Exhibit No.:

Issue: Cost of Capital

Witness: Samuel C. Hadaway

Type of Exhibit: Direct Testimony

Sponsoring Party: KCP&L Greater Missouri

Operations Company

Case No.: ER-2010-

Date Testimony Prepared: June 4, 2010

#### MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2010-\_\_\_\_

#### **DIRECT TESTIMONY**

**OF** 

#### SAMUEL C. HADAWAY

#### ON BEHALF OF

### KCP&L GREATER MISSOURI OPERATIONS COMPANY

June 2010

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Has Been Removed.
Certain Schedules Attached To This Testimony Designated "(HC)"
Have Been Removed
Pursuant To 4 CSR 240-2,135.

### DIRECT TESTIMONY

OF

### SAMUEL C. HADAWAY

# Case No. ER-2010-\_\_\_\_

1		I. <u>INTRODUCTION AND SUMMARY OF RECOMMENDATIONS</u>
2	Q.	Please state your name and business address.
3	A.	My name is Samuel C. Hadaway and my business address is FINANCO, Inc., 3520
4		Executive Center Drive, Suite 124, Austin, Texas 78731.
5	Q.	On whose behalf are you testifying?
6	A.	I am testifying on behalf of KCP&L Greater Missouri Operations Company ("GMO"
7		or the "Company").
8	Q.	Please state your educational background and describe your professional
9		training and experience.
10	A.	I have a bachelor's degree in economics from Southern Methodist University, as well
11		as M.B.A. and Ph.D. degrees with concentrations in finance and economics from the
12		University of Texas at Austin ("UT Austin"). I am an owner and full-time employee
13		of FINANCO, Inc. FINANCO provides financial research concerning the cost of
14		capital and financial condition for regulated companies as well as financial modeling
15		and other economic studies in litigation support. In addition to my work at
16		FINANCO, I have served as an adjunct professor in the McCombs School of
17		Business at UT Austin and in what is now the McCoy College of Business at Texas
18		State University. In my prior academic work, I taught economics and finance courses
19		and I conducted research and directed graduate students in the areas of investments
20		and capital market research. I was previously Director of the Economic Research

Division at the Public Utility Commission of Texas ("Texas Commission") where I supervised the Texas Commission's finance, economics, and accounting staff, and served as the Texas Commission's chief financial witness in electric and telephone rate cases. I have taught courses at various utility conferences on cost of capital, capital structure, utility financial condition, and cost allocation and rate design issues. I have made presentations before the New York Society of Security Analysts, the National Rate of Return Analysts Forum, and various other professional and legislative groups. I have served as a vice president and on the board of directors of the Financial Management Association.

A list of my publications and testimony I have given before various regulatory bodies and in state and federal courts is contained in my resume, which is included as Appendix A.

- 13 Q. Have you previously testified before the Missouri Public Service Commission

  14 ("MPSC" or "Commission") or other utility regulatory agencies?
- 15 A. Yes. I have testified before the MPSC and numerous other regulatory commissions 16 on cost of capital and related financial issues.
- 17 Q. What is the purpose of your testimony?

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- 18 A. The purpose of my testimony is to estimate GMO's required rate of return on equity
  19 ("ROE") and to support the Company's requested capital structure and overall rate of
  20 return.
- 21 Q. Please outline and describe the testimony you will present.
- A. My testimony is divided into five additional sections. Following this introduction, in Section II, I discuss the impact on ROE of GMO's fuel adjustment clause ("FAC").

In Section III, I present and explain the Company's requested capital structure and overall cost of capital. In Section IV, I review various methods for estimating the cost of equity. In this section, I discuss the discounted cash flow ("DCF") model, as well as risk premium methods and other approaches that are often used to estimate the cost of capital. In Section V, I review general capital market costs and conditions, and discuss recent developments in the electric utility industry that affect the cost of capital. In Section VI, I discuss the details of my cost of equity studies and provide a summary table of my ROE results.

### 9 Q. Please describe the general approach you use in your cost of equity studies.

A.

First, my recommendation is premised upon the fair rate of return principles established by the U.S. Supreme Court in Federal Power Comm'n v. Hope Natural Gas Co., 320 US 591, 603 (1944) ("Hope") and Bluefield Water Works & Improvements Co. v. Public Service Commission, 262 US 679, 693 (1923) ("Bluefield"). That is to say, a utility's return authorized by a regulatory body, such as the MPSC, should be commensurate with returns on investments in other enterprises having corresponding risks. The return should also be sufficient to assure confidence in the financial integrity of the utility so as to maintain its credit, and to attract capital so that it is able to properly discharge its public duties. Given these legal principles, I have reviewed several methods to determine an appropriate ROE and overall rate of return for GMO. These methods and the underlying economic models are applied to an investment grade company reference group of other electric utilities generally similar to GMO.

### Q. Please explain your analysis in arriving at a recommended ROE for GMO.

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My ROE estimate is based on alternative versions of the constant growth and multistage growth DCF model. I also provide a bond-yield-plus-equity risk premium analysis and I review economic conditions and interest rates that are expected to prevail during the coming year. Because GMO is a wholly-owned subsidiary of Great Plains Energy Incorporated ("GPE") and does not have publicly traded common stock or other independent market data, its cost of equity cannot be estimated directly. For this reason, I apply the DCF model to a large reference group of investment grade electric utilities selected from the Value Line Investment Survey ("Value Line"). Value Line is a widely-followed, reputable source of financial data often used by professional economists to estimate ROE. To be included in my group, the reference companies must have at least a triple-B (investment grade) bond rating: they must derive at least 70 percent of revenues from regulated utility sales; they must have consistent financial records not affected by recent mergers or restructuring; and they must have a consistent dividend record with no dividend cuts within the past The fundamental characteristics of the companies in my comparable group are summarized in Schedule SCH-1, page 1.

I also conducted a risk premium analysis based on ROEs allowed by state regulators relative to Moody's average utility debt costs. In this analysis, I considered both current utility bond yields and the higher interest rates that Standard and Poor's ("S&P") is forecasting for the coming year. S&P forecasts that long-term government and corporate interest rates will increase from current levels by 30 basis

1	points (0.30%) during 2010. The data sources and the details of my cost of equity
2	studies are contained in my Schedules SCH-1 through SCH-6.

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- Q. Please state your ROE recommendation and summarize the results of your cost of equity studies.
- 5 I estimate the midpoint cost of equity for my comparable group to be 10.75 percent. A. 6 My DCF analysis indicates that an ROE range of 10.5 percent to 11.0 percent is 7 appropriate. My risk premium analysis indicates an ROE range of 10.61 percent to 8 10.82 percent. Based on these quantitative results and my further review of other 9 economic data, the reasonable comparable group midpoint ROE is 10.75 percent. As 10 discussed in the testimony of Company witness Curtis Blanc, the Company is 11 requesting an ROE of 11.0 percent commensurate with the top of my DCF range to 12 reflect the Company's reliability and customer satisfaction achievements.

# II. <u>IMPACT OF GMO'S FUEL ADJUSTMENT CLAUSE ON ROE</u>

- Q. Have you considered the effect of GMO'S FAC on the Company's business risk
   profile and its required ROE?
  - Yes. I have considered the effect of GMO's FAC from several perspectives, and I have concluded from my analysis that no adjustment to ROE should be made. Most important, the continuation of GMO's FAC makes GMO's business risk profile more similar to the risk profiles of the comparable companies that I used to estimate ROE.

All of the companies in my 31-company comparable group have fuel and purchased power adjustment mechanisms. Schedule SCH-1, pages 2-3 lists the companies and shows their cost recovery mechanisms at the operating company level. From this perspective, no adjustment to the base ROE obtained from the comparable

- 1 company group should be applied to GMO. In fact, without the FAC, GMO's
- 2 business risk profile would be higher than that of the average comparable company.

## 3 III. GMO CAPITAL STRUCTURE AND OVERALL RATE OF RETURN

- 4 Q. Please summarize the Company's requested capital structure and overall rate of
- 5 return.
- 6 A. The requested capital structure components and the resulting overall rate of return are
  7 presented in Table 1 below:

ð	f T	lable 1						
9	Requested C	Requested Capital Structure						
10	Capital Components	Ratio	Cost	Weighted Cost				
11	Debt	48.69%	6.73%	3.28%				
12	Equity-linked convertible deb	t 4.53%	13.59%	0.62%				
13	Preferred stock	0.62%	4.29%	0.03%				
14	Common equity	46.16%	11.00%	5.07%				
15	TOTAL	100.00%		9.00%				

- Q. What is the basis for the Company's requested capital structure and overall rateof return?
- 18 A. The requested capital structure, as well as the costs for debt and preferred stock, are
  19 consistent with GPE's projected capital structure at December 31, 2010. These data
  20 are presented in more detail in Schedule SCH2010-2, with the December 31, 2010
  21 summary shown on page 8 of that schedule. Using the parent company's consolidated
  22 capital structure is consistent with GMO's approach in its prior rate cases.

1	Q.	What are the key differences between GPE's actual capital structure as of						
2		December 31, 2009 and the requested capital structure, projected as of						
3		December 31, 2010?						
4	A.	The actual GPE capital structure as of December 31, 2009, is shown on page 2 of						
5		Schedule SCH2010-2. The key differences between the actual capital structure and						
6		the requested capital structure, projected as of December 31, 2010, are as follows:						
7		Long-Term Debt						
8		Net Long-Term Debt is projected to increase by ** million due to additional						
9		long-term debt expected to be issued by year-end 2010 to refinance maturing GMO						
10		long-term debt and finance construction expenditures.						
11		<u>Equity</u>						
12		Equity is projected to increase by ** million, which is driven primarily by a						
13		projected increase in retained earnings and a small amount of equity issued by GPE						
14		through the dividend reinvestment and direct stock purchase plan and company						
15		benefit plans.						
16		IV. ESTIMATING THE COST OF EQUITY CAPITAL						
17	Q.	What is the purpose of this section of your testimony?						
18	A.	The purpose of this section of my testimony is to present a general definition of the						
19		cost of equity and to compare the strengths and weaknesses of several of the most						
20		widely used methods for estimating the cost of equity. Estimating the cost of equity						
21		is fundamentally a matter of informed judgment. The various models provide a						
22		concrete link to actual capital market data and assist with defining the various						
23		relationships that underlie the ROE estimation process.						

Q. Please define the term "cost of equity capital" and provide an overview of the
 cost estimation process.

A.

The cost of equity capital is the profit or rate of return that equity investors expect to receive. In concept it is no different than the cost of debt or the cost of preferred stock. The cost of equity is the rate of return that common stockholders expect, just as interest on bonds and dividends on preferred stock are the returns that investors in those securities expect. Equity investors expect a return on their capital commensurate with the risks they take, consistent with returns that are available from other similar investments. Unlike returns from debt and preferred stocks, however, the equity return is not directly observable in advance and, therefore, it must be estimated or inferred from capital market data and trading activity.

An example helps to illustrate the cost of equity concept. Assume that an investor buys a share of common stock for \$20 per share. If the stock's expected dividend is \$1.00, the expected dividend yield is 5.0 percent (\$1.00 / \$20 = 5.0 percent). If the stock price is also expected to increase to \$21.20 after one year, this \$1.20 expected gain adds an additional 6.0 percent to the expected total rate of return (\$1.20 / \$20 = 6.0 percent). Therefore, when buying the stock at \$20 per share, the investor expects a total return of 11.0 percent: 5.0 percent dividend yield, plus 6.0 percent price appreciation. In this example, the total expected rate of return at 11.0 percent is the appropriate measure of the cost of equity capital, because it is this rate of return that caused the investor to commit the \$20 of equity capital in the first place. If the stock were riskier, or if expected returns from other investments were higher,

investors would require a higher rate of return from the stock, which would result in a lower initial purchase price in market trading.

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Each day market rates of return and prices change to reflect new investor expectations and requirements. For example, when interest rates on bonds and savings accounts rise, utility stock prices usually fall. This is true, at least in part, because higher interest rates on these alternative investments make utility stocks relatively less attractive, which causes utility stock prices to decline in market trading. This competitive market adjustment process is quick and continuous, so that market prices generally reflect investor expectations and the relative attractiveness of one investment versus another. In this context, to estimate the cost of equity one must apply informed judgment about the relative risk of the company in question and knowledge about the risk and expected rate of return characteristics of other available investments as well.

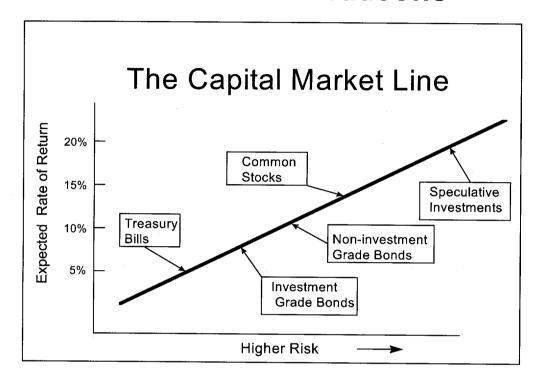
# Q. How does the market account for risk differences among the various investments?

Risk-return tradeoffs among capital market investments have been the subject of extensive financial research. Literally dozens of textbooks and hundreds of academic articles have addressed the issue. Generally, such research confirms the common sense conclusion that investors will take additional risks only if they expect to receive a higher rate of return. Empirical tests consistently show that returns from low risk securities, such as U.S. Treasury bills, are the lowest; that returns from longer-term Treasury bonds and corporate bonds are increasingly higher as risks increase; and, generally, returns from common stocks and other more risky investments are even

1	higher. These observations provide a sound theoretical foundation for both the DCF
2	and risk premium methods for estimating the cost of equity capital. These methods
3	attempt to capture the well founded risk-return principle and explicitly measure
4	investors' rate of return requirements.

- 5 Q. Can you illustrate the capital market risk-return principle that you just described?
- Yes. The following graph depicts the risk-return relationship that has become widely known as the Capital Market Line ("CML"). The CML offers a graphical representation of the capital market risk-return principle. The graph is not meant to illustrate the actual expected rate of return for any particular investment, but merely to illustrate in a general way the risk-return relationship.

# **Risk-Return Tradeoffs**



As a continuum, the CML can be viewed as an available opportunity set for investors. Those investors with low risk tolerance or investment objectives that mandate a low risk profile should invest in assets depicted in the lower left-hand portion of the graph. Investments in this area, such as Treasury bills and short-maturity, high quality corporate commercial paper, offer a high degree of investor certainty. In nominal terms (before considering the potential effects of inflation), such assets are virtually risk-free.

Investment risks increase as one moves up and to the right along the CML. A higher degree of uncertainty exists about the level of investment value at any point in time and about the level of income payments that may be received. Among these

investments are long-term bonds and preferred stocks, which offer priority claims to assets and income payments. They are relatively low risk, but they are not risk-free. The market value of long-term bonds, even those issued by the U.S. Treasury, often fluctuates widely when government policies or other factors cause interest rates to change.

Farther up the CML continuum, common stocks are exposed to even more risk, depending on the nature of the underlying business and the financial strength of the issuing corporation. Common stock risks include market-wide factors, such as general changes in capital costs, as well as industry and company specific elements that may add further to the volatility of a given company's performance. As I will illustrate in my risk premium analysis, common stocks typically are more volatile and have higher risk than high quality bond investments and, therefore, they reside above and to the right of bonds on the CML graph. Other more speculative investments, such as stock options and commodity futures contracts, offer even higher risks (and higher potential returns). The CML's depiction of the risk-return tradeoffs available in the capital markets provides a useful perspective for estimating investors' required rates of return.

# Q. How is the fair rate of return in the regulatory process related to the estimated cost of equity capital?

- 20 A. The regulatory process is guided by fair rate of return principles established in the
  21 U.S. Supreme Court cases, *Bluefield* and *Hope*:
  - A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business

undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. Bluefield Water Works & Improvement Company v. Public Service Commission of West Virginia, 262 U.S. 679, 692-693 (1923).

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From the investor or company point of view, it is important that there be enough revenue not only for operating expenses, but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591, 603 (1944).

- Based on these principles, the fair rate of return should closely parallel investor opportunity costs as discussed above. If a utility earns its market cost of equity, neither its stockholders nor its customers should be disadvantaged.
- What specific methods and capital market data are used to evaluate the cost of equity?
- A. Techniques for estimating the cost of equity normally fall into three groups:

  comparable earnings methods, risk premium methods, and DCF methods.
- Q. Please describe the first set of estimation techniques, the comparable earnings
   methods.
- 25 A. The comparable earnings methods have evolved over time. The original comparable
  26 earnings methods were based on book accounting returns. This approach developed
  27 ROE estimates by reviewing accounting returns for unregulated companies thought to
  28 have risks similar to those of the regulated company in question. These methods have
  29 generally been rejected because they assume that the unregulated group is earning its
  30 actual cost of capital, and that its equity book value is the same as its market value.

In most situations these assumptions are not valid, and, therefore, accounting-based methods do not generally provide reliable cost of equity estimates.

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More recent comparable earnings methods are based on historical stock market returns rather than book accounting returns. While this approach has some merit, it too has been criticized because there can be no assurance that historical returns actually reflect current or future market requirements. Also, in practical application, earned market returns tend to fluctuate widely from year to year. For these reasons, a current cost of equity estimate (based on the DCF model or a risk premium analysis) is usually required.

# Q. Please describe the second set of estimation techniques, the risk premium methods.

The risk premium methods begin with currently observable market returns, such as yields on government or corporate bonds, and add an increment to account for the additional equity risk. The capital asset pricing model ("CAPM") and arbitrage pricing theory ("APT") model are more sophisticated risk premium approaches. The CAPM and APT methods estimate the cost of equity directly by combining the "risk-free" government bond rate with explicit risk measures to determine the risk premium required by the market. Although these methods are widely used in academic cost of capital research, their additional data requirements and their potentially questionable underlying assumptions have detracted from their use in most regulatory jurisdictions. The basic risk premium methods provide a useful parallel approach with the DCF model and assure consistency with other capital market data consistency in the cost of equity cost estimation process.

- 1 Q. Please describe the third set of estimation techniques, based on the DCF model.
- 2 A. The DCF model is the most widely used regulatory cost of equity estimation method.
- 3 Like the risk premium approach, the DCF model has a sound basis in theory, and
- 4 many argue that it has the additional advantage of simplicity. I will describe the DCF
- 5 model in detail below, but in essence its estimate of ROE is simply the sum of the
- 6 expected dividend yield and the expected long-term dividend (or price) growth rate.
- While dividend yields are easy to obtain, estimating long-term growth is more
- 8 difficult. Because the constant growth DCF model also requires very long-term
- growth estimates (technically to infinity), some argue that its application is too
- speculative to provide reliable results, resulting in the preference for the multistage
- growth DCF analysis.
- 12 Q. Of the three estimation methods, which do you believe provides the most reliable
- results?
- 14 A. From my experience, a combination of DCF and risk premium methods provides the
- most reliable approach. While the caveat about estimating long-term growth must be
- observed, the DCF model's other inputs are readily obtainable, and the model's results
- 17 typically are consistent with capital market behavior. The risk premium methods
- provide a good parallel approach to the DCF model and further ensure that current
- market conditions are accurately reflected in the cost of equity estimate.
- 20 Q. Please explain the DCF model.
- 21 A. The DCF model is predicated on the concept that stock prices represent the present
- value or discounted value of all future dividends that investors expect to receive. In
- the most general form, the DCF model is expressed in the following formula:

 $P_0 = D_1/(1+k) + D_2/(1+k)^2 + ... + D_{\infty}/(1+k)^{\infty}$  (1)

where  $P_0$  is today's stock price;  $D_1$ ,  $D_2$ , etc. are all future dividends and k is the discount rate, or the investor's required rate of return on equity. Equation (1) is a routine present value calculation based on the assumption that the stock's price is the present value of all dividends expected to be paid in the future.

Under the additional assumption that dividends are expected to grow at a constant rate "g" and that k is strictly greater than g, equation (1) can be solved for k and rearranged into the simple form:

$$k = D_1/P_0 + g \tag{2}$$

Equation (2) is the familiar constant growth DCF model for cost of equity estimation, where  $D_1/P_0$  is the expected dividend yield and g is the long-term expected dividend growth rate.

- Q. Are there circumstances where the constant growth model may not give reliable results?
- Yes. Under circumstances when growth rates are expected to fluctuate or when future growth rates are highly uncertain, the constant growth model may not give reliable results. Although the DCF model itself is still valid, i.e., equation (1) is mathematically correct, under such circumstances the simplified form of the model must be modified to capture market expectations accurately.

Recent events and current market conditions in the electric utility industry as discussed later appear to challenge the constant growth assumption of the traditional DCF model. Since the mid-1980s, dividend growth expectations for many electric utilities have fluctuated widely. In fact, over one-third of the electric utilities in the

U.S. have reduced or eliminated their common dividends over this time period. Some of these companies have re-established their dividends, producing exceptionally high growth rates. Under these circumstances, long-term growth rate estimates may be highly uncertain, and estimating a reliable "constant" growth rate for many companies is often difficult.

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# 6 Q. Can the DCF model be applied when the constant growth assumption is violated?

Yes. When growth expectations are uncertain, the more general version of the model represented in equation (1) should be solved explicitly over a finite "transition" period while uncertainty prevails. The constant growth version of the model can then be applied after the transition period, under the assumption that more stable conditions will prevail in the future. There are two alternatives for dealing with the nonconstant growth transition period.

Under the "terminal price" nonconstant growth approach, equation (1) is written in a slightly different form:

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$$P_0 = D_1/(1+k) + D_2/(1+k)^2 + ... + P_T/(1+k)^T$$
 (3)

where the variables are the same as in equation (1) except that  $P_T$  is the estimated stock price at the end of the transition period T. Under the assumption that normal growth resumes after the transition period, the price  $P_T$  is then expected to be based on constant growth assumptions. With the terminal price approach, the estimated cost of equity, k, is just the rate of return that investors would expect to earn if they bought the stock at today's market price, held it and received dividends through the transition period (until period T), and then sold it for price  $P_T$ . In this approach, the

- analyst's task is to estimate the rate of return that investors expect to receive given the current level of market prices they are willing to pay.
- What is the other alternative for dealing with the nonconstant growth transition
  period?
- 5 A. Under the "multistage" nonconstant growth approach, equation (1) is simply
  6 expanded to incorporate two or more growth rate periods, with the assumption that a
  7 permanent constant growth rate can be estimated for some point in the future:

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$$P_0 = D_0(1+g_1)/(1+k) + ... + D_2(1+g_2)^n/(1+k)^n +$$
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$$... + [D_T(1+g_T)^{(T+1)}/(k-g_T)]/(1+k)^T$$
(4)

where the variables are the same as in equation (1), but  $g_1$  represents the growth rate for the first period;  $D_2$  is the dividend at the beginning of the second period and  $g_2$  is the growth rate for the second period; and  $D_T$  is the dividend at the beginning of the third period and  $g_T$  is the growth rate for the period from year T (the end of the transition period) to infinity. The first two growth rates are simply estimates for fluctuating growth over "n" years (typically 5 or 10 years) and  $g_T$  is a constant growth rate assumed to prevail forever after year T. The difficult task for analysts in the multistage approach is determining the various growth rates for each period.

Although less convenient for exposition purposes, the nonconstant growth models are based on the same valid capital market assumptions as the constant growth version. The nonconstant growth approach simply requires more explicit data inputs and more work to solve for the discount rate, k. Fortunately, the required data are available from investment and economic forecasting services, and computer

- algorithms can easily produce the required solutions. Both constant and nonconstant
- 2 growth DCF analyses are presented in the following section.

#### 3 Q. Please explain the risk premium methodology.

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- 4 Risk premium methods are based on the assumption that equity securities are riskier A. 5 than debt and, therefore, that equity investors require a higher rate of return. This 6 basic premise is well supported by legal and economic distinctions between debt and 7 equity securities, and it is widely accepted as a fundamental capital market principle. 8 For example, debt holders' claims to the earnings and assets of the borrower have 9 priority over all claims of equity investors. The contractual interest on mortgage debt 10 must be paid in full before any dividends can be paid to shareholders, and secured mortgage claims must be fully satisfied before any assets can be distributed to 11 12 shareholders in bankruptcy. Also, the guaranteed, fixed-income nature of interest 13 payments makes year-to-year returns from bonds typically more stable than capital 14 gains and dividend payments on stocks. All these factors demonstrate the more risky position of stockholders and support the equity risk premium concept. 15
- Q. Are risk premium estimates of the cost of equity typically consistent with other
   current capital market costs?
  - A. Generally so, but as noted previously, the recent sharp decline in interest rates and continuing government intervention in the credit markets raise questions about the accuracy of current risk premium estimates of ROE. The risk premium approach is generally useful because it is founded on current market interest rates, which are directly observable.

## 23 Q. Is there consensus about how risk premium data should be employed?

No. In regulatory practice, there is often considerable debate about how risk premium data should be interpreted and used. Since the analyst's basic task is to gauge investors' required returns on long-term investments, some argue that the estimated equity spread should be based on the longest possible time period. Others argue that market relationships between debt and equity from several decades ago are irrelevant and that only recent debt-equity observations should be given any weight in estimating investor requirements. There is no consensus on this issue. Since analysts cannot observe or measure investors' expectations directly, it is not possible to know exactly how such expectations are formed or, therefore, to know exactly what time period is most appropriate in a risk premium analysis.

A.

A.

The important point is to answer the following question: "What rate of return should equity investors reasonably expect relative to returns that are currently available from long-term bonds?" The risk premium studies and analyses I discuss later address this question. My risk premium analysis is based on an intermediate position that avoids some of the problems and concerns that have been expressed about both very long and very short periods of analysis with the risk premium model.

# Q. Please summarize your discussion of cost of equity estimation techniques.

Estimating the cost of equity is one of the most controversial issues in utility ratemaking. Because actual investor requirements are not directly observable, several methods have been developed to assist in the estimation process. The comparable earnings method is the oldest but perhaps least reliable. Its use of accounting rates of return, or even historical market returns, may or may not reflect current investor

requirements. Differences in accounting methods among companies and issues of comparability also detract from this approach.

The DCF and risk premium methods have become the most widely accepted in regulatory practice. A combination of the DCF model and a review of risk premium data provides the most reliable cost of equity estimate. While the DCF model does require judgment about future growth rates, the dividend yield is straightforward, and the model's results are generally consistent with actual capital market behavior. For these reasons, I will rely on the DCF model and I will review risk premium estimates in the cost of equity studies that follow.

## V. FUNDAMENTAL FACTORS THAT AFFECT THE COST OF EQUITY

11 Q. What is the purpose of this section of your testimony?

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- 12 A. In this section, I review recent capital market conditions and industry and company13 specific factors that should be reflected in the cost of capital estimate.
- 14 Q. What has been the recent experience in the U.S. capital markets?
- In Schedule SCH-3, page 1, I provide a review of annual interest rates and rates of inflation in the U.S. economy over the past ten years. During that time inflation and fixed income market costs declined and, generally, have been lower than rates that prevailed in the previous decade. Inflation, as measured by the Consumer Price Index ("CPI"), was essentially zero percent in 2008 but increased to about a 3 percent annual rate in 2009. Over the past decade, the CPI has averaged 2.6 percent. This is lower than its long-run average of 3.5 percent to 4.0 percent.

Having reduced the Federal Funds overnight bank interest rate to virtually zero, the Federal Reserve System's current monetary policy options are limited.

During the period from mid-2004 until mid-2006, the Federal Reserve System increased the short-term Federal Funds interest rate 17 times, raising it from 1 percent to 5.25 percent. In late 2007, in response to the early turbulence in the sub-prime credit markets, the Federal Reserve Open Market Committee began aggressively reducing the Federal Funds rate. Since September 2007, the rate has been lowered eleven times to its current target level of between zero and one-quarter percent. While governmental policies and "flight to safety" issues have driven down interest rates on higher quality debt securities, the cost of equity for utilities has not declined to the same extent over the past year.

# 10 Q. Has the recent extreme turbulence in the capital markets increased the cost of capital for utilities?

A.

Yes. At various times since late 2008, the capital markets in the U.S. have been more turbulent than at any time since the 1930s. This period has seen frequent large daily moves in the stock market and conditions in the corporate debt market that, in late 2008 and parts of early 2009, could best be characterized as -chaotic. The S&P 500 and the Dow Jones Industrial Average have fluctuated by 50 percent since November 2007. In this environment, many large financial institutions such as Countrywide Financial, Washington Mutual, the Federal Home Loan Mortgage Association, the Federal National Mortgage Association, Wachovia, Bear Sterns, and Merrill Lynch were unable to survive as independent institutions. Lehman Brothers

<sup>&</sup>lt;sup>1</sup> The term "flight to safety" refers to the tendency for investors, during periods of market turbulence, to remove money from more risky investments, such as corporate bonds and stocks, and to put the money into government securities such as Treasury bills and bonds. The effect causes a reduction in the supply of funds to corporations and an increase in funds invested in government securities. The

was forced to file for bankruptcy. Other surviving institutions such as Citigroup,
Goldman Sachs, American International Group, Morgan Stanley and others have
required multibillion dollar capital infusions.

A.

Since October 2008, the Federal government has enacted emergency legislation and taken other steps to stabilize the economy. As part of that effort the government increased federal deposit insurance for banks, lent billions of dollars to financial institutions, purchased hundreds of billions of dollars in illiquid securities, guaranteed loans between financial institutions, and purchased equity in banks. There is no question that the economic and financial uncertainties generated by the credit crisis have significantly impacted the risks surrounding public utility company cost of capital.

# Q. Can you be more specific regarding the impact of the credit crisis on the cost of capital of public utilities?

Yes. In Schedule SCH-3, page 2, I provide data that illustrate the volatility that has occurred in the debt markets. The schedule shows that during the past 24 months triple-B spreads for utility companies were at more than twice previously existing levels. The month-by-month interest rates paid by triple-B rated utilities and the U.S. Treasury since January 2008 are presented in Schedule SCH-3, page 2. These interest rate data are summarized in Table 2 below.

result is wider "spreads" between corporate bond and government bond interest rates and higher capital costs for corporations.

Table 2
Long-Term Interest Rate Trends

	Triple-B	30-Year	Triple-B
Month	<b>Utility Rate</b>	Treasury Rate	<b>Utility Spread</b>
Jan-08	6.35	4.33	2.02
Feb-08	6.60	4.52	2.08
Mar-08	6.68	4.39	2.29
Apr-08	6.81	4.44	2.37
May-08	6.79	4.60	2.19
Jun-08	6.93	4.69	2.24
Jul-08	6.97	4.57	2.40
Aug-08	6.98	4.50	2.48
Sep-08	7.15	4.27	2.88
Oct-08	8.58	4.17	4.41
Nov-08	8.98	4.00	4.98
Dec-08	8.11	2.87	5.24
Jan-09	7.90	3.13	4.77
Feb-09	7.74	3.59	4.15
Mar-09	8.00	3.64	4.36
Apr-09	8.03	3.76	4.27
May-09	7.76	4.23	3.53
Jun-09	7.31	4.52	2.79
Jul-09	6.87	4.41	2.46
Aug-09	6.36	4.37	1.99
Sep-09	6.12	4.19	1.93
Oct-09	6.14	4.19	1.95
Nov-09	6.18	4.31	1.87
Dec-09	6.26	4.49	1.77
Jan-10	6.16	4.60	1.56
Feb-10	6.25	4.62	1.63
Mar-10	6.22	4.64	1.58
Apr-10	6.19	4.69	1.50
3-Mo Avg	6.22	4.65	1.57
12-Mo Avg	6.49	4.44	2.05
M	1 /77.85		

Mergent Bond Record (Utility Rates); www.federalreserve.gov (Treasury

Rates.) Three month average is February-April 2010.

Twelve month average is for May 2009- April 2010.

1

2

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The data in Table 2 vividly illustrate the market turmoil that has occurred. In fact, increased risk aversion and continuing market volatility have resulted in ongoing difficulties for many corporations. While the effects of the market turbulence may not be easily captured in financial models for estimating the rate of return, the

1	market's	turbulence	and	continuing	elevated	risk	aversion	should	be	considered
2	explicitly	in estimate	s of t	he cost of ea	quity capi	tal.				

- Q. Do the smaller spreads between triple-B utility bond yields and U.S. Treasury bonds mean that the markets have completely recovered from the economic turmoil that resulted from the financial crisis?
- A. No. While markets have stabilized relative to the near-chaotic conditions that existed in late 2008, investors remain concerned about high unemployment, the large federal government deficits that are being created, and the potential for further fallout from housing foreclosures and other remnants of the financial crisis. Although it is difficult to measure these effects directly, the data in Table 2 provide some perspective for the ongoing impacts.

Table 3								
Utility Bond Interest Rate Spreads								
Column 1 2 3								
	Aa	Baa	Baa minus					
Month	Utility	Utility	Aa					
Apr-07	5.83	6.24	0.41					
May-07	5.86	6.23	0.37					
Jun-07	6.18	6.54	0.36					
Jul-07	6.11	6.49	0.38					
Aug-07	6.11	6.51	0.40					
Sep-07	6.10	6.45	0.35					
Oct-07	6.04	6.36	0.32					
Nov-07	5.87	6.27	0.40					
Dec-07	6.03	6.51	0.48					
Jan-08	5.87	6.35	0.48					
Feb-08	6.04	6.60	0.56					
Mar-08	5.99	6.68	0.69					
Apr-08	5.99	6.81	0.82					
May-08	6.07	6.79	0.72					
Jun-08	6.19	6.93	0.74					
Jul-08	6.13	6.97	0.84					
Aug-08	6.09	6.98	0.89					
Sep-08	6.13	7.15	1.02					
Oct-08	6.95	8.58	1.63					
Nov-08	6.83	8.98	2.15					
Dec-08	5.92	8.11	2.19					
Jan-09	6.01	7.90	1.89					
Feb-09	6.11	7.74	1.63					
Mar-09	6.14	8.00	1.86					
Apr-09	6.19	8.03	1.84					
May-09	6.23	7.76	1.53					
Jun-09	6.13	7.31	1.18					
Jul-09	5.63	6.87	1.24					
Aug-09	5.33	6.36	1.03					
Sep-09	5.15	6.12	0.97					
Oct-09	5.23	6.14	0.91					
Nov-09	5.33	6.18	0.85					
Dec-09	5.52	6.26	0.74					
Jan-10	5.55	6.16	0.61					
Feb-10	5.69	6.25	0.56					
Mar-10	5.64	6.22	0.58					
Apr-10	5.62	6.19	0.57					
3-Mo Avg	5.65	6.22	0.57					
Source: Mergent Bond Record.								
Three-month average is for February through April 2010.								

The spreads between the highest quality Aa utility bond interest rates and Baa rates remain almost twice as wide as those that existed in 2007 before the financial crisis began. Like the Treasury bond yield spreads shown in Table 1, the Baa – Aa spreads have narrowed since late 2008 and early 2009, but they have not returned to the lower levels that existed in early 2007. These continuing wider spreads between the highest quality utility Aa bonds and minimum investment grade Baa bonds are an indication of heightened investor risk aversion caused by the continuing effects of the financial turmoil.

A.

### Q. What do forecasts for the economy and interest rates show for the coming year?

Expectations are beginning to move toward higher interest rates during the coming year. On February 18, 2010, the Federal Reserve (Fed) raised the Discount Rate from 0.50 percent to 0.75 percent. All members of the 12 Federal Reserve banks supported the decision. This is the first increase in any of the government administered interest rates since the Fed began its efforts to revive the economy in 2008.

Additional economic data and projections from S&P also point to higher rates. S&P's most recent *Trends & Projections* publication for April 2010 is presented in Schedule SCH-3, page 3. The S&P data reflect significant economic contraction during 2009. S&P indicates that real gross domestic product (GDP) declined by 2.4 percent during that year. However, GDP growth resumed in the 3rd Quarter of 2009, and for all of 2010, S&P expects real GDP to increase by 3.0 percent.

S&P also forecasts that long-term government and high grade corporate interest rates will rise somewhat from recent levels. The summary interest rate data

are presented in Table 4 below:

Table 4
Standard & Poor's Interest Rate Forecast

	(a)	(b)	(c)
	Average	Average	Average
	Apr 2010	2009	2010 Est.
Treasury Bills	0.2%	0.2%	0.3%
10-Yr. T-Bonds	3.9%	3.3%	4.1%
30-Yr. T-Bonds	4.7%	4.1%	5.0%
Aaa Corporate Bonds	5.3%	5.3%	5.7%

Sources: Column (a) from: www.federalreserve.gov, (Current Rates).

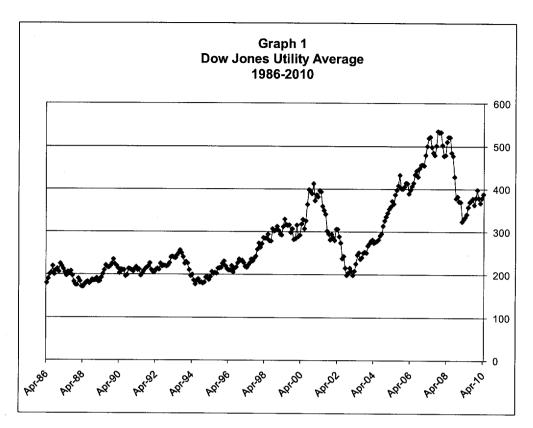
Columns (b) and (c) from: Standard & Poor's Trends & Projections, April

2010, page 8 (Projected Rates).

The data in Table 4 show that long-term Treasury interest rates during 2010 are projected to increase by 30 basis points from the average for April 2010. The rate on highest grade Aaa corporate bonds is expected to increase by 40 basis points. Although in the recently turbulent market environment it has been difficult to project interest rates, these market data offer perspective for judging the cost of capital in the present case.

# 20 Q. How have utility stocks performed during the past several years?

A. Utility stock prices have fluctuated widely. After reaching a level of over 400 in 2000, the Dow Jones Utility Average ("DJUA") dropped to about 200 by October 2002. From late 2002 until 2008, the DJUA trended upward. More recently, utility stock prices have dropped with the overall market decline. The current level for the DJUA is 25 percent below the record high levels attained in 2007. The wider fluctuations in more recent years are vividly illustrated in Graph 1, which depicts DJUA prices over the past 25 years.

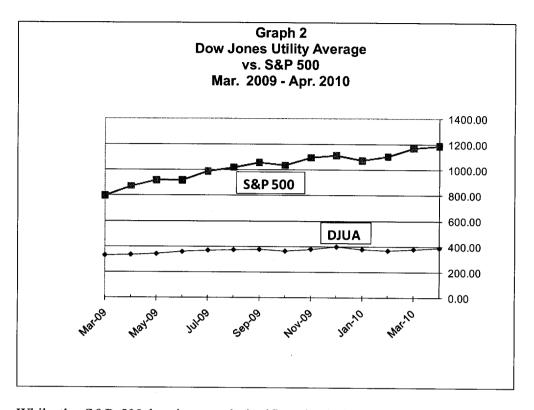


In this environment, investors' return expectations and requirements for providing capital to the utility industry remain high relative to the longer-term traditional view of the utility industry. Increased market volatility for utility shares causes investors to require a higher rate of return.

Q. How have utility stocks performed relative to the overall market recovery experienced during the past year?

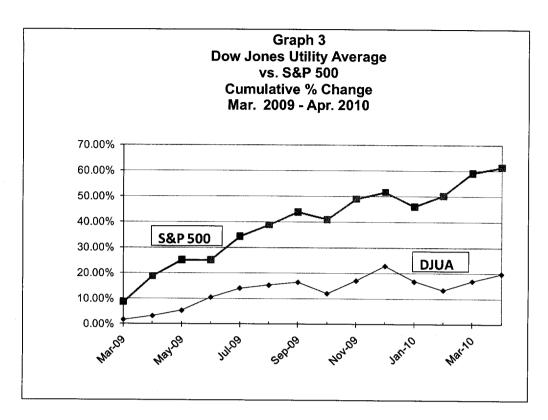
9 Utility stock prices have lagged significantly behind the overall market recovery.

Graph 2 shows the monthly levels for the DJUA versus the broader market S&P 500 index since the market lows that occurred in February and March of 2009.



While the S&P 500 has increased significantly during the past year, utility prices have remained relatively flat. This result is a further indication that the cost of equity for utility companies has not declined to the same extent that interest rates have fallen or to the same extent that the cost of equity may have come down for the broader equity market. The relatively lower prices for utility shares indicate that the cost of capital for utilities is higher.

Graph 3 further illustrates this result by showing the cumulative percentage change in the two equity indexes since the March 2009 lows.



While the S&P 500 has recovered over 60 percent (61.43%) from its March 2009 lows, utility stock prices have increased by less than one-third that amount (19.75%). This result again suggests the market difficulties that utilities face and the continuing relatively higher cost of equity for utility companies.

### Q. What is the industry's current fundamental position?

A.

The industry has seen significant volatility both in terms of fundamental operating characteristics and the effects of the economy. While many companies have refocused their businesses on more traditional utility service, the effects of deregulation of the wholesale power markets and continuing fuel price uncertainties remain prominent. The economic crisis has also reduced sales volumes and increased the difficulty of planning for future load requirements. S&P reflects this volatility in its most recent Electric Utility Industry Survey:

#### **Standard & Poor's Industry Surveys**

The S&P Electric Utilities subindex was down 0.5% in 2009, compared with a 23.5% increase for the benchmark S&P 500 Composite stock index and a 24.3% increase for the broader S&P 1500 SuperComposite. This followed a strong decline of 28.1% in 2008 for the S&P Electric Utilities subindex, versus declines of 38.5% and 38.2% for the S&P 500 and the S&P 1500, respectively. We believe the underperformance of electric utility stocks in 2009 reflected both the downturn in the economy and the weakness in power markets, as well as the impact on earnings from abnormally mild summer weather.

We expect the performance of both the electric utility sector and the individual companies within the sector to remain relatively volatile over the next several years. However, assuming that the housing, financial, and credit markets begin to stabilize, we believe the stocks will be less volatile in 2010 than they were in 2008 and 2009, or during the first few years of this decade.... \*\*\* The performance of the sector, however, will remain sensitive to the macroeconomic environment and market forces surrounding it. (Standard & Poor's Industry Surveys, Electric Utilities February 25, 2010, page 6).

Value Line also comments on the industry's relatively poor stock price performance:

#### Value Line Investment Survey

The Value Line Utility Average underperformed the Value Line Geometric Average by a wide margin in 2009. Things haven't changed so far in 2010. The broad-based Value Line Geometric Average is up 8%, while the Value Line Utility Average is where it was at the start of the year. (*Value Line Investment Survey*, Electric Utility (Central) Industry, March 26, 2010, page 901.)

Credit market gyrations and the volatility of utility shares demonstrate the increased uncertainties that utility investors face. These uncertainties translate into a higher cost of capital for utilities than has been experienced in recent years.

# Q. Do utilities continue to face the operating and financial risks that existed prior to

#### 34 the recent financial crisis?

35 A. Yes. Prior to the recent financial crisis, the greatest consideration for utility investors 36 was the industry's continuing transition to more open market conditions and competition. With the passage of the Energy Policy Act ("EPACT") in 1992 and the Federal Energy Regulatory Commission's ("FERC") Order 888 in 1996, the stage was set for vastly increased competition in the electric utility industry. EPACT's mandate for open access to the transmission grid and FERC's implementation through Order 888 effectively opened the market for wholesale electricity to competition. Previously protected utility service territory and lack of transmission access in some parts of the country had limited the availability of competitive bulk power prices. EPACT and Order 888 have essentially eliminated such constraints for incremental power needs.

In addition to wholesale issues at the federal level, many states implemented retail access and opened their retail markets to competition. Prior to the Western energy crisis, investors' concerns had focused principally on appropriate transition mechanisms and the recovery of stranded costs. More recently, however, provisions for dealing with power cost adjustments have become a larger concern.

Concern is also beginning to develop around pending climate change legislation including the recent passage by the House of Representatives of H.R. 2454 – the American Clean Energy and Security Act of 2009, also referred to as the Waxman-Markey bill. It has not been passed by the Senate and at this time I cannot predict if it will pass or if / when climate legislation in any form will pass, but it appears increasingly likely that in the foreseeable future climate change initiatives will require utilities to balance a diverse set of supply-side and demand-side resources in order to respond. In particular, utilities with significant coal-fired generation would have the added risk of addressing a reduction in greenhouse gas emissions by

needing to make costly changes to existing generation fleets such as retiring existing coal plants in favor of lower-emission alternatives, operating higher cost supply options, purchasing domestic and/or foreign carbon offsets, or purchasing more expensive low-or-zero emission power. In addition, climate change legislation would likely place added pressure on utilities to offer demand-side alternatives, including energy efficiency programs, that will reduce customers' demand for power.

A.

As expected, the opening of previously protected utility markets to competition, the uncertainty created by the removal of regulatory protection, continuing fuel price volatility and concerns about the impact of climate change legislation have raised the level of uncertainty about investment returns across the entire industry.

# Q. Is GMO affected by these same market uncertainties and increasing utilitycapital costs?

Yes. To some extent all electric utilities are being affected by the industry's transition to competition. GMO's power costs and other operating activities have been significantly affected by transition and restructuring events around the country. In fact, the uncertainty associated with the changes that are transforming the utility industry as a whole, as viewed from the perspective of the investor, remain a factor in assessing any utility's required ROE, including the ROE from GMO's operations in Missouri. For GMO specifically, its large construction program, and its heavy dependence on wholesale transactions to avoid retail rate increases all increase the Company's risk profile. This is true even though Missouri has not adopted retail choice or other major forms of restructuring.

#### Q. Are there other specific risks that GMO must address?

Yes. The above-mentioned climate change initiatives create fairly significant risk for the Company going forward. Approximately 76 percent of the Company's fuel mix based on actual generation is coal. With the completion of the new Iatan Unit 2 coal plant, the Company estimates that this percentage will increase to 80 percent. The Company discussed the potential impact of climate change risk in its most recent Form 10-K:

The companies are subject to extensive federal, state and local environmental laws, regulations and permit requirements relating to air and water quality, waste management and disposal, natural resources and health and safety. In addition to imposing continuing compliance obligations and remediation costs for historical and preexisting conditions, these laws and regulations authorize the imposition of substantial penalties for noncompliance, including fines, injunctive relief and other sanctions. There is also a risk that new environmental laws and regulations, new judicial interpretations of environmental laws and regulations, or the requirements in new or renewed environmental permits could adversely affect the companies' operations. In addition, there is also a risk of lawsuits brought by third parties alleging violations of environmental commitments or requirements, creation of a public nuisance or other matters, and seeking injunctions or monetary or other damages and certain federal courts have held that state and local governments and private parties have standing to bring climate change tort suits seeking companyspecific emission reductions and damages.

In addition to the potential for new environmental laws, the Environmental Protection Agency (EPA) is considering the regulation of greenhouse gases under the existing Clean Air Act. Among other actions, the EPA has proposed rules that focus on facilities emitting over 25,000 tons of greenhouse gases per year. These proposed rules would establish new thresholds for greenhouse gas emissions, defining when Clean Air Act permits under the New Source Review and Title V operating permits programs would be required for new or existing industrial facilities. Most of Great Plains Energy's and GMO's generating facilities would be affected by these proposed rules. Additional federal and/or state legislation or regulation respecting greenhouse gas emissions may be proposed or enacted in the near future. Further, pursuant to the Collaboration Agreement,

GMO agreed to pursue a set of initiatives including energy efficiency, additional wind generation, lower emission permit levels at its Iatan and LaCygne stations and other initiatives designed to offset CO<sub>2</sub> emissions. Requirements to reduce greenhouse gas emissions may cause Great Plains Energy and GMO to incur significant costs relating to their ongoing operations (through additional environmental control equipment, retiring and replacing existing generation, or selecting more costly generation alternatives), to procure emission allowance credits, or due to the imposition of taxes, fees or other governmental charges as a result of such emissions.

A.

Due to all of the above, Great Plains Energy's and GMO's projected capital and other expenditures for environmental compliance are subject to significant uncertainties, including the timing of implementation of any new or modified environmental requirements, the emissions limits imposed by such requirements and the types and costs of the compliance alternatives selected by Great Plains Energy and GMO. As a result, costs to comply with environmental requirements cannot be estimated with certainty, and actual costs be significantly higher than projections. Other environmental laws and regulations affecting the operations of the companies may be adopted, and new interpretations of existing laws and regulations could be adopted or become applicable to the companies or their facilities, any of which may materially adversely affect Great Plains Energy's and GMO's business, adversely affect the companies' ability to continue operating its power plants as currently done and substantially increase their environmental expenditures or liabilities in the future. (2009 SEC Form 10-K, pp. 13-16.)

# Q. How do capital market participants respond to these financial risk perceptions and concerns?

As I discussed previously, equity investors respond to changing assessments of risk and financial prospects by changing the price they are willing to pay for a given security. When the risk perceptions increase or financial prospects decline, investors refuse to pay the previously existing market price for a company's securities, and market supply and demand forces then establish a new lower price. The lower market price typically translates into a higher cost of capital through a higher dividend yield requirement, as well as the potential for increased capital gains if prospects improve.

In addition to market losses for prior shareholders, the higher cost of capital is transmitted directly to the company by the need to issue more shares to raise any given amount of capital for future investment. The additional shares also impose additional future dividend requirements and reduce future earnings per share growth prospects.

# 6 Q. How have regulatory commissions responded to these changing market and industry conditions?

8 A. The overall average ROEs allowed for electric utilities since 2006 are summarized in Table 5 below:

Table 4 **Authorized Electric Utility Equity Returns** 2006 2008 2007 2009 2010 1<sup>st</sup> Quarter 10.38% 10.27% 10.45% 10.29% 10.66% 2<sup>nd</sup> Quarter 10.68% 10.27% 10.57% 10.55% 3<sup>rd</sup> Ouarter 10.06% 10.02% 10.47% 10.46% 4<sup>th</sup> Quarter 10.39% 10.56% 10.33% 10.54% Full Year Average 10.36% 10.36% 10.46% 10.48% 10.66% Average Utility **Debt Cost** 6.08% 6.11% 6.65% 6.28% 5.88% Indicated Average Risk Premium 4.28% 4.25% 3.81% 4.20% 4.78%

Source: Regulatory Focus, Regulatory Research Associates, Inc., Major Rate Case Decisions, April 1, 2010. Utility debt costs are the "average" public utility bond yields as reported by Moody's.

Since 2006, equity risk premiums (the difference between allowed equity returns and utility interest rates) have ranged from 3.81 percent to 4.78 percent.

### VI. <u>COST OF EQUITY CAPITAL FOR GMO</u>

### 26 Q. What is the purpose of this section of your testimony?

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A. In this section I present my quantitative studies of the cost of equity capital for GMO and discuss the details and results of my analysis.

### Q. How are your studies organized?

A. In the first part of my analysis, I apply three versions of the DCF model to a

31-company group of electric utilities based on the selection criteria discussed

previously. In the second part of my analysis, I present my risk premium analysis and

review projected economic conditions and projected capital costs for the coming year.

My DCF analysis is based on three versions of the DCF model. In the first version of the DCF model, I use the constant growth format with long-term expected growth based on analysts' estimates of five-year utility earnings growth. While I continue to endorse a longer-term growth estimation approach based on growth in overall gross domestic product, I show the traditional DCF results because this is the approach that has traditionally been used by many regulators. In the second version of the DCF model, for the estimated growth rate, I use the estimated long-term GDP growth rate. In the third version of the DCF model, I use a two-stage growth approach, with stage one based on Value Line's three-to-five-year dividend projections and stage two based on long-term projected growth in GDP. The dividend yields in all three of the DCF models are from Value Line's projections of dividends for the coming year. The stock prices are based on the three-month average for the months that correspond to the Value Line editions from which the underlying financial data are taken.

# Q. Why do you believe the long-term GDP growth rate should be used to estimate long-term growth expectations in the DCF model?

A. Growth in nominal GDP (real GDP plus inflation) is the most general measure of economic growth in the U.S. economy. For long time periods, such as those used in

the Ibbotson Associates rate of return data, GDP growth has averaged between

5 percent and 8 percent per year. From this observation, Professors Brigham and

Houston offer the following observation concerning the appropriate long-term growth

rate in the DCF Model:

Expected growth rates vary somewhat among companies, but dividends for mature firms are often expected to grow in the future at about the same rate as nominal gross domestic product (real GDP plus inflation). On this basis, one might expect the dividend of an average

dividends for mature firms are often expected to grow in the future at about the same rate as nominal gross domestic product (real GDP plus inflation). On this basis, one might expect the dividend of an average, or "normal," company to grow at a rate of 5 to 8 percent a year. (Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management, 11th Ed. 2007, page 298.)

Other academic research on corporate growth rates offers similar conclusions about GDP growth, as well as concerns about the long-term adequacy of analysts' forecasts:

Our estimated median growth rate is reasonable when compared to the overall economy's growth rate. On average over the sample period, the median growth rate over 10 years for income before extraordinary items is about 10 percent for all firms. ... After deducting the dividend yield (the median yield is 2.5 percent per year), as well as inflation (which averages 4 percent per year over the sample period), the growth in real income before extraordinary items is roughly 3.5 percent per year. This is consistent with the historical growth rate in real gross domestic product, which has averaged about 3.4 percent per year over the period 1950-1998. (Louis K. C. Chan, Jason Karceski, and Josef Lakonishok, "The Level and Persistence of Growth Rates," The Journal of Finance, April 2003, p. 649)

IBES long-term growth estimates are associated with realized growth in the immediate short-term future. Over long horizons, however, there is little forecastability in earnings, and analysts' estimates tend to be overly optimistic. ... On the whole, the absence of predictability in growth fits in with the economic intuition that competitive pressures ultimately work to correct excessively high or excessively low profitability growth. (Ibid, page 683)

These findings support the notion that long-term growth expectations are more closely predicted by broader measures of economic growth than by near-term

- analysts' estimates. Especially for the very long-term growth rate requirements of the
- 2 DCF model, the growth in nominal GDP should be considered an important input.
- 3 Q. How did you estimate the expected long-term GDP growth rate?
- 4 A. I developed my long-term GDP growth forecast from nominal GDP data contained in the St. Louis Federal Reserve Bank data base. That data for the period 1949 through 5 6 2009 are summarized in my Schedule SCH-4 As shown at the bottom of that exhibit, 7 the overall average for the period was 6.9 percent. The data also show, however, that 8 in the more recent years since 1980, lower inflation has resulted in lower overall GDP 9 growth. For this reason I gave more weight to the more recent years in my GDP 10 forecast. This approach is consistent with the concept that more recent data should 11 have a greater effect on expectations. Based on this approach, my overall forecast for 12 long-term GDP growth is 90 basis points lower than the long-term average, at a level 13 of 6.0 percent.
- 14 Q. The DCF model requires an estimate of investors' long-term growth rate
  15 expectations. Why do you believe your forecast of GDP growth based on long16 term historical data is appropriate?
- 17 A. There are at least three reasons. First, most econometric forecasts are derived from
  18 the trending of historical data or the use of weighted averages. This is the approach I
  19 have taken in ScheduleSCH-4. The long-run historical average GDP growth rate is
  20 6.9 percent, but my estimate of long-term expected growth is only 6.0 percent. My
  21 forecast is lower because my forecasting method gives much more weight to the more
  22 recent 10- and 20-year periods.

Second, some currently lower GDP growth forecasts likely understate very long growth rate expectations that are required in the DCF model. Many of those forecasts are currently low because they are based on the assumption of permanently low inflation rates, in the range of 2 percent. As shown in my Schedule SCH4, the average long-term inflation rate has been over 3 percent in all but the most recent 20 years.

Finally, the current economic turmoil makes it even more important to consider longer-term economic data in the growth rate estimate. As discussed in the previous section, current near-term forecasts for both real GDP and inflation are severely depressed. To the extent that even the longer-term outlooks of professional economists are also depressed, their forecasts may be understated. Under these circumstances, a longer-term view is even more important. For all these reasons, while I am also presenting other growth rate approaches based on analysts' estimates in this testimony, I believe it is appropriate also to consider long-term GDP growth in estimating the DCF growth rate.

### 16 Q. Please summarize the results of your electric utility DCF analyses.

A.

The DCF results for my comparable company group are presented in Schedule SCH-5. As shown in the first column of page 1 of that schedule, the traditional constant growth model produces an ROE range of 10.5 percent to 10.7 percent. In the second column of page 1, I recalculate the constant growth results with the growth rate based on long-term forecasted growth in GDP. With the GDP growth rate, the constant growth model indicates an ROE of 11.0 percent. Finally, in the third column of page 1, I present the results from the multistage DCF model. The multistage

model indicates an ROE of 10.8 percent. The overall results from the DCF model indicate a reasonable ROE range of 10.5 percent to 11.0 percent.

### Q. What are the results of your risk premium studies?

A.

A. The details and results of my risk premium studies are shown in Schedule SCH-6. These studies indicate an ROE range of 10.61 percent to 10.82 percent. The Federal Reserve System's continuing "easy money" policies have provided renewed liquidity in the credit markets that is reflected in these lower yields. These results are slightly below the average DCF results, which continues to demonstrate the equity market risk aversion that is reflected in continuing volatility and relatively low stock prices for utility shares. These circumstances indicate that the cost of equity capital has not declined to the same extent as the yields on utility debt.

### Q. How are your risk premium studies structured?

My equity risk premium studies are divided into two parts. First, I compare electric utility authorized ROEs for the period 1980-2009 to contemporaneous long-term utility interest rates. The differences between the average authorized ROEs and the average interest rate for the year is the indicated equity risk premium. I then add the indicated equity risk premium to the forecasted and current 3-month average triple-B utility bond interest rate to estimate ROE. Because there is a strong inverse relationship between equity risk premiums and interest rates (when interest rates are high, risk premiums are low and vice versa), further analysis is required to estimate the current equity risk premium level.

The inverse relationship between risk premiums and interest rate levels is well documented in numerous, well-respected academic studies. These studies typically

use regression analysis or other statistical methods to predict or measure the risk premium relationship under varying interest rate conditions. On page 3 of Schedule SCH-6, I provide regression analyses of the allowed annual equity risk premiums relative to interest rate levels. The negative and statistically significant regression coefficients confirm the inverse relationship between risk premiums and interest rates. This means that when interest rates rise by one percentage point, the cost of equity increases, but by a smaller amount. Similarly, when interest rates decline by one percentage point, the cost of equity declines by less than one percentage point. I use this negative interest rate change coefficient in conjunction with current interest rates to establish the appropriate current equity risk premium.

Table 6

### 11 Q. Please summarize the results of your cost of equity analysis.

12 A. My quantitative results are summarized in Table 6 below:

13	Summary of Cost of Equity Estimates									
16	DCF Analysis	Indicated Cost								
17	Constant Growth (Analysts' Growth Rates)	10.5%-10.7%								
18	Constant Growth (GDP Growth)	11.0%								
19	Multistage Growth Model	10.8%								
20	Reasonable DCF Range for ROE	<u>10.5%-11.0%</u>								
21	Risk Premium Analysis	Indicated Cost								
22	Projected Utility Interest Rate + Risk Premium									
23	Risk Premium ROE Estimate (6.57% + 4.25%)	10.82%								
24	Recent Utility Interest Rate + Risk Premium									
25	Risk Premium ROE Estimate (6.22% + 4.39%)	10.61%								
26										
27	Comparable Group Midpoint ROE	10.75%								
28		- I wills								

Q. How should these results be interpreted by the Commission in setting the fair cost of equity for GMO?

The midpoint estimate my for comparable group is 10.75 percent. The Company is requesting an ROE of 11.0 percent commensurate with the top of my DCF range as compensation for its reliability and customer satisfaction achievements. The recent market turmoil and the continuing effects on capital market conditions make it difficult to strictly interpret quantitative model estimates for the cost of equity. While corporate interest rates have dropped from the levels that existed in late 2008, the DCF results, based on continuing relatively low utility stock prices, show that the cost of equity has not dropped in lockstep with the decline in interest rates. Under these conditions, use of a lower DCF range or equity risk premium estimates based strictly on historical risk premium relationships likely understate the cost of equity.

### 11 Q. Does this conclude your testimony?

12 A. Yes, it does.

A.

# BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of the Application of KCP&L Greater ) Missouri Operations Company to Modify Its ) Docket No. ER-2010 Electric Tariffs to Effectuate a Rate Increase )
AFFIDAVIT OF SAMUEL C. HADAWAY
STATE OF TEXAS )
) ss COUNTY OF TRAVIS )
Samuel C. Hadaway, being first duly sworn on his oath, states:
1. My name is Samuel C. Hadaway. I am employed by FINANCO, Inc. in Austin,
Texas. I have been retained by Great Plains Energy, Inc. to serve as an expert witness to provide
cost of capital testimony on behalf of KCP&L Greater Missouri Operations Company.
2. Attached hereto and made a part hereof for all purposes is my Direct Testimony
on behalf of KCP&L Greater Missouri Operations Company consisting of (44) pages, having
been prepared in written form for introduction into evidence in the above-captioned docket.
3. I have knowledge of the matters set forth therein. I hereby swear and affirm that
my answers contained in the attached testimony to the questions therein propounded, including
any attachments thereto, are true and accurate to the best of my knowledge, information and
Subscribed and sworn before me this day of May, 2010.
Notary Public  My commission expires: 01-14-2012
AMRITA SINGH Notary Public STATE OF TEXAS My Comm. Exp. 01-14-2012

### SAMUEL C. HADAWAY

### FINANCO, Inc. Financial Analysis Consultants

3520 Executive Center Drive, Suite 124 Austin, Texas 78731 (512) 346-9317

### **SUMMARY OF QUALIFICATIONS**

- Principal, Financial Analysis Consultants (FINANCO, Inc.).
- Ph.D. in Finance and Econometrics.
- Extensive expert witness testimony in court and before regulatory agencies.
- Management of professional research staff in academic and regulatory organizations.
- Professional presentations before executive development groups, the National Rate of Return Analysts' Forum, and the New York Society of Security Analysts.
- Financial Management Association, Vice President for Practitioner Services.

### **EDUCATION**

The University of Texas at Austin
Ph.D., Finance and Econometrics
January 1975

The University of Texas at Austin MBA, Finance
June 1973

Southern Methodist University BA, Economics June 1969

Dissertation: An Evaluation of the Original and Recent Variants of the Capital Asset Pricing Model.

Thesis: The Pricing of Risk on the New York Stock Exchange.

Honors program. Departmental distinction.

### **OTHER EXPERIENCE**

University of Texas at Austin Adjunct Associate Professor 1985-1988, 2004-Present

Texas State University San Marcos Associate Professor of Finance 1983-1984, 2003-2004

Public Utility Commission of Texas Chief Economist and Director of Economic Research Division August 1980-August 1983

Assistant Professor of Finance Texas Tech University July 1978-July 1980 University of Alabama January 1975-June 1978 Corporate Financial Management, Investments, and Integrative Finance Cases.

Graduate and undergraduate courses in Financial Management, Managerial Economics, and Investment Analysis.

Lead financial witness. Supervised Commission staff in research and testimony on rate of return, financial condition, and economic analysis.

Member of graduate faculty. Conducted Ph.D. seminars and directed doctoral dissertations in capital market theory. Served as consultant to industry, church and governmental organizations.

### FINANCIAL AND ECONOMIC TESTIMONY IN REGULATORY PROCEEDINGS (Client in parenthesis)

### **Cost of Money Testimony:**

- Washington Utilities and Transportation Commission, Docket UE-100749, May 4, 2010 (PacifiCorp).
- New Hampshire Public Utilities Commission, Docket No. DE 10-055, April 15, 2010 (Unitil Energy Systems)
- Oregon Public Utility Commission, Docket No. UE-217, March 1, 2010 (PacifiCorp).
- Texas Public Utility Commission, Docket No. 37744, December 30, 2009, (Entergy Texas, Inc.)
- Kansas Corporation Commission, Docket No. 10-KCPE-415-RTS, December 17, 2009 (Kansas City Power & Light Company).
- Texas Public Utility Commission, Docket No. 37690, December 9, 2009, (El Paso Electric Company).
- California Public Utilities Commission, Application No. 09-11-015, November 20, 2009 (PacifiCorp).
- Federal Energy Regulatory Commission, Docket No. ER10-230-000, November 6, 2009 (Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company).
- Wyoming Public Service Commission, Docket No. 20000-352-ER-09, October 2, 2009 (Rocky Mountain Power dba/PacifiCorp).
- Arkansas Public Service Commission, Docket No. 09-084-U, September 4, 2009, (Entergy-Arkansas)
- Texas Public Utility Commission, Docket No. 37364, August 28, 2009, (American Electric Power-SWEPCO)
- Utah Public Service Commission, Docket No. 09-035-23, June 23, 2009 (Rocky Mountain Power/PacifiCorp).
- New Mexico Public Regulation Commission, Case No. 09-00171-UT, May 2009, (El Paso Electric Company).
- Oregon Public Utility Commission, Docket No. UE-207, April 2, 2009 (PacifiCorp).
- Arkansas Public Service Commission, Docket No. 09-008-Ü, February 19, 2009 (American Electric Power-SWEPCO).
- Washington Utilities and Transportation Commission, Docket UE-090205, February 9, 2009 (PacifiCorp).
- Idaho Public Utilities Commission, Case No. PAC-E-08-07, September 19, 2008 (Rocky Mountain Power/PacifiCorp).
- Missouri Public Service Commission, Case No. ER-2009-089, September 5, 2008 (Kansas City Power & Light Company).
- Kansas Corporation Commission, Docket No. 09-KCPE-246-RTS, September 5, 2008 (Kansas City Power & Light Company).
- Missouri Public Service Commission, Case No. ER-2009-090, September 5, 2008 (Aquila, Inc. dba/KCP&L Greater Missouri Operations Company).
- Utah Public Service Commission, Docket No. 08-035-38, July 17, 2008 (Rocky Mountain Power/PacifiCorp).
- Wyoming Public Service Commission, Docket No. 20000-333-ER-08, July 2008 (Rocky Mountain Power dba/PacifiCorp).
- Texas Public Utility Commission, Docket No. 35717, June 27, 2008, (Oncor Electric Delivery Company LLC).
- Washington Utilities and Transportation Commission, Docket UG-080546, March 28, 2008 (NW Natural).
- Washington Utilities and Transportation Commission, Docket UE-080220, February 6, 2008 (PacifiCorp).
- Utah Public Service Commission, Docket No. 07-035-93, December 17, 2007 (PacifiCorp).

- Illinois Commerce Commission, Docket No. 07-0566, October 17, 2007 (Commonwealth Edison Company).
- Texas Public Utility Commission, Docket No. 34800, September 26, 2007, (Entergy Gulf States, Inc.)
- Texas Public Utility Commission, Docket No. 34040, August 28, 2007, (Oncor/TXU Electric Delivery Company)
- Massachusetts Department of Public Utilities, D.P.U. 07-71, August 17, 2007, (Fitchburg Gas and Electric Light Company d/b/a/ Unitil)
- Arizona Corporation Commission, Docket No. E-01933A-07-0402, July 2, 2007, (Tucson Electric Power Company).
- Wyoming Public Service Commission, Docket No. 20000-277-ER-07, June 29, 2007 (Rocky Mountain Power dba/PacifiCorp).
- Idaho Public Utilities Commission, Case No. PAC-E-05-1, June 8, 2007 (Rocky Mountain Power dba/PacifiCorp).
- Kansas Corporation Commission, Docket No. 07-KCPE-905-RTS, March 1, 2007 (Kansas City Power & Light Company). New Mexico Public Regulation Commission, Case No. 07-00077-UT, February 21,
- 2007, (Public Service Company of New Mexico).
- Missouri Public Service Commission, Case No. ER-2006-0291, February 1, 2007 (Kansas City Power & Light Company).
- Texas PUC Docket Nos. 33734, January 22, 2007 (Electric Transmission Texas, LLC).
- Texas PUC Docket Nos. 33309 and 33310, November 2006, (AEP Texas Central Company and AEP Texas North Company).
- Louisiana Public Service Commission, Docket No. U-23327, October 2006 and January 2005 (Southwestern Electric Power Company, American Electric Power Company)
- Missouri Public Service Commission, Case No. ER-2007-0004, July 3, 2006 (Aquila, Inc.).
- New Mexico Public Regulation Commission, Case No. 06-00258-UT, June 30, 2006 (El Paso Electric Company).
- New Mexico Public Regulation Commission, Case No. 06-00210-UT, May 30, 2006 (Public Service Company of New Mexico).
- Texas Public Utility Commission, Docket No. 32093, April 14, 2006 (CenterPoint Energy-Houston Electric, LLC).
- Utah Public Service Commission, Docket No. 06-035-21, March 7, 2006 (PacifiCorp).
- Oregon Public Utility Commission, Case No. UE-179, February 23, 2006 (PacifiCorp).
- Kansas Corporation Commission, Docket No. 06-KCPE-828-RTS, January 31, 2006 (Kansas City Power & Light Company).
- Missouri Public Service Commission, Case No. ER-2006-0314, January 27, 2006 (Kansas City Power & Light Company).
- California Public Utilities Commission, Docket No. 05-11-022, November 29, 2005 (PacifiCorp).
- Texas Public Utility Commission, Docket No. 31994, November 5, 2005 (Texas-New Mexico Power Company).
- New Hampshire Public Utilities Commission, Docket No. DE 05-178, November 4, 2005 (Unitil Energy Systems).
- Wyoming Public Service Commission, Docket No. 20000-ER-05-230, October 14, 2005 (PacifiCorp).
- Minnesota Public Utilities Commission, Docket. No. G-008/GR-05-1380, October 2005 (CenterPoint Energy Minnegasco).
- Texas Railroad Commission, Gas Utilities Division No. 9625, September 2005 (CenterPoint Energy Entex).

- Illinois Commerce Commission, Docket No. 05-0597, August 31, 2005 (Commonwealth Edison Company).
- Washington Utilities and Transportation Commission, Docket ,UE-050684/General Rate Case, May 2005 (PacifiCorp).
- Missouri Public Service Commission, Case No. ER-2005-0436, May 2005 (Aquila, Inc.).
- Idaho Public Utilities Commission, Case No. PAC-E-05-1, January 14, 2005 (PacifiCorp).
- Arkansas Public Service Commission, Docket No. 04-121-U, December 3, 2004 (CenterPoint Energy Arkla).
- Oregon Public Utility Commission, Case No. UE-170, November 12, 2004 (PacifiCorp).
- Texas Public Utility Commission, Docket No. 29206, November 8, 2004 (Texas-New Mexico Power Company).
- Texas Railroad Commission, Gas Utilities Division Nos. 9533 and 9534, October 13, 2004 (CenterPoint Energy Entex).
- Texas Public Utility Commission, Docket No. 29526, August 18 and September 2, 2004 (CenterPoint Energy Houston Electric).
- Utah Public Service Commission, Docket No. 04-2035-, August 4, 2004 (PacifiCorp).
- Oklahoma Corporation Commission, Cause No. PUD-200400187, July 2, 2004, (CenterPoint Energy Arkla).
- Minnesota Public Utilities Commission, Docket No. G-008/GR-04-901, July 2004, (CenterPoint Energy Minnegasco).
- Washington Utilities and Transportation Commission, Docket ,UE-032065/General Rate Case, December 2003 (PacifiCorp).
- Washington Utilities and Transportation Commission, Docket, UG-031885, November 2003 (Northwest Natural Gas Company.).
- Wyoming Public Service Commission, Docket No. 20000-ER-03-198, May 2003 (PacifiCorp).
- Public Service Commission of Utah, Docket No. 03-2035-02, May 2003 (PacifiCorp).
- Public Utility Commission of Oregon, Case. UE-147, March 2003 (PacifiCorp).
- Wyoming Public Service Commission, Docket No. 20000-ER-00-162, May 2002 (PacifiCorp).
- Public Utility Commission of Oregon, UG-152, November 2002 (Northwest Natural).
- Massachusetts Department of Telecommunications and Energy, D.T.E. 02-24/24, May 2002 (Fitchburg Gas and Electric Light Company).
- New Hampshire Public Utilities Commission, Docket No. DE 01-247, January 2002 (Unitil Corporation).
- Washington Utilities and Transportation Commission, Docket UE-011569,70,UG-011571, November 2001 (Puget Sound Energy, Inc.).
- California Public Utilities Commission, Docket No. 01-03-026, September and December 2001 (PacifiCorp).
- New Mexico Public Regulation Commission, Docket No. 3643, July 2001 (Texas-New Mexico Power Company).
- Texas Natural Resources Conservation Commission, Docket No. 2001-1074/5-URC, May 2001 (AquaSource Utility, Inc.).
- Massachusetts Department of Telecommunications and Energy, Docket No. 99-118, May 2001 (Fitchburg Gas and Electric Light Company).
- Public Service Commission of Utah, Docket No. 01-035-01, January 2001 (PacifiCorp)
- Federal Energy Regulatory Commission, Docket No. ER-01-651, January 2001 (Southwestern Electric Power Company).
- Wyoming Public Service Commission, Docket No. 20000-ER-00-162, December 2000 (PacifiCorp).
- Public Utility Commission of Oregon, Case. UE-116, November 2000, (PacifiCorp)

- Public Utility Commission of Texas, Docket No. 22344, September 2000, (AEP Texas Companies, Entergy Gulf States, Inc., Reliant Energy HL&P, Texas-New Mexico Power Company, TXU Electric Company)
- Public Utility Commission of Oregon, Case UE-111, August 2000, (PacifiCorp)
- Texas Public Utility Commission, Docket Nos. 22352,3,4, March 2000 (Central Power and Light Co., Southwestern Electric Power Co., West Texas Utilities Co.).
- Texas Public Utility Commission, Docket No. 22355, March 2000 (Reliant Energy, Inc.).
- Texas Public Utility Commission, Docket No. 22349, March 2000 (Texas-New Mexico Power Co.).
- Texas Public Utility Commission, Docket No. 22350, March 2000 (TXU Electric).
- Washington Utilities and Transportation Commission, Docket UE-991831, November 1999 (PacifiCorp).
- Public Service Commission of Utah, Docket No. 99-035-10, September 1999 (PacifiCorp)
- Louisiana Public Service Commission Docket No. U-23029, August 1999 (Southwestern Electric Power Company)
- Wyoming Public Service Commission, Docket No. 2000-ER-99-145, July 1999, January 2000 (PacifiCorp, dba Pacific Power and Light Company).
- Texas PUC Docket No. 20150, March 1999 (Entergy Gulf States, Inc.)
- Federal Energy Regulatory Commission Docket No. ER-98-3177-00, May and December 1998 (Southwestern Electric Power Company).
- Public Service Commission of Utah, Docket No. 97-035-01, June 1998 (PacifiCorp, dba Utah Power and Light Company).
- Massachusetts Dept. of Telecommunications and Energy, Docket No. DTE 98-51, May 1998, (Fitchburg Gas and Electric Light Company, a subsidiary of Unitil Corp.)
- Texas PUC, Docket No. 18490, March 1998, (Texas Utilities Electric Company)
- Texas PUC Docket No. 17751, March 1998 and July 1997 (Texas-New Mexico Power Company).
- Federal Energy Regulatory Commission Docket No. RP-97, February 1998 and May 1997 (Koch Gateway Pipeline Company).
- Federal Energy Regulatory Commission Docket No. ER-97-4468-000, December 1997 (Puget Sound Power & Light).
- Oklahoma Corporation Commission, Cause No. PUD 960000214, August 1997 (Public Service Company of Oklahoma).
- Oregon Public Utility Commission Docket No. UE-94, April 1996, (PacifiCorp).
- Texas PUC Docket No. 15643, May and September 1996, (Central Power and Light and West Texas Utilities Company).
- Federal Energy Regulatory Commission Docket No. ER-96, April 1996 (Puget Sound Power & Light).
- Federal Energy Regulatory Commission Docket No. ER96, February 1996, (Central and South West Corporation).
- Washington Utilities & Transportation Commission Docket No. UE-951270, November 1995 (Puget Sound Power & Light).
- Texas PUC Docket No. 14965, November 1995, (Central Power and Light).
- Texas PUC Docket No. 13369, February 1995 (West Texas Utilities).
- Texas PUC Docket No. 12065, July and December 1994, (Houston Lighting & Power)
- Texas PUC, Docket No. 12820, July and November 1994, (Central Power and Light).
- Texas PUC Docket No. 12900, March 1994, and New Mexico PUC Case No. 2531, August 1993, (TNP Enterprises).
- Texas PUC, Docket No. 12815, March 1994, (Pedernales Electric Cooperative).
- Florida Public Service Commission, Docket No. 930987-EI, December 1993, (TECO Energy).

- Iowa Department of Commerce, Docket No. RPU-93-9, December 1993, (US West Communications).
- Texas PUC Dkt. No. 11735, May and September 1993, (Texas Utilities Electric Company)
- Oklahoma Corporation Commission, Cause No. PUD 001342, October 1992 (Public Service Company of Oklahoma).
- Texas PUC Dkt. No. 9983, November 1991, (Southwest Texas Telephone Company).
- Texas PUC Dkt. No. 9850, November 1990, Houston Lighting & Power Company).
- Texas PUC Dkt. Nos. 8480/8482, January 1989; City of Austin Dkt. No. 1, August 1988 and July 1987, (City of Austin Electric Department).
- Missouri Public Service Commission Case No. ER-90-101, July 1990 (UtiliCorp).
- Texas PUC Dkt. No. 9945, December 1990; Texas PUC Dkt. No. 9165, November 1989, (El Paso Electric Company).
- Texas PUC Dkt. No. 9427, July 1990, (Lower Colorado River Authority Association of Wholesale Customers).
- Oregon Public Utility Commission, March 1990, (Pacific Power & Light Company).
- Utah Public Service Commission, November 1989, (Utah Power & Light Company).
- Texas PUC Dkt. No. 5610, September 1988, (GTE Southwest).
- Iowa State Utilities Board, September 1988, (Northwestern Bell Telephone Company).
- Texas Water Commission, Dkt. Nos. RC-022 and RC-023, November 1986, (City of Houston Water Department).
- Pennsylvania PUC Dkt. Nos. R-842770 and R-842771, May 1985, (Bethlehem Steel).

### **Capital Structure Testimony:**

- Federal Energy Regulatory Commission Docket No. RP-97, May 1997 (Koch Gateway Pipeline Company).
- Illinois Commerce Commission Dkt. No. 93-0252 Remand, July 1996, (Sprint).
- California PUC (Appl. No. 92-05-004) April 1993 and May 1993, (Pacific Telesis).
- Montana PSC, Dkt. No. 90.12.86, November 1991, (US West Communications).
- Massachusetts PUC Dkt. No. 86-33, June 1987, (New England Telephone Company).
- Maine PUC Dkt. No. 85-159, February 1987, (New England Telephone Company).
- New Hampshire PUC Dkt. No. 85-181, September 1986, (New England Telephone Company).
- Maine PUC Dkt. No. 83-213, March 1984, (New England Telephone Company).

### **Regulatory Policy and Other Regulatory Issues:**

- Texas PUC Docket No.31056, September 16, 2005, (AEP Texas Central Company).
- New Hampshire PUC Docket No. DE 03-086, May 2003, (Unitil Corporation).
- Texas PUC Docket No. 26194, May 2003 (El Paso Electric Company)
- Texas PUC Docket No. 22622, June 15, 2001 (TXU Electric)
- Texas PUC Docket No. 20125, November 1999 (Entergy Gulf States, Inc.)
- Texas PUC Docket No. 21112, July 1999 and New Mexico Public Regulation Commission Case No. 3103, July 1999 (Texas-New Mexico Power Company)
- Texas PUC Docket No. 20292, May 1999 (Central Power and Light Co.)
- Texas PUC Docket No. 20150, November 1998 (Entergy Gulf States, Inc.)
- New Mexico PUC Case No. 2769, May 1997, (Texas-New Mexico Power Company). Texas PUC Dkt. No. 15296, September 1996, (City of College Station, Texas).
- Texas PUC Dkt. No. 14965 Competitive Issues Phase, August 1996 (Central Power and Light Company).
- Texas PUC Dkt. No. 12456, May 1994, (Texas Utilities Electric Company).
- Texas PUC, Dkt. No. 12700/12701 and Federal Energy Regulatory Commission, Docket No. EC94-000, January 1994, (El Paso Electric Company).

- Florida Public Service Commission Generic Purchased Power Proceedings, October 1993 (TECO Energy).
- Texas PUC, Docket No. 11248, December 1992 (Barbara Faskins).
- Texas PUC Dkt. No. 10894, January and June 1992, (Gulf States Utilities Company).
- State Corporation Commission of Kansas, Dkt. No. 175,456-U, August 1991, (UtiliCorp United).
- Texas PUC Dkt. No. 9561, May 1990; Texas PUC Dkt. Nos. 6668/8646, July 1989 and February 1990, (Central Power and Light Company).
- Texas PUC Dkt. No. 9300, April 1990 and June 1990, (Texas Utilities Electric Co.).
- Texas PUC Dkt. No. 10200, August 1991, (Texas-New Mexico Power Company).
- Texas PUC Dkt. No. 7289, May 1987, (West Texas Utilities Company).
- Texas PUC Dkt. No. 7195, January 1987, (North Star Steel Texas).
- New Mexico PSC Case No. 1916, April 1986, (Public Service Company of New Mexico).
- Texas PUC Dkt. No. 6525, March 1986, (North Star Steel Texas).
- Texas PUC Dkt. No. 6375, November 1985, (Valley Industrial Council).
- Texas PUC Dkt. No. 6220, April 1985, (North Star Steel Texas).
- Texas PUC Dkt. No. 5940, March 1985, (West Texas Municipal Power Agency).
- Texas PUC Dkt. No. 5820, October 1984, (North Star Steel Texas).
- Texas PUC Dkt. No. 5779, September 1984, (Texas Industrial Energy Consumers).
- Texas PUC Dkt. No. 5560, April 1984, (North Star Steel Texas).
- Arizona PSC Dkt. No. U-1345-83-155, January 1984 and May 1984 (Arizona Public Service Company Shareholders Association).

### **Insurance Rate Testimony:**

- Texas Department of Insurance, Docket No. 2673, January 2008, (Texas Land Title Association).
- Texas Department of Insurance, Docket No. 2601, December 2006, (Texas Land Title Association).
- Texas Department of Insurance, Docket No. 2394, November 1999, (Texas Title Insurance Agents).
- Senate Interim Committee on Title Insurance of the Texas Legislature, February 6, 1998
- Texas Department of Insurance, Docket No. 2279, October 1997, (Texas Title Insurance Agents).
- Texas Department of Insurance, January 1996, (Independent Metropolitan Title Insurance Agents of Texas).
- Texas Insurance Board, January 1992, (Texas Land Title Association).
- Texas Insurance Board, December 1990, (Texas Land Title Association).
- Texas Insurance Board, November 1989, (Texas Land Title Association).
- Texas Insurance Board, December 1987, (Texas Land Title Association).

### **Testimony On Behalf Of Texas PUC Staff:**

- Texland Electric Cooperative, Dkt. No. 3896, February 1983
- El Paso Electric Company, Dkt. No. 4620, September 1982.
- Southwestern Bell Telephone Company, Dkt. No. 4545, August 1982.
- Central Power and Light Company, Dkt. No. 4400, May 1982.
- Texas-New Mexico Power Company, Dkt. 4240, March 1982.
- Texas Power and Light Company, Dkt. No. 3780, May 1981.
- General Telephone Company of the Southwest, Dkt. No. 3690, April 1981.
- Mid-South Electric Cooperative, Dkt. No. 3656, March 1981.

- West Texas Utilities Company, Dkt. No. 3473, December 1980.
- Houston Lighting & Power Company, Dkt. No. 3320, September 1980.

### **ECONOMIC ANALYSIS AND TESTIMONY**

### **Antitrust Litigation:**

- Marginal Cost Analysis of Concrete Production/Predatory Pricing (Stiles)
- Analysis of Lost Business Opportunity due to denial of Waste Disposal Site Permit (Browning-Ferris Industries, Inc.).
- Analysis of Electric Power Transmission Costs in Purchased Power Dispute (City of College Station, Texas).

### **Contract Litigation:**

- Analysis of Cogeneration Contract/Economic Viability Issues(Texas-New Mexico Power Company)
- Definition of Electric Sales/Franchise Fee Contract Dispute (Reliant Energy HL&P)
- Analysis of Purchased Power Agreement/Breach of Contract (Texas-New Mexico Power Company)
- Regulatory Commission Provisions in Franchise Fee Ordinance Dispute (Central Power & Light Company)
- Analysis of Economic Damages resulting from attempted Acquisition of Highway Construction Company (Dillingham Construction Corporation).
- Analysis of Economic Damages due to Contract Interference in Acquisition of Electric Utility Cooperative (PacifiCorp).
- Analysis of Economic Damages due to Patent Infringement of Boiler Cleaning Process (Dowell-Schlumberger/The Dow Chemical Company).

### **Lender Liability/Securities Litigation:**

- ERISA Valuation of Retail Drug Store Chain (Sommers Drug Stores Company).
- Analysis of Lost Business Opportunities in Failed Businesses where Lenders Refused to Extend or Foreclosed Loans (FirstCity Bank Texas, McAllen State Bank, General Electric Credit Corporation).
- Usury and Punitive Damages Analysis based on Property Valuation in Failed Real Estate Venture (Tomen America, Inc.).

### Personal Injury/Wrongful Death/Lost Earnings Capacity Litigation:

- Analysis of Lost Earnings Capacity and Punitive Damages due to Industrial Accident (Worsham, Forsythe and Wooldridge).
- Analysis of Lost Earnings Capacity due to Improper Termination (Lloyd Gosselink, Ryan & Fowler).
- Present Value Analysis of Lost Earnings and Future Medical Costs due to Medical Malpractice (Sierra Medical Center).

### **Product Warranty/Liability Litigation:**

- Analysis of Lost Profits due to Equipment Failure in Cogeneration Facility (WF Energy/Travelers Insurance Company).
- Analysis of Economic Damages due to Grain Elevator Explosion (Degesch Chemical Company).
- Analysis of Economic Damages due to failure of Plastic Pipe Water Lines (Western Plastics, Inc.)

• Analysis of Rail Car Repair and Maintenance Costs in Product Warranty Dispute (Youngstown Steel Door Company).

### **Property Tax Litigation:**

- Evaluation of Electric Utility Distribution System (Jasper-Newton Electric Cooperative).
- Evaluations of Electric Utility Generating Plants (West Texas Utilities Company).

## Valuations of Closely Held Businesses in Litigation Support and Federal Estate Tax Planning.

### PROFESSIONAL PRESENTATIONS

- "Fundamentals of Financial Management and Reporting for Non-Financial Managers," Austin Energy, July 2000.
- "Fundamentals of Finance and Accounting," the IC<sup>2</sup> Institute, University of Texas at Austin, December 1996 and 1997.
- "Fundamentals of Financial Analysis and Project Evaluation," Central and South West Companies, April, May, and June 1997.
- "Fundamentals of Financial Management and Valuation," West Texas Utilities Company, November 1995.
- "Financial Modeling: Testing the Reasonableness of Regulatory Results," University of Texas Center for Legal and Regulatory Studies Conference, June 1991.
- "Estimating the Cost of Equity Capital," University of Texas at Austin Utilities Conference, June 1989, June 1990.
- "Regulation: The Bottom Line," Texas Society of Certified Public Accountants, Annual Utilities Conference, Austin, Texas, April 1990.
- "Alternative Treatments of Large Plant Additions -- Modeling the Alternatives," University of Texas at Dallas Public Utilities Conference, July 1989.
- "Industrial Customer Electrical Requirements," Edison Electric Institute Financial Conference, Scottsdale, Arizona, October 1988.
- "Acquisitions and Consolidations in the Electric Power Industry," Conference on Emerging Issues of Competition in the Electric Utility Industry, University of Texas at Austin, May 1988.
- "The General Fund Transfer Is It A Tax? Is It A Dividend Payout? Is It Fair?" The Texas Public Power Association Annual Meeting, Austin, May 1984.
- "Avoiding 'Rate Shock' Preoperational Phase-In Through CWIP in Rate Base," Edison Electric Institute, Finance Committee Annual Meeting, May 1983.
- "A Cost-Benefit Analysis of Alternative Bond Ratings Among Electric Utility Companies in Texas," (with B.L. Heidebrecht and J.L. Nash), Texas Senate Subcommittee on Consumer Affairs, December 1982.
- "Texas PUC Rate of Return and Construction Work in Progress Methods," New York Society of Security Analysts, New York, August 1982.
- "In Support of Debt Service Requirements as a Guide to Setting Rates of Return for Subsidiaries," Financial Forum, National Society of Rate of Return Analysts, Washington, D.C., May 1982.

### **PUBLICATIONS**

- "Institutional Constraints on Public Fund Performance," (with B.L. Hadaway) *Journal of Portfolio Management*, Winter 1989.
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# KCP&L Greater Missouri Operations Company Comparable Company Fundamental Characteristics

		(1)	(2	2)	(3)					
		% Regulated	Cradit	Rating		oital Structure (200 Long-Term Debt				
No.	Company	Revenue	S&P	Moody's	_ Common Equity Ratio	Ratio	Ratio			
1	ALLETE	89.8%	A-	A2	57.2%	42.8%	0.0%			
2	Alliant Energy Co.	90.2%	A-	A2	51.2%	44.3%	4.5%			
3	American Elec. Pwr.	94.4%	BBB	Baa2	45.4%	54.4%	0.2%			
4	Avista Corp.	92.2%	BBB+	Baa1	49.1%	50.9%	0.0%			
5	Black Hills Corp	88.3%	BBB	A3	51.6%	48.4%	0.0%			
6	Cleco Corporation	94.7%	BBB	Baa2	45.8%	54.2%	0.0%			
7	Con. Edison	83.8%	A-	A3	50.4%	48.5%	1.0%			
8	DPL Inc.	100.0%	Α	Aa3	46.9%	52.1%	1.0%			
9	DTE Energy Co.	81.1%	A-	A2	46.1%	53.9%	0.0%			
10	Duke Energy	83.9%	BBB+	A2	57.6%	42.4%	0.0%			
11	Edison Internat.	80.6%	Α	A1	46.5%	49.3%	4.2%			
12	Empire District	99.0%	BBB+	Baa1	48.4%	51.6%	0.0%			
13	Entergy Corp.	74.9%	A-	Baa3	43.1%	55.3%	1.6%			
14	FPL Group, Inc.	73.5%	Α	Aa2	44.3%	55.7%	0.0%			
15	Hawaiian Electric	88.1%	BBB	Baa2	50.7%	48.0%	1.3%			
16	IDACORP	84.2%	A-	NR	49.8%	50.2%	0.0%			
17	Northeast Utilities	99.0%	BBB+	A3	43.7%	54.9%	1.4%			
18	NSTAR	99.5%	AA-	A1	48.2%	50.7%	1.1%			
19	PG&E Corp.	100.0%	BBB+	A3	47.4%	51.4%	1.2%			
20	Pinnacle West	95.5%	BBB-	Baa2	49.6%	50.4%	0.0%			
21	Portland General	100.0%	A-	A3	49.7%	50.3%	0.0%			
22	Progress Energy	99.9%	A-	A1	43.8%	55.8%	0.4%			
23	SCANA Corp.	73.1%	A-	A3	43.2%	56.8%	0.0%			
24	Sempra Energy	76.7%	A+	Aa3	54.1%	44.8%	1.1%			
25	Southern Co.	84.5%	Α	A2	45.7%	53.2%	1.1%			
26	Teco Energy, Inc.	80.0%	BBB	Baa1	39.4%	60.6%	0.0%			
27	UIL Holdings Co.	99.9%	NR	Baa2	46.0%	54.0%	0.0%			
28	Vectren Corp.	76.3%	Α	A2	47.5%	52.5%	0.0%			
29	Westar Energy	100.0%	BBB	Baa1	47.4%	52.1%	0.5%			
30	Wisconsin Energy	99.8%	A-	A1	47.7%	51.9%	0.4%			
31	Xcel Energy Inc.	99.2%	Α	A2	47.7%	51.6%	0.7%			
	Average	89.8%	A-/BBB+	A2/A3	47.9%	51.4%	0.7%			

### Column Sources:

<sup>(1)</sup> Most recent company 10-Ks.

<sup>(2)</sup> AUS Utility Reports, May 2010.

<sup>(3)</sup> Value Line Investment Survey, Electric Utility (East), Feb 26, 2010; (Central), Mar 26, 2010; (West), May 7, 2010 and most recent company 10-Ks (where actual 2009 data not available from Value Line).

### KCP&L Greater Missouri Operations Company Comparable Company Recovery Mechanisms April 2010

							RECOVERY MECHANISM FOR THE FOLLOWING COSTS:									
	Comparable		Juris-	Utility			Fuel/Purch	Conser-	Environ-	Trans-	Renewable					
No.	Company	Operating Company	diction	Type	Elec	Gas	Power/Gas	vation	mental	mission	Resources	Decoupling	Other			
1	ALLETE	Minnesota Power	MN	VI	Х		х	Х	Х	Х	х					
2	Alliant Energy Co.	Interstate Power & Light	IA	VI	Х	Х	х									
	0,	Wisconsin Power & Light	WI	VI	Х	Х	х		1	ì	ĺ					
3	American Elec. Pwr.	Columbus Southern, Ohio Power	ОН	Del	Х		х			х			Smart meters			
		Public Svc. Co. of Oklahoma	OK	VI	Х		х						Reliablility, Incremental Capital			
		AEP Texas Central, North	TX	Del	Х								Smart meters			
		SWEPCO	TX	VI	Х		х									
		Indiana Michigan Pwr Co.	IN	VI	Х		х									
		Appalachian Pwr Co.	VA	VI	Х		х			Х						
4	Avista Corp.	Avista Utilities	WA	VI	Х	Х	х					Х				
5	Black Hills Corp.	Black Hills Power	SD,MT	VI	Х		х			Х	х					
		Cheyenne Light	WY	VI	Х	Х	Х						i			
		Colorado Electric	CO	VI	Х		Х	Х		Х						
		Gas Utilities	KS,NE	Del		Х	Х						Bad debts, weather, other taxes			
6	Cleco Corporation	Cleco Power	LA	VI	Х	1	Х		Х				Certain transmission & other investment			
7	Con. Edison Co.	Con. Ed., Orange & Rockland	NY	Del	Х	Х	х					Х	Weather			
8	DPL Inc.	Dayton Power & Light	ОН	Del	Х		х	Х	Х	Х	х		Smart meters			
9	DTE Energy Co.	Detroit Edison	MI	VI	Х	Х	х		х			х	Bad debts, storm/line clearing			
10	Duke Energy	Duke Energy Carolinas	NC	VI	Х		х	Х			х		Nuclear investment			
	0,	Duke Energy Carolinas	SC	VI	Х		х	Х					Storm/line clearing, nuclear investment			
		Duke Energy Ohio	OH	Del	Х	Х	х	Х		Х			Bad debts, smart meters, reliability, gas mains			
		Duke Energy Indiana	IN	VI	Х	Х	х		Х				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
11	Edison Internat.	Southern California Edison	CA	VI	Х		х	Х	Х			Х	Nuclear decommissioning, cost of capital			
12	Empire District	Empire District	MO	VI	Х	Х	х						<b>5</b> ,			
13	Entergy Corp.	Entergy Arkansas	AR	VI	Х		х						Certain power plant investment			
	3, 44 (	Entergy Gulf States Louisiana	LA	VI	Х	Х	х						Certain power plant investment, formula rate plan			
		Entergy Texas	TX	VI	Х		Х			х						
		Entergy Louisiana	LA	VI	Х		х						Formula rate plan			
		Entergy Mississippi	MS	VI	Х		х						Certain power plant investment, formula rate plan			
		Entergy New Orleans	LA	VI	Х	Х	х	Х					Storm/line clearing			
14	FPL Group, Inc.	Florida Power & Light	FL	VI	Х		х	Х	х	ì	ĺ		Storm/line clearing, other taxes, pension, nuclear & solar inv			
15	Hawaiian Electric	Hawaiian Electric	HI	VI	Х		х	Х	1	ì	х	Х				
16	IDACORP	Idaho Power Co.	ID	VI	Х		х	Х	1	Х	ĺ	Х	Weather, smart meters			
17	Northeast Utilities	Connecticut Light & Power	CT	Del	Х		х	Х	1	х	ĺ		Other taxes			
		Western Mass. Electric Co.	MA	Del	Х		х	Х		х			Pension			
		Public Service Co. of NH	NH	VI	Х		Х	Х	Х	Х			Clean Air Project investment			
		Yankee Gas	CT	Del		Х	х		Х		Ì					
18	NSTAR	NSTAR	MA	Del	Х	Х	х	Х		Х	х		Bad debts, pension			
19	PG&E Corp.	Pacific Gas & Electric	CA	VI	Х	Х	Х	Х	Х		Х	Х	Approved resource plan investment, cost of capital			
20	Pinnacle West	APS	AZ	VI	Х		Х	Х		Х	Х					
21	Portland General	Portland General	OR	VI	Х		Х	Х			Х	Х				
22	Progress Energy	Progress Energy Florida	FL	VI	Х		Х	Х	Х				Storm/line clearing, nuclear investment			
	, ,,	Progress Energy Carolina	NC	VI	Х		Х	Х	Х		Х					
		Progress Energy Carolina	SC	VI	Х	l	х	Х	Х		Ì		Nuclear investment			
23	SCANA Corp.	South Carolina E&G	SC,NC	VI	Х	Х	Х					Х	Bad debts, weather			
24	Sempra Energy	San Diego Gas & Electric	CA	VI	Х	Х	х	Х	Х		Ì	х	Cost of capital			

### KCP&L Greater Missouri Operations Company Comparable Company Recovery Mechanisms April 2010

										RECOVE	RY MECHANISI	M FOR THE FOL	LOWING COSTS:
	Comparable		Juris-	Utility			Fuel/Purch	Conser-	Environ-	Trans-	Renewable		
No.	Company	Operating Company	diction	Туре	Elec	Gas	Power/Gas	vation	mental	mission	Resources	Decoupling	Other
25	Southern Co.	Alabama Power	AL	VI	Х		х		Х				Storm/line clearing
		Georgia Power, Sav Pwr	GA	VI	Х		Х						Nuclear investment
		Gulf Power	FL	VI	Х		Х	X	Х				
		Mississippi Power	MS	VI	Х		Х		Х				Baseload investment
26	TECO Energy, Inc.	Tampa Electric Co.	FL	VI	Х	Х	Х	Х	Х				
27	UIL Holdings Co.	United Illuminating Co.	CT	Del	Х		Х	Х		Х	Х	Х	Congestion reduction investment
28	Vectren Corp.	Southern Indiana G&E	IN	VI	Х	Х	Х	Х	Х			Х	Bad debts, weather, nuclear decomm, transmission inv
29	Westar Energy	Westar Energy	KS	VI	Х		Х		Х	Х			
30	Wisconsin Energy	Wisconsin Electric	WI	VI	Х	Х	Х						
31	Xcel Energy Inc.	NSP-Minnesota	MN	VI	Х	Х	Х	Х	Х	Х	Х		Coal conversion investment
		NSP-Wisconsin	WI	VI	Х	Х	Х						
		PSC Colorado	CO	VI	Χ	Χ	Х	X	Х	Х	Х		
		Southwestern Public Service	TX	VI	Х		Х	Х					
	Summary of Results	Cos with Recovery Mechanisms:					31	21	16	13	12	12	21
		Total Companies	31										

Source: Company 10-K's; select information for AEP, Black Hills, and Hawaiian Electric provided by Regulatory Research Associates (RRA). Note: VI=Vertically Integrated; Del=Delivery

### GREAT PLAINS ENERGY INCORPORATED Capitalization December 31, 2009 (Actual) (\$ in 000's)

		GPE Cons	olidated			GPE Capitalization for KCPL Ratemaking				GPE Capital GMO Rate			Other			
CAPITAL COMPONENT	AMOUNT	PERCENT	REQUIRED RETURN	WEIGHTED RETURN	AMOUNT	PERCENT	REQUIRED RETURN	WEIGHTED RETURN	AMOUNT	PERCENT	REQUIRED RETURN	WEIGHTED RETURN	AMOUNT	PERCENT	REQUIRED T	WEIGHTED RETURN
KCPL Long-term Debt	\$1,776,617	29.60%	6.80%		1,770,808	47.29%	6.80%		3,862	0.17%	6.80%		1,947	47.29%	6.80%	
GMO Long-term Debt	\$962,560	16.04%	7.03%		-	0.00%	7.03%		962,560	42.70%	7.03%		-	0.00%	7.03%	
GPE Long-term Debt	\$99,602	1.66%	7.53%		-	0.00%	7.53%		99,602	4.42%	7.53%		-	0.00%	7.53%	
Long-Term Debt (Note 1)	\$2,838,779	47.29%	6.90%	3.2649%	1,770,808	47.29%	6.80%	3.2151%	1,066,025	47.29%	7.08%	3.3477%	1,947	47.29%	6.80%	3.2151%
Equity-linked Convertible Debt	287,500	4.79%	13.59%	0.6508%	179,340	4.79%	13.59%	0.6508%	107,963	4.79%	13.59%	0.6508%	197	4.79%	13.59%	0.6508%
Preferred Stock	39,000	0.65%	4.29%	0.0279%	24,328	0.65%	4.29%	0.0279%	14,645	0.65%	4.29%	0.0279%	27	0.65%	4.29%	0.0279%
Common Equity (Note 2)	2,837,400 \$6,002,679	47.27% 100.00%	11.00%	5.1996% 9.1432%	1,769,948 \$3,744,424	47.27% 100.00%	11.00%	5.1996% 9.0934%	1,065,507 \$2,254,139	47.27% 100.00%	11.00%	5.1996% 9.2260%	1,946 \$4,116	47.27% 100.00%	11.00% _	5.1996% 9.0934%

Note 1: Includes amounts classified as current liabilities and excludes the Fair Value Adjustment

### **GREAT PLAINS ENERGY INCORPORATED**

Capitalization
December 31, 2009 (Actual)
(\$ in 000's)

			REQUIRED	WEIGHTED
CAPITAL COMPONENT	AMOUNT	PERCENT	RETURN	RETURN
Long-Term Debt (Note 1)	\$2,838,779	47.29%	6.90%	3.2649%
Equity-linked Convertible Debt	287,500	4.79%	13.59%	0.6508%
Preferred Stock	39,000	0.65%	4.29%	0.0279%
Common Equity (Note 2)	2,837,400	47.27%	11.00%	5.1996%
	\$6,002,679	100.00%		9.1432%

Note 1: Includes amounts classified as current liabilities and excludes the Fair Value Adjustment

# KANSAS CITY POWER & LIGHT COMPANY Capitalization December 31, 2009 (Actual) (\$ in 000's)

AMOUNT	PERCENT
\$1,776,617	47.45%
1,967,807	52.55%
\$3,744,424	100.00%
	\$1,776,617 1,967,807

Note 1: Includes amounts classified as current liabilities

# GREATER MISSOURI OPERATIONS Capitalization

December 31, 2009 (Actual)
(\$ in 000's)

AMOUNT	PERCENT
\$962,560	42.70%
1,291,579	57.30%
\$2,254,139	100.00%
	\$962,560 1,291,579

Note 1: Includes amounts classified as current liabilities and excludes the Fair Value Ac

### KANSAS CITY POWER & LIGHT COMPANY, GREAT PLAINS ENERGY and GMO Weighted Average Cost of Long-Term Debt Capital

December 31, 2009 (Actual)											
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	<b>(j)</b>
						Discounts &				Long-term	Annual Cost
		Initial	Date of	Date of	Price to	Underwriters	Issuance	Net Proceeds	Cost to	Debt Capital	of Long-term
Line		Offering	Offering	Maturity	Public	Commissions	Expense	to Company	Company	Outstanding	Debt Capital
KAN	ISAS CITY POWER & LIGHT ONLY										
	Pledged General Mortgage Bonds										
1	EIRR 1992 Series	\$31,000,000	9/15/1992	7/1/2017					5.686%	\$31,000,000	\$1,762,660
2	EIRR Hawthorn 1993 Series - 4.0% Coupon	\$12,366,000	10/14/1993	1/2/2012					4.202%	\$12,366,000	\$519,619
3	MATES Series 1993-A	\$40,000,000	12/7/1993	12/1/2023					5.468%	\$40,000,000	\$2,187,200
4	MATES Series 1993-B	\$39,480,000	12/7/1993	12/1/2023					5.243%	\$39,480,000	\$2,069,936
5	EIRR La Cygne 2005 Series - 4.05% Coupon	\$13,982,500	2/23/1994	3/1/2015					4.254%	\$13,982,000	\$594,794
6	EIRR La Cygne 2005 Series - 4.65% Coupon	\$21,940,000	2/23/1994	9/1/2035					4.731%	\$21,940,000	\$1,037,981
7	Mortgage Bonds Series 2009A - 7.15%	\$400,000,000	3/24/2009	3/24/2019	\$400,000,000	\$3,032,000	\$1,423,316	\$395,544,684	7.309%	\$400,000,000	\$29,235,757
	Unsecured Notes										
8	Senior Notes Due 2017 - 5.85% Coupon (1)	\$250,000,000	5/30/2007	6/15/2017	\$250,000,000	\$2,045,000	\$218,906	\$247,736,094	5.972%	\$250,000,000	\$14,928,940
9	Senior Notes Due 2011 - 6.5% Coupon (2)	\$150,000,000	3/20/2001	11/15/2011	\$150,000,000	\$1,198,500	\$83,971	\$148,717,529	6.618%	\$150,000,000	\$9,927,369
10	Senior Notes Due 2035 - 6.05% Coupon (3)	\$250,000,000	11/17/2005	11/15/2035	\$250,000,000	\$3,692,500	\$255,609	\$246,051,891	6.166%	\$250,000,000	\$15,415,411
11	Senior Notes Due 2018 - 6.375% Coupon (4)	\$350,000,000	3/6/2008	3/1/2018	\$350,000,000	\$2,275,000	\$291,730	\$347,433,270	6.476%	\$350,000,000	\$22,665,182
	Environmental Improvement Revenue Refund	ing Bonds									
12	2005 Series Due 2035 - 4.65% Coupon	\$50,000,000	9/1/05	9/1/2035							
13	2007 Series A-1 Due 2035	\$63,250,000	9/19/07	9/1/2035					4.747%	\$50,000,000	\$2,373,500
14	2007 Series A-2 Due 2035	\$10,000,000	9/19/07	9/1/2035					5.337%	\$63,250,000	\$3,375,340
15	2007 Series B Due 2035	\$73,250,000	9/19/07	9/1/2035					5.210%	\$10,000,000	\$520,997
16	2008 Series Due 2038	\$23,400,000	5/28/08	5/1/2038					5.572%	\$73,250,000	\$4,081,219
_		Ψ20,400,000	3/20/00	3/1/2036					4.930%	\$23,400,000	\$1,153,586
	Other Long-Term Debt										
17	Unamortized Discount on Senior Notes									(2,050,854)	
18	Loss/(Gain) on Reacquired Debt									(2,000,004)	\$395,361
19	Weighted Cost of Interest Rate Management Prod	ducts									\$8,535,948
									-		Ψ0,000,040
20	Total KCP&L Long-Term Debt Capital			De	ecember 31, 2009	(Actual)			_	\$1,776,617,146	\$120,780,803
21	KCD8.I Weighted Ave. Cook off T										
21	KCP&L Weighted Avg. Cost of Long-Term D	ebt Capital			December 31, 200	09 (Actual)		6.798%			

### KANSAS CITY POWER & LIGHT COMPANY, GREAT PLAINS ENERGY and GMO Weighted Average Cost of Long-Term Debt Capital

### December 31, 2009 (Actual) (a) (b) (c) (d) (f) (q) (h) (i) (j) Discounts & Long-term Annual Cost Initial Date of Date of Price to Underwriters Net Proceeds Cost to Debt Capital of Long-term Issuance Line Issue Offering Offering Maturity Public Commissions Company Outstanding Debt Capital Expense to Company GMO ONLY Pledged General Mortgage Bonds 1 SJLP First Mortgage Bonds - 9.44% \$22,500,000 2/1/91 2/1/21 \$22,500,000 \$664,653 9.745% \$13,500,000 \$21,835,347 \$1,315,638 **Unsecured Notes** 2 Senior Notes Due 2021 - 8.27% Coupon \$131,750,000 3/31/99 11/15/21 \$131,750,000 \$3,591,143 \$128,158,857 8.547% \$80,850,000 \$6,910,156 Senior Notes Due 2009 - 7.625% Coupon \$200,000,000 11/15/99 11/15/09 \$200,000,000 \$3,025,739 \$196,974,261 7.846% \$0 Senior Notes Due 2011 - 7.95% Coupon \$250,000,000 2/1/01 2/1/11 \$250,000,000 \$1,880,959 \$248,119,041 8.061% \$137,310,000 \$11,068,590 5 Senior Notes Due 2011 - 7.75% Coupon \$200,000,000 6/20/01 6/15/11 \$200,000,000 \$0 \$200,000,000 7.750% \$197,000,000 \$15,267,500 6 Senior Notes Due 2011 - 11.875% Coupon \$500,000,000 7/3/02 7/1/12 \$500,000,000 \$0 \$500,000,000 6.258% \$500,000,000 \$31,292,205 Medium Term Notes Due 2013 - 7.16% Coupon \$9,000,000 11/30/93 11/30/13 \$9,000,000 \$490,738 \$8,509,262 7.699% \$6,000,000 \$461,921 Medium Term Notes Due 2023 - 7.33% Coupon \$3,000,000 11/30/93 11/30/13 \$3,000,000 \$163,606 \$2,836,394 7.803% \$3,000,000 \$234,095 Medium Term Notes Due 2023 - 7.17% Coupon .\$7,000,000 12/6/93 12/1/23 \$7,000,000 \$382,259 \$6,617,741 7.636% \$7,000,000 \$534,536 **Environmental Improvement Revenue Refunding Bonds** 10 Warnego 1996 Series - Auction Rate \$7,300,000 3/1/96 3/1/26 \$7,300,000 \$422.982 \$6,877,018 0.493% \$35,975 \$7,300,000 SJLP EIERA Bonds - 5.85% \$5,600,000 6/4/95 2/1/13 \$5,600,000 \$913,838 \$4,686,162 \$5,600,000 7.519% \$421,066 12 Sibley 1993 Series - Auction Rate \$5,000,000 5/26/93 5/1/28 \$5,000,000 \$111,563 \$4,888,437 \$5,000,000 \$108,401 2.168% Other Long-Term Debt 13 Sanwa Bus CC \$8,190,000 12/9/95 12/9/09 \$8,190,000 \$35,000 \$8,155,000 \$0 7.038% 14 Loss/(Gain) on Reacquired Debt 44,404 15 Total GMO Long-Term Debt Capital December 31, 2009 (Actual) \$962,560,000 \$67,694,487

December 31, 2009 (Actual)

7.033%

16 GMO Weighted Avg. Cost of Long-Term Debt Capital

### KANSAS CITY POWER & LIGHT COMPANY, GREAT PLAINS ENERGY and GMO Weighted Average Cost of Long-Term Debt Capital

				o.gou /	December 31, 200	-	ntai							
		(a)	(b)	(c)	(d)	(e) Discounts &	(f)	(g)	(h)	(i)	(j) Annual Cost			
		Initial	Date of	Date of	Price to	Underwriters	Issuance	Net Proceeds	Cost to	Long-term Debt Capital	of Long-term			
Line	Issue	Offering	Offering	Maturity	Public	Commissions	Expense	to Company	Company	Outstanding	Debt Capital			
GRI	EAT PLAINS ENERGY ONLY													
	Unsecured Notes													
1	Senior Notes Due 2017 - 6.875% Coupon (5)	\$100,000,000	9/20/2007	9/15/2017	\$100,000,000	\$1,166,000	\$87,098	\$98,746,902	7.052%	\$100,000,000	\$7,051,752			
	Other Long-Term Debt													
2	Unamortized Discount on Senior Notes	-								(\$397,750)				
3	Weighted Cost of Interest Rate Management Pro	oducts									\$453,103			
4	Total GPE Only Long-Term Debt Capital	I		c	December 31, 2009	(Actual)				\$99,602,250	\$7,504,855			
5	GPE Only Weighted Avg. Cost of Long-Terr	m Debt Capital			December 31, 20	09 (Actual)		7.535%						
GRE	GREAT PLAINS ENERGY, KANSAS CITY POWER & LIGHT and GMO													
6	Total GPE, KCP&L and GMO Long-Term	Debt Capital			December 31, 2009	(Actual)				\$2,838,779,396	\$195,980,146			
7	GPE, KCP&L and GMO Weighted Avg. Cost	t of Long-Term Debt	Capital		December 31, 20	09 (Actual)		6.904%						

<sup>(1)</sup> Expenses associated with the Senior Notes are being amortized over a 10 year period.

<sup>(2)</sup> Expenses associated with the Senior Notes are being amortized over a 10 year period.

<sup>(3)</sup> Expenses associated with the Senior Notes are being amortized over a 30 year period.

<sup>(4)</sup> Expenses associated with the Senior Notes are being amortized over a 10 year period.

<sup>(5)</sup> Expenses associated with the Senior Notes are being amortized over a 10 year period.

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### **GREAT PLAINS ENERGY**

### Cost of Equity-linked Convertible Debt

December 31, 2009 (Actual) and December 31. 2010 (Projected)

					(		-,,				
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
						Underwriters				Convertible	Annual Cost
		Initial	Date of	Date of	Price to	Discounts &	Issuance	Net Proceeds	Cost to	Debt Capital	of Convertible
Line	Issue	Offering	Offering	Conversion	Public	Commissions	Expense	to Company	Company	Outstanding	Debt Capital
GRE	AT PLAINS ENERGY										
	Unsecured Notes	_									
1	Equity Units - Total Cost	\$287,500,000	5/12/2009	6/15/2012	\$287,500,000	\$10,062,500	\$1,034,053	\$276,403,447	13.588%	\$287,500,000	\$39,065,460
	Subordinate Debt portion of Equity Units	\$287,500,000	5/12/2009	6/15/2012	\$287,500,000	\$3,593,750	\$623,797	\$283,282,453	10.577%	\$287,500,000	\$30,409,025
	Cost of Equity Units not tax deductible					\$6,468,750	\$410,256		3.011%		\$8,656,435

### GREAT PLAINS ENERGY INCORPORATED

# Weighted Cost of Preferred Stock Capital Outstanding at December 31, 2009 (Actual) and December 31, 2010 (Projected)

	(a)		(c) No. of Shares	(d)	(e) Underwriters	(f)	(g)	(h)	(i)	(j) Annual Cost of Preferred
Line	Description of Issue	Date of Issuance	Initial Offering	Price to Public	Discounts & Commissions	Issuance Expense	Net Proceeds to Company	Cost to Company	Preferred Stock Capital Outstanding	Stock Capital
LITE	Description of Issue	133441166	Onening	1 1100 10 1 40110	Commodicina	<u> </u>	to company	<u> </u>		
1	3.80% cum \$100 par	12-01-46	100,000	\$10,270,000	\$179,000	\$58,391	\$10,032,609	3.788%	\$10,000,000	\$378,800
									40.000.000	400 700
2	4.50% cum \$100 par	1-20-52	100,000	10,000,000	195,000	79,241	9,725,759	4.627%	10,000,000	462,700
3	4.20% cum \$100 par	1-21-54	70,000	7,070,000	122,500	41,270	6,906,230	4.257%	7,000,000	297,990
	•									4 400
4	4.35% cum \$100 par	4-17-56	120,000	12,000,000	201,600	71,304	11,727,096	4.451%	12,000,000	534,120
5	Total Preferred Stock Ca	pital Decemb	per 31, 2009 (	(Actual)					\$39,000,000	\$1,673,610

Weighted Average Cost at December 31, 2009 (Actual) and December 31, 2010 (Projected)

4.291%

KCP&L Greater Missouri Operations Company Historical Capital Market Costs

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Prime Rate	9.5%	%6.9	4.7%	4.1%	4.3%	6.2%	8.0%	8.1%	5.1%	3.3%
Consumer Price Index	3.4%	1.6%	2.5%	2.0%	3.3%	3.3%	2.5%	4.1%	%0.0	2.8%
Long-Term Treasuries	2.9%	2.5%	5.4%	2.0%	5.1%	4.7%	2.0%	4.8%	4.3%	4.1%
Moody's Avg Utility Debt	8.1%	7.7%	7.5%	%9:9	6.2%	%2.5	6.1%	6.1%	%2'9	6.3%
Moody's Baa Utility Debt	8.4%	8.0%	8.0%	%8.9	6.4%	2.9%	%8:9	6.3%	7.2%	7.1%

SOURCES:

Prime Interest Rate - Federal Reserve Bank of St. Louis website

Long-Term Treasuries - Federal Reserve Bank of St. Louis website; 30-year Treasury bonds 1999-2001 and 2007-2009; 20-year Treasury bonds 2002-2006 Consumer Price Index For All Urban Consumers: All Items (Seasonally Adjusted, December to December) - Federal Reserve Bank of St. Louis website

Moody's Average Utility Debt - Moody's (Mergent) Bond Record

Moody's Baa Utility Debt - Moody's (Mergent) Bond Record

KCP&L Greater Missouri Operations Company Long-Term Interest Rate Trends

	Triple-B	30-Year	Triple-B
Month	Utility Rate	Treasury Rate	Utility Spread
Jan-08	6.35	4.33	2.02
Feb-08	6.60	4.52	2.08
Mar-08	6.68	4.39	2.29
Apr-08	6.81	4.44	2.37
May-08	6.79	4.60	2.19
Jun-08	6.93	4.69	2.24
Jul-08	6.97	4.57	2.40
Aug-08	6.98	4.50	2.48
Sep-08	7.15	4.27	2.88
Oct-08	8.58	4.17	4.41
Nov-08	8.98	4.00	4.98
Dec-08	8.11	2.87	5.24
Jan-09	7.90	3.13	4.77
Feb-09	7.74	3.59	4.15
Mar-09	8.00	3.64	4.36
Apr-09	8.03	3.76	4.27
May-09	7.76	4.23	3.53
Jun-09	7.31	4.52	2.79
Jul-09	6.87	4.41	2.46
Aug-09	6.36	4.37	1.99
Sep-09	6.12	4.19	1.93
Oct-09	6.14	4.19	1.95
Nov-09	6.18	4.31	1.87
Dec-09	6.26	4.49	1.77
Jan-10	6.16	4.60	1.56
Feb-10	6.25	4.62	1.63
Mar-10	6.22	4.64	1.58
Apr-10	6.19	4.69	1.50
3-Mo Avg	6.22	4.65	1.57
12-Mo Avg	6.49	4.44	2.05

Sources: Mergent Bond Record (Utility Rates); www.federalreserve.gov (Treasury Rates).

Three month average is for February 2010-April 2010.

Twelve month average is for May 2009-April 2010.

# \* Economic Indicators

ons
Billic
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Figures
. Dollar
Rates —
Annual
Adjusted
Seasonally

			Annual % Change	Chai	epu		. 5008	60		F2	F2010		F2011	
R2009	E2010	E2011	R2009	E2010	E2011		9 0°	R4Q	ā	20 20	g 2	4 Q	ā Š	50
\$14,256.3	\$14,845.4	\$15,556.1	(1.3)	4 1.1	4.8	Gross Domestic Product GDP (current dollars)	\$14,242.1	\$14,453.8	\$14,581.6	\$14,774.0	\$14,940.0	\$15,085.9	\$15,276.2	\$15,451.0
(1.3)		8.4		1	,	Annual rate of increase (%)	2.6	6.1	3.6	5.4	4.6	4.0	5.1	4.7
(2.4)	3.0	2.9	,	,	,	Annual rate of increase-real GDP (%)	2.2	5.6	2.5	3.5	2.3	2.6	2.8	2.9
1.2	1.1	1.8	,	ı	,	Annual rate of increase-GDP deflator (%	6.0	0.5	1.1	1.8	2.2	1.3	2.2	1.7
						*Components of Real GDP								
\$9,235.1	\$9,449.7	\$9,665.5	(0.6)	2.3	2.3	Personal consumption expenditures	\$9,252.6	\$9,289.5	\$9,364.1	\$9,415.8	\$9,482.8	\$9,535.9	\$9,574.7	\$9,624.9
(9.0)	2.3	2.3			,	% change	2.8	1.6	3.3	2.2	2.9	2.3	1.6	2.1
1,101.4	1,177.0	1,256.0	(3.9)	6.9	6.7	Durable goods	1,122.7	1,123.7	1,139.1	1,167.4	1,192.2	1,209.3	1,222.7	1,237.6
2,037.0	2,088.8	2,116.5	(1.0)	2.5	1.3	Nondurable goods	2,033.3	2,053.4	2,077.7	2,083.5	2,093.7	2,100.4	2,103.3	2,110.5
6,087.8	6,183.6	6,303.3	0.1	1.6	1.9	Services	9.060,9	6,105.9	6,142.0	6,163.6	6,198.8	6,230.1	6,254.4	6,284.1
1,291.0	1,312.5	1,403.5	(17.8)	1.7	6.9	Nonresidental fixed investment	1,269.0	1,285.5	1,287.9	1,305.9	1,320.0	1,336.0	1,361.6	1,385.8
(17.8)	1.7	6.9	,			% change	(6.5)	5.3	0.7	2.7	4.4	4.9	7.9	7.3
890.7		1,097.1	(16.6)	9.6	12.4	Producers durable equipment	879.8	918.9	930.2	960.5	991.0	1,021.9	1,055.8	1,085.3
349.6	348.7	432.0	(20.8)	(0.3)	23.9	Residental fixed investment	350.5	353.5	343.2	345.4	346.7	359.4	383.9	417.0
	(0.3)	23.9	,			% change	19.0	3.5	(11.1)	2.6	1.5	15.5	30.2	39.3
	27.5	51.0	,			Net change in business inventories	(139.2)	(19.7)	(2.8)	31.4	38.3	42.9	48.2	49.2
ਜੁ 2,564.6	2,584.6	2,564.8	1.8	8.0	(0.8)	Gov't purchases of goods & services	2,585.5	2,576.9	2,570.4	2,586.7	2,590.2	2,591.1	2,584.6	2,570.1
		1,038.2	5.2	3.8	(2.5)	Federal	1,043.3	1,043.4	1,052.8	1,069.3	1,070.6	1,068.2	1,058.8	1,044.0
		1,530.3	(0.2)	(1.1)	0.4	State & local	1,545.5	1,537.0	1,521.5	1,521.6	1,523.9	1,526.9	1,529.6	1,529.8
	(357.2)	(348.6)				Net exports	(357.4)	(348.0)	(344.7)	(352.0)	(366.7)	(365.3)	(354.3)	(345.9)
1,472.4	1,650.1	1,792.5	(9.6)	12.1	8.6	Exports	1,478.8	1,556.8	1,587.7	1,633.7	1,671.3	1,707.8	1,740.8	1,776.6
1,828.0	2,007.3	2,141.1	(13.9)	8.6	6.7	Imports	1,836.2	1,904.8	1,932.3	1,985.7	2,038.0	2,073.0	2,095.1	2,122.5
2010						**Income & Profits								
↔	\$12,418.6	\$13,007.2	(1.7)	3.3	4.7	Personal income	\$12,005.2	\$12,097.7	\$12,188.2	\$12,342.2	\$12,505.8	\$12,638.0	\$12,785.5	\$12,919.3
10,923.7	11,255.6	11,659.4	1.1	3.0	3.6	Disposable personal income	10,934.3	11,028.7	11,059.4	11,191.2	11,340.7	11,431.0	11,469.5	11,582.6
4.2	3.3	2.8	1	,	,	Savings rate (%)	3.9	3.9	3.1	3.4	3.5	3.4	2.8	2.8
1,427.7	1,701.4	1,846.3	(2.4)	19.2	8.5	Corporate profits before taxes	1,495.0	1,632.0	1,736.8	1,674.8	1,683.4	1,710.5	1,825.0	1,830.5
1,112.8	1,309.7	1,308.2	(4.9)	17.7	(0.1)	Corporate profits after taxes	1,173.9	1,270.1	1,334.5	1,288.4	1,297.3	1,318.6	1,295.3	1,296.3
51.15	63.89	71.81	243.8	24.9	12.4	‡Eamings per share (S&P 500)	12.49	51.15	59.52	61.65	63.23	63.89	66.63	68.97
						†Prices & Interest Rates								
(0.3)	2.2	2.0	1	,	,	Consumer price index	3.7	2.6	1.6	1.5	2.5	1.6	2.3	2.1
0.2		2.0	1	,	,	Treasury bills	0.2	0.1	0.1	0.2	4.0	0.8	1.3	1.8
3.3		5.1	,	,	,	10-yr notes	3.5	3.5	3.7	4.0	4.3	4.5	4.8	5.0
4.1	5.0	2.7	,	,	,	30-yr bonds	4.3	4.3	4.6	4.9	5.1	5.3	5.6	2.5
5.3	2.7	9.9		,		New issue rate-corporate bonds	5.3	5.2	5.3	5.6	5.9	6.1	6.4	9.9
INDI						Other Key Indicators								
2	U	1,142.2	(38.6)	9.8	72.3	Housing starts (1,000 units SAAR)	586.7	558.7	595.2	604.5	681.2	770.8	930.2	1,083.3
_	_	13.6	(21.6)	13.4	15.6	Auto & truck sales (1,000,000 units)	11.5	10.8	11.0	11.6	12.0	12.4	12.7	13.2
		9.5	1			Unemployment rate (%)	9.6	10.0	9.7	9.6	9.6	9.7	9.6	9.4
11B	(4.6)	(0.9)				§U.S. dollar	(18.6)	(9.2)	10.7	(1.3)	(6.9)	(8.2)	(7.3)	(4.8)
	। changes are	from prior year	r and quarteri	y change	s are fron	Note: Annual changes are from prior year and quarterly changes are from prior quarter. Figures may not add to totals because of rounding. A-Advance data. P-Preliminary. E-Estimated. R-Revised.	cause of round	Jing. A-Adva	nce data. P-F	reliminary. E	-Estimated. F	Revised.		

Note: Allinda Chaines are from pilot year and quarterly changes are from pilot quarter. Frgures ind and broads broads or fourting, Array and the forecast prepared by Standard & Poor's. \*2005 Chain-weighted dollars. \*\*Current dollars. ‡Trailing 4 quarters. ‡Average for period. §Quarterly % changes at quarterly rates. This forecast prepared by Standard & Poor's.

# KCP&L Greater Missouri Operations Company GDP Growth Rate Forecast

	Nominal	%	GDP Price	%		%
	GDP	Change	Deflator	Change	CPI	Change
1949	265.2		14.4		23.6	
1950	313.3	18.1%	15.0	4.2%	25.0	5.8%
1951 1952	347.9 371.4	11.0% 6.8%	15.9 16.1	5.6% 1.5%	26.5 26.7	6.0% 0.9%
1953	375.9	1.2%	16.1	0.8%	26.9	0.6%
1954	389.4	3.6%	16.4	0.8%	26.8	-0.4%
1955	426.0	9.4%	16.8	2.6%	26.9	0.4%
1956	448.1	5.2%	17.3	3.3%	27.6	2.8%
1957	461.5	3.0%	17.8	2.7%	28.5	3.0%
1958 1959	485.0 513.2	5.1% 5.8%	18.3 18.4	2.5% 0.9%	29.0 29.4	1.8% 1.5%
1960	523.7	2.0%	18.7	1.4%	29.4	1.4%
1961	562.6	7.4%	18.9	1.1%	30.0	0.7%
1962	593.3	5.5%	19.1	1.3%	30.4	1.2%
1963	633.5	6.8%	19.4	1.4%	30.9	1.6%
1964	675.6	6.6%	19.7	1.5%	31.3	1.2%
1965 1966	747.5 806.9	10.6% 7.9%	20.1 20.8	2.0% 3.5%	31.9 32.9	1.9% 3.4%
1966	852.7	7.9% 5.7%	20.6	3.5%	34.0	3.4%
1968	936.2	9.8%	22.4	4.6%	35.6	4.7%
1969	1004.5	7.3%	23.6	5.2%	37.7	5.9%
1970	1052.7	4.8%	24.7	5.0%	39.8	5.6%
1971	1151.4	9.4%	25.9	4.7%	41.1	3.3%
1972	1286.6	11.7% 11.3%	27.1	4.5%	42.5	3.4%
1973 1974	1431.8 1552.8	8.5%	28.9 32.0	6.8% 10.7%	46.3 51.9	8.9% 12.1%
1975	1713.9	10.4%	34.4	7.6%	55.6	7.1%
1976	1884.5	10.0%	36.3	5.4%	58.4	5.0%
1977	2110.8	12.0%	38.7	6.7%	62.3	6.7%
1978	2416.0	14.5%	41.5	7.3%	67.9	9.0%
1979	2659.4	10.1%	45.2	8.7%	76.9	13.3%
1980 1981	2915.3 3194.7	9.6% 9.6%	49.6 53.6	9.7% 8.3%	86.4 94.1	12.4% 8.9%
1982	3312.5	3.7%	56.4	5.2%	97.7	3.8%
1983	3688.1	11.3%	58.3	3.3%	101.4	3.8%
1984	4034.0	9.4%	60.4	3.6%	105.5	4.0%
1985	4318.7	7.1%	62.1	2.8%	109.5	3.8%
1986	4543.3	5.2%	63.5	2.3%	110.8	1.2%
1987 1988	4883.1 5251.0	7.5% 7.5%	65.5 67.9	3.1% 3.7%	115.6 120.7	4.3% 4.4%
1989	5581.7	6.3%	70.3	3.5%	126.3	4.6%
1990	5846.0	4.7%	73.2	4.2%	134.2	6.3%
1991	6092.5	4.2%	75.5	3.2%	138.2	3.0%
1992	6493.6	6.6%	77.1	2.2%	142.3	3.0%
1993 1994	6813.8	4.9% 6.4%	78.8	2.2% 2.1%	146.3 150.1	2.8% 2.6%
1994	7248.2 7542.5	4.1%	80.5 82.1	2.1%	153.9	2.5%
1996	8023.0	6.4%	83.6	1.8%	159.1	3.4%
1997	8505.7	6.0%	85.0	1.6%	161.8	1.7%
1998	9027.5	6.1%	85.9	1.1%	164.4	1.6%
1999	9607.7	6.4%	87.2	1.5%	168.8	2.7%
2000 2001	10129.8 10373.1	5.4% 2.4%	89.4 91.2	2.5% 2.0%	174.6 177.4	3.4% 1.6%
2001	10373.1	2.4% 3.8%	91.2	2.0% 1.8%	181.8	2.5%
2003	11416.5	6.0%	94.8	2.1%	185.5	2.0%
2004	12144.9	6.4%	97.9	3.2%	191.7	3.3%
2005	12915.6	6.3%	101.3	3.5%	198.1	3.3%
2006	13611.5	5.4%	104.2	2.9%	203.1	2.5%
2007 2008	14337.9 14347.3	5.3% 0.1%	107.1 109.2	2.7% 2.0%	211.4 211.3	4.1% 0.0%
2008	14347.3	0.1%	109.2	2.0% 0.7%	217.2	2.8%
10-Year Av		4.2%	100.0	2.3%	217.2	2.6%
20-Year Av	•	4.9%		2.3%		2.8%
30-Year Av	•	5.8%		3.0%		3.5%
40-Year Av		6.9%		4.0%		4.5%
50-Year Av	-	6.9% 6.9%		3.7% 3.5%		4.1% 3.8%
Average of		6.0%		3.1%		3.6%
2.2.30 01		2.070		,		2.070

Source: St. Louis Federal Reserve Bank, www.research.stlouisfed.org

### KCP&L Greater Missouri Operations Company Discounted Cash Flow Analysis Summary Of DCF Model Results

	1	T	
	Constant Growth	Constant Growth	Low Near-Term Growth
	DCF Model	DCF Model	Two-Stage Growth
Company	Analysts' Growth Rates	Long-Term GDP Growth	DCF Model
Сотрану	/a.yata aramari tataa	l	2 31643.
1 ALLETE	9.8%	11.3%	10.6%
2 Alliant Energy Co.	10.4%	10.9%	10.9%
3 American Elec. Pwr.	8.4%	10.8%	10.7%
4 Avista Corp.	11.0%	11.0%	11.2%
5 Black Hills Corp	11.1%	11.0%	10.6%
6 Cleco Corporation	11.0%	10.0%	10.5%
7 Con. Edison	8.7%	11.4%	10.8%
8 DPL Inc.	9.9%	10.6%	10.6%
9 DTE Energy Co.	10.5%	10.9%	10.9%
10 Duke Energy	10.7%	12.0%	11.7%
11 Edison Internat.	NA	9.9%	9.7%
12 Empire District	13.4%	12.9%	12.2%
13 Entergy Corp.	9.0%	9.8%	9.8%
14 FPL Group, Inc.	11.1%	10.1%	10.1%
15 Hawaiian Electric	14.9%	11.7%	11.1%
16 IDACORP	8.7%	9.5%	9.4%
17 Northeast Utilities	11.8%	10.0%	9.9%
18 NSTAR	10.5%	10.8%	10.9%
19 PG&E Corp.	11.5%	10.4%	10.7%
20 Pinnacle West	12.0%	11.6%	11.2%
21 Portland General	10.3%	11.5%	11.3%
22 Progress Energy	10.5%	12.4%	11.6%
23 SCANA Corp.	9.7%	11.1%	10.7%
24 Sempra Energy	8.1%	9.3%	9.4%
25 Southern Co.	10.3%	11.5%	11.4%
26 Teco Energy, Inc.	11.8%	11.1%	11.0%
27 UIL Holdings Co.	9.9%	12.2%	11.3%
28 Vectren Corp.	10.5%	11.8%	11.3%
29 Westar Energy	12.1%	11.7%	11.3%
30 Wisconsin Energy	12.2%	9.4%	10.0%
31 Xcel Energy Inc.	10.6%	10.8%	10.6%
GROUP AVERAGE	10.7%	11.0%	10.8%
GROUP MEDIAN	10.5%	11.0%	10.8%

Source: Value Line Investment Survey, Electric Utility (East), Feb 26, 2010; (Central), Mar 26, 2010; (West), May 7, 2010.

Constant growth result for Edison International at 6.4% is below the cost of debt plus 100 basis points and is eliminated.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

### **KCP&L Greater Missouri Operations Company Constant Growth DCF Model Analysts' Growth Rates**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				ı	Analysts' Est	imated Grow		
		Next					Average	ROE
	Recent		Dividend	Value			Growth	K=Div Yld+G
Company	Price(P0)	Div(D1)	Yield	Line	Zacks	Thomson	(Cols 4-6)	(Cols 3+7)
1 ALLETE	33.30	1.76	5.29%	NA	3.70%	5.33%	4.52%	9.8%
<ol><li>Alliant Energy Co.</li></ol>	32.91	1.62	4.91%	7.00%	4.00%	5.60%	5.53%	10.4%
3 American Elec. Pwr.	34.11	1.65	4.84%	3.00%	3.60%	4.00%	3.53%	8.4%
4 Avista Corp.	20.88	1.04	4.98%	8.50%	4.80%	4.67%	5.99%	11.0%
5 Black Hills Corp	29.40	1.46	4.97%	6.50%	6.00%	6.00%	6.17%	11.1%
6 Cleco Corporation	26.22	1.04	3.97%	8.00%	9.00%	4.00%	7.00%	11.0%
7 Con. Edison	43.99	2.39	5.43%	2.50%	3.00%	4.28%	3.26%	8.7%
8 DPL Inc.	27.25	1.25	4.57%	6.50%	5.00%	4.47%	5.32%	9.9%
9 DTE Energy Co.	44.89	2.18	4.86%	7.00%	5.00%	4.90%	5.63%	10.5%
10 Duke Energy	16.45	0.98	5.96%	5.50%	4.40%	4.38%	4.76%	10.7%
11 Edison Internat.	<del>33.68</del>	<del>1.31</del>	<del>3.89%</del>	<del>0.50%</del>	<del>5.00%</del>	<del>2.03%</del>	<del>2.51%</del>	<del>6.4%</del>
12 Empire District	18.48	1.28	6.93%	7.00%	NA	6.00%	6.50%	13.4%
13 Entergy Corp.	79.58	3.00	3.77%	5.00%	4.00%	6.68%	5.23%	9.0%
14 FPL Group, Inc.	48.44	2.00	4.13%	7.00%	7.00%	6.89%	6.96%	11.1%
15 Hawaiian Electric	21.63	1.24	5.73%	11.50%	8.60%	7.26%	9.12%	14.9%
16 IDACORP	34.06	1.20	3.52%	5.50%	5.00%	5.00%	5.17%	8.7%
17 Northeast Utilities	26.73	1.07	3.98%	7.00%	8.40%	7.94%	7.78%	11.8%
18 NSTAR	34.95	1.68	4.81%	5.50%	6.00%	5.72%	5.74%	10.5%
19 PG&E Corp.	42.60	1.89	4.44%	7.00%	7.70%	6.40%	7.03%	11.5%
20 Pinnacle West	37.24	2.10	5.64%	6.00%	7.00%	6.00%	6.33%	12.0%
21 Portland General	19.11	1.06	5.52%	3.00%	5.80%	5.67%	4.82%	10.3%
22 Progress Energy	39.02	2.51	6.43%	4.50%	4.00%	3.56%	4.02%	10.5%
23 SCANA Corp.	37.12	1.91	5.15%	3.50%	5.10%	5.08%	4.56%	9.7%
24 Sempra Energy	49.64	1.62	3.26%	4.00%	7.00%	3.50%	4.83%	8.1%
25 Southern Co.	32.89	1.82	5.53%	4.50%	4.90%	4.94%	4.78%	10.3%
26 Teco Energy, Inc.	15.85	0.81	5.11%	6.00%	6.20%	7.93%	6.71%	11.8%
27 UIL Holdings Co.	27.79	1.73	6.23%	3.00%	4.00%	4.10%	3.70%	9.9%
28 Vectren Corp.	23.99	1.38	5.75%	4.50%	4.80%	5.00%	4.77%	10.5%
29 Westar Energy	22.20	1.26	5.68%	7.50%	5.00%	6.85%	6.45%	12.1%
30 Wisconsin Energy	49.93	1.70	3.40%	8.00%	9.50%	9.00%	8.83%	12.2%
31 Xcel Energy Inc.	21.12	1.02	4.81%	5.50%	5.70%	6.16%	5.79%	10.6%
GROUP AVERAGE	33.06	1.59	4.99%	5.86%	5.66%	5.58%	5.69%	10.7%
GROUP MEDIAN	00.00	1.50	4.97%	0.0070	0.0070	0.0070	0.0070	10.5%

Source: Value Line Investment Survey, Electric Utility (East), Feb 26, 2010; (Central), Mar 26, 2010; (West), May 7, 2010.

Constant growth result for Edison International at 6.4% is below the cost of debt plus 100 basis points and is eliminated. NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

# KCP&L Greater Missouri Operations Company Constant Growth DCF Model Long-Term GDP Growth

	(9)	(10)	(11)	(12)	(13)
		Next			ROE
	Recent		Dividend	CDD	K=Div Yld+G
Company	Price(P0)		Yield		(Cols 11+12)
Сотграну	T fice(i o)	DIV(D1)	riciu	Glowin	(00/3 / / + /2)
1 ALLETE	33.30	1.76	5.29%	6.00%	11.3%
2 Alliant Energy Co.	32.91	1.62	4.91%	6.00%	10.9%
3 American Elec. Pwr.	34.11	1.65	4.84%	6.00%	10.8%
4 Avista Corp.	20.88	1.04	4.98%	6.00%	11.0%
5 Black Hills Corp	29.40	1.46	4.97%	6.00%	11.0%
6 Cleco Corporation	26.22	1.04	3.97%	6.00%	10.0%
7 Con. Edison	43.99	2.39	5.43%	6.00%	11.4%
8 DPL Inc.	27.25	1.25	4.57%	6.00%	10.6%
9 DTE Energy Co.	44.89	2.18	4.86%	6.00%	10.9%
10 Duke Energy	16.45	0.98	5.96%	6.00%	12.0%
11 Edison Internat.	33.68	1.31	3.89%	6.00%	9.9%
12 Empire District	18.48	1.28	6.93%	6.00%	12.9%
13 Entergy Corp.	79.58	3.00	3.77%	6.00%	9.8%
14 FPL Group, Inc.	48.44	2.00	4.13%	6.00%	10.1%
15 Hawaiian Electric	21.63	1.24	5.73%	6.00%	11.7%
16 IDACORP	34.06	1.20	3.52%	6.00%	9.5%
17 Northeast Utilities	26.73	1.07	3.98%	6.00%	10.0%
18 NSTAR	34.95	1.68	4.81%	6.00%	10.8%
19 PG&E Corp.	42.60	1.89	4.44%	6.00%	10.4%
20 Pinnacle West	37.24	2.10	5.64%	6.00%	11.6%
21 Portland General	19.11	1.06	5.52%	6.00%	11.5%
22 Progress Energy	39.02	2.51	6.43%	6.00%	12.4%
23 SCANA Corp.	37.12	1.91	5.15%	6.00%	11.1%
24 Sempra Energy	49.64	1.62	3.26%	6.00%	9.3%
25 Southern Co.	32.89	1.82	5.53%	6.00%	11.5%
26 Teco Energy, Inc.	15.85	0.81	5.11%	6.00%	11.1%
27 UIL Holdings Co.	27.79	1.73	6.23%	6.00%	12.2%
28 Vectren Corp.	23.99	1.38	5.75%	6.00%	11.8%
29 Westar Energy	22.20	1.26	5.68%	6.00%	11.7%
30 Wisconsin Energy	49.93	1.70	3.40%	6.00%	9.4%
31 Xcel Energy Inc.	21.12	1.02	4.81%	6.00%	10.8%
GROUP AVERAGE	33.08	1.58	4.95%	6.00%	11.0%
GROUP MEDIAN			4.97%		11.0%

Source: Value Line Investment Survey, Electric Utility (East), Feb 26, 2010; (Central), Mar 26, 2010; (West), May 7, 2010.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

# KCP&L Greater Missouri Operations Company Low Near-Term Growth Two-Stage Growth DCF Model

	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
			Annual			CA	SH FLO\	NΘ			ROE=Internal
	2011	2014	Change	Recent	Year 1	Year 2	Year 3		Year 5	Year 5-150	Rate of Return
Company	Div	Div	to 2014	Price	Div	Div	Div	Div		Div Growth	(Yrs 0-150)
Сотрану	DIV	DIV	10 2014	1 1100	DIV	DIV	DIV	DIV	DIV	DIV CIOWAII	(110 0 100)
1 ALLETE	1.76	1.80	0.01	-33.30	1.76	1.77	1.79	1.80	1.91	6.00%	10.6%
2 Alliant Energy Co.	1.65	1.92	0.09	-32.91	1.65	1.74	1.83	1.92	2.04	6.00%	10.9%
3 American Elec. Pwr.	1.66	1.90	0.08	-34.11	1.66	1.74	1.82	1.90	2.01	6.00%	10.7%
4 Avista Corp.	1.08	1.30	0.07	-20.88	1.08	1.15	1.23	1.30	1.38	6.00%	11.2%
5 Black Hills Corp	1.48	1.60	0.04	-29.40	1.48	1.52	1.56	1.60	1.70	6.00%	10.6%
6 Cleco Corporation	1.10	1.40	0.10	-26.22	1.10	1.20	1.30	1.40	1.48	6.00%	10.5%
7 Con. Edison	2.40	2.46	0.02	-43.99	2.40	2.42	2.44	2.46	2.61	6.00%	10.8%
8 DPL Inc.	1.28	1.50	0.07	-27.25	1.28	1.35	1.43	1.50	1.59	6.00%	10.6%
9 DTE Energy Co.	2.24	2.60	0.12	-44.89	2.24	2.36	2.48	2.60	2.76	6.00%	10.9%
10 Duke Energy	0.99	1.10	0.04	-16.45	0.99	1.03	1.06	1.10	1.17	6.00%	11.7%
11 Edison Internat.	1.34	1.50	0.05	-33.68	1.34	1.39	1.45	1.50	1.59	6.00%	9.7%
12 Empire District	1.28	1.35	0.02	-18.48	1.28	1.30	1.33	1.35	1.43	6.00%	12.2%
13 Entergy Corp.	3.00	3.60	0.20	-79.58	3.00	3.20	3.40	3.60	3.82	6.00%	9.8%
14 FPL Group, Inc.	2.00	2.40	0.13	-48.44	2.00	2.13	2.27	2.40	2.54	6.00%	10.1%
15 Hawaiian Electric	1.24	1.30	0.02	-21.63	1.24	1.26	1.28	1.30	1.38	6.00%	11.1%
16 IDACORP	1.20	1.40	0.07	-34.06	1.20	1.27	1.33	1.40	1.48	6.00%	9.4%
17 Northeast Utilities	1.10	1.25	0.05	-26.73	1.10	1.15	1.20	1.25	1.33	6.00%	9.9%
18 NSTAR	1.73	2.05	0.11	-34.95	1.73	1.84	1.94	2.05	2.17	6.00%	10.9%
19 PG&E Corp.	1.96	2.40	0.15	-42.60	1.96	2.11	2.25	2.40	2.54	6.00%	10.7%
20 Pinnacle West	2.10	2.30	0.07	-37.24	2.10	2.17	2.23	2.30	2.44	6.00%	11.2%
21 Portland General	1.07	1.20	0.04	-19.11	1.07	1.11	1.16	1.20	1.27	6.00%	11.3%
22 Progress Energy	2.52	2.58	0.02	-39.02	2.52	2.54	2.56	2.58	2.73	6.00%	11.6%
23 SCANA Corp.	1.92	2.05	0.04	-37.12	1.92	1.96	2.01	2.05	2.17	6.00%	10.7%
24 Sempra Energy	1.68	2.05	0.12	-49.64	1.68	1.80	1.93	2.05	2.17	6.00%	9.4%
25 Southern Co.	1.85	2.10	0.08	-32.89	1.85	1.93	2.02	2.10	2.23	6.00%	11.4%
26 Teco Energy, Inc.	0.82	0.95	0.04	-15.85	0.82	0.86	0.91	0.95	1.01	6.00%	11.0%
27 UIL Holdings Co.	1.73	1.73	0.00	-27.79	1.73	1.73	1.73	1.73	1.83	6.00%	11.3%
28 Vectren Corp.	1.39	1.50	0.04	-23.99	1.39	1.43	1.46	1.50	1.59	6.00%	11.3%
29 Westar Energy	1.28	1.40	0.04	-22.20	1.28	1.32	1.36	1.40	1.48	6.00%	11.3%
30 Wisconsin Energy	1.80	2.40	0.20	-49.93	1.80	2.00	2.20	2.40	2.54	6.00%	10.0%
31 Xcel Energy Inc.	1.03	1.15	0.04	-21.12	1.03	1.07	1.11	1.15	1.22	6.00%	10.6%
GROUP AVERAGE											10.8%
GROUP MEDIAN											10.8%

Source: Value Line Investment Survey, Electric Utility (East), Feb 26, 2010; (Central), Mar 26, 2010; (West), May 7, 2010.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

# KCP&L Greater Missouri Operations Company Discounted Cash Flow Analysis Column Descriptions

Column 1: Three-month Average Price per Share (Feb 2010-Apr 2010)	Column 13: Column 11 Plus Column 12
Column 2: Average of Estimated 2010-2011 Div per Share from Value Line	Column 14: Estimated 2011 Div per Share from Value Line
Column 3: Column 2 Divided by Column 1	Column 15: Estimated 2014 Div per Share from
Column 4: "Est'd '07-'09 to '13-'15" Earnings Growth Reported by Value Line	Value Line
Column 5: "Next 5 Years" Company Growth Estimate as	Column 16: (Column 15 Minus Column 14) Divided by Three
Reported by Zacks.com	Column 17: See Column 1
Column 6: "Next 5 Years (per annum) Growth Estimate Reported by Thomson Financial Network (at Yahoo Finance)	Column 18: See Column 14
	Column 19: Column 18 Plus Column 16
Column 7: Average of Columns 4-6	Column 20: Column 19 Plus Column 19
Column 8: Column 3 Plus Column 7	Column 21: Column 20 Plus Column 16
Column 9: See Column 1	Column 22: Column 21 Increased by the Growth
Column 10: See Column 2	Rate Shown in Column 23
Column 11: Column 10 Divided by Column 9	Column 23: See Column 12
Column 12: Average of GDP Growth During the Last 10 year, 20 year, 30 year, 40 year, 50 year, and 60 year growth periods. See Schedule SCH2010-3	Column 24: The Internal Rate of Return of the Cash Flows in Columns 17-22 along with the Dividends for the Years 6-150 Implied by the Growth Rates shown in Column 23

### **KCP&L Greater Missouri Operations Company**

Risk Premium Analysis

(Based on Projected Interest Rates)

1	MOODY'S AVERAGE	AUTHORIZED	INDICATED		
PUBLIC UTILITY		ELECTRIC	RISK		
	BOND YIELD (1)	RETURNS (2)	PREMIUM		
1980	13.15%	14.23%	1.08%		
1981	15.62%	15.22%	-0.40%		
1982	15.33%	15.78%	0.45%		
1983	13.31%	15.36%	2.05%		
1984	14.03%	15.32%	1.29%		
1985	12.29%	15.20%	2.91%		
1986	9.46%	13.93%	4.47%		
1987	9.98%	12.99%	3.01%		
1988	10.45%	12.79%	2.34%		
1989	9.66%	12.97%	3.31%		
1990	9.76%	12.70%	2.94%		
1991	9.21%	12.55%	3.34%		
1992	8.57%	12.09%	3.52%		
1993	7.56%	11.41%	3.85%		
1994	8.30%	11.34%	3.04%		
1995	7.91%	11.55%	3.64%		
1996	7.74%	11.39%	3.65%		
1997	7.63%	11.40%	3.77%		
1998	7.00%	11.66%	4.66%		
1999	7.55%	10.77%	3.22%		
2000	8.14%	11.43%	3.29%		
2001	7.72%	11.09%	3.29%		
2001	7.72%	11.16%	3.63%		
2002	6.61%	10.97%	4.36%		
2003	6.20%	10.75%	4.55%		
2005	5.67%	10.54%	4.87%		
2006	6.08%	10.36%	4.28%		
2007	6.11%	10.36%	4.25%		
2008	6.65%	10.46%	3.81%		
2009_	6.28%	10.48%	4.20%		
AVERAGE	9.05%	12.28%	3.23%		
INDICATED	COST OF EQUITY				
	O TRIPLE-B UTILITY B	OND VIELD*	G E70/		
			6.57%		
	VG ANNUAL YIELD D	URING STUDY	9.05%		
INTERESTR	RATE DIFFERENCE		-2.48%		
INTEDEST	RATE CHANGE COEF	EICIENT	-41.13%		
_	NT TO AVG RISK PRE	-	1.02%		
ADUSTIVIEI	NI TO AVG KISK PKE	INITOINI	1.0270		
BASIC RISK	PREMILIM		3.23%		
	RATE ADJUSTMENT		1.02%		
EQUITY RIS	4.25%				
LQUITIN	OK I KLIVIIOW		4.23 /0		
PROJECTE	TRIPLE-B UTILITY B	OND YIFI D*	6.57%		
	EQUITY RETURN		10.82%		
			10.0270		

<sup>(1)</sup> Moody's Investors Service

<sup>(2)</sup> Regulatory Research Associates, Inc.

<sup>\*</sup>Projected triple-B bond yield is 157 basis points over projected long-term Treasury bond rate of 5.0% from Schedule SCH2010-3, p. 3. The triple-B spread is for 3 months ended Apr 2010 from Schedule SCH2010-3, p. 2.

### **KCP&L Greater Missouri Operations Company**

Risk Premium Analysis

(Based on Current Interest Rates)

	(Daoca on	our one interest reactory		
	MOODY'S AVERAGE	AUTHORIZED	INDICATED	
PUBLIC UTILITY		ELECTRIC	RISK	
	BOND YIELD (1)	RETURNS (2)	PREMIUM	
1980	· ,	14.23%	1.08%	
1981	15.62%	15.22%	-0.40%	
1982	15.33%	15.78%	0.45%	
1983	13.31%	15.36%	2.05%	
1984	14.03%	15.32%	1.29%	
1985	12.29%	15.20%	2.91%	
1986	9.46%	13.93%	4.47%	
1987	9.98%	12.99%	3.01%	
1988	10.45%	12.79%	2.34%	
1989	9.66%	12.97%	3.31%	
1990	9.76%	12.70%	2.94%	
1991	9.21%	12.55%	3.34%	
1992	8.57%	12.09%	3.52%	
1993	7.56%	11.41%	3.85%	
1994	8.30%	11.34%	3.04%	
1995	7.91%	11.55%	3.64%	
1996	7.74%	11.39%	3.65%	
1997	7.63%	11.40%	3.77%	
1998	7.00%	11.66%	4.66%	
1999		10.77%	3.22%	
2000	8.14%	11.43%	3.29%	
2001		11.09%	3.37%	
2002		11.16%	3.63%	
2003		10.97%	4.36%	
2004		10.75%	4.55%	
2005		10.54%	4.87%	
2006		10.36%	4.28%	
2007		10.36%	4.25%	
2008		10.46%	3.81%	
2009		10.48%	4.20%	
AVERAGE		12.28%	3.23%	
INDICATED	COST OF EQUITY			
	TRIPLE-B UTILITY BOI		6.22%	
	AVG ANNUAL YIELD D	URING STUDY	9.05%	
	RATE DIFFERENCE		-2.83%	
_	RATE CHANGE COEF	-	-41.13%	
ADUSTME	ENT TO AVG RISK PRE	MIUM	1.16%	
BASIC RISI	K PREMIUM		3.23%	
INTERES	RATE ADJUSTMENT		1.16%	
EQUITY RISK PREMIUM				
CURRENT	TRIPLE-B UTILITY BOI	ND YIELD*	6.22%	
	EQUITY RETURN		10.61%	
			10.0170	

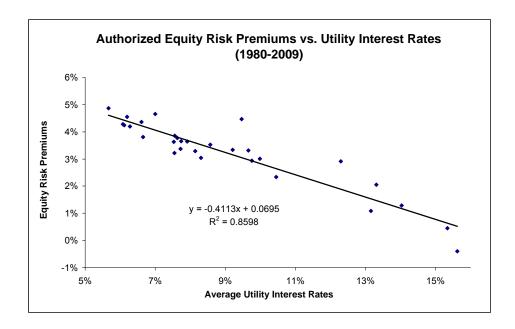
<sup>(1)</sup> Moody's Investors Service

<sup>(2)</sup> Regulatory Research Associates, Inc.

<sup>\*</sup>Current triple-B utility bond yield is three month average of Moody's Triple-B Public Utility Bond Yield Average through Apr 2010 from Schedule SCH2010-3, p. 2.

### **KCP&L Greater Missouri Operations Company**

Risk Premium Analysis
Regression Analysis & Interest Rate Change Coefficient



### SUMMARY OUTPUT

Regression Statistics					
Multiple R	0.927242552				
R Square	0.85977875				
Adjusted R Square	0.854770848				
Standard Error	0.0047873				
Observations	30				

### ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.003934704	0.003934704	171.6844276	1.82118E-13
Residual	28	0.000641711	2.29182E-05		
Total	29	0.004576415			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.069475479	0.002972433	23.373272	6.55788E-20	0.063386727	0.075564232	0.063386727	0.075564232
X Variable 1	-0.411331263	0.031392526	-13.10284044	1.82118E-13	-0.475635937	-0.347026589	-0.475635937	-0.347026589