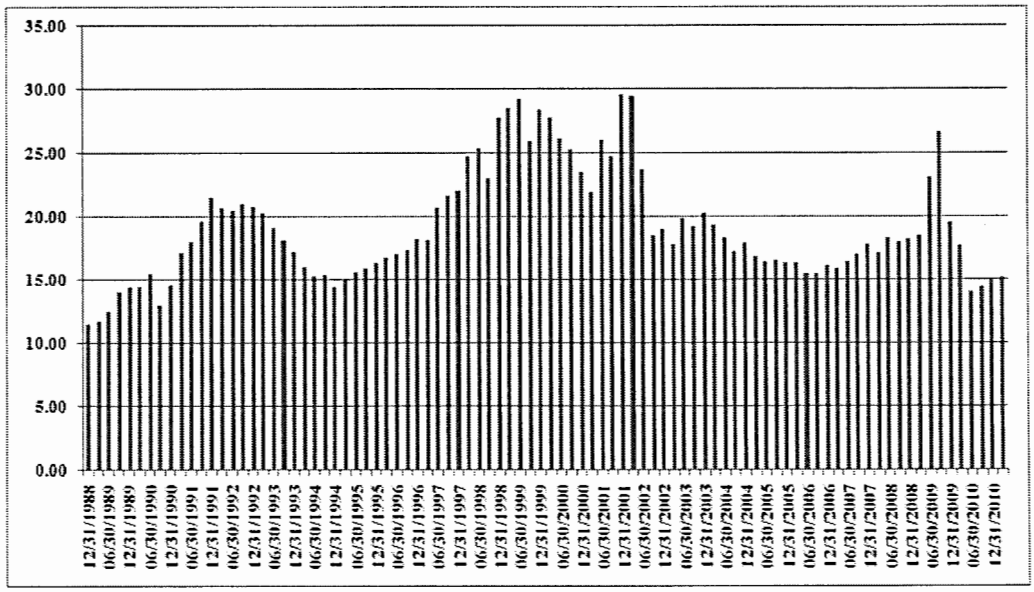


Exhibit JRW-C1

Real S&P 500 EPS Growth Rate

Year	S&P 500 EPS	Annual Inflation CPI	Inflation Adjustment Factor	Real S&P 500 EPS	
1960	3.10	1.48		3.10	
1961	3.37	0.07	1.01	3.35	
1962	3.67	1.22	1.02	3.59	
1963	4.13	1.65	1.04	3.99	
1964	4.76	1.19	1.05	4.55	
1965	5.30	1.92	1.07	4.97	
1966	5.41	3.35	1.10	4.90	
1967	5.46	3.04	1.14	4.80	
1968	5.72	4.72	1.19	4.81	
1969	6.10	6.11	1.26	4.83	10-Year
1970	5.51	5.49	1.34	4.13	2.89%
1971	5.57	3.36	1.38	4.04	
1972	6.17	3.41	1.43	4.33	
1973	7.96	8.80	1.55	5.13	
1974	9.35	12.20	1.74	5.37	
1975	7.71	7.01	1.86	4.14	
1976	9.75	4.81	1.95	4.99	
1977	10.87	6.77	2.08	5.22	
1978	11.64	9.03	2.27	5.13	
1979	14.55	13.31	2.57	5.66	10-Year
1980	14.99	12.40	2.89	5.18	2.30%
1981	15.18	8.94	3.15	4.82	
1982	13.82	3.87	3.27	4.23	
1983	13.29	3.80	3.40	3.91	
1984	16.84	3.95	3.53	4.77	
1985	15.68	3.77	3.66	4.28	
1986	14.43	1.13	3.70	3.90	
1987	16.04	4.41	3.87	4.15	
1988	22.77	4.42	4.04	5.64	
1989	24.03	4.65	4.22	5.69	10-Year
1990	21.73	6.11	4.48	4.85	-0.65%
1991	19.10	3.06	4.62	4.14	
1992	18.13	2.90	4.75	3.81	
1993	19.82	2.75	4.88	4.06	
1994	27.05	2.67	5.01	5.40	
1995	35.35	2.54	5.14	6.88	
1996	35.78	3.32	5.31	6.74	
1997	39.56	1.70	5.40	7.33	
1998	38.23	1.61	5.48	6.97	
1999	45.17	2.68	5.63	8.02	10-Year
2000	52.00	3.39	5.82	8.93	6.29%
2001	44.23	1.55	5.92	7.48	
2002	47.24	2.38	6.06	7.80	
2003	54.15	1.88	6.17	8.77	
2004	67.01	3.26	6.37	10.51	
2005	68.32	3.42	6.60	10.35	
2006	81.96	2.54	6.77	12.11	
2007	87.51	4.08	7.04	12.43	
2008	65.39	0.09	7.05	9.28	
2009	59.65	2.72	7.24	8.24	10-Year
2010	83.66	1.50	7.35	11.39	2.46%
2011	97.05	2.96	7.57	12.83	
Data Source: http://pages.stern.nyu.edu/~adamodar/				Real EPS Growth	**2.8%**

CERTIFICATE OF SERVICE

12-KCPE-764-RTS

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