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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2016-0156

DIRECT TESTIMONY

OF

ROBERT B. HEVERT

ON BEHALF OF

KCP&L GREATER MISSOURI OPERATIONS COMPANY

**Kansas City, Missouri
February 23, 2016**

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GLOSSARY OF FREQUENTLY USED TERMS

TERM	DESCRIPTION
Beta Coefficient	A component of the CAPM that measures the risk of a given stock relative to the risk of the overall market.
Capital Asset Pricing Model (“CAPM”)	A risk premium-based model used to estimate the Cost of Equity, assuming the stock is added to a well-diversified portfolio. The CAPM assumes that investors are compensated for the time value of money (represented by the Risk-Free Rate), and risk (represented by the combination of the Beta Coefficient and the Market Risk Premium).
Constant Growth DCF Model	A form of the DCF model that assumes cash flows will grow at a constant rate, in perpetuity. The model simplifies to a form that expresses the Cost of Equity as the sum of the expected dividend yield and the expected growth rate.
Cost of Equity	The return required by investors to invest in equity securities. The terms “Return on Equity” and “Cost of Equity” are used interchangeably.
Discounted Cash Flow (“DCF”) Model	A model used to estimate the Cost of Equity based on expected cash flows. The Cost of Equity equals the discount rate that sets the current market price equal to the present value of expected cash flows.
Dividend Yield	For a given stock, the current dividend divided by the current market price.
Gross Domestic Product (“GDP”)	The value of all finished goods and services produced within a country during a given period of time (usually measured annually). GDP includes public and private consumption, government expenditures, investments, and exports less imports.
Market Return	The expected return on the equity market, taken as a portfolio.
Market Risk Premium	The additional compensation required by investing in the equity market as a portfolio over the Risk-Free rate. The Market Risk Premium is a component of the CAPM.
Multi-Stage DCF Model	A form of the DCF model in which the rate of growth may change over different stages.
Proxy Group	A group of publicly traded companies used as the “proxy” for the subject company (in this case, KCP&L Greater Missouri Operations Company). Proxy companies are sometimes referred to as “Comparable Companies.”

TERM	DESCRIPTION
Return on Equity (“ROE”)	The return required by investors to invest in equity securities. The terms “Return on Equity” and “Cost of Equity” are used interchangeably.
Risk-Free Rate	The rate of return on an asset with no risk of default.
Risk Premium	The additional compensation required by investors for taking on additional increments of risk. Risk Premium-based approaches are used in addition to the DCF and CAPM to estimate the Cost of Equity.
Terminal Growth	The expected rate of growth in the final, or terminal, stage of the Multi-Stage DCF model.
Treasury Inflation Protected Securities (“TIPS”)	Treasury securities that are indexed to inflation. The principal value of TIPS increase with inflation and decrease with deflation, as measured by the Consumer Price Index.
Treasury Yield	The return on Treasury securities; the yield on long-term Treasury bonds is considered to be a measure of the Risk-Free Rate.

DIRECT TESTIMONY

OF

ROBERT B. HEVERT

Case No. ER-2016-0156

1 **I. INTRODUCTION AND SUMMARY OF RECOMMENDATIONS**

2 **Q: Please state your name and business address.**

3 A: My name is Robert B. Hevert and my business address is Sussex Economic Advisors,
4 LLC, 1900 West Park Drive, Suite 250, Westborough, MA 01581.

5 **Q: On whose behalf are you submitting this testimony?**

6 A: I am submitting this direct testimony (“Direct Testimony”) before the Missouri Public
7 Service Commission (“Commission”) on behalf of KCP&L Greater Missouri Operations
8 Company (“GMO” or the “Company”).

9 **Q: Please describe your educational background.**

10 A: I hold a Bachelor’s degree in Business and Economics from the University of Delaware,
11 and an MBA with a concentration in Finance from the University of Massachusetts. I
12 also hold the Chartered Financial Analyst designation.

13 **Q: Please describe your experience in the energy and utility industries.**

14 A: I have worked in regulated industries for over twenty-five years, having served as an
15 executive and manager with consulting firms, a financial officer of a publicly-traded
16 natural gas utility (at the time, Bay State Gas Company), and an analyst at a
17 telecommunications utility. In my role as a consultant, I have advised numerous energy
18 and utility clients on a wide range of financial and economic issues, including corporate

1 and asset-based transactions, asset and enterprise valuation, transaction due diligence,
2 and strategic matters. As an expert witness, I have provided testimony in approximately
3 150 proceedings regarding various financial and regulatory matters before numerous state
4 utility regulatory agencies and the Federal Energy Regulatory Commission. A summary
5 of my professional and educational background, including a list of my testimony in prior
6 proceedings, is included in Attachment A to my Direct Testimony.

7 II. PURPOSE AND OVERVIEW OF TESTIMONY

8 **Q: What is the purpose of your Direct Testimony?**

9 A: On behalf of GMO, my Direct Testimony presents evidence and provides a
10 recommendation regarding the Company's ROE,¹ and assesses the reasonableness of the
11 Company's capital structure and Cost of Debt. My analyses and conclusions are
12 supported by the data presented in Schedules RBH-1 through RBH-12, which have been
13 prepared by me or under my direction.

14 **Q: What are your conclusions regarding the appropriate Cost of Capital for the**
15 **Company?**

16 A: The Company's 5.089 percent Cost of Debt reflects the prevailing level of interest rates
17 at the times of issuance. As such, I conclude that the Company's proposed Cost of Debt
18 is reasonable and appropriate.

19 As to the Company's requested capital structure, which includes 54.83 percent
20 common equity and 45.17 percent long-term debt, I conclude that it is consistent with

¹ Throughout my Direct Testimony, I interchangeably use the terms "ROE" and "Cost of Equity."

1 those in place at similarly-situated utilities, whose capital structures include common
2 equity ratios in the range of 46.50 percent to 66.01 percent.

3 As to the Company's Cost of Equity, my analyses indicate that an ROE in the
4 range of 9.75 percent to 10.50 percent represents the range of equity investors' required
5 return for investment in vertically integrated electric utilities similar to the Company in
6 today's capital markets. I note that the Cost of Equity, which is the return required by
7 equity investors to assume the risks of ownership, is a market-based concept. As
8 discussed further in my testimony, as opposed to the earned return on common equity,
9 which is an accounting construct that can be observed in historical data, the Cost of
10 Equity is unobservable and must be estimated based on observable capital market data.
11 As a consequence, there may be differences of opinion among analysts as to the data,
12 assumptions and models used in the estimation process.

13 Further, I am aware that in a recent rate proceeding regarding Kansas City Power
14 & Light Company ("KCP&L"), the Commission's Report and Order (Case No. ER-2014-
15 0370) discussed the importance of recommendations that rely on verifiable and
16 independent market data, and accepted market-based rate of return models.² As
17 discussed throughout my Direct Testimony, the analyses that underlie my recommended
18 range consider the Commission's findings, and reflect the types of analyses and data
19 discussed in its Order. Based on the those analyses and data, and in light of the
20 Commission's recent Order in KCP&L's case, it is my view that the Company's ROE is
21 within the range of 9.75 percent to 10.50 percent, and represents a reasonable, but
22 conservative range of the Company's Cost of Equity.

1 **Q: Please discuss the KCP&L Order as it relates to your recommended ROE for GMO.**

2 A: As noted above, my recommendation takes into consideration various aspects of the
3 Commission’s findings in the KCP&L Order. In particular, the Commission found that
4 ROEs between 9.40 percent and 9.60 percent represented “accurate estimate[s] of the
5 current market cost of capital for KCPL,”³ and determined that an ROE of 9.50 percent
6 was reasonable.⁴ At the same time, capital market conditions have evolved since the
7 KCP&L rate proceeding; those changes should be reflected in the market-based return in
8 this case. On balance, given the current capital market environment, business risks faced
9 by the Company, and the Commission’s findings in Case No. ER-2014-0370, I believe
10 my recommendation represents a proper (if not somewhat conservative) zone of
11 reasonableness, and that the Company’s market-based Cost of Equity falls within that
12 range.

13 **Q: How does your recommendation compare to recently authorized returns?**

14 A: In the KCP&L Order, the Commission noted that it is appropriate to look to authorized
15 ROEs in other jurisdictions to evaluate the reasonableness of ROE recommendations.⁵
16 As shown in Chart 1, below, my recommendation is highly consistent with recently
17 authorized ROEs for vertically integrated electric utilities.

² *In the Matter of Kansas City Power & Light Company’s Request for Authority to Implement a General Rate Increase for Electric Service*, Case No. ER-2014-0370, Report and Order (Sep. 15, 2015) (the “KCP&L Order”).

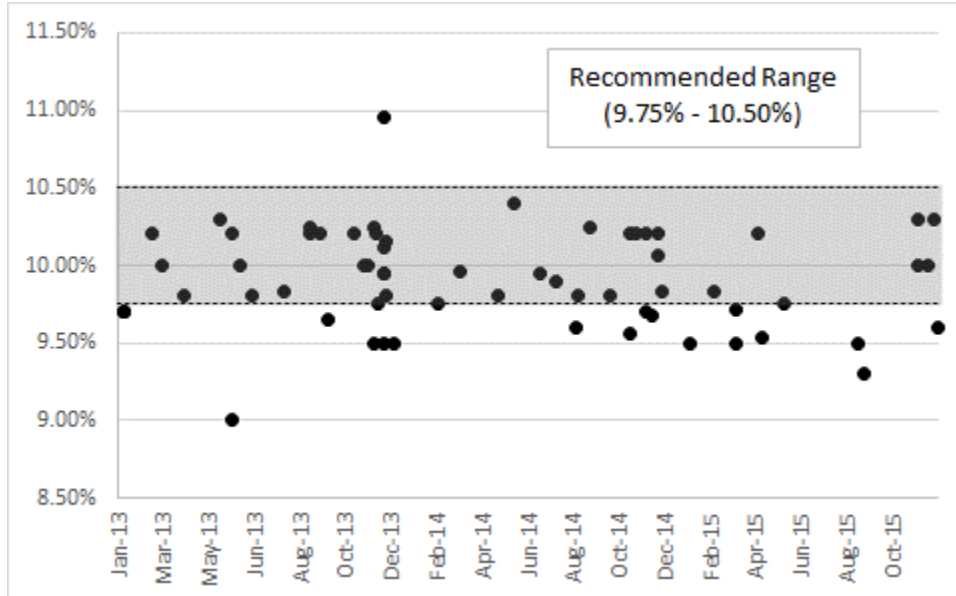
³ KCP&L Order, at 22.

⁴ *Ibid.*, at 22.

⁵ *Ibid.*, at 19.

1

Chart 1: Authorized Returns⁶



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In fact, the average authorized ROE for 2015 was 9.75 percent, and half of the eight ROE authorizations in the fourth quarter of 2015 were 10.00 percent or higher.

5

6

Q: Please provide a brief overview of the analyses that led to your ROE recommendation.

7

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A: Because all financial models are subject to various assumptions and constraints, equity analysts and investors tend to use multiple methods to develop their return requirements. I therefore relied on three widely-accepted approaches to develop my ROE recommendation: (1) the Discounted Cash Flow (“DCF”) model, including the Constant Growth, and Multi-Stage forms; (2) the Capital Asset Pricing Model (“CAPM”); and (3) the Bond Yield Plus Risk Premium approach. As discussed in Sections V, VI and VII, I considered the results of those methods in the context of both Company-specific, and general capital market factors. Based on those analyses, I concluded that a range of 9.75

⁶ Source: SNL Financial

1 percent to 10.50 percent represents reasonable estimates of the Company's Cost of
2 Equity.

3 **Q: How is the remainder of your Direct Testimony organized?**

4 A: The remainder of my Direct Testimony is organized as follows:

5 Section III – Provides a summary of issues regarding Cost of Equity estimation in
6 regulatory proceedings and discusses the regulatory guidelines pertinent to the
7 development of the cost of capital;

8 Section IV – Explains my selection of the proxy group used to develop my
9 analytical results;

10 Section V – Explains my analyses and the analytical bases for my ROE
11 recommendation;

12 Section VI – Provides a discussion of specific business risks and other
13 considerations that have a direct bearing on the Company's Cost of Equity;

14 Section VII – Highlights the current capital market conditions and their effect on
15 the Company's Cost of Equity;

16 Section VIII – Analyzes the Company's embedded Cost of Debt;

17 Section IX – Provides my analyses of the Company's capital structure and
18 presents the overall rate of return;

19 Section X – Summarizes my conclusions and recommendations.

III. SUMMARY OF ISSUES SURROUNDING COST OF EQUITY ESTIMATION IN REGULATORY PROCEEDINGS

1 **Q: Before addressing the specific aspects of this proceeding, please provide an overview**
2 **of the issues surrounding the Cost of Equity in regulatory proceedings, generally.**

3 A: In very general terms, the Cost of Equity is the return that investors require to make an
4 equity investment in a firm. That is, investors will only provide funds to a firm if the
5 return that they *expect* is equal to, or greater than, the return that they *require* to accept
6 the risk of providing funds to the firm. From the firm’s perspective, that required return,
7 whether it is provided to debt or equity investors, has a cost. Individually, we speak of
8 the “Cost of Debt” and the “Cost of Equity;” together, they are referred to as the “Cost of
9 Capital.”

10 The Cost of Capital (including the costs of both debt and equity) is based on the
11 economic principle of “opportunity costs.” Investing in any asset, whether debt or equity
12 securities, implies a forgone opportunity to invest in alternative assets. For any
13 investment to be sensible, its expected return must be at least equal to the return expected
14 on alternative, comparable investment opportunities. Because investments with like risks
15 should offer similar returns, the opportunity cost of an investment should equal the return
16 available on an investment of comparable risk.

17 Although both debt and equity have required costs, they differ in certain
18 fundamental ways. Most noticeably, the Cost of Debt is contractually defined and can be
19 directly observed as the interest rate or yield on debt securities.⁷ The Cost of Equity, on
20 the other hand, is neither directly observable nor a contractual obligation. Rather, equity

⁷ The observed interest rate may be adjusted to reflect issuance or other directly observable costs.

1 investors have a claim on cash flows only after debt holders are paid; the uncertainty (or
2 risk) associated with those residual cash flows determines the Cost of Equity. Because
3 equity investors bear the “residual risk,” they take greater risks and require higher returns
4 than debt holders. In that basic sense, equity and debt investors differ: They invest in
5 different securities, face different risks, and require different returns.

6 Whereas the Cost of Debt can be directly observed, the Cost of Equity must be
7 estimated or inferred based on market data and various financial models. As discussed
8 throughout my Direct Testimony, each of those models is subject to certain assumptions,
9 which may be more or less applicable under differing market conditions. In addition,
10 because the Cost of Equity is premised on opportunity costs, the models typically are
11 applied to a group of “comparable” or “proxy” companies. The choice of models
12 (including their inputs), the selection of proxy companies, and the interpretation of the
13 model results all require the application of reasoned judgment. That judgment should
14 consider data and information that is not necessarily included in the models themselves.
15 In the end, the estimated Cost of Equity should reflect the return that investors require in
16 light of the subject company’s risks, and the returns available on comparable investments.

17 **Q: Please now provide a brief summary of the regulatory guidelines established for the**
18 **purpose of determining the ROE.**

19 A: The United States Supreme Court (the “Court”) established the guiding principles for
20 establishing a fair return for capital in two cases: (1) *Bluefield Water Works and*
21 *Improvement Co. v. Public Service Comm’n of West Virginia*, 262 U.S. 679 (1923)
22 (*“Bluefield”*); and (2) *Federal Power Comm’n v. Hope Natural Gas Co.*, 320 U.S. 591
23 (1944) (*“Hope”*). In those cases, the Court recognized that the fair rate of return on

1 equity should be: (1) comparable to returns investors expect to earn on other investments
2 of similar risk; (2) sufficient to assure confidence in the company's financial integrity;
3 and (3) adequate to maintain and support the company's credit and to attract capital.

4 **Q: Does Missouri precedent provide similar guidance?**

5 A: Yes. In a prior order, the Commission cited the *Hope* and *Bluefield* decisions at some
6 length and acknowledged its authority and responsibility to set "just and reasonable" rates
7 for public utility service, stating that:

8 The standard for rates is "just and reasonable," a standard founded on
9 constitutional provisions, as the United States Supreme Court has
10 explained. But the Commission must also consider the customers.
11 Balancing the interests of investor and consumer is not reducible to a
12 single formula, and making pragmatic adjustments is part of the
13 Commission's duty. Thus, the law requires a just and reasonable end,
14 but does not specify a means. The Commission is charged with
15 approving rate schedules that are as "just and reasonable" to
16 consumers as they are to the utility.⁸

17 Based on those standards, the authorized ROE should provide the Company with the
18 opportunity to earn a fair and reasonable return, and should enable efficient access to
19 external capital under a variety of market conditions.

20 In addition, the Missouri Court of Appeals provided the following guidance:

21 The cases also recognize that the fixing of rates is a matter largely of
22 prophecy and because of this commissions, in carrying out their
23 functions, necessarily deal in what are called 'zones of
24 reasonableness', the result of which is that they have some latitude in
25 exercising this most difficult function.⁹

26 That is, the Commission has found it appropriate to consider both quantitative and
27 qualitative information when developing its zone of reasonableness. Consistent with

⁸ *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Case No. ER-2012-0175, Report and Order (Jan. 9, 2013), at 11.

⁹ KCP&L Order, at 21, citing *State ex rel. Laclede Gas Co. v. Public Service Commission*, 535 S.W.2d 561, 570 - 571 (Mo. App. 1976).

1 Missouri precedent, I discuss throughout my Direct Testimony that the estimation of the
2 market required ROE (and the zone of reasonableness) does not lend itself to a strict
3 mathematical solution.

4 **Q: Why is it important for a utility to be allowed the opportunity to earn a return**
5 **adequate to attract equity capital at reasonable terms?**

6 A: A return that is adequate to attract capital at reasonable terms enables the utility to
7 provide service while maintaining its financial integrity. As discussed above, and in
8 keeping with the *Hope* and *Bluefield* standards, that return should be commensurate with
9 the returns expected elsewhere in the market for investments of equivalent risk. The
10 consequence of the Commission's order in this case, therefore, should be to provide
11 GMO with the opportunity to earn a return on equity that is: (1) adequate to attract capital
12 at reasonable terms; (2) sufficient to ensure its financial integrity; and (3) commensurate
13 with returns on investments in enterprises having corresponding risks. To the extent
14 GMO is provided a reasonable opportunity to earn its market-based Cost of Equity,
15 neither customers nor shareholders should be disadvantaged. In fact, a return that is
16 adequate to attract capital at reasonable terms enables the Company to provide safe,
17 reliable electric utility service while maintaining its financial integrity.

18 **Q: How is the Cost of Equity estimated in regulatory proceedings?**

19 A: As noted earlier and as discussed later in more detail, the Cost of Equity is estimated by
20 the use of various financial models. By their very nature, those models produce a range
21 of results from which the ROE is estimated. That estimate must be based on a
22 comprehensive review of relevant data and information, and does not necessarily lend
23 itself to a strict mathematical solution. The key consideration in determining the ROE is

1 to ensure that the overall analysis reasonably reflects investors' view of the financial
2 markets in general and the subject company (in the context of the proxy companies) in
3 particular. Both practitioners and academics, however, recognize that financial models
4 simply are tools to be used in the ROE estimation process, and that strict adherence to
5 any single approach, or to the specific results of any single approach, can lead to flawed
6 or misleading conclusions. That position is consistent with the *Hope* and *Bluefield*
7 principle that it is the analytical result, as opposed to the methodology, that is controlling
8 in arriving at ROE determinations. Thus, a reasonable ROE estimate appropriately
9 considers alternative methodologies and the reasonableness of their individual and
10 collective results in the context of observable, relevant market information.

IV. PROXY GROUP SELECTION

11 **Q: As a preliminary matter, why is it necessary to select a group of proxy companies to**
12 **determine the Cost of Equity for the Company?**

13 A: Since the ROE is a market-based concept, and GMO is not a publicly traded entity, it is
14 necessary to establish a group of comparable, publicly traded companies to serve as its
15 "proxy." Even if the Company were a publicly traded entity, short-term events could bias
16 its market value during a given period of time. A significant benefit of using a proxy
17 group is that it moderates the effects of anomalous, temporary events associated with any
18 one company.

1 **Q: Does the selection of a proxy group suggest that analytical results will be tightly**
2 **clustered around average (i.e., mean) results?**

3 A: No. For example, the Constant Growth DCF approach defines the Cost of Equity as the
4 sum of the expected dividend yield and projected long-term growth. Despite the care
5 taken to ensure risk comparability, market expectations with respect to future risks and
6 growth opportunities will vary from company to company. Therefore, even within a
7 group of similarly-situated companies, it is common for analytical results to reflect a
8 seemingly wide range. Consequently, at issue is how to estimate the Cost of Equity from
9 within that range. Such a determination necessarily must consider a wide range of both
10 quantitative and qualitative information.

11 **Q: Please provide a summary profile of GMO.**

12 A: GMO, a wholly owned subsidiary of Great Plains Energy Incorporated (“GPE”), provides
13 electric service to approximately 317,000 retail customers in Missouri and regulated
14 steam service to certain customers in the St. Joseph, Missouri area.¹⁰ GPE’s current long-
15 term issuer credit rating from Standard & Poor’s (“S&P”) is BBB+ (outlook: Stable) and
16 Baa2 (outlook: Stable) from Moody’s Investors Service (“Moody’s”).¹¹

17 **Q: How did you select the companies included in your proxy group?**

18 A: I began with the universe of companies that Value Line classifies as Electric Utilities, and
19 applied the following screening criteria:

- 20
- I excluded companies that do not consistently pay quarterly cash dividends;

¹⁰ See KCP&L Greater Missouri Operations Company, FERC Form 1, Year Ending Q4 2014, 301; and Great Plains Energy Inc., SEC Form 10-K, for the year-end December 31, 2014, at 6.

¹¹ Source: SNL Financial, Great Plains Energy Incorporated company profile.

- 1 • I excluded companies that were not covered by at least two utility industry equity
2 analysts;
- 3 • I excluded companies that do not have investment grade senior unsecured bond
4 and/or corporate credit ratings from S&P;
- 5 • I excluded companies that were not vertically-integrated, *i.e.* utilities that own and
6 operate regulated generation, transmission and distribution assets;
- 7 • I excluded any companies whose regulated operating income over the three most
8 recently reported fiscal years comprised less than 60.00 percent of the respective
9 totals for that company;
- 10 • I excluded any companies whose regulated electric operating income over the
11 three most recently reported fiscal years represented less than 60.00 percent of
12 total regulated operating income;¹² and
- 13 • I eliminated companies that are currently known to be party to a merger, or other
14 significant transaction.¹³

15 **Q: Did you include GPE in your proxy group?**

16 A: No. In order to avoid the circular logic that would otherwise occur, it has been my
17 consistent practice to exclude the subject company (or its parent) from the proxy group.

¹² In the KCP&L's most recent case (Case No. ER-2014-0370), I excluded companies whose regulated electric operating income over the three most recently reported fiscal years represented less than 90.00 percent of total regulated operating income. However, due to recent consolidation in the industry, that threshold would produce a relatively small group of proxy companies. As such, in this proceeding, I have lowered the threshold to 60.00 percent.

¹³ In response to recent media reports concerning Empire District Electric Company and stock trading activity on December 11, 2015, the company confirmed in a press release on December 13, 2015 that "it is in the early stages of exploring strategic alternatives, and has retained a financial advisor with regard to the exploration of such strategic alternatives." On February 9, 2016 Empire District Electric Company announced it is being acquired by Algonquin Power & Utilities Corp. As such, I have excluded Empire District Electric Company from my proxy group.

1 **Q: What companies met those screening criteria?**

2 A: The criteria discussed above resulted in a proxy group of the following eighteen
3 companies:

4 **Table 1: Proxy Group Screening Results**

Company	Ticker
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Avista Corporation	AVA
CMS Energy Corporation	CMS
Dominion Resources, Inc. ¹⁴	D
DTE Energy Company	DTE
IDACORP, Inc.	IDA
NorthWestern Corporation	NWE
OGE Energy Corp.	OGE
Otter Tail Corporation	OTTR
Pinnacle West Capital Corporation	PNW
PNM Resources, Inc.	PNM
Portland General Electric Company	POR
SCANA Corporation	SCG
Westar Energy, Inc.	WR
Xcel Energy Inc.	XEL

V. COST OF EQUITY ESTIMATION

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

6 A: Regulated utilities primarily use common stock and long-term debt to finance their
7 capital investments. The Weighted Average Cost of Capital weights the costs of the

¹⁴ The merger of Dominion Resources Inc. (“Dominion”) and Questar Corporation was announced on February 1, 2016, subsequent to the period used in the various analyses discussed in more detail below. (See, Dominion SEC Form 8-K, dated January 31, 2016.) As such, I have retained Dominion in the proxy group; I may exclude Dominion from any updated analyses that I may file in this proceeding.

1 individual sources of capital by their respective book values. While the Cost of Debt can
2 be directly observed, the Cost of Equity is market-based and, therefore, must be estimated
3 based on observable market information.

4 **Q: How is the required ROE determined?**

5 A: I estimated the ROE using analyses based on market data to quantify a range of investor
6 expectations of required equity returns. By their very nature, quantitative models
7 produce a range of results from which the market required ROE must be estimated. As
8 discussed throughout my Direct Testimony, that estimation must be based on a
9 comprehensive review of relevant data and information, and does not necessarily lend
10 itself to a strict mathematical solution. Consequently, the key consideration in
11 determining the ROE is to ensure that the overall analysis reasonably reflects investors'
12 view of the financial markets in general, and the subject company (in the context of the
13 proxy companies) in particular.

14 Because the Cost of Equity is not directly observable, it must be estimated based
15 on both quantitative and qualitative information. Although a number of empirical models
16 have been developed for that purpose, all are subject to limiting assumptions or other
17 constraints. Consequently, many finance texts recommend using multiple approaches to
18 estimate the Cost of Equity.¹⁵ When faced with the task of estimating the Cost of Equity,
19 analysts and investors are inclined to gather and evaluate as much relevant data as
20 reasonably can be analyzed and, therefore, rely on multiple analytical approaches.

21 I also note that as a practical matter, no individual model is more reliable than all
22 others under all market conditions. Therefore, it is both prudent and appropriate to use

1 multiple methodologies in order to mitigate the effects of assumptions and inputs
2 associated with any single approach. As such, I have considered the results of the
3 Constant Growth and Multi-Stage forms of the DCF model; the Capital Asset Pricing
4 Model; and the Bond Yield Plus Risk Premium approach.

5 **A. Constant Growth Discounted Cash Flow Model**

6 **Q: Please more fully describe the Constant Growth DCF approach.**

7 A: The Constant Growth DCF approach is based on the theory that a stock's current price
8 represents the present value of all expected future cash flows. In its simplest form, the
9 Constant Growth DCF model expresses the Cost of Equity as the discount rate that sets
10 the current price equal to expected cash flows:

11
$$P = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_m}{(1+k)^m} \quad \text{Equation [1]}$$

12 where P represents the current stock price, $D_1 \dots D_m$ represent expected future dividends,
13 and k is the discount rate, or required ROE. Equation [1] is a standard present value
14 calculation that can be simplified and rearranged into the familiar form:

15
$$k = \frac{D_1 (1+g)}{P} + g \quad \text{Equation [2]}$$

16 Equation [2] often is referred to as the “Constant Growth DCF” model, in which
17 the first term is the expected dividend yield and the second term is the expected long-
18 term annual growth rate.

¹⁵ See, e.g., Eugene Brigham, Louis Gapenski, *Financial Management: Theory and Practice*, 7th Ed., 1994, at 341, and Tom Copeland, Tim Koller and Jack Murrin, *Valuation: Measuring and Managing the Value of Companies*, 3rd ed., 2000, at 214.

1 **Q: What assumptions are inherent in the Constant Growth DCF model?**

2 A: The Constant Growth DCF model assumes: (1) a constant average annual growth rate for
3 earnings and dividends; (2) a stable dividend payout ratio; (3) a constant Price to
4 Earnings multiple; and (4) a discount rate greater than the expected growth rate.

5 **Q: What market data did you use to calculate the dividend yield in your Constant**
6 **Growth DCF model?**

7 A: The dividend yield is based on the proxy companies' current annualized dividend, and
8 average closing stock prices over the 30, 90, and 180-trading day periods as of January
9 15, 2016.

10 **Q: Why did you use three averaging periods to calculate an average stock price?**

11 A: I did so to ensure that the model's results are not skewed by anomalous events that may
12 affect stock prices on any given trading day. At the same time, the averaging period
13 should be reasonably representative of expected capital market conditions over the long
14 term. In my view, using 30-, 90-, and 180-day averaging periods reasonably balances
15 those concerns.

16 **Q: Did you make any adjustments to the dividend yield to account for periodic growth**
17 **in dividends?**

18 A: Yes, I did. Since utility companies tend to increase their quarterly dividends at different
19 times throughout the year, it is reasonable to assume that dividend increases will be
20 evenly distributed over calendar quarters. Given that assumption, it is appropriate to
21 calculate the expected dividend yield by applying one-half of the long-term growth rate
22 to the current dividend yield. That adjustment ensures that the expected dividend yield is,

1 on average, representative of the coming twelve-month period, and does not overstate the
2 dividends to be paid during that time.

3 **Q: Is it important to select appropriate measures of long-term growth in applying the**
4 **DCF model?**

5 A: Yes. In its Constant Growth form, the DCF model (*i.e.*, as presented in Equation [2]
6 above) assumes a single growth estimate in perpetuity. Accordingly, in order to reduce
7 the long-term growth rate to a single measure, one must assume a fixed payout ratio, and
8 the same constant growth rate for earnings per share (“EPS”), dividends per share, and
9 book value per share. Since dividend growth can only be sustained by earnings growth,
10 the model should incorporate a variety of measures of long-term earnings growth. That
11 can be accomplished by averaging those measures of long-term growth that tend to be
12 least influenced by capital allocation decisions that companies may make in response to
13 near-term changes in the business environment. Because such decisions may directly
14 affect near-term dividend payout ratios, estimates of earnings growth are more indicative
15 of long-term investor expectations than are dividend growth estimates. For the purposes
16 of the Constant Growth DCF model, therefore, growth in EPS represents the appropriate
17 measure of long-term growth.

1 **Q: Please summarize the findings of academic research on the appropriate measure for**
2 **estimating equity returns using the DCF model.**

3 A: The relationship between various growth rates and stock valuation metrics has been the
4 subject of much academic research.¹⁶ As noted over 40 years ago by Charles Phillips in
5 The Economics of Regulation:

6 For many years, it was thought that investors bought utility stocks
7 largely on the basis of dividends. More recently, however, studies
8 indicate that the market is valuing utility stocks with reference to total
9 per share earnings, so that the earnings-price ratio has assumed
10 increased emphasis in rate cases.¹⁷

11 Philips' conclusion continues to hold true. Subsequent academic research has
12 clearly and consistently indicated that measures of earnings and cash flow are strongly
13 related to returns, and that analysts' forecasts of growth are superior to other measures of
14 growth in predicting stock prices.¹⁸ For example, Vander Weide and Carleton state that,
15 "[our] results ... are consistent with the hypothesis that investors use analysts' forecasts,
16 rather than historically oriented growth calculations, in making stock buy-and-sell
17 decisions."¹⁹ Other research specifically notes the importance of analysts' growth
18 estimates in determining the Cost of Equity, and in the valuation of equity securities. Dr.
19 Robert Harris noted that "a growing body of knowledge shows that analysts' earnings
20 forecast are indeed reflected in stock prices." Citing Cragg and Malkiel, Dr. Harris notes
21 that those authors "found that the evaluations of companies that analysts make are the

¹⁶ See Harris, Robert, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

¹⁷ Charles F. Phillips, Jr., The Economics of Regulation, at 285 (Rev. ed. 1969).

¹⁸ See, e.g., Christofi, Christofi, Lori and Moliver, *Evaluating Common Stocks Using Value Line's Projected Cash Flows and Implied Growth Rate*, Journal of Investing (Spring 1999); Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, 21 (Summer 1992); and Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

1 sorts of ones on which market valuation is based.”²⁰ Similarly, Brigham, Shome and
2 Vinson noted that “evidence in the current literature indicates that (i) analysts’ forecasts
3 are superior to forecasts based solely on time series data; and (ii) investors do rely on
4 analysts’ forecasts.”²¹

5 To that point, the research of Carleton and Vander Weide demonstrates that
6 earnings growth projections have a statistically significant relationship to stock valuation
7 levels, while dividend growth rates do not.²² Those findings suggest that investors form
8 their investment decisions based on expectations of growth in earnings, not dividends.
9 Consequently, earnings growth, not dividend growth, is the appropriate estimate for the
10 purpose of the Constant Growth DCF model.

11 **Q: Please summarize your inputs to the Constant Growth DCF model.**

12 A: I applied the DCF model to the proxy group of integrated electric utility companies using
13 the following inputs for the price and dividend terms:

- 14 • The average daily closing prices for the 30-trading days, 90-trading days, and
15 180-trading days ended January 15, 2016, for the term P_0 ; and
- 16 • The annualized dividend per share as of January 15, 2016, for the term D_0 .

17 I then calculated my DCF results using each of the following growth terms:

- 18 • The Zacks consensus long-term earnings growth estimates;
- 19 • The First Call consensus long-term earnings growth estimates; and

¹⁹ Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

²⁰ Robert S. Harris, *Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

²¹ Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility’s Cost of Equity*, Financial Management (Spring 1985).

²² See Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

- 1 • The Value Line long-term earnings growth estimates.²³

2 **Q: In the KCP&L Order, the Commission suggested that your Constant Growth DCF**
3 **results were based on unsustainably high growth rates.²⁴ Do you believe the EPS**
4 **growth rates used in your Direct Testimony in this proceeding are too high?**

5 A: No, I do not. First, from a practical standpoint, the Constant Growth form of the DCF
6 model is subject to certain limiting assumptions. In particular, that expected growth rates
7 will continue in perpetuity. It is for this reason that I have also provided a Multi-Stage
8 DCF analysis (described below).

9 Second, as also noted below, the average long-term growth rate in GDP has been
10 6.20 percent. In that regard, the median growth rate in my Constant Growth DCF
11 analysis of 5.12 percent is reasonable relative to historical measures.²⁵ That median
12 growth rate is also below the long-term expected GDP growth rate in my Multi-Stage
13 DCF analysis²⁶ (see Schedule RBH-2).

14 Finally, as discussed above, consensus EPS growth rate forecasts are the
15 appropriate measure of expected growth because earnings growth enables both dividend
16 and book value growth and investors rely on analysts' forecasts. As such, I believe the
17 growth rates used in my Constant Growth DCF model are reasonable, while being
18 consistent with academic research, and historical and expected measures of long-term
19 growth.

²³ See Schedule RBH-1.

²⁴ KCP&L Order, at p. 19.

²⁵ See Schedule RBH-1.

²⁶ See Schedule RBH-2.

1 **Q: How did you calculate the DCF results?**

2 A: For each proxy company, I calculated the mean, mean high, and mean low results. For
3 the mean result, I combined the average of the EPS growth rate estimates reported by
4 Value Line, Zacks, and First Call with the subject company's dividend yield for each
5 proxy company and then calculated the average result for those estimates. I calculated
6 the high DCF result by combining the maximum EPS growth rate estimate as reported by
7 Value Line, Zacks, and First Call with the subject company's dividend yield. The mean
8 high result simply is the average of those estimates. I used the same approach to
9 calculate the low DCF result, using instead the minimum of the Value Line, Zacks, and
10 First Call estimate for each proxy company, and calculating the average result for those
11 estimates.

12 **Q: What are the results of your Constant Growth DCF analysis?**

13 A: My Constant Growth DCF results are summarized in Table 2, below (*see* also Schedule
14 RBH-1).

15 **Table 2: Constant Growth DCF Results²⁷**

	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	8.46%	9.19%	9.98%
90-Day Average	8.50%	9.22%	10.02%
180-Day Average	8.57%	9.29%	10.09%

²⁷ See Schedule RBH-1.

1 **B. Multi-Stage DCF Model**

2 **Q: What other forms of the DCF model have you used?**

3 A: In order to address certain limiting assumptions underlying the Constant Growth form of
4 the DCF model, I also considered the Multi-Stage (three-stage) DCF Model. The Multi-
5 Stage model, which is an extension of the Constant Growth form, enables the analyst to
6 specify growth rates over three distinct stages. As with the Constant Growth form of the
7 DCF model, the Multi-Stage form defines the Cost of Equity as the discount rate that sets
8 the current price equal to the discounted value of future cash flows. Unlike the Constant
9 Growth form, however, the Multi-Stage model must be solved in an iterative fashion.

10 **Q: Please generally describe the structure of your Multi-Stage DCF model.**

11 A: The Multi-Stage DCF model sets the subject company's stock price equal to the present
12 value of future cash flows received over three "stages." In the first two stages, "cash
13 flows" are defined as projected dividends. In the third stage, "cash flows" equal both
14 dividends and the expected price at which the stock will be sold at the end of the period
15 (*i.e.*, the "terminal price"). I calculated the terminal price based on the Gordon model,²⁸
16 which defines the price as the expected dividend divided by the difference between the
17 Cost of Equity (*i.e.*, the discount rate) and the long-term expected growth rate. In
18 essence, the terminal price is defined by the present value of the remaining "cash flows"
19 in perpetuity. In each of the three stages, the dividend is the product of the projected
20 earnings per share and the expected dividend payout ratio. A summary description of the
21 model is provided in Table 3 (below).

²⁸ See Morningstar, Inc., *2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook*, at 48-52.

1

Table 3: Multi-Stage DCF Structure

Stage	0	1	2	3
Cash Flow Component	Initial Stock Price	Expected Dividend	Expected Dividend	Expected Dividend + Terminal Value
Inputs	Stock Price Earnings Per Share (EPS); Dividends Per Share (DPS)	Expected EPS; Expected DPS	Expected EPS; Expected DPS	Expected EPS; Expected DPS; Terminal Value
Assumptions	30-, 90-, and 180-day average stock price	EPS Growth Rate; Payout Ratio	Growth Rate Change; Payout Ratio Change	Long-term Growth Rate; Long-term Payout Ratio

2 **Q: What are the analytical benefits of your three-stage DCF model?**

3 A: The principal benefits relate to the flexibility provided by the model's formulation. Since
4 the model provides the ability to specify near, intermediate and long-term growth rates,
5 for example, it avoids the sometimes limiting assumption that the subject company will
6 grow at the same, constant rate in perpetuity. In addition, by calculating the dividend as
7 the product of earnings per share and the dividend payout ratio, the model enables
8 analysts to reflect assumptions regarding the timing and extent of changes in the payout
9 ratio to reflect, for example, increases or decreases in expected capital spending, or
10 transition from current payout levels to long-term expected levels. In that regard,
11 because the model relies on multiple sources of earnings growth rate assumptions, it is

1 not limited to a single source, such as Value Line, for all inputs, and mitigates the
2 potential bias associated with relying on a single source of growth estimates.²⁹

3 The model also enables the analyst to assess the reasonableness of the inputs and
4 results by reference to certain market-based metrics. For example, the stock price
5 estimate can be divided by the expected earnings per share in the final year to calculate
6 an average Price to Earnings (“P/E”) ratio. Similarly, the terminal P/E ratio can be
7 divided by the terminal growth rate to develop a Price to Earnings Growth (“PEG”) ratio.
8 To the extent that either the projected P/E or PEG ratios are inconsistent with either
9 historical or expected levels, it may indicate incorrect or inconsistent assumptions within
10 the balance of the model.

11 **Q: Please summarize your inputs to the Multi-Stage DCF model.**

12 A: I applied the Multi-Stage model to the proxy group described earlier in my Direct
13 Testimony. My assumptions with respect to the various model inputs are described in
14 Table 4 (below).

²⁹ See Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts’ Growth Forecasts*, Financial Management 21 (Summer 1992).

Table 4: Multi-Stage DCF Model Assumptions

Stage	Initial	First	Transition	Terminal
Stock Price	30-, 90-, and 180-day average stock price as of January 15, 2016			
Earnings Growth	2014 actual EPS escalated by Period 1 growth rate	EPS growth as average of (1) Value Line; (2) Zacks; and (3) First Call	Transition to Long-term GDP growth	Long-term GDP growth
Payout Ratio	Value Line company-specific	Value Line company-specific	Transition to long-term industry payout ratio	Long-term expected payout ratio
Terminal Value				Expected dividend in final year divided by solved Cost of Equity less long-term growth rate

2 **Q: How did you calculate the long-term GDP growth rate?**

3 A: The long-term growth rate of 5.35 percent is based on the real GDP growth rate of 3.25
4 percent from 1929 through 2014, and an inflation rate of 2.04 percent. The GDP growth
5 rate is calculated as the compound growth rate in the chain-weighted GDP for the period
6 from 1929 through 2014.³⁰ The rate of inflation of 2.04 percent is an average of two
7 components: (1) the compound annual forward rate starting in ten years (*i.e.*, 2026, which
8 is the beginning of the terminal period) based on the 180-day average spread between

1 yields on long-term nominal Treasury Securities and long-term Treasury Inflation
2 Protected Securities, known as the “TIPS spread” of 1.87 percent,³¹ and (2) and the
3 projected Blue Chip Financial Forecast of CPI for 2022 – 2026 of 2.20 percent.³²

4 I averaged these two measures of inflation because nominal Treasury yields are
5 related to inflation, which includes the effect of commodities such as oil, which may
6 cause the current TIPS spread to somewhat understate long-term expected inflation. To
7 account for that effect, I also considered the 2.20 percent long-term projected rate of
8 inflation as provided by Blue Chip Financial Forecast.³³ My long-term inflation rate,
9 therefore, is the average of those two estimates, or 2.04 percent.

10 **Q: Have you compared your long-term growth rate to historical measures?**

11 A: Yes, I have. From 1929 through 2014, the long-term geometric average growth in
12 nominal GDP was 6.20 percent. The arithmetic average annual growth rate over that
13 time was 6.44 percent. Considered in that context, my 5.35 percent assumption is
14 approximately 100 basis points below the long-term average. I also calculated the
15 average five-year average annual growth rates over the 1929 to 2014 period. I then
16 arranged that data in histograms to provide a perspective of how frequently various levels
17 of growth have occurred.

18 As Chart 2 demonstrates, average annual growth of 5.35 percent and above has
19 been observed frequently. When measured over five-year periods, average annual growth
20 exceeded 5.35 percent in 58 of 82 periods. That is, my result falls in approximately the

³⁰ See Bureau of Economic Analysis, “Current-Dollar and ‘Real’ Gross Domestic Product,” September 1, 2015 update.

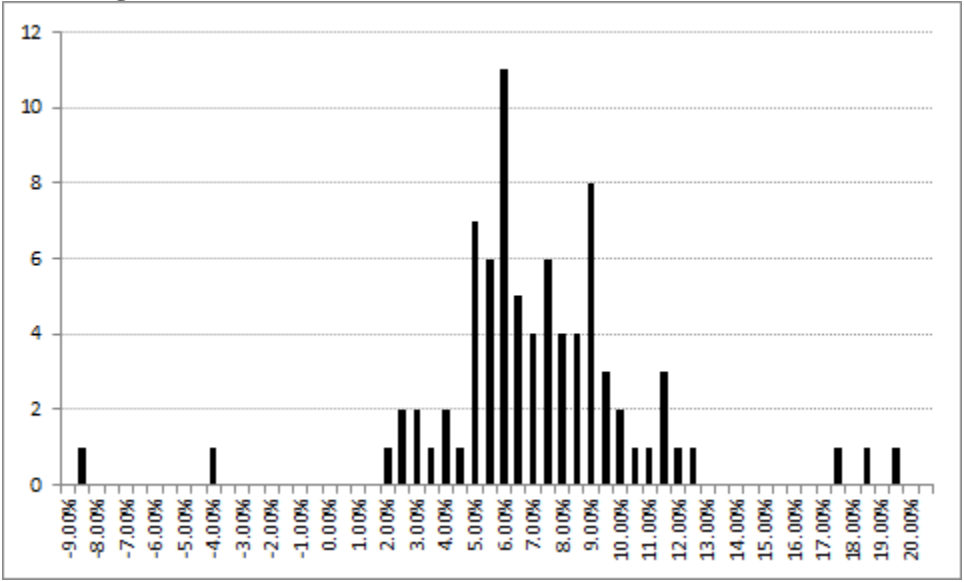
³¹ See Board of Governors of the Federal Reserve System, “Table H.15 Selected Interest Rates.”

³² *Blue Chip Financial Forecasts*, December 1, 2015, at 14.

³³ *Ibid.*

1 28th percentile of observed growth rates in GDP. As such, I believe my long-term growth
2 estimate is reasonable, if not conservative.

3 **Chart 2:**
4 **Average Annual GDP Growth Measured over Five-Year Periods**³⁴



5
6 **Q: Have you compared other projections of GDP to historical measures?**

7 **A:** Yes, I have. Specifically, I reviewed GDP projections from the Social Security
8 Administration (“SSA”) and the Energy Information Administration (“EIA”). SSA
9 forecasts a long-term GDP growth rate of 4.35 percent between 2025 and 2085 under its
10 Intermediate scenario,³⁵ while EIA forecasts the GDP growth rate between 2013 and
11 2040 to be 4.24 percent in its Reference case.³⁶

12 Because they are perpetual, terminal growth rates that substantially deviate from
13 the long-term historical average should be viewed with considerable caution. As Chart 2

³⁴ Source: Bureau of Economic Analysis.
³⁵ Tables V.B.1 and V.B.2 of the 2015 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS includes “Intermediate” scenario assumptions of 2.30 percent and 2.00 percent for the GDP Price Index, and Real GDP Growth, respectively, over the period 2025 through 2085. Combined, those projections indicate nominal GDP growth of 4.35 percent.

1 demonstrates, average annual growth as low as 4.24 percent has been observed very
2 infrequently. In fact, average annual growth exceeded 4.24 percent in 71 of 81 five-year
3 periods, which represents the 13th percentile of observed results. While the long-term
4 growth rate of 5.35 percent used in my Multi-Stage DCF model represents a conservative
5 measure of the GDP growth, the SSA and EIA forecasts are approximately 100 to 110
6 basis points lower. As such, I believe my estimate of the long-term growth rate
7 represents a more reasonable measure of perpetual growth in the final stage of my Multi-
8 Stage DCF model.

9 Furthermore, both SSA and EIA provide alternative scenarios in addition to their
10 base case scenarios (Intermediate and Reference, respectively). SSA's Low-cost and
11 High-cost scenarios produce a range of nominal GDP forecasts from 2.82 percent to 5.88
12 percent.³⁷ EIA develops six scenarios which produce a range of nominal GDP forecasts
13 of 4.14 percent to 5.36 percent.³⁸ My estimated long-term growth rate is within the
14 ranges of scenarios produced by both SSA and EIA.

³⁶ Energy Information Administration, 2015 Annual Energy Outlook, Table 20. EIA forecasts the GDP Price Index, and Real GDP growth to be 1.80 percent and 2.40 percent, respectively. Combined those assumptions indicate nominal GDP growth of 4.24 percent.

³⁷ Tables V.B.1 and V.B.2 of the 2015 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS includes "Low-cost" and "High-cost" scenario assumptions of 3.10 percent and 1.50 percent for the GDP Price Index, and Real GDP Growth 2.70 percent and 1.30 percent, respectively, over the period 2025 through 2085. Combined, those projections indicate nominal GDP growth of 5.88 percent and 2.82 percent.

³⁸ Energy Information Administration, 2015 Annual Energy Outlook, Table 20. EIA forecasts the GDP Price Index, and Real GDP growth to be 1.70 percent and 2.40 percent, respectively for the Low Oil Price scenario and 3.50 percent and 1.80 percent, respectively for the Low Economic Growth scenario. Combined those assumptions indicate nominal GDP growth rates of 4.14 percent and 5.36 percent.

1 **Q: What were your specific assumptions with respect to the payout ratio?**

2 A: As noted in Table 4, for the first two periods, I relied on the first year and long-term
3 projected payout ratios reported by Value Line³⁹ for each of the proxy companies. I then
4 assumed that by the end of the second period (*i.e.*, the end of year 10), the payout ratio
5 will converge to the historical industry average ratio of 67.30 percent.⁴⁰

6 **Q: What are the results of your Multi-Stage DCF analysis?**

7 A: Table 5 (*see* also Schedule RBH-2) presents the Multi-Stage DCF analysis results. Using
8 the Gordon model to calculate the terminal stock price, the Multi-Stage DCF analysis
9 produces a range of results from 9.50 percent to 10.10 percent.

10 **Table 5: Multi-Stage DCF Model Results⁴¹**

	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	9.50%	9.72%	9.97%
90-Day Average	9.54%	9.76%	10.01%
180-Day Average	9.62%	9.84%	10.10%

³⁹ As reported in the Value Line Investment Survey company reports as “All Div’ds to Net Prof.”

⁴⁰ Source: Bloomberg Professional

⁴¹ *See* Schedule RBH-2.

1 **Q: Are those results consistent with other market indices?**

2 A: Yes. Based on the assumptions described earlier, when using the Gordon model method
3 to estimate the terminal price, the Multi-Stage model produces average P/E multiples of
4 11.11 to 15.51 (depending upon the stock price averaging period). This range is
5 consistent with the projected proxy group average P/E ratio of 12.50 to 18.00 for 2018
6 through 2020.⁴²

7 **Q: Did you undertake any additional analyses to support your recommendation?**

8 A: Yes. As noted earlier, I also applied the CAPM and Risk Premium approaches.

9 **C. Capital Asset Pricing Model**

10 **Q: Please briefly describe the general form of the CAPM.**

11 A: The CAPM is a risk premium method that estimates the Cost of Equity for a given
12 security as a function of a risk-free return plus a risk premium (to compensate investors
13 for the non-diversifiable or “systematic” risk of that security). As shown in Equation [3],
14 the CAPM is defined by four components, each of which theoretically must be a forward-
15 looking estimate:

16
$$k = r_f + \beta(r_m - r_f) \quad \text{Equation [3]}$$

17 where:

18 k = the required market ROE for a security;

19 β = the Beta coefficient of that security;

20 r_f = the risk-free rate of return; and

⁴² Projected P/E ratios provided by Value Line. Value Line calculates the projected P/E ratios as the average annual forecast stock price divided by its forecast EPS.

1 r_m = the required return on the market as a whole.

2 In Equation [3], the term $(r_m - r_f)$ represents the Market Risk Premium.⁴³
3 According to the theory underlying the CAPM, since unsystematic risk can be diversified
4 away by adding securities to investment portfolios, investors should be concerned only
5 with systematic or non-diversifiable risk. Non-diversifiable risk is measured by the Beta
6 coefficient, which is defined as:

7
$$\beta_j = \frac{\sigma_j}{\sigma_m} \times \rho_{j,m}$$
 Equation [4]

8 Where σ_j is the standard deviation of returns for company “j,” σ_m is the standard
9 deviation of returns for the broad market (as measured, for example, by the S&P 500
10 Index), and $\rho_{j,m}$ is the correlation of returns in between company j and the broad market.
11 The Beta coefficient therefore represents both relative volatility (*i.e.*, the standard
12 deviation) of returns, and the correlation in returns between the subject company and the
13 overall market.

14 Intuitively, higher Beta coefficients indicate that the subject company’s returns
15 have been relatively volatile, and have moved in tandem with the overall market.
16 Consequently, if a company has a Beta coefficient of 1.00, it is as risky as the market and
17 does not provide any diversification benefit.

⁴³ The Market Risk Premium is defined as the incremental return of the market portfolio over the risk-free rate.

1 **Q: What assumptions did you include in your CAPM analysis?**

2 A: Since utility equity is a long duration investment, I used two different measures of the
3 risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds (*i.e.*, 2.96
4 percent); and (2) the projected 30-year Treasury yield (*i.e.*, 3.45 percent).

5 **Q: Why have you relied upon the 30-year Treasury yield for your CAPM analysis?**

6 A: In determining the security most relevant to the application of the CAPM, it is important
7 to select the term (or maturity) that best matches the life of the underlying investment.
8 Electric utilities typically are long-duration investments and, as such, the 30-year
9 Treasury yield is more suitable for the purpose of calculating the Cost of Equity.

10 **Q: Please describe your *ex-ante* approach to estimating the Market Risk Premium**
11 **(“MRP”).**

12 A: The approach is based on the market required return, less the current 30-year Treasury
13 yield. To estimate the market required return, I calculated the market capitalization
14 weighted average ROE based on the Constant Growth DCF model. To do so, I relied on
15 data from two sources: (1) Bloomberg; and (2) Value Line.⁴⁴ With respect to
16 Bloomberg-derived growth estimates, I calculated the expected dividend yield (using the
17 same one-half growth rate assumption described earlier), and combined that amount with
18 the projected earnings growth rate to arrive at the market capitalization weighted average
19 DCF result. I performed that calculation for each of the S&P 500 companies for which
20 Bloomberg provided consensus growth rates. I then subtracted the current 30-year
21 Treasury yield from that amount to arrive at the market DCF-derived *ex-ante* market risk
22 premium estimate. In the case of Value Line, I performed the same calculation, again

⁴⁴ See Schedule RBH-4.

1 using all companies for which five-year earnings growth rates were available. The results
2 of those calculations are provided in Schedule RBH-3.

3 As discussed above each input to the CAPM should be forward-looking.
4 Witnesses in prior rate cases have relied on historical measures of the MRP.⁴⁵ While it
5 may be instructive to review historical MRPs to inform the reasonableness of an *ex-ante*
6 estimate (as I have done below), they do not include investors' expectations, and
7 therefore are not appropriate for use in the CAPM. As such, I believe my *ex-ante*
8 approach is reasonable.

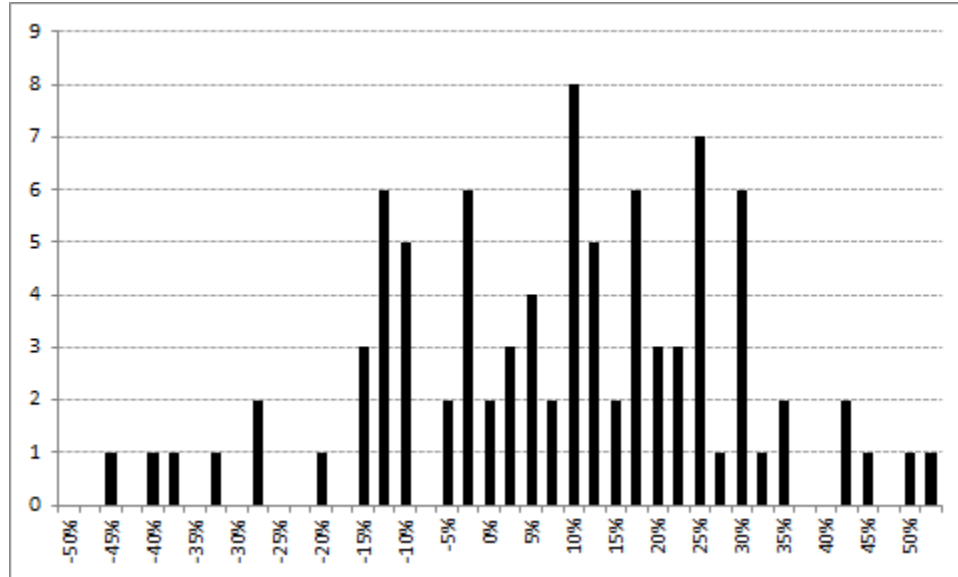
9 **Q: Have you undertaken any analyses to determine the reasonableness of the *ex-ante***
10 **MRP calculation?**

11 A: Yes, I have considered how often various ranges of MRPs have been observed over the
12 1926 to 2014 period. To perform that analysis, I gathered the annual Market Risk Premia
13 reported by Morningstar and produced a histogram of those observations. The results of
14 that analysis, which are presented in Chart 3, demonstrate that MRPs in the range of
15 approximately 10.27 percent (the average of my MRP estimates) and higher occurred
16 quite often.

⁴⁵ See, for example, Staff Report, Revenue Requirement and Cost of Service, Kansas City Power & Light Company, Case No. ER-2014-0370, at 55.

1

Chart 3: Frequency Distribution of MRP, 1926 -2014⁴⁶



2

3

4

5

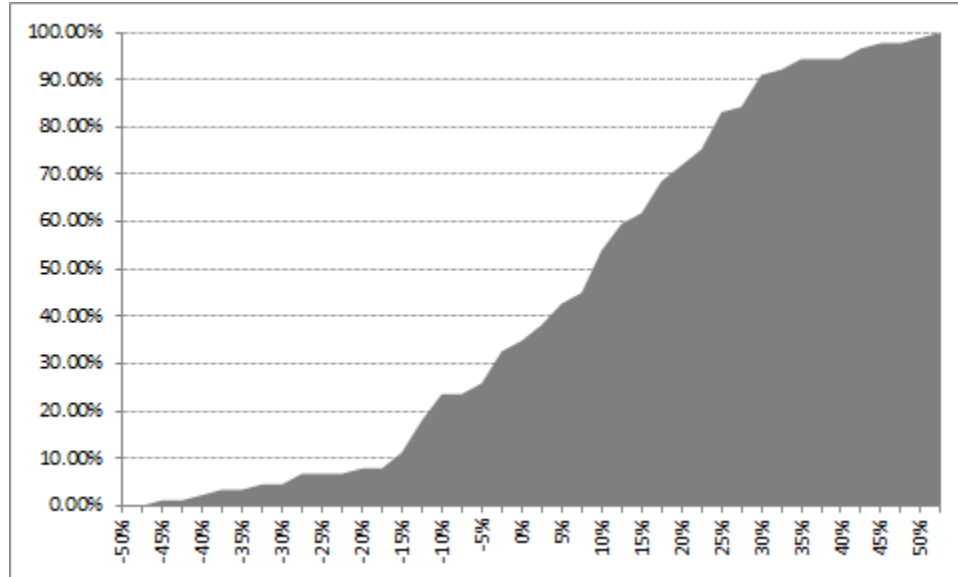
6

I then considered a different perspective, calculating the cumulative probability of the same ranges of MRP estimates. Those results, which are provided in Chart 4 (below) demonstrate that there is approximately a 54.00 percent probability that an MRP of at least 10.27 percent will occur in any given year.

⁴⁶ Source: Morningstar, Inc., Ibbotson Stocks Bonds Bills and Inflation 2015 Classic Yearbook, at 196-197.

1

Chart 4: Cumulative Probability of Market Risk Premia, 1926-2014⁴⁷



2

3 **Q: How did you apply your expected Market Risk Premium and risk-free rate**
4 **estimates?**

5 A: I relied on the *ex-ante* Market Risk Premia discussed above, together with the current and
6 near-term projected 30-year Treasury yields as inputs to my CAPM analyses.

7 **Q: What Beta coefficient did you use in your CAPM model?**

8 A: As shown in Schedule RBH-4, I considered the Beta coefficients reported by two
9 sources: Bloomberg and Value Line. While both of those services adjust their calculated
10 (or “raw”) Beta coefficients to reflect the tendency of the Beta coefficient to regress to
11 the market mean of 1.00, Value Line calculates the Beta coefficient over a five-year
12 period, while Bloomberg’s calculation is based on two years of data.

13 **Q: What are the results of your CAPM analysis?**

14 A: As shown in Table 6 the CAPM analyses suggest an ROE range of 8.97 percent to 11.69
15 percent (*see* also Schedule RBH-5).

⁴⁷ *Ibid.*

1

Table 6: Summary of CAPM Results⁴⁸

	<i>Bloomberg Derived Market Risk Premium</i>	<i>Value Line Derived Market Risk Premium</i>
<i>Average Bloomberg Beta Coefficient</i>		
Current 30-Year Treasury (2.96%)	9.46%	8.97%
Near Term Projected 30-Year Treasury (3.45%)	9.95%	9.46%
<i>Average Value Line Beta Coefficient</i>		
Current 30-Year Treasury (2.96%)	11.20%	10.57%
Near Term Projected 30-Year Treasury (3.45%)	11.69%	11.07%

2 **D. Bond Yield Plus Risk Premium Approach**

3 **Q: Please generally describe the Bond Yield Plus Risk Premium approach.**

4 A: This approach is based on the basic financial tenet that equity investors bear the residual
5 risk associated with ownership and therefore require a premium over the return they
6 would have earned as a bondholder. That is, since returns to equity holders are more
7 risky than returns to bondholders, equity investors must be compensated for bearing that
8 additional risk. Risk premium approaches, therefore, estimate the Cost of Equity as the
9 sum of the equity risk premium and the yield on a particular class of bonds. As noted in
10 my discussion of the CAPM, since the equity risk premium is not directly observable, it
11 typically is estimated using a variety of approaches, some of which incorporate *ex-ante*,
12 or forward-looking estimates of the Cost of Equity, and others that consider historical, or
13 *ex-post*, estimates. An alternative approach is to use actual authorized returns for electric
14 utilities to estimate the Equity Risk Premium.

⁴⁸ See Schedule RBH-5.

1 **Q: Please explain how you performed your Bond Yield Plus Risk Premium analysis.**

2 A: As suggested above, I first defined the Risk Premium as the difference between the
3 authorized ROE and the then-prevailing level of long-term (*i.e.*, 30-year) Treasury yield.
4 I then gathered data for 1,468 electric utility rate proceedings between January, 1980 and
5 January 15, 2016. In addition to the authorized ROE, I also calculated the average period
6 between the filing of the case and the date of the final order (the “lag period”). In order
7 to reflect the prevailing level of interest rates during the pendency of the proceedings, I
8 calculated the average 30-year Treasury yield over the average lag period (approximately
9 200 days).

10 Because the data cover a number of economic cycles, the analysis also may be
11 used to assess the stability of the Equity Risk Premium. Prior research, for example, has
12 shown that the Equity Risk Premium is inversely related to the level of interest rates.
13 That analysis is particularly relevant given the relatively low, but increasing level of
14 current Treasury yields.

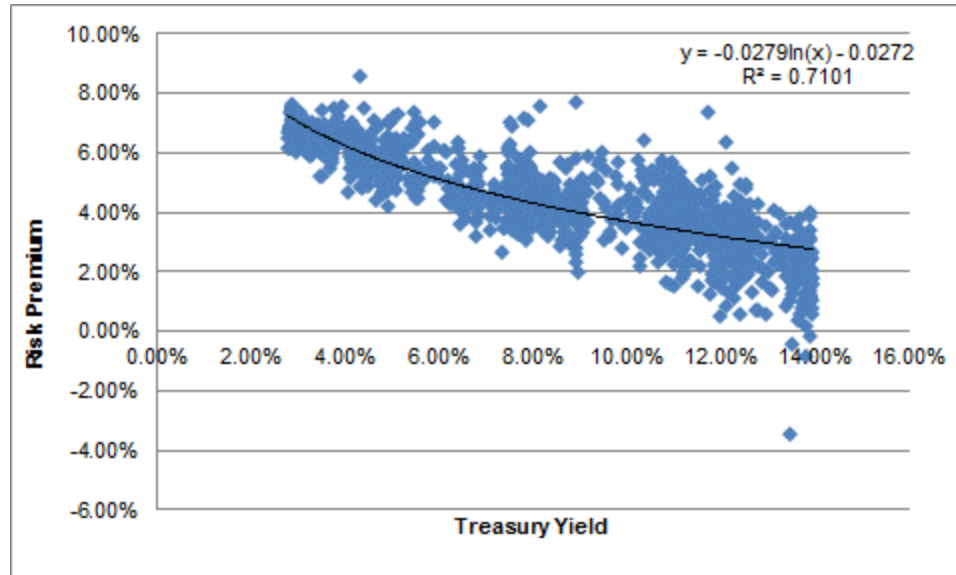
15 **Q: How did you analyze the relationship between interest rates and the Equity Risk**
16 **Premium?**

17 A: The basic method used was regression analysis, in which the observed Equity Risk
18 Premium is the dependent variable, and the average 30-year Treasury yield is the
19 independent variable. Relative to the long-term historical average, the analytical period
20 includes interest rates and authorized ROEs that are quite high during one period (*i.e.*, the
21 1980s) and that are quite low during another (*i.e.*, the post-Lehman bankruptcy period).
22 To account for that variability, I used the semi-log regression, in which the Equity Risk
23 Premium is expressed as a function of the natural log of the 30-year Treasury yield:

1
$$RP = \alpha + \beta(\text{LN}(T_{30}))$$
 Equation [5]

2 As shown on Chart 5 (below), the semi-log form is useful when measuring an
3 absolute change in the dependent variable (in this case, the Risk Premium) relative to a
4 proportional change in the independent variable (the 30-year Treasury yield).

5 **Chart 5: Equity Risk Premium⁴⁹**



6
7 As Chart 5 illustrates, over time there has been a statistically significant, negative
8 relationship between the 30-year Treasury yield and the Equity Risk Premium.
9 Consequently, simply applying the long-term average Equity Risk Premium of 4.50
10 percent would significantly understate the Cost of Equity and produce results well below
11 any reasonable estimate. Based on the regression coefficients in Chart 5, however, the
12 implied ROE is between 10.04 percent and 10.47 percent (see Table 7 and Schedule
13 RBH-6).

⁴⁹ See Schedule RBH-6.

1

Table 7: Summary of Bond Yield Plus Risk Premium Results⁵⁰

	<i>Return on Equity</i>
Current 30-Year Treasury (2.96%)	10.04%
Near Term Projected 30-Year Treasury (3.45%)	10.10%
Long Term Projected 30-Year Treasury (4.65%)	10.47%

2 **Q: Has the Commission considered authorized ROEs in other jurisdictions in setting**
3 **the authorized ROE for a subject company?**

4 A: Yes, it has. For example, in Docket Nos. ER-2012-0175 and ER-2014-0370 the
5 Commission determined that recently authorized ROEs for utilities throughout the United
6 States supported its authorized ROE, noting in ER-2014-0370:

7 KCPL must compete with other utilities all over the country for the
8 same capital. Therefore, the industry authorized return on equity
9 provides a reasonableness test for the recommendations offered by the
10 return on equity witnesses.⁵¹

11 The Bond Yield Plus Risk Premium approach relies on the same data over an
12 approximately 36-year period, while also considering the inverse relationship between
13 Treasury yields and the Equity Risk Premium. That is, the Bond Yield Plus Risk
14 Premium approach provides additional information beyond a simple average of
15 authorized ROEs in that it accounts for different market environments and considers the
16 long-term relationship between the inputs to the analysis.

⁵⁰ See Schedule RBH-6.

⁵¹ See, *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Case No. ER-2012-0175, Report and Order (Jan. 9, 2013), at 18; and KCP&L Order, at 18-19.

1 **Q: Have you provided an alternative Bond Yield Plus Risk Premium analysis to**
2 **account for how market conditions may affect the inverse relationship between**
3 **interest rates and the Equity Risk Premium?**

4 A: To address the prospect that the market conditions affect the relationship between interest
5 rates and the Equity Risk Premium, I first calculated the “credit spread”, or the difference
6 between the Moody’s A-Utility Bond yield and the 30-Year Treasury yield. To reflect
7 the risk of equity investments, I calculated the market volatility as measured by the
8 CBOE Volatility Index (the “VIX”) since 1990, the first year for which data was
9 available. I then performed a regression analysis in which the Equity Risk Premium is
10 the dependent variable, and Treasury yields, credit spreads, and the VIX were the
11 explanatory variables. There were three principal findings from those analyses (*see*
12 *Schedule RBH-7*):

- 13 1. Credit spreads and the VIX do not negate the statistically significant inverse
14 relationship between Treasury yields and the Equity Risk Premium.
- 15 2. There is a high degree of correlation between credit spreads and the VIX,
16 indicating that the two move closely together. That is, the “relative risk” of the
17 two is not a meaningful factor.
- 18 3. Based on the current, and projected Treasury yields, the expected ROE falls in the
19 range of 9.89 percent to 10.01 percent. Those results overlap with my
20 recommended range, and are only slightly below the results of my Bond Yield
21 Plus Risk Premium analysis (*see Schedule RBH-6*).

22 Lastly, please note that neither the VIX nor credit spreads added significantly to the
23 explanatory value of the regression equations.

VI. BUSINESS RISKS AND OTHER CONSIDERATIONS

1 **Q: Do the mean DCF results for the proxy group provide an appropriate estimate of**
2 **the Cost of Equity for GMO?**

3 A: No, the mean DCF results do not necessarily provide an appropriate estimate of the
4 Company's Cost of Equity. In my view, there are additional factors that must be taken
5 into consideration when determining where the Company's Cost of Equity falls within
6 the range of results. Those factors include: (1) the regulatory environment in which the
7 Company operates; (2) the Company's generation portfolio; and (3) the Company's
8 capital expenditure plans. Those risk factors, which are discussed below, should be
9 considered with respect to their overall effect on the GMO's risk profile and therefore its
10 Cost of Equity.

11 **A. Regulatory Environment**

12 **Q: How does the regulatory environment in which a utility operates affect its access to**
13 **and cost of capital?**

14 A: The regulatory environment can significantly affect both the access to and the cost of
15 capital in several ways. First, the proportion and cost of debt capital available to utility
16 companies are influenced by rating agencies' assessment of the regulatory environment.
17 In addition, it is important to recognize that regulatory decisions regarding the authorized
18 ROE and capital structure have direct consequences for the subject utility's internal cash
19 flow generation (sometimes referred to as "Funds from Operations" or "FFO"). Since
20 credit ratings are intended to reflect the ability to meet financial obligations as they come

1 due, the ability to generate the cash flows required to meet those obligations (and to
2 provide an additional amount for unexpected events) is of critical importance to debt
3 investors. Two of the most important metrics used to assess that ability are the ratios of
4 FFO to debt, and FFO to interest expense, both of which are directly affected by
5 regulatory decisions regarding the appropriate rate of return and capital structure.

6 Investors recognize that a reasonable allowed ROE that is subject to earnings
7 attrition due to unfavorable regulatory or economic factors does not provide any
8 assurance that the utility actually will recover its costs or earn a reasonable return. The
9 authorized ROE affects not only the cash flow-related metrics that measure financial
10 strength, but also provides an indication of the degree of regulatory support, as well as
11 risk associated with a given utility and jurisdiction. It is, therefore, an important measure
12 of regulatory support and financial integrity from several perspectives.

13 **Q: Have you compared GMO's regulatory risks to electric utilities in other**
14 **jurisdictions?**

15 A: Yes, I have. S&P assesses the credit-supportiveness of the regulatory environments in
16 which utilities operate. Based on an assessment of both qualitative and quantitative
17 factors, S&P created a rank order of 53 regulatory jurisdictions in the United States.⁵²
18 Based on S&P's rankings, Missouri's regulatory environment is ranked in the bottom
19 quarter of all jurisdictions. Rankings such as those provided by S&P are observable and
20 meaningful indicators of the financial community's view of the regulatory risks faced by

⁵² S&P Ratings Direct, *Utility Regulatory Assessments For U.S. Investor-Owned Utilities*, (January 7, 2014). Rankings include state regulatory commissions (including two commissions in Texas), the District of Columbia, and U.S. (federal) jurisdictions.

1 utilities. Given Missouri’s ranking, the financial community appears to attribute higher
2 regulatory risk to GMO than to other utilities (on average).

3 **Q: Are there issues associated with regulatory lag that also are a consideration for**
4 **equity investors?**

5 A: Yes, there are. As noted in an April 2013 report by Regulatory Research Associates,
6 Missouri is one of only five states that legally prohibit utilities from including
7 Construction Work in Progress (“CWIP”) in the rate base.⁵³ As a consequence, the
8 Company’s ability to maintain its revenue and cash flow is disadvantaged relative to
9 others that either have the ability to include CWIP in rate base during general rate cases
10 (and therefore earn a cash return on that investment), or are provided a more timely cash
11 return through adjustment clauses. When the revenue per dollar of assets decreases, the
12 earned return on common equity also will decrease. Because that earned return is a
13 principal element of cash flow, the dilution in earnings resulting from the untimely
14 recovery of capital investments diminishes the Company’s financial profile and increases
15 its relative risk.

16 In addition, rates for Missouri utilities are set based on an historical test year, with
17 limited “known and measurable” changes.⁵⁴ In contrast, other utilities, including utilities
18 in the proxy group, have the ability to recover rate base additions through forecast test
19 years or alternative rate plans. As Regulatory Research Associates has noted, “[s]uch
20 rate changes provide for improved cash flow and possibly earnings through reduced

⁵³ Regulatory Research Associates, *Construction Work in Progress; Getting acquainted with an old issue*, April 22, 2013, at 2; and Regulatory Research Associates, *Missouri Regulatory Review*, October 1, 2015, at 2-3.

⁵⁴ Regulatory Research Associates, *Missouri Regulatory Review*, October 1, 2015, at 2-3.

1 regulatory lag.”⁵⁵ As with the inability to include CWIP in its rate base, because it is
2 subject to the regulatory lag otherwise mitigated by forecast test years or alternative rate
3 plans, GMO’s ability to generate earnings and cash flow is disadvantaged relative to its
4 peers.

5 The same holds true regarding the Company’s inability to implement interim
6 rates. As RRA points out, the Commission “may authorize an interim increase, subject to
7 refund, if a company can demonstrate an emergency, or a near emergency situation.”
8 RRA concludes that as a result, “interim increases have rarely been sought or authorized”
9 in Missouri.⁵⁶ Because interim rates are unlikely, the Company’s cash flow position is
10 diluted as it invests in its rate base.

11 **Q: As required by MPSC regulation 4 CSR 240-3.161(3)(N), please provide a complete**
12 **explanation of any changes in business risk to the Company resulting from**
13 **implementation of the fuel adjustment clause (“FAC”) it proposes in this**
14 **proceeding, in addition to any other changes in business risk experienced by the**
15 **Company.**

16 A: First, the use of FAC mechanisms is prevalent throughout the industry. As shown in
17 Schedule RBH-8, each of the vertically integrated companies in my proxy group has a
18 fuel adjustment mechanism. As a consequence, the continuation of an FAC for GMO
19 would leave its business and regulatory risk profile comparable to the risk profiles of
20 other electric utilities, as it relates to fuel cost recovery. Therefore, no downward
21 adjustment to GMO’s rate of return would be reasonable or appropriate as a result of

⁵⁵ Regulatory Research Associates, *Alternative Regulation/Incentive Plans, A State-by-State Review*, November 2013, at 1. I note that by statute, Texas distribution utilities are not a provider of last resort (that is, they provide standard offer service) at the retail level and do not charge retail customers for supply or generation.

⁵⁶ Regulatory Research Associates, *Missouri Regulatory Review*, October 1, 2015, at 2.

1 continuation of an FAC. Of course, discontinuation of an FAC for GMO would likely
2 warrant an upward adjustment to the Company's return due to what would be an
3 incremental risk for GMO in the area of fuel cost recovery relative to other electric
4 utilities. I am not aware of other changes in business risk experienced by GMO.

5 **B. Generation Portfolio**

6 **Q: Please provide an overview of the Company's generation portfolio.**

7 A: GMO's operations are heavily dependent on coal-fired generation, which represented
8 97.00 percent of the Company's electric utility 2014 net generation.⁵⁷

9 **Q: Please briefly describe the risks associated with GMO's generation portfolio.**

10 A: In general, highly capital-intensive generation assets are subject to certain risks including
11 the recovery of the investors' capital in the event of a change in market structure or a
12 plant failure, and recovery of replacement power and repair costs in the event of extended
13 or unplanned outage. In addition, federal environmental and safety regulations present a
14 substantial risk of requiring investors to commit new capital to comply with new
15 regulations or operation restrictions or possibly closure. In fact, a report by the Staff of
16 the Missouri Public Service Commission estimated that known Environmental Protection
17 Agency regulations, which primarily affect coal-fired generating plants in Missouri,
18 would cost state electric utilities and their customers between approximately \$2.23 billion
19 and \$2.47 billion from 2012 to 2022.⁵⁸ That report further highlighted the level of

⁵⁷ Source: SNL Financial, GMO electric utility net generation.

⁵⁸ See *Amended Updated Staff Report on The Cost of Compliance with Federal Environmental Regulations*, Case No. EW-2012-0065 (Apr. 3, 2014) at 23. The report includes cost estimates for Kansas City Power & Light Company, KCP&L Greater Missouri Operations Co., Ameren Missouri, and Empire District Electric Company.

1 uncertainty regarding emerging environmental regulations and the potential consequences
2 of those emerging environmental regulations, including additional plant investments.

3 In a September 2014 report, S&P noted that power generators have addressed
4 carbon-reduction policies that target coal-fired generating plants by implementing three
5 strategies: adding “scrubbers” to coal-fired plants; switching to burning natural gas; or
6 retiring coal-fired plants outright.⁵⁹ To the extent these strategies increase costs for
7 utilities, their credit profiles may come under pressure. As noted by S&P:

8 Higher costs could become a key credit issue for regulated utilities given
9 the importance of managing customer rate increases, which has
10 implications for relations with regulators, as well as economic and
11 political ramifications that could heighten business risk. Any rating
12 actions would likely not occur until there is further clarity from a utility
13 about early plant retirements and related cost recovery. For utilities that
14 have significant coal-fired generation, recovery mechanisms will be
15 extremely important to continue to support operating cash flow and
16 maintain robust financial measures.⁶⁰

17 **Q: Does the Environmental Protection Agency’s (“EPA”) Clean Power Plan present**
18 **any additional risk to the Company?**

19 A: Yes. The EPA’s Clean Power Plan established “interim and final carbon dioxide
20 emission performance rates for the two types of electric generating units – steam electric
21 and natural gas fired power plants – under Section 111(d) of the Clean Air Act.”⁶¹ In
22 addition, the Clean Power Plan established state-specific interim and final goals for
23 Missouri. Missouri may choose between a rate-based or mass-based approach to meeting
24 those goals. The rate-based goal is based on a reduction in carbon dioxide (“CO₂”) rates
25 from 2,008 lbs/Net MWh in 2012 to 1,272 lbs/Net MWh in 2030. The mass-based goal

⁵⁹ S&P Research, *The Clean Power Plan Will Spur Further Coal Plant Closings, But How Will U.S. Utilities Recover The Costs?* (September 2, 2014).

⁶⁰ *Ibid.*

⁶¹ Clean Power Plan: Stage at a Glance, Missouri, Environmental Protection Agency, Updated August 3, 2015.

1 is based on a reduction in CO₂ emissions from 78 million short tons to 55 million short
2 tons.⁶²

3 Both goals represent a significant reduction in CO₂ emissions in Missouri. As
4 discussed above, GMO's operations are heavily dependent on coal-fired generation. The
5 need to further reduce carbon emissions as a result of the Clean Power Plan could lead to
6 increasing costs for GMO.

7 **Q: What are your conclusions regarding the Company's generating portfolio?**

8 A: The Company's generating portfolio consists of a high percentage of coal power plants
9 that face certain inherent risks associated with capital intensive assets such as the risk of
10 an extended forced outage and changing market dynamics. In particular, the Company
11 and its investors are faced with the risk that new and impending federal environmental
12 and safety regulations will require it to expend additional capital or face closure or
13 curtailment of generating capacity. Because investors consider these risks in establishing
14 their return requirements, the Commission likewise should consider the effect of the
15 additional risk associated with the Company's generating portfolio in determining
16 GMO's authorized ROE.

17 **C. Planned Capital Expenditures**

18 **Q: Please briefly summarize the Company's capital investment plans.**

19 A: As discussed Attachment B, GPE's five-year capital expenditures budget over the 2015-
20 2019 timeframe totals approximately \$3.22 billion, which includes substantial

⁶² *Ibid.*

1 investments for GMO.⁶³ Because the Company will continue to make substantial
2 investments in its utility operations, it will require efficient access to capital markets
3 during the period that rates established in this proceeding will be in effect.

4 **Q: Do credit rating agencies recognize risk associated with increased capital**
5 **expenditures?**

6 A: Yes, they do. From a credit perspective, the additional pressure on cash flows associated
7 with high levels of capital expenditures exerts corresponding pressure on credit metrics
8 and, therefore, credit ratings. S&P has noted that:

9 The real challenge for the industry is the combination of slow growth and
10 huge investment needs. We believe that for the remainder of 2012 and
11 beyond, state regulation will continue to be the single most influential
12 factor for the sector's credit quality. Cost increases, construction projects,
13 environmental compliance, and other public policy directives, together
14 with lackluster growth, will necessitate continued reliance on rate relief
15 requests.⁶⁴

16 The rating agency views noted above also are consistent with certain observations
17 discussed earlier in my Direct Testimony: (1) the benefits of maintaining a strong
18 financial profile are significant when capital access is required, and become particularly
19 acute during periods of market instability; and (2) the Commission's decision in this
20 proceeding will have a direct bearing on the Company's credit profile, and its ability to
21 access the capital needed to fund its investments.

⁶³ See GPE Investor Presentation at 11 (December, 2015), attached as Attachment B.

⁶⁴ S&P Ratings Direct, *Industry Economic and Ratings Outlook: U.S. Regulated Utilities Will Likely Stay On A Stable Trajectory For The Rest Of 2012 And Into 2013*, at 6 (July 17, 2012).

1 **Q: Have you also considered the relationship between capital expenditures and the**
2 **earned return on common equity?**

3 A: Yes, I have. The “DuPont” formula decomposes the Return on Common Equity into
4 three components: (1) the Profit Margin (net income/revenues); (2) Asset Turnover
5 (revenues/net plant); and (3) the Equity Multiplier (net plant/equity).⁶⁵ As Schedule
6 RBH-9 demonstrates, based on the proxy companies, the Asset Turnover rate declined
7 from 2003 through 2014 (the historical period covered by Value Line) and is expected to
8 remain at its current level through Value Line’s 2018 – 2020 projection period. Over that
9 same period, according to Value Line data, average Net Plant is expected to experience a
10 cumulative increase of approximately 195.00 percent. Since, as noted above, the utility
11 industry is going through a period of increased capital investment, the lag between the
12 addition of net plant and revenue generated by those investments dilute the Asset
13 Turnover ratio, at least in the near term.

14 In order to gain an additional perspective on the relationship between plant
15 additions and Asset Turnover, I performed a regression analysis in which the annual
16 change in the Asset Turnover rate was the dependent variable, and the annual change in
17 Net Plant was the independent variable. As shown in Schedule RBH-9, that analysis
18 indicates a statistically significant negative relationship between the two variables, such
19 that as annual net plant increases, the Asset Turnover ratio decreases. This, in turn,
20 suggests that an increase in capital expenditures also negatively affects the Return on
21 Common Equity, causing greater financial stress to the utility. To the extent investors

1 value a company based on earnings and cash flow, this additional financial strain is a key
2 concern.

3 **Q: What are your conclusions regarding the effect of the Company's capital spending**
4 **plans on its risk profile?**

5 A: It is clear that the Company's capital expenditure program is significant. The financial
6 community recognizes the additional risks associated with substantial capital
7 expenditures and the financing, regulatory and operating risks associated with those
8 plans. The Company must have access to the capital markets on a timely basis and at
9 reasonable cost rates in order to fund those investments. In my view, the Company's
10 capital investment plan remains an important consideration in establishing its ROE and
11 overall rate of return.

12 **Q: What are your conclusions regarding the Company's overall business risk profile?**

13 A: The regulatory environment is one of the most important issues considered by both debt
14 and equity investors in assessing the risks and prospects of utility companies. From the
15 perspective of debt investors, the authorized return should enable the Company to
16 generate the cash flow needed to meet its near-term financial obligations, make the
17 capital investments needed to maintain and expand its system, and maintain sufficient
18 levels of liquidity to fund unexpected events. That financial liquidity must be derived not
19 only from internally generated funds, but also by efficient access to capital markets.
20 Because investors have many investment alternatives, even within a given market sector,

⁶⁵ The DuPont formula is commonly used by financial analysts to monitor specific operational and financial drivers of a company's earned ROE. The formula expands the calculation of the ROE into the product of three financial metrics: Profit Margin, Asset Turnover and the Equity Multiplier. That is, $ROE = (\text{earnings} / \text{revenue}) \times (\text{revenue} / \text{assets}) \times (\text{assets} / \text{equity})$. See, e.g., Eugene Brigham, Michael Ehrhardt, Financial Management: Theory and Practice, 12th Ed., 2008, at 140-141.

1 the Company's financial profile must be adequate on a relative basis to ensure its ability
2 to attract capital under a variety of economic and financial market conditions.

3 From the perspective of GPE, the authorized return must be sufficient to fund
4 incremental capital investments in GMO's operations. From the perspective of equity
5 investors, the authorized return must be adequate to provide a risk-comparable return on
6 the equity portion of the Company's capital investments. Since (as discussed earlier)
7 equity investors are the residual claimants on the Company's cash, they are particularly
8 concerned with regulatory uncertainty and its effect on future cash flows.

9 In light of those risks, I believe that an ROE in the range of 9.75 percent to 10.50
10 percent is reasonable, if not conservative. An ROE in that range would permit the
11 Company to compete for a capital at a time when it requires additional funds to finance
12 large projects as it confronts multiple new and emerging safety and environmental
13 regulations.

VII. CAPITAL MARKET ENVIRONMENT

14 **Q: Do economic conditions influence the required cost of capital and required return**
15 **on common equity?**

16 A: Yes. As discussed in Section V, the models used to estimate the Cost of Equity are
17 meant to reflect, and therefore are influenced by, current and expected capital market
18 conditions. As to the analyses used to estimate the Cost of Equity, it is important to
19 assess the reasonableness of any financial model's results in the context of observable
20 market data. To the extent that certain ROE estimates are incompatible with such data or
21 inconsistent with basic financial principles, it is appropriate to consider whether

1 alternative estimation techniques are likely to provide more meaningful and reliable
2 results.

3 **Q: Do you have any general observations regarding the relationship between current**
4 **capital market conditions and the Company's Cost of Equity?**

5 A: Yes, I do. Much has been reported about the Federal Reserve's market intervention since
6 2007, and its effect on interest rates. Although the Federal Reserve completed its
7 Quantitative Easing initiative in October 2014, it was not until December 2015 that it
8 raised the Federal Funds rate, and began the process of rate normalization.⁶⁶ A
9 significant issue, then, is how investors will react as that process continues, and
10 eventually is completed. A viable outcome is that investors will perceive greater chances
11 for economic growth, which will increase the growth rates included in the Constant
12 Growth DCF model. At the same time, higher growth and the absence of Federal market
13 intervention could provide the opportunity for interest rates to increase, thereby
14 increasing the dividend yield portion of the DCF model. In that case, both terms of the
15 Constant Growth DCF model would increase, producing increased ROE estimates.

16 At this time, however, market data remains somewhat disjointed. As a
17 consequence, it is difficult to rely on a single model to estimate the Company's Cost of
18 Equity. A more reasoned approach is to understand the relationships among Federal
19 Reserve policies, interest rates and risk, and assess how those factors may affect different
20 models and their results. For the reasons discussed below, the current market is one in
21 which it is very important to consider a broad range of data and models when
22 determining the Cost of Equity.

⁶⁶ See Federal Reserve Press Release (December 16, 2015).

1 **Q: Please summarize the effect of recent Federal Reserve policies on interest rates and**
2 **the cost of capital.**

3 A: Beginning in 2008, the Federal Reserve proceeded on a steady path of initiatives intended
4 to lower long-term Treasury yields.⁶⁷ The Federal Reserve policy actions “were designed
5 to put downward pressure on longer-term interest rates by having the Federal Reserve
6 take onto its balance sheet some of the duration and prepayment risks that would
7 otherwise have been borne by private investors.”⁶⁸ Under that policy, “Securities held
8 outright” on the Federal Reserve’s balance sheet increased from approximately \$489
9 billion at the beginning of October 2008 to \$4.24 trillion by mid-January 2016.⁶⁹ To put
10 that increase in context, the securities held by the Federal Reserve represented
11 approximately 3.29 percent of GDP at the end of September 2008, and had risen to
12 approximately 23.50 percent of GDP in January 2016.⁷⁰ As such, the Federal Reserve
13 policy actions have represented a significant source of liquidity, and have had a
14 substantial effect on capital markets.

15 Just as market intervention by the Federal Reserve has reduced interest rates, it
16 also has had the effect of reducing market volatility. As shown in Chart 6 (below), each
17 time the Federal Reserve began to purchase bonds (as evidenced by the increase in
18 “Securities Held Outright” on its balance sheet), volatility subsequently declined. In fact,
19 in September 2012, when the Federal Reserve began to purchase long-term securities at a
20 pace of \$85 billion per month, volatility (as measured by the CBOE Volatility Index,
21 known as the “VIX”) fell, and through October 2014 remained in a relatively narrow

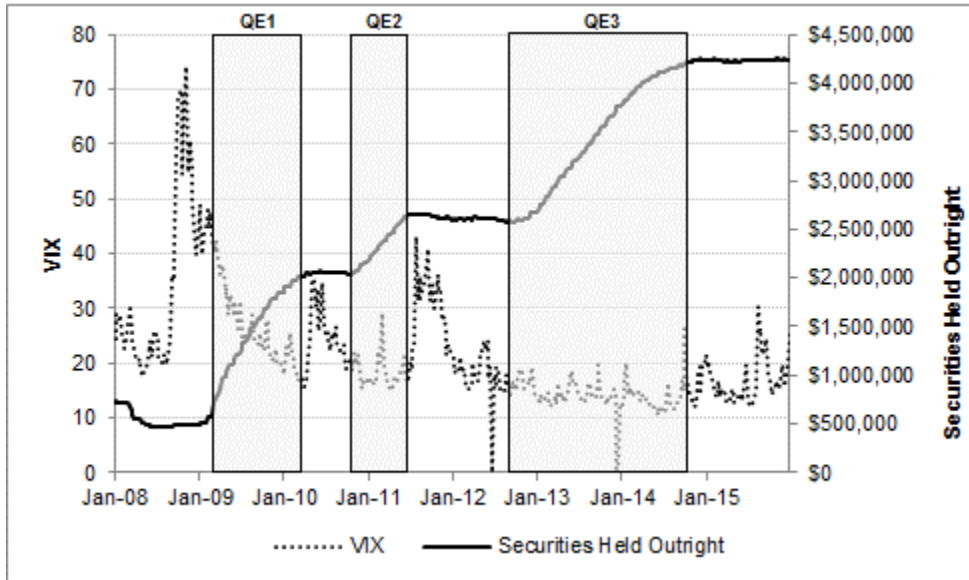
⁶⁷ See Federal Reserve Press Release (June 19, 2013).

⁶⁸ Federal Reserve Bank of New York, *Domestic Open Market Operations During 2012*, April 2013, at 29.

⁶⁹ Source: Federal Reserve Board Schedule H.4.1. “Securities held outright” include U.S. Treasury securities, Federal agency debt securities, and mortgage-backed securities.

1 range. The reason is quite straight-forward: Investors became confident that the Federal
2 Reserve would intervene if markets were to become unstable.

3 **Chart 6: VIX and Federal Reserve Asset Purchases**⁷¹



4
5 The important analytical issue is whether we can infer that risk aversion among
6 investors is at a historically low level, implying a Cost of Equity that is well below
7 recently authorized returns. Given the negative correlation between the expansion of the
8 Federal Reserve's balance sheet and the VIX, it is difficult to conclude that fundamental
9 risk aversion and investor return requirements have fallen. If it were the case that
10 investors believe that volatility will remain at low levels (that is, that market risk and
11 uncertainty will remain low), it is not clear why they would decrease their return
12 requirements for defensive sectors such as utilities. In that respect, it appears that the
13 Constant Growth DCF results are at odds with market conditions.

⁷⁰ Source: Federal Reserve Board Schedule H.4.1; Bureau of Economic Analysis.

⁷¹ Source: Federal Reserve Economic Data (FRED), Federal Reserve Bank of St. Louis; Federal Reserve Statistical Release H.4.1, Factors Affecting Reserve Balances.

1 **Q: Has the Federal Reserve’s quantitative easing policy been associated with changes in**
2 **the proxy companies’ trading levels?**

3 A: Yes, that appears to be the case. From January 2000 through the end of August 2012
4 (that is, immediately prior to the third round of Quantitative Easing), the proxy group’s
5 average P/E ratio traded at a 6.00 percent discount to the market. From September 2012
6 through May 2013, when the Federal Reserve announced it would begin to taper its asset
7 purchases, the proxy group traded at a 23.00 percent premium to the market. In fact,
8 between September 2012 and January 15, 2016, the proxy group P/E ratio traded at a
9 13.00 percent premium to the market.

10 More recently, even after the Federal Reserve noted that it would be “patient” in
11 assessing when it would normalize monetary policy, the proxy group’s average P/E ratio
12 fell to approximately 102.00 percent of the market P/E (*i.e.*, a 2.00 percent premium)
13 since the beginning of September 2015, closer to the long-term relationship. Given the
14 convergence in the proxy group and market average P/E ratios, it may be that investors
15 saw the electric utility sector as somewhat over-valued relative to the market, and bid
16 prices down in response.

17 **Q: Does your recommendation also consider the current interest rate environment?**

18 A: Yes, it does. From an analytical perspective, it is important that the inputs and
19 assumptions used to arrive at an ROE recommendation, including assessments of capital
20 market conditions, are consistent with the recommendation itself. Although I appreciate
21 that all analyses require an element of judgment, the application of that judgment must be
22 made in the context of the quantitative and qualitative information available to the analyst
23 and the capital market environment in which the analyses were undertaken. Because the

1 Cost of Equity is forward-looking, the salient issue is whether investors see the likelihood
2 of increased interest rates during the period in which the rates set in this proceeding will
3 be in effect.

4 As to long-term interest rates, the approximately 50 economists surveyed by Blue
5 Chip Financial Forecast see the 30-year Treasury yield as increasing to 4.00 percent by
6 2017 and 4.40 percent by 2018.⁷² Those projections are supported by the fact that
7 investors recently have been willing to pay nearly twice the premium for the option to
8 sell long-term Government bonds in January 2018 (with an exercise price equal to the
9 current price) than they have been willing to pay for the option to buy those bonds.⁷³
10 Because the prices of bonds move inversely to interest rates,⁷⁴ those option prices
11 indicate that investors believe it is considerably more likely that interest rates will
12 increase over the coming year, than it is likely that they will decrease. As noted in
13 Section V (above), all else remaining equal an increase in interest rates would increase
14 the return required by equity holders.

15 Given that: (1) Federal monetary policy has begun its process of “normalization”;
16 and (2) economists and market data indicate expectations for increasing interest rates into
17 2018 and beyond, I believe that an ROE in the range of 9.75 percent to 10.50 percent
18 reflects the prevailing and expected interest rate environment.

19 **Q: What conclusions do you draw from your analyses of capital market conditions?**

20 A: From an analytical perspective, it is important that the inputs and assumptions used to
21 arrive at an ROE determination, including assessments of capital market conditions, are
22 consistent with the conclusion itself. Although I appreciate that all analyses require an

⁷² See, Blue Chip Financial Forecast, Vol. 34 No. 12, December 1, 2015, at 14.

1 element of judgment, the application of that judgment must be made in the context of the
2 quantitative and qualitative information available to the analyst and the capital market
3 environment in which the analyses were undertaken. Because the application of financial
4 models and interpretation of their results often is the subject of differences among
5 analysts in regulatory proceedings, I believe that it is important to review and consider a
6 variety of data points; doing so enables us to put in context both quantitative analyses and
7 the associated recommendations.
8

VIII. COST OF DEBT

9 **Q: What is the Company's Cost of Debt?**

10 A: As shown in Schedule RBH-10, the Company's Cost of Debt is 5.089 percent.

11 **Q: How does the projected cost of debt as of July 31, 2016 compare to the actual cost of**
12 **debt as of September 30, 2015 and the cost of debt used in GMO last rate case (Case**
13 **No. ER-2012-0175)?**

14 A: In Case No. ER-2012-0175, which was approved by the Commission in its Report and
15 Order dated January 9, 2013, GMO based its cost of debt on GPE's consolidated cost of
16 debt. In this proceeding, the Company recommends using the weighted average cost of
17 GMO-specific debt.⁷³ The projected cost of GMO debt of 5.089 percent (as of July 31,
18 2016) is the same as the actual cost of GMO debt (5.089 percent as of September 30,
19 2015), but 134 basis points below the 6.425 percent Cost of GPE Consolidated Debt
20 approved in GMO's last rate case.

⁷³ Source: <http://www.nasdaq.com/symbol/tlt/option-chain?dateindex=7>

⁷⁴ That is, as interest rates move up (down), bond prices move down (up).

⁷⁵ See Direct Testimony of Kevin Bryant.

1 **Q: Have you assessed the Company's Cost of Debt?**

2 A: Yes, I reviewed the prevailing Bloomberg Fair Value Curves for A-rated and BBB-rated
3 utility debt concurrent with the date of issuance of the Company's debt instruments. As
4 shown Schedule RBH-11, the Company's weighted average coupon rate is consistent
5 with the prevailing yields at the times of issuance. As such, I believe the Company's
6 5.089 percent current Cost of Debt is reasonable.

IX. CAPITAL STRUCTURE AND OVERALL RATE OF RETURN

7 **Q: Please summarize the Company's requested capital structure and overall rate of**
8 **return.**

9 A: The requested capital structure components and resulting overall rate of return are
10 presented in Table 8 below:

11 **Table 8: Summary of Overall Rate of Return⁷⁶**

Capital Components	Ratio	Cost	Weighted Cost
Long-Term Debt	45.17%	5.09%	2.30%
Common Equity	54.83%	9.90% ⁷⁷	5.43%
Total	100.00%		7.73%

12 **Q: What is the basis for the Company's requested capital structure and overall rate of**
13 **return?**

14 A: The requested capital structure, as well as the cost of debt, are based on GMO's projected
15 capital structure at July 31, 2016. The data supporting the requested capital structure is

⁷⁶ See Schedule RBH-10.

⁷⁷ See Direct Testimony of Kevin Bryant.

1 presented in Schedule RBH-10, with the July 31, 2016 summary shown on page 1 of that
2 schedule. The use of GMO's capital structure and cost of capital is supported in the
3 Direct Testimony of Kevin Bryant.

4 **Q: What are the principal differences between GMO's actual capital structure as of**
5 **September 30, 2015 and the requested projected capital structure as of July 31,**
6 **2016?**

7 A: The actual GMO capital structure as of September 30, 2015, is shown on page 6 of
8 Schedule RBH-10. The key differences between the actual capital structure and the
9 requested capital structure, projected as of July 31, 2016, are as follows:

- 10 • Net Long-Term Debt is projected to decrease by \$1.125 million in
11 connection with long-term debt maturities.
- 12 • Equity is projected to decrease by \$80.4 million due to the payout of
13 common dividends partially offset by an increase in the accumulated other
14 comprehensive income balance and earnings.

15 **Q: How does the capital structure affect the Cost of Equity?**

16 A: In practice, the capital structure should enable the Company to maintain or enhance its
17 financial integrity, thereby enabling access to capital at competitive rates under a variety
18 of economic and financial market conditions. The capital structure relates to financial
19 risk, which is a function of the percentage of debt relative to equity (that relationship is
20 often referred to as "financial leverage"). As the percentage of debt in the capital
21 structure increases, so do the fixed obligations for the repayment of that debt and,
22 therefore, the risk that cash flows may not be sufficient to meet those obligations on a
23 timely basis. Consequently, as the degree of financial leverage increases, the risk of

1 financial distress (*i.e.*, financial risk) also increases. Since the capital structure can affect
2 the subject company's overall level of risk, it is an important consideration in establishing
3 a just and reasonable rate of return. Therefore, it is important to consider the capital
4 structure in light of industry practice and investor requirements.

5 **Q: Please describe your analysis of the Company's capital structure relative to industry**
6 **practice.**

7 A: As a measure of industry practice, I calculated the average capital structure for each of
8 the utility operating companies held by the proxy companies over the last eight fiscal
9 quarters. As shown in Schedule RBH-12, the proxy group average capital structure over
10 that period includes 52.70 percent common equity and 47.30 percent long-term debt; the
11 average common equity ratios (on a company-specific basis) range from 46.50 percent to
12 66.01 percent. Based on that review, it is apparent that GMO's capital structure is
13 consistent with those in place at the proxy companies.

14 **Q: What is the basis for using average capital components rather than a point-in-time**
15 **measurement?**

16 A: Measuring the capital components at a particular point in time can skew the capital
17 structure by the specific circumstances of a particular period. Therefore, it is more
18 appropriate to normalize the relative relationship between the capital components over a
19 period of time.

20 **Q: What is your conclusion regarding an appropriate capital structure for GMO?**

21 A: Considering the range of proxy company average equity ratios from 46.50 percent to
22 66.01 percent, I believe that GMO's 54.83 percent common equity ratio is appropriate.

X. CONCLUSIONS AND RECOMMENDATION

1 **Q: What is your conclusion regarding the Company's Cost of Equity?**

2 A: As discussed in Section V (and as shown in Schedules RBH-1 through RBH-6), I have
3 performed several analyses to estimate GMO's Cost of Equity. In light of those results,
4 and taking into consideration other relevant and observable market data, as well as the
5 Commission's findings in the KCP&L Order, I believe that an ROE in the range of 9.75
6 percent to 10.50 percent represents the range of returns required by equity investors under
7 current and expected market conditions. As discussed earlier in my testimony, my
8 recommendation reflects analytical results based on a proxy group of electric utilities,
9 and takes into consideration the Company's risk profile, including the regulatory
10 environment in which GMO operates, its generation portfolio, and its planned capital
11 expenditures.

12 I also conclude that the Company's 5.089 percent Cost of Debt reflects prevailing
13 market conditions at the times of issuance, and therefore is reasonable and appropriate.
14 Lastly, I conclude that the Company's capital structure, which consists of 54.83 percent
15 common equity, 45.17 percent long-term debt is reasonable relative to its peers. The
16 Company's proposed capital structure is consistent with industry practice, and supports
17 GMO's financial integrity.

18 **Q: Does this conclude your Direct Testimony?**

19 A: Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of KCP&L Greater Missouri Operations)
Company's Request for Authority to Implement) Case No. ER-2016-0156
A General Rate Increase for Electric Service)

AFFIDAVIT OF ROBERT B. HEVERT

COMMONWEALTH OF MASSACHUSETTS)
) ss
COUNTY OF WORCESTER)

Robert B. Hevert, being first duly sworn on his oath, states:

1. My name is Robert B. Hevert and my business address is Sussex Economic Advisors, LLC, 1900 West Park Drive, Suite 250, Westborough, MA 01581. I have been retained to serve as an expert witness to provide 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 sixty-six (66) 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 belief.

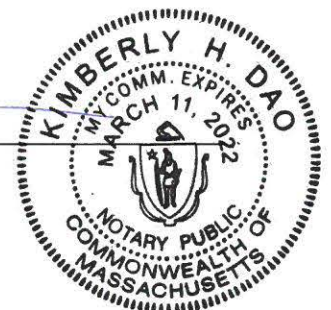
Robert B. Hevert

Robert B. Hevert

Subscribed and sworn before me this 23rd day of February, 2016.

Kimberly H. Dao

Notary Public



My commission expires: March 11, 2022

Robert B. Hevert, CFA
Managing Partner
Sussex Economic Advisors, LLC

Mr. Hevert is a financial and economic consultant with broad experience in the energy and utility industries. He has an extensive background in the areas of corporate finance, mergers and acquisitions, project finance, asset and business unit valuation, rate and regulatory matters, energy market assessment, and corporate strategic planning. Mr. Hevert has provided expert testimony on a wide range of financial, strategic and economic matters on over 100 occasions at both the state and federal levels.

REPRESENTATIVE PROJECT EXPERIENCE

Litigation Support and Expert Testimony

Provided expert testimony and support of litigation in various regulatory proceedings on a variety of energy and economic issues including: cost of capital for ratemaking purposes; the proposed transfer of power purchase agreements; procurement of residual service electric supply; the legal separation of generation assets; merger-related synergies; assessment of economic damages; and specific financing transactions. Services provided include collaborating with counsel, business and technical staff to develop litigation strategies, preparing and reviewing discovery and briefing materials, preparing presentation materials and participating in technical sessions with regulators and intervenors.

Financial and Economic Advisory Services

Retained by numerous leading energy companies and financial institutions throughout North America to provide services relating to the strategic evaluation, acquisition, sale or development of a variety of regulated and non-regulated enterprises. Specific services have included: developing strategic and financial analyses and managing multi-faceted due diligence reviews of proposed corporate M&A counter-parties; developing, screening and recommending potential M&A transactions and facilitating discussions between senior utility executives regarding transaction strategy and structure; performing valuation analyses and financial due diligence reviews of electric generation projects, retail marketing companies, and wholesale trading entities in support of significant M&A transactions.

Specific divestiture-related services have included advising both buy and sell-side clients in transactions for physical and contractual electric generation resources. Sell-side services have included: development and implementation of key aspects of asset divestiture programs such as marketing, offering memorandum development, development of transaction terms and conditions, bid process management, bid evaluation, negotiations, and regulatory approval process. Buy-side services have included comprehensive asset screening, selection, valuation and due diligence reviews. Both buy and sell-side services have included the use of sophisticated asset valuation techniques, and the development and delivery of fairness opinions.

Specific corporate finance experience while a Vice President with Bay State Gas included: negotiation, placement and closing of both private and public long-term debt, preferred and common equity; structured and project financing; corporate cash management; financial analysis, planning and forecasting; and various aspects of investor relations.

Regulatory Analysis and Ratemaking

On behalf of electric, natural gas and combination utilities throughout North America, provided services relating to energy industry restructuring including merchant function exit, residual energy supply obligations, and stranded cost assessment and recovery. Specific services provided include: performing strategic review and development of merchant function exit strategies including analysis of provider of last

resort obligations in both electric and gas markets; and developing value optimizing strategies for physical generation assets.

Energy Market Assessment

Retained by numerous leading energy companies and financial institutions nationwide to manage or provide assessments of regional energy markets throughout the U.S. and Canada. Such assessments have included development of electric and natural gas price forecasts, analysis of generation project entry and exit scenarios, assessment of natural gas and electric transmission infrastructure, market structure and regulatory situation analysis, and assessment of competitive position. Market assessment engagements typically have been used as integral elements of business unit or asset-specific strategic plans or valuation analyses.

Resource Procurement, Contracting and Analysis

Assisted various clients in evaluating alternatives for acquiring fuel and power supplies, including the development and negotiation of energy contracts and tolling agreements. Assignments also have included developing generation resource optimization strategies. Provided advice and analyses of transition service power supply contracts in the context of both physical and contractual generation resource divestiture transactions.

Business Strategy and Operations

Retained by numerous leading North American energy companies and financial institutions nationwide to provide services relating to the development of strategic plans and planning processes for both regulated and non-regulated enterprises. Specific services provided include: developing and implementing electric generation strategies and business process redesign initiatives; developing market entry strategies for retail and wholesale businesses including assessment of asset-based marketing and trading strategies; and facilitating executive level strategic planning retreats. As Vice President, of Bay State was responsible for the company's strategic planning and business development processes, played an integral role in developing the company's non-regulated marketing affiliate, EnergyUSA, and managed the company's non-regulated investments, partnerships and strategic alliances.

PROFESSIONAL HISTORY

Sussex Economic Advisors, LLC (2012 – Present)

Managing Partner

Concentric Energy Advisors, Inc. (2002 – 2012)

President

Navigant Consulting, Inc. (1997 – 2001)

Managing Director (2000 – 2001)

Director (1998 – 2000)

Vice President, REED Consulting Group (1997 – 1998)

Bay State Gas Company (now Columbia Gas Company of Massachusetts) (1987 – 1997)

Vice President and Assistant Treasurer

Boston College (1986 – 1987)

Financial Analyst

General Telephone Company of the South (1984 – 1986)

Revenue Requirements Analyst

EDUCATION

M.B.A., University of Massachusetts at Amherst, 1984
B.S., University of Delaware, 1982

DESIGNATIONS AND PROFESSIONAL AFFILIATIONS

Chartered Financial Analyst, 1991
Association for Investment Management and Research
Boston Security Analyst Society

PUBLICATIONS/PRESENTATIONS

Has made numerous presentations throughout the United States and Canada on several topics, including:

- Generation Asset Valuation and the Use of Real Options
 - Retail and Wholesale Market Entry Strategies
 - The Use Strategic Alliances in Restructured Energy Markets
 - Gas Supply and Pipeline Infrastructure in the Northeast Energy Markets
 - Nuclear Asset Valuation and the Divestiture Process
-

AVAILABLE UPON REQUEST

Extensive client and project listings, and specific references.

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Regulatory Commission of Alaska				
ENSTAR Natural Gas Company	08/14	ENSTAR Natural Gas Company	Matter No. TA 262-4	Return on Equity
Alberta Utilities Commission				
Altalink, L.P., and EPCOR Distribution & Transmission, Inc.	02/16	Altalink, L.P., and EPCOR Distribution & Transmission, Inc.	2016 General Cost of Capital, Proceeding ID. 20622	Rate of Return
Arizona Corporation Commission				
Southwest Gas Corporation	11/10	Southwest Gas Corporation	Docket No. G-01551A-10-0458	Return on Equity
Arkansas Public Service Commission				
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	11/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 15-098-U	Return on Equity
SourceGas Arkansas, Inc.	03/15	SourceGas Arkansas, Inc.	Docket No. 15-011-U	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	01/07	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 06-161-U	Return on Equity
California Public Utilities Commission				
Southwest Gas Corporation	12/12	Southwest Gas Corporation	Docket No. A-12-12-024	Return on Equity
Colorado Public Utilities Commission				
Xcel Energy, Inc.	03/15	Public Service Company of Colorado	Docket No. 15AL-0135G	Return on Equity (gas)
Xcel Energy, Inc.	06/14	Public Service Company of Colorado	Docket No. 14AL-0660E	Return on Equity (electric)
Xcel Energy, Inc.	12/12	Public Service Company of Colorado	Docket No. 12AL-1268G	Return on Equity (gas)
Xcel Energy, Inc.	11/11	Public Service Company of Colorado	Docket No. 11AL-947E	Return on Equity (electric)

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Xcel Energy, Inc.	12/10	Public Service Company of Colorado	Docket No. 10AL-963G	Return on Equity (electric)
Atmos Energy Corporation	07/09	Atmos Energy Colorado-Kansas Division	Docket No. 09AL-507G	Return on Equity (gas)
Xcel Energy, Inc.	12/06	Public Service Company of Colorado	Docket No. 06S-656G	Return on Equity (gas)
Xcel Energy, Inc.	04/06	Public Service Company of Colorado	Docket No. 06S-234EG	Return on Equity (electric)
Xcel Energy, Inc.	08/05	Public Service Company of Colorado	Docket No. 05S-369ST	Return on Equity (steam)
Xcel Energy, Inc.	05/05	Public Service Company of Colorado	Docket No. 05S-246G	Return on Equity (gas)
Connecticut Public Utilities Regulatory Authority				
Connecticut Light and Power Company	06/14	Connecticut Light and Power Company	Docket No. 14-05-06	Return on Equity
Southern Connecticut Gas Company	09/08	Southern Connecticut Gas Company	Docket No. 08-08-17	Return on Equity
Southern Connecticut Gas Company	12/07	Southern Connecticut Gas Company	Docket No. 05-03-17PH02	Return on Equity
Connecticut Natural Gas Corporation	12/07	Connecticut Natural Gas Corporation	Docket No. 06-03-04PH02	Return on Equity
Delaware Public Service Commission				
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 13-115	Return on Equity
Delmarva Power & Light Company	12/12	Delmarva Power & Light Company	Case No. 12-546	Return on Equity
Delmarva Power & Light Company	03/12	Delmarva Power & Light Company	Case No. 11-528	Return on Equity
District of Columbia Public Service Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Potomac Electric Power Company	03/13	Potomac Electric Power Company	Formal Case No. FC1103-2013-E	Return on Equity
Potomac Electric Power Company	07/11	Potomac Electric Power Company	Formal Case No. FC1087	Return on Equity
Federal Energy Regulatory Commission				
Sabine Pipeline, LLC	09/15	Sabine Pipeline, LLC	Docket No. RP15-1322-000	Return on Equity
Nextera Energy Transmission West, LLC	07/15	Nextera Energy Transmission West, LLC	Docket No. ER15-2239-000	Return on Equity
Maritimes & Northeast Pipeline, LLC	05/15	Maritimes & Northeast Pipeline, LLC	Docket No. RP15-1026-000	Return on Equity
Public Service Company of New Mexico	12/12	Public Service Company of New Mexico	Docket No. ER13-685-000	Return on Equity
Public Service Company of New Mexico	10/10	Public Service Company of New Mexico	Docket No. ER11-1915-000	Return on Equity
Portland Natural Gas Transmission System	05/10	Portland Natural Gas Transmission System	Docket No. RP10-729-000	Return on Equity
Florida Gas Transmission Company, LLC	10/09	Florida Gas Transmission Company, LLC	Docket No. RP10-21-000	Return on Equity
Maritimes and Northeast Pipeline, LLC	07/09	Maritimes and Northeast Pipeline, LLC	Docket No. RP09-809-000	Return on Equity
Spectra Energy	02/08	Saltville Gas Storage	Docket No. RP08-257-000	Return on Equity
Panhandle Energy Pipelines	08/07	Panhandle Energy Pipelines	Docket No. PL07-2-000	Response to draft policy statement regarding inclusion of MLPs in proxy groups for determination of gas pipeline ROEs
Southwest Gas Storage Company	08/07	Southwest Gas Storage Company	Docket No. RP07-541-000	Return on Equity
Southwest Gas Storage Company	06/07	Southwest Gas Storage Company	Docket No. RP07-34-000	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Sea Robin Pipeline LLC	06/07	Sea Robin Pipeline LLC	Docket No. RP07-513-000	Return on Equity
Transwestern Pipeline Company	09/06	Transwestern Pipeline Company	Docket No. RP06-614-000	Return on Equity
GPU International and Aquila	11/00	GPU International	Docket No. EC01-24-000	Market Power Study
Florida Public Service Commission				
Tampa Electric Company	04/13	Tampa Electric Company	Docket No. 130040-EI	Return on Equity
Georgia Public Service Commission				
Atlanta Gas Light Company	05/10	Atlanta Gas Light Company	Docket No. 31647-U	Return on Equity
Hawaii Public Utilities Commission				
Maui Electric Company, Limited	12/14	Maui Electric Company, Limited	Docket No. 2014-0318	Return on Equity
Hawaiian Electric Company	06/14	Hawaiian Electric Light Company	Docket No. 2013-0373	Return on Equity
Hawaii Electric Light Company	08/12	Hawaiian Electric Light Company	Docket No. 2012-0099	Return on Equity
Illinois Commerce Commission				
Ameren Illinois Company d/b/a Ameren Illinois	01/15	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 15-0142	Return on Equity
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	03/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Docket No. 14-0371	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	01/13	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 13-0192	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0279	Return on Equity (electric)
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0282	Return on Equity (gas)
Indiana Utility Regulatory Commission				
Duke Energy Indiana, Inc.	12/15	Duke Energy Indiana, Inc.	Cause No. 44720	Return on Equity
Duke Energy Indiana, Inc.	12/14	Duke Energy Indiana, Inc.	Cause No. 44526	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Northern Indiana Public Service Company	05/09	Northern Indiana Public Service Company	Cause No. 43894	Assessment of Valuation Approaches
Kansas Corporation Commission				
Kansas City Power & Light Company	01/15	Kansas City Power & Light Company	Docket No. 15-KCPE-116-RTS	Return on Equity
Maine Public Utilities Commission				
Central Maine Power Company	06/11	Central Maine Power Company	Docket No. 2010-327	Response to Bench Analysis provided by Commission Staff relating to the Company's credit and collections processes
Maryland Public Service Commission				
Potomac Electric Power Company	12/13	Potomac Electric Power Company	Case No. 9336	Return on Equity
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 9317	Return on Equity
Potomac Electric Power Company	11/12	Potomac Electric Power Company	Case No. 9311	Return on Equity
Potomac Electric Power Company	12/11	Potomac Electric Power Company	Case No. 9286	Return on Equity
Delmarva Power & Light Company	12/11	Delmarva Power & Light Company	Case No. 9285	Return on Equity
Delmarva Power & Light Company	12/10	Delmarva Power & Light Company	Case No. 9249	Return on Equity
Massachusetts Department of Public Utilities				
National Grid	11/15	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 15-155	Return on Equity
Fitchburg Gas and Electric Light Company d/b/a Unitil	06/15	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 15-80	Return on Equity
NSTAR Gas Company	12/14	NSTAR Gas Company	DPU 14-150	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Fitchburg Gas and Electric Light Company d/b/a Unitil	07/13	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 13-90	Return on Equity
Bay State Gas Company d/b/a Columbia Gas of Massachusetts	04/12	Bay State Gas Company d/b/a Columbia Gas of Massachusetts	DPU 12-25	Capital Cost Recovery
National Grid	08/09	Massachusetts Electric Company d/b/a National Grid	DPU 09-39	Revenue Decoupling and Return on Equity
National Grid	08/09	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 09-38	Return on Equity – Solar Generation
Bay State Gas Company	04/09	Bay State Gas Company	DPU 09-30	Return on Equity
NSTAR Electric	09/04	NSTAR Electric	DTE 04-85	Divestiture of Power Purchase Agreement
NSTAR Electric	08/04	NSTAR Electric	DTE 04-78	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-68	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-61	Divestiture of Power Purchase Agreement
NSTAR Electric	06/04	NSTAR Electric	DTE 04-60	Divestiture of Power Purchase Agreement
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Bay State Gas Company	01/93	Bay State Gas Company	DPU 93-14	Divestiture of Shelf Registration
Bay State Gas Company	01/91	Bay State Gas Company	DPU 91-25	Divestiture of Shelf Registration
Minnesota Public Utilities Commission				
Minnesota Energy Resources Corporation	09/15	Minnesota Energy Resources Corporation	Docket No. G-011/GR-15-736	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-15-424	Return on Equity
Xcel Energy, Inc.	11/13	Northern States Power Company	Docket No. E002/GR-13-868	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/13	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-13-316	Return on Equity
Xcel Energy, Inc.	11/12	Northern States Power Company	Docket No. E002/GR-12-961	Return on Equity
Otter Tail Power Corporation	04/10	Otter Tail Power Company	Docket No. E-017/GR-10-239	Return on Equity
Minnesota Power a division of ALLETE, Inc.	11/09	Minnesota Power	Docket No. E-015/GR-09-1151	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	11/08	CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-08-1075	Return on Equity
Otter Tail Power Corporation	10/07	Otter Tail Power Company	Docket No. E-017/GR-07-1178	Return on Equity
Xcel Energy, Inc.	11/05	Northern States Power Company -Minnesota	Docket No. E-002/GR-05-1428	Return on Equity (electric)
Xcel Energy, Inc.	09/04	Northern States Power Company - Minnesota	Docket No. G-002/GR-04-1511	Return on Equity (gas)
Mississippi Public Service Commission				
CenterPoint Energy Resources, Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Mississippi Gas	07/09	CenterPoint Energy Mississippi Gas	Docket No. 09-UN-334	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Missouri Public Service Commission				
Kansas City Power & Light Company	10/14	Kansas City Power & Light Company	Case No. ER-2014-0370	Return on Equity (electric)
Union Electric Company d/b/a Ameren Missouri	07/14	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2014-0258	Return on Equity (electric)
Union Electric Company d/b/a Ameren Missouri	06/14	Union Electric Company d/b/a Ameren Missouri	Case No. EC-2014-0223	Return on Equity (electric)
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	02/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Case No. GR-2014-0152	Return on Equity
Laclede Gas Company	12/12	Laclede Gas Company	Case No. GR-2013-0171	Return on Equity
Union Electric Company d/b/a Ameren Missouri	02/12	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2012-0166	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	09/10	Union Electric Company d/b/a AmerenUE	Case No. ER-2011-0028	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	06/10	Union Electric Company d/b/a AmerenUE	Case No. GR-2010-0363	Return on Equity (gas)
Montana Public Service Commission				
Northwestern Corporation	09/12	Northwestern Corporation d/b/a Northwestern Energy	Docket No. D2012.9.94	Return on Equity (gas)
Nevada Public Utilities Commission				
Southwest Gas Corporation	04/12	Southwest Gas Corporation	Docket No. 12-04005	Return on Equity (gas)
Nevada Power Company	06/11	Nevada Power Company	Docket No. 11-06006	Return on Equity (electric)
New Hampshire Public Utilities Commission				
Liberty Utilities d/b/a EnergyNorth Natural Gas	08/14	Liberty Utilities d/b/a EnergyNorth Natural Gas	Docket No. DG 14-180	Return on Equity
Liberty Utilities d/b/a Granite State Electric Company	03/13	Liberty Utilities d/b/a Granite State Electric Company	Docket No. DE 13-063	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
EnergyNorth Natural Gas d/b/a National Grid NH	02/10	EnergyNorth Natural Gas d/b/a National Grid NH	Docket No. DG 10-017	Return on Equity
Unitil Energy Systems, Inc. ("Unitil"), EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	08/08	Unitil Energy Systems, Inc. ("Unitil"), EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	Docket No. DG 07-072	Carrying Charge Rate on Cash Working Capital
New Jersey Board of Public Utilities				
Pepco Holdings, Inc.	04/14	Atlantic City Electric Company	Docket No. ER14030245	Return on Equity
Orange and Rockland Utilities	11/13	Rockland Electric Company	Docket No. ER13111135	Return on Equity
Atlantic City Electric Company	12/12	Atlantic City Electric Company	Docket No. ER12121071	Return on Equity
Atlantic City Electric Company	08/11	Atlantic City Electric Company	Docket No. ER11080469	Return on Equity
Pepco Holdings, Inc.	09/06	Atlantic City Electric Company	Docket No. EM06090638	Divestiture and Valuation of Electric Generating Assets
Pepco Holdings, Inc.	12/05	Atlantic City Electric Company	Docket No. EM05121058	Market Value of Electric Generation Assets; Auction
Conectiv	06/03	Atlantic City Electric Company	Docket No. EO03020091	Market Value of Electric Generation Assets; Auction Process
New Mexico Public Regulation Commission				
Public Service Company of New Mexico	08/15	Public Service Company of New Mexico	Case No. 15-00261-UT	Return on Equity (electric)
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 14-00332-UT	Return on Equity (electric)
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 13-00390-UT	Cost of Capital and Financial Integrity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Southwestern Public Service Company	02/11	Southwestern Public Service Company	Case No. 10-00395-UT	Return on Equity (electric)
Public Service Company of New Mexico	06/10	Public Service Company of New Mexico	Case No. 10-00086-UT	Return on Equity (electric)
Public Service Company of New Mexico	09/08	Public Service Company of New Mexico	Case No. 08-00273-UT	Return on Equity (electric)
Xcel Energy, Inc.	07/07	Southwestern Public Service Company	Case No. 07-00319-UT	Return on Equity (electric)
New York State Public Service Commission				
Consolidated Edison Company of New York, Inc.	01/15	Consolidated Edison Company of New York, Inc.	Case No. 15-E-0050	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	11/14	Orange and Rockland Utilities, Inc.	Case Nos. 14-E-0493 and 14-G-0494	Return on Equity (electric and gas)
Consolidated Edison Company of New York, Inc.	01/13	Consolidated Edison Company of New York, Inc.	Case No. 13-E-0030	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Electric Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Electric Service	Case No. 12-E-0201	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Gas Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Gas Service	Case No. 12-G-0202	Return on Equity (gas)
Orange and Rockland Utilities, Inc.	07/11	Orange and Rockland Utilities, Inc.	Case No. 11-E-0408	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	07/10	Orange and Rockland Utilities, Inc.	Case No. 10-E-0362	Return on Equity (electric)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-G-0795	Return on Equity (gas)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-S-0794	Return on Equity (steam)

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Niagara Mohawk Power Corporation	07/01	Niagara Mohawk Power Corporation	Case No. 01-E-1046	Power Purchase and Sale Agreement; Standard Offer Service Agreement
North Carolina Utilities Commission				
Duke Energy Carolinas, LLC	02/13	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1026	Return on Equity
Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	10/12	Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	Docket No. E-2, Sub 1023	Return on Equity
Virginia Electric and Power Company d/b/a Dominion North Carolina Power	03/12	Virginia Electric and Power Company d/b/a Dominion North Carolina Power	Docket No. E-22, Sub 479	Return on Equity (electric)
Duke Energy Carolinas, LLC	07/11	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 989	Return on Equity (electric)
North Dakota Public Service Commission				
Otter Tail Power Company	11/08	Otter Tail Power Company	Docket No. 08-862	Return on Equity (electric)
Oklahoma Corporation Commission				
Oklahoma Gas & Electric Company	12/15	Oklahoma Gas & Electric Company	Cause No. PUD201500273	Return on Equity
Public Service Company of Oklahoma	07/15	Public Service Company of Oklahoma	Cause No. PUD201500208	Return on Equity
Oklahoma Gas & Electric Company	07/11	Oklahoma Gas & Electric Company	Cause No. PUD201100087	Return on Equity
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/09	CenterPoint Energy Oklahoma Gas	Cause No. PUD200900055	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Pennsylvania Public Utility Commission				
Pike County Light & Power Company	01/14	Pike County Light & Power Company	Docket No. R-2013-2397237	Return on Equity (electric & gas)
Veolia Energy Philadelphia, Inc.	12/13	Veolia Energy Philadelphia, Inc.	Docket No. R-2013-2386293	Return on Equity (steam)
Rhode Island Public Utilities Commission				
The Narragansett Electric Company d/b/a National Grid	04/12	The Narragansett Electric Company d/b/a National Grid	Docket No. 4323	Return on Equity (electric & gas)
National Grid RI – Gas	08/08	National Grid RI – Gas	Docket No. 3943	Revenue Decoupling and Return on Equity
South Carolina Public Service Commission				
Duke Energy Carolinas, LLC	03/13	Duke Energy Carolinas, LLC	Docket No. 2013-59-E	Return on Equity
South Carolina Electric & Gas	06/12	South Carolina Electric & Gas	Docket No. 2012-218-E	Return on Equity
Duke Energy Carolinas, LLC	08/11	Duke Energy Carolinas, LLC	Docket No. 2011-271-E	Return on Equity
South Carolina Electric & Gas	03/10	South Carolina Electric & Gas	Docket No. 2009-489-E	Return on Equity
South Dakota Public Utilities Commission				
Otter Tail Power Company	08/10	Otter Tail Power Company	Docket No. EL10-011	Return on Equity (electric)
Northern States Power Company	06/09	South Dakota Division of Northern States Power	Docket No. EL09-009	Return on Equity (electric)
Otter Tail Power Company	10/08	Otter Tail Power Company	Docket No. EL08-030	Return on Equity (electric)
Texas Public Utility Commission				
Wind Energy Transmission Texas, LLC	05/15	Wind Energy Transmission Texas, LLC	Docket No. 44746	Return on Equity
Cross Texas Transmission	12/14	Cross Texas Transmission	Docket No. 43950	Return on Equity
Southwestern Public Service Company	12/14	Southwestern Public Service Company	Docket No. 43695	Return on Equity (electric)
Sharyland Utilities, L.P.	05/13	Sharyland Utilities, L.P.	Docket No. 41474	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Wind Energy Texas Transmission, LLC	08/12	Wind Energy Texas Transmission, LLC	Docket No. 40606	Return on Equity
Southwestern Electric Power Company	07/12	Southwestern Electric Power Company	Docket No. 40443	Return on Equity
Oncor Electric Delivery Company, LLC	01/11	Oncor Electric Delivery Company, LLC	Docket No. 38929	Return on Equity
Texas-New Mexico Power Company	08/10	Texas-New Mexico Power Company	Docket No. 38480	Return on Equity (electric)
CenterPoint Energy Houston Electric LLC	06/10	CenterPoint Energy Houston Electric LLC	Docket No. 38339	Return on Equity
Xcel Energy, Inc.	05/10	Southwestern Public Service Company	Docket No. 38147	Return on Equity (electric)
Texas-New Mexico Power Company	08/08	Texas-New Mexico Power Company	Docket No. 36025	Return on Equity (electric)
Xcel Energy, Inc.	05/06	Southwestern Public Service Company	Docket No. 32766	Return on Equity (electric)
Texas Railroad Commission				
Centerpoint Energy Resources Corp. d/b/a Centerpoint Energy Entex and Centerpoint Energy Texas Gas	03/15	Centerpoint Energy Resources Corp. d/b/a Centerpoint Energy Entex and Centerpoint Energy Texas Gas	GUD 10432	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/12	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10182	Return on Equity
Atmos Energy Corporation – West Texas Division	06/12	Atmos Energy Corporation – West Texas Division	GUD 10175	Return on Equity
Atmos Energy Corporation – Mid-Texas Division	06/12	Atmos Energy Corporation – Mid-Texas Division	GUD 10171	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	12/10	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10038	Return on Equity
Atmos Pipeline – Texas	09/10	Atmos Pipeline - Texas	GUD 10000	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/09	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 9902	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	03/08	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	GUD 9791	Return on Equity
Utah Public Service Commission				
Questar Gas Company	12/07	Questar Gas Company	Docket No. 07-057-13	Return on Equity
Vermont Public Service Board				
Central Vermont Public Service Corporation; Green Mountain Power	02/12	Central Vermont Public Service Corporation; Green Mountain Power	Docket No. 7770	Merger Policy
Central Vermont Public Service Corporation	12/10	Central Vermont Public Service Corporation	Docket No. 7627	Return on Equity (electric)
Green Mountain Power	04/06	Green Mountain Power	Docket Nos. 7175 and 7176	Return on Equity (electric)
Vermont Gas Systems, Inc.	12/05	Vermont Gas Systems	Docket Nos. 7109 and 7160	Return on Equity (gas)

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Virginia State Corporation Commission				
Virginia Electric and Power Company	12/15	Virginia Electric and Power Company	Case Nos. PUE-2015-0058; PUE-2015-0059; PUE-2015-0060; PUE-2015-0061; PUE-2015-0075; PUE-2015-0089; PUE-2015-0102; PUE-2015-0104	Return on Equity
Virginia Electric and Power Company	03/15	Virginia Electric and Power Company	Case No. PUE-2015-00027	Return on Equity
Virginia Electric and Power Company	03/13	Virginia Electric and Power Company	Case No. PUE-2013-00020	Return on Equity
Virginia Natural Gas, Inc.	02/11	Virginia Natural Gas, Inc.	Case No. PUE-2010-00142	Capital Structure
Columbia Gas Of Virginia, Inc.	06/06	Columbia Gas Of Virginia, Inc.	Case No. PUE-2005-00098	Merger Synergies
Dominion Resources	10/01	Virginia Electric and Power Company	Case No. PUE000584	Corporate Structure and Electric Generation Strategy

Expert Report

United States District Court, Western District of Texas, Austin Division				
Southwestern Public Service Company	02/12	Southwestern Public Service Company	C.A. No. A-09-CA-917-SS	PURPA and FERC regulations



Proud Past. Confident Future.



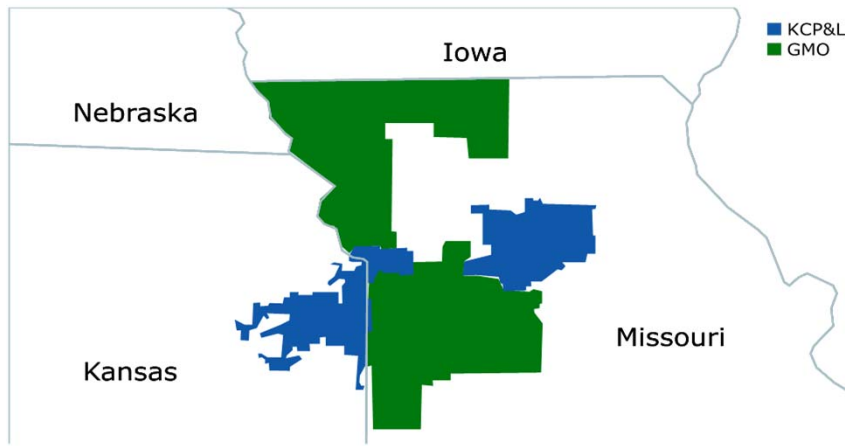
Forward-Looking Statement

Statements made in this presentation that are not based on historical facts are forward-looking, may involve risks and uncertainties, and are intended to be as of the date when made. Forward-looking statements include, but are not limited to, the outcome of regulatory proceedings, cost estimates of capital projects and other matters affecting future operations. In connection with the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, Great Plains Energy and KCP&L are providing a number of important factors that could cause actual results to differ materially from the provided forward-looking information. These important factors include: future economic conditions in regional, national and international markets and their effects on sales, prices and costs; prices and availability of electricity in regional and national wholesale markets; market perception of the energy industry, Great Plains Energy and KCP&L; changes in business strategy, operations or development plans; the outcome of contract negotiations for goods and services; effects of current or proposed state and federal legislative and regulatory actions or developments, including, but not limited to, deregulation, re-regulation and restructuring of the electric utility industry; decisions of regulators regarding rates the companies can charge for electricity; adverse changes in applicable laws, regulations, rules, principles or practices governing tax, accounting and environmental matters including, but not limited to, air and water quality; financial market conditions and performance including, but not limited to, changes in interest rates and credit spreads and in availability and cost of capital and the effects on nuclear decommissioning trust and pension plan assets and costs; impairments of long-lived assets or goodwill; credit ratings; inflation rates; effectiveness of risk management policies and procedures and the ability of counterparties to satisfy their contractual commitments; impact of terrorist acts, including but not limited to cyber terrorism; ability to carry out marketing and sales plans; weather conditions including, but not limited to, weather-related damage and their effects on sales, prices and costs; cost, availability, quality and deliverability of fuel; the inherent uncertainties in estimating the effects of weather, economic conditions and other factors on customer consumption and financial results; ability to achieve generation goals and the occurrence and duration of planned and unplanned generation outages; delays in the anticipated in-service dates and cost increases of generation, transmission, distribution or other projects; Great Plains Energy's ability to successfully manage transmission joint venture; the inherent risks associated with the ownership and operation of a nuclear facility including, but not limited to, environmental, health, safety, regulatory and financial risks; workforce risks, including, but not limited to, increased costs of retirement, health care and other benefits; and other risks and uncertainties.

This list of factors is not all-inclusive because it is not possible to predict all factors. Other risk factors are detailed from time to time in Great Plains Energy's and KCP&L's quarterly reports on Form 10-Q and annual report on Form 10-K filed with the Securities and Exchange Commission. Each forward-looking statement speaks only as of the date of the particular statement. Great Plains Energy and KCP&L undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

Solid Vertically Integrated Midwest Utilities

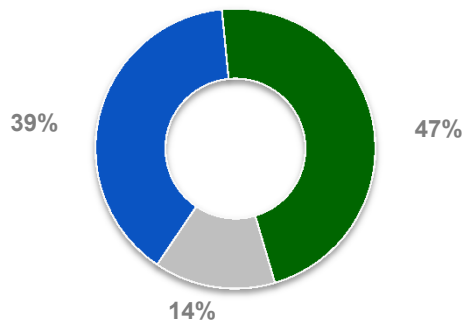
Service Territories: KCP&L and GMO



Business Highlights

- ❑ Solid Midwest fully regulated electric utility operating under the KCP&L brand
- ❑ Company attributes
 - Regulated operations in Kansas and Missouri
 - ~844,200 customers / ~3,000 employees
 - ~6,600 MW of primarily low-cost coal baseload generation
 - ~3,600 circuit miles of transmission lines; ~22,500 circuit miles of distribution lines
 - ~\$10.5 billion in assets at 2014YE
 - ~\$6.6 billion in rate base

2014 Retail MWh Sold by Customer Type

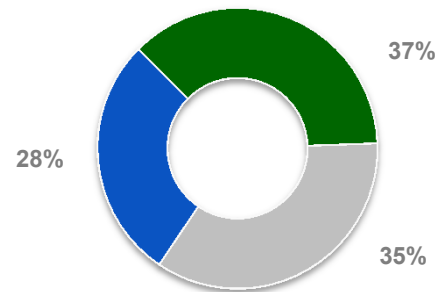


■ Residential ■ Commercial ■ Industrial

Total: ~ 23,115 MWhs¹

1. In thousands

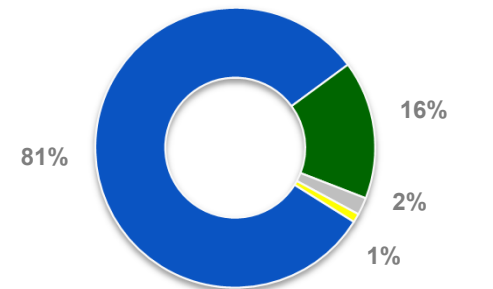
2014 Retail MWh Sales by Jurisdiction



■ Kansas ■ Missouri (KCP&L) ■ GMO

Total: ~ 23,115 MWhs¹

2014 MWh Generated by Fuel Type



■ Coal ■ Nuclear ■ Wind ■ Natural Gas and oil

Clear Focus

Continue to promote the economic strength of the region,
improve the customer experience and grow earnings

Best in Class Electric Utility Operations	Customer Experience	Targeted Investment Opportunities
<ul style="list-style-type: none"> ❑ Disciplined execution to deliver reliable and low cost power ❑ Focused on earning our allowed return by actively managing regulatory lag ❑ Proactive economic development 	<ul style="list-style-type: none"> ❑ Responsive to changing customer expectations <ul style="list-style-type: none"> ○ Technology investments that facilitate more informed customer interaction ○ Expand comprehensive suite of energy-related products and services 	<ul style="list-style-type: none"> ❑ Balanced strategic growth initiatives through national transmission opportunities and flexibility for opportunistic growth

Long-Term Growth Targets

Strategy – To provide Safe and Reliable Service to Our Customers at a Reasonable Cost and Deliver Competitive Total Shareholder Returns

Targeting Earnings Growth	Targeting Dividend Growth
<ul style="list-style-type: none"> ❑ Near term (2014 - 2016) <ul style="list-style-type: none"> – Compounding annual EPS growth of 4% - 6%¹ – Rate base increase from \$5.8 billion to \$6.6 billion ❑ Longer term (Post 2016) <ul style="list-style-type: none"> – Competitive customer rates – Infrastructure & system reliability – Physical & cyber security – Investments in sustainability – National transmission 	<ul style="list-style-type: none"> ❑ Near term (2014 - 2016) <ul style="list-style-type: none"> – Compounding annual dividend growth of 4% - 6% – 55% - 70% payout ratio ❑ Longer term (Post 2016) <ul style="list-style-type: none"> – 60% - 70% payout ratio – Increasing cash flow flexibility – Favorable tax position through 2023 due to NOLs and tax credits – Improving credit metrics

1. Based on our 2014 earnings per share guidance range of \$1.60 - \$1.75

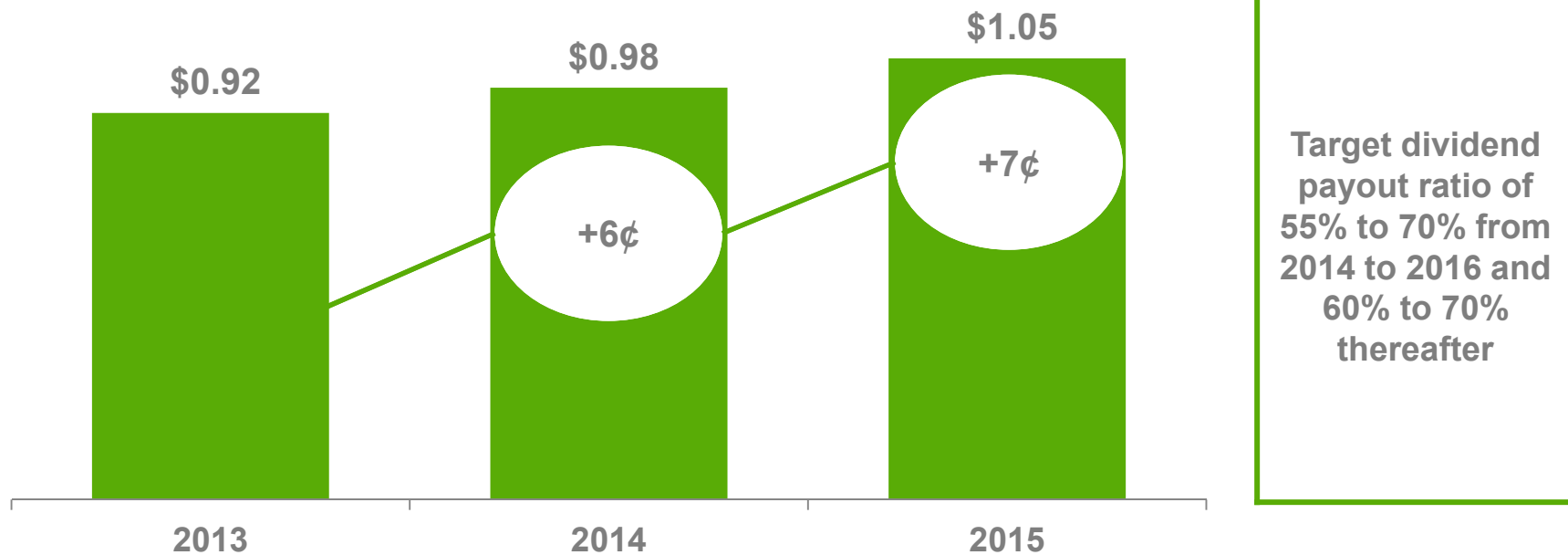
2016 and 2017 Considerations

	2016	2017
Earnings Growth	<ul style="list-style-type: none"> ❑ 4 – 6% growth target from 2014 – 2016 off of initial 2014 earnings per share guidance range of \$1.60 – \$1.75 	
Monitor Demand and Tightly Control O&M	<ul style="list-style-type: none"> ❑ Weather-normalized retail sales growth of flat to 0.5%, net of energy efficiency ❑ Focused O&M and capital management 	<ul style="list-style-type: none"> ❑ Weather-normalized retail sales growth of flat to 0.5%, net of energy efficiency ❑ Focused O&M and capital management
Operational and Regulatory Execution	<ul style="list-style-type: none"> ❑ Full year of new KCP&L retail rates on total Great Plains Energy rate base of \$6.6 billion <ul style="list-style-type: none"> – Fuel adjustment clause ❑ File GMO general rate case ❑ File abbreviated rate case for KCP&L KS 	<ul style="list-style-type: none"> ❑ Anticipate new retail rates in 2017 for KCP&L KS and GMO
Improve Cash Flow Position and Support Targeted Dividend Growth	<ul style="list-style-type: none"> ❑ No plans to issue equity ❑ No plans to issue long-term debt ❑ Utilization of NOLs and tax credits, minimizing cash income tax payments 	<ul style="list-style-type: none"> ❑ No plans to issue equity ❑ Refinance long-term debt ❑ Increasing cash flow flexibility ❑ Utilization of NOLs and tax credits, minimizing cash income tax payments

Increasing Cash Flexibility

Increasing cash flexibility expected to drive dividend growth

**~7% Dividend CAGR¹ exceeds
target of 4% – 6% from 2014 to 2016**

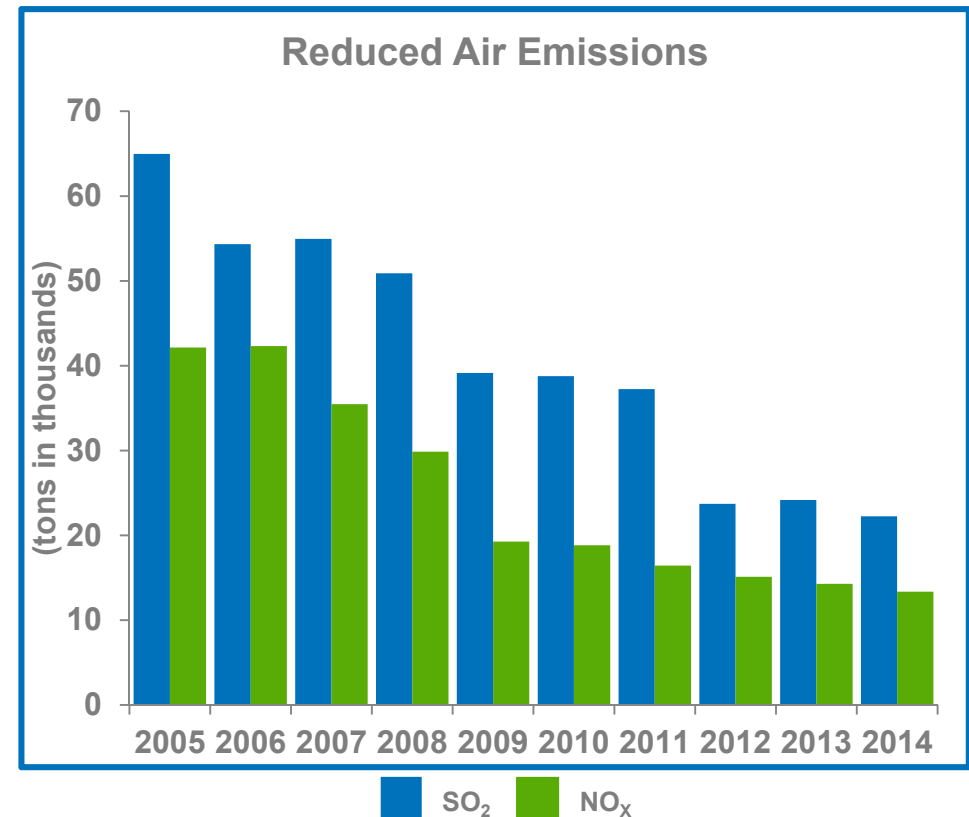


1. 2013 – 2015 based on fourth quarter declared dividend

Commitment to the Environment

Environmental sustainability investments providing customers with affordable, reliable energy while also improving regional air quality

- ❑ Sustainable energy strategy has prepared company for Clean Power Plan and other environmental rules
- ❑ 72% of coal fleet retrofitted with emission-reducing scrubbers
- ❑ Plan to cease burning coal in the coming years at three plants totaling more than 700 megawatts or nearly 20% of the Company's coal fleet

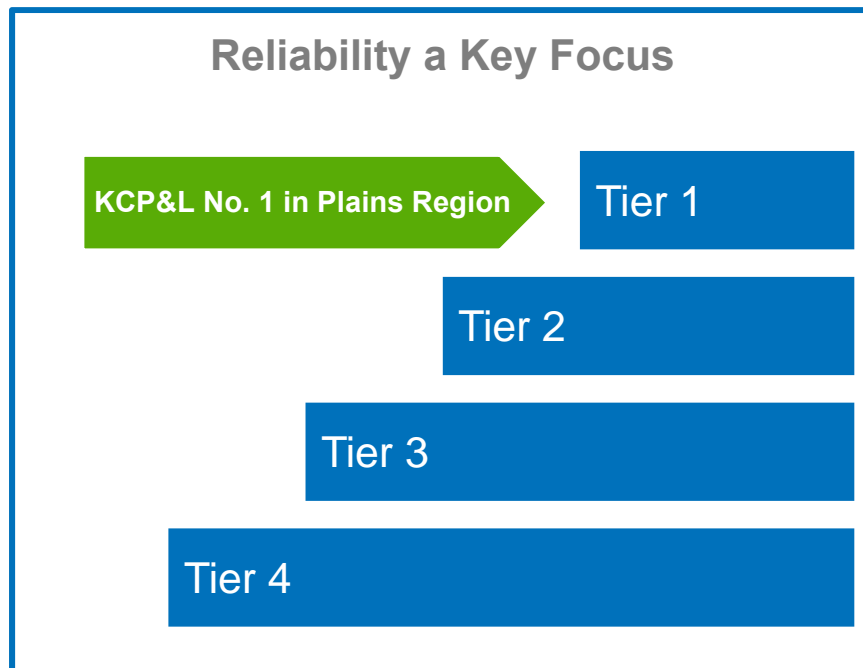


Since 2005, reduced SO₂ and NO_x emissions by approximately 66% and 68%, respectively

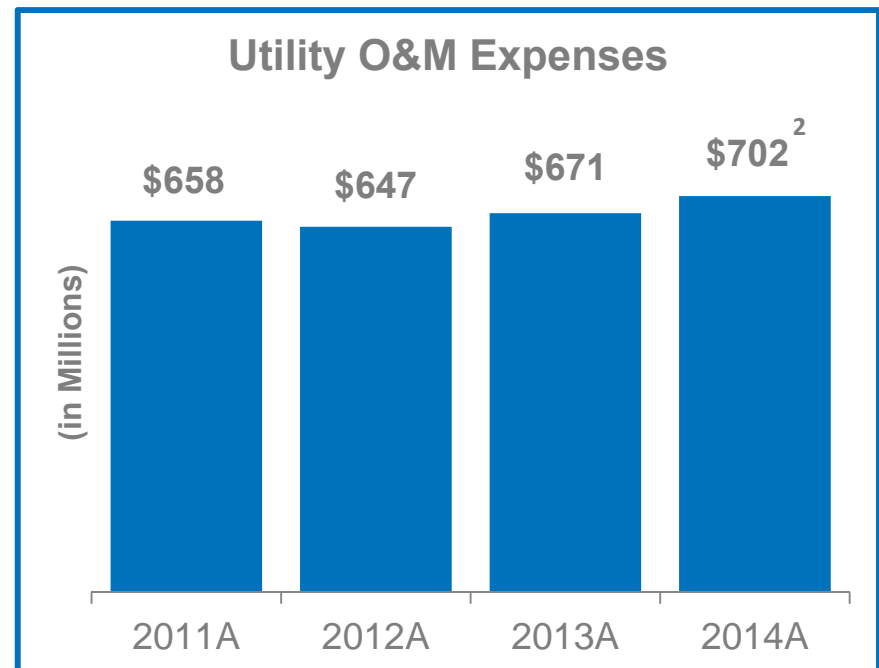
Operational Excellence

Focused on top tier customer satisfaction and operational excellence

In 2014, awarded the most reliable utility for the Plains Region for eight consecutive years



Successfully managed O&M¹ growth below inflation rate from 2011 – 2014



Through disciplined cost management, expect O&M¹ in 2015 to be flat compared to 2014

1. Exclusive of regulatory amortizations and items with direct revenue offsets

2. Approximately \$30 million of the \$55 million increase from 2012 to 2014 is due to regulatory amortizations, and items with direct revenue offsets

Local Economy

Improving residential real estate and jobs market leading to continued customer growth

Economic Development Activity

- ❑ Kansas City area now the largest auto manufacturing center in the United States, outside of Detroit
- ❑ Cerner Corporation's \$4.5 billion business expansion underway and is expected to create up to 16,000 new jobs between 2017 and 2025, making it the largest economic development project in Missouri history

Housing Market

- ❑ September 2015 year to date single family housing permits highest since 2007
- ❑ September 2015 year to date sales of new and existing homes are up over 12% compared to 2014 with an average sales price increase of 5%

Employment

- ❑ Kansas City area has experienced 51 consecutive months of job growth through September 2015 and employment levels are above the pre-recession peak
- ❑ Kansas City area unemployment rate of 4.4% in September 2015 compared with the national average of 4.9%¹

1. On a non-seasonally adjusted basis

Projected Utility Capital Expenditures

Projected Utility Capital Expenditures (In Millions) ^{1,2}	2015E	2016E	2017E	2018E	2019E
Generating facilities	\$245.2	\$222.5	\$204.8	\$205.1	\$203.2
Distribution and transmission facilities	260.1	229.6	201.0	203.0	222.9
General facilities	148.2	84.2	71.8	28.6	15.9
Nuclear fuel	20.0	21.0	44.4	21.2	23.5
Environmental	119.1	62.2	158.4	103.4	99.9
Total utility capital expenditures	\$792.6	\$619.5	\$680.4	\$561.3	\$565.4

Considerations

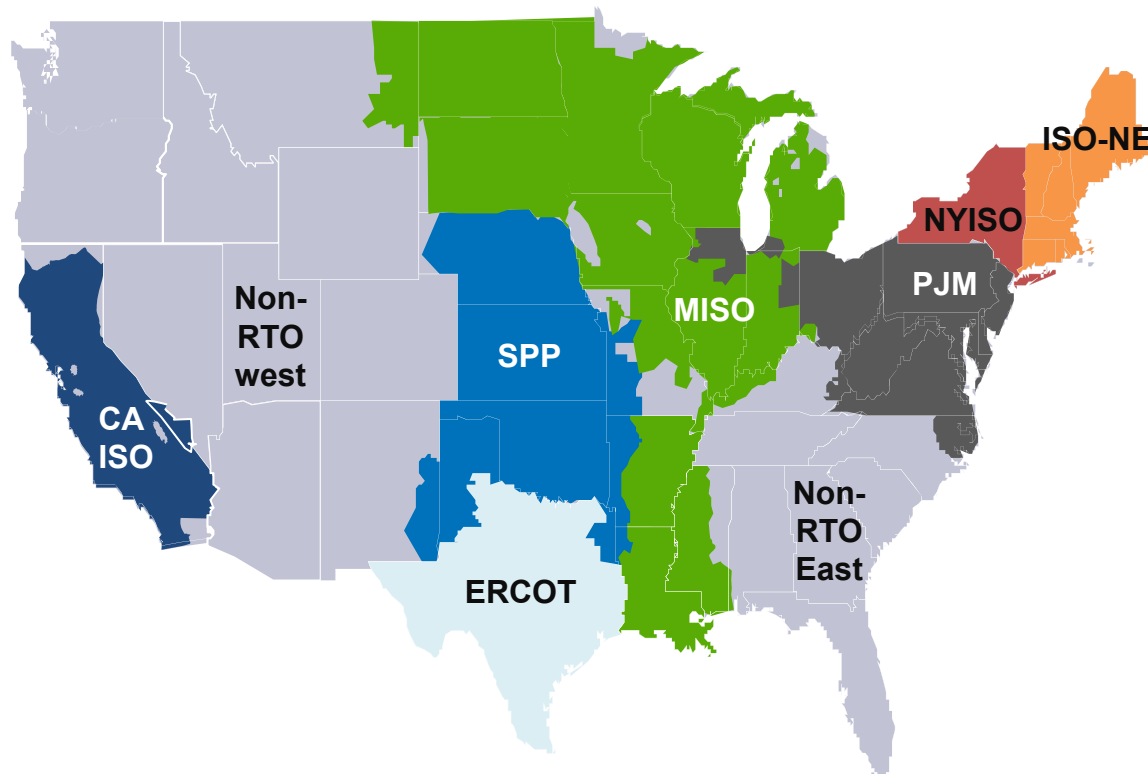
Generating facilities	<ul style="list-style-type: none"> ❑ Includes expenditures associated with KCP&L's 47% interest in Wolf Creek
Distribution and Transmission facilities	<ul style="list-style-type: none"> ❑ Includes expenditures associated with vehicle fleet, expanding service areas and infrastructure replacement
General facilities	<ul style="list-style-type: none"> ❑ Expenditures associated with information systems and facilities
Environmental	<ul style="list-style-type: none"> ❑ KCP&L's share of environmental upgrades at La Cygne to comply with the Best Available Retrofit Technology (BART) rule ❑ Upgrades to comply with the Mercury and Air Toxic Standards (MATS) rule and Coal Combustion Residuals (CCR) rule ❑ Estimates for compliance with the Clean Air Act and Clean Water Act based on proposed or final regulations where the timing is uncertain

1. Projected capital expenditures for KCP&L and GMO; excludes Allowance for Funds Used During Construction (AFUDC)
2. Great Plains Energy accounts for its 13.5% ownership in Transource Energy, LLC (Transource) under the equity method of accounting. Great Plains Energy's capital contributions to Transource are not reflected in projected capital expenditures

Transource Energy, LLC

Pursuing competitive transmission opportunities through Transource

- ❑ Transource is a joint venture between GXP (13.5%) and AEP (86.5%) structured to pursue competitive transmission projects¹
- ❑ Actively pursuing transmission projects in broad range of existing and emerging regions
- ❑ Transource Project Portfolio:
 - SPP:
 - Iatan – Nashua Project, \$65 million, completed in 2015
 - Sibley – Nebraska City Project, \$266 million, 2016 expected in service
 - PJM:
 - Thorofare Area Project, \$60 million, 2019 expected in service



1. The venture excludes transmission projects in the Electric Reliability Council of Texas (ERCOT) and AEP's existing transmission project joint ventures

Competitive Process Timeline for Initial Focus Regions

Transource is well-positioned to compete and deliver innovative transmission solutions;
Transource awarded first transmission project under PJM's new competitive process

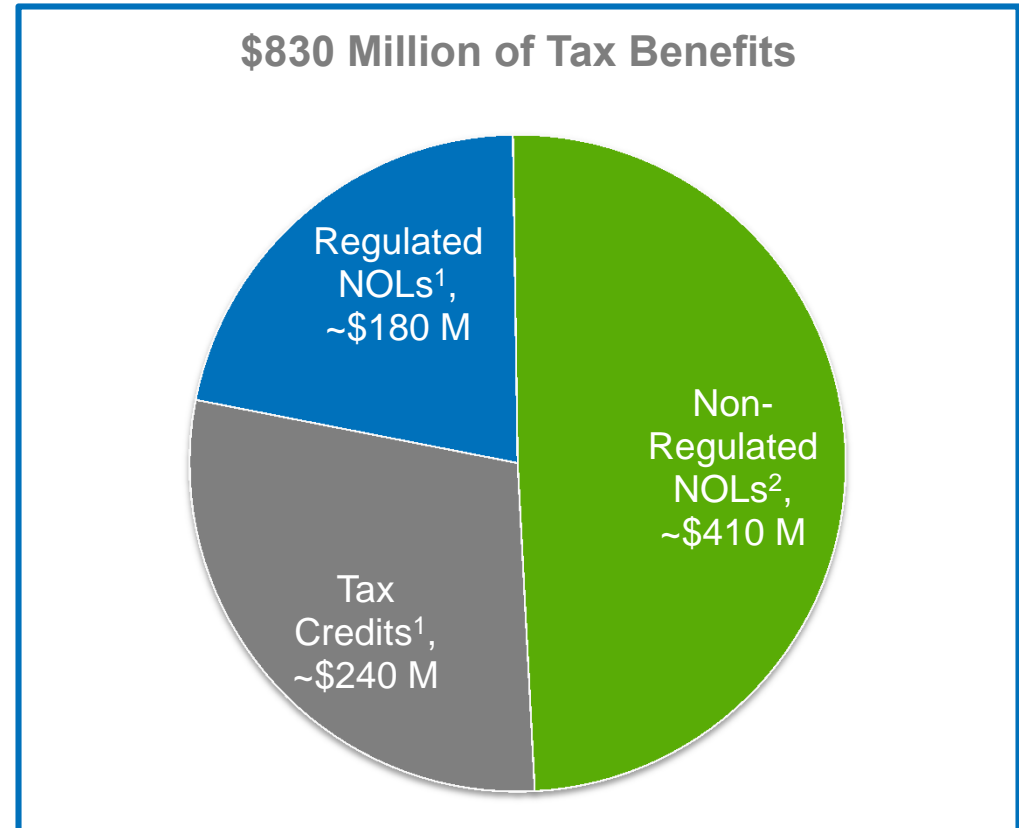
PJM: Competitive process underway. PJM will solicit proposals for both reliability and market efficiency needs throughout each year.



Favorable Income Tax Position

Future tax benefits mitigate the need for additional equity in the foreseeable future

- Approximately \$830 million in future income tax benefits at year-end 2014:
 - ~ \$590 million of tax benefits on net operating loss (NOL) carryforwards
 - ~ \$240 million tax credit carry forwards primarily related to advanced coal investment tax credits (ITC), wind production tax credits, and alternative minimum tax (AMT) credits
- Do not anticipate paying significant income taxes through approximately 2023



1. Regulated NOLs are included in rate base and tax credits are generally included in cost of service as generated except for ITC which is amortized over the life of the property it relates to
2. Non-Regulated NOLs, which include approximately \$350 million related to the GMO acquisition, are not included in rate base

Investment Thesis

Pure-play, regulated Midwest Utility with balanced total shareholder return profile

- ❑ Earnings growth driven by infrastructure investments, disciplined cost management and national transmission opportunities
- ❑ Increasing cash flow flexibility expected to drive dividend growth and potential share repurchases
- ❑ Solid track record of execution and constructive regulatory treatment with opportunities for improvements in regulatory framework
- ❑ Flexible investment opportunities with improved risk profile

**Annual EPS Growth
of 4% - 6%¹**

+

**Enhanced Dividend Growth
of 4% - 6%²**

=

**Attractive Platform
for Shareholders**

1. From 2014 to 2016 based on our 2014 earnings per share guidance range of \$1.60 - \$1.75

2. From 2014 to 2016

Appendix

	Pages
Operations Overview	17 – 22
2015 Earnings Review and Business Update	23 – 30

State Commissioners

Missouri Public Service Commission (MPSC)



Mr. Daniel Y. Hall (D)
Chair (since August 2015)
 Term began: September 2013
 Term expires: September 2019



Mr. Stephen M. Stoll (D)
Commissioner
 Term began: June 2012
 Term expires: December 2017



Mr. William P. Kenney (R)
Commissioner
 Term began: January 2013
 Term expires: January 2019



Mr. Scott T. Rupp (R)
Commissioner
 Term began: March 2014
 Term expires: March 2020



Ms. Maida J. Coleman (D)
Commissioner
 Term began: August 2015
 Term expires: August 2021

MPSC consists of five (5) members, including the Chairman, who are appointed by the Governor and confirmed by the Senate.

- Members serve six-year terms (may continue to serve after term expires until reappointed or replaced)
- Governor appoints one member to serve as Chairman

Kansas Corporation Commission (KCC)



Ms. Shari Feist Albrecht (I)
Chair (since January 2014)
 Term began: June 2012
 Term expires: March 2016



Mr. Jay S. Emler (R)
Commissioner
 Term began: January 2014, reappointed May 2015
 Term expires: March 2019



Mr. Pat Apple (R)
Commissioner
 Term began: March 2014
 Term expires: March 2018

KCC consists of three (3) members, including the Chairman, who are appointed by the Governor and confirmed by the Senate.

- Members serve four-year terms (may continue to serve after term expires until reappointed or replaced)
- Commissioners elect one member to serve as Chairman

Most Recent Rate Cases

Rate Case Outcomes (\$millions)							
Rate Jurisdiction	Date Filed	New Retail Rates	Rate Base	Common Equity Ratio	Authorized ROE	Annual Revenue Increase	Percent Increase
KCP&L – Kansas	1/2/2015	10/1/2015	\$2,185 ¹	50.48%	9.3%	\$48.7	9.04%
KCP&L – Missouri	10/30/2014	9/29/2015	\$2,580	50.09%	9.5%	\$89.7	11.76%
GMO – Missouri	2/27/2012	1/26/2013	\$1,830	52.25% ²	9.7%	\$47.9 ³	Refer to fn. ⁴
GMO (Steam) – Missouri	9/5/2008	7/1/2009	\$14	n/a	n/a ⁵	\$1.0	2.3%
Total			\$6,609				

1. Includes \$68.6 million of transmission plant in the Transmission Delivery Charge rider
2. Missouri Public Service Commission authorized an equity ratio of approximately 52.6% or approximately 52.3% after including other comprehensive income
3. L&P \$21.7 million - includes full impact of phase in from rate case ER-2010-0356
4. MPS 4.9%, L&P 12.7% - includes full impact of phase in from rate case ER-2010-0356
5. Negotiated settlement, information not available

Cost Recovery Mechanisms

Mechanism	KCP&L Kansas	KCP&L Missouri	GMO
Energy Cost Adjustment Rider (KS) / Fuel Adjustment Clause Rider (MO)	√	√	√
Property Tax Surcharge Rider	√		
Energy Efficiency Cost Recovery Rider	√		
Pension and OPEB Tracker	√	√	√
Missouri Energy Efficiency Investment Act Programs (KCP&L: Rider / GMO: Tracker)		√	√
Renewable Energy Standards Tracker		√	√
Renewable Energy Standard Rate Adjustment Mechanism Rider			√
Abbreviated rate case (La Cygne)	√		
Transmission Delivery Charge rider	√		
Critical Infrastructure Protection Standards / Cybersecurity tracker	√		

Transource's Transmission Investments

(Transource share)	Iatan – Nashua Project ¹ – 345 kV	Sibley – Nebraska City Project ¹ – 345 kV	Thorofare Area Project – 138 kV
RTO	SPP	SPP	PJM
Estimated Cost (\$M)	\$65	\$266	\$60
Line Miles	31	135	15
Expected In-Service	Completed in 2015	2016	2019
CWIP Included	Yes	Yes	Yes
Cap on equity % in capital structure:			
During construction	60%	60%	60%
Post construction	55%	55%	-
Authorized ROE:			
Base	9.8%	9.8%	TBD ³
Risk	-	1.0%	-
RTO Participation	0.5%	0.5%	0.5%
Total	10.3%²	11.3%²	TBD³

1. Includes abandoned plant recovery of prudently incurred costs and pre-commercial costs/regulatory asset treatment

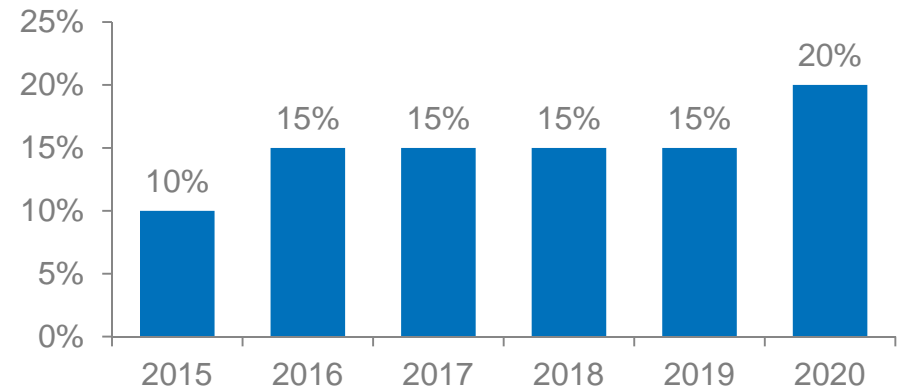
2. Weighted average all-in ROE for SPP projects, inclusive of risk and RTO participation incentives, is approximately 11.1%

3. FERC 205 order issued in docket ER15-2114-000. The base ROE requested is 10.5% and the ROE was directed to settlement procedures in the order.

Renewable Energy and Energy Efficiency

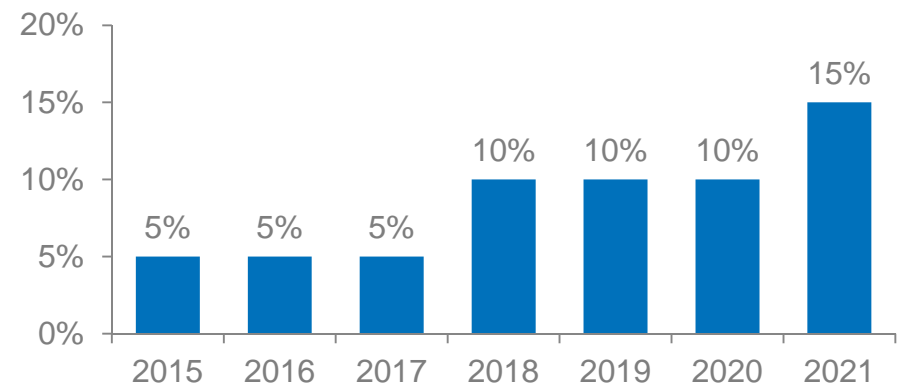
- Renewable portfolio of approximately 1,000 MW of wind, hydroelectric, landfill gas and solar power of owned assets and commitments in place representing 13% of total generation capacity
- Future renewable investments driven by the Renewable Portfolio Standards (RPS) in Kansas and Missouri
 - Well positioned to satisfy goals in both states through 2021 and beyond
- Flexibility regarding acquisition of future renewable resources:
 - Through Purchased Power Agreements (PPAs) and purchases of Renewable Energy Credits (RECs); or
 - Adding to rate base if supported by credit profile and available equity and debt financing
- Energy efficiency expected to be a key component of future resource portfolio:
 - Aggressive pursuit planned with appropriate regulatory recovery

Kansas RPS Goals



Based on three-year average peak retail demand

Missouri RPS Requirements

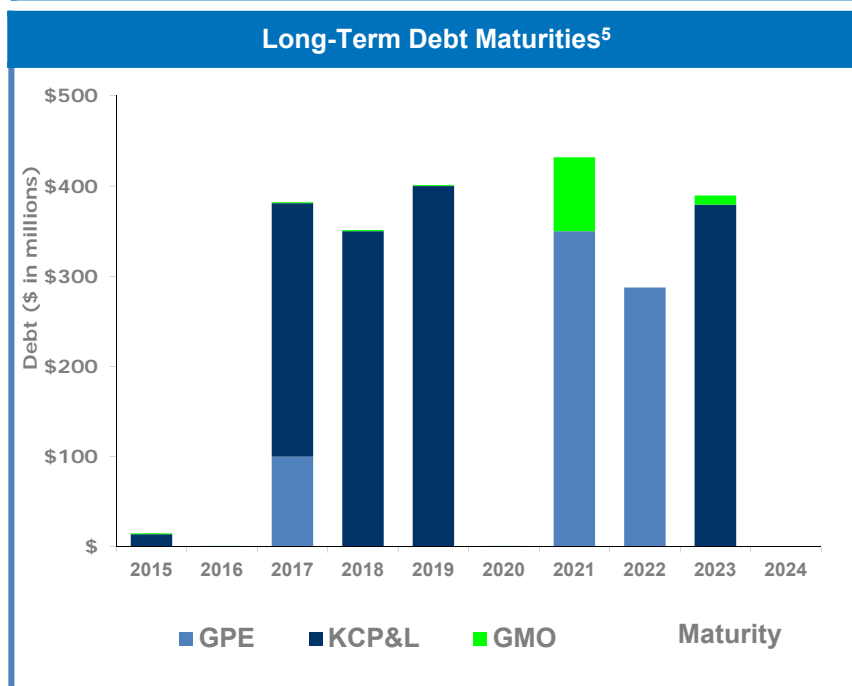


Based on electricity provided to retail customers

September 30, 2015 Debt Profile and Credit Ratings

□ In August 2015, KCP&L issued \$350 million 10-year senior unsecured notes with a coupon rate of 3.65%

(\$ in Millions)	Great Plains Energy Debt							
	KCP&L		GMO ¹		GPE		Consolidated	
	Amount	Rate ²	Amount	Rate ²	Amount	Rate ²	Amount	Rate ²
Short-term debt	\$ 192.1	0.67%	\$ 137.0	0.68%	\$ 12.0	1.75%	\$ 341.1	0.71%
Long-term debt ³	2,575.5	4.94%	447.7	5.04%	741.4	5.30%	3,764.6	5.02%
Total	\$2,767.6	4.64%	\$584.7	4.02%	\$753.4	5.24%	\$4,105.7⁴	4.66%



Current Credit Ratings

	Moody's	Standard & Poor's
Great Plains Energy		
Outlook	Stable	Stable
Corporate Credit Rating	-	BBB+
Preferred Stock	Ba1	BBB-
Senior Unsecured Debt	Baa2	BBB
KCP&L		
Outlook	Stable	Stable
Senior Secured Debt	A2	A
Senior Unsecured Debt	Baa1	BBB+
Commercial Paper	P-2	A-2
GMO		
Outlook	Stable	Stable
Senior Unsecured Debt	Baa2	BBB+
Commercial Paper	P-2	A-2

¹ Great Plains Energy guarantees approximately 26% of GMO's debt; ² Weighted Average Rates – excludes premium/discounts and other amortizations; ³ Includes current maturities of long-term debt; ⁴ Secured debt = \$707M (17%), Unsecured debt = \$3,398M (83%); ⁵ Includes long-term debt maturities through December 31, 2024

Financial Highlights and Business Update

Financial Review

- ❑ Third quarter 2015 EPS of \$0.82 compared with \$0.95 in 2014
- ❑ September 30, 2015, year-to-date EPS of \$1.22 compared with \$1.44 in 2014
- ❑ Narrowed 2015 EPS guidance range from \$1.35 - \$1.60 to \$1.35 - \$1.45

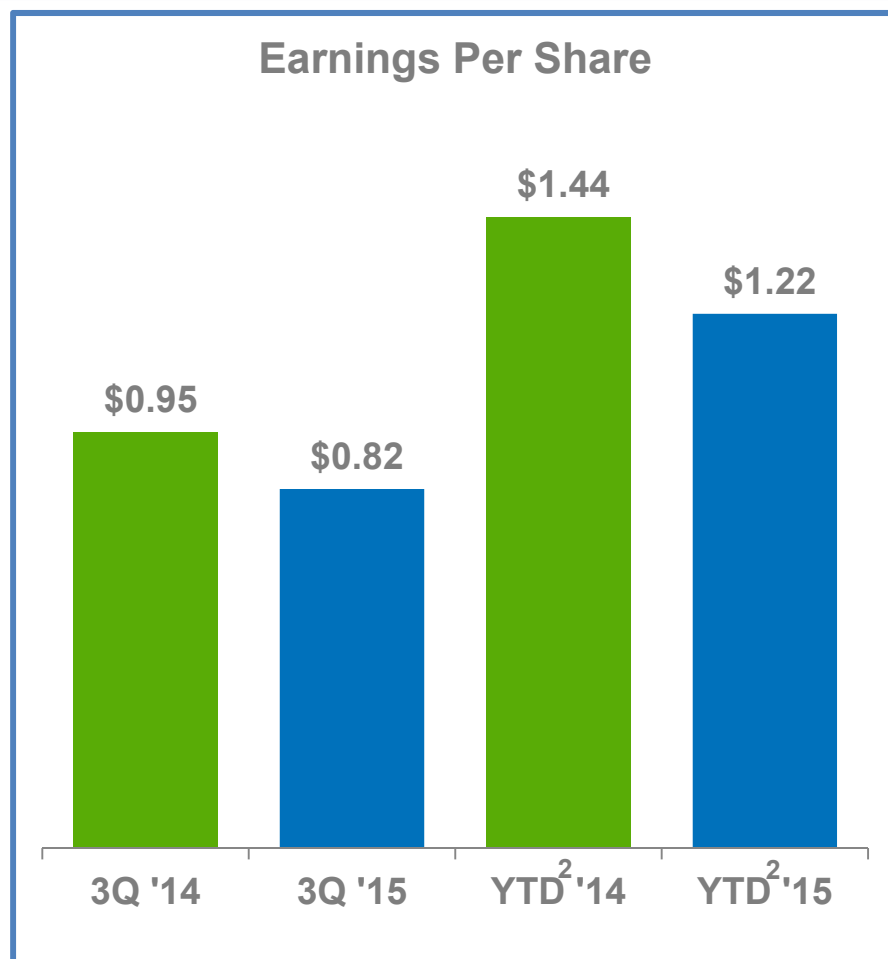
Regulatory Update

- ❑ New retail rates and cost recovery mechanisms in KCP&L's Missouri and Kansas jurisdictions effective September 29, 2015 and October 1, 2015, respectively
 - Total revenue increase of \$138 million
 - Missouri authorized Fuel Adjustment Clause
 - Kansas authorized Transmission Delivery Charge rider and Critical Infrastructure Protection Standards / Cybersecurity tracker
 - La Cygne environmental upgrade project included in rate base – no disallowance in rate cases

Dividend Action

- ❑ Increased quarterly common stock dividend 7.1% from \$0.245 per share to \$0.2625 per share

Earnings – 2015 versus 2014



Narrowed 2015 earnings per share guidance range from \$1.35 - \$1.60 to \$1.35 - \$1.45

EPS: 2015 Compared to 2014¹

	3Q 2015	YTD 2015 ²
Weather	\$0.09	(\$0.02)
WN Demand	(\$0.01)	-
New Retail Rates	\$0.01	\$0.03
KCP&L MO Wholesale Margin	(\$0.02)	(\$0.07)
Other Margin	(\$0.03)	-
Transmission	(\$0.01)	(\$0.03)
Fuel & Purchase Power	\$0.02	\$0.06
O&M	(\$0.04)	\$0.05
AFUDC	(\$0.04)	(\$0.08)
Depreciation & Amortization	(\$0.02)	(\$0.08)
2014 Release of Uncertain Tax Position	(\$0.05)	(\$0.05)
Other	(\$0.03)	(\$0.03)
Total	(\$0.13)	(\$0.22)

1. Numbers may not add due to the effect of dilutive shares on EPS

2. As of September 30

Customer Consumption

Retail MWh Sales Growth Rates						
3Q 2015 Compared to 3Q 2014				YTD 2015 Compared to YTD 2014 ¹		
	Total Change in MWh Sales	Weather – Normalized Change in MWh Sales	% of Retail MWh Sales	Total Change in MWh Sales	Weather – Normalized Change in MWh Sales	% of Retail MWh Sales
Residential	4.9%	(1.9%)	41%	(2.9%)	(0.2%)	39%
Commercial	3.1%	(1.0%)	46%	0.3%	0.5%	47%
Industrial	2.9%	0.8%	13%	(0.8%)	(1.2%)	14%
	3.8%	(1.1%) ²		(1.1%)	0.0% ²	

Results in line with full-year projections of flat to 0.5%, net of energy efficiency

1. As of September 30
2. Weighted average

2015 Fourth Quarter and Full Year

Earnings Guidance

- ❑ Narrowed 2015 earnings per share guidance range from \$1.35 - \$1.60 to \$1.35 - \$1.45

Revenue Assumptions

- ❑ Normal weather in 4Q 2015
- ❑ Weather-normalized demand growth
 - Year-to-date September 30, weather-normalized demand was flat, net of energy efficiency – in line with full year projection of flat to 0.5%
- ❑ New retail rates and cost recovery mechanisms in KCP&L's Missouri and Kansas jurisdictions effective September 29, 2015 and October 1, 2015, respectively

Other Drivers

- ❑ Increasing depreciation expense
- ❑ O&M full year increase 2% - 3% compared to 2014 versus initial projection of 3% to 4%
 - Projected to be flat exclusive of regulatory amortizations and items which have direct revenue offsets versus previously disclosed 1% - 2%
- ❑ Lower AFUDC
- ❑ Higher effective tax rate
- ❑ In August 2015, KCP&L issued \$350 million 10-year senior unsecured notes with a coupon rate of 3.65%

2015 Guidance Assumptions Income Taxes

- ❑ Effective income tax rate of approximately 35%
- ❑ Federal/state combined statutory rate of approximately 38.9% impacted by:
 - AFUDC Equity (non-taxable)
 - Wind Production Tax Credits (PTC)
 - Amortization of Investment Tax Credits (ITC)
- ❑ Do not expect to generate significant income tax liability or pay significant income taxes during 2015 due to:
 - Ongoing wind PTC
 - Utilization of prior year Net Operating Losses (NOLs) and tax credits

Great Plains Energy Consolidation Earnings and Earnings Per Share – Three Months Ended September 30 (Unaudited)

	Earnings (millions)		Earnings per Share	
	2015	2014	2015	2014
Electric Utility	\$ 129.1	\$ 140.3	\$ 0.83	\$ 0.91
Other	(2.3)	7.1	(0.01)	0.04
Net income	126.8	147.4	0.82	0.95
Preferred dividends	(0.4)	(0.4)	-	-
Earnings available for common shareholders	\$ 126.4	\$ 147.0	\$ 0.82	\$ 0.95

Common stock outstanding for the quarter averaged 154.8 million shares, compared with 154.3 million shares for the same period in 2014

Great Plains Energy Consolidation Earnings and Earnings Per Share – Year to Date September 30 (Unaudited)

	Earnings (millions)		Earnings per Share	
	2015	2014	2015	2014
Electric Utility	\$ 196.4	\$ 221.1	\$ 1.27	\$ 1.43
Other	(6.3)	2.2	(0.05)	(0.01)
Net income	190.1	223.3	1.22	1.44
Preferred dividends	(1.2)	(1.2)	-	-
Earnings available for common shareholders	\$ 188.9	\$ 222.1	\$ 1.22	\$ 1.44

Common stock outstanding for the year to date averaged 154.8 million shares, compared with 154.2 million shares for the same period in 2014

Great Plains Energy Reconciliation of Gross Margin to Operating Revenues (Unaudited)

	Three Months Ended September 30 (millions)		Year to Date September 30 (millions)	
	2015	2014	2015	2014
Operating revenues	\$ 781.4	\$ 782.5	\$ 1,939.5	\$ 2,016.0
Fuel	(124.5)	(142.3)	(332.0)	(392.9)
Purchased power	(52.1)	(61.2)	(146.3)	(185.7)
Transmission of electricity by others	(23.9)	(19.3)	(65.1)	(55.6)
Gross margin	\$ 580.9	\$ 559.7	\$ 1,396.1	\$ 1,381.8

Gross margin is a financial measure that is not calculated in accordance with generally accepted accounting principles (GAAP). Gross margin, as used by Great Plains Energy, is defined as operating revenues less fuel, purchased power and transmission. The Company's expense for fuel, purchased power and transmission, offset by wholesale sales margin, is subject to recovery through cost adjustment mechanisms, except for KCP&L's Missouri retail operations. As a result, operating revenues increase or decrease in relation to a significant portion of these expenses. Management believes that gross margin provides a more meaningful basis for evaluating the Electric Utility segment's operations across periods than operating revenues because gross margin excludes the revenue effect of fluctuations in these expenses. Gross margin is used internally to measure performance against budget and in reports for management and the Board of Directors. The Company's definition of gross margin may differ from similar terms used by other companies. A reconciliation to GAAP operating revenues is provided in the table above.

Investor Relations Information

- ❑ NYSE: GXP
- ❑ www.greatplainsenergy.com
- ❑ Company Contacts:

Lori Wright
Vice President – Investor Relations
and Treasurer
(816) 556-2506
lori.wright@kcpl.com

Calvin Girard
Senior Manager, Investor Relations
(816) 654-1777
calvin.girard@kcpl.com

Constant Growth Discounted Cash Flow Model
30 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.02	\$50.12	4.03%	4.14%	5.00%	5.00%	6.50%	5.50%	9.13%	9.64%	10.66%
Alliant Energy Corporation	LNT	\$2.35	\$61.59	3.82%	3.92%	5.40%	5.55%	6.00%	5.65%	9.32%	9.57%	9.93%
Ameren Corporation	AEE	\$1.70	\$43.18	3.94%	4.06%	6.30%	6.00%	7.00%	6.43%	10.06%	10.50%	11.08%
American Electric Power Company, Inc.	AEP	\$2.24	\$57.34	3.91%	4.00%	4.70%	4.43%	5.00%	4.71%	8.42%	8.71%	9.00%
Avista Corporation	AVA	\$1.32	\$34.97	3.77%	3.87%	5.00%	5.00%	5.00%	5.00%	8.87%	8.87%	8.87%
CMS Energy Corporation	CMS	\$1.16	\$35.77	3.24%	3.34%	6.10%	6.72%	5.50%	6.11%	8.83%	9.45%	10.07%
Dominion Resources, Inc.	D	\$2.59	\$67.46	3.84%	3.96%	6.10%	5.49%	8.00%	6.53%	9.43%	10.49%	11.99%
DTE Energy Company	DTE	\$2.92	\$79.78	3.66%	3.76%	5.60%	5.12%	5.00%	5.24%	8.75%	9.00%	9.36%
IDACORP, Inc.	IDA	\$2.04	\$67.89	3.00%	3.05%	4.00%	4.00%	1.00%	3.00%	4.02%	6.05%	7.06%
NorthWestern Corporation	NWE	\$1.92	\$54.03	3.55%	3.66%	5.00%	6.81%	6.50%	6.10%	8.64%	9.77%	10.48%
OGE Energy Corp.	OGE	\$1.10	\$25.52	4.31%	4.39%	5.70%	2.17%	3.00%	3.62%	6.53%	8.01%	10.13%
Otter Tail Corporation	OTTR	\$1.23	\$26.51	4.64%	4.81%	NA	6.00%	9.00%	7.50%	10.78%	12.31%	13.85%
Pinnacle West Capital Corporation	PNW	\$2.50	\$63.57	3.93%	4.02%	4.80%	4.95%	4.00%	4.58%	8.01%	8.61%	8.98%
PNM Resources, Inc.	PNM	\$0.88	\$29.89	2.94%	3.07%	7.70%	9.30%	9.00%	8.67%	10.76%	11.74%	12.38%
Portland General Electric Company	POR	\$1.20	\$36.42	3.29%	3.37%	4.40%	4.14%	6.00%	4.85%	7.50%	8.22%	9.39%
SCANA Corporation	SCG	\$2.18	\$60.15	3.62%	3.71%	4.50%	4.45%	4.50%	4.48%	8.15%	8.19%	8.21%
Westar Energy, Inc.	WR	\$1.44	\$41.90	3.44%	3.51%	3.60%	3.50%	6.00%	4.37%	7.00%	7.88%	9.54%
Xcel Energy Inc.	XEL	\$1.28	\$35.81	3.57%	3.66%	5.00%	4.68%	4.50%	4.73%	8.16%	8.39%	8.66%
PROXY GROUP MEAN				3.70%	3.80%	5.23%	5.18%	5.64%	5.39%	8.46%	9.19%	9.98%
PROXY GROUP MEDIAN				3.72%	3.81%	5.00%	5.00%	5.75%	5.12%	8.70%	8.93%	9.73%

Notes:

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional, equals 30-trading day average as of January 15, 2015
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + 0.5 x [8])
- [5] Source: Zacks
- [6] Source: Yahoo! Finance
- [7] Source: Value Line
- [8] Equals Average([5], [6], [7])
- [9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
- [10] Equals [4] + [8]
- [11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model
90 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.02	\$50.31	4.02%	4.13%	5.00%	5.00%	6.50%	5.50%	9.12%	9.63%	10.65%
Alliant Energy Corporation	LNT	\$2.35	\$59.72	3.93%	4.05%	5.40%	5.55%	6.00%	5.65%	9.44%	9.70%	10.05%
Ameren Corporation	AEE	\$1.70	\$42.83	3.97%	4.10%	6.30%	6.00%	7.00%	6.43%	10.09%	10.53%	11.11%
American Electric Power Company, Inc.	AEP	\$2.24	\$56.58	3.96%	4.05%	4.70%	4.43%	5.00%	4.71%	8.48%	8.76%	9.06%
Avista Corporation	AVA	\$1.32	\$33.87	3.90%	3.99%	5.00%	5.00%	5.00%	5.00%	8.99%	8.99%	8.99%
CMS Energy Corporation	CMS	\$1.16	\$35.33	3.28%	3.38%	6.10%	6.72%	5.50%	6.11%	8.87%	9.49%	10.11%
Dominion Resources, Inc.	D	\$2.59	\$69.01	3.75%	3.88%	6.10%	5.49%	8.00%	6.53%	9.35%	10.41%	11.90%
DTE Energy Company	DTE	\$2.92	\$80.17	3.64%	3.74%	5.60%	5.12%	5.00%	5.24%	8.73%	8.98%	9.34%
IDACORP, Inc.	IDA	\$2.04	\$66.25	3.08%	3.13%	4.00%	4.00%	1.00%	3.00%	4.09%	6.13%	7.14%
NorthWestern Corporation	NWE	\$1.92	\$53.77	3.57%	3.68%	5.00%	6.81%	6.50%	6.10%	8.66%	9.78%	10.50%
OGE Energy Corp.	OGE	\$1.10	\$26.72	4.12%	4.19%	5.70%	2.17%	3.00%	3.62%	6.33%	7.81%	9.93%
Otter Tail Corporation	OTTR	\$1.23	\$26.61	4.62%	4.80%	NA	6.00%	9.00%	7.50%	10.76%	12.30%	13.83%
Pinnacle West Capital Corporation	PNW	\$2.50	\$63.35	3.95%	4.04%	4.80%	4.95%	4.00%	4.58%	8.03%	8.62%	8.99%
PNM Resources, Inc.	PNM	\$0.88	\$28.43	3.09%	3.23%	7.70%	9.30%	9.00%	8.67%	10.91%	11.90%	12.54%
Portland General Electric Company	POR	\$1.20	\$36.56	3.28%	3.36%	4.40%	4.14%	6.00%	4.85%	7.49%	8.21%	9.38%
SCANA Corporation	SCG	\$2.18	\$57.82	3.77%	3.85%	4.50%	4.45%	4.50%	4.48%	8.30%	8.34%	8.36%
Westar Energy, Inc.	WR	\$1.44	\$40.32	3.57%	3.65%	3.60%	3.50%	6.00%	4.37%	7.13%	8.02%	9.68%
Xcel Energy Inc.	XEL	\$1.28	\$35.44	3.61%	3.70%	5.00%	4.68%	4.50%	4.73%	8.19%	8.42%	8.70%
PROXY GROUP MEAN				3.73%	3.83%	5.23%	5.18%	5.64%	5.39%	8.50%	9.22%	10.02%
PROXY GROUP MEDIAN				3.76%	3.87%	5.00%	5.00%	5.75%	5.12%	8.70%	8.99%	9.81%

Notes:

- [1] Source: Bloomberg Professional
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Constant Growth Discounted Cash Flow Model
180 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.02	\$49.47	4.08%	4.20%	5.00%	5.00%	6.50%	5.50%	9.19%	9.70%	10.72%
Alliant Energy Corporation	LNT	\$2.35	\$59.67	3.94%	4.05%	5.40%	5.55%	6.00%	5.65%	9.44%	9.70%	10.06%
Ameren Corporation	AEE	\$1.70	\$41.34	4.11%	4.24%	6.30%	6.00%	7.00%	6.43%	10.24%	10.68%	11.26%
American Electric Power Company, Inc.	AEP	\$2.24	\$55.91	4.01%	4.10%	4.70%	4.43%	5.00%	4.71%	8.53%	8.81%	9.11%
Avista Corporation	AVA	\$1.32	\$32.85	4.02%	4.12%	5.00%	5.00%	5.00%	5.00%	9.12%	9.12%	9.12%
CMS Energy Corporation	CMS	\$1.16	\$34.36	3.38%	3.48%	6.10%	6.72%	5.50%	6.11%	8.97%	9.59%	10.21%
Dominion Resources, Inc.	D	\$2.59	\$69.57	3.72%	3.84%	6.10%	5.49%	8.00%	6.53%	9.31%	10.37%	11.87%
DTE Energy Company	DTE	\$2.92	\$79.11	3.69%	3.79%	5.60%	5.12%	5.00%	5.24%	8.78%	9.03%	9.39%
IDACORP, Inc.	IDA	\$2.04	\$62.69	3.25%	3.30%	4.00%	4.00%	1.00%	3.00%	4.27%	6.30%	7.32%
NorthWestern Corporation	NWE	\$1.92	\$52.75	3.64%	3.75%	5.00%	6.81%	6.50%	6.10%	8.73%	9.85%	10.57%
OGE Energy Corp.	OGE	\$1.10	\$28.22	3.90%	3.97%	5.70%	2.17%	3.00%	3.62%	6.11%	7.59%	9.71%
Otter Tail Corporation	OTTR	\$1.23	\$26.76	4.60%	4.77%	NA	6.00%	9.00%	7.50%	10.73%	12.27%	13.80%
Pinnacle West Capital Corporation	PNW	\$2.50	\$61.66	4.05%	4.15%	4.80%	4.95%	4.00%	4.58%	8.14%	8.73%	9.10%
PNM Resources, Inc.	PNM	\$0.88	\$27.23	3.23%	3.37%	7.70%	9.30%	9.00%	8.67%	11.06%	12.04%	12.68%
Portland General Electric Company	POR	\$1.20	\$35.66	3.37%	3.45%	4.40%	4.14%	6.00%	4.85%	7.57%	8.29%	9.47%
SCANA Corporation	SCG	\$2.18	\$55.39	3.94%	4.02%	4.50%	4.45%	4.50%	4.48%	8.47%	8.51%	8.52%
Westar Energy, Inc.	WR	\$1.44	\$38.32	3.76%	3.84%	3.60%	3.50%	6.00%	4.37%	7.32%	8.21%	9.87%
Xcel Energy Inc.	XEL	\$1.28	\$34.55	3.70%	3.79%	5.00%	4.68%	4.50%	4.73%	8.29%	8.52%	8.80%
PROXY GROUP MEAN				3.80%	3.90%	5.23%	5.18%	5.64%	5.39%	8.57%	9.29%	10.09%
PROXY GROUP MEDIAN				3.83%	3.91%	5.00%	5.00%	5.75%	5.12%	8.76%	9.07%	9.79%

Notes:

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional, equals 180-trading day average as of January 15, 2015
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + 0.5 x [8])
- [5] Source: Zacks
- [6] Source: Yahoo! Finance
- [7] Source: Value Line
- [8] Equals Average([5], [6], [7])
- [9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
- [10] Equals [4] + [8]
- [11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Multi-Stage Growth Discounted Cash Flow Model
180 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs table with columns: [1] Stock, [2] EPS Growth Rate Estimates, [3] [4] [5] Long-Term, [6] [7] [8] [9] Payout Ratio, [10] [11] [12] [13] Iterative Solution, Terminal, Terminal. Rows include Company, Ticker, Price, Zacks, First Call, Value Line, Low, Growth, 2016, 2019, 2026, Proof, IRR, P/E Ratio, PEG Ratio.

Projected Annual Earnings per Share table with columns: [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] [30]. Rows include Company, Ticker, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030.

Projected Annual Dividend Payout Ratio table with columns: [31] [32] [33] [34] [35] [36] [37] [38] [39] [40] [41] [42] [43] [44] [45]. Rows include Company, Ticker, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030.

Projected Annual Cash Flows table with columns: [46] [47] [48] [49] [50] [51] [52] [53] [54] [55] [56] [57] [58] [59] [60] [61] Terminal Value. Rows include Company, Ticker, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030.

Projected Annual Data Investor Cash Flows table with columns: [62] [63] [64] [65] [66] [67] [68] [69] [70] [71] [72] [73] [74] [75] [76] [77] [78]. Rows include Company, Ticker, Initial Outflow, 1/15/16, 12/31/16, 6/30/17, 6/30/18, 6/30/19, 6/30/20, 6/30/21, 6/30/22, 6/30/23, 6/30/24, 6/30/25, 6/30/26, 6/30/27, 6/30/28, 6/30/29, 6/30/30.

Multi-Stage DCF Notes:

- [1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average
- [2] Source: Zacks
- [3] Source: Yahoo! Finance
- [4] Source: Value Line
- [5] Equals indicated value (average, minimum, maximum) of Columns [2], [3], [4]
- [6] Source: Federal Reserve, Bureau of Economic Analysis
- [7] Source: Value Line
- [8] Source: Value Line
- [9] Source: Bloomberg Professional
- [10] Equals Column [1] + Column [62]
- [11] Equals result of Excel Solver function; goal: Column [10] equals \$0.00
- [12] Equals Column [61] / Column [30]
- [13] Equals Column [12] / (Column [6] x 100)
- [14] Source: Value Line
- [15] Equals Column [14] x (1 + Column [5])
- [16] Equals Column [15] x (1 + Column [5])
- [17] Equals Column [16] x (1 + Column [5])
- [18] Equals Column [17] x (1 + Column [5])
- [19] Equals Column [18] x (1 + Column [5])
- [20] Equals Column [19] x (1 + Column [5])
- [21] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2021 - 2020)))) x Column [20]
- [22] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2022 - 2020)))) x Column [21]
- [23] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2023 - 2020)))) x Column [23]
- [24] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2024 - 2020)))) x Column [24]
- [25] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2025 - 2020)))) x Column [25]
- [26] Equals Column [25] x (1 + Column [6])
- [27] Equals Column [26] x (1 + Column [6])
- [28] Equals Column [27] x (1 + Column [6])
- [29] Equals Column [28] x (1 + Column [6])
- [30] Equals Column [29] x (1 + Column [6])
- [31] Equals Column [7]
- [32] Equals Column [31] + ((Column [34] - Column [31]) / 3)
- [33] Equals Column [32] + ((Column [34] - Column [31]) / 3)
- [34] Equals Column [8]
- [35] Equals Column [34] + ((Column [41] - Column [34]) / 7)
- [36] Equals Column [35] + ((Column [41] - Column [34]) / 7)
- [37] Equals Column [36] + ((Column [41] - Column [34]) / 7)
- [38] Equals Column [37] + ((Column [41] - Column [34]) / 7)
- [39] Equals Column [38] + ((Column [41] - Column [34]) / 7)
- [40] Equals Column [39] + ((Column [41] - Column [34]) / 7)
- [41] Equals Column [9]
- [42] Equals Column [9]
- [43] Equals Column [9]
- [44] Equals Column [9]
- [45] Equals Column [9]
- [46] Equals Column [16] x Column [31]
- [47] Equals Column [17] x Column [32]
- [48] Equals Column [18] x Column [33]
- [49] Equals Column [19] x Column [34]
- [50] Equals Column [20] x Column [35]
- [51] Equals Column [21] x Column [36]
- [52] Equals Column [22] x Column [37]
- [53] Equals Column [23] x Column [38]
- [54] Equals Column [24] x Column [39]
- [55] Equals Column [25] x Column [40]
- [56] Equals Column [26] x Column [41]
- [57] Equals Column [27] x Column [42]
- [58] Equals Column [28] x Column [43]
- [59] Equals Column [29] x Column [44]
- [60] Equals Column [30] x Column [45]
- [61] Equals (Column [60] x (1 + Column [6])) / (Column [11] - Column [6])
- [62] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [63] through Column [78]
- [63] Equals \$0.00
- [64] Equals (12/31/2016 - 1/15/2016) / 365 x Column [46]
- [65] Equals Column [46] x (1 + .5 x Column 5)
- [66] Equals Column [48]
- [67] Equals Column [49]
- [68] Equals Column [50]
- [69] Equals Column [51]
- [70] Equals Column [52]
- [71] Equals Column [53]
- [72] Equals Column [54]
- [73] Equals Column [55]
- [74] Equals Column [56]
- [75] Equals Column [57]
- [76] Equals Column [58]
- [77] Equals Column [59]
- [78] Equals Column [60] + [61]

Ex-Ante Market Risk Premium
Market DCF Method Based - Bloomberg

[1]	[2]	[3]
S&P 500 Est. Required Market Return	Current 30-Year Treasury (30-day average)	Implied Market Risk Premium
13.63%	2.96%	10.68%

[4]	[5]	[6]	[7]	[8]	[9]		
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	12,326.86	0.07%	1.28%	11.80%	13.15%	0.0093%
ALCOA INC	AA	9,039.89	0.05%	1.74%	9.77%	11.59%	0.0060%
AMERICAN AIRLINES GROUP INC	AAL	24,431.42	0.14%	1.03%	22.53%	23.68%	0.0332%
ADVANCE AUTO PARTS INC	AAP	10,567.31	0.06%	0.18%	11.75%	11.94%	0.0072%
APPLE INC	AAPL	538,536.02	3.09%	2.24%	12.74%	15.12%	0.4671%
ABBVIE INC	ABBV	93,736.39	0.54%	3.55%	10.96%	14.70%	0.0790%
AMERISOURCEBERGEN CORP	ABC	19,076.57	0.11%	1.35%	12.50%	13.93%	0.0152%
ABBOTT LABORATORIES	ABT	60,474.32	0.35%	2.36%	11.96%	14.46%	0.0501%
ACCENTURE PLC-CL A	ACN	65,315.19	0.37%	2.21%	9.85%	12.17%	0.0456%
ADOBE SYSTEMS INC	ADBE	44,477.94	0.26%	0.00%	20.09%	20.09%	0.0512%
ANALOG DEVICES INC	ADI	15,546.86	0.09%	3.28%	10.80%	14.25%	0.0127%
ARCHER-DANIELS-MIDLAND CO	ADM	18,803.27	0.11%	3.55%	2.70%	6.30%	0.0068%
AUTOMATIC DATA PROCESSING	ADP	35,937.22	0.21%	2.60%	10.33%	13.06%	0.0269%
ALLIANCE DATA SYSTEMS CORP	ADS	15,362.83	0.09%	0.00%	14.50%	14.50%	0.0128%
AUTODESK INC	ADSK	11,130.96	0.06%	0.00%	-4.39%	-4.39%	-0.0028%
ADT CORP/THE	ADT	4,760.08	0.03%	2.96%	6.47%	9.52%	0.0026%
AMEREN CORPORATION	AEE	10,557.04	0.06%	3.82%	7.10%	11.05%	0.0067%
AMERICAN ELECTRIC POWER	AEP	28,806.07	0.17%	3.67%	4.58%	8.33%	0.0138%
AES CORP	AES	5,746.24	0.03%	4.68%	4.35%	9.14%	0.0030%
AETNA INC	AET	36,627.45	0.21%	0.95%	12.34%	13.35%	0.0281%
AFLAC INC	AFL	24,157.68	0.14%	2.79%	8.45%	11.36%	0.0157%
ALLERGAN PLC	AGN	116,361.33	0.67%	0.00%	12.01%	12.01%	0.0802%
AMERICAN INTERNATIONAL GROUP	AIG	69,384.03	0.40%	1.50%	9.50%	11.07%	0.0441%
APARTMENT INVT & MGMT CO -A	AIV	5,914.37	0.03%	3.15%	8.34%	11.62%	0.0039%
ASSURANT INC	AIZ	5,153.23	0.03%	1.69%	8.62%	10.38%	0.0031%
AKAMAI TECHNOLOGIES INC	AKAM	7,856.00	0.05%	0.00%	16.83%	16.83%	0.0076%
ALLSTATE CORP	ALL	22,514.11	0.13%	2.06%	9.00%	11.15%	0.0144%
ALLEGION PLC	ALLE	5,628.11	0.03%	0.66%	15.09%	15.80%	0.0051%
ALEXION PHARMACEUTICALS INC	ALXN	35,754.46	0.21%	0.00%	21.21%	21.21%	0.0435%
APPLIED MATERIALS INC	AMAT	18,478.06	0.11%	2.59%	14.06%	16.83%	0.0178%
AMETEK INC	AME	11,392.20	0.07%	0.76%	10.41%	11.21%	0.0073%
AFFILIATED MANAGERS GROUP	AMG	6,927.54	0.04%	0.00%	13.22%	13.22%	0.0053%
AMGEN INC	AMGN	114,723.28	0.66%	2.09%	8.56%	10.74%	0.0707%
AMERIPRISE FINANCIAL INC	AMP	16,162.78	0.09%	2.80%	13.00%	15.98%	0.0148%
AMERICAN TOWER CORP	AMT	37,439.37	0.21%	2.04%	13.90%	16.08%	0.0345%
AMAZON.COM INC	AMZN	267,278.72	1.53%	0.00%	63.25%	63.25%	0.9697%
AUTONATION INC	AN	5,149.59	0.03%	0.00%	12.00%	12.00%	0.0035%
ANTHEM INC	ANTM	35,230.18	0.20%	1.85%	9.27%	11.20%	0.0226%
AON PLC	AON	23,581.50	0.14%	1.35%	10.71%	12.12%	0.0164%
APACHE CORP	APA	13,355.24	0.08%	2.83%	0.47%	3.31%	0.0025%
ANADARKO PETROLEUM CORP	APC	16,270.73	0.09%	3.38%	1.88%	5.29%	0.0049%
AIR PRODUCTS & CHEMICALS INC	APD	25,389.03	0.15%	2.81%	5.00%	7.88%	0.0115%
AMPHENOL CORP-CL A	APH	14,022.80	0.08%	1.17%	8.76%	9.98%	0.0080%
AIRGAS INC	ARG	9,967.19	0.06%	1.74%	9.05%	10.87%	0.0062%
ACTIVISION BLIZZARD INC	ATVI	25,525.63	0.15%	0.66%	11.33%	12.03%	0.0176%
AVALONBAY COMMUNITIES INC	AVB	24,049.32	0.14%	2.84%	6.13%	9.06%	0.0125%
AVAGO TECHNOLOGIES LTD	AVGO	33,170.45	0.19%	1.46%	21.04%	22.65%	0.0431%
AVERY DENNISON CORP	AVY	5,369.57	0.03%	2.49%	9.05%	11.66%	0.0036%
AMERICAN EXPRESS CO	AXP	61,918.91	0.36%	1.80%	7.22%	9.08%	0.0323%
AUTOZONE INC	AZO	21,289.00	0.12%	0.00%	12.34%	12.34%	0.0151%
BOEING CO/THE	BA	84,170.04	0.48%	2.90%	12.24%	15.31%	0.0739%
BANK OF AMERICA CORP	BAC	150,564.46	0.86%	1.38%	24.88%	26.44%	0.2283%
BAXTER INTERNATIONAL INC	BAX	19,200.32	0.11%	3.45%	8.75%	12.35%	0.0136%
BED BATH & BEYOND INC	BBBY	7,261.65	0.04%	0.00%	6.23%	6.23%	0.0026%
BB&T CORP	BBT	25,854.17	0.15%	3.17%	10.92%	14.26%	0.0211%
BEST BUY CO INC	BBY	9,291.13	0.05%	4.33%	9.60%	14.14%	0.0075%
CR BARD INC	BCR	13,072.67	0.07%	0.53%	13.78%	14.34%	0.0108%
BECTON DICKINSON AND CO	BDX	30,218.77	0.17%	1.84%	11.42%	13.36%	0.0232%
FRANKLIN RESOURCES INC	BEN	19,491.74	0.11%	2.21%	4.74%	7.00%	0.0078%
BROWN-FORMAN CORP-CLASS B	BF/B	19,330.35	0.11%	1.46%	8.28%	9.80%	0.0109%
BAKER HUGHES INC	BHI	17,395.50	0.10%	1.68%	-0.20%	1.48%	0.0015%
BIOGEN INC	BIIB	60,926.11	0.35%	0.00%	11.55%	11.55%	0.0403%
BANK OF NEW YORK MELLON CORP	BK	39,105.84	0.22%	1.90%	12.57%	14.59%	0.0327%
BLACKROCK INC	BLK	49,270.13	0.28%	3.19%	11.36%	14.73%	0.0416%
BALL CORP	BLL	9,402.12	0.05%	0.74%	7.33%	8.10%	0.0044%
BRISTOL-MYERS SQUIBB CO	BMY	104,735.01	0.60%	2.37%	18.90%	21.49%	0.1291%
BROADCOM CORP-CL A	BRCM	32,240.46	0.18%	1.06%	12.36%	13.49%	0.0249%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	311,582.52	1.79%	0.00%	5.00%	5.00%	0.0894%
BOSTON SCIENTIFIC CORP	BSX	24,038.64	0.14%	0.00%	10.51%	10.51%	0.0145%
BORGWARNER INC	BWA	6,964.19	0.04%	1.66%	10.19%	11.94%	0.0048%
BAXALTA INC	BXLT	27,227.71	0.16%	0.24%	5.15%	5.40%	0.0084%
BOSTON PROPERTIES INC	BXP	18,191.11	0.10%	2.62%	6.05%	8.75%	0.0091%
CITIGROUP INC	C	126,517.72	0.73%	1.00%	25.29%	26.42%	0.1917%
CA INC	CA	11,639.82	0.07%	3.78%	5.50%	9.38%	0.0063%
CONAGRA FOODS INC	CAG	16,948.42	0.10%	2.56%	8.17%	10.83%	0.0105%
CARDINAL HEALTH INC	CAH	26,726.42	0.15%	1.96%	12.36%	14.44%	0.0221%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
CAMERON INTERNATIONAL CORP	CAM	11,182.28	N/A	0.00%	N/A	N/A	N/A
CATERPILLAR INC	CAT	34,858.34	0.20%	4.93%	9.00%	14.15%	0.0283%
CHUBB LTD	CB	50,438.72	0.29%	2.43%	11.20%	13.77%	0.0398%
CBRE GROUP INC - A	CBG	9,670.78	0.06%	0.00%	12.50%	12.50%	0.0069%
CBS CORP-CLASS B NON VOTING	CBS	21,789.63	0.12%	1.34%	13.28%	14.71%	0.0184%
COCA-COLA ENTERPRISES	CCE	10,417.11	0.06%	2.40%	4.87%	7.33%	0.0044%
CROWN CASTLE INTL CORP	CCI	26,407.99	0.15%	4.22%	22.80%	27.50%	0.0417%
CARNIVAL CORP	CCL	39,242.17	0.23%	2.50%	18.35%	21.07%	0.0474%
CELGENE CORP	CELG	80,969.56	0.46%	0.00%	21.39%	21.39%	0.0994%
CERNER CORP	CERN	19,421.29	0.11%	0.00%	17.28%	17.28%	0.0192%
CF INDUSTRIES HOLDINGS INC	CF	7,358.19	0.04%	3.80%	20.00%	24.18%	0.0102%
CHURCH & DWIGHT CO INC	CHD	10,349.53	0.06%	1.69%	9.55%	11.33%	0.0067%
CHESAPEAKE ENERGY CORP	CHK	2,367.65	0.01%	5.06%	-2.46%	2.53%	0.0003%
C.H. ROBINSON WORLDWIDE INC	CHRW	9,128.80	0.05%	2.44%	10.63%	13.20%	0.0069%
CIGNA CORP	CI	35,092.84	0.20%	0.03%	10.90%	10.93%	0.0220%
CINCINNATI FINANCIAL CORP	CINF	9,031.52	N/A	0.00%	N/A	N/A	N/A
COLGATE-PALMOLIVE CO	CL	56,820.01	0.33%	2.43%	8.46%	10.99%	0.0358%
CLOROX COMPANY	CLX	16,376.50	0.09%	2.45%	6.88%	9.42%	0.0088%
COMERICA INC	CMA	6,371.29	0.04%	2.31%	7.32%	9.70%	0.0035%
COMCAST CORP-CLASS A	CMCSA	131,810.10	0.76%	1.85%	12.66%	14.63%	0.1106%
CME GROUP INC	CME	28,652.00	0.16%	5.14%	12.48%	17.94%	0.0295%
CHIPOTLE MEXICAN GRILL INC	CMG	14,843.38	0.09%	0.00%	19.23%	19.23%	0.0164%
CUMMINS INC	CMI	14,982.35	0.09%	4.26%	5.92%	10.31%	0.0089%
CMS ENERGY CORP	CMS	10,056.46	0.06%	3.21%	6.25%	9.56%	0.0055%
CENTERPOINT ENERGY INC	CNP	7,443.54	0.04%	5.72%	4.50%	10.35%	0.0044%
CONSOL ENERGY INC	CNX	1,142.98	0.01%	2.87%	20.55%	23.71%	0.0016%
CAPITAL ONE FINANCIAL CORP	COF	33,439.04	0.19%	2.41%	5.57%	8.05%	0.0154%
CABOT OIL & GAS CORP	COG	6,791.68	0.04%	0.49%	41.53%	42.12%	0.0164%
COACH INC	COH	8,722.39	0.05%	4.30%	10.67%	15.19%	0.0076%
ROCKWELL COLLINS INC	COL	11,272.60	0.06%	1.56%	7.97%	9.59%	0.0062%
CONOCOPHILLIPS	COP	48,595.51	0.28%	7.45%	6.00%	13.68%	0.0381%
COSTCO WHOLESALE CORP	COST	66,138.10	0.38%	1.11%	9.55%	10.71%	0.0406%
CAMPBELL SOUP CO	CPB	16,428.52	0.09%	2.56%	4.48%	7.09%	0.0067%
COLUMBIA PIPELINE GROUP	CPGX	6,653.89	N/A	2.11%	N/A	N/A	N/A
SALESFORCE.COM INC	CRM	47,051.04	0.27%	0.00%	27.72%	27.72%	0.0748%
CISCO SYSTEMS INC	CSGO	119,896.99	0.69%	3.65%	7.86%	11.65%	0.0801%
CSRA INC	CSRA	4,658.94	N/A	0.00%	N/A	N/A	N/A
CSX CORP	CSX	22,189.74	0.13%	3.32%	5.96%	9.38%	0.0119%
CINTAS CORP	CTAS	9,086.20	0.05%	1.24%	12.18%	13.50%	0.0070%
CENTURYLINK INC	CTL	12,786.31	0.07%	9.27%	0.40%	9.69%	0.0071%
COGNIZANT TECH SOLUTIONS-A	CTSH	35,699.72	0.20%	0.00%	16.27%	16.27%	0.0333%
CITRIX SYSTEMS INC	CTXS	10,198.56	0.06%	0.00%	18.58%	18.58%	0.0109%
CABLEVISION SYSTEMS-NY GRP-A	CVC	8,563.81	0.05%	1.65%	8.40%	10.12%	0.0050%
CVS HEALTH CORP	CVS	103,977.08	0.60%	1.48%	14.50%	16.09%	0.0960%
CHEVRON CORP	CVX	157,470.01	0.90%	5.12%	-1.56%	3.52%	0.0318%
DOMINION RESOURCES INC/VA	D	41,006.58	0.24%	3.76%	6.50%	10.38%	0.0244%
DELTA AIR LINES INC	DAL	34,998.08	0.20%	1.01%	23.40%	24.53%	0.0492%
DU PONT (E.I.) DE NEMOURS	DD	47,404.85	0.27%	3.20%	5.45%	8.74%	0.0238%
DEERE & CO	DE	23,122.30	0.13%	3.35%	5.52%	8.97%	0.0119%
DISCOVER FINANCIAL SERVICES	DFS	21,015.10	0.12%	2.20%	7.62%	9.90%	0.0119%
DOLLAR GENERAL CORP	DG	20,039.57	0.11%	1.28%	12.80%	14.15%	0.0163%
QUEST DIAGNOSTICS INC	DGX	9,428.11	0.05%	2.31%	10.46%	12.89%	0.0070%
DR HORTON INC	DHI	9,849.06	0.06%	1.20%	15.90%	17.19%	0.0097%
DANAHER CORP	DHR	58,379.46	0.33%	0.62%	12.90%	13.56%	0.0454%
WALT DISNEY CO/THE	DIS	154,149.70	0.88%	1.53%	9.20%	10.80%	0.0955%
DISCOVERY COMMUNICATIONS-A	DISCA	16,638.82	0.10%	0.00%	15.50%	15.50%	0.0148%
DELPHI AUTOMOTIVE PLC	DLPH	18,897.55	0.11%	1.54%	10.61%	12.23%	0.0133%
DOLLAR TREE INC	DLTR	17,680.13	0.10%	0.00%	22.00%	22.00%	0.0223%
DUN & BRADSTREET CORP	DNB	3,446.73	0.02%	1.94%	10.00%	12.04%	0.0024%
DIAMOND OFFSHORE DRILLING	DO	2,319.35	0.01%	2.96%	13.40%	16.56%	0.0022%
DOVER CORP	DOV	8,197.68	0.05%	3.10%	11.33%	14.61%	0.0069%
DOW CHEMICAL CO/THE	DOW	49,774.08	0.29%	3.97%	6.48%	10.57%	0.0302%
DR PEPPER SNAPPLE GROUP INC	DPS	16,841.62	0.10%	2.10%	7.70%	9.88%	0.0095%
DARDEN RESTAURANTS INC	DRI	7,723.68	0.04%	3.40%	12.22%	15.83%	0.0070%
DTE ENERGY COMPANY	DTE	14,454.97	0.08%	3.52%	5.04%	8.65%	0.0072%
DUKE ENERGY CORP	DUK	49,615.14	0.28%	4.55%	4.09%	8.73%	0.0248%
DAVITA HEALTHCARE PARTNERS I	DVA	14,025.17	0.08%	0.00%	13.03%	13.03%	0.0105%
DEVON ENERGY CORP	DVN	10,065.39	0.06%	3.92%	5.40%	9.43%	0.0054%
ELECTRONIC ARTS INC	EA	20,531.97	0.12%	0.00%	14.33%	14.33%	0.0169%
EBAY INC	EBAY	30,328.52	0.17%	0.00%	7.25%	7.25%	0.0126%
ECOLAB INC	ECL	30,292.23	0.17%	1.27%	13.22%	14.57%	0.0253%
CONSOLIDATED EDISON INC	ED	19,843.25	0.11%	3.83%	6.97%	6.97%	0.0079%
EQUIFAX INC	EFX	12,186.40	0.07%	1.13%	10.00%	11.18%	0.0078%
EDISON INTERNATIONAL	EIX	19,261.96	0.11%	2.85%	4.58%	7.50%	0.0083%
ESTEE LAUDER COMPANIES-CL A	EL	30,406.67	0.17%	1.36%	12.36%	13.81%	0.0241%
EMC CORP/MA	EMC	48,512.65	0.28%	1.88%	8.53%	10.49%	0.0292%
EASTMAN CHEMICAL CO	EMN	9,175.03	0.05%	2.63%	6.95%	9.67%	0.0051%
EMERSON ELECTRIC CO	EMR	28,067.37	0.16%	4.46%	7.38%	12.00%	0.0193%
ENDO INTERNATIONAL PLC	ENDP	11,895.38	0.07%	0.00%	12.13%	12.13%	0.0083%
EOG RESOURCES INC	EOG	34,616.72	0.20%	1.06%	0.98%	2.05%	0.0041%
EQUINIX INC	EQIX	18,158.00	0.10%	1.98%	17.00%	19.15%	0.0199%
EQUITY RESIDENTIAL	EQR	28,623.70	0.16%	2.81%	5.99%	8.88%	0.0146%
EQT CORP	EQT	8,008.35	0.05%	4.49%	25.00%	30.06%	0.0138%
EVERSOURCE ENERGY	ES	16,300.46	0.09%	3.26%	6.60%	9.96%	0.0093%
EXPRESS SCRIPTS HOLDING CO	ESRX	50,443.43	0.29%	0.00%	16.17%	16.17%	0.0468%
ESSEX PROPERTY TRUST INC	ESS	15,197.99	0.09%	2.50%	6.27%	8.84%	0.0077%
ENSCO PLC-CL A	ESV	2,425.39	0.01%	5.83%	-4.00%	1.72%	0.0002%
E*TRADE FINANCIAL CORP	ETFC	7,341.78	0.04%	0.00%	16.38%	16.38%	0.0069%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
EATON CORP PLC	ETN	22,149.61	0.13%	4.60%	8.36%	13.15%	0.0167%
ENERGY CORP	ETR	12,146.36	0.07%	4.92%	1.56%	6.51%	0.0045%
EDWARDS LIFESCIENCES CORP	EW	16,111.35	0.09%	0.00%	16.40%	16.40%	0.0152%
EXELON CORP	EXC	25,251.24	0.14%	4.52%	4.88%	9.51%	0.0138%
EXPEDITORS INTL WASH INC	EXPD	7,866.64	0.05%	1.69%	8.73%	10.49%	0.0047%
EXPEDIA INC	EXPE	15,441.48	0.09%	0.83%	19.93%	20.84%	0.0185%
FORD MOTOR CO	F	47,504.50	0.27%	4.79%	12.19%	17.27%	0.0471%
FASTENAL CO	FAST	10,912.82	0.06%	3.30%	13.75%	17.27%	0.0108%
FACEBOOK INC-A	FB	268,574.60	1.54%	0.00%	29.26%	29.26%	0.4507%
FREEMPORT-MCMORAN INC	FCX	5,028.04	0.03%	9.45%	-59.00%	-52.34%	-0.0151%
FEDEX CORP	FDX	34,981.09	0.20%	0.79%	13.80%	14.64%	0.0294%
FIRSTENERGY CORP	FE	13,465.42	0.08%	4.52%	2.64%	7.22%	0.0056%
F5 NETWORKS INC	FFIV	6,640.30	0.04%	0.00%	14.55%	14.55%	0.0055%
FIDELITY NATIONAL INFO SERV	FIS	16,494.70	0.09%	1.77%	14.64%	14.64%	0.0138%
FISERV INC	FISV	19,960.57	0.11%	0.00%	12.80%	12.80%	0.0147%
FIFTH THIRD BANCORP	FITB	13,598.95	0.08%	3.05%	4.58%	7.69%	0.0060%
FLIR SYSTEMS INC	FLIR	4,384.16	0.03%	1.41%	15.00%	16.51%	0.0042%
FLUOR CORP	FLR	5,940.64	0.03%	2.00%	5.73%	7.79%	0.0027%
FLOWSERVE CORP	FLS	4,712.60	0.03%	1.99%	6.47%	8.51%	0.0023%
FMC CORP	FMC	4,682.15	0.03%	1.84%	6.47%	8.37%	0.0022%
TWENTY-FIRST CENTURY FOX-A	FOXA	51,453.92	0.30%	1.23%	13.94%	15.26%	0.0450%
FIRST SOLAR INC	FSLR	6,188.42	0.04%	0.00%	2.01%	2.01%	0.0007%
FMC TECHNOLOGIES INC	FTI	5,546.76	0.03%	0.00%	-11.80%	-11.80%	-0.0038%
FRONTIER COMMUNICATIONS CORP	FTR	4,953.22	0.03%	9.91%	3.00%	13.05%	0.0037%
AGL RESOURCES INC	GAS	7,644.86	0.04%	3.21%	7.00%	10.32%	0.0045%
GENERAL DYNAMICS CORP	GD	39,828.99	0.23%	2.15%	9.02%	11.27%	0.0257%
GENERAL ELECTRIC CO	GE	268,884.98	1.54%	3.24%	8.58%	11.96%	0.1844%
GENERAL GROWTH PROPERTIES	GGP	23,853.83	0.14%	2.60%	7.05%	9.75%	0.0133%
GILEAD SCIENCES INC	GILD	132,357.99	0.76%	1.40%	7.78%	9.24%	0.0702%
GENERAL MILLS INC	GIS	32,479.72	0.19%	3.27%	7.54%	10.93%	0.0204%
CORNING INC	GLW	19,956.95	0.11%	2.83%	5.29%	8.20%	0.0094%
GENERAL MOTORS CO	GM	46,016.15	0.26%	4.72%	12.08%	17.09%	0.0451%
KEURIG GREEN MOUNTAIN INC	GMCR	13,432.56	0.08%	1.43%	12.08%	13.60%	0.0105%
GAMESTOP CORP-CLASS A	GME	2,683.75	0.02%	3.74%	11.78%	15.74%	0.0024%
ALPHABET INC-CL C	GOOG	482,671.80	2.77%	0.00%	17.63%	17.63%	0.4880%
GENUINE PARTS CO	GPC	11,830.39	0.07%	3.09%	6.62%	9.81%	0.0067%
GAP INC/THE	GPS	9,348.24	0.05%	3.95%	8.34%	12.46%	0.0067%
GARMIN LTD	GRMN	6,189.92	0.04%	6.18%	5.07%	11.40%	0.0040%
GOLDMAN SACHS GROUP INC	GS	69,299.84	0.40%	1.64%	9.15%	10.86%	0.0432%
GOODYEAR TIRE & RUBBER CO	GT	7,408.42	0.04%	0.91%	7.00%	7.94%	0.0034%
WW GRAINGER INC	GWV	11,893.40	0.07%	2.42%	10.08%	12.63%	0.0086%
HALLIBURTON CO	HAL	26,401.84	0.15%	2.33%	6.70%	9.11%	0.0138%
HARMAN INTERNATIONAL	HAR	5,546.41	0.03%	1.83%	16.00%	17.97%	0.0057%
HASBRO INC	HAS	8,981.62	0.05%	2.55%	9.55%	12.22%	0.0063%
HUNTINGTON BANCSHARES INC	HBAN	7,632.00	0.04%	2.61%	7.20%	9.90%	0.0043%
HANESBRANDS INC	HBI	11,382.42	0.07%	1.38%	16.04%	17.53%	0.0114%
HCA HOLDINGS INC	HCA	26,200.80	0.15%	0.00%	10.33%	10.33%	0.0155%
WELLTOWER INC	HCN	23,469.29	0.13%	4.98%	4.51%	9.60%	0.0129%
HCP INC	HCP	16,853.13	0.10%	6.24%	3.53%	9.88%	0.0095%
HOME DEPOT INC	HD	151,169.48	0.87%	1.97%	14.07%	16.18%	0.1403%
HESS CORP	HES	11,077.68	0.06%	2.59%	-15.54%	-13.15%	-0.0084%
HARTFORD FINANCIAL SVCS GRP	HIG	16,007.56	0.09%	2.00%	9.25%	11.34%	0.0104%
HARLEY-DAVIDSON INC	HOG	7,758.82	0.04%	3.05%	10.58%	13.79%	0.0061%
HONEYWELL INTERNATIONAL INC	HON	74,957.45	0.43%	2.22%	9.74%	12.07%	0.0519%
STARWOOD HOTELS & RESORTS	HOT	10,109.25	0.06%	2.52%	8.35%	10.97%	0.0064%
HELMERICH & PAYNE	HP	4,866.59	0.03%	6.10%	1.10%	7.23%	0.0020%
HEWLETT PACKARD ENTERPRIS	HPE	21,851.20	0.13%	1.75%	3.01%	4.79%	0.0060%
HP INC	HPQ	18,115.59	0.10%	4.88%	2.43%	7.36%	0.0077%
H&R BLOCK INC	HRB	7,519.73	0.04%	2.53%	11.00%	13.66%	0.0059%
HORMEL FOODS CORP	HRL	20,113.09	0.12%	1.51%	7.15%	8.71%	0.0100%
HARRIS CORP	HRS	10,481.80	N/A	2.39%	N/A	N/A	N/A
HENRY SCHEIN INC	HSIC	12,166.87	0.07%	0.00%	10.23%	10.23%	0.0071%
HOST HOTELS & RESORTS INC	HST	9,891.20	0.06%	6.18%	5.67%	12.02%	0.0068%
HERSHEY CO/THE	HSY	18,063.22	0.10%	2.65%	8.43%	11.19%	0.0116%
HUMANA INC	HUM	24,035.99	0.14%	0.71%	12.66%	13.41%	0.0185%
INTL BUSINESS MACHINES CORP	IBM	126,143.42	0.72%	3.76%	6.48%	10.36%	0.0749%
INTERCONTINENTAL EXCHANGE IN	ICE	29,145.69	0.17%	1.18%	15.75%	17.02%	0.0285%
INTL FLAVORS & FRAGRANCES	IFF	9,253.65	0.05%	1.79%	9.40%	11.27%	0.0060%
ILLUMINA INC	ILMN	25,056.36	0.14%	0.00%	19.38%	19.38%	0.0278%
INTEL CORP	INTC	140,437.44	0.81%	3.44%	8.69%	12.28%	0.0989%
INTUIT INC	INTU	24,153.76	0.14%	1.31%	17.21%	18.63%	0.0258%
INTERNATIONAL PAPER CO	IP	15,098.53	0.09%	4.50%	9.10%	13.81%	0.0120%
INTERPUBLIC GROUP OF COS INC	IPG	8,825.88	0.05%	2.20%	6.50%	8.77%	0.0044%
INGERSOLL-RAND PLC	IR	13,506.68	0.08%	2.25%	10.11%	12.47%	0.0097%
IRON MOUNTAIN INC	IRM	5,245.04	0.03%	7.70%	7.30%	15.28%	0.0046%
INTUITIVE SURGICAL INC	ISRG	20,821.76	0.12%	0.00%	14.53%	14.53%	0.0173%
ILLINOIS TOOL WORKS	ITW	29,533.71	0.17%	2.48%	9.50%	6.93%	0.0161%
INVESCO LTD	IVZ	12,190.28	0.07%	3.74%	9.46%	13.37%	0.0093%
HUNT (JB) TRANSPRT SVCS INC	JBHT	7,470.90	0.04%	1.29%	14.13%	15.51%	0.0066%
JOHNSON CONTROLS INC	JCI	22,488.90	0.13%	3.29%	11.50%	14.98%	0.0193%
JACOBS ENGINEERING GROUP INC	JEC	4,632.38	0.03%	0.00%	7.22%	7.22%	0.0019%
JOHNSON & JOHNSON	JNJ	268,393.53	1.54%	3.04%	6.03%	9.17%	0.1411%
JUNIPER NETWORKS INC	JNPR	9,931.84	0.06%	1.55%	11.38%	13.01%	0.0074%
JPMORGAN CHASE & CO	JPM	209,971.64	1.20%	3.25%	7.70%	11.08%	0.1334%
NORDSTROM INC	JWN	8,356.80	0.05%	13.82%	7.95%	22.32%	0.0107%
KELLOGG CO	K	25,045.29	0.14%	2.83%	4.54%	7.44%	0.0107%
KEYCORP	KEY	9,615.07	0.06%	2.53%	6.56%	9.17%	0.0051%
KRAFT HEINZ CO/THE	KHC	83,971.14	0.48%	2.87%	15.87%	18.96%	0.0913%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
KIMCO REALTY CORP	KIM	10,498.08	0.06%	3.87%	4.78%	8.75%	0.0053%
KLA-TENCOR CORP	KLAC	10,048.15	0.06%	3.19%	13.47%	16.88%	0.0097%
KIMBERLY-CLARK CORP	KMB	45,504.98	0.26%	2.80%	8.22%	11.13%	0.0291%
KINDER MORGAN INC	KMI	29,009.69	0.17%	12.38%	6.13%	18.89%	0.0314%
CARMAX INC	KMX	8,811.73	0.05%	0.00%	13.53%	13.53%	0.0068%
COCA-COLA CO/THE	KO	180,482.88	1.04%	3.18%	5.79%	9.06%	0.0938%
MICHAEL KORS HOLDINGS LTD	KORS	6,546.68	0.04%	0.00%	7.11%	7.11%	0.0027%
KROGER CO	KR	37,517.08	0.22%	1.07%	10.39%	11.51%	0.0248%
KOHL'S CORP	KSS	9,139.84	0.05%	3.74%	7.52%	11.40%	0.0060%
KANSAS CITY SOUTHERN	KSU	7,384.17	0.04%	1.95%	8.80%	10.84%	0.0046%
LOEWS CORP	L	12,561.45	N/A	0.71%	N/A	N/A	N/A
L BRANDS INC	LB	26,726.37	0.15%	4.34%	11.18%	15.76%	0.0242%
LEGGETT & PLATT INC	LEG	5,268.26	N/A	3.25%	N/A	N/A	N/A
LENNAR CORP-A	LEN	8,381.72	0.05%	0.39%	18.50%	18.93%	0.0091%
LABORATORY CRP OF AMER HLDGS	LH	11,229.18	0.06%	0.00%	10.26%	10.26%	0.0066%
L-3 COMMUNICATIONS HOLDINGS	LLL	8,755.13	0.05%	2.35%	4.00%	6.40%	0.0032%
LINEAR TECHNOLOGY CORP	LLTC	9,314.70	0.05%	3.12%	6.76%	9.98%	0.0053%
ELI LILLY & CO	LLY	90,020.14	0.52%	2.46%	12.59%	15.20%	0.0785%
LEGG MASON INC	LM	3,447.32	0.02%	2.54%	18.45%	21.22%	0.0042%
LOCKHEED MARTIN CORP	LMT	66,372.75	0.38%	2.84%	7.80%	10.75%	0.0409%
LINCOLN NATIONAL CORP	LNC	10,002.78	0.06%	2.04%	10.30%	12.45%	0.0071%
LOWE'S COS INC	LOW	63,133.07	0.36%	1.54%	16.97%	18.64%	0.0675%
LAM RESEARCH CORP	LRCX	10,797.72	0.06%	1.77%	5.48%	7.29%	0.0045%
LEUCADIA NATIONAL CORP	LUK	5,703.20	0.03%	1.59%	18.00%	19.73%	0.0065%
SOUTHWEST AIRLINES CO	LUV	25,864.62	0.15%	0.75%	19.72%	20.54%	0.0305%
LEVEL 3 COMMUNICATIONS INC	LVLTL	16,641.24	0.10%	0.00%	30.00%	30.00%	0.0286%
LYONDELLBASELL INDU-CL A	LYB	33,699.30	0.19%	3.98%	5.33%	9.41%	0.0182%
MACY'S INC	M	11,908.24	0.07%	3.64%	6.60%	10.36%	0.0071%
MASTERCARD INC-CLASS A	MA	99,600.82	0.57%	0.71%	16.83%	17.60%	0.1006%
MACERICH CO/THE	MAC	12,069.32	0.07%	5.22%	5.45%	10.82%	0.0075%
MARRIOTT INTERNATIONAL -CL A	MAR	15,312.03	0.09%	1.59%	12.22%	13.91%	0.0122%
MASCO CORP	MAS	8,351.24	0.05%	1.47%	14.53%	16.11%	0.0077%
MATTEL INC	MAT	8,718.01	0.05%	5.92%	9.43%	15.63%	0.0078%
MCDONALD'S CORP	MCD	105,761.71	0.61%	3.00%	9.10%	12.23%	0.0742%
MICROCHIP TECHNOLOGY INC	MCHP	8,230.52	0.05%	3.54%	6.84%	10.50%	0.0050%
MCKESSON CORP	MCK	37,968.00	0.22%	0.62%	13.53%	14.19%	0.0309%
MOODY'S CORP	MCO	17,000.22	0.10%	1.54%	13.00%	14.64%	0.0143%
MONDELEZ INTERNATIONAL INC-A	MDLZ	64,059.34	0.37%	1.59%	10.90%	12.57%	0.0462%
MEDTRONIC PLC	MDT	103,943.03	0.60%	2.06%	8.07%	10.21%	0.0609%
METLIFE INC	MET	47,888.87	0.27%	3.44%	8.50%	12.08%	0.0332%
MCGRAW HILL FINANCIAL INC	MHFI	22,494.37	0.13%	1.59%	11.17%	12.85%	0.0166%
MOHAWK INDUSTRIES INC	MHK	12,230.44	0.07%	0.00%	11.55%	11.55%	0.0081%
MEAD JOHNSON NUTRITION CO	MJN	13,748.06	0.08%	2.35%	9.27%	11.72%	0.0092%
MCCORMICK & CO-NON VTG SHRS	MKC	10,721.04	0.06%	1.89%	6.50%	8.46%	0.0052%
MARTIN MARIETTA MATERIALS	MLM	8,247.07	0.05%	1.28%	23.61%	25.05%	0.0118%
MARSH & MCLENNAN COS	MMC	27,235.25	0.16%	2.28%	11.92%	14.33%	0.0224%
3M CO	MMM	85,393.23	0.49%	2.96%	9.10%	12.19%	0.0597%
MALLINCKRODT PLC	MNK	7,629.32	0.04%	0.00%	11.28%	11.28%	0.0049%
MONSTER BEVERAGE CORP	MNST	28,817.80	0.17%	0.00%	19.38%	19.38%	0.0320%
ALTRIA GROUP INC	MO	112,150.86	0.64%	3.83%	7.71%	11.68%	0.0751%
MONSANTO CO	MON	40,015.10	0.23%	2.39%	9.74%	12.25%	0.0281%
MOSAIC CO/THE	MOS	8,978.56	0.05%	4.28%	15.37%	19.97%	0.0103%
MARATHON PETROLEUM CORP	MPC	22,075.79	0.13%	2.79%	4.63%	7.48%	0.0095%
MERCK & CO. INC.	MRK	142,861.80	0.82%	3.53%	6.76%	10.40%	0.0852%
MARATHON OIL CORP	MRO	5,512.90	0.03%	8.35%	-0.78%	7.55%	0.0024%
MORGAN STANLEY	MS	50,283.74	0.29%	2.13%	17.07%	19.38%	0.0559%
MICROSOFT CORP	MSFT	407,303.69	2.34%	2.79%	9.93%	12.86%	0.3005%
MOTOROLA SOLUTIONS INC	MSI	10,874.43	0.06%	2.26%	9.00%	11.36%	0.0071%
M & T BANK CORP	MTB	18,575.21	0.11%	2.68%	6.07%	8.83%	0.0094%
MICRON TECHNOLOGY INC	MU	11,495.01	0.07%	0.00%	-0.14%	-0.14%	-0.0001%
MURPHY OIL CORP	MUR	2,951.94	0.02%	8.14%	13.00%	21.67%	0.0037%
MYLAN NV	MYL	24,444.74	0.14%	0.00%	10.80%	10.80%	0.0151%
NAVIENT CORP	NAVI	3,260.78	N/A	7.07%	N/A	N/A	N/A
NOBLE ENERGY INC	NBL	11,826.58	0.07%	2.62%	1.21%	3.85%	0.0026%
NASDAQ INC	NDAQ	9,277.72	0.05%	1.61%	6.85%	8.52%	0.0045%
NEXTERA ENERGY INC	NEE	48,476.01	0.28%	2.93%	6.72%	9.74%	0.0271%
NEWMONT MINING CORP	NEM	9,365.38	0.05%	0.54%	1.43%	1.97%	0.0011%
NETFLIX INC	NFLX	44,465.48	0.26%	0.00%	28.06%	28.06%	0.0716%
NEWFIELD EXPLORATION CO	NFX	4,286.31	0.02%	0.00%	5.48%	5.48%	0.0013%
NISOURCE INC	NI	6,290.57	0.04%	4.20%	4.00%	8.29%	0.0030%
NIKE INC -CL B	NKE	98,033.22	0.56%	1.06%	13.98%	15.12%	0.0850%
NIELSEN HOLDINGS PLC	NLSN	16,269.75	0.09%	2.46%	12.33%	14.94%	0.0139%
NORTHROP GRUMMAN CORP	NOC	33,596.78	0.19%	1.67%	8.69%	10.43%	0.0201%
NATIONAL OILWELL VARCO INC	NOV	11,253.64	0.06%	6.14%	-7.65%	-1.75%	-0.0011%
NRG ENERGY INC	NRG	3,176.32	0.02%	5.77%	26.60%	33.13%	0.0060%
NORFOLK SOUTHERN CORP	NSC	21,428.35	0.12%	3.29%	5.58%	8.95%	0.0110%
NETAPP INC	NTAP	6,504.66	0.04%	3.24%	11.20%	14.62%	0.0055%
NORTHERN TRUST CORP	NTRS	14,747.23	0.08%	2.21%	13.71%	16.07%	0.0136%
NUCOR CORP	NUE	11,234.46	0.06%	4.24%	9.00%	13.43%	0.0087%
NVIDIA CORP	NVDA	14,585.18	0.08%	1.45%	8.53%	10.04%	0.0084%
NEWELL RUBBERMAID INC	NWL	9,917.42	0.06%	2.02%	9.42%	11.54%	0.0066%
NEWS CORP - CLASS A	NWSA	7,330.39	0.04%	1.60%	6.00%	7.65%	0.0032%
REALTY INCOME CORP	O	13,032.55	0.07%	4.36%	4.58%	9.04%	0.0068%
OWENS-ILLINOIS INC	OI	2,105.37	0.01%	0.00%	5.02%	5.02%	0.0006%
ONEOK INC	OKE	4,591.55	0.03%	11.14%	7.17%	18.71%	0.0049%
OMNICOM GROUP	OMC	16,877.92	0.10%	2.89%	5.33%	8.29%	0.0080%
ORACLE CORP	ORCL	143,345.63	0.82%	1.78%	8.24%	10.10%	0.0830%
O'REILLY AUTOMOTIVE INC	ORLY	22,900.25	0.13%	0.00%	18.12%	18.12%	0.0238%

Company	Ticker	[4]	[5]	[6]	[7]	[8]	[9]
		Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
OCCIDENTAL PETROLEUM CORP	OXY	47,954.98	0.28%	4.73%	8.00%	12.92%	0.0355%
PAYCHEX INC	PAYX	16,856.19	0.10%	3.60%	9.33%	13.10%	0.0127%
PEOPLE'S UNITED FINANCIAL	PBCT	4,492.18	N/A	4.63%	N/A	N/A	N/A
PITNEY BOWES INC	PBI	3,635.58	0.02%	4.07%	14.00%	18.35%	0.0038%
PACCAR INC	PCAR	16,015.08	0.09%	3.34%	6.93%	10.39%	0.0095%
P G & E CORP	PCG	25,734.11	0.15%	3.48%	6.33%	9.91%	0.0146%
PLUM CREEK TIMBER CO	PCL	7,188.44	0.04%	4.26%	22.82%	27.57%	0.0114%
PRICELINE GROUP INC/THE	PCLN	54,102.14	0.31%	0.00%	18.71%	18.71%	0.0581%
PRECISION CASTPARTS CORP	PCP	31,935.61	0.18%	0.06%	12.50%	12.56%	0.0230%
PATTERSON COS INC	PDCO	4,001.06	0.02%	2.28%	9.93%	12.33%	0.0028%
PUBLIC SERVICE ENTERPRISE GP	PEG	20,036.09	0.11%	3.94%	3.80%	7.82%	0.0090%
PEPSICO INC	PEP	136,841.99	0.78%	2.94%	6.04%	9.07%	0.0712%
PFIZER INC	PFE	190,190.19	1.09%	3.64%	5.09%	8.81%	0.0961%
PRINCIPAL FINANCIAL GROUP	PFG	11,098.20	0.06%	3.96%	7.93%	12.04%	0.0077%
PROCTER & GAMBLE CO/THE	PG	203,988.54	1.17%	3.61%	8.25%	12.01%	0.1406%
PROGRESSIVE CORP	PGR	17,483.72	0.10%	2.55%	8.66%	11.32%	0.0114%
PARKER HANNIFIN CORP	PH	11,964.88	0.07%	2.92%	8.37%	11.41%	0.0078%
PULTEGROUP INC	PHM	5,565.25	0.03%	2.08%	17.50%	19.77%	0.0063%
PERKINELMER INC	PKI	5,306.80	0.03%	0.59%	6.14%	6.75%	0.0021%
PROLOGIS INC	PLD	20,338.26	0.12%	3.93%	4.77%	8.80%	0.0103%
PHILIP MORRIS INTERNATIONAL	PM	133,688.73	0.77%	4.68%	6.54%	11.37%	0.0872%
PNC FINANCIAL SERVICES GROUP	PNC	43,838.87	0.25%	2.48%	7.72%	10.29%	0.0259%
PENTAIR PLC	PNR	8,042.92	0.05%	2.87%	15.28%	18.36%	0.0085%
PINNACLE WEST CAPITAL	PNW	7,095.49	0.04%	3.77%	4.97%	8.83%	0.0036%
PEPCO HOLDINGS INC	POM	6,637.16	0.04%	4.13%	6.00%	10.25%	0.0039%
PPG INDUSTRIES INC	PPG	24,745.84	0.14%	1.52%	7.03%	8.60%	0.0122%
PPL CORP	PPL	22,399.03	0.13%	4.51%	4.69%	9.30%	0.0120%
PERRIGO CO PLC	PRGO	21,229.76	0.12%	0.35%	12.98%	13.35%	0.0163%
PRUDENTIAL FINANCIAL INC	PRU	31,506.33	0.18%	3.48%	10.67%	14.33%	0.0259%
PUBLIC STORAGE	PSA	43,037.82	0.25%	2.64%	4.88%	7.58%	0.0187%
PHILLIPS 66	PSX	41,859.06	0.24%	2.77%	6.93%	9.80%	0.0235%
PVH CORP	PVH	5,601.02	0.03%	0.22%	7.87%	8.10%	0.0026%
QUANTA SERVICES INC	PWR	2,896.41	0.02%	0.00%	8.00%	8.00%	0.0013%
PRAXAIR INC	PX	27,741.10	0.16%	2.94%	6.85%	9.89%	0.0157%
PIONEER NATURAL RESOURCES CO	PXD	18,272.98	0.10%	0.07%	0.15%	0.22%	0.0002%
PAYPAL HOLDINGS INC	PYPL	39,472.81	0.23%	0.00%	16.33%	16.33%	0.0370%
QUALCOMM INC	QCOM	68,871.77	0.40%	4.20%	11.12%	15.55%	0.0614%
QORVO INC	QROV	5,173.08	0.03%	0.00%	14.74%	14.74%	0.0044%
RYDER SYSTEM INC	R	2,631.19	0.02%	3.01%	9.70%	12.85%	0.0019%
REYNOLDS AMERICAN INC	RAI	66,681.87	0.38%	3.02%	5.90%	9.02%	0.0345%
ROYAL CARIBBEAN CRUISES LTD	RCL	18,242.02	0.10%	1.60%	19.45%	21.20%	0.0222%
REGENERON PHARMACEUTICALS	REGN	48,176.91	0.28%	0.00%	22.47%	22.47%	0.0621%
REGIONS FINANCIAL CORP	RF	10,704.84	0.06%	3.24%	5.32%	8.65%	0.0053%
ROBERT HALF INTL INC	RHI	5,633.86	0.03%	1.89%	15.15%	17.19%	0.0056%
RED HAT INC	RHT	13,435.73	0.08%	0.00%	18.03%	18.03%	0.0139%
TRANSOCEAN LTD	RIG	3,657.74	0.02%	10.59%	26.29%	38.26%	0.0080%
RALPH LAUREN CORP	RL	8,527.04	0.05%	2.00%	14.40%	16.54%	0.0081%
ROCKWELL AUTOMATION INC	ROK	12,103.17	0.07%	3.15%	7.67%	10.94%	0.0076%
ROPER TECHNOLOGIES INC	ROP	17,079.42	0.10%	0.59%	11.77%	12.39%	0.0121%
ROSS STORES INC	ROST	21,177.71	0.12%	0.90%	10.63%	11.58%	0.0141%
RANGE RESOURCES CORP	RRC	3,700.73	0.02%	0.74%	9.54%	10.32%	0.0022%
REPUBLIC SERVICES INC	RSG	15,025.00	0.09%	2.68%	6.77%	9.54%	0.0082%
RAYTHEON COMPANY	RTN	36,219.08	0.21%	2.21%	7.41%	9.70%	0.0201%
STARBUCKS CORP	SBUX	86,118.40	0.49%	1.41%	18.16%	19.70%	0.0973%
SCANA CORP	SCG	8,650.76	0.05%	3.60%	5.55%	9.25%	0.0046%
SCHWAB (CHARLES) CORP	SCHW	35,572.46	0.20%	0.89%	19.58%	20.55%	0.0419%
SPECTRA ENERGY CORP	SE	16,462.99	0.09%	6.04%	6.40%	12.63%	0.0119%
SEALED AIR CORP	SEE	8,082.53	0.05%	1.27%	10.01%	11.34%	0.0053%
SHERWIN-WILLIAMS CO/THE	SHW	22,539.63	0.13%	1.10%	17.55%	18.75%	0.0242%
SIGNET JEWELERS LTD	SIG	9,664.72	0.06%	0.70%	12.50%	13.24%	0.0073%
JM SMUCKER CO/THE	SJM	14,152.75	0.08%	2.27%	11.43%	13.83%	0.0112%
SCHLUMBERGER LTD	SLB	79,462.14	0.46%	3.09%	12.60%	15.88%	0.0724%
SL GREEN REALTY CORP	SLG	10,114.10	0.06%	2.46%	5.14%	7.66%	0.0044%
SNAP-ON INC	SNA	9,130.65	0.05%	1.33%	3.30%	4.65%	0.0024%
SANDISK CORP	SNDK	14,345.43	0.08%	1.68%	6.25%	7.98%	0.0066%
SCRIPPS NETWORKS INTER-CL A	SNI	7,199.74	0.04%	1.64%	9.84%	11.56%	0.0048%
SOUTHERN CO/THE	SO	42,874.65	0.25%	4.58%	3.93%	8.60%	0.0211%
SIMON PROPERTY GROUP INC	SPG	56,985.53	0.33%	3.30%	6.79%	10.19%	0.0333%
STAPLES INC	SPLS	5,811.91	0.03%	5.32%	3.46%	8.87%	0.0030%
STERICYCLE INC	SRCL	9,786.85	0.06%	0.00%	15.69%	15.69%	0.0088%
SEMPRA ENERGY	SRE	22,832.88	0.13%	3.04%	9.00%	12.18%	0.0159%
SUNTRUST BANKS INC	STI	19,079.91	0.11%	2.46%	6.54%	9.08%	0.0099%
ST JUDE MEDICAL INC	STJ	15,512.40	0.09%	2.10%	11.22%	13.44%	0.0120%
STATE STREET CORP	STT	22,179.63	0.13%	2.40%	8.15%	10.64%	0.0135%
SEAGATE TECHNOLOGY	STX	9,237.09	0.05%	7.61%	7.06%	14.94%	0.0079%
CONSTELLATION BRANDS INC-A	STZ	28,436.31	0.16%	0.87%	13.68%	14.61%	0.0238%
STANLEY BLACK & DECKER INC	SWK	14,328.81	0.08%	2.23%	10.67%	13.01%	0.0107%
SKYWORX SOLUTIONS INC	SWKS	11,597.14	0.07%	1.75%	18.29%	20.20%	0.0134%
SOUTHWESTERN ENERGY CO	SWN	2,576.01	0.01%	0.00%	5.30%	5.30%	0.0008%
SYNCHRONY FINANCIAL	SYF	23,046.95	0.13%	0.00%	4.63%	6.54%	0.0061%
STRYKER CORP	SYK	34,213.83	0.20%	1.52%	11.14%	12.75%	0.0250%
SYMANTEC CORP	SYMC	13,328.13	0.08%	3.06%	6.47%	9.63%	0.0074%
SYSCO CORP	SYU	22,501.57	0.13%	3.14%	9.18%	12.47%	0.0161%
AT&T INC	T	209,106.48	1.20%	5.55%	4.42%	10.10%	0.1211%
MOLSON COORS BREWING CO -B	TAP	15,864.32	0.09%	1.91%	12.10%	14.12%	0.0128%
TERADATA CORP	TDC	3,053.68	0.02%	0.00%	8.22%	8.22%	0.0014%
TECO ENERGY INC	TE	6,330.06	0.04%	3.34%	5.50%	8.94%	0.0032%
TE CONNECTIVITY LTD	TEL	20,610.78	0.12%	2.39%	10.00%	12.51%	0.0148%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
TEGNA INC	TGNA	5,325.06	0.03%	2.75%	5.00%	7.82%	0.0024%
TARGET CORP	TGT	43,172.90	0.25%	3.06%	9.82%	13.03%	0.0323%
TENET HEALTHCARE CORP	THC	2,300.37	0.01%	0.00%	18.95%	18.95%	0.0025%
TIFFANY & CO	TIF	8,673.53	0.05%	2.33%	10.39%	12.84%	0.0064%
TJX COMPANIES INC	TJX	45,199.91	0.26%	1.24%	10.89%	12.20%	0.0316%
TORCHMARK CORP	TMK	6,530.34	0.04%	1.00%	7.56%	8.60%	0.0032%
THERMO FISHER SCIENTIFIC INC	TMO	52,984.21	0.30%	0.45%	11.50%	11.98%	0.0364%
TRIPADVISOR INC	TRIP	10,183.91	0.06%	0.00%	17.34%	17.34%	0.0101%
T ROWE PRICE GROUP INC	TROW	16,308.64	0.09%	6.05%	9.33%	15.66%	0.0147%
TRAVELERS COS INC/THE	TRV	31,973.40	0.18%	2.26%	7.30%	9.65%	0.0177%
TRACTOR SUPPLY COMPANY	TSCO	10,946.87	0.06%	0.93%	15.31%	16.31%	0.0102%
TYSON FOODS INC-CL A	TSN	20,382.90	0.12%	1.17%	8.73%	9.95%	0.0116%
TESORO CORP	TSO	11,161.40	0.06%	2.01%	18.28%	20.47%	0.0131%
TOTAL SYSTEM SERVICES INC	TSS	8,331.04	0.05%	0.88%	11.00%	11.93%	0.0057%
TIME WARNER CABLE	TWC	50,134.46	0.29%	1.70%	6.90%	8.66%	0.0249%
TIME WARNER INC	TWX	55,683.78	0.32%	2.01%	12.37%	14.50%	0.0463%
TEXAS INSTRUMENTS INC	TXN	48,722.21	0.28%	2.89%	9.48%	12.50%	0.0349%
TEXTRON INC	TXT	10,221.59	0.06%	0.21%	9.26%	9.48%	0.0056%
TYCO INTERNATIONAL PLC	TYC	12,848.53	0.07%	2.84%	10.60%	13.59%	0.0100%
UNDER ARMOUR INC-CLASS A	UA	14,811.44	0.08%	0.00%	22.87%	22.87%	0.0194%
UNITED CONTINENTAL HOLDINGS	UAL	17,446.01	0.10%	0.00%	20.25%	20.25%	0.0203%
UNIVERSAL HEALTH SERVICES-B	UHS	10,751.89	0.06%	0.37%	10.35%	10.74%	0.0066%
UNITEDHEALTH GROUP INC	UNH	104,146.16	0.60%	1.72%	12.22%	14.05%	0.0839%
UNUM GROUP	UNM	6,918.78	0.04%	2.46%	9.00%	11.57%	0.0046%
UNION PACIFIC CORP	UNP	63,298.88	0.36%	3.10%	8.04%	11.27%	0.0409%
UNITED PARCEL SERVICE-CL B	UPS	80,172.94	0.46%	3.24%	11.44%	14.87%	0.0684%
URBAN OUTFITTERS INC	URBN	2,483.69	0.01%	0.00%	12.68%	12.68%	0.0018%
UNITED RENTALS INC	URI	5,096.28	0.03%	0.00%	12.39%	12.39%	0.0036%
US BANCORP	USB	68,477.87	0.39%	2.75%	6.16%	8.99%	0.0353%
UNITED TECHNOLOGIES CORP	UTX	75,955.60	0.44%	2.99%	8.44%	11.55%	0.0503%
VISA INC-CLASS A SHARES	V	158,081.48	0.91%	0.79%	16.53%	17.39%	0.1577%
VARIAN MEDICAL SYSTEMS INC	VAR	7,303.36	0.04%	0.00%	9.78%	9.78%	0.0041%
VF CORP	VFC	23,438.47	0.13%	2.42%	11.02%	13.58%	0.0183%
VIACOM INC-CLASS B	VIAB	15,931.41	0.09%	4.07%	9.28%	13.54%	0.0124%
VALERO ENERGY CORP	VLO	31,976.64	0.18%	2.54%	4.77%	7.37%	0.0135%
VULCAN MATERIALS CO	VMC	11,177.46	0.06%	0.48%	44.64%	45.22%	0.0290%
VORNADO REALTY TRUST	VNO	17,127.05	0.10%	2.77%	4.87%	7.71%	0.0076%
VERISK ANALYTICS INC	VRSK	12,209.01	0.07%	0.00%	12.00%	12.00%	0.0084%
VERISIGN INC	VRSN	8,279.41	0.05%	0.00%	8.70%	8.70%	0.0041%
VERTEX PHARMACEUTICALS INC	VRTX	24,058.18	0.14%	0.00%	33.59%	33.59%	0.0463%
VENTAS INC	VTR	18,210.83	0.10%	5.58%	2.60%	8.25%	0.0086%
VERIZON COMMUNICATIONS INC	VZ	180,780.03	1.04%	5.00%	7.28%	12.46%	0.1291%
WATERS CORP	WAT	10,309.24	0.06%	0.00%	9.76%	9.76%	0.0058%
WALGREENS BOOTS ALLIANCE INC	WBA	86,224.24	0.49%	1.82%	12.93%	14.87%	0.0735%
WESTERN DIGITAL CORP	WDC	10,946.26	0.06%	4.34%	5.10%	9.54%	0.0060%
WEC ENERGY GROUP INC	WEC	16,652.35	0.10%	3.40%	6.10%	9.60%	0.0092%
WELLS FARGO & CO	WFC	249,363.42	1.43%	3.21%	9.52%	12.88%	0.1843%
WHOLE FOODS MARKET INC	WFM	10,190.27	0.06%	1.83%	9.85%	11.77%	0.0069%
WHIRLPOOL CORP	WHR	10,058.93	0.06%	2.70%	16.65%	19.57%	0.0113%
WILLIS TOWERS WATSON PLC	WLTW	15,538.73	0.09%	1.20%	10.00%	11.26%	0.0100%
WASTE MANAGEMENT INC	WM	23,003.44	0.13%	2.97%	8.00%	11.09%	0.0146%
WILLIAMS COS INC	WMB	12,071.21	0.07%	15.27%	10.00%	26.03%	0.0180%
WAL-MART STORES INC	WMT	198,293.25	1.14%	3.16%	-0.08%	3.08%	0.0351%
WESTROCK CO	WRK	9,520.83	0.05%	4.04%	5.72%	9.88%	0.0054%
WESTERN UNION CO	WU	8,407.88	0.05%	3.73%	6.66%	10.51%	0.0051%
WEYERHAEUSER CO	WY	13,180.54	0.08%	4.69%	3.60%	8.37%	0.0063%
WYNDHAM WORLDWIDE CORP	WYN	7,594.49	0.04%	2.59%	9.00%	11.71%	0.0051%
WYNN RESORTS LTD	WYNN	5,928.55	0.03%	5.14%	8.93%	14.30%	0.0049%
CIMAREX ENERGY CO	XEC	7,973.27	0.05%	0.76%	-5.56%	-4.82%	-0.0022%
XCEL ENERGY INC	XEL	18,523.64	0.11%	3.48%	4.67%	8.23%	0.0087%
XL GROUP PLC	XL	10,570.46	0.06%	2.04%	9.50%	11.64%	0.0071%
XILINX INC	XLNX	11,001.10	0.06%	2.89%	8.12%	11.13%	0.0070%
EXXON MOBIL CORP	XOM	322,960.77	1.85%	3.71%	-0.14%	3.57%	0.0661%
DENTSPLY INTERNATIONAL INC	XRAY	7,910.60	0.05%	0.50%	9.07%	9.59%	0.0043%
XEROX CORP	XRX	9,212.87	0.05%	3.07%	8.55%	11.75%	0.0062%
XYLEM INC	XYL	5,915.50	0.03%	1.69%	11.30%	13.09%	0.0044%
YAHOO! INC	YHOO	27,518.51	0.16%	0.00%	11.76%	11.76%	0.0186%
YUM! BRANDS INC	YUM	28,932.00	0.17%	2.55%	11.85%	14.55%	0.0241%
ZIMMER BIOMET HOLDINGS INC	ZBH	20,598.07	0.12%	0.87%	10.48%	11.40%	0.0135%
ZIONS BANCORPORATION	ZION	4,563.94	0.03%	0.97%	7.15%	8.16%	0.0021%
ZOETIS INC	ZTS	21,599.79	0.12%	0.76%	10.23%	11.03%	0.0137%
		17,435,002.32					13.63%

[1] Equals sum of Col. [9]

[2] Source: Bloomberg Professional

[3] Equals [1] - [2]

[4] Source: Bloomberg Professional

[5] Equals weight in S&P 500 based on market capitalization

[6] Source: Bloomberg Professional

[7] Source: Bloomberg Professional

[8] Equals ([6] x (1 + (0.5 x [7]))) + [7]

[9] Equals Col. [5] x Col. [8]

Ex-Ante Market Risk Premium
Market DCF Method Based - Value Line

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-day	Implied Market
Market Return	average)	Risk Premium
12.82%	2.96%	9.87%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	12,486.52	0.08%	1.22%	-1.00%	0.21%	0.0002%
ALCOA INC	AA	9,484.57	0.06%	1.66%	17.00%	18.80%	0.0110%
AMERICAN AIRLINES GROUP INC	AAL	25,956.38	N/A	0.99%	N/A	N/A	N/A
ADVANCE AUTO PARTS INC	AAP	10,349.43	0.06%	0.17%	13.50%	13.68%	0.0087%
APPLE INC	AAPL	555,197.50	3.42%	2.24%	14.00%	16.40%	0.5604%
ABBVIE INC	ABBV	89,191.79	N/A	4.18%	N/A	N/A	N/A
AMERISOURCEBERGEN CORP	ABC	20,291.97	0.12%	1.45%	15.00%	16.56%	0.0207%
ABBOTT LABORATORIES	ABT	61,309.69	0.38%	2.53%	1.00%	3.54%	0.0134%
ACCENTURE PLC-CL A	ACN	66,074.38	0.41%	2.16%	7.50%	9.74%	0.0396%
ADOBE SYSTEMS INC	ADBE	44,783.71	0.28%	0.00%	26.50%	26.50%	0.0731%
ANALOG DEVICES INC	ADI	15,759.08	0.10%	3.17%	13.00%	16.38%	0.0159%
ARCHER-DANIELS-MIDLAND CO	ADM	20,049.36	0.12%	3.36%	8.00%	11.49%	0.0142%
AUTOMATIC DATA PROCESSING	ADP	36,603.97	0.23%	2.74%	9.00%	11.86%	0.0267%
ALLIANCE DATA SYSTEMS CORP	ADS	15,662.16	0.10%	0.00%	15.00%	15.00%	0.0145%
AUTODESK INC	ADSK	11,863.26	0.07%	0.00%	13.50%	13.50%	0.0099%
ADT CORP/THE	ADT	5,038.52	0.03%	2.90%	10.50%	13.55%	0.0042%
AMEREN CORPORATION	AEE	10,604.05	0.07%	3.94%	7.00%	11.08%	0.0072%
AMERICAN ELECTRIC POWER	AEP	29,026.21	0.18%	3.84%	5.00%	8.94%	0.0160%
AES CORP	AES	5,968.98	0.04%	4.97%	8.00%	13.17%	0.0048%
AETNA INC	AET	37,746.77	0.23%	0.92%	11.00%	11.97%	0.0278%
AFLAC INC	AFL	24,508.14	0.15%	2.90%	4.50%	7.47%	0.0113%
ALLERGAN PLC	AGN	117,853.30	0.73%	0.00%	17.00%	17.00%	0.1233%
AMERICAN INTERNATIONAL GROUP	AIG	71,441.36	0.44%	1.96%	5.00%	7.01%	0.0308%
APARTMENT INVT & MGMT CO -A	AIV	-	N/A	3.17%	N/A	N/A	N/A
ASSURANT INC	AIZ	5,295.04	0.03%	2.52%	3.50%	6.06%	0.0020%
AKAMAI TECHNOLOGIES INC	AKAM	8,347.07	0.05%	0.00%	15.50%	15.50%	0.0080%
ALLSTATE CORP	ALL	22,783.80	0.14%	2.05%	7.50%	9.63%	0.0135%
ALLEGION PLC	ALLE	5,776.78	N/A	0.66%	N/A	N/A	N/A
ALEXION PHARMACEUTICALS INC	ALXN	37,805.03	0.23%	0.00%	25.50%	25.50%	0.0593%
APPLIED MATERIALS INC	AMAT	19,499.60	0.12%	2.38%	18.50%	21.10%	0.0253%
AMETEK INC	AME	11,416.00	0.07%	0.75%	7.50%	8.28%	0.0058%
AFFILIATED MANAGERS GROUP	AMG	7,355.56	0.05%	0.00%	13.00%	13.00%	0.0059%
AMGEN INC	AMGN	115,620.50	0.71%	2.61%	9.50%	12.23%	0.0871%
AMERIPRISE FINANCIAL INC	AMP	16,642.75	0.10%	2.82%	13.50%	16.51%	0.0169%
AMERICAN TOWER CORP	AMT	39,050.66	0.24%	2.21%	14.50%	16.87%	0.0406%
AMAZON.COM INC	AMZN	278,117.00	N/A	0.00%	N/A	N/A	N/A
AUTONATION INC	AN	5,281.55	0.03%	0.00%	11.50%	11.50%	0.0037%
ANTHEM INC	ANTM	36,048.11	0.22%	1.81%	9.00%	10.89%	0.0242%
AON PLC	AON	23,936.12	0.15%	1.37%	13.50%	14.96%	0.0220%
APACHE CORP	APA	13,997.86	N/A	2.70%	N/A	N/A	N/A
ANADARKO PETROLEUM CORP	APC	17,783.50	0.11%	3.09%	17.50%	20.86%	0.0228%
AIR PRODUCTS & CHEMICALS INC	APD	25,449.57	0.16%	2.74%	12.00%	14.90%	0.0233%
AMPHENOL CORP-CL A	APH	14,396.02	0.09%	1.20%	9.50%	10.76%	0.0095%
AIRGAS INC	ARG	9,973.74	0.06%	1.82%	10.00%	11.91%	0.0073%
ACTIVISION BLIZZARD INC	ATVI	25,875.42	0.16%	0.73%	10.00%	10.77%	0.0171%
AVALONBAY COMMUNITIES INC	AVB	-	N/A	3.07%	N/A	N/A	N/A
AVAGO TECHNOLOGIES LTD	AVGO	34,415.73	0.21%	1.41%	15.50%	17.02%	0.0361%
AVERY DENNISON CORP	AVY	5,459.74	0.03%	2.50%	7.50%	10.09%	0.0034%
AMERICAN EXPRESS CO	AXP	62,292.87	0.38%	1.93%	4.50%	6.47%	0.0248%
AUTOZONE INC	AZO	21,526.52	0.13%	0.00%	13.00%	13.00%	0.0172%
BOEING CO/THE	BA	86,688.17	0.53%	3.38%	11.00%	14.57%	0.0777%
BANK OF AMERICA CORP	BAC	156,305.30	0.96%	1.40%	28.00%	29.60%	0.2848%
BAXTER INTERNATIONAL INC	BAX	19,308.18	0.12%	1.30%	-8.50%	-7.26%	-0.0086%
BED BATH & BEYOND INC	BBBY	7,235.45	0.04%	0.00%	5.50%	5.50%	0.0024%
BB&T CORP	BBT	26,540.70	0.16%	3.35%	8.00%	11.48%	0.0188%
BEST BUY CO INC	BBY	9,114.73	0.06%	3.48%	8.00%	11.62%	0.0065%
CR BARD INC	BCR	13,074.13	0.08%	0.57%	10.00%	10.60%	0.0085%
BECTON DICKINSON AND CO	BDX	30,637.31	0.19%	1.82%	11.50%	13.42%	0.0253%
FRANKLIN RESOURCES INC	BEN	20,516.31	0.13%	2.16%	7.50%	9.74%	0.0123%
BROWN-FORMAN CORP-CLASS B	BF/B	18,672.46	0.11%	1.49%	9.00%	10.56%	0.0121%
BAKER HUGHES INC	BHI	17,953.70	0.11%	1.65%	4.00%	5.68%	0.0063%
BIOPEN INC	BIIB	62,539.89	0.38%	0.00%	16.50%	16.50%	0.0635%
BANK OF NEW YORK MELLON CORP	BK	40,515.77	0.25%	1.83%	11.50%	13.44%	0.0335%
BLACKROCK INC	BLK	50,815.82	0.31%	2.81%	8.50%	11.43%	0.0358%
BALL CORP	BLL	9,320.84	0.06%	0.76%	9.50%	10.30%	0.0059%
BRISTOL-MYERS SQUIBB CO	BMY	105,952.80	0.65%	2.39%	14.50%	17.06%	0.1113%
BROADCOM CORP-CL A	BRCM	32,886.00	0.20%	1.04%	6.50%	7.57%	0.0153%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	159.83	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	24,422.71	0.15%	0.00%	16.00%	16.00%	0.0241%
BORGWARNER INC	BWA	7,365.41	0.05%	1.58%	8.50%	10.15%	0.0046%
BAXALTA INC	BXLT	N/A	N/A	0.00%	N/A	N/A	N/A
BOSTON PROPERTIES INC	BXP	-	N/A	2.34%	N/A	N/A	N/A
CITIGROUP INC	C	135,186.60	0.83%	0.44%	13.50%	13.97%	0.1163%
CA INC	CA	11,752.32	0.07%	3.70%	4.00%	7.77%	0.0056%
CONAGRA FOODS INC	CAG	17,378.22	0.11%	2.50%	6.50%	9.08%	0.0097%
CARDINAL HEALTH INC	CAH	26,905.62	0.17%	2.02%	14.00%	16.16%	0.0268%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
CAMERON INTERNATIONAL CORP	CAM	11,431.61	0.07%	0.00%	3.50%	3.50%	0.0025%
CATERPILLAR INC	CAT	36,255.71	0.22%	4.95%	3.50%	8.54%	0.0191%
CHUBB LTD	CB	28,895.14	0.18%	1.79%	5.50%	7.34%	0.0131%
CBRE GROUP INC - A	CBG	9,847.90	0.06%	0.00%	12.50%	12.50%	0.0076%
CBS CORP-CLASS B NON VOTING	CBS	22,150.02	0.14%	1.28%	12.50%	13.86%	0.0189%
COCA-COLA ENTERPRISES	CCE	10,480.64	0.06%	2.60%	5.00%	7.67%	0.0049%
CROWN CASTLE INTL CORP	CCI	28,023.41	0.17%	4.22%	23.50%	28.22%	0.0487%
CARNIVAL CORP	CCL	40,409.32	0.25%	2.31%	14.00%	16.47%	0.0410%
CELGENE CORP	CELG	83,144.06	0.51%	0.00%	16.50%	16.50%	0.0844%
CERNER CORP	CERN	19,907.03	0.12%	0.00%	17.00%	17.00%	0.0208%
CF INDUSTRIES HOLDINGS INC	CF	7,602.84	0.05%	4.29%	6.50%	10.93%	0.0051%
CHURCH & DWIGHT CO INC	CHD	10,247.58	0.06%	1.71%	8.50%	10.28%	0.0065%
CHESAPEAKE ENERGY CORP	CHK	2,461.48	0.02%	0.00%	7.00%	7.00%	0.0011%
C.H. ROBINSON WORLDWIDE INC	CHRW	9,097.54	0.06%	2.73%	6.50%	9.32%	0.0052%
CIGNA CORP	CI	35,734.13	0.22%	0.03%	14.50%	14.53%	0.0320%
CINCINNATI FINANCIAL CORP	CINF	9,203.92	0.06%	3.28%	7.50%	10.90%	0.0062%
COLGATE-PALMOLIVE CO	CL	56,981.45	0.35%	2.53%	11.00%	13.67%	0.0479%
CLOROX COMPANY	CLX	16,397.29	0.10%	2.47%	8.00%	10.57%	0.0107%
COMERICA INC	CMA	6,542.30	0.04%	2.28%	7.50%	9.87%	0.0040%
COMCAST CORP-CLASS A	CMCSA	135,270.50	0.83%	1.82%	10.00%	11.91%	0.0992%
CME GROUP INC	CME	28,521.79	0.18%	2.36%	10.00%	12.48%	0.0219%
CHIPOTLE MEXICAN GRILL INC	CMG	14,170.98	0.09%	0.00%	16.50%	16.50%	0.0144%
CUMMINS INC	CMI	15,396.19	0.09%	4.50%	10.00%	14.73%	0.0140%
CMS ENERGY CORP	CMS	10,172.34	0.06%	3.38%	5.50%	8.97%	0.0056%
CENTERPOINT ENERGY INC	CNP	7,585.52	N/A	5.84%	N/A	N/A	N/A
CONSOL ENERGY INC	CNX	1,287.28	0.01%	0.71%	8.00%	8.74%	0.0007%
CAPITAL ONE FINANCIAL CORP	COF	34,554.93	0.21%	2.48%	5.00%	7.54%	0.0160%
CABOT OIL & GAS CORP	COG	6,750.29	0.04%	0.49%	30.50%	31.06%	0.0129%
COACH INC	COH	8,813.40	0.05%	4.25%	1.50%	5.78%	0.0031%
ROCKWELL COLLINS INC	COL	11,514.05	0.07%	1.55%	7.00%	8.60%	0.0061%
CONOCOPHILLIPS	COP	50,928.98	0.31%	7.18%	2.50%	9.77%	0.0306%
COSTCO WHOLESALE CORP	COST	67,365.04	0.41%	1.05%	10.50%	11.61%	0.0481%
CAMPBELL SOUP CO	CPB	16,581.90	0.10%	2.34%	4.50%	6.89%	0.0070%
COLUMBIA PIPELINE GROUP	CPGX	N/A	N/A	0.00%	N/A	N/A	N/A
SALESFORCE.COM INC	CRM	48,518.48	N/A	0.00%	N/A	N/A	N/A
CISCO SYSTEMS INC	CSGO	125,322.10	0.77%	3.41%	6.50%	10.02%	0.0773%
CSRA INC	CSRA	N/A	N/A	0.00%	N/A	N/A	N/A
CSX CORP	CSX	22,677.20	0.14%	3.10%	9.00%	12.24%	0.0171%
CINTAS CORP	CTAS	9,411.20	0.06%	1.23%	13.50%	14.81%	0.0086%
CENTURYLINK INC	CTL	13,237.21	0.08%	9.04%	15.00%	24.72%	0.0201%
COGNIZANT TECH SOLUTIONS-A	CTSH	36,601.60	0.23%	0.00%	16.00%	16.00%	0.0360%
CITRIX SYSTEMS INC	CTXS	20,086.79	0.12%	0.00%	13.00%	13.00%	0.0161%
CABLEVISION SYSTEMS-NY GRP-A	CVC	8,632.20	0.05%	0.00%	13.00%	13.00%	0.0069%
CVS HEALTH CORP	CVS	106,016.10	0.65%	1.78%	13.00%	14.90%	0.0972%
CHEVRON CORP	CVX	160,857.70	0.99%	5.01%	2.50%	7.57%	0.0750%
DOMINION RESOURCES INC/VA	D	41,476.85	0.26%	4.02%	8.00%	12.18%	0.0311%
DELTA AIR LINES INC	DAL	35,727.92	0.22%	1.50%	16.00%	17.62%	0.0388%
DU PONT (E.I.) DE NEMOURS	DD	50,299.96	0.31%	2.75%	6.00%	8.83%	0.0273%
DEERE & CO	DE	24,153.02	0.15%	3.26%	-1.00%	2.24%	0.0033%
DISCOVER FINANCIAL SERVICES	DFS	21,544.57	0.13%	2.23%	4.00%	6.27%	0.0083%
DOLLAR GENERAL CORP	DG	19,897.04	0.12%	1.42%	14.00%	15.52%	0.0190%
QUEST DIAGNOSTICS INC	DGX	9,633.60	0.06%	2.27%	9.00%	11.37%	0.0067%
DR HORTON INC	DHI	9,923.98	0.06%	1.19%	15.00%	16.28%	0.0099%
DANAHER CORP	DHR	59,824.81	0.37%	0.62%	13.00%	13.66%	0.0503%
WALT DISNEY CO/THE	DIS	158,576.00	0.98%	1.43%	12.50%	14.02%	0.1368%
DISCOVERY COMMUNICATIONS-A	DISCA	11,321.70	0.07%	0.00%	17.50%	17.50%	0.0122%
DELPHI AUTOMOTIVE PLC	DLPH	19,480.29	0.12%	1.67%	15.50%	17.30%	0.0207%
DOLLAR TREE INC	DLTR	17,774.36	0.11%	0.00%	17.50%	17.50%	0.0191%
DUN & BRADSTREET CORP	DNB	3,440.69	0.02%	1.94%	4.50%	6.48%	0.0014%
DIAMOND OFFSHORE DRILLING	DO	2,492.18	0.02%	2.75%	0.50%	3.26%	0.0005%
DOVER CORP	DOV	8,633.10	0.05%	3.02%	2.50%	5.56%	0.0030%
DOW CHEMICAL CO/THE	DOW	51,257.13	0.32%	4.16%	12.50%	16.92%	0.0534%
DR PEPPER SNAPPLE GROUP INC	DPS	17,061.78	0.11%	2.22%	9.00%	11.32%	0.0119%
DARDEN RESTAURANTS INC	DRI	7,908.31	0.05%	3.24%	11.50%	14.93%	0.0073%
DTE ENERGY COMPANY	DTE	14,594.99	0.09%	3.69%	5.00%	8.78%	0.0079%
DUKE ENERGY CORP	DUK	49,790.56	0.31%	4.64%	5.00%	9.76%	0.0299%
DAVITA HEALTHCARE PARTNERS I	DVA	14,232.62	0.09%	0.00%	11.50%	11.50%	0.0101%
DEVON ENERGY CORP	DVN	10,669.56	0.07%	3.70%	6.00%	9.81%	0.0064%
ELECTRONIC ARTS INC	EA	20,053.28	0.12%	0.00%	16.50%	16.50%	0.0204%
EBAY INC	EBAY	31,048.89	0.19%	0.00%	3.50%	3.50%	0.0067%
ECOLAB INC	ECL	30,953.35	0.19%	1.34%	11.00%	12.41%	0.0237%
CONSOLIDATED EDISON INC	ED	18,248.81	0.11%	3.96%	3.00%	7.02%	0.0079%
EQUIFAX INC	EFX	12,239.32	0.08%	1.12%	9.00%	10.17%	0.0077%
EDISON INTERNATIONAL	EIX	19,402.05	0.12%	3.22%	3.50%	6.78%	0.0081%
ESTEE LAUDER COMPANIES-CL A	EL	31,241.75	0.19%	1.42%	9.00%	10.48%	0.0202%
EMC CORP/MA	EMC	47,835.13	0.29%	1.87%	3.50%	5.40%	0.0159%
EASTMAN CHEMICAL CO	EMN	9,501.71	0.06%	2.88%	9.50%	12.52%	0.0073%
EMERSON ELECTRIC CO	EMR	28,691.51	0.18%	4.34%	2.00%	6.38%	0.0113%
ENDO INTERNATIONAL PLC	ENDP	12,221.99	N/A	0.00%	N/A	N/A	N/A
EOG RESOURCES INC	EOG	35,871.39	0.22%	1.12%	2.00%	3.13%	0.0069%
EQUINIX INC	EQIX	17,815.37	0.11%	2.17%	25.50%	27.95%	0.0306%
EQUITY RESIDENTIAL	EQR	-	N/A	3.03%	N/A	N/A	N/A
EQT CORP	EQT	7,938.18	0.05%	0.23%	14.00%	14.25%	0.0070%
EVERSOURCE ENERGY	ES	16,449.53	0.10%	3.43%	8.50%	12.08%	0.0122%
EXPRESS SCRIPTS HOLDING CO	ESRX	52,420.01	0.32%	0.00%	17.50%	17.50%	0.0565%
ESSEX PROPERTY TRUST INC	ESS	-	N/A	2.77%	N/A	N/A	N/A
ENSCO PLC-CL A	ESV	2,593.41	0.02%	5.45%	-2.00%	3.40%	0.0005%
E*TRADE FINANCIAL CORP	ETFC	7,548.22	0.05%	0.00%	32.50%	32.50%	0.0151%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
EATON CORP PLC	ETN	22,362.50	0.14%	4.55%	5.00%	9.66%	0.0133%
ENERGY CORP	ETR	12,326.54	0.08%	4.95%	-1.00%	3.93%	0.0030%
EDWARDS LIFESCIENCES CORP	EW	16,607.34	0.10%	0.00%	15.00%	15.00%	0.0153%
EXELON CORP	EXC	25,665.03	0.16%	4.44%	7.50%	12.11%	0.0191%
EXPEDITORS INTL WASH INC	EXPD	8,043.11	0.05%	1.67%	10.50%	12.26%	0.0061%
EXPEDIA INC	EXPE	13,976.75	0.09%	0.89%	23.00%	23.99%	0.0206%
FORD MOTOR CO	F	47,513.91	0.29%	4.92%	10.00%	15.17%	0.0444%
FASTENAL CO	FAST	11,368.92	0.07%	2.85%	8.50%	11.47%	0.0080%
FACEBOOK INC-A	FB	277,993.60	1.71%	0.00%	32.50%	32.50%	0.5562%
FREEMPORT-MCMORAN INC	FCX	4,779.60	0.03%	0.00%	-0.50%	-0.50%	-0.0001%
FEDEX CORP	FDX	36,298.50	0.22%	0.76%	15.00%	15.82%	0.0353%
FIRSTENERGY CORP	FE	13,774.21	0.08%	4.52%	7.00%	11.68%	0.0099%
F5 NETWORKS INC	FFIV	6,604.19	0.04%	0.00%	9.00%	9.00%	0.0037%
FIDELITY NATIONAL INFO SERV	FIS	17,010.63	0.10%	1.73%	11.00%	12.83%	0.0134%
FISERV INC	FISV	20,432.38	0.13%	0.00%	10.50%	10.50%	0.0132%
FIFTH THIRD BANCORP	FITB	14,039.50	0.09%	3.17%	4.00%	7.23%	0.0063%
FLIR SYSTEMS INC	FLIR	4,382.80	0.03%	1.51%	6.50%	8.06%	0.0022%
FLUOR CORP	FLR	5,984.58	0.04%	2.00%	7.50%	9.58%	0.0035%
FLOWSERVE CORP	FLS	4,844.44	0.03%	1.94%	10.00%	12.04%	0.0036%
FMC CORP	FMC	4,724.91	0.03%	2.04%	4.50%	6.59%	0.0019%
TWENTY-FIRST CENTURY FOX-A	FOXA	52,483.95	0.32%	1.13%	9.50%	10.68%	0.0345%
FIRST SOLAR INC	FSLR	6,234.78	0.04%	0.00%	7.50%	7.50%	0.0029%
FMC TECHNOLOGIES INC	FTI	5,821.11	0.04%	0.00%	5.50%	5.50%	0.0020%
FRONTIER COMMUNICATIONS CORP	FTR	5,105.11	0.03%	9.61%	18.00%	28.47%	0.0089%
AGL RESOURCES INC	GAS	7,643.03	0.05%	3.21%	6.50%	9.81%	0.0046%
GENERAL DYNAMICS CORP	GD	40,793.16	0.25%	2.14%	9.00%	11.24%	0.0282%
GENERAL ELECTRIC CO	GE	293,774.50	1.81%	3.17%	9.00%	12.31%	0.2227%
GENERAL GROWTH PROPERTIES	GGP	-	N/A	2.95%	N/A	N/A	N/A
GILEAD SCIENCES INC	GILD	134,786.00	0.83%	1.85%	22.50%	24.56%	0.2038%
GENERAL MILLS INC	GIS	32,839.15	0.20%	3.27%	5.50%	8.86%	0.0179%
CORNING INC	GLW	20,483.20	0.13%	2.78%	6.00%	8.86%	0.0112%
GENERAL MOTORS CO	GM	48,480.00	0.30%	4.75%	12.00%	17.04%	0.0508%
KEURIG GREEN MOUNTAIN INC	GMCR	13,878.83	0.09%	1.44%	8.50%	10.00%	0.0085%
GAMESTOP CORP-CLASS A	GME	2,683.34	0.02%	5.63%	11.00%	16.94%	0.0028%
ALPHABET INC-CL C	GOOG	491,507.90	3.03%	0.00%	16.50%	16.50%	0.4992%
GENUINE PARTS CO	GPC	11,834.89	0.07%	3.13%	7.00%	10.24%	0.0075%
GAP INC/THE	GPS	9,380.88	0.06%	4.05%	6.50%	10.68%	0.0062%
GARMIN LTD	GRMN	6,313.64	0.04%	6.24%	-2.00%	4.18%	0.0016%
GOLDMAN SACHS GROUP INC	GS	68,838.65	0.42%	1.61%	7.00%	8.67%	0.0367%
GOODYEAR TIRE & RUBBER CO	GT	7,642.29	0.05%	0.99%	10.50%	11.54%	0.0054%
WW GRAINGER INC	GWV	11,864.61	0.07%	2.48%	9.00%	11.59%	0.0085%
HALLIBURTON CO	HAL	27,223.20	0.17%	2.26%	5.00%	7.32%	0.0123%
HARMAN INTERNATIONAL	HAR	5,843.57	0.04%	1.70%	20.00%	21.87%	0.0079%
HASBRO INC	HAS	8,754.50	0.05%	2.62%	10.00%	12.75%	0.0069%
HUNTINGTON BANCSHARES INC	HBAN	7,847.09	0.05%	2.84%	9.00%	11.97%	0.0058%
HANESBRANDS INC	HBI	11,722.94	0.07%	1.34%	16.00%	17.45%	0.0126%
HCA HOLDINGS INC	HCA	26,870.98	0.17%	0.00%	12.50%	12.50%	0.0207%
WELLTOWER INC	HCN	-	N/A	5.18%	N/A	N/A	N/A
HCP INC	HCP	-	0.00%	6.29%	89.00%	98.09%	0.0000%
HOME DEPOT INC	HD	151,678.20	0.93%	2.11%	13.50%	15.75%	0.1471%
HESS CORP	HES	11,432.44	0.07%	2.50%	-10.00%	-7.63%	-0.0054%
HARTFORD FINANCIAL SVCS GRP	HIG	16,555.39	0.10%	2.09%	13.50%	15.73%	0.0160%
HARLEY-DAVIDSON INC	HOG	8,052.36	0.05%	2.95%	10.50%	13.60%	0.0067%
HONEYWELL INTERNATIONAL INC	HON	76,098.03	0.47%	2.41%	8.50%	11.01%	0.0516%
STARWOOD HOTELS & RESORTS	HOT	10,359.90	0.06%	2.45%	6.50%	9.03%	0.0058%
HELMERICH & PAYNE	HP	5,020.00	0.03%	5.90%	1.00%	6.93%	0.0021%
HEWLETT PACKARD ENTERPRIS	HPE	N/A	N/A	0.00%	N/A	N/A	N/A
HP INC	HPQ	N/A	N/A	0.00%	N/A	N/A	N/A
H&R BLOCK INC	HRB	7,628.23	0.05%	2.78%	9.50%	12.41%	0.0058%
HORMEL FOODS CORP	HRL	20,830.00	0.13%	1.47%	14.50%	16.08%	0.0206%
HARRIS CORP	HRS	10,491.04	0.06%	2.41%	7.00%	9.49%	0.0061%
HENRY SCHEIN INC	HSIC	12,225.07	0.08%	0.00%	8.50%	8.50%	0.0064%
HOST HOTELS & RESORTS INC	HST	-	N/A	6.02%	N/A	N/A	N/A
HERSHEY CO/THE	HSY	18,334.19	0.11%	2.76%	7.00%	9.86%	0.0111%
HUMANA INC	HUM	24,787.33	0.15%	0.69%	10.00%	10.72%	0.0164%
INTL BUSINESS MACHINES CORP	IBM	128,937.30	N/A	3.91%	N/A	N/A	N/A
INTERCONTINENTAL EXCHANGE IN	ICE	27,507.70	0.17%	1.20%	13.50%	14.78%	0.0250%
INTL FLAVORS & FRAGRANCES	IFF	9,417.72	0.06%	1.91%	6.50%	8.47%	0.0049%
ILLUMINA INC	ILMN	25,636.10	0.16%	0.00%	32.50%	32.50%	0.0513%
INTEL CORP	INTC	154,860.20	0.95%	2.93%	10.00%	13.08%	0.1247%
INTUIT INC	INTU	24,933.02	0.15%	1.27%	14.00%	15.36%	0.0236%
INTERNATIONAL PAPER CO	IP	15,147.77	0.09%	4.82%	15.50%	20.69%	0.0193%
INTERPUBLIC GROUP OF COS INC	IPG	9,312.20	0.06%	2.42%	12.50%	15.07%	0.0086%
INGERSOLL-RAND PLC	IR	13,590.21	0.08%	2.23%	9.50%	11.84%	0.0099%
IRON MOUNTAIN INC	IRM	5,300.29	0.03%	7.73%	6.50%	14.48%	0.0047%
INTUITIVE SURGICAL INC	ISRG	20,341.18	0.13%	0.00%	7.00%	7.00%	0.0088%
ILLINOIS TOOL WORKS	ITW	30,108.04	0.19%	2.66%	10.00%	12.79%	0.0237%
INVESCO LTD	IVZ	12,559.03	0.08%	3.65%	14.00%	17.91%	0.0138%
HUNT (JB) TRANSPRT SVCS INC	JBHT	7,513.31	0.05%	1.28%	12.00%	13.36%	0.0062%
JOHNSON CONTROLS INC	JCI	23,029.77	0.14%	3.30%	10.00%	13.47%	0.0191%
JACOBS ENGINEERING GROUP INC	JEC	4,726.61	0.03%	0.00%	6.00%	6.00%	0.0017%
JOHNSON & JOHNSON	JNJ	273,656.40	1.68%	3.19%	6.50%	9.79%	0.1650%
JUNIPER NETWORKS INC	JNPR	10,066.37	0.06%	1.76%	16.00%	17.90%	0.0111%
JPMORGAN CHASE & CO	JPM	214,241.80	1.32%	3.16%	8.00%	11.29%	0.1488%
NORDSTROM INC	JWN	8,489.47	0.05%	3.43%	7.00%	10.55%	0.0055%
KELLOGG CO	K	25,399.63	0.16%	2.90%	4.00%	6.96%	0.0109%
KEYCORP	KEY	9,881.42	0.06%	2.71%	6.50%	9.30%	0.0057%
KRAFT HEINZ CO/THE	KHC	28,151.69	N/A	3.25%	N/A	N/A	N/A

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
KIMCO REALTY CORP	KIM	-	N/A	4.11%	N/A	N/A	N/A
KLA-TENCOR CORP	KLAC	10,395.36	0.06%	3.12%	8.50%	11.75%	0.0075%
KIMBERLY-CLARK CORP	KMB	46,176.47	0.28%	2.77%	7.00%	9.87%	0.0280%
KINDER MORGAN INC	KMI	31,145.96	0.19%	3.58%	13.00%	16.81%	0.0322%
CARMAX INC	KMX	9,297.31	0.06%	0.00%	13.50%	13.50%	0.0077%
COCA-COLA CO/THE	KO	182,094.20	1.12%	3.34%	4.50%	7.92%	0.0887%
MICHAEL KORS HOLDINGS LTD	KORS	6,646.01	0.04%	0.00%	11.50%	11.50%	0.0047%
KROGER CO	KR	37,702.98	0.23%	1.18%	11.50%	12.75%	0.0296%
KOHL'S CORP	KSS	9,339.14	0.06%	3.84%	6.50%	10.46%	0.0060%
KANSAS CITY SOUTHERN	KSU	7,467.09	0.05%	1.93%	13.00%	15.06%	0.0069%
LOEWS CORP	L	12,769.59	0.08%	0.70%	12.50%	13.24%	0.0104%
L BRANDS INC	LB	27,412.20	0.17%	2.12%	9.00%	11.22%	0.0189%
LEGGETT & PLATT INC	LEG	5,279.16	0.03%	3.30%	11.50%	14.99%	0.0049%
LENNAR CORP-A	LEN	8,624.15	0.05%	0.39%	19.50%	19.93%	0.0106%
LABORATORY CRP OF AMER HLDGS	LH	11,303.03	0.07%	0.00%	9.00%	9.00%	0.0063%
L-3 COMMUNICATIONS HOLDINGS	LLL	8,970.90	0.06%	2.29%	6.00%	8.36%	0.0046%
LINEAR TECHNOLOGY CORP	LLTC	9,451.23	0.06%	3.04%	6.50%	9.64%	0.0056%
ELI LILLY & CO	LLY	91,460.67	0.56%	2.47%	8.00%	10.57%	0.0595%
LEGG MASON INC	LM	3,548.24	0.02%	2.44%	12.00%	14.59%	0.0032%
LOCKHEED MARTIN CORP	LMT	66,504.79	0.41%	3.12%	9.00%	12.26%	0.0502%
LINCOLN NATIONAL CORP	LNC	10,272.27	0.06%	2.53%	8.00%	10.63%	0.0067%
LOWE'S COS INC	LOW	64,107.47	0.39%	1.69%	15.50%	17.32%	0.0684%
LAM RESEARCH CORP	LRCX	11,375.37	0.07%	1.67%	19.50%	21.33%	0.0149%
LEUCADIA NATIONAL CORP	LUK	N/A	N/A	0.00%	N/A	N/A	N/A
SOUTHWEST AIRLINES CO	LUV	26,319.87	0.16%	0.74%	29.00%	29.85%	0.0484%
LEVEL 3 COMMUNICATIONS INC	LVL	17,212.92	N/A	0.00%	N/A	N/A	N/A
LYONDELLBASELL INDU-CL A	LYB	34,583.77	0.21%	4.09%	10.50%	14.80%	0.0315%
MACY'S INC	M	11,832.81	0.07%	3.83%	7.00%	10.96%	0.0080%
MASTERCARD INC-CLASS A	MA	101,986.40	0.63%	0.84%	13.00%	13.89%	0.0872%
MACERICH CO/THE	MAC	-	N/A	3.58%	N/A	N/A	N/A
MARRIOTT INTERNATIONAL -CL A	MAR	15,618.01	0.10%	1.65%	16.00%	17.78%	0.0171%
MASCO CORP	MAS	8,280.91	0.05%	1.52%	18.50%	20.16%	0.0103%
MATTEL INC	MAT	8,923.59	0.05%	5.78%	4.00%	9.90%	0.0054%
MCDONALD'S CORP	MCD	107,080.50	0.66%	3.05%	4.50%	7.62%	0.0502%
MICROCHIP TECHNOLOGY INC	MCHP	8,536.31	0.05%	3.43%	9.50%	13.09%	0.0069%
MCKESSON CORP	MCK	37,917.36	0.23%	0.68%	14.00%	14.73%	0.0344%
MOODY'S CORP	MCO	17,424.85	0.11%	1.68%	10.00%	11.76%	0.0126%
MONDELEZ INTERNATIONAL INC-A	MDLZ	65,811.66	0.41%	1.74%	11.00%	12.84%	0.0520%
MEDTRONIC PLC	MDT	105,166.40	0.65%	2.14%	7.00%	9.21%	0.0597%
METLIFE INC	MET	48,492.23	0.30%	3.77%	6.00%	9.88%	0.0295%
MCGRAW HILL FINANCIAL INC	MHFI	22,948.47	N/A	1.60%	N/A	N/A	N/A
MOHAWK INDUSTRIES INC	MHK	12,607.85	0.08%	0.00%	15.50%	15.50%	0.0120%
MEAD JOHNSON NUTRITION CO	MJN	13,633.41	0.08%	2.39%	6.50%	8.97%	0.0075%
MCCORMICK & CO-NON VTG SHRS	MKC	10,887.75	0.07%	2.02%	8.50%	10.61%	0.0071%
MARTIN MARIETTA MATERIALS	MLM	8,175.69	0.05%	1.29%	26.50%	27.96%	0.0141%
MARSH & MCLENNAN COS	MMC	27,979.61	0.17%	2.32%	10.50%	12.94%	0.0223%
3M CO	MMM	86,926.36	0.54%	2.90%	8.00%	11.02%	0.0589%
MALLINCKRODT PLC	MNK	7,642.12	N/A	0.00%	N/A	N/A	N/A
MONSTER BEVERAGE CORP	MNST	28,872.95	0.18%	0.00%	16.50%	16.50%	0.0293%
ALTRIA GROUP INC	MO	114,150.70	0.70%	3.88%	9.50%	13.56%	0.0953%
MONSANTO CO	MON	40,570.79	0.25%	2.34%	7.50%	9.93%	0.0248%
MOSAIC CO/THE	MOS	8,833.45	0.05%	4.71%	5.50%	10.34%	0.0056%
MARATHON PETROLEUM CORP	MPC	23,314.44	0.14%	2.93%	9.00%	12.06%	0.0173%
MERCK & CO. INC.	MRK	145,155.70	0.89%	3.55%	4.00%	7.62%	0.0681%
MARATHON OIL CORP	MRO	6,140.39	0.04%	2.21%	1.00%	3.22%	0.0012%
MORGAN STANLEY	MS	52,568.46	0.32%	2.21%	24.50%	26.98%	0.0873%
MICROSOFT CORP	MSFT	424,136.50	2.61%	2.71%	6.50%	9.30%	0.2428%
MOTOROLA SOLUTIONS INC	MSI	11,145.23	0.07%	2.69%	4.50%	7.25%	0.0050%
M & T BANK CORP	MTB	14,292.27	0.09%	2.61%	5.50%	8.18%	0.0072%
MICRON TECHNOLOGY INC	MU	13,065.74	0.08%	0.00%	1.00%	1.00%	0.0008%
MURPHY OIL CORP	MUR	3,168.70	0.02%	7.60%	-4.00%	3.45%	0.0007%
MYLAN NV	MYL	24,931.01	0.15%	0.00%	21.00%	21.00%	0.0322%
NAVIENT CORP	NAVI	3,405.70	N/A	7.13%	N/A	N/A	N/A
NOBLE ENERGY INC	NBL	12,529.17	0.08%	2.48%	4.50%	7.04%	0.0054%
NASDAQ INC	NDAQ	9,432.79	0.06%	1.74%	9.00%	10.82%	0.0063%
NEXTERA ENERGY INC	NEE	48,723.09	0.30%	3.31%	7.50%	10.93%	0.0328%
NEWMONT MINING CORP	NEM	9,137.87	0.06%	0.58%	-12.00%	-11.45%	-0.0064%
NETFLIX INC	NFLX	45,756.16	0.28%	0.00%	23.00%	23.00%	0.0648%
NEWFIELD EXPLORATION CO	NFX	5,195.05	0.03%	0.00%	9.50%	9.50%	0.0030%
NISOURCE INC	NI	6,369.50	0.04%	3.10%	-1.50%	1.58%	0.0006%
NIKE INC -CL B	NKE	99,876.57	0.61%	1.09%	15.50%	16.67%	0.1025%
NIELSEN HOLDINGS PLC	NLSN	16,637.45	0.10%	2.45%	10.50%	13.08%	0.0134%
NORTHROP GRUMMAN CORP	NOC	33,922.80	0.21%	1.73%	7.50%	9.29%	0.0194%
NATIONAL OILWELL VARCO INC	NOV	11,463.67	0.07%	6.03%	-5.50%	0.36%	0.0003%
NRG ENERGY INC	NRG	3,350.82	0.02%	5.53%	23.50%	29.68%	0.0061%
NORFOLK SOUTHERN CORP	NSC	21,541.75	0.13%	3.27%	8.00%	11.40%	0.0151%
NETAPP INC	NTAP	6,780.24	0.04%	3.10%	5.50%	8.69%	0.0036%
NORTHERN TRUST CORP	NTRS	15,200.40	0.09%	2.19%	9.50%	11.79%	0.0110%
NUCOR CORP	NUE	11,576.42	0.07%	4.14%	22.50%	27.11%	0.0193%
NVIDIA CORP	NVDA	15,424.46	0.09%	1.60%	9.00%	10.67%	0.0101%
NEWELL RUBBERMAID INC	NWL	10,010.91	0.06%	2.03%	14.00%	16.17%	0.0100%
NEWS CORP - CLASS A	NWSA	7,389.62	0.05%	1.57%	32.00%	33.82%	0.0154%
REALTY INCOME CORP	O	-	N/A	4.38%	N/A	N/A	N/A
OWENS-ILLINOIS INC	OI	2,219.56	0.01%	0.00%	5.50%	5.50%	0.0008%
ONEOK INC	OKE	4,767.24	0.03%	11.55%	9.50%	21.60%	0.0063%
OMNICOM GROUP	OMC	17,139.54	0.11%	3.11%	9.00%	12.25%	0.0129%
ORACLE CORP	ORCL	148,970.80	0.92%	1.73%	7.00%	8.79%	0.0806%
O'REILLY AUTOMOTIVE INC	ORLY	23,295.52	0.14%	0.00%	13.00%	13.00%	0.0186%

Company	Ticker	[4]	[5]	[6]	[7]	[8]	[9]
		Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
OCCIDENTAL PETROLEUM CORP	OXY	48,879.11	0.30%	4.69%	-4.00%	0.60%	0.0018%
PAYCHEX INC	PAYX	17,077.79	0.11%	3.68%	9.50%	13.35%	0.0140%
PEOPLE'S UNITED FINANCIAL	PBCT	4,586.66	0.03%	4.59%	11.00%	15.84%	0.0045%
PITNEY BOWES INC	PBI	3,664.89	0.02%	4.03%	4.00%	8.11%	0.0018%
PACCAR INC	PCAR	16,163.06	0.10%	5.16%	9.50%	14.91%	0.0148%
P G & E CORP	PCG	26,180.41	0.16%	3.41%	10.50%	14.09%	0.0227%
PLUM CREEK TIMBER CO	PCL	7,353.70	0.05%	4.16%	9.50%	13.86%	0.0063%
PRICELINE GROUP INC/THE	PCLN	56,269.72	0.35%	0.00%	17.00%	17.00%	0.0589%
PRECISION CASTPARTS CORP	PCP	31,950.69	0.20%	0.05%	8.00%	8.05%	0.0158%
PATTERSON COS INC	PDCO	4,024.93	0.02%	2.32%	11.50%	13.95%	0.0035%
PUBLIC SERVICE ENTERPRISE GP	PEG	20,081.34	0.12%	4.08%	5.00%	9.18%	0.0114%
PEPSICO INC	PEP	140,074.20	0.86%	3.00%	6.00%	9.09%	0.0784%
PFIZER INC	PFE	192,042.10	1.18%	3.86%	9.50%	13.54%	0.1601%
PRINCIPAL FINANCIAL GROUP	PFG	11,443.56	0.07%	3.90%	7.50%	11.55%	0.0081%
PROCTER & GAMBLE CO/THE	PG	207,171.60	1.28%	3.48%	7.50%	11.11%	0.1417%
PROGRESSIVE CORP	PGR	17,666.61	0.11%	2.28%	11.50%	13.91%	0.0151%
PARKER HANNIFIN CORP	PH	12,326.59	0.08%	2.78%	6.50%	9.37%	0.0071%
PULTEGROUP INC	PHM	5,610.63	0.03%	2.24%	14.00%	16.40%	0.0057%
PERKINELMER INC	PKI	5,382.63	0.03%	0.58%	7.50%	8.10%	0.0027%
PROLOGIS INC	PLD	-	N/A	4.04%	N/A	N/A	N/A
PHILIP MORRIS INTERNATIONAL	PM	136,152.00	0.84%	4.64%	2.00%	6.69%	0.0560%
PNC FINANCIAL SERVICES GROUP	PNC	47,083.54	0.29%	2.35%	4.50%	6.90%	0.0200%
PENTAIR PLC	PNR	8,203.31	0.05%	2.90%	15.00%	18.12%	0.0091%
PINNACLE WEST CAPITAL	PNW	7,183.99	0.04%	3.86%	4.00%	7.94%	0.0035%
PEPCO HOLDINGS INC	POM	6,628.84	0.04%	4.13%	10.50%	14.85%	0.0061%
PPG INDUSTRIES INC	PPG	25,195.50	0.16%	1.54%	12.50%	14.14%	0.0219%
PPL CORP	PPL	22,948.42	0.14%	4.45%	2.00%	6.49%	0.0092%
PERRIGO CO PLC	PRGO	21,288.03	0.13%	0.34%	14.50%	14.86%	0.0195%
PRUDENTIAL FINANCIAL INC	PRU	33,112.13	0.20%	3.89%	4.50%	8.48%	0.0173%
PUBLIC STORAGE	PSA	-	N/A	2.77%	N/A	N/A	N/A
PHILLIPS 66	PSX	42,291.12	0.26%	3.02%	5.00%	8.10%	0.0211%
PVH CORP	PVH	5,645.53	0.03%	0.22%	8.50%	8.73%	0.0030%
QUANTA SERVICES INC	PWR	2,820.92	0.02%	0.00%	10.00%	10.00%	0.0017%
PRAXAIR INC	PXD	28,424.78	0.17%	3.11%	7.50%	10.73%	0.0188%
PIONEER NATURAL RESOURCES CO	PXD	17,321.87	0.11%	0.07%	13.50%	13.57%	0.0145%
PAYPAL HOLDINGS INC	PYPL	40,134.27	N/A	0.00%	N/A	N/A	N/A
QUALCOMM INC	QCOM	72,740.52	0.45%	4.40%	4.50%	9.00%	0.0403%
QORVO INC	QORVO	5,557.27	N/A	0.00%	N/A	N/A	N/A
RYDER SYSTEM INC	R	2,691.02	0.02%	3.26%	11.50%	14.95%	0.0025%
REYNOLDS AMERICAN INC	RAI	67,739.39	0.42%	3.04%	13.50%	16.75%	0.0698%
ROYAL CARIBBEAN CRUISES LTD	RCL	19,336.86	0.12%	1.71%	21.50%	23.39%	0.0278%
REGENERON PHARMACEUTICALS	REGN	48,931.32	0.30%	0.00%	24.50%	24.50%	0.0738%
REGIONS FINANCIAL CORP	RF	11,249.62	0.07%	3.11%	6.00%	9.20%	0.0064%
ROBERT HALF INTL INC	RHI	5,706.69	0.04%	1.95%	12.50%	14.57%	0.0051%
RED HAT INC	RHT	13,975.83	0.09%	0.00%	15.50%	15.50%	0.0133%
TRANSOCEAN LTD	RIG	3,833.61	0.02%	0.00%	-11.50%	-11.50%	-0.0027%
RALPH LAUREN CORP	RL	8,558.09	0.05%	2.13%	7.00%	9.20%	0.0048%
ROCKWELL AUTOMATION INC	ROK	12,258.92	0.08%	3.13%	6.00%	9.22%	0.0070%
ROPER TECHNOLOGIES INC	ROP	17,221.53	0.11%	0.70%	8.00%	8.73%	0.0093%
ROSS STORES INC	ROST	21,392.36	0.13%	0.98%	9.00%	10.02%	0.0132%
RANGE RESOURCES CORP	RRC	3,917.83	0.02%	0.69%	16.50%	17.25%	0.0042%
REPUBLIC SERVICES INC	RSG	15,386.12	0.09%	2.75%	8.00%	10.86%	0.0103%
RAYTHEON COMPANY	RTN	36,580.53	0.23%	2.21%	8.50%	10.80%	0.0243%
STARBUCKS CORP	SBUX	87,591.20	0.54%	1.36%	17.00%	18.48%	0.0996%
SCANA CORP	SCG	8,738.34	0.05%	3.63%	4.50%	8.21%	0.0044%
SCHWAB (CHARLES) CORP	SCHW	37,016.80	0.23%	0.85%	14.50%	15.41%	0.0351%
SPECTRA ENERGY CORP	SE	17,029.98	0.10%	6.38%	5.00%	11.54%	0.0121%
SEALED AIR CORP	SEE	8,166.94	0.05%	1.26%	19.50%	20.88%	0.0105%
SHERWIN-WILLIAMS CO/THE	SHW	22,645.89	0.14%	1.32%	13.00%	14.41%	0.0201%
SIGNET JEWELERS LTD	SIG	9,897.75	0.06%	0.74%	14.50%	15.29%	0.0093%
JM SMUCKER CO/THE	SJM	14,397.14	0.09%	2.28%	7.50%	9.87%	0.0087%
SCHLUMBERGER LTD	SLB	81,568.20	0.50%	3.09%	9.50%	12.74%	0.0640%
SL GREEN REALTY CORP	SLG	-	N/A	2.83%	N/A	N/A	N/A
SNAP-ON INC	SNA	9,469.89	0.06%	1.50%	9.50%	11.07%	0.0065%
SANDISK CORP	SNDK	15,017.71	0.09%	0.00%	1.50%	1.50%	0.0014%
SCRIPPS NETWORKS INTER-CL A	SNI	7,341.12	0.05%	1.61%	9.00%	10.68%	0.0048%
SOUTHERN CO/THE	SO	42,836.12	0.26%	4.71%	4.50%	9.32%	0.0246%
SIMON PROPERTY GROUP INC	SPG	-	N/A	3.45%	N/A	N/A	N/A
STAPLES INC	SPLS	5,882.52	0.04%	5.25%	-2.00%	3.20%	0.0012%
STERICYCLE INC	SRCL	9,888.10	0.06%	0.00%	10.00%	10.00%	0.0061%
SEMPRA ENERGY	SRE	23,068.64	0.14%	3.14%	8.50%	11.77%	0.0167%
SUNTRUST BANKS INC	STI	19,669.70	0.12%	2.90%	9.00%	12.03%	0.0146%
ST JUDE MEDICAL INC	STJ	15,673.09	0.10%	2.20%	6.50%	8.77%	0.0085%
STATE STREET CORP	STT	23,193.81	0.14%	2.47%	7.00%	9.56%	0.0136%
SEAGATE TECHNOLOGY	STX	9,601.92	0.06%	7.85%	2.00%	9.93%	0.0059%
CONSTELLATION BRANDS INC-A	STZ	28,538.98	0.18%	0.95%	17.00%	18.03%	0.0317%
STANLEY BLACK & DECKER INC	SWK	14,646.20	0.09%	2.25%	10.00%	12.36%	0.0111%
SKYWORKS SOLUTIONS INC	SWKS	12,281.96	0.08%	1.61%	21.00%	22.78%	0.0172%
SOUTHWESTERN ENERGY CO	SWN	2,549.28	0.02%	0.00%	-4.00%	-4.00%	-0.0006%
SYNCHRONY FINANCIAL	SYF	23,497.16	N/A	0.00%	N/A	N/A	N/A
STRYKER CORP	SYK	34,185.92	0.21%	1.67%	17.00%	18.81%	0.0396%
SYMANTEC CORP	SYM	13,926.40	0.09%	2.93%	4.00%	6.99%	0.0060%
SYSCO CORP	SY	23,922.37	0.15%	3.09%	12.00%	15.28%	0.0225%
AT&T INC	T	211,021.90	1.30%	5.60%	5.50%	11.25%	0.1462%
MOLSON COORS BREWING CO -B	TAP	16,055.58	0.10%	1.89%	8.50%	10.47%	0.0103%
TERADATA CORP	TDC	3,099.79	0.02%	0.00%	3.50%	3.50%	0.0007%
TECO ENERGY INC	TE	6,331.58	0.04%	3.34%	5.50%	8.93%	0.0035%
TE CONNECTIVITY LTD	TEL	23,198.98	0.14%	2.30%	9.00%	11.40%	0.0163%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
TEGNA INC	TGNA	5,384.90	0.03%	2.31%	-0.50%	1.80%	0.0006%
TARGET CORP	TGT	43,555.63	0.27%	3.18%	9.50%	12.83%	0.0344%
TENET HEALTHCARE CORP	THC	2,326.47	0.01%	0.00%	28.00%	28.00%	0.0040%
TIFFANY & CO	TIF	8,571.45	0.05%	2.45%	12.50%	15.10%	0.0080%
TJX COMPANIES INC	TJX	45,842.65	0.28%	1.23%	10.00%	11.29%	0.0319%
TORCHMARK CORP	TMK	6,669.58	0.04%	1.00%	7.50%	8.54%	0.0035%
THERMO FISHER SCIENTIFIC INC	TMO	54,193.52	0.33%	0.44%	14.50%	14.97%	0.0499%
TRIPADVISOR INC	TRIP	10,368.56	0.06%	0.00%	21.00%	21.00%	0.0134%
T ROWE PRICE GROUP INC	TROW	16,506.75	0.10%	3.31%	9.50%	12.97%	0.0132%
TRAVELERS COS INC/THE	TRV	32,543.31	0.20%	2.28%	4.50%	6.83%	0.0137%
TRACTOR SUPPLY COMPANY	TSCO	11,175.54	0.07%	1.11%	15.50%	16.70%	0.0115%
TYSON FOODS INC-CL A	TSN	19,523.79	0.12%	1.13%	12.50%	13.70%	0.0165%
TESORO CORP	TSO	11,652.52	0.07%	2.07%	12.50%	14.70%	0.0105%
TOTAL SYSTEM SERVICES INC	TSS	8,437.23	0.05%	0.87%	11.00%	11.92%	0.0062%
TIME WARNER CABLE	TWC	51,531.07	0.32%	1.65%	6.00%	7.70%	0.0244%
TIME WARNER INC	TWX	56,651.65	0.35%	1.98%	12.00%	14.10%	0.0492%
TEXAS INSTRUMENTS INC	TXN	51,012.09	0.31%	3.04%	11.50%	14.71%	0.0462%
TEXTRON INC	TXT	10,395.80	0.06%	0.21%	17.00%	17.23%	0.0110%
TYCO INTERNATIONAL PLC	TYC	12,762.54	0.08%	2.71%	11.50%	14.37%	0.0113%
UNDER ARMOUR INC-CLASS A	UA	15,079.06	0.09%	0.00%	25.50%	25.50%	0.0237%
UNITED CONTINENTAL HOLDINGS	UAL	17,875.51	0.11%	0.00%	24.50%	24.50%	0.0270%
UNIVERSAL HEALTH SERVICES-B	UHS	10,948.23	0.07%	0.36%	12.00%	12.38%	0.0083%
UNITEDHEALTH GROUP INC	UNH	105,554.30	0.65%	1.81%	12.50%	14.42%	0.0937%
UNUM GROUP	UNM	7,176.08	0.04%	2.51%	11.00%	13.65%	0.0060%
UNION PACIFIC CORP	UNP	64,538.18	0.40%	2.92%	10.00%	13.07%	0.0519%
UNITED PARCEL SERVICE-CL B	UPS	81,214.65	0.50%	3.47%	10.50%	14.15%	0.0708%
URBAN OUTFITTERS INC	URBN	2,584.07	0.02%	0.00%	15.00%	15.00%	0.0024%
UNITED RENTALS INC	URI	5,304.14	0.03%	0.00%	16.00%	16.00%	0.0052%
US BANCORP	USB	70,021.05	0.43%	2.55%	5.50%	8.12%	0.0350%
UNITED TECHNOLOGIES CORP	UTX	78,953.73	0.49%	2.88%	7.00%	9.98%	0.0485%
VISA INC-CLASS A SHARES	V	163,467.00	1.01%	0.76%	13.50%	14.31%	0.1440%
VARIAN MEDICAL SYSTEMS INC	VAR	7,568.81	0.05%	0.00%	6.50%	6.50%	0.0030%
VF CORP	VFC	23,678.19	0.15%	2.66%	12.00%	14.82%	0.0216%
VIACOM INC-CLASS B	VIAB	16,485.00	0.10%	3.86%	11.00%	15.07%	0.0153%
VALERO ENERGY CORP	VLO	32,517.11	0.20%	2.97%	10.00%	13.12%	0.0263%
VULCAN MATERIALS CO	VMC	11,373.10	0.07%	0.47%	47.50%	48.08%	0.0337%
VORNADO REALTY TRUST	VNO	17,447.58	0.11%	2.72%	6.50%	9.31%	0.0100%
VERISK ANALYTICS INC	VRSK	12,234.67	0.08%	0.00%	12.50%	12.50%	0.0094%
VERISIGN INC	VRSN	8,464.55	0.05%	0.00%	11.00%	11.00%	0.0057%
VERTEX PHARMACEUTICALS INC	VRTX	25,033.79	N/A	0.00%	N/A	N/A	N/A
VENTAS INC	VTR	-	N/A	5.78%	N/A	N/A	N/A
VERIZON COMMUNICATIONS INC	VZ	182,576.00	1.12%	5.04%	5.50%	10.68%	0.1200%
WATERS CORP	WAT	10,372.51	0.06%	0.00%	8.50%	8.50%	0.0054%
WALGREENS BOOTS ALLIANCE INC	WBA	88,882.65	0.55%	1.76%	15.00%	16.89%	0.0924%
WESTERN DIGITAL CORP	WDC	11,376.75	0.07%	4.06%	2.00%	6.10%	0.0043%
WEC ENERGY GROUP INC	WEC	16,731.25	0.10%	3.74%	6.00%	9.85%	0.0101%
WELLS FARGO & CO	WFC	258,693.10	1.59%	3.06%	5.50%	8.64%	0.1377%
WHOLE FOODS MARKET INC	WFM	10,665.87	0.07%	1.77%	8.50%	10.35%	0.0068%
WHIRLPOOL CORP	WHR	10,454.34	0.06%	2.69%	13.50%	16.37%	0.0105%
WILLIS TOWERS WATSON PLC	WLTW	N/A	N/A	0.00%	N/A	N/A	N/A
WASTE MANAGEMENT INC	WM	23,564.37	0.15%	2.98%	7.00%	10.08%	0.0146%
WILLIAMS COS INC	WMB	13,699.21	0.08%	14.00%	16.00%	31.12%	0.0262%
WAL-MART STORES INC	WMT	202,422.60	1.25%	3.11%	1.50%	4.63%	0.0577%
WESTROCK CO	WRK	9,894.50	N/A	3.90%	N/A	N/A	N/A
WESTERN UNION CO	WU	8,667.78	0.05%	3.62%	6.00%	9.73%	0.0052%
WEYERHAEUSER CO	WY	13,496.38	0.08%	4.70%	12.50%	17.49%	0.0145%
WYNDHAM WORLDWIDE CORP	WYN	7,741.37	0.05%	2.52%	8.50%	11.13%	0.0053%
WYNN RESORTS LTD	WYNN	5,229.47	0.03%	3.88%	5.50%	9.49%	0.0031%
CIMAREX ENERGY CO	XEC	8,033.73	0.05%	0.75%	4.00%	4.77%	0.0024%
XCEL ENERGY INC	XEL	18,621.77	0.11%	3.65%	4.50%	8.23%	0.0094%
XL GROUP PLC	XL	9,048.79	0.06%	2.26%	9.00%	11.36%	0.0063%
XILINX INC	XLNX	10,898.31	0.07%	2.92%	17.00%	20.17%	0.0135%
EXXON MOBIL CORP	XOM	329,376.50	2.03%	3.69%	2.50%	6.24%	0.1264%
DENTSPLY INTERNATIONAL INC	XRAY	7,893.11	0.05%	0.51%	9.00%	9.53%	0.0046%
XEROX CORP	XRX	9,293.86	0.06%	3.27%	1.50%	4.79%	0.0027%
XYLEM INC	XYL	6,021.32	0.04%	1.67%	9.50%	11.25%	0.0042%
YAHOO! INC	YHOO	28,607.77	0.18%	0.00%	4.50%	4.50%	0.0079%
YUM! BRANDS INC	YUM	30,174.31	0.19%	2.69%	8.50%	11.30%	0.0210%
ZIMMER BIOMET HOLDINGS INC	ZBH	20,848.10	0.13%	0.94%	14.50%	15.51%	0.0199%
ZIONS BANCORPORATION	ZION	4,696.38	0.03%	1.13%	11.50%	12.69%	0.0037%
ZOETIS INC	ZTS	21,991.43	N/A	0.86%	N/A	N/A	N/A
		16,245.080					12.82%

[1] Equals sum of Col. [9]

[2] Source: Bloomberg Professional

[3] Equals [1] - [2]

[4] Source: Value Line

[5] Equals weight in S&P 500 based on market capitalization

[6] Source: Value Line

[7] Source: Value Line

[8] Equals (([6] x (1 + (0.5 x [7]))) + [7])

[9] Equals Col. [5] x Col. [8]

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1]	[2]
		Bloomberg	Value Line
ALLETE, Inc.	ALE	0.588	0.80
Alliant Energy Corporation	LNT	0.620	0.80
Ameren Corporation	AEE	0.590	0.75
American Electric Power Company, Inc.	AEP	0.550	0.70
Avista Corporation	AVA	0.594	0.80
CMS Energy Corporation	CMS	0.529	0.75
Dominion Resources, Inc.	D	0.573	0.70
DTE Energy Company	DTE	0.602	0.75
IDACORP, Inc.	IDA	0.683	0.80
NorthWestern Corporation	NWE	0.632	0.70
OGE Energy Corp.	OGE	0.700	0.95
Otter Tail Corporation	OTTR	0.723	0.85
Pinnacle West Capital Corporation	PNW	0.598	0.75
PNM Resources, Inc.	PNM	0.622	0.85
Portland General Electric Company	POR	0.653	0.80
SCANA Corporation	SCG	0.578	0.75
Westar Energy, Inc.	WR	0.640	0.75
Xcel Energy Inc.	XEL	0.489	0.65
Mean		0.609	0.77

Notes:

[1] Source: Bloomberg Professional

[2] Source: Value Line

Capital Asset Pricing Model Results
Bloomberg and Value Line Derived Market Risk Premium

	[1]	[2]	[3]	[4]	[5]	[6]
			Ex-Ante Market Risk Premium Bloomberg Market DCF Derived	Value Line Market DCF Derived	CAPM Result	
	Risk-Free Rate	Average Beta Coefficient			Bloomberg Market DCF Derived	Value Line Market DCF Derived
PROXY GROUP BLOOMBERG BETA COEFFICIENT						
Current 30-Year Treasury (30-day average) [7]	2.96%	0.609	10.68%	9.87%	9.46%	8.97%
Near-Term Projected 30-Year Treasury [8]	3.45%	0.609	10.68%	9.87%	9.95%	9.46%
Mean					9.71%	9.21%
PROXY GROUP VALUE LINE AVERAGE BETA COEFFICIENT						
Current 30-Year Treasury (30-day average) [7]	2.96%	0.772	10.68%	9.87%	11.20%	10.57%
Near-Term Projected 30-Year Treasury [8]	3.45%	0.772	10.68%	9.87%	11.69%	11.07%
Mean					11.45%	10.82%

Notes:

[1] See Notes [7] and [8]

[2] Source: Exhibit RBH-4

[3] Source: Exhibit RBH-3

[4] Source: Exhibit RBH-3

[5] Equals Col. [1] + (Col. [2] x Col. [3])

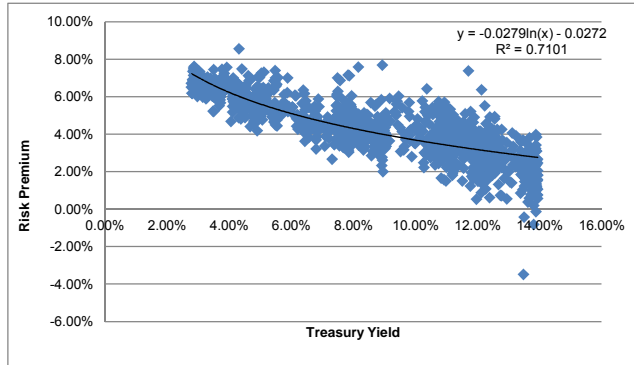
[6] Equals Col. [1] + (Col. [2] x Col. [4])

[7] Source: Bloomberg Professional

[8] Source: Blue Chip Financial Forecasts, Vol. 35, No. 1, January 1, 2016, at 2.

Bond Yield Plus Risk Premium

[1]	[2]	[3]	[4]	[5]
Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
-2.72%	-2.79%			
Current 30-Year Treasury		2.96%	7.08%	10.04%
Near-Term Projected 30-Year Treasury		3.45%	6.65%	10.10%
Long-Term Projected 30-Year Treasury		4.65%	5.82%	10.47%



Notes:

- [1] Constant of regression equation
- [2] Slope of regression equation
- [3] Source: Current = Bloomberg Professional, Near Term Projected = Blue Chip Financial Forecasts, Vol. 35, No. 1, January 1, 2016, at 2, Long Term Projected = Blue Chip Financial Forecasts, Vol. 34, No. 12, December 1, 2015, at 14
- [4] Equals [1] + ln([3]) x [2]
- [5] Equals [3] + [4]
- [6] Source: SNL Financial
- [7] Source: SNL Financial
- [8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
- [9] Equals [7] - [8]

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/1/1980	14.50%	9.36%	5.14%
1/7/1980	14.39%	9.38%	5.01%
1/9/1980	15.00%	9.40%	5.60%
1/14/1980	15.17%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980	15.50%	9.47%	6.03%
1/30/1980	13.86%	9.52%	4.34%
1/31/1980	12.61%	9.53%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980	12.80%	9.63%	3.17%
2/14/1980	13.00%	9.65%	3.35%
2/19/1980	13.50%	9.68%	3.82%
2/27/1980	13.75%	9.78%	3.97%
2/29/1980	13.75%	9.81%	3.94%
2/29/1980	14.00%	9.81%	4.19%
2/29/1980	14.77%	9.81%	4.96%
3/7/1980	12.70%	9.89%	2.81%
3/14/1980	13.50%	9.97%	3.53%
3/26/1980	14.16%	10.10%	4.06%
3/27/1980	14.24%	10.12%	4.12%
3/28/1980	14.50%	10.13%	4.37%
4/11/1980	12.75%	10.27%	2.48%
4/14/1980	13.85%	10.29%	3.56%
4/16/1980	15.50%	10.31%	5.19%
4/22/1980	13.25%	10.35%	2.90%
4/22/1980	13.90%	10.35%	3.55%
4/24/1980	16.80%	10.38%	6.43%
4/29/1980	15.50%	10.41%	5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980	15.00%	10.45%	4.55%
5/8/1980	13.75%	10.46%	3.29%
5/9/1980	14.35%	10.47%	3.88%
5/13/1980	13.60%	10.48%	3.12%
5/15/1980	13.25%	10.49%	2.76%
5/19/1980	13.75%	10.51%	3.24%
5/27/1980	13.62%	10.54%	3.08%
5/27/1980	14.60%	10.54%	4.06%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980	13.80%	10.56%	3.24%
6/2/1980	15.63%	10.57%	5.06%
6/9/1980	15.90%	10.60%	5.30%
6/10/1980	13.78%	10.60%	3.18%
6/12/1980	14.25%	10.61%	3.64%
6/19/1980	13.40%	10.62%	2.78%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980	14.75%	10.67%	4.08%
7/10/1980	15.00%	10.68%	4.32%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.71%	3.09%
7/22/1980	14.10%	10.72%	3.38%
7/24/1980	15.00%	10.73%	4.27%
7/25/1980	13.48%	10.73%	2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980	13.50%	10.88%	2.62%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.94%	2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.98%	4.52%
10/7/1980	12.50%	10.99%	1.51%
10/9/1980	13.25%	11.00%	2.25%
10/9/1980	14.50%	11.00%	3.50%
10/9/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	13.75%	11.12%	2.63%
11/5/1980	14.00%	11.12%	2.88%
11/8/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/8/1980	14.15%	11.22%	2.93%
12/8/1980	15.10%	11.22%	3.88%
12/9/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%
1/2/1981	15.25%	11.22%	4.03%
1/7/1981	14.30%	11.21%	3.09%
1/19/1981	15.25%	11.20%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.21%	3.79%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.33%	3.92%
3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981	16.00%	11.50%	4.50%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.60%	3.70%
4/1/1981	14.53%	11.68%	2.85%
4/3/1981	19.10%	11.71%	7.39%
4/9/1981	15.00%	11.78%	3.22%
4/9/1981	15.30%	11.78%	3.52%
4/9/1981	16.50%	11.78%	4.72%
4/9/1981	17.00%	11.78%	5.22%
4/10/1981	13.75%	11.80%	1.95%
4/13/1981	13.57%	11.82%	1.75%
4/15/1981	15.30%	11.85%	3.45%
4/16/1981	13.50%	11.87%	1.63%
4/17/1981	14.10%	11.87%	2.23%
4/21/1981	14.00%	11.90%	2.10%
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%
5/15/1981	15.75%	12.22%	3.53%
5/18/1981	14.88%	12.23%	2.65%
5/20/1981	16.00%	12.26%	3.74%
5/21/1981	14.00%	12.27%	1.73%
5/26/1981	14.90%	12.30%	2.60%
5/27/1981	15.00%	12.31%	2.69%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.37%	2.30%
6/5/1981	13.00%	12.39%	0.61%
6/10/1981	16.75%	12.42%	4.33%
6/17/1981	14.40%	12.46%	1.94%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.51%	2.24%
6/26/1981	16.00%	12.52%	3.48%
6/30/1981	15.25%	12.54%	2.71%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.74%	0.74%
7/31/1981	13.50%	12.78%	0.72%
7/31/1981	15.00%	12.78%	2.22%
7/31/1981	16.00%	12.78%	3.22%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981	13.50%	12.95%	0.55%
8/20/1981	16.50%	12.95%	3.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.05%	1.45%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%
3/12/1982	16.25%	13.88%	2.37%
3/17/1982	17.30%	13.88%	3.42%
3/22/1982	15.10%	13.89%	1.21%
3/27/1982	15.40%	13.89%	1.51%
3/30/1982	15.50%	13.90%	1.60%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982	15.50%	13.91%	1.59%
4/5/1982	15.50%	13.92%	1.58%
4/8/1982	16.40%	13.93%	2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%
4/27/1982	15.00%	13.94%	1.06%
4/28/1982	15.75%	13.94%	1.81%
4/30/1982	14.70%	13.94%	0.76%
4/30/1982	15.50%	13.94%	1.56%
5/3/1982	16.60%	13.94%	2.66%
5/4/1982	16.00%	13.94%	2.06%
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982	15.00%	13.91%	1.09%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/1/1982	15.50%	13.15%	2.35%
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	14.63%	12.33%	2.30%
1/12/1983	15.50%	12.33%	3.17%
1/20/1983	17.75%	12.24%	5.51%
1/21/1983	15.00%	12.22%	2.78%
1/24/1983	14.50%	12.21%	2.29%
1/24/1983	15.50%	12.21%	3.29%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.17%	3.97%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.10%	1.90%
2/10/1983	15.00%	12.06%	2.94%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.97%	3.53%
2/23/1983	15.10%	11.96%	3.14%
2/23/1983	16.00%	11.96%	4.04%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.77%	1.23%
3/18/1983	15.25%	11.73%	3.52%
3/23/1983	15.40%	11.69%	3.71%
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983	16.71%	11.61%	5.10%
3/31/1983	15.00%	11.59%	3.41%
4/4/1983	15.20%	11.58%	3.62%
4/8/1983	15.50%	11.51%	3.99%
4/11/1983	14.81%	11.49%	3.32%
4/19/1983	14.50%	11.38%	3.12%
4/20/1983	16.00%	11.36%	4.64%
4/29/1983	16.00%	11.24%	4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983	16.46%	11.12%	5.34%
5/12/1983	14.14%	11.11%	3.03%
5/18/1983	15.00%	11.05%	3.95%
5/23/1983	14.90%	11.01%	3.89%
5/23/1983	15.50%	11.01%	4.49%
5/25/1983	15.50%	10.98%	4.52%
5/27/1983	15.00%	10.96%	4.04%
5/31/1983	14.00%	10.95%	3.05%
5/31/1983	15.50%	10.95%	4.55%
6/2/1983	14.50%	10.93%	3.57%
6/17/1983	15.03%	10.84%	4.19%
7/1/1983	14.80%	10.78%	4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.00%	10.74%	4.26%
7/19/1983	15.10%	10.74%	4.36%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/7/1983	15.00%	10.86%	4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983	16.15%	10.95%	5.20%
10/4/1983	14.80%	10.96%	3.84%
10/7/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.25%	11.01%	5.24%
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/1/1983	16.00%	11.06%	4.94%
11/9/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	14.69%	11.22%	3.47%
12/20/1983	16.00%	11.22%	4.78%
12/20/1983	16.25%	11.22%	5.03%
12/22/1983	14.75%	11.23%	3.52%
12/22/1983	15.75%	11.23%	4.52%
1/3/1984	14.75%	11.27%	3.48%
1/10/1984	15.90%	11.30%	4.60%
1/12/1984	15.60%	11.31%	4.29%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984	15.90%	11.33%	4.57%
1/30/1984	16.10%	11.37%	4.73%
1/31/1984	15.25%	11.37%	3.88%
2/1/1984	14.80%	11.38%	3.42%
2/6/1984	13.75%	11.40%	2.35%
2/6/1984	14.75%	11.40%	3.35%
2/9/1984	15.25%	11.42%	3.83%
2/15/1984	15.70%	11.44%	4.26%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984	14.75%	11.47%	3.28%
2/28/1984	14.50%	11.51%	2.99%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.64%	4.36%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
4/2/1984	15.50%	11.71%	3.79%
4/6/1984	14.74%	11.75%	2.99%
4/11/1984	15.72%	11.78%	3.94%
4/17/1984	15.00%	11.81%	3.19%
4/18/1984	16.20%	11.82%	4.38%
4/25/1984	14.64%	11.85%	2.79%
4/30/1984	14.40%	11.87%	2.53%
5/16/1984	14.69%	11.98%	2.71%
5/16/1984	15.00%	11.98%	3.02%
5/22/1984	14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.15%	3.10%
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984	16.00%	12.31%	3.69%
7/12/1984	16.50%	12.32%	4.18%
7/13/1984	16.25%	12.33%	3.92%
7/17/1984	14.14%	12.35%	1.79%
7/18/1984	15.30%	12.36%	2.94%
7/18/1984	15.50%	12.36%	3.14%
7/19/1984	14.30%	12.37%	1.93%
7/24/1984	16.79%	12.39%	4.40%
7/31/1984	16.00%	12.43%	3.57%
8/3/1984	14.25%	12.44%	1.81%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
8/17/1984	14.30%	12.49%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984	16.30%	12.51%	3.79%
8/31/1984	15.55%	12.52%	3.03%
9/6/1984	16.00%	12.53%	3.47%
9/10/1984	14.75%	12.54%	2.21%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984	14.50%	12.57%	1.93%
9/28/1984	15.00%	12.57%	2.43%
9/28/1984	16.25%	12.57%	3.68%
10/9/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.58%	3.82%
10/31/1984	16.25%	12.58%	3.67%
11/7/1984	15.60%	12.58%	3.02%
11/9/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.58%	3.17%
11/20/1984	15.25%	12.58%	2.67%
11/20/1984	15.92%	12.58%	3.34%
11/23/1984	15.00%	12.58%	2.42%
11/28/1984	16.15%	12.57%	3.58%
12/3/1984	15.80%	12.56%	3.24%
12/4/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.53%	2.22%
12/19/1984	15.00%	12.53%	2.47%
12/20/1984	16.00%	12.53%	3.47%
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985	15.75%	12.47%	3.28%
1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.35%	2.12%
3/1/1985	13.84%	12.31%	1.53%
3/8/1985	16.85%	12.28%	4.57%
3/14/1985	15.50%	12.25%	3.25%
3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.17%	3.45%
4/3/1985	14.60%	12.14%	2.46%
4/9/1985	15.50%	12.11%	3.39%
4/16/1985	15.70%	12.06%	3.64%
4/22/1985	14.00%	12.02%	1.98%
4/26/1985	15.50%	11.98%	3.52%
4/29/1985	15.00%	11.97%	3.03%
5/2/1985	14.68%	11.94%	2.74%
5/8/1985	15.62%	11.89%	3.73%
5/10/1985	16.50%	11.87%	4.63%
5/29/1985	14.61%	11.73%	2.88%
5/31/1985	16.00%	11.71%	4.29%
6/14/1985	15.50%	11.61%	3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.33%	3.17%
8/2/1985	14.80%	11.29%	3.51%
8/7/1985	15.00%	11.27%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.15%	3.35%
9/9/1985	14.60%	11.11%	3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.50%	11.05%	4.45%
9/27/1985	15.80%	11.05%	4.75%
10/2/1985	14.00%	11.03%	2.97%
10/2/1985	14.75%	11.03%	3.72%
10/3/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985	15.50%	10.90%	4.60%
11/8/1985	14.30%	10.89%	3.41%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.23%	5.77%
2/24/1986	14.50%	10.18%	4.32%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986	13.40%	9.69%	3.71%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.32%	5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986	15.10%	9.18%	5.92%
6/2/1986	12.81%	9.17%	3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986	12.00%	8.91%	3.09%
6/26/1986	14.75%	8.91%	5.84%
6/30/1986	13.00%	8.87%	4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.66%	3.74%
7/25/1986	14.25%	8.57%	5.68%
8/6/1986	13.50%	8.44%	5.06%
8/14/1986	13.50%	8.35%	5.15%
9/16/1986	12.75%	8.06%	4.69%
9/19/1986	13.25%	8.03%	5.22%
10/1/1986	14.00%	7.95%	6.05%
10/3/1986	13.40%	7.93%	5.47%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986	13.00%	7.75%	5.25%
12/3/1986	12.90%	7.58%	5.32%
12/4/1986	14.44%	7.58%	6.86%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.51%	6.29%
12/30/1986	13.00%	7.49%	5.51%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.47%	4.93%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.54%	4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987	13.50%	7.70%	5.80%
6/15/1987	13.20%	7.78%	5.42%
6/29/1987	15.00%	7.83%	7.17%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987	12.90%	7.86%	5.04%
7/15/1987	13.50%	7.88%	5.62%
7/16/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%
7/27/1987	13.00%	7.92%	5.08%
7/27/1987	13.40%	7.92%	5.48%
7/27/1987	13.50%	7.92%	5.58%
7/31/1987	12.98%	7.95%	5.03%
8/26/1987	12.63%	8.06%	4.57%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
8/26/1987	12.75%	8.06%	4.69%
8/27/1987	13.25%	8.06%	5.19%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	12.75%	8.31%	4.44%
9/30/1987	13.00%	8.31%	4.69%
10/2/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.43%	4.57%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.68%	3.32%
12/3/1987	14.20%	8.70%	5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%
12/16/1987	13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987	13.00%	8.81%	4.19%
1/20/1988	13.80%	8.94%	4.86%
1/26/1988	13.90%	8.95%	4.95%
1/29/1988	13.20%	8.96%	4.24%
2/4/1988	12.60%	8.96%	3.64%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%
3/24/1988	11.24%	8.92%	2.32%
3/30/1988	12.72%	8.92%	3.80%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.93%	4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.99%	4.51%
5/16/1988	13.00%	8.99%	4.01%
6/30/1988	12.75%	9.00%	3.75%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.92%	3.83%
8/23/1988	11.70%	8.93%	2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%
12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989	13.00%	9.05%	3.95%
3/30/1989	14.00%	9.05%	4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.00%	4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
1/10/1990	12.80%	8.24%	4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.20%	3.80%
2/9/1990	12.10%	8.17%	3.93%
2/24/1990	12.86%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/12/1990	12.52%	8.18%	4.34%
4/19/1990	12.75%	8.20%	4.55%
5/21/1990	12.10%	8.28%	3.82%
5/29/1990	12.40%	8.30%	4.10%
5/31/1990	12.00%	8.30%	3.70%
6/4/1990	12.90%	8.30%	4.60%
6/6/1990	12.25%	8.31%	3.94%
6/15/1990	13.20%	8.32%	4.88%
6/20/1990	12.92%	8.32%	4.60%
6/27/1990	12.90%	8.33%	4.57%
6/29/1990	12.50%	8.33%	4.17%
7/6/1990	12.10%	8.34%	3.76%
7/6/1990	12.35%	8.34%	4.01%
8/10/1990	12.55%	8.41%	4.14%
8/16/1990	13.21%	8.43%	4.78%
8/22/1990	13.10%	8.45%	4.65%
8/24/1990	13.00%	8.46%	4.54%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%
10/5/1990	12.84%	8.62%	4.22%
10/19/1990	13.00%	8.67%	4.33%
10/25/1990	12.30%	8.68%	3.62%
11/21/1990	12.70%	8.69%	4.01%
12/13/1990	12.30%	8.67%	3.63%
12/17/1990	12.87%	8.67%	4.20%
12/18/1990	13.10%	8.67%	4.43%
12/19/1990	12.00%	8.66%	3.34%
12/20/1990	12.75%	8.66%	4.09%
12/21/1990	12.50%	8.66%	3.84%
12/27/1990	12.79%	8.66%	4.13%
1/2/1991	13.10%	8.65%	4.45%
1/4/1991	12.50%	8.65%	3.85%
1/15/1991	12.75%	8.64%	4.11%
1/25/1991	11.70%	8.63%	3.07%
2/4/1991	12.50%	8.60%	3.90%
2/7/1991	12.50%	8.59%	3.91%
2/12/1991	13.00%	8.58%	4.43%
2/14/1991	12.72%	8.57%	4.15%
2/22/1991	12.80%	8.55%	4.25%
3/6/1991	13.10%	8.53%	4.57%
3/8/1991	12.30%	8.52%	3.78%
3/8/1991	13.00%	8.52%	4.48%
4/22/1991	13.00%	8.49%	4.51%
5/7/1991	13.50%	8.47%	5.03%
5/13/1991	13.25%	8.47%	4.78%
5/30/1991	12.75%	8.44%	4.31%
6/12/1991	12.00%	8.41%	3.59%
6/25/1991	11.70%	8.39%	3.31%
6/28/1991	12.50%	8.38%	4.12%
7/1/1991	12.00%	8.38%	3.62%
7/3/1991	12.50%	8.37%	4.13%
7/19/1991	12.10%	8.34%	3.76%
8/1/1991	12.90%	8.32%	4.58%
8/16/1991	13.20%	8.29%	4.91%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.25%	8.23%	4.02%
10/17/1991	13.00%	8.20%	4.80%
10/23/1991	12.50%	8.20%	4.30%
10/23/1991	12.55%	8.20%	4.35%
10/31/1991	11.80%	8.19%	3.61%
11/1/1991	12.00%	8.19%	3.81%
11/5/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.50%	8.18%	4.32%
11/27/1991	12.10%	8.18%	3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
1/9/1992	12.80%	8.09%	4.71%
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.06%	4.94%
1/27/1992	12.65%	8.05%	4.60%
1/31/1992	12.00%	8.04%	3.96%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.01%	4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.94%	3.51%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.93%	3.57%
5/5/1992	11.50%	7.89%	3.61%
5/12/1992	11.87%	7.88%	3.99%
5/12/1992	12.46%	7.88%	4.58%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/13/1992	13.50%	7.84%	5.66%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992	11.40%	7.71%	3.69%
9/30/1992	11.75%	7.70%	4.05%
10/2/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992	11.85%	7.68%	4.17%
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992	12.40%	7.66%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.63%	4.27%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993	11.90%	7.49%	4.41%
2/26/1993	11.80%	7.48%	4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.25%	4.50%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.23%	4.27%
5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.10%	4.28%
7/23/1993	10.46%	7.09%	3.37%
8/24/1993	11.50%	6.96%	4.54%
9/21/1993	10.50%	6.81%	3.69%
9/29/1993	11.47%	6.77%	4.70%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.57%	5.43%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993	10.55%	6.48%	4.07%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.47%	4.83%
1/4/1994	10.07%	6.44%	3.63%
1/13/1994	11.00%	6.42%	4.58%
1/21/1994	11.00%	6.40%	4.60%
1/28/1994	11.35%	6.39%	4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.39%	3.46%
11/9/1994	10.85%	7.39%	3.46%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.49%	3.57%
12/8/1994	11.50%	7.54%	3.96%
12/8/1994	11.70%	7.54%	4.16%
12/14/1994	10.95%	7.56%	3.39%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%
1/9/1995	12.28%	7.64%	4.64%
1/31/1995	11.00%	7.69%	3.31%
2/10/1995	12.60%	7.70%	4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.71%	3.79%
3/20/1995	12.00%	7.72%	4.28%
3/23/1995	12.81%	7.72%	5.09%
3/29/1995	11.60%	7.72%	3.88%
4/6/1995	11.10%	7.71%	3.39%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995	11.63%	7.68%	3.95%
5/25/1995	11.20%	7.65%	3.55%
6/9/1995	11.25%	7.60%	3.65%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.52%	3.58%
9/11/1995	11.30%	7.20%	4.10%
9/27/1995	11.30%	7.12%	4.18%
9/27/1995	11.50%	7.12%	4.38%
9/27/1995	11.75%	7.12%	4.63%
9/29/1995	11.00%	7.11%	3.89%
11/9/1995	11.38%	6.90%	4.48%
11/9/1995	12.36%	6.90%	5.46%
11/17/1995	11.00%	6.86%	4.14%
12/4/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.70%	4.90%
12/27/1995	12.00%	6.66%	5.34%
2/5/1996	12.25%	6.48%	5.77%
3/29/1996	10.67%	6.42%	4.25%
4/8/1996	11.00%	6.42%	4.58%
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
4/24/1996	11.25%	6.43%	4.82%
4/30/1996	11.00%	6.43%	4.57%
5/13/1996	11.00%	6.44%	4.56%
5/23/1996	11.25%	6.43%	4.82%
6/25/1996	11.25%	6.48%	4.77%
6/27/1996	11.20%	6.48%	4.72%
8/12/1996	10.40%	6.57%	3.83%
9/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%
12/18/1996	11.75%	6.83%	4.92%
12/31/1996	11.50%	6.83%	4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.80%	3.22%
4/2/1997	11.65%	6.80%	4.85%
4/28/1997	11.50%	6.81%	4.69%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
2/2/1998	12.75%	6.39%	6.36%
3/2/1998	11.25%	6.29%	4.96%
3/6/1998	10.75%	6.27%	4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998	11.40%	5.94%	5.46%
9/15/1998	11.90%	5.78%	6.12%
11/30/1998	12.60%	5.58%	7.02%
12/10/1998	12.20%	5.54%	6.66%
12/17/1998	12.10%	5.52%	6.58%
2/5/1999	10.30%	5.38%	4.92%
3/4/1999	10.50%	5.34%	5.16%
4/6/1999	10.94%	5.32%	5.62%
7/29/1999	10.75%	5.52%	5.23%
9/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
1/7/2000	11.50%	6.05%	5.45%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/7/2000	11.50%	6.05%	5.45%
2/17/2000	10.60%	6.17%	4.43%
3/28/2000	11.25%	6.20%	5.05%
5/24/2000	11.00%	6.18%	4.82%
7/18/2000	12.20%	6.16%	6.04%
9/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
1/23/2001	11.25%	5.79%	5.46%
2/8/2001	11.50%	5.77%	5.73%
5/8/2001	10.75%	5.62%	5.13%
6/26/2001	11.00%	5.62%	5.38%
7/25/2001	11.02%	5.60%	5.42%
7/25/2001	11.02%	5.60%	5.42%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001	10.50%	5.56%	4.94%
9/7/2001	10.75%	5.55%	5.20%
9/10/2001	11.00%	5.55%	5.45%
9/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/3/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
1/22/2002	10.00%	5.50%	4.50%
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002	10.17%	5.46%	4.71%
6/10/2002	12.00%	5.47%	6.53%
6/18/2002	11.16%	5.48%	5.68%
6/20/2002	11.00%	5.48%	5.52%
6/20/2002	12.30%	5.48%	6.82%
7/15/2002	11.00%	5.48%	5.52%
9/12/2002	12.30%	5.45%	6.85%
9/26/2002	10.45%	5.41%	5.04%
12/4/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
1/8/2003	11.10%	5.19%	5.91%
1/31/2003	12.45%	5.13%	7.32%
2/28/2003	12.30%	5.05%	7.25%
3/6/2003	10.75%	5.03%	5.72%
3/7/2003	9.96%	5.02%	4.94%
3/20/2003	12.00%	4.98%	7.02%
4/3/2003	12.00%	4.96%	7.04%
4/15/2003	11.15%	4.94%	6.21%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003	9.75%	4.79%	4.96%
7/16/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.80%	4.70%
8/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
1/13/2004	12.00%	4.95%	7.05%
3/2/2004	10.75%	4.99%	5.76%
3/26/2004	10.25%	5.02%	5.23%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.08%	5.17%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
7/16/2004	11.60%	5.11%	6.49%
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%
12/29/2004	9.85%	5.07%	4.78%
1/6/2005	10.70%	5.08%	5.62%
2/18/2005	10.30%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005	10.25%	4.87%	5.38%
5/18/2005	10.25%	4.78%	5.47%
5/25/2005	10.75%	4.76%	5.99%
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005	11.50%	4.64%	6.86%
8/5/2005	11.75%	4.62%	7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%
12/22/2005	11.15%	4.54%	6.61%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.53%	6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006	10.20%	4.83%	5.37%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.89%	4.66%
9/1/2006	10.54%	4.90%	5.64%
9/14/2006	10.00%	4.91%	5.09%
10/6/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/1/2006	10.25%	4.95%	5.30%
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
1/5/2007	10.00%	4.95%	5.05%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.90%	4.95%	5.95%
1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.87%	6.48%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007	9.67%	4.80%	4.87%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/22/2007	10.50%	4.83%	5.67%
6/28/2007	10.75%	4.84%	5.91%
7/12/2007	9.67%	4.86%	4.81%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
8/15/2007	10.40%	4.88%	5.52%
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/28/2008	9.40%	4.80%	4.60%
1/30/2008	10.00%	4.79%	5.21%
1/31/2008	10.71%	4.79%	5.92%
2/29/2008	10.25%	4.75%	5.50%
3/12/2008	10.25%	4.73%	5.52%
3/25/2008	9.10%	4.68%	4.42%
4/22/2008	10.25%	4.60%	5.65%
4/24/2008	10.10%	4.60%	5.50%
5/1/2008	10.70%	4.59%	6.11%
5/19/2008	11.00%	4.56%	6.44%
5/27/2008	10.00%	4.55%	5.45%
6/10/2008	10.70%	4.54%	6.16%
6/27/2008	10.50%	4.54%	5.96%
6/27/2008	11.04%	4.54%	6.50%
7/10/2008	10.43%	4.52%	5.91%
7/16/2008	9.40%	4.52%	4.88%
7/30/2008	10.80%	4.51%	6.29%
7/31/2008	10.70%	4.51%	6.19%
8/11/2008	10.25%	4.51%	5.74%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008	10.30%	4.50%	5.80%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.48%	5.72%
10/8/2008	10.15%	4.46%	5.69%
11/13/2008	10.55%	4.45%	6.10%
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.79%	6.21%
4/30/2009	11.25%	3.78%	7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%
7/17/2009	10.50%	3.78%	6.72%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.30%	6.70%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.70%	4.35%	6.35%
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41%	5.77%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/2/2010	9.63%	4.41%	5.22%
3/4/2010	10.50%	4.41%	6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.10%	4.44%	5.66%
5/28/2010	10.20%	4.44%	5.76%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010	9.67%	4.43%	5.24%
6/28/2010	10.50%	4.43%	6.07%
6/30/2010	9.40%	4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.53%	4.43%	6.10%
7/15/2010	10.70%	4.43%	6.27%
7/30/2010	10.70%	4.41%	6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010	9.90%	4.37%	5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.33%	5.67%
9/16/2010	10.00%	4.33%	5.67%
9/30/2010	9.75%	4.29%	5.46%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010	10.70%	4.20%	6.50%
11/19/2010	10.20%	4.18%	6.02%
11/22/2010	10.00%	4.18%	5.82%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010	10.25%	4.15%	6.10%
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.15%	5.85%
12/20/2010	10.60%	4.15%	6.45%
12/21/2010	10.30%	4.14%	6.16%
12/27/2010	9.90%	4.14%	5.76%
12/29/2010	11.15%	4.14%	7.01%
1/5/2011	10.15%	4.13%	6.02%
1/12/2011	10.30%	4.12%	6.18%
1/13/2011	10.30%	4.12%	6.18%
1/18/2011	10.00%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.12%	5.48%
2/3/2011	10.00%	4.12%	5.88%
2/25/2011	10.00%	4.14%	5.86%
3/25/2011	9.80%	4.18%	5.62%
3/30/2011	10.00%	4.18%	5.82%
4/12/2011	10.00%	4.21%	5.79%
4/25/2011	10.74%	4.23%	6.51%
4/26/2011	9.67%	4.23%	5.44%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.24%	5.76%
5/4/2011	10.00%	4.24%	5.76%
5/24/2011	10.50%	4.27%	6.23%
6/8/2011	10.75%	4.30%	6.45%
6/16/2011	9.20%	4.32%	4.88%
6/17/2011	9.95%	4.32%	5.63%
7/13/2011	10.20%	4.36%	5.84%
8/1/2011	9.20%	4.39%	4.81%
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011	10.35%	4.37%	5.98%
8/19/2011	10.25%	4.36%	5.89%
9/2/2011	12.88%	4.32%	8.56%
9/22/2011	10.00%	4.24%	5.76%
10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/14/2011	10.00%	3.80%	6.20%
12/14/2011	10.30%	3.80%	6.50%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.76%	6.44%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%
12/23/2011	10.19%	3.74%	6.45%
1/25/2012	10.50%	3.57%	6.93%
1/27/2012	10.50%	3.56%	6.94%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.44%	6.46%
2/27/2012	10.25%	3.43%	6.82%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012	10.37%	3.32%	7.05%
4/4/2012	10.00%	3.30%	6.70%
4/26/2012	10.00%	3.21%	6.79%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.17%	6.63%
5/15/2012	10.00%	3.14%	6.86%
5/29/2012	10.05%	3.11%	6.94%
6/7/2012	10.30%	3.08%	7.22%
6/14/2012	9.40%	3.06%	6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.06%	6.54%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.02%	6.78%
7/20/2012	9.31%	3.01%	6.30%
7/20/2012	9.81%	3.01%	6.80%
9/13/2012	9.80%	2.94%	6.86%
9/19/2012	9.80%	2.94%	6.86%
9/19/2012	10.05%	2.94%	7.11%
9/26/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.75%	2.89%	6.86%
11/29/2012	9.88%	2.89%	6.99%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.87%	6.84%
12/19/2012	10.25%	2.87%	7.38%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
7/12/2013	9.36%	3.07%	6.29%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013	10.20%	3.31%	6.89%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.48%	5.24%
12/9/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%
12/17/2013	10.95%	3.51%	7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%
12/30/2013	9.50%	3.54%	5.96%
2/20/2014	9.20%	3.68%	5.52%
2/26/2014	9.75%	3.69%	6.06%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
6/30/2014	9.55%	3.64%	5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%
7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.57%	6.18%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%
9/11/2014	9.60%	3.51%	6.09%
9/15/2014	10.25%	3.51%	6.74%
10/9/2014	9.80%	3.45%	6.35%
11/6/2014	9.56%	3.37%	6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.33%	6.37%
11/26/2014	10.20%	3.33%	6.87%
12/4/2014	9.68%	3.31%	6.37%
12/10/2014	9.25%	3.29%	5.96%
12/10/2014	9.25%	3.29%	5.96%
12/11/2014	10.07%	3.29%	6.78%
12/12/2014	10.20%	3.28%	6.92%
12/17/2014	9.17%	3.27%	5.90%
12/18/2014	9.83%	3.26%	6.57%
1/23/2015	9.50%	3.14%	6.36%
2/24/2015	9.83%	3.04%	6.79%
3/18/2015	9.75%	2.98%	6.77%
3/25/2015	9.50%	2.96%	6.54%
3/26/2015	9.72%	2.95%	6.77%
4/23/2015	10.20%	2.87%	7.33%
4/29/2015	9.53%	2.86%	6.67%
5/1/2015	9.60%	2.85%	6.75%
5/26/2015	9.75%	2.83%	6.92%
6/17/2015	9.00%	2.82%	6.18%
6/17/2015	9.00%	2.82%	6.18%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.00%	2.88%	7.12%
11/19/2015	10.30%	2.88%	7.42%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/15/2015	9.60%	2.91%	6.69%
12/17/2015	9.70%	2.91%	6.79%
12/18/2015	9.50%	2.91%	6.59%
12/30/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.94%	6.56%

of Cases: 1,468
Average: 4.50%

Alternative Bond Yield Plus Risk Premium Analyses

	[1]	[2]	[3]	[4]
	30-Year Treasury Yield	Moody's Utility A Yield	Moody's Utility A Credit Spread	VIX
30-Day Average	2.96%	4.35%	1.39%	20.05
Near-Term Projected	3.45%	4.35%	0.90%	20.05
Long-Term Projected	4.65%	4.35%	-0.30%	20.05

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.8288
R Square	0.6869
Adjusted R Square	0.6854
Standard Error	0.0054
Observations	619

ANOVA					
	df	SS	MS	F	Significance F
Regression	3	0.0391	0.0130	449.7729	0.0000
Residual	615	0.0178	0.0000		
Total	618	0.0569			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.0300	0.0024	-12.2325	0.0000	-0.0348	-0.0251	-0.0348	-0.0251
LN(30-Year Treasury)	-0.0265	0.0008	-33.4361	0.0000	-0.0281	-0.0250	-0.0281	-0.0250
Moody's Utility A Credit Spread	0.2412	0.0911	2.6467	0.0083	0.0622	0.4202	0.0622	0.4202
VIX	0.0001	0.0001	2.2520	0.0247	0.0000	0.0003	0.0000	0.0003

	Risk Premium	Return on Equity
Regression Result - Credit Spread, VIX	6.97%	9.92%
Regression Result - Credit Spread, VIX	6.44%	9.89%
Regression Result - Credit Spread, VIX	5.36%	10.01%

Notes:

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional
- [3] Source: Bloomberg Professional
- [4] Source: Bloomberg Professional
- [5] Source: SNL Financial
- [6] Source: SNL Financial
- [7] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period) as of January 15, 2015
- [8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period) as of January 15, 2015
- [9] Equals LN[8]
- [10] Equals [8] - [7]
- [11] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period) as of January 15, 2015
- [12] Equals [6] - [7]

[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
1/1/1980	14.50%	9.36%		-2.37			5.14%
1/7/1980	14.39%	9.38%		-2.37			5.01%
1/9/1980	15.00%	9.40%		-2.36			5.60%
1/14/1980	15.17%	9.42%		-2.36			5.75%
1/17/1980	13.93%	9.44%		-2.36			4.49%
1/23/1980	15.50%	9.47%		-2.36			6.03%
1/30/1980	13.86%	9.52%		-2.35			4.34%
1/31/1980	12.61%	9.53%		-2.35			3.08%
2/6/1980	13.71%	9.58%		-2.35			4.13%
2/13/1980	12.80%	9.63%		-2.34			3.17%
2/14/1980	13.00%	9.65%		-2.34			3.35%
2/19/1980	13.50%	9.68%		-2.34			3.82%
2/27/1980	13.75%	9.78%		-2.32			3.97%
2/29/1980	13.75%	9.81%		-2.32			3.94%
2/29/1980	14.00%	9.81%		-2.32			4.19%
2/29/1980	14.77%	9.81%		-2.32			4.96%
3/7/1980	12.70%	9.89%		-2.31			2.81%
3/14/1980	13.50%	9.97%		-2.31			3.53%
3/26/1980	14.16%	10.10%		-2.29			4.06%
3/27/1980	14.24%	10.12%		-2.29			4.12%
3/28/1980	14.50%	10.13%		-2.29			4.37%
4/11/1980	12.75%	10.27%		-2.28			2.48%
4/14/1980	13.85%	10.29%		-2.27			3.56%
4/16/1980	15.50%	10.31%		-2.27			5.19%
4/22/1980	13.25%	10.35%		-2.27			2.90%
4/22/1980	13.90%	10.35%		-2.27			3.55%
4/24/1980	16.80%	10.38%		-2.27			6.43%
4/29/1980	15.50%	10.41%		-2.26			5.09%
5/6/1980	13.70%	10.45%		-2.26			3.25%
5/7/1980	15.00%	10.45%		-2.26			4.55%
5/8/1980	13.75%	10.46%		-2.26			3.29%
5/9/1980	14.35%	10.47%		-2.26			3.88%
5/13/1980	13.60%	10.48%		-2.26			3.12%
5/15/1980	13.25%	10.49%		-2.25			2.76%
5/19/1980	13.75%	10.51%		-2.25			3.24%
5/27/1980	13.62%	10.54%		-2.25			3.08%
5/27/1980	14.60%	10.54%		-2.25			4.06%
5/29/1980	16.00%	10.56%		-2.25			5.44%
5/30/1980	13.80%	10.56%		-2.25			3.24%
6/2/1980	15.63%	10.57%		-2.25			5.06%
6/9/1980	15.90%	10.60%		-2.24			5.30%
6/10/1980	13.78%	10.60%		-2.24			3.18%
6/12/1980	14.25%	10.61%		-2.24			3.64%
6/19/1980	13.40%	10.62%		-2.24			2.78%
6/30/1980	13.00%	10.65%		-2.24			2.35%
6/30/1980	13.40%	10.65%		-2.24			2.75%
7/9/1980	14.75%	10.67%		-2.24			4.08%
7/10/1980	15.00%	10.68%		-2.24			4.32%
7/15/1980	15.80%	10.70%		-2.24			5.10%
7/18/1980	13.80%	10.71%		-2.23			3.09%
7/22/1980	14.10%	10.72%		-2.23			3.38%
7/24/1980	15.00%	10.73%		-2.23			4.27%
7/25/1980	13.48%	10.73%		-2.23			2.75%
7/31/1980	14.58%	10.75%		-2.23			3.83%
8/8/1980	13.50%	10.78%		-2.23			2.72%
8/8/1980	14.00%	10.78%		-2.23			3.22%
8/8/1980	15.45%	10.78%		-2.23			4.67%
8/11/1980	14.85%	10.78%		-2.23			4.07%
8/14/1980	14.00%	10.79%		-2.23			3.21%
8/14/1980	16.25%	10.79%		-2.23			5.46%
8/25/1980	13.75%	10.82%		-2.22			2.93%
8/27/1980	13.80%	10.83%		-2.22			2.97%
8/29/1980	12.50%	10.84%		-2.22			1.66%
9/15/1980	13.50%	10.88%		-2.22			2.62%
9/15/1980	13.93%	10.88%		-2.22			3.05%
9/15/1980	15.80%	10.88%		-2.22			4.92%
9/24/1980	12.50%	10.93%		-2.21			1.57%
9/24/1980	15.00%	10.93%		-2.21			4.07%
9/26/1980	13.75%	10.94%		-2.21			2.81%
9/30/1980	14.10%	10.96%		-2.21			3.14%
9/30/1980	14.20%	10.96%		-2.21			3.24%
10/1/1980	13.90%	10.97%		-2.21			2.93%
10/3/1980	15.50%	10.98%		-2.21			4.52%
10/7/1980	12.50%	10.99%		-2.21			1.51%
10/9/1980	13.25%	11.00%		-2.21			2.25%
10/9/1980	14.50%	11.00%		-2.21			3.50%
10/9/1980	14.50%	11.00%		-2.21			3.50%
10/16/1980	16.10%	11.02%		-2.21			5.08%
10/17/1980	14.50%	11.03%		-2.20			3.47%
10/31/1980	13.75%	11.11%		-2.20			2.64%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
10/31/1980	14.25%	11.11%		-2.20			3.14%
11/4/1980	15.00%	11.12%		-2.20			3.88%
11/5/1980	13.75%	11.12%		-2.20			2.63%
11/5/1980	14.00%	11.12%		-2.20			2.88%
11/8/1980	13.75%	11.14%		-2.19			2.61%
11/10/1980	14.85%	11.15%		-2.19			3.70%
11/17/1980	14.00%	11.18%		-2.19			2.82%
11/18/1980	14.00%	11.19%		-2.19			2.81%
11/19/1980	13.00%	11.19%		-2.19			1.81%
11/24/1980	14.00%	11.21%		-2.19			2.79%
11/26/1980	14.00%	11.21%		-2.19			2.79%
12/8/1980	14.15%	11.22%		-2.19			2.93%
12/8/1980	15.10%	11.22%		-2.19			3.88%
12/9/1980	15.35%	11.22%		-2.19			4.13%
12/12/1980	15.45%	11.23%		-2.19			4.22%
12/17/1980	13.25%	11.23%		-2.19			2.02%
12/18/1980	15.80%	11.23%		-2.19			4.57%
12/19/1980	14.50%	11.23%		-2.19			3.27%
12/19/1980	14.64%	11.23%		-2.19			3.41%
12/22/1980	13.45%	11.23%		-2.19			2.22%
12/22/1980	15.00%	11.23%		-2.19			3.77%
12/30/1980	14.50%	11.22%		-2.19			3.28%
12/30/1980	14.95%	11.22%		-2.19			3.73%
12/31/1980	13.39%	11.22%		-2.19			2.17%
1/2/1981	15.25%	11.22%		-2.19			4.03%
1/7/1981	14.30%	11.21%		-2.19			3.09%
1/19/1981	15.25%	11.20%		-2.19			4.05%
1/23/1981	13.10%	11.20%		-2.19			1.90%
1/23/1981	14.40%	11.20%		-2.19			3.20%
1/26/1981	15.25%	11.20%		-2.19			4.05%
1/27/1981	15.00%	11.21%		-2.19			3.79%
1/31/1981	13.47%	11.22%		-2.19			2.25%
2/3/1981	15.25%	11.23%		-2.19			4.02%
2/5/1981	15.75%	11.25%		-2.19			4.50%
2/11/1981	15.60%	11.28%		-2.18			4.32%
2/20/1981	15.25%	11.33%		-2.18			3.92%
3/11/1981	15.40%	11.49%		-2.16			3.91%
3/12/1981	14.51%	11.50%		-2.16			3.01%
3/12/1981	16.00%	11.50%		-2.16			4.50%
3/13/1981	13.02%	11.52%		-2.16			1.50%
3/18/1981	16.19%	11.55%		-2.16			4.64%
3/19/1981	13.75%	11.56%		-2.16			2.19%
3/23/1981	14.30%	11.58%		-2.16			2.72%
3/25/1981	15.30%	11.60%		-2.15			3.70%
4/1/1981	14.53%	11.68%		-2.15			2.85%
4/3/1981	19.10%	11.71%		-2.14			7.39%
4/9/1981	15.00%	11.78%		-2.14			3.22%
4/9/1981	15.30%	11.78%		-2.14			3.52%
4/9/1981	16.50%	11.78%		-2.14			4.72%
4/9/1981	17.00%	11.78%		-2.14			5.22%
4/10/1981	13.75%	11.80%		-2.14			1.95%
4/13/1981	13.57%	11.82%		-2.14			1.75%
4/15/1981	15.30%	11.85%		-2.13			3.45%
4/16/1981	13.50%	11.87%		-2.13			1.63%
4/17/1981	14.10%	11.87%		-2.13			2.23%
4/21/1981	14.00%	11.90%		-2.13			2.10%
4/21/1981	16.80%	11.90%		-2.13			4.90%
4/24/1981	16.00%	11.95%		-2.12			4.05%
4/27/1981	12.50%	11.97%		-2.12			0.53%
4/27/1981	13.61%	11.97%		-2.12			1.64%
4/29/1981	13.65%	12.00%		-2.12			1.65%
4/30/1981	13.50%	12.02%		-2.12			1.48%
5/4/1981	16.22%	12.05%		-2.12			4.17%
5/5/1981	14.40%	12.07%		-2.11			2.33%
5/7/1981	16.25%	12.11%		-2.11			4.14%
5/7/1981	16.27%	12.11%		-2.11			4.16%
5/8/1981	13.00%	12.13%		-2.11			0.87%
5/8/1981	16.00%	12.13%		-2.11			3.87%
5/12/1981	13.50%	12.16%		-2.11			1.34%
5/15/1981	15.75%	12.22%		-2.10			3.53%
5/18/1981	14.88%	12.23%		-2.10			2.65%
5/20/1981	16.00%	12.26%		-2.10			3.74%
5/21/1981	14.00%	12.27%		-2.10			1.73%
5/26/1981	14.90%	12.30%		-2.10			2.60%
5/27/1981	15.00%	12.31%		-2.09			2.69%
5/29/1981	15.50%	12.34%		-2.09			3.16%
6/1/1981	16.50%	12.35%		-2.09			4.15%
6/3/1981	14.67%	12.37%		-2.09			2.30%
6/5/1981	13.00%	12.39%		-2.09			0.61%
6/10/1981	16.75%	12.42%		-2.09			4.33%
6/17/1981	14.40%	12.46%		-2.08			1.94%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
6/18/1981	16.33%	12.47%		-2.08			3.86%
6/25/1981	14.75%	12.51%		-2.08			2.24%
6/26/1981	16.00%	12.52%		-2.08			3.48%
6/30/1981	15.25%	12.54%		-2.08			2.71%
7/1/1981	15.50%	12.56%		-2.07			2.94%
7/1/1981	17.50%	12.56%		-2.07			4.94%
7/10/1981	16.00%	12.62%		-2.07			3.38%
7/14/1981	16.90%	12.64%		-2.07			4.26%
7/15/1981	16.00%	12.65%		-2.07			3.35%
7/17/1981	15.00%	12.67%		-2.07			2.33%
7/20/1981	15.00%	12.68%		-2.07			2.32%
7/21/1981	14.00%	12.69%		-2.06			1.31%
7/28/1981	13.48%	12.74%		-2.06			0.74%
7/31/1981	13.50%	12.78%		-2.06			0.72%
7/31/1981	15.00%	12.78%		-2.06			2.22%
7/31/1981	16.00%	12.78%		-2.06			3.22%
8/5/1981	15.71%	12.83%		-2.05			2.88%
8/10/1981	14.50%	12.87%		-2.05			1.63%
8/11/1981	15.00%	12.88%		-2.05			2.12%
8/20/1981	13.50%	12.95%		-2.04			0.55%
8/20/1981	16.50%	12.95%		-2.04			3.55%
8/24/1981	15.00%	12.97%		-2.04			2.03%
8/28/1981	15.00%	13.01%		-2.04			1.99%
9/3/1981	14.50%	13.05%		-2.04			1.45%
9/10/1981	14.50%	13.11%		-2.03			1.39%
9/11/1981	16.00%	13.12%		-2.03			2.88%
9/16/1981	16.00%	13.15%		-2.03			2.85%
9/17/1981	16.50%	13.16%		-2.03			3.34%
9/23/1981	15.85%	13.20%		-2.03			2.65%
9/28/1981	15.50%	13.23%		-2.02			2.27%
10/9/1981	15.75%	13.33%		-2.02			2.42%
10/15/1981	16.25%	13.37%		-2.01			2.88%
10/16/1981	15.50%	13.38%		-2.01			2.12%
10/16/1981	16.50%	13.38%		-2.01			3.12%
10/19/1981	14.25%	13.39%		-2.01			0.86%
10/20/1981	15.25%	13.41%		-2.01			1.84%
10/20/1981	17.00%	13.41%		-2.01			3.59%
10/23/1981	16.00%	13.45%		-2.01			2.55%
10/27/1981	10.00%	13.48%		-2.00			-3.48%
10/29/1981	14.75%	13.51%		-2.00			1.24%
10/29/1981	16.50%	13.51%		-2.00			2.99%
11/3/1981	15.17%	13.53%		-2.00			1.64%
11/5/1981	16.60%	13.55%		-2.00			3.05%
11/6/1981	15.17%	13.56%		-2.00			1.61%
11/24/1981	15.50%	13.61%		-1.99			1.89%
11/25/1981	15.25%	13.61%		-1.99			1.64%
11/25/1981	15.35%	13.61%		-1.99			1.74%
11/25/1981	16.10%	13.61%		-1.99			2.49%
11/25/1981	16.10%	13.61%		-1.99			2.49%
12/1/1981	15.70%	13.61%		-1.99			2.09%
12/1/1981	16.00%	13.61%		-1.99			2.39%
12/1/1981	16.49%	13.61%		-1.99			2.88%
12/1/1981	16.50%	13.61%		-1.99			2.89%
12/4/1981	16.00%	13.61%		-1.99			2.39%
12/11/1981	16.25%	13.63%		-1.99			2.62%
12/14/1981	14.00%	13.63%		-1.99			0.37%
12/15/1981	15.81%	13.63%		-1.99			2.18%
12/15/1981	16.00%	13.63%		-1.99			2.37%
12/16/1981	15.25%	13.63%		-1.99			1.62%
12/17/1981	16.50%	13.63%		-1.99			2.87%
12/18/1981	15.45%	13.63%		-1.99			1.82%
12/30/1981	14.25%	13.67%		-1.99			0.58%
12/30/1981	16.00%	13.67%		-1.99			2.33%
12/30/1981	16.25%	13.67%		-1.99			2.58%
12/31/1981	16.15%	13.67%		-1.99			2.48%
1/4/1982	15.50%	13.67%		-1.99			1.83%
1/11/1982	14.50%	13.72%		-1.99			0.78%
1/11/1982	17.00%	13.72%		-1.99			3.28%
1/13/1982	14.75%	13.74%		-1.98			1.01%
1/14/1982	15.75%	13.75%		-1.98			2.00%
1/15/1982	15.00%	13.76%		-1.98			1.24%
1/15/1982	16.50%	13.76%		-1.98			2.74%
1/22/1982	16.25%	13.79%		-1.98			2.46%
1/27/1982	16.84%	13.81%		-1.98			3.03%
1/28/1982	13.00%	13.81%		-1.98			-0.81%
1/29/1982	15.50%	13.82%		-1.98			1.68%
2/1/1982	15.85%	13.82%		-1.98			2.03%
2/3/1982	16.44%	13.84%		-1.98			2.60%
2/8/1982	15.50%	13.86%		-1.98			1.64%
2/11/1982	16.00%	13.88%		-1.97			2.12%
2/11/1982	16.20%	13.88%		-1.97			2.32%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
2/17/1982	15.00%	13.89%		-1.97			1.11%
2/19/1982	15.17%	13.89%		-1.97			1.28%
2/26/1982	15.25%	13.89%		-1.97			1.36%
3/1/1982	15.03%	13.89%		-1.97			1.14%
3/1/1982	16.00%	13.89%		-1.97			2.11%
3/3/1982	15.00%	13.88%		-1.97			1.12%
3/8/1982	17.10%	13.88%		-1.97			3.22%
3/12/1982	16.25%	13.88%		-1.97			2.37%
3/17/1982	17.30%	13.88%		-1.97			3.42%
3/22/1982	15.10%	13.89%		-1.97			1.21%
3/27/1982	15.40%	13.89%		-1.97			1.51%
3/30/1982	15.50%	13.90%		-1.97			1.60%
3/31/1982	17.00%	13.91%		-1.97			3.09%
4/1/1982	14.70%	13.91%		-1.97			0.79%
4/1/1982	16.50%	13.91%		-1.97			2.59%
4/2/1982	15.50%	13.91%		-1.97			1.59%
4/5/1982	15.50%	13.92%		-1.97			1.58%
4/8/1982	16.40%	13.93%		-1.97			2.47%
4/13/1982	14.50%	13.94%		-1.97			0.56%
4/23/1982	15.75%	13.94%		-1.97			1.81%
4/27/1982	15.00%	13.94%		-1.97			1.06%
4/28/1982	15.75%	13.94%		-1.97			1.81%
4/30/1982	14.70%	13.94%		-1.97			0.76%
4/30/1982	15.50%	13.94%		-1.97			1.56%
5/3/1982	16.60%	13.94%		-1.97			2.66%
5/4/1982	16.00%	13.94%		-1.97			2.06%
5/14/1982	15.50%	13.92%		-1.97			1.58%
5/18/1982	15.42%	13.92%		-1.97			1.50%
5/19/1982	14.69%	13.92%		-1.97			0.77%
5/20/1982	15.00%	13.91%		-1.97			1.09%
5/20/1982	15.10%	13.91%		-1.97			1.19%
5/20/1982	15.50%	13.91%		-1.97			1.59%
5/20/1982	16.30%	13.91%		-1.97			2.39%
5/21/1982	17.75%	13.91%		-1.97			3.84%
5/27/1982	15.00%	13.89%		-1.97			1.11%
5/28/1982	15.50%	13.89%		-1.97			1.61%
5/28/1982	17.00%	13.89%		-1.97			3.11%
6/1/1982	13.75%	13.89%		-1.97			-0.14%
6/1/1982	16.60%	13.89%		-1.97			2.71%
6/9/1982	17.86%	13.88%		-1.97			3.98%
6/14/1982	15.75%	13.88%		-1.97			1.87%
6/15/1982	14.85%	13.88%		-1.97			0.97%
6/18/1982	15.50%	13.87%		-1.98			1.63%
6/21/1982	14.90%	13.87%		-1.98			1.03%
6/23/1982	16.00%	13.86%		-1.98			2.14%
6/23/1982	16.17%	13.86%		-1.98			2.31%
6/24/1982	14.85%	13.86%		-1.98			0.99%
6/25/1982	14.70%	13.86%		-1.98			0.84%
7/1/1982	16.00%	13.84%		-1.98			2.16%
7/2/1982	15.62%	13.84%		-1.98			1.78%
7/2/1982	17.00%	13.84%		-1.98			3.16%
7/13/1982	14.00%	13.82%		-1.98			0.18%
7/13/1982	16.80%	13.82%		-1.98			2.98%
7/14/1982	15.76%	13.82%		-1.98			1.94%
7/14/1982	16.02%	13.82%		-1.98			2.20%
7/19/1982	16.50%	13.80%		-1.98			2.70%
7/22/1982	14.50%	13.77%		-1.98			0.73%
7/22/1982	17.00%	13.77%		-1.98			3.23%
7/27/1982	16.75%	13.75%		-1.98			3.00%
7/29/1982	16.50%	13.74%		-1.99			2.76%
8/11/1982	17.50%	13.68%		-1.99			3.82%
8/18/1982	17.07%	13.63%		-1.99			3.44%
8/20/1982	15.73%	13.60%		-1.99			2.13%
8/25/1982	16.00%	13.57%		-2.00			2.43%
8/26/1982	15.50%	13.56%		-2.00			1.94%
8/30/1982	15.00%	13.55%		-2.00			1.45%
9/3/1982	16.20%	13.53%		-2.00			2.67%
9/8/1982	15.00%	13.52%		-2.00			1.48%
9/15/1982	13.08%	13.50%		-2.00			-0.42%
9/15/1982	16.25%	13.50%		-2.00			2.75%
9/16/1982	16.00%	13.50%		-2.00			2.50%
9/17/1982	15.25%	13.50%		-2.00			1.75%
9/23/1982	17.17%	13.47%		-2.00			3.70%
9/24/1982	14.50%	13.46%		-2.01			1.04%
9/27/1982	15.25%	13.46%		-2.01			1.79%
10/1/1982	15.50%	13.42%		-2.01			2.08%
10/15/1982	15.90%	13.32%		-2.02			2.58%
10/22/1982	15.75%	13.24%		-2.02			2.51%
10/22/1982	17.15%	13.24%		-2.02			3.91%
10/29/1982	15.54%	13.16%		-2.03			2.38%
11/1/1982	15.50%	13.15%		-2.03			2.35%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
11/3/1982	17.20%	13.13%		-2.03			4.07%
11/4/1982	16.25%	13.11%		-2.03			3.14%
11/5/1982	16.20%	13.09%		-2.03			3.11%
11/9/1982	16.00%	13.05%		-2.04			2.95%
11/23/1982	15.50%	12.89%		-2.05			2.61%
11/23/1982	15.85%	12.89%		-2.05			2.96%
11/30/1982	16.50%	12.81%		-2.06			3.69%
12/1/1982	17.04%	12.79%		-2.06			4.25%
12/6/1982	15.00%	12.73%		-2.06			2.27%
12/6/1982	16.35%	12.73%		-2.06			3.62%
12/10/1982	15.50%	12.66%		-2.07			2.84%
12/13/1982	16.00%	12.65%		-2.07			3.35%
12/14/1982	15.30%	12.63%		-2.07			2.67%
12/14/1982	16.40%	12.63%		-2.07			3.77%
12/20/1982	16.00%	12.57%		-2.07			3.43%
12/21/1982	14.75%	12.56%		-2.07			2.19%
12/21/1982	15.85%	12.56%		-2.07			3.29%
12/22/1982	16.25%	12.54%		-2.08			3.71%
12/22/1982	16.58%	12.54%		-2.08			4.04%
12/22/1982	16.75%	12.54%		-2.08			4.21%
12/29/1982	14.90%	12.48%		-2.08			2.42%
12/29/1982	16.25%	12.48%		-2.08			3.77%
12/30/1982	16.00%	12.47%		-2.08			3.53%
12/30/1982	16.35%	12.47%		-2.08			3.88%
12/30/1982	16.77%	12.47%		-2.08			4.30%
1/5/1983	17.33%	12.40%		-2.09			4.93%
1/11/1983	15.90%	12.34%		-2.09			3.56%
1/12/1983	14.63%	12.33%		-2.09			2.30%
1/12/1983	15.50%	12.33%		-2.09			3.17%
1/20/1983	17.75%	12.24%		-2.10			5.51%
1/21/1983	15.00%	12.22%		-2.10			2.78%
1/24/1983	14.50%	12.21%		-2.10			2.29%
1/24/1983	15.50%	12.21%		-2.10			3.29%
1/25/1983	15.85%	12.19%		-2.10			3.66%
1/27/1983	16.14%	12.17%		-2.11			3.97%
2/1/1983	18.50%	12.13%		-2.11			6.37%
2/4/1983	14.00%	12.10%		-2.11			1.90%
2/10/1983	15.00%	12.06%		-2.12			2.94%
2/21/1983	15.50%	11.98%		-2.12			3.52%
2/22/1983	15.50%	11.97%		-2.12			3.53%
2/23/1983	15.10%	11.96%		-2.12			3.14%
2/23/1983	16.00%	11.96%		-2.12			4.04%
3/2/1983	15.25%	11.89%		-2.13			3.36%
3/9/1983	15.20%	11.82%		-2.13			3.38%
3/15/1983	13.00%	11.77%		-2.14			1.23%
3/18/1983	15.25%	11.73%		-2.14			3.52%
3/23/1983	15.40%	11.69%		-2.15			3.71%
3/24/1983	15.00%	11.67%		-2.15			3.33%
3/29/1983	15.50%	11.63%		-2.15			3.87%
3/30/1983	16.71%	11.61%		-2.15			5.10%
3/31/1983	15.00%	11.59%		-2.15			3.41%
4/4/1983	15.20%	11.58%		-2.16			3.62%
4/8/1983	15.50%	11.51%		-2.16			3.99%
4/11/1983	14.81%	11.49%		-2.16			3.32%
4/19/1983	14.50%	11.38%		-2.17			3.12%
4/20/1983	16.00%	11.36%		-2.18			4.64%
4/29/1983	16.00%	11.24%		-2.19			4.76%
5/1/1983	14.50%	11.24%		-2.19			3.26%
5/9/1983	15.50%	11.15%		-2.19			4.35%
5/11/1983	16.46%	11.12%		-2.20			5.34%
5/12/1983	14.14%	11.11%		-2.20			3.03%
5/18/1983	15.00%	11.05%		-2.20			3.95%
5/23/1983	14.90%	11.01%		-2.21			3.89%
5/23/1983	15.50%	11.01%		-2.21			4.49%
5/25/1983	15.50%	10.98%		-2.21			4.52%
5/27/1983	15.00%	10.96%		-2.21			4.04%
5/31/1983	14.00%	10.95%		-2.21			3.05%
5/31/1983	15.50%	10.95%		-2.21			4.55%
6/2/1983	14.50%	10.93%		-2.21			3.57%
6/17/1983	15.03%	10.84%		-2.22			4.19%
7/1/1983	14.80%	10.78%		-2.23			4.02%
7/1/1983	14.90%	10.78%		-2.23			4.12%
7/8/1983	16.25%	10.76%		-2.23			5.49%
7/13/1983	13.20%	10.75%		-2.23			2.45%
7/19/1983	15.00%	10.74%		-2.23			4.26%
7/19/1983	15.10%	10.74%		-2.23			4.36%
7/25/1983	16.25%	10.73%		-2.23			5.52%
7/28/1983	15.90%	10.74%		-2.23			5.16%
8/3/1983	16.34%	10.75%		-2.23			5.59%
8/3/1983	16.50%	10.75%		-2.23			5.75%
8/19/1983	15.00%	10.80%		-2.23			4.20%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
8/22/1983	15.50%	10.80%		-2.23			4.70%
8/22/1983	16.40%	10.80%		-2.23			5.60%
8/31/1983	14.75%	10.84%		-2.22			3.91%
9/7/1983	15.00%	10.86%		-2.22			4.14%
9/14/1983	15.78%	10.89%		-2.22			4.89%
9/16/1983	15.00%	10.90%		-2.22			4.10%
9/19/1983	14.50%	10.91%		-2.22			3.59%
9/20/1983	16.50%	10.91%		-2.22			5.59%
9/28/1983	14.50%	10.94%		-2.21			3.56%
9/29/1983	15.50%	10.95%		-2.21			4.55%
9/30/1983	15.25%	10.95%		-2.21			4.30%
9/30/1983	16.15%	10.95%		-2.21			5.20%
10/4/1983	14.80%	10.96%		-2.21			3.84%
10/7/1983	16.00%	10.97%		-2.21			5.03%
10/13/1983	15.52%	10.99%		-2.21			4.53%
10/17/1983	15.50%	11.00%		-2.21			4.50%
10/18/1983	14.50%	11.00%		-2.21			3.50%
10/19/1983	16.25%	11.01%		-2.21			5.24%
10/19/1983	16.50%	11.01%		-2.21			5.49%
10/26/1983	15.00%	11.04%		-2.20			3.96%
10/27/1983	15.20%	11.04%		-2.20			4.16%
11/1/1983	16.00%	11.06%		-2.20			4.94%
11/9/1983	14.90%	11.09%		-2.20			3.81%
11/10/1983	14.35%	11.10%		-2.20			3.25%
11/23/1983	16.00%	11.13%		-2.20			4.87%
11/23/1983	16.15%	11.13%		-2.20			5.02%
11/30/1983	15.00%	11.14%		-2.19			3.86%
12/5/1983	15.25%	11.15%		-2.19			4.10%
12/6/1983	15.07%	11.15%		-2.19			3.92%
12/8/1983	15.90%	11.16%		-2.19			4.74%
12/9/1983	14.75%	11.17%		-2.19			3.58%
12/12/1983	14.50%	11.17%		-2.19			3.33%
12/15/1983	15.56%	11.19%		-2.19			4.37%
12/19/1983	14.80%	11.21%		-2.19			3.59%
12/20/1983	14.69%	11.22%		-2.19			3.47%
12/20/1983	16.00%	11.22%		-2.19			4.78%
12/20/1983	16.25%	11.22%		-2.19			5.03%
12/22/1983	14.75%	11.23%		-2.19			3.52%
12/22/1983	15.75%	11.23%		-2.19			4.52%
1/3/1984	14.75%	11.27%		-2.18			3.48%
1/10/1984	15.90%	11.30%		-2.18			4.60%
1/12/1984	15.60%	11.31%		-2.18			4.29%
1/18/1984	13.75%	11.33%		-2.18			2.42%
1/19/1984	15.90%	11.33%		-2.18			4.57%
1/30/1984	16.10%	11.37%		-2.17			4.73%
1/31/1984	15.25%	11.37%		-2.17			3.88%
2/1/1984	14.80%	11.38%		-2.17			3.42%
2/6/1984	13.75%	11.40%		-2.17			2.35%
2/6/1984	14.75%	11.40%		-2.17			3.35%
2/9/1984	15.25%	11.42%		-2.17			3.83%
2/15/1984	15.70%	11.44%		-2.17			4.26%
2/20/1984	15.00%	11.46%		-2.17			3.54%
2/20/1984	15.00%	11.46%		-2.17			3.54%
2/22/1984	14.75%	11.47%		-2.17			3.28%
2/28/1984	14.50%	11.51%		-2.16			2.99%
3/2/1984	14.25%	11.54%		-2.16			2.71%
3/20/1984	16.00%	11.64%		-2.15			4.36%
3/23/1984	15.50%	11.67%		-2.15			3.83%
3/26/1984	14.71%	11.68%		-2.15			3.03%
4/2/1984	15.50%	11.71%		-2.14			3.79%
4/6/1984	14.74%	11.75%		-2.14			2.99%
4/11/1984	15.72%	11.78%		-2.14			3.94%
4/17/1984	15.00%	11.81%		-2.14			3.19%
4/18/1984	16.20%	11.82%		-2.14			4.38%
4/25/1984	14.64%	11.85%		-2.13			2.79%
4/30/1984	14.40%	11.87%		-2.13			2.53%
5/16/1984	14.69%	11.98%		-2.12			2.71%
5/16/1984	15.00%	11.98%		-2.12			3.02%
5/22/1984	14.40%	12.02%		-2.12			2.38%
5/29/1984	15.10%	12.06%		-2.12			3.04%
6/13/1984	15.25%	12.15%		-2.11			3.10%
6/15/1984	15.60%	12.17%		-2.11			3.43%
6/22/1984	16.25%	12.21%		-2.10			4.04%
6/29/1984	15.25%	12.26%		-2.10			2.99%
7/2/1984	13.35%	12.27%		-2.10			1.08%
7/10/1984	16.00%	12.31%		-2.09			3.69%
7/12/1984	16.50%	12.32%		-2.09			4.18%
7/13/1984	16.25%	12.33%		-2.09			3.92%
7/17/1984	14.14%	12.35%		-2.09			1.79%
7/18/1984	15.30%	12.36%		-2.09			2.94%
7/18/1984	15.50%	12.36%		-2.09			3.14%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
7/19/1984	14.30%	12.37%		-2.09			1.93%
7/24/1984	16.79%	12.39%		-2.09			4.40%
7/31/1984	16.00%	12.43%		-2.09			3.57%
8/3/1984	14.25%	12.44%		-2.08			1.81%
8/17/1984	14.30%	12.49%		-2.08			1.81%
8/20/1984	15.00%	12.49%		-2.08			2.51%
8/27/1984	16.30%	12.51%		-2.08			3.79%
8/31/1984	15.55%	12.52%		-2.08			3.03%
9/6/1984	16.00%	12.53%		-2.08			3.47%
9/10/1984	14.75%	12.54%		-2.08			2.21%
9/13/1984	15.00%	12.55%		-2.08			2.45%
9/17/1984	17.38%	12.56%		-2.08			4.82%
9/26/1984	14.50%	12.57%		-2.07			1.93%
9/28/1984	15.00%	12.57%		-2.07			2.43%
9/28/1984	16.25%	12.57%		-2.07			3.68%
10/9/1984	14.75%	12.58%		-2.07			2.17%
10/12/1984	15.60%	12.59%		-2.07			3.01%
10/22/1984	15.00%	12.59%		-2.07			2.41%
10/26/1984	16.40%	12.58%		-2.07			3.82%
10/31/1984	16.25%	12.58%		-2.07			3.67%
11/7/1984	15.60%	12.58%		-2.07			3.02%
11/9/1984	16.00%	12.58%		-2.07			3.42%
11/14/1984	15.75%	12.58%		-2.07			3.17%
11/20/1984	15.25%	12.58%		-2.07			2.67%
11/20/1984	15.92%	12.58%		-2.07			3.34%
11/23/1984	15.00%	12.58%		-2.07			2.42%
11/28/1984	16.15%	12.57%		-2.07			3.58%
12/3/1984	15.80%	12.56%		-2.07			3.24%
12/4/1984	16.50%	12.56%		-2.07			3.94%
12/18/1984	16.40%	12.53%		-2.08			3.87%
12/19/1984	14.75%	12.53%		-2.08			2.22%
12/19/1984	15.00%	12.53%		-2.08			2.47%
12/20/1984	16.00%	12.53%		-2.08			3.47%
12/28/1984	16.00%	12.50%		-2.08			3.50%
1/3/1985	14.75%	12.49%		-2.08			2.26%
1/10/1985	15.75%	12.47%		-2.08			3.28%
1/11/1985	16.30%	12.46%		-2.08			3.84%
1/23/1985	15.80%	12.43%		-2.08			3.37%
1/24/1985	15.82%	12.43%		-2.09			3.39%
1/25/1985	16.75%	12.42%		-2.09			4.33%
1/30/1985	14.90%	12.40%		-2.09			2.50%
1/31/1985	14.75%	12.39%		-2.09			2.36%
2/8/1985	14.47%	12.35%		-2.09			2.12%
3/1/1985	13.84%	12.31%		-2.10			1.53%
3/8/1985	16.85%	12.28%		-2.10			4.57%
3/14/1985	15.50%	12.25%		-2.10			3.25%
3/15/1985	15.62%	12.25%		-2.10			3.37%
3/29/1985	15.62%	12.17%		-2.11			3.45%
4/3/1985	14.60%	12.14%		-2.11			2.46%
4/9/1985	15.50%	12.11%		-2.11			3.39%
4/16/1985	15.70%	12.06%		-2.12			3.64%
4/22/1985	14.00%	12.02%		-2.12			1.98%
4/26/1985	15.50%	11.98%		-2.12			3.52%
4/29/1985	15.00%	11.97%		-2.12			3.03%
5/2/1985	14.68%	11.94%		-2.13			2.74%
5/8/1985	15.62%	11.89%		-2.13			3.73%
5/10/1985	16.50%	11.87%		-2.13			4.63%
5/29/1985	14.61%	11.73%		-2.14			2.88%
5/31/1985	16.00%	11.71%		-2.14			4.29%
6/14/1985	15.50%	11.61%		-2.15			3.89%
7/9/1985	15.00%	11.45%		-2.17			3.55%
7/16/1985	14.50%	11.39%		-2.17			3.11%
7/26/1985	14.50%	11.33%		-2.18			3.17%
8/2/1985	14.80%	11.29%		-2.18			3.51%
8/7/1985	15.00%	11.27%		-2.18			3.73%
8/28/1985	14.25%	11.15%		-2.19			3.10%
8/28/1985	15.50%	11.15%		-2.19			4.35%
8/29/1985	14.50%	11.15%		-2.19			3.35%
9/9/1985	14.60%	11.11%		-2.20			3.49%
9/9/1985	14.90%	11.11%		-2.20			3.79%
9/17/1985	14.90%	11.08%		-2.20			3.82%
9/23/1985	15.00%	11.06%		-2.20			3.94%
9/27/1985	15.50%	11.05%		-2.20			4.45%
9/27/1985	15.80%	11.05%		-2.20			4.75%
10/2/1985	14.00%	11.03%		-2.20			2.97%
10/2/1985	14.75%	11.03%		-2.20			3.72%
10/3/1985	15.25%	11.03%		-2.20			4.22%
10/24/1985	15.40%	10.96%		-2.21			4.44%
10/24/1985	15.82%	10.96%		-2.21			4.86%
10/24/1985	15.85%	10.96%		-2.21			4.89%
10/28/1985	16.00%	10.95%		-2.21			5.05%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
10/29/1985	16.65%	10.94%		-2.21			5.71%
10/31/1985	15.06%	10.93%		-2.21			4.13%
11/4/1985	14.50%	10.92%		-2.21			3.58%
11/7/1985	15.50%	10.90%		-2.22			4.60%
11/8/1985	14.30%	10.89%		-2.22			3.41%
12/12/1985	14.75%	10.73%		-2.23			4.02%
12/18/1985	15.00%	10.69%		-2.24			4.31%
12/20/1985	14.50%	10.67%		-2.24			3.83%
12/20/1985	14.50%	10.67%		-2.24			3.83%
12/20/1985	15.00%	10.67%		-2.24			4.33%
1/24/1986	15.40%	10.41%		-2.26			4.99%
1/31/1986	15.00%	10.35%		-2.27			4.65%
2/5/1986	15.00%	10.32%		-2.27			4.68%
2/5/1986	15.75%	10.32%		-2.27			5.43%
2/10/1986	13.30%	10.29%		-2.27			3.01%
2/11/1986	12.50%	10.28%		-2.27			2.22%
2/14/1986	14.40%	10.24%		-2.28			4.16%
2/18/1986	16.00%	10.23%		-2.28			5.77%
2/24/1986	14.50%	10.18%		-2.28			4.32%
2/26/1986	14.00%	10.15%		-2.29			3.85%
3/5/1986	14.90%	10.08%		-2.29			4.82%
3/11/1986	14.50%	10.02%		-2.30			4.48%
3/12/1986	13.50%	10.00%		-2.30			3.50%
3/27/1986	14.10%	9.86%		-2.32			4.24%
3/31/1986	13.50%	9.84%		-2.32			3.66%
4/1/1986	14.00%	9.83%		-2.32			4.17%
4/2/1986	15.50%	9.81%		-2.32			5.69%
4/4/1986	15.00%	9.78%		-2.32			5.22%
4/14/1986	13.40%	9.69%		-2.33			3.71%
4/23/1986	15.00%	9.57%		-2.35			5.43%
5/16/1986	14.50%	9.32%		-2.37			5.18%
5/16/1986	14.50%	9.32%		-2.37			5.18%
5/29/1986	13.90%	9.19%		-2.39			4.71%
5/30/1986	15.10%	9.18%		-2.39			5.92%
6/2/1986	12.81%	9.17%		-2.39			3.64%
6/11/1986	14.00%	9.07%		-2.40			4.93%
6/24/1986	16.63%	8.94%		-2.41			7.69%
6/26/1986	12.00%	8.91%		-2.42			3.09%
6/26/1986	14.75%	8.91%		-2.42			5.84%
6/30/1986	13.00%	8.87%		-2.42			4.13%
7/10/1986	14.34%	8.75%		-2.44			5.59%
7/11/1986	12.75%	8.73%		-2.44			4.02%
7/14/1986	12.60%	8.71%		-2.44			3.89%
7/17/1986	12.40%	8.66%		-2.45			3.74%
7/25/1986	14.25%	8.57%		-2.46			5.68%
8/6/1986	13.50%	8.44%		-2.47			5.06%
8/14/1986	13.50%	8.35%		-2.48			5.15%
9/16/1986	12.75%	8.06%		-2.52			4.69%
9/19/1986	13.25%	8.03%		-2.52			5.22%
10/1/1986	14.00%	7.95%		-2.53			6.05%
10/3/1986	13.40%	7.93%		-2.53			5.47%
10/31/1986	13.50%	7.77%		-2.55			5.73%
11/5/1986	13.00%	7.75%		-2.56			5.25%
12/3/1986	12.90%	7.58%		-2.58			5.32%
12/4/1986	14.44%	7.58%		-2.58			6.86%
12/16/1986	13.60%	7.52%		-2.59			6.08%
12/22/1986	13.80%	7.51%		-2.59			6.29%
12/30/1986	13.00%	7.49%		-2.59			5.51%
1/2/1987	13.00%	7.49%		-2.59			5.51%
1/12/1987	12.40%	7.47%		-2.59			4.93%
1/27/1987	12.71%	7.46%		-2.60			5.25%
3/2/1987	12.47%	7.47%		-2.59			5.00%
3/3/1987	13.60%	7.47%		-2.59			6.13%
3/4/1987	12.38%	7.47%		-2.59			4.91%
3/10/1987	13.50%	7.47%		-2.59			6.03%
3/13/1987	13.00%	7.47%		-2.59			5.53%
3/31/1987	13.00%	7.46%		-2.59			5.54%
4/6/1987	13.00%	7.47%		-2.59			5.53%
4/14/1987	12.50%	7.49%		-2.59			5.01%
4/16/1987	14.50%	7.50%		-2.59			7.00%
4/27/1987	12.00%	7.54%		-2.59			4.46%
5/5/1987	12.85%	7.58%		-2.58			5.27%
5/12/1987	12.65%	7.62%		-2.57			5.03%
5/28/1987	13.50%	7.70%		-2.56			5.80%
6/15/1987	13.20%	7.78%		-2.55			5.42%
6/29/1987	15.00%	7.83%		-2.55			7.17%
6/30/1987	12.50%	7.84%		-2.55			4.66%
7/8/1987	12.00%	7.86%		-2.54			4.14%
7/10/1987	12.90%	7.86%		-2.54			5.04%
7/15/1987	13.50%	7.88%		-2.54			5.62%
7/16/1987	13.50%	7.88%		-2.54			5.62%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
7/16/1987	15.00%	7.88%		-2.54			7.12%
7/27/1987	13.00%	7.92%		-2.54			5.08%
7/27/1987	13.40%	7.92%		-2.54			5.48%
7/27/1987	13.50%	7.92%		-2.54			5.58%
7/31/1987	12.98%	7.95%		-2.53			5.03%
8/26/1987	12.63%	8.06%		-2.52			4.57%
8/26/1987	12.75%	8.06%		-2.52			4.69%
8/27/1987	13.25%	8.06%		-2.52			5.19%
9/9/1987	13.00%	8.14%		-2.51			4.86%
9/30/1987	12.75%	8.31%		-2.49			4.44%
9/30/1987	13.00%	8.31%		-2.49			4.69%
10/2/1987	11.50%	8.33%		-2.49			3.17%
10/15/1987	13.00%	8.43%		-2.47			4.57%
11/2/1987	13.00%	8.55%		-2.46			4.45%
11/19/1987	13.00%	8.64%		-2.45			4.36%
11/30/1987	12.00%	8.68%		-2.44			3.32%
12/3/1987	14.20%	8.70%		-2.44			5.50%
12/15/1987	13.25%	8.77%		-2.43			4.48%
12/16/1987	13.50%	8.78%		-2.43			4.72%
12/16/1987	13.72%	8.78%		-2.43			4.94%
12/17/1987	11.75%	8.79%		-2.43			2.96%
12/18/1987	13.50%	8.80%		-2.43			4.70%
12/21/1987	12.01%	8.81%		-2.43			3.20%
12/22/1987	12.00%	8.81%		-2.43			3.19%
12/22/1987	12.00%	8.81%		-2.43			3.19%
12/22/1987	12.75%	8.81%		-2.43			3.94%
12/22/1987	13.00%	8.81%		-2.43			4.19%
1/20/1988	13.80%	8.94%		-2.42			4.86%
1/26/1988	13.90%	8.95%		-2.41			4.95%
1/29/1988	13.20%	8.96%		-2.41			4.24%
2/4/1988	12.60%	8.96%		-2.41			3.64%
3/1/1988	11.56%	8.94%		-2.41			2.62%
3/23/1988	12.87%	8.92%		-2.42			3.95%
3/24/1988	11.24%	8.92%		-2.42			2.32%
3/30/1988	12.72%	8.92%		-2.42			3.80%
4/1/1988	12.50%	8.92%		-2.42			3.58%
4/7/1988	13.25%	8.93%		-2.42			4.32%
4/25/1988	10.96%	8.96%		-2.41			2.00%
5/3/1988	12.91%	8.97%		-2.41			3.94%
5/11/1988	13.50%	8.99%		-2.41			4.51%
5/16/1988	13.00%	8.99%		-2.41			4.01%
6/30/1988	12.75%	9.00%		-2.41			3.75%
7/1/1988	12.75%	8.99%		-2.41			3.76%
7/20/1988	13.40%	8.96%		-2.41			4.44%
8/5/1988	12.75%	8.92%		-2.42			3.83%
8/23/1988	11.70%	8.93%		-2.42			2.77%
8/29/1988	12.75%	8.94%		-2.41			3.81%
8/30/1988	13.50%	8.94%		-2.41			4.56%
9/8/1988	12.60%	8.95%		-2.41			3.65%
10/13/1988	13.10%	8.93%		-2.42			4.17%
12/19/1988	13.00%	9.02%		-2.41			3.98%
12/20/1988	12.25%	9.02%		-2.41			3.23%
12/20/1988	13.00%	9.02%		-2.41			3.98%
12/21/1988	12.90%	9.02%		-2.41			3.88%
12/27/1988	13.00%	9.03%		-2.40			3.97%
12/28/1988	13.10%	9.03%		-2.40			4.07%
12/30/1988	13.40%	9.04%		-2.40			4.36%
1/27/1989	13.00%	9.05%		-2.40			3.95%
1/31/1989	13.00%	9.05%		-2.40			3.95%
2/17/1989	13.00%	9.05%		-2.40			3.95%
2/20/1989	12.40%	9.05%		-2.40			3.35%
3/1/1989	12.76%	9.05%		-2.40			3.71%
3/8/1989	13.00%	9.05%		-2.40			3.95%
3/30/1989	14.00%	9.05%		-2.40			4.95%
4/5/1989	14.20%	9.05%		-2.40			5.15%
4/18/1989	13.00%	9.05%		-2.40			3.95%
5/5/1989	12.40%	9.05%		-2.40			3.35%
6/2/1989	13.20%	9.00%		-2.41			4.20%
6/8/1989	13.50%	8.98%		-2.41			4.52%
6/27/1989	13.25%	8.91%		-2.42			4.34%
6/30/1989	13.00%	8.90%		-2.42			4.10%
8/14/1989	12.50%	8.77%		-2.43			3.73%
9/28/1989	12.25%	8.63%		-2.45			3.62%
10/24/1989	12.50%	8.54%		-2.46			3.96%
11/9/1989	13.00%	8.49%		-2.47			4.51%
12/15/1989	13.00%	8.34%		-2.48			4.66%
12/20/1989	12.90%	8.32%		-2.49			4.58%
12/21/1989	12.90%	8.31%		-2.49			4.59%
12/27/1989	12.50%	8.29%		-2.49			4.21%
12/27/1989	13.00%	8.29%		-2.49			4.71%
1/10/1990	12.80%	8.24%		-2.50		19.95	4.56%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
1/11/1990	12.90%	8.24%		-2.50		19.96	4.66%
1/17/1990	12.80%	8.22%		-2.50		21.59	4.58%
1/26/1990	12.00%	8.20%		-2.50		22.87	3.80%
2/9/1990	12.10%	8.17%		-2.50		23.58	3.93%
2/24/1990	12.86%	8.15%		-2.51		23.35	4.71%
3/30/1990	12.90%	8.16%		-2.51		22.17	4.74%
4/4/1990	15.76%	8.17%		-2.51		22.16	7.59%
4/12/1990	12.52%	8.18%		-2.50		22.04	4.34%
4/19/1990	12.75%	8.20%		-2.50		22.01	4.55%
5/21/1990	12.10%	8.28%		-2.49		21.42	3.82%
5/29/1990	12.40%	8.30%		-2.49		21.25	4.10%
5/31/1990	12.00%	8.30%		-2.49		21.17	3.70%
6/4/1990	12.90%	8.30%		-2.49		21.11	4.60%
6/6/1990	12.25%	8.31%		-2.49		21.06	3.94%
6/15/1990	13.20%	8.32%		-2.49		20.80	4.88%
6/20/1990	12.92%	8.32%		-2.49		20.68	4.60%
6/27/1990	12.90%	8.33%		-2.49		20.52	4.57%
6/29/1990	12.50%	8.33%		-2.48		20.45	4.17%
7/6/1990	12.10%	8.34%		-2.48		20.33	3.76%
7/6/1990	12.35%	8.34%		-2.48		20.33	4.01%
8/10/1990	12.55%	8.41%		-2.48		20.52	4.14%
8/16/1990	13.21%	8.43%		-2.47		20.64	4.78%
8/22/1990	13.10%	8.45%		-2.47		20.82	4.65%
8/24/1990	13.00%	8.46%		-2.47		21.00	4.54%
9/26/1990	11.45%	8.59%		-2.45		21.96	2.86%
10/2/1990	13.00%	8.61%		-2.45		22.09	4.39%
10/5/1990	12.84%	8.62%		-2.45		22.18	4.22%
10/19/1990	13.00%	8.67%		-2.45		22.68	4.33%
10/25/1990	12.30%	8.68%		-2.44		22.81	3.62%
11/21/1990	12.70%	8.69%		-2.44		22.98	4.01%
12/13/1990	12.30%	8.67%		-2.44		22.96	3.63%
12/17/1990	12.87%	8.67%		-2.45		22.99	4.20%
12/18/1990	13.10%	8.67%		-2.45		23.00	4.43%
12/19/1990	12.00%	8.66%		-2.45		23.02	3.34%
12/20/1990	12.75%	8.66%		-2.45		23.04	4.09%
12/21/1990	12.50%	8.66%		-2.45		23.05	3.84%
12/27/1990	12.79%	8.66%		-2.45		23.11	4.13%
1/2/1991	13.10%	8.65%		-2.45		23.23	4.45%
1/4/1991	12.50%	8.65%		-2.45		23.31	3.85%
1/15/1991	12.75%	8.64%		-2.45		23.74	4.11%
1/25/1991	11.70%	8.63%		-2.45		23.92	3.07%
2/4/1991	12.50%	8.60%		-2.45		23.93	3.90%
2/7/1991	12.50%	8.59%		-2.45		23.93	3.91%
2/12/1991	13.00%	8.58%		-2.46		23.96	4.43%
2/14/1991	12.72%	8.57%		-2.46		23.98	4.15%
2/22/1991	12.80%	8.55%		-2.46		24.05	4.25%
3/6/1991	13.10%	8.53%		-2.46		24.14	4.57%
3/8/1991	12.30%	8.52%		-2.46		24.18	3.78%
3/8/1991	13.00%	8.52%		-2.46		24.18	4.48%
4/22/1991	13.00%	8.49%		-2.47		24.19	4.51%
5/7/1991	13.50%	8.47%		-2.47		24.21	5.03%
5/13/1991	13.25%	8.47%		-2.47		24.13	4.78%
5/30/1991	12.75%	8.44%		-2.47		23.59	4.31%
6/12/1991	12.00%	8.41%		-2.48		23.06	3.59%
6/25/1991	11.70%	8.39%		-2.48		22.50	3.31%
6/28/1991	12.50%	8.38%		-2.48		22.35	4.12%
7/1/1991	12.00%	8.38%		-2.48		22.30	3.62%
7/3/1991	12.50%	8.37%		-2.48		22.18	4.13%
7/19/1991	12.10%	8.34%		-2.48		21.59	3.76%
8/1/1991	12.90%	8.32%		-2.49		20.95	4.58%
8/16/1991	13.20%	8.29%		-2.49		20.17	4.91%
9/27/1991	12.50%	8.23%		-2.50		19.03	4.27%
9/30/1991	12.25%	8.23%		-2.50		19.01	4.02%
10/17/1991	13.00%	8.20%		-2.50		18.52	4.80%
10/23/1991	12.50%	8.20%		-2.50		18.27	4.30%
10/23/1991	12.55%	8.20%		-2.50		18.27	4.35%
10/31/1991	11.80%	8.19%		-2.50		17.73	3.61%
11/1/1991	12.00%	8.19%		-2.50		17.67	3.81%
11/5/1991	12.25%	8.19%		-2.50		17.58	4.06%
11/12/1991	12.50%	8.18%		-2.50		17.38	4.32%
11/12/1991	13.25%	8.18%		-2.50		17.38	5.07%
11/25/1991	12.40%	8.18%		-2.50		17.24	4.22%
11/26/1991	11.60%	8.18%		-2.50		17.22	3.42%
11/26/1991	12.50%	8.18%		-2.50		17.22	4.32%
11/27/1991	12.10%	8.18%		-2.50		17.21	3.92%
12/18/1991	12.25%	8.15%		-2.51		17.09	4.10%
12/19/1991	12.60%	8.15%		-2.51		17.08	4.45%
12/19/1991	12.80%	8.15%		-2.51		17.08	4.65%
12/20/1991	12.65%	8.14%		-2.51		17.06	4.51%
1/9/1992	12.80%	8.09%		-2.51		17.13	4.71%
1/16/1992	12.75%	8.07%		-2.52		17.14	4.68%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
1/21/1992	12.00%	8.06%		-2.52		17.13	3.94%
1/22/1992	13.00%	8.06%		-2.52		17.12	4.94%
1/27/1992	12.65%	8.05%		-2.52		17.08	4.60%
1/31/1992	12.00%	8.04%		-2.52		17.12	3.96%
2/11/1992	12.40%	8.03%		-2.52		17.16	4.37%
2/25/1992	12.50%	8.01%		-2.52		17.14	4.49%
3/16/1992	11.43%	7.98%		-2.53		17.25	3.45%
3/18/1992	12.28%	7.98%		-2.53		17.25	4.30%
4/2/1992	12.10%	7.95%		-2.53		17.23	4.15%
4/9/1992	11.45%	7.94%		-2.53		17.25	3.51%
4/10/1992	11.50%	7.93%		-2.53		17.24	3.57%
4/14/1992	11.50%	7.93%		-2.53		17.22	3.57%
5/5/1992	11.50%	7.89%		-2.54		17.08	3.61%
5/12/1992	11.87%	7.88%		-2.54		17.08	3.99%
5/12/1992	12.46%	7.88%		-2.54		17.08	4.58%
6/1/1992	12.30%	7.87%		-2.54		17.01	4.43%
6/12/1992	10.90%	7.86%		-2.54		16.96	3.04%
6/26/1992	12.35%	7.85%		-2.54		16.91	4.50%
6/29/1992	11.00%	7.85%		-2.54		16.89	3.15%
6/30/1992	13.00%	7.85%		-2.55		16.87	5.15%
7/13/1992	11.90%	7.84%		-2.55		16.78	4.06%
7/13/1992	13.50%	7.84%		-2.55		16.78	5.66%
7/22/1992	11.20%	7.83%		-2.55		16.66	3.37%
8/3/1992	12.00%	7.81%		-2.55		16.51	4.19%
8/6/1992	12.50%	7.80%		-2.55		16.48	4.70%
9/22/1992	12.00%	7.71%		-2.56		15.90	4.29%
9/28/1992	11.40%	7.71%		-2.56		15.79	3.69%
9/30/1992	11.75%	7.70%		-2.56		15.76	4.05%
10/2/1992	13.00%	7.70%		-2.56		15.75	5.30%
10/12/1992	12.20%	7.70%		-2.56		15.86	4.50%
10/16/1992	13.16%	7.70%		-2.56		15.84	5.46%
10/30/1992	11.75%	7.71%		-2.56		15.75	4.04%
11/3/1992	12.00%	7.71%		-2.56		15.75	4.29%
12/3/1992	11.85%	7.68%		-2.57		15.37	4.17%
12/15/1992	11.00%	7.66%		-2.57		15.19	3.34%
12/16/1992	11.90%	7.66%		-2.57		15.16	4.24%
12/16/1992	12.40%	7.66%		-2.57		15.16	4.74%
12/17/1992	12.00%	7.66%		-2.57		15.13	4.34%
12/22/1992	12.30%	7.65%		-2.57		15.01	4.65%
12/22/1992	12.40%	7.65%		-2.57		15.01	4.75%
12/29/1992	12.25%	7.63%	8.36%	-2.57	0.73%	14.87	4.62%
12/30/1992	12.00%	7.63%	8.36%	-2.57	0.73%	14.85	4.37%
12/31/1992	11.90%	7.63%	8.36%	-2.57	0.74%	14.83	4.27%
1/12/1993	12.00%	7.61%	8.37%	-2.58	0.76%	14.72	4.39%
1/21/1993	11.25%	7.59%	8.34%	-2.58	0.75%	14.55	3.66%
2/2/1993	11.40%	7.56%	8.28%	-2.58	0.72%	14.36	3.84%
2/15/1993	12.30%	7.52%	8.23%	-2.59	0.71%	14.23	4.78%
2/24/1993	11.90%	7.49%	8.19%	-2.59	0.70%	14.19	4.41%
2/26/1993	11.80%	7.48%	8.18%	-2.59	0.70%	14.17	4.32%
2/26/1993	12.20%	7.48%	8.18%	-2.59	0.70%	14.17	4.72%
4/23/1993	11.75%	7.29%	8.03%	-2.62	0.74%	13.85	4.46%
5/11/1993	11.75%	7.25%	8.00%	-2.62	0.75%	13.85	4.50%
5/14/1993	11.50%	7.24%	8.00%	-2.63	0.76%	13.87	4.26%
5/25/1993	11.50%	7.23%	7.99%	-2.63	0.76%	13.88	4.27%
5/28/1993	11.00%	7.22%	7.99%	-2.63	0.77%	13.85	3.78%
6/3/1993	12.00%	7.21%	7.98%	-2.63	0.77%	13.84	4.79%
6/16/1993	11.50%	7.19%	7.97%	-2.63	0.78%	13.77	4.31%
6/18/1993	12.10%	7.18%	7.96%	-2.63	0.78%	13.76	4.92%
6/25/1993	11.67%	7.17%	7.95%	-2.64	0.79%	13.73	4.50%
7/21/1993	11.38%	7.10%	7.90%	-2.65	0.81%	13.46	4.28%
7/23/1993	10.46%	7.09%	7.90%	-2.65	0.81%	13.37	3.37%
8/24/1993	11.50%	6.96%	7.83%	-2.67	0.87%	12.80	4.54%
9/21/1993	10.50%	6.81%	7.75%	-2.69	0.94%	12.72	3.69%
9/29/1993	11.47%	6.77%	7.73%	-2.69	0.96%	12.73	4.70%
9/30/1993	11.60%	6.76%	7.72%	-2.69	0.96%	12.74	4.84%
11/2/1993	10.80%	6.60%	7.60%	-2.72	0.99%	12.67	4.20%
11/12/1993	12.00%	6.57%	7.57%	-2.72	1.00%	12.76	5.43%
11/26/1993	11.00%	6.52%	7.53%	-2.73	1.01%	12.85	4.48%
12/14/1993	10.55%	6.48%	7.49%	-2.74	1.01%	12.75	4.07%
12/16/1993	10.60%	6.48%	7.49%	-2.74	1.01%	12.73	4.12%
12/21/1993	11.30%	6.47%	7.48%	-2.74	1.01%	12.66	4.83%
1/4/1994	10.07%	6.44%	7.45%	-2.74	1.01%	12.50	3.63%
1/13/1994	11.00%	6.42%	7.43%	-2.75	1.01%	12.46	4.58%
1/21/1994	11.00%	6.40%	7.41%	-2.75	1.01%	12.39	4.60%
1/28/1994	11.35%	6.39%	7.40%	-2.75	1.01%	12.37	4.96%
2/3/1994	11.40%	6.38%	7.39%	-2.75	1.01%	12.34	5.02%
2/17/1994	10.60%	6.36%	7.38%	-2.76	1.01%	12.38	4.24%
2/25/1994	11.25%	6.35%	7.37%	-2.76	1.02%	12.40	4.90%
2/25/1994	12.00%	6.35%	7.37%	-2.76	1.02%	12.40	5.65%
3/1/1994	11.00%	6.35%	7.37%	-2.76	1.02%	12.41	4.65%
3/4/1994	11.00%	6.35%	7.37%	-2.76	1.02%	12.44	4.65%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
4/25/1994	11.00%	6.41%	7.42%	-2.75	1.01%	13.02	4.59%
5/10/1994	11.75%	6.45%	7.45%	-2.74	1.01%	13.19	5.30%
5/13/1994	10.50%	6.46%	7.47%	-2.74	1.01%	13.24	4.04%
6/3/1994	11.00%	6.54%	7.53%	-2.73	0.99%	13.31	4.46%
6/27/1994	11.40%	6.65%	7.63%	-2.71	0.98%	13.42	4.75%
8/5/1994	12.75%	6.88%	7.82%	-2.68	0.95%	13.41	5.87%
10/31/1994	10.00%	7.33%	8.22%	-2.61	0.90%	13.76	2.67%
11/9/1994	10.85%	7.39%	8.28%	-2.61	0.89%	13.92	3.46%
11/9/1994	10.85%	7.39%	8.28%	-2.61	0.89%	13.92	3.46%
11/18/1994	11.20%	7.45%	8.33%	-2.60	0.88%	14.12	3.75%
11/22/1994	11.60%	7.47%	8.35%	-2.59	0.88%	14.14	4.13%
11/28/1994	11.06%	7.49%	8.37%	-2.59	0.88%	14.20	3.57%
12/8/1994	11.50%	7.54%	8.43%	-2.58	0.88%	14.30	3.96%
12/8/1994	11.70%	7.54%	8.43%	-2.58	0.88%	14.30	4.16%
12/14/1994	10.95%	7.56%	8.45%	-2.58	0.89%	14.29	3.39%
12/15/1994	11.50%	7.57%	8.46%	-2.58	0.89%	14.27	3.93%
12/19/1994	11.50%	7.58%	8.47%	-2.58	0.89%	14.24	3.92%
12/28/1994	12.15%	7.61%	8.50%	-2.58	0.88%	14.15	4.54%
1/9/1995	12.28%	7.64%	8.53%	-2.57	0.89%	14.14	4.64%
1/31/1995	11.00%	7.69%	8.58%	-2.57	0.89%	13.72	3.31%
2/10/1995	12.60%	7.70%	8.59%	-2.56	0.89%	13.56	4.90%
2/17/1995	11.90%	7.70%	8.60%	-2.56	0.90%	13.50	4.20%
3/9/1995	11.50%	7.71%	8.61%	-2.56	0.90%	13.36	3.79%
3/20/1995	12.00%	7.72%	8.61%	-2.56	0.89%	13.34	4.28%
3/23/1995	12.81%	7.72%	8.61%	-2.56	0.89%	13.32	5.09%
3/29/1995	11.60%	7.72%	8.61%	-2.56	0.90%	13.31	3.88%
4/6/1995	11.10%	7.71%	8.61%	-2.56	0.90%	13.31	3.39%
4/7/1995	11.00%	7.71%	8.61%	-2.56	0.90%	13.30	3.29%
4/19/1995	11.00%	7.70%	8.61%	-2.56	0.91%	13.21	3.30%
5/12/1995	11.63%	7.68%	8.58%	-2.57	0.90%	13.20	3.95%
5/25/1995	11.20%	7.65%	8.56%	-2.57	0.91%	13.21	3.55%
6/9/1995	11.25%	7.60%	8.52%	-2.58	0.92%	13.25	3.65%
6/21/1995	12.25%	7.56%	8.48%	-2.58	0.92%	13.23	4.69%
6/30/1995	11.10%	7.52%	8.45%	-2.59	0.94%	13.19	3.58%
9/11/1995	11.30%	7.20%	8.18%	-2.63	0.97%	12.51	4.10%
9/27/1995	11.30%	7.12%	8.10%	-2.64	0.98%	12.25	4.18%
9/27/1995	11.50%	7.12%	8.10%	-2.64	0.98%	12.25	4.38%
9/27/1995	11.75%	7.12%	8.10%	-2.64	0.98%	12.25	4.63%
9/29/1995	11.00%	7.11%	8.09%	-2.64	0.98%	12.24	3.89%
11/9/1995	11.38%	6.90%	7.91%	-2.67	1.01%	12.46	4.48%
11/9/1995	12.36%	6.90%	7.91%	-2.67	1.01%	12.46	5.46%
11/17/1995	11.00%	6.86%	7.87%	-2.68	1.02%	12.50	4.14%
12/4/1995	11.35%	6.78%	7.82%	-2.69	1.04%	12.51	4.57%
12/11/1995	11.40%	6.74%	7.79%	-2.70	1.04%	12.52	4.66%
12/20/1995	11.60%	6.70%	7.75%	-2.70	1.05%	12.50	4.90%
12/27/1995	12.00%	6.66%	7.72%	-2.71	1.06%	12.48	5.34%
2/5/1996	12.25%	6.48%	7.59%	-2.74	1.11%	12.63	5.77%
3/29/1996	10.67%	6.42%	7.52%	-2.75	1.11%	13.47	4.25%
4/8/1996	11.00%	6.42%	7.53%	-2.75	1.11%	13.62	4.58%
4/11/1996	12.59%	6.43%	7.53%	-2.74	1.11%	13.73	6.16%
4/11/1996	12.59%	6.43%	7.53%	-2.74	1.11%	13.73	6.16%
4/24/1996	11.25%	6.43%	7.55%	-2.74	1.11%	13.92	4.82%
4/30/1996	11.00%	6.43%	7.55%	-2.74	1.12%	13.98	4.57%
5/13/1996	11.00%	6.44%	7.57%	-2.74	1.13%	14.14	4.56%
5/23/1996	11.25%	6.43%	7.57%	-2.74	1.14%	14.23	4.82%
6/25/1996	11.25%	6.48%	7.60%	-2.74	1.12%	14.71	4.77%
6/27/1996	11.20%	6.48%	7.60%	-2.74	1.12%	14.75	4.72%
8/12/1996	10.40%	6.57%	7.67%	-2.72	1.10%	15.35	3.83%
9/27/1996	11.00%	6.71%	7.76%	-2.70	1.05%	15.96	4.29%
10/16/1996	12.25%	6.76%	7.79%	-2.69	1.03%	16.20	5.49%
11/5/1996	11.00%	6.81%	7.83%	-2.69	1.02%	16.42	4.19%
11/26/1996	11.30%	6.83%	7.84%	-2.68	1.01%	16.58	4.47%
12/18/1996	11.75%	6.83%	7.85%	-2.68	1.02%	16.80	4.92%
12/31/1996	11.50%	6.83%	7.85%	-2.68	1.02%	16.84	4.67%
1/3/1997	10.70%	6.83%	7.85%	-2.68	1.02%	16.86	3.87%
2/13/1997	11.80%	6.82%	7.83%	-2.68	1.01%	17.23	4.98%
2/20/1997	11.80%	6.82%	7.83%	-2.69	1.01%	17.29	4.98%
3/31/1997	10.02%	6.80%	7.81%	-2.69	1.00%	17.83	3.22%
4/2/1997	11.65%	6.80%	7.80%	-2.69	1.00%	17.86	4.85%
4/28/1997	11.50%	6.81%	7.80%	-2.69	0.99%	18.20	4.69%
4/29/1997	11.70%	6.81%	7.80%	-2.69	0.99%	18.21	4.89%
7/17/1997	12.00%	6.77%	7.75%	-2.69	0.97%	19.03	5.23%
12/12/1997	11.00%	6.60%	7.60%	-2.72	1.00%	22.57	4.40%
12/23/1997	11.12%	6.57%	7.58%	-2.72	1.01%	22.84	4.55%
2/2/1998	12.75%	6.39%	7.47%	-2.75	1.08%	23.43	6.36%
3/2/1998	11.25%	6.29%	7.39%	-2.77	1.10%	23.40	4.96%
3/6/1998	10.75%	6.27%	7.38%	-2.77	1.11%	23.37	4.48%
3/20/1998	10.50%	6.22%	7.34%	-2.78	1.12%	23.35	4.28%
4/30/1998	12.20%	6.12%	7.26%	-2.79	1.14%	23.66	6.08%
7/10/1998	11.40%	5.94%	7.16%	-2.82	1.23%	23.13	5.46%
9/15/1998	11.90%	5.78%	7.09%	-2.85	1.31%	23.82	6.12%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
11/30/1998	12.60%	5.58%	7.05%	-2.89	1.47%	26.04	7.02%
12/10/1998	12.20%	5.54%	7.05%	-2.89	1.50%	26.30	6.66%
12/17/1998	12.10%	5.52%	7.04%	-2.90	1.52%	26.55	6.58%
2/5/1999	10.30%	5.38%	7.01%	-2.92	1.63%	27.50	4.92%
3/4/1999	10.50%	5.34%	7.01%	-2.93	1.67%	28.15	5.16%
4/6/1999	10.94%	5.32%	7.03%	-2.93	1.70%	28.43	5.62%
7/29/1999	10.75%	5.52%	7.25%	-2.90	1.74%	25.84	5.23%
9/23/1999	10.75%	5.70%	7.43%	-2.86	1.73%	24.95	5.05%
11/17/1999	11.10%	5.90%	7.63%	-2.83	1.73%	24.34	5.20%
1/7/2000	11.50%	6.05%	7.79%	-2.81	1.75%	23.49	5.45%
1/7/2000	11.50%	6.05%	7.79%	-2.81	1.75%	23.49	5.45%
2/17/2000	10.60%	6.17%	7.94%	-2.78	1.77%	23.37	4.43%
3/28/2000	11.25%	6.20%	8.04%	-2.78	1.85%	22.98	5.05%
5/24/2000	11.00%	6.18%	8.19%	-2.78	2.00%	23.85	4.82%
7/18/2000	12.20%	6.16%	8.27%	-2.79	2.11%	23.37	6.04%
9/29/2000	11.16%	6.03%	8.31%	-2.81	2.28%	22.44	5.13%
11/28/2000	12.90%	5.89%	8.28%	-2.83	2.40%	22.97	7.01%
11/30/2000	12.10%	5.88%	8.28%	-2.83	2.40%	23.03	6.22%
1/23/2001	11.25%	5.79%	8.20%	-2.85	2.41%	23.50	5.46%
2/8/2001	11.50%	5.77%	8.18%	-2.85	2.40%	23.17	5.73%
5/8/2001	10.75%	5.62%	7.97%	-2.88	2.35%	24.37	5.13%
6/26/2001	11.00%	5.62%	7.93%	-2.88	2.31%	24.90	5.38%
7/25/2001	11.02%	5.60%	7.89%	-2.88	2.29%	25.06	5.42%
7/25/2001	11.02%	5.60%	7.89%	-2.88	2.29%	25.06	5.42%
7/31/2001	11.00%	5.59%	7.88%	-2.88	2.29%	24.98	5.41%
8/31/2001	10.50%	5.56%	7.82%	-2.89	2.26%	24.50	4.94%
9/7/2001	10.75%	5.55%	7.81%	-2.89	2.25%	24.54	5.20%
9/10/2001	11.00%	5.55%	7.80%	-2.89	2.25%	24.57	5.45%
9/20/2001	10.00%	5.55%	7.79%	-2.89	2.25%	24.85	4.45%
10/24/2001	10.30%	5.54%	7.78%	-2.89	2.24%	25.70	4.76%
11/28/2001	10.60%	5.49%	7.75%	-2.90	2.26%	26.15	5.11%
12/3/2001	12.88%	5.49%	7.75%	-2.90	2.26%	26.20	7.39%
12/20/2001	12.50%	5.50%	7.76%	-2.90	2.26%	26.14	7.00%
1/22/2002	10.00%	5.50%	7.76%	-2.90	2.27%	25.52	4.50%
3/27/2002	10.10%	5.45%	7.69%	-2.91	2.24%	24.63	4.65%
4/22/2002	11.80%	5.45%	7.67%	-2.91	2.22%	24.46	6.35%
5/28/2002	10.17%	5.46%	7.64%	-2.91	2.17%	24.27	4.71%
6/10/2002	12.00%	5.47%	7.63%	-2.91	2.16%	24.33	6.53%
6/18/2002	11.16%	5.48%	7.62%	-2.90	2.15%	24.40	5.68%
6/20/2002	11.00%	5.48%	7.62%	-2.90	2.15%	24.45	5.52%
6/20/2002	12.30%	5.48%	7.62%	-2.90	2.15%	24.45	6.82%
7/15/2002	11.00%	5.48%	7.60%	-2.90	2.13%	24.13	5.52%
9/12/2002	12.30%	5.45%	7.51%	-2.91	2.06%	25.14	6.85%
9/26/2002	10.45%	5.41%	7.48%	-2.92	2.07%	25.82	5.04%
12/4/2002	11.55%	5.29%	7.36%	-2.94	2.07%	28.01	6.26%
12/13/2002	11.75%	5.27%	7.34%	-2.94	2.08%	28.25	6.48%
12/20/2002	11.40%	5.25%	7.33%	-2.95	2.08%	28.44	6.15%
1/8/2003	11.10%	5.19%	7.29%	-2.96	2.10%	28.87	5.91%
1/31/2003	12.45%	5.13%	7.24%	-2.97	2.11%	29.61	7.32%
2/28/2003	12.30%	5.05%	7.19%	-2.99	2.14%	30.69	7.25%
3/6/2003	10.75%	5.03%	7.17%	-2.99	2.14%	30.93	5.72%
3/7/2003	9.96%	5.02%	7.17%	-2.99	2.14%	30.99	4.94%
3/20/2003	12.00%	4.98%	7.13%	-3.00	2.15%	31.50	7.02%
4/3/2003	12.00%	4.96%	7.10%	-3.00	2.14%	31.71	7.04%
4/15/2003	11.15%	4.94%	7.07%	-3.01	2.13%	31.67	6.21%
6/25/2003	10.75%	4.79%	6.85%	-3.04	2.06%	28.30	5.96%
6/26/2003	10.75%	4.79%	6.84%	-3.04	2.05%	28.22	5.96%
7/9/2003	9.75%	4.79%	6.82%	-3.04	2.03%	27.50	4.96%
7/16/2003	9.75%	4.79%	6.80%	-3.04	2.01%	27.03	4.96%
7/25/2003	9.50%	4.80%	6.79%	-3.04	1.99%	26.35	4.70%
8/26/2003	10.50%	4.83%	6.74%	-3.03	1.90%	24.80	5.67%
12/17/2003	9.85%	4.94%	6.51%	-3.01	1.57%	20.53	4.91%
12/17/2003	10.70%	4.94%	6.51%	-3.01	1.57%	20.53	5.76%
12/18/2003	11.50%	4.94%	6.51%	-3.01	1.57%	20.45	6.56%
12/19/2003	12.00%	4.94%	6.50%	-3.01	1.56%	20.38	7.06%
12/19/2003	12.00%	4.94%	6.50%	-3.01	1.56%	20.38	7.06%
12/23/2003	10.50%	4.94%	6.50%	-3.01	1.56%	20.21	5.56%
1/13/2004	12.00%	4.95%	6.46%	-3.01	1.51%	19.36	7.05%
3/2/2004	10.75%	4.99%	6.38%	-3.00	1.39%	18.18	5.76%
3/26/2004	10.25%	5.02%	6.35%	-2.99	1.33%	17.98	5.23%
4/5/2004	11.25%	5.03%	6.35%	-2.99	1.32%	17.86	6.22%
5/18/2004	10.50%	5.07%	6.36%	-2.98	1.28%	17.45	5.43%
5/25/2004	10.25%	5.08%	6.35%	-2.98	1.28%	17.37	5.17%
5/27/2004	10.25%	5.08%	6.35%	-2.98	1.28%	17.34	5.17%
6/2/2004	11.22%	5.08%	6.35%	-2.98	1.27%	17.30	6.14%
6/30/2004	10.50%	5.10%	6.32%	-2.98	1.22%	16.97	5.40%
6/30/2004	10.50%	5.10%	6.32%	-2.98	1.22%	16.97	5.40%
7/16/2004	11.60%	5.11%	6.30%	-2.97	1.19%	16.72	6.49%
8/25/2004	10.25%	5.10%	6.27%	-2.98	1.17%	16.53	5.15%
9/9/2004	10.40%	5.10%	6.25%	-2.98	1.16%	16.36	5.30%
11/9/2004	10.50%	5.07%	6.20%	-2.98	1.13%	15.94	5.43%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
11/23/2004	11.00%	5.06%	6.19%	-2.98	1.13%	15.75	5.94%
12/14/2004	10.97%	5.07%	6.18%	-2.98	1.11%	15.58	5.90%
12/21/2004	11.25%	5.07%	6.17%	-2.98	1.10%	15.51	6.18%
12/21/2004	11.50%	5.07%	6.17%	-2.98	1.10%	15.51	6.43%
12/22/2004	10.70%	5.07%	6.17%	-2.98	1.10%	15.49	5.63%
12/22/2004	11.50%	5.07%	6.17%	-2.98	1.10%	15.49	6.43%
12/29/2004	9.85%	5.07%	6.17%	-2.98	1.10%	15.33	4.78%
1/6/2005	10.70%	5.08%	6.17%	-2.98	1.09%	15.14	5.62%
2/18/2005	10.30%	4.98%	6.08%	-3.00	1.11%	14.60	5.32%
2/25/2005	10.50%	4.96%	6.07%	-3.00	1.11%	14.48	5.54%
3/10/2005	11.00%	4.93%	6.03%	-3.01	1.10%	14.19	6.07%
3/24/2005	10.30%	4.90%	5.99%	-3.02	1.09%	14.06	5.40%
4/4/2005	10.00%	4.88%	5.97%	-3.02	1.09%	14.02	5.12%
4/7/2005	10.25%	4.87%	5.96%	-3.02	1.09%	14.00	5.38%
5/18/2005	10.25%	4.78%	5.86%	-3.04	1.08%	13.90	5.47%
5/25/2005	10.75%	4.76%	5.84%	-3.04	1.07%	13.77	5.99%
5/26/2005	9.75%	4.76%	5.83%	-3.04	1.07%	13.74	4.99%
6/1/2005	9.75%	4.75%	5.82%	-3.05	1.07%	13.66	5.00%
7/19/2005	11.50%	4.64%	5.73%	-3.07	1.08%	13.17	6.86%
8/5/2005	11.75%	4.62%	5.70%	-3.07	1.07%	12.95	7.13%
8/15/2005	10.13%	4.61%	5.68%	-3.08	1.07%	12.85	5.52%
9/28/2005	10.00%	4.54%	5.61%	-3.09	1.07%	12.77	5.46%
10/4/2005	10.75%	4.54%	5.61%	-3.09	1.07%	12.78	6.21%
12/12/2005	11.00%	4.55%	5.63%	-3.09	1.08%	12.96	6.45%
12/13/2005	10.75%	4.55%	5.63%	-3.09	1.08%	12.96	6.20%
12/21/2005	10.29%	4.54%	5.63%	-3.09	1.09%	12.91	5.75%
12/21/2005	10.40%	4.54%	5.63%	-3.09	1.09%	12.91	5.86%
12/22/2005	11.00%	4.54%	5.63%	-3.09	1.09%	12.90	6.46%
12/22/2005	11.15%	4.54%	5.63%	-3.09	1.09%	12.90	6.61%
12/28/2005	10.00%	4.54%	5.63%	-3.09	1.09%	12.87	5.46%
12/28/2005	10.00%	4.54%	5.63%	-3.09	1.09%	12.87	5.46%
1/5/2006	11.00%	4.53%	5.62%	-3.09	1.09%	12.82	6.47%
1/27/2006	9.75%	4.52%	5.62%	-3.10	1.10%	12.73	5.23%
3/3/2006	10.39%	4.53%	5.65%	-3.09	1.12%	12.40	5.86%
4/17/2006	10.20%	4.61%	5.75%	-3.08	1.14%	12.34	5.59%
4/26/2006	10.60%	4.64%	5.78%	-3.07	1.14%	12.34	5.96%
5/17/2006	11.60%	4.69%	5.85%	-3.06	1.15%	12.47	6.91%
6/6/2006	10.00%	4.74%	5.90%	-3.05	1.16%	12.72	5.26%
6/27/2006	10.75%	4.80%	5.98%	-3.04	1.18%	13.07	5.95%
7/6/2006	10.20%	4.83%	6.00%	-3.03	1.18%	13.12	5.37%
7/24/2006	9.60%	4.86%	6.05%	-3.02	1.19%	13.30	4.74%
7/26/2006	10.50%	4.86%	6.06%	-3.02	1.20%	13.30	5.64%
7/28/2006	10.05%	4.86%	6.06%	-3.02	1.20%	13.29	5.19%
8/23/2006	9.55%	4.89%	6.09%	-3.02	1.21%	13.19	4.66%
9/1/2006	10.54%	4.90%	6.10%	-3.02	1.21%	13.19	5.64%
9/14/2006	10.00%	4.91%	6.11%	-3.01	1.21%	13.24	5.09%
10/6/2006	9.67%	4.92%	6.12%	-3.01	1.20%	13.29	4.75%
11/21/2006	10.08%	4.95%	6.15%	-3.01	1.19%	13.11	5.13%
11/21/2006	10.08%	4.95%	6.15%	-3.01	1.19%	13.11	5.13%
11/21/2006	10.12%	4.95%	6.15%	-3.01	1.19%	13.11	5.17%
12/1/2006	10.25%	4.95%	6.14%	-3.00	1.19%	13.06	5.30%
12/1/2006	10.50%	4.95%	6.14%	-3.00	1.19%	13.06	5.55%
12/7/2006	10.75%	4.95%	6.14%	-3.00	1.19%	13.06	5.80%
12/21/2006	10.90%	4.95%	6.14%	-3.01	1.18%	12.98	5.95%
12/21/2006	11.25%	4.95%	6.14%	-3.01	1.18%	12.98	6.30%
12/22/2006	10.25%	4.95%	6.14%	-3.01	1.18%	12.97	5.30%
1/5/2007	10.00%	4.95%	6.13%	-3.01	1.18%	12.97	5.05%
1/11/2007	10.10%	4.95%	6.13%	-3.01	1.18%	12.98	5.15%
1/11/2007	10.10%	4.95%	6.13%	-3.01	1.18%	12.98	5.15%
1/11/2007	10.90%	4.95%	6.13%	-3.01	1.18%	12.98	5.95%
1/12/2007	10.10%	4.95%	6.13%	-3.01	1.18%	12.97	5.15%
1/13/2007	10.40%	4.95%	6.13%	-3.01	1.18%	12.97	5.45%
1/19/2007	10.80%	4.94%	6.13%	-3.01	1.18%	12.95	5.86%
3/21/2007	11.35%	4.87%	6.03%	-3.02	1.16%	12.82	6.48%
3/22/2007	9.75%	4.86%	6.03%	-3.02	1.16%	12.81	4.89%
5/15/2007	10.00%	4.81%	5.94%	-3.03	1.14%	12.23	5.19%
5/17/2007	10.25%	4.81%	5.94%	-3.04	1.13%	12.22	5.44%
5/17/2007	10.25%	4.81%	5.94%	-3.04	1.13%	12.22	5.44%
5/22/2007	10.20%	4.80%	5.94%	-3.04	1.13%	12.20	5.40%
5/22/2007	10.50%	4.80%	5.94%	-3.04	1.13%	12.20	5.70%
5/23/2007	10.70%	4.80%	5.94%	-3.04	1.13%	12.19	5.90%
5/25/2007	9.67%	4.80%	5.94%	-3.04	1.13%	12.18	4.87%
6/15/2007	9.90%	4.82%	5.94%	-3.03	1.12%	12.27	5.08%
6/21/2007	10.20%	4.83%	5.94%	-3.03	1.12%	12.30	5.37%
6/22/2007	10.50%	4.83%	5.95%	-3.03	1.12%	12.31	5.67%
6/28/2007	10.75%	4.84%	5.95%	-3.03	1.11%	12.38	5.91%
7/12/2007	9.67%	4.86%	5.96%	-3.02	1.11%	12.56	4.81%
7/19/2007	10.00%	4.87%	5.97%	-3.02	1.11%	12.65	5.13%
7/19/2007	10.00%	4.87%	5.97%	-3.02	1.11%	12.65	5.13%
8/15/2007	10.40%	4.88%	5.99%	-3.02	1.11%	13.75	5.52%
10/9/2007	10.00%	4.91%	6.07%	-3.01	1.16%	15.91	5.09%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
10/17/2007	9.10%	4.91%	6.08%	-3.01	1.17%	16.13	4.19%
10/31/2007	9.96%	4.90%	6.08%	-3.02	1.18%	16.59	5.06%
11/29/2007	10.90%	4.87%	6.08%	-3.02	1.21%	18.10	6.03%
12/6/2007	10.75%	4.86%	6.08%	-3.02	1.22%	18.41	5.89%
12/13/2007	9.96%	4.86%	6.09%	-3.02	1.24%	18.60	5.10%
12/14/2007	10.70%	4.86%	6.10%	-3.02	1.24%	18.63	5.84%
12/14/2007	10.80%	4.86%	6.10%	-3.02	1.24%	18.63	5.94%
12/19/2007	10.20%	4.86%	6.10%	-3.03	1.25%	18.72	5.34%
12/20/2007	10.20%	4.85%	6.10%	-3.03	1.25%	18.75	5.35%
12/20/2007	11.00%	4.85%	6.10%	-3.03	1.25%	18.75	6.15%
12/28/2007	10.25%	4.85%	6.12%	-3.03	1.26%	18.83	5.40%
12/31/2007	11.25%	4.85%	6.12%	-3.03	1.27%	18.86	6.40%
1/8/2008	10.75%	4.83%	6.12%	-3.03	1.29%	19.13	5.92%
1/17/2008	10.75%	4.81%	6.12%	-3.03	1.31%	19.48	5.94%
1/28/2008	9.40%	4.80%	6.12%	-3.04	1.33%	19.95	4.60%
1/30/2008	10.00%	4.79%	6.12%	-3.04	1.33%	20.10	5.21%
1/31/2008	10.71%	4.79%	6.12%	-3.04	1.34%	20.17	5.92%
2/29/2008	10.25%	4.75%	6.15%	-3.05	1.40%	21.41	5.50%
3/12/2008	10.25%	4.73%	6.16%	-3.05	1.43%	21.95	5.52%
3/25/2008	9.10%	4.68%	6.16%	-3.06	1.48%	22.51	4.42%
4/22/2008	10.25%	4.60%	6.16%	-3.08	1.56%	23.28	5.65%
4/24/2008	10.10%	4.60%	6.16%	-3.08	1.56%	23.32	5.50%
5/1/2008	10.70%	4.59%	6.16%	-3.08	1.57%	23.42	6.11%
5/19/2008	11.00%	4.56%	6.16%	-3.09	1.60%	23.33	6.44%
5/27/2008	10.00%	4.55%	6.16%	-3.09	1.61%	23.21	5.45%
6/10/2008	10.70%	4.54%	6.17%	-3.09	1.62%	22.88	6.16%
6/27/2008	10.50%	4.54%	6.18%	-3.09	1.64%	22.74	5.96%
6/27/2008	11.04%	4.54%	6.18%	-3.09	1.64%	22.74	6.50%
7/10/2008	10.43%	4.52%	6.19%	-3.10	1.66%	22.86	5.91%
7/16/2008	9.40%	4.52%	6.19%	-3.10	1.67%	23.05	4.88%
7/30/2008	10.80%	4.51%	6.20%	-3.10	1.69%	23.31	6.29%
7/31/2008	10.70%	4.51%	6.20%	-3.10	1.70%	23.32	6.19%
8/11/2008	10.25%	4.51%	6.22%	-3.10	1.71%	23.36	5.74%
8/26/2008	10.18%	4.50%	6.24%	-3.10	1.74%	23.26	5.68%
9/10/2008	10.30%	4.50%	6.25%	-3.10	1.75%	23.04	5.80%
9/24/2008	10.65%	4.48%	6.28%	-3.11	1.79%	23.44	6.17%
9/24/2008	10.65%	4.48%	6.28%	-3.11	1.79%	23.44	6.17%
9/24/2008	10.65%	4.48%	6.28%	-3.11	1.79%	23.44	6.17%
9/30/2008	10.20%	4.48%	6.29%	-3.11	1.81%	23.77	5.72%
10/8/2008	10.15%	4.46%	6.31%	-3.11	1.85%	24.58	5.69%
11/13/2008	10.55%	4.45%	6.52%	-3.11	2.08%	29.55	6.10%
11/17/2008	10.20%	4.44%	6.54%	-3.11	2.09%	29.97	5.76%
12/1/2008	10.25%	4.40%	6.59%	-3.12	2.20%	31.76	5.85%
12/23/2008	11.00%	4.27%	6.62%	-3.15	2.35%	34.10	6.73%
12/29/2008	10.00%	4.24%	6.62%	-3.16	2.38%	34.33	5.76%
12/29/2008	10.20%	4.24%	6.62%	-3.16	2.38%	34.33	5.96%
12/31/2008	10.75%	4.22%	6.62%	-3.17	2.40%	34.45	6.53%
1/14/2009	10.50%	4.15%	6.63%	-3.18	2.48%	35.20	6.35%
1/21/2009	10.50%	4.12%	6.63%	-3.19	2.51%	35.74	6.38%
1/21/2009	10.50%	4.12%	6.63%	-3.19	2.51%	35.74	6.38%
1/21/2009	10.50%	4.12%	6.63%	-3.19	2.51%	35.74	6.38%
1/27/2009	10.76%	4.09%	6.63%	-3.20	2.54%	36.20	6.67%
1/30/2009	10.50%	4.08%	6.63%	-3.20	2.56%	36.50	6.42%
2/4/2009	8.75%	4.06%	6.64%	-3.20	2.57%	36.86	4.69%
3/4/2009	10.50%	3.96%	6.64%	-3.23	2.67%	39.48	6.54%
3/12/2009	11.50%	3.93%	6.64%	-3.24	2.71%	40.32	7.57%
4/2/2009	11.10%	3.85%	6.65%	-3.26	2.80%	41.94	7.25%
4/21/2009	10.61%	3.80%	6.65%	-3.27	2.85%	42.82	6.81%
4/24/2009	10.00%	3.79%	6.66%	-3.27	2.87%	43.01	6.21%
4/30/2009	11.25%	3.78%	6.66%	-3.28	2.89%	43.20	7.47%
5/4/2009	10.74%	3.77%	6.66%	-3.28	2.89%	43.30	6.97%
5/20/2009	10.25%	3.74%	6.66%	-3.29	2.92%	43.85	6.51%
5/28/2009	10.50%	3.74%	6.67%	-3.29	2.92%	44.13	6.76%
6/22/2009	10.00%	3.76%	6.66%	-3.28	2.90%	44.90	6.24%
6/24/2009	10.80%	3.77%	6.66%	-3.28	2.89%	44.97	7.03%
7/8/2009	10.63%	3.77%	6.64%	-3.28	2.88%	44.89	6.86%
7/17/2009	10.50%	3.78%	6.62%	-3.28	2.84%	44.53	6.72%
8/31/2009	10.25%	3.82%	6.34%	-3.27	2.52%	39.06	6.43%
10/14/2009	10.70%	4.01%	6.13%	-3.22	2.12%	33.94	6.69%
10/23/2009	10.88%	4.06%	6.10%	-3.20	2.05%	33.27	6.82%
11/2/2009	10.70%	4.09%	6.08%	-3.20	1.99%	32.69	6.61%
11/3/2009	10.70%	4.10%	6.08%	-3.20	1.99%	32.55	6.60%
11/24/2009	10.25%	4.15%	6.03%	-3.18	1.87%	30.96	6.10%
11/25/2009	10.75%	4.16%	6.02%	-3.18	1.86%	30.84	6.59%
11/30/2009	10.35%	4.17%	6.02%	-3.18	1.85%	30.67	6.18%
12/3/2009	10.50%	4.18%	6.01%	-3.18	1.83%	30.27	6.32%
12/7/2009	10.70%	4.18%	6.00%	-3.17	1.82%	29.98	6.52%
12/16/2009	10.90%	4.21%	5.98%	-3.17	1.77%	29.08	6.69%
12/16/2009	11.00%	4.21%	5.98%	-3.17	1.77%	29.08	6.79%
12/18/2009	10.40%	4.22%	5.98%	-3.16	1.75%	28.81	6.18%
12/18/2009	10.40%	4.22%	5.98%	-3.16	1.75%	28.81	6.18%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
12/22/2009	10.20%	4.23%	5.97%	-3.16	1.74%	28.54	5.97%
12/22/2009	10.40%	4.23%	5.97%	-3.16	1.74%	28.54	6.17%
12/22/2009	10.40%	4.23%	5.97%	-3.16	1.74%	28.54	6.17%
12/30/2009	10.00%	4.26%	5.96%	-3.16	1.70%	27.98	5.74%
1/4/2010	10.80%	4.28%	5.95%	-3.15	1.68%	27.77	6.52%
1/11/2010	11.00%	4.30%	5.94%	-3.15	1.64%	27.16	6.70%
1/26/2010	10.13%	4.35%	5.90%	-3.13	1.55%	26.14	5.78%
1/27/2010	10.40%	4.35%	5.90%	-3.13	1.54%	26.06	6.05%
1/27/2010	10.40%	4.35%	5.90%	-3.13	1.54%	26.06	6.05%
1/27/2010	10.70%	4.35%	5.90%	-3.13	1.54%	26.06	6.35%
2/9/2010	9.80%	4.38%	5.87%	-3.13	1.49%	25.50	5.42%
2/18/2010	10.60%	4.40%	5.85%	-3.12	1.45%	25.09	6.20%
2/24/2010	10.18%	4.41%	5.84%	-3.12	1.43%	24.84	5.77%
3/2/2010	9.63%	4.41%	5.82%	-3.12	1.41%	24.58	5.22%
3/4/2010	10.50%	4.41%	5.82%	-3.12	1.41%	24.45	6.09%
3/5/2010	10.50%	4.41%	5.82%	-3.12	1.40%	24.40	6.09%
3/11/2010	11.90%	4.42%	5.80%	-3.12	1.39%	24.14	7.48%
3/17/2010	10.00%	4.41%	5.79%	-3.12	1.37%	23.87	5.59%
3/25/2010	10.15%	4.42%	5.77%	-3.12	1.36%	23.50	5.73%
4/2/2010	10.10%	4.43%	5.76%	-3.12	1.33%	23.19	5.67%
4/27/2010	10.00%	4.46%	5.74%	-3.11	1.29%	22.18	5.54%
4/29/2010	9.90%	4.46%	5.74%	-3.11	1.28%	22.13	5.44%
4/29/2010	10.06%	4.46%	5.74%	-3.11	1.28%	22.13	5.60%
4/29/2010	10.26%	4.46%	5.74%	-3.11	1.28%	22.13	5.80%
5/12/2010	10.30%	4.45%	5.72%	-3.11	1.27%	22.27	5.85%
5/12/2010	10.30%	4.45%	5.72%	-3.11	1.27%	22.27	5.85%
5/28/2010	10.10%	4.44%	5.70%	-3.11	1.26%	22.82	5.66%
5/28/2010	10.20%	4.44%	5.70%	-3.11	1.26%	22.82	5.76%
6/7/2010	10.30%	4.44%	5.69%	-3.11	1.25%	23.01	5.86%
6/16/2010	10.00%	4.44%	5.69%	-3.11	1.25%	23.17	5.56%
6/28/2010	9.67%	4.43%	5.68%	-3.12	1.25%	23.20	5.24%
6/28/2010	10.50%	4.43%	5.68%	-3.12	1.25%	23.20	6.07%
6/30/2010	9.40%	4.43%	5.68%	-3.12	1.25%	23.30	4.97%
7/1/2010	10.25%	4.43%	5.68%	-3.12	1.25%	23.35	5.82%
7/15/2010	10.53%	4.43%	5.67%	-3.12	1.24%	23.44	6.10%
7/15/2010	10.70%	4.43%	5.67%	-3.12	1.24%	23.44	6.27%
7/30/2010	10.70%	4.41%	5.66%	-3.12	1.24%	23.39	6.29%
8/4/2010	10.50%	4.41%	5.65%	-3.12	1.24%	23.39	6.09%
8/6/2010	9.83%	4.41%	5.65%	-3.12	1.24%	23.40	5.42%
8/25/2010	9.90%	4.37%	5.60%	-3.13	1.23%	23.38	5.53%
9/3/2010	10.60%	4.35%	5.58%	-3.14	1.23%	23.43	6.25%
9/14/2010	10.70%	4.33%	5.56%	-3.14	1.23%	23.46	6.37%
9/16/2010	10.00%	4.33%	5.56%	-3.14	1.23%	23.44	5.67%
9/16/2010	10.00%	4.33%	5.56%	-3.14	1.23%	23.44	5.67%
9/30/2010	9.75%	4.29%	5.52%	-3.15	1.23%	23.46	5.46%
10/14/2010	10.35%	4.24%	5.48%	-3.16	1.24%	23.48	6.11%
10/28/2010	10.70%	4.21%	5.45%	-3.17	1.24%	23.52	6.49%
11/2/2010	10.38%	4.20%	5.44%	-3.17	1.24%	23.57	6.18%
11/4/2010	10.70%	4.20%	5.44%	-3.17	1.24%	23.56	6.50%
11/19/2010	10.20%	4.18%	5.42%	-3.18	1.24%	23.30	6.02%
11/22/2010	10.00%	4.18%	5.41%	-3.18	1.24%	23.26	5.82%
12/1/2010	10.13%	4.16%	5.40%	-3.18	1.24%	23.19	5.97%
12/6/2010	9.86%	4.15%	5.39%	-3.18	1.24%	23.17	5.71%
12/9/2010	10.25%	4.15%	5.39%	-3.18	1.23%	23.12	6.10%
12/13/2010	10.70%	4.15%	5.38%	-3.18	1.24%	23.10	6.55%
12/14/2010	10.13%	4.15%	5.38%	-3.18	1.24%	23.10	5.98%
12/15/2010	10.44%	4.15%	5.38%	-3.18	1.24%	23.09	6.29%
12/17/2010	10.00%	4.15%	5.38%	-3.18	1.24%	23.08	5.85%
12/20/2010	10.60%	4.15%	5.38%	-3.18	1.23%	23.07	6.45%
12/21/2010	10.30%	4.14%	5.38%	-3.18	1.23%	23.07	6.16%
12/27/2010	9.90%	4.14%	5.37%	-3.18	1.23%	23.04	5.76%
12/29/2010	11.15%	4.14%	5.37%	-3.18	1.23%	23.04	7.01%
1/5/2011	10.15%	4.13%	5.37%	-3.19	1.23%	23.06	6.02%
1/12/2011	10.30%	4.12%	5.36%	-3.19	1.23%	23.04	6.18%
1/13/2011	10.30%	4.12%	5.35%	-3.19	1.23%	23.03	6.18%
1/18/2011	10.00%	4.12%	5.35%	-3.19	1.23%	23.02	5.88%
1/20/2011	9.30%	4.12%	5.35%	-3.19	1.23%	23.03	5.18%
1/20/2011	10.13%	4.12%	5.35%	-3.19	1.23%	23.03	6.01%
1/31/2011	9.60%	4.12%	5.34%	-3.19	1.22%	23.09	5.48%
2/3/2011	10.00%	4.12%	5.33%	-3.19	1.22%	23.10	5.88%
2/25/2011	10.00%	4.14%	5.34%	-3.18	1.20%	22.61	5.86%
3/25/2011	9.80%	4.18%	5.35%	-3.18	1.17%	21.32	5.62%
3/30/2011	10.00%	4.18%	5.35%	-3.17	1.16%	21.18	5.82%
4/12/2011	10.00%	4.21%	5.35%	-3.17	1.14%	20.76	5.79%
4/25/2011	10.74%	4.23%	5.37%	-3.16	1.13%	20.20	6.51%
4/26/2011	9.67%	4.23%	5.37%	-3.16	1.13%	20.15	5.44%
4/27/2011	10.40%	4.24%	5.37%	-3.16	1.13%	20.11	6.16%
5/4/2011	10.00%	4.24%	5.37%	-3.16	1.13%	19.87	5.76%
5/4/2011	10.00%	4.24%	5.37%	-3.16	1.13%	19.87	5.76%
5/24/2011	10.50%	4.27%	5.38%	-3.15	1.11%	19.45	6.23%
6/8/2011	10.75%	4.30%	5.39%	-3.15	1.09%	19.06	6.45%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
6/16/2011	9.20%	4.32%	5.40%	-3.14	1.09%	18.86	4.88%
6/17/2011	9.95%	4.32%	5.40%	-3.14	1.09%	18.85	5.63%
7/13/2011	10.20%	4.36%	5.43%	-3.13	1.06%	18.50	5.84%
8/1/2011	9.20%	4.39%	5.44%	-3.13	1.05%	18.46	4.81%
8/8/2011	10.00%	4.38%	5.43%	-3.13	1.05%	18.77	5.62%
8/11/2011	10.00%	4.38%	5.42%	-3.13	1.05%	19.06	5.62%
8/12/2011	10.35%	4.37%	5.42%	-3.13	1.05%	19.14	5.98%
8/19/2011	10.25%	4.36%	5.41%	-3.13	1.05%	19.52	5.89%
9/2/2011	12.88%	4.32%	5.37%	-3.14	1.05%	20.30	8.56%
9/22/2011	10.00%	4.24%	5.31%	-3.16	1.07%	21.32	5.76%
10/12/2011	10.30%	4.14%	5.23%	-3.18	1.09%	22.80	6.16%
10/20/2011	10.50%	4.10%	5.20%	-3.19	1.10%	23.24	6.40%
11/30/2011	10.90%	3.87%	5.03%	-3.25	1.15%	25.24	7.03%
11/30/2011	10.90%	3.87%	5.03%	-3.25	1.15%	25.24	7.03%
12/14/2011	10.00%	3.80%	4.97%	-3.27	1.17%	25.64	6.20%
12/14/2011	10.30%	3.80%	4.97%	-3.27	1.17%	25.64	6.50%
12/20/2011	10.20%	3.76%	4.94%	-3.28	1.17%	25.73	6.44%
12/21/2011	10.20%	3.76%	4.93%	-3.28	1.17%	25.74	6.44%
12/22/2011	9.90%	3.75%	4.92%	-3.28	1.17%	25.74	6.15%
12/22/2011	10.40%	3.75%	4.92%	-3.28	1.17%	25.74	6.65%
12/23/2011	10.19%	3.74%	4.92%	-3.28	1.17%	25.74	6.45%
1/25/2012	10.50%	3.57%	4.80%	-3.33	1.23%	25.85	6.93%
1/27/2012	10.50%	3.56%	4.78%	-3.34	1.23%	25.86	6.94%
2/15/2012	10.20%	3.47%	4.71%	-3.36	1.23%	26.07	6.73%
2/23/2012	9.90%	3.44%	4.68%	-3.37	1.24%	26.09	6.46%
2/27/2012	10.25%	3.43%	4.67%	-3.37	1.24%	26.10	6.82%
2/29/2012	10.40%	3.41%	4.66%	-3.38	1.25%	26.12	6.99%
3/29/2012	10.37%	3.32%	4.58%	-3.41	1.26%	25.97	7.05%
4/4/2012	10.00%	3.30%	4.56%	-3.41	1.27%	25.86	6.70%
4/26/2012	10.00%	3.21%	4.49%	-3.44	1.28%	25.88	6.79%
5/2/2012	10.00%	3.18%	4.47%	-3.45	1.29%	25.81	6.82%
5/7/2012	9.80%	3.17%	4.46%	-3.45	1.29%	25.81	6.63%
5/15/2012	10.00%	3.14%	4.43%	-3.46	1.28%	25.77	6.86%
5/29/2012	10.05%	3.11%	4.40%	-3.47	1.29%	25.29	6.94%
6/7/2012	10.30%	3.08%	4.38%	-3.48	1.30%	24.83	7.22%
6/14/2012	9.40%	3.06%	4.36%	-3.49	1.30%	24.50	6.34%
6/15/2012	10.40%	3.06%	4.36%	-3.49	1.30%	24.44	7.34%
6/18/2012	9.60%	3.06%	4.36%	-3.49	1.30%	24.37	6.54%
6/19/2012	9.25%	3.05%	4.35%	-3.49	1.30%	24.30	6.20%
6/26/2012	10.10%	3.04%	4.34%	-3.49	1.30%	23.90	7.06%
6/29/2012	10.00%	3.04%	4.34%	-3.49	1.30%	23.63	6.96%
7/9/2012	10.20%	3.03%	4.32%	-3.50	1.30%	23.23	7.17%
7/16/2012	9.80%	3.02%	4.31%	-3.50	1.29%	22.67	6.78%
7/20/2012	9.31%	3.01%	4.30%	-3.50	1.30%	22.15	6.30%
7/20/2012	9.81%	3.01%	4.30%	-3.50	1.30%	22.15	6.80%
9/13/2012	9.80%	2.94%	4.22%	-3.53	1.28%	19.17	6.86%
9/19/2012	9.80%	2.94%	4.22%	-3.53	1.28%	18.89	6.86%
9/19/2012	10.05%	2.94%	4.22%	-3.53	1.28%	18.89	7.11%
9/26/2012	9.50%	2.94%	4.21%	-3.53	1.27%	18.55	6.56%
10/12/2012	9.60%	2.93%	4.19%	-3.53	1.26%	18.06	6.67%
10/23/2012	9.75%	2.93%	4.17%	-3.53	1.24%	17.86	6.82%
10/24/2012	10.30%	2.93%	4.17%	-3.53	1.24%	17.85	7.37%
11/9/2012	10.30%	2.92%	4.14%	-3.53	1.22%	17.75	7.38%
11/28/2012	10.40%	2.90%	4.12%	-3.54	1.22%	17.61	7.50%
11/29/2012	9.75%	2.89%	4.11%	-3.54	1.22%	17.59	6.86%
11/29/2012	9.88%	2.89%	4.11%	-3.54	1.22%	17.59	6.99%
12/5/2012	9.71%	2.89%	4.10%	-3.54	1.22%	17.53	6.82%
12/5/2012	10.40%	2.89%	4.10%	-3.54	1.22%	17.53	7.51%
12/12/2012	9.80%	2.88%	4.09%	-3.55	1.21%	17.49	6.92%
12/13/2012	9.50%	2.88%	4.09%	-3.55	1.21%	17.48	6.62%
12/13/2012	10.50%	2.88%	4.09%	-3.55	1.21%	17.48	7.62%
12/14/2012	10.40%	2.88%	4.09%	-3.55	1.21%	17.47	7.52%
12/19/2012	9.71%	2.87%	4.09%	-3.55	1.21%	17.46	6.84%
12/19/2012	10.25%	2.87%	4.09%	-3.55	1.21%	17.46	7.38%
12/20/2012	9.50%	2.87%	4.09%	-3.55	1.21%	17.44	6.63%
12/20/2012	9.80%	2.87%	4.09%	-3.55	1.21%	17.44	6.93%
12/20/2012	10.25%	2.87%	4.09%	-3.55	1.21%	17.44	7.38%
12/20/2012	10.25%	2.87%	4.09%	-3.55	1.21%	17.44	7.38%
12/20/2012	10.30%	2.87%	4.09%	-3.55	1.21%	17.44	7.43%
12/20/2012	10.40%	2.87%	4.09%	-3.55	1.21%	17.44	7.53%
12/20/2012	10.45%	2.87%	4.09%	-3.55	1.21%	17.44	7.58%
12/21/2012	10.20%	2.87%	4.09%	-3.55	1.22%	17.43	7.33%
12/26/2012	9.80%	2.86%	4.08%	-3.55	1.22%	17.45	6.94%
1/9/2013	9.70%	2.85%	4.06%	-3.56	1.22%	17.49	6.85%
1/9/2013	9.70%	2.85%	4.06%	-3.56	1.22%	17.49	6.85%
1/9/2013	9.70%	2.85%	4.06%	-3.56	1.22%	17.49	6.85%
1/16/2013	9.60%	2.84%	4.05%	-3.56	1.21%	17.44	6.76%
1/16/2013	9.60%	2.84%	4.05%	-3.56	1.21%	17.44	6.76%
2/13/2013	10.20%	2.84%	4.03%	-3.56	1.19%	17.01	7.36%
2/22/2013	9.75%	2.85%	4.03%	-3.56	1.17%	16.90	6.90%
2/27/2013	10.00%	2.86%	4.02%	-3.56	1.17%	16.86	7.14%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
3/14/2013	9.30%	2.88%	4.02%	-3.55	1.14%	16.37	6.42%
3/27/2013	9.80%	2.90%	4.03%	-3.54	1.13%	15.90	6.90%
5/1/2013	9.84%	2.94%	4.02%	-3.53	1.08%	15.26	6.90%
5/15/2013	10.30%	2.96%	4.03%	-3.52	1.07%	15.03	7.34%
5/30/2013	10.20%	2.98%	4.05%	-3.51	1.07%	14.88	7.22%
5/31/2013	9.00%	2.98%	4.05%	-3.51	1.07%	14.89	6.02%
6/11/2013	10.00%	3.00%	4.06%	-3.51	1.06%	14.96	7.00%
6/21/2013	9.75%	3.02%	4.08%	-3.50	1.06%	15.01	6.73%
6/25/2013	9.80%	3.03%	4.09%	-3.50	1.06%	15.02	6.77%
7/12/2013	9.36%	3.07%	4.13%	-3.48	1.06%	15.06	6.29%
8/8/2013	9.83%	3.14%	4.20%	-3.46	1.05%	14.83	6.69%
8/14/2013	9.15%	3.16%	4.21%	-3.45	1.05%	14.74	5.99%
9/11/2013	10.20%	3.26%	4.31%	-3.42	1.04%	14.57	6.94%
9/11/2013	10.25%	3.26%	4.31%	-3.42	1.04%	14.57	6.99%
9/24/2013	10.20%	3.31%	4.35%	-3.41	1.04%	14.48	6.89%
10/3/2013	9.65%	3.33%	4.37%	-3.40	1.04%	14.46	6.32%
11/6/2013	10.20%	3.41%	4.44%	-3.38	1.03%	14.40	6.79%
11/21/2013	10.00%	3.44%	4.47%	-3.37	1.03%	14.36	6.56%
11/26/2013	10.00%	3.45%	4.48%	-3.37	1.03%	14.35	6.55%
12/3/2013	10.25%	3.47%	4.49%	-3.36	1.02%	14.38	6.78%
12/4/2013	9.50%	3.47%	4.50%	-3.36	1.02%	14.38	6.03%
12/5/2013	10.20%	3.48%	4.50%	-3.36	1.02%	14.38	6.72%
12/9/2013	8.72%	3.48%	4.51%	-3.36	1.02%	14.35	5.24%
12/9/2013	9.75%	3.48%	4.51%	-3.36	1.02%	14.35	6.27%
12/13/2013	9.75%	3.50%	4.52%	-3.35	1.02%	14.34	6.25%
12/16/2013	9.95%	3.50%	4.52%	-3.35	1.02%	14.35	6.45%
12/16/2013	9.95%	3.50%	4.52%	-3.35	1.02%	14.35	6.45%
12/16/2013	10.12%	3.50%	4.52%	-3.35	1.02%	14.35	6.62%
12/17/2013	9.50%	3.51%	4.53%	-3.35	1.02%	14.36	5.99%
12/17/2013	10.95%	3.51%	4.53%	-3.35	1.02%	14.36	7.44%
12/18/2013	8.72%	3.51%	4.53%	-3.35	1.02%	14.37	5.21%
12/18/2013	9.80%	3.51%	4.53%	-3.35	1.02%	14.37	6.29%
12/19/2013	10.15%	3.51%	4.53%	-3.35	1.02%	14.37	6.64%
12/30/2013	9.50%	3.54%	4.55%	-3.34	1.01%	14.40	5.96%
2/20/2014	9.20%	3.68%	4.64%	-3.30	0.96%	14.61	5.52%
2/26/2014	9.75%	3.69%	4.65%	-3.30	0.96%	14.64	6.06%
3/17/2014	9.55%	3.72%	4.67%	-3.29	0.96%	14.72	5.83%
3/26/2014	9.40%	3.73%	4.68%	-3.29	0.95%	14.67	5.67%
3/26/2014	9.96%	3.73%	4.68%	-3.29	0.95%	14.67	6.23%
4/2/2014	9.70%	3.73%	4.68%	-3.29	0.95%	14.59	5.97%
5/16/2014	9.80%	3.70%	4.63%	-3.30	0.93%	14.38	6.10%
5/30/2014	9.70%	3.68%	4.61%	-3.30	0.93%	14.34	6.02%
6/6/2014	10.40%	3.67%	4.60%	-3.30	0.93%	14.27	6.73%
6/30/2014	9.55%	3.64%	4.56%	-3.31	0.92%	13.95	5.91%
7/2/2014	9.62%	3.64%	4.56%	-3.31	0.92%	13.91	5.98%
7/10/2014	9.95%	3.63%	4.54%	-3.32	0.91%	13.86	6.32%
7/23/2014	9.75%	3.61%	4.52%	-3.32	0.91%	13.71	6.14%
7/29/2014	9.45%	3.60%	4.51%	-3.32	0.90%	13.58	5.85%
7/31/2014	9.90%	3.60%	4.50%	-3.32	0.90%	13.57	6.30%
8/20/2014	9.75%	3.57%	4.47%	-3.33	0.90%	13.61	6.18%
8/25/2014	9.60%	3.56%	4.46%	-3.34	0.90%	13.59	6.04%
8/29/2014	9.80%	3.54%	4.44%	-3.34	0.90%	13.57	6.26%
9/11/2014	9.60%	3.51%	4.42%	-3.35	0.90%	13.56	6.09%
9/15/2014	10.25%	3.51%	4.41%	-3.35	0.91%	13.57	6.74%
10/9/2014	9.80%	3.45%	4.36%	-3.37	0.91%	13.61	6.35%
11/6/2014	9.56%	3.37%	4.29%	-3.39	0.92%	14.11	6.19%
11/6/2014	10.20%	3.37%	4.29%	-3.39	0.92%	14.11	6.83%
11/14/2014	10.20%	3.35%	4.28%	-3.40	0.93%	13.98	6.85%
11/26/2014	9.70%	3.33%	4.27%	-3.40	0.94%	13.82	6.37%
11/26/2014	10.20%	3.33%	4.27%	-3.40	0.94%	13.82	6.87%
12/4/2014	9.68%	3.31%	4.25%	-3.41	0.95%	13.79	6.37%
12/10/2014	9.25%	3.29%	4.24%	-3.41	0.95%	13.80	5.96%
12/10/2014	9.25%	3.29%	4.24%	-3.41	0.95%	13.80	5.96%
12/11/2014	10.07%	3.29%	4.24%	-3.42	0.95%	13.83	6.78%
12/12/2014	10.20%	3.28%	4.23%	-3.42	0.95%	13.87	6.92%
12/17/2014	9.17%	3.27%	4.23%	-3.42	0.96%	13.96	5.90%
12/18/2014	9.83%	3.26%	4.22%	-3.42	0.96%	13.98	6.57%
1/23/2015	9.50%	3.14%	4.13%	-3.46	0.99%	14.37	6.36%
2/24/2015	9.83%	3.04%	4.06%	-3.49	1.02%	14.67	6.79%
3/18/2015	9.75%	2.98%	4.02%	-3.51	1.04%	14.88	6.77%
3/25/2015	9.50%	2.96%	4.00%	-3.52	1.04%	14.94	6.54%
3/26/2015	9.72%	2.95%	4.00%	-3.52	1.04%	14.97	6.77%
4/23/2015	10.20%	2.87%	3.94%	-3.55	1.07%	15.19	7.33%
4/29/2015	9.53%	2.86%	3.93%	-3.56	1.07%	15.20	6.67%
5/1/2015	9.60%	2.85%	3.93%	-3.56	1.08%	15.23	6.75%
5/26/2015	9.75%	2.83%	3.93%	-3.56	1.10%	15.16	6.92%
6/17/2015	9.00%	2.82%	3.95%	-3.57	1.13%	15.29	6.18%
6/17/2015	9.00%	2.82%	3.95%	-3.57	1.13%	15.29	6.18%
9/2/2015	9.50%	2.79%	4.00%	-3.58	1.21%	15.67	6.71%
9/10/2015	9.30%	2.79%	4.01%	-3.58	1.22%	15.97	6.51%
10/15/2015	9.00%	2.81%	4.06%	-3.57	1.24%	16.67	6.19%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
11/19/2015	10.00%	2.88%	4.15%	-3.55	1.27%	16.29	7.12%
11/19/2015	10.30%	2.88%	4.15%	-3.55	1.27%	16.29	7.42%
12/3/2015	10.00%	2.90%	4.18%	-3.54	1.28%	16.27	7.10%
12/9/2015	9.14%	2.90%	4.19%	-3.54	1.29%	16.32	6.24%
12/9/2015	9.14%	2.90%	4.19%	-3.54	1.29%	16.32	6.24%
12/11/2015	10.30%	2.90%	4.20%	-3.54	1.29%	16.41	7.40%
12/15/2015	9.60%	2.91%	4.20%	-3.54	1.30%	16.49	6.69%
12/17/2015	9.70%	2.91%	4.21%	-3.54	1.30%	16.53	6.79%
12/18/2015	9.50%	2.91%	4.21%	-3.54	1.30%	16.56	6.59%
12/30/2015	9.50%	2.93%	4.23%	-3.53	1.30%	16.59	6.57%
1/6/2016	9.50%	2.94%	4.25%	-3.53	1.31%	16.71	6.56%
Average:							4.50%
Count:							1,468

Summary of Adjustment Clauses & Alternative Regulation/Incentive Plans

Company	Parent	State	Adjustment Clauses							Alternative Regulation / Incentive Plans				
			Fuel/ Purchased Power	Decoupling (F/P) [1]	New Capital Investment [2]	Energy Efficiency [3]	Renewables & RPS [4]	Environmental [5]	Other [6]	Formula- Based Rates	Price Freeze/ Cap	Earnings Sharing	Formula- Based ROE	Service Quality/ Performance
ALLETE (Minnesota Power)	ALE	Minnesota	✓			✓	✓	✓	✓					
Superior Water, Light and Power Company	ALE	Wisconsin	✓						✓					
Interstate Power and Light Company	LNT	Iowa	✓			✓			✓					
Wisconsin Power and Light Company	LNT	Wisconsin	✓						✓					
Ameren Illinois Company	AEE	Illinois	✓			✓	✓		✓	✓		✓		✓
Union Electric Company	AEE	Missouri	✓	P		✓			✓					
Southwestern Electric Power Company	AEP	Arkansas	✓	P	✓	✓			✓					
Indiana Michigan Power Company	AEP	Indiana	✓	P	✓	✓			✓					
Kentucky Power Company	AEP	Kentucky	✓	P	✓	✓			✓					
Southwestern Electric Power Company	AEP	Louisiana	✓	P		✓			✓			✓		
Indiana Michigan Power Company	AEP	Michigan	✓	P		✓	✓		✓					
Ohio Power Company	AEP	Ohio	✓	P	✓	✓	✓		✓			✓		
Public Service Company of Oklahoma	AEP	Oklahoma	✓	P	✓	✓			✓					
Kingsport Power Company	AEP	Tennessee	✓						✓					
AEP Texas Central Company	AEP	Texas			✓	✓			✓					
AEP Texas North Company	AEP	Texas			✓	✓			✓					
Southwestern Electric Power Company	AEP	Texas	✓			✓	✓		✓					
Appalachian Power Company	AEP	Virginia			✓	✓	✓		✓			✓		✓
Appalachian Power Company	AEP	West Virginia	✓			✓			✓					
Wheeling Power Company	AEP	West Virginia	✓			✓			✓					
Alaska Electric Light and Power Company	AVA	Alaska	✓						✓					
Avista Corporation	AVA	Idaho	✓			✓			✓			✓		
Avista Corporation	AVA	Washington	✓	F		✓			✓			✓		
Consumers Energy Company	CMS	Michigan	✓			✓	✓		✓					
Virginia Electric and Power Company	D	North Carolina	✓			✓	✓		✓					
Virginia Electric and Power Company	D	Virginia	✓		✓	✓	✓		✓		✓		✓	
DTE Electric Company	DTE	Michigan	✓			✓	✓		✓					
Idaho Power Co.	IDA	Idaho	✓	P		✓			✓			✓		
Idaho Power Co.	IDA	Oregon	✓			✓	✓		✓					
NorthWestern Energy	NWE	Montana	✓	P		✓			✓					
NorthWestern Energy	NWE	South Dakota	✓			✓			✓					
Oklahoma Gas and Electric Company	OGE	Arkansas	✓	P	✓	✓	✓		✓					
Oklahoma Gas and Electric Company	OGE	Oklahoma	✓	P	✓	✓			✓					
Otter Tail Power Company	OTTR	Minnesota	✓			✓	✓		✓					
Otter Tail Power Company	OTTR	North Dakota	✓			✓	✓		✓					
Arizona Public Service Company	PNW	Arizona	✓	P	✓	✓	✓		✓			✓		
Public Service Company of New Mexico	PNM	New Mexico	✓		✓	✓	✓		✓					
Texas-New Mexico Power Company	PNM	Texas	✓		✓	✓	✓		✓					
Portland General Electric Company	POR	Oregon	✓	P	✓	✓	✓		✓					
South Carolina Electric & Gas Co.	SCG	South Carolina	✓	P	✓	✓	✓		✓			✓		
Kansas Gas and Electric Company	WR	Kansas	✓	P		✓	✓		✓					
Westar Energy (KPL)	WR	Kansas	✓	P		✓	✓		✓					
Public Service Company of Colorado	XEL	Colorado	✓		✓	✓	✓		✓			✓	✓	
Northern States Power Company - MN	XEL	Minnesota	✓		✓	✓	✓		✓					
Southwestern Public Service Company	XEL	New Mexico	✓			✓	✓		✓			✓		
Northern States Power Company - MN	XEL	North Dakota	✓			✓	✓		✓					
Northern States Power Company - MN	XEL	South Dakota	✓	P	✓	✓	✓		✓			✓		
Southwestern Public Service Company	XEL	Texas	✓			✓	✓		✓			✓		
Northern States Power Company - WI	XEL	Wisconsin	✓						✓					

Notes:

A mechanism may cover one or more cost categories; therefore, designations may not indicate separate mechanisms for each category.

[1] Full or partial decoupling (such as Straight-Fixed Variable rate design, weather normalization clauses, and recovery of lost revenues as a result of Energy Efficiency programs).

[2] Includes recovery of costs related to targeted new generation projects, infrastructure replacement, system integrity/hardening, Smart Grid, AMI metering, and other capital expenditures.

[3] Utility-sponsored conservation, energy efficiency, load control, or other demand side management programs.

[4] Recovers costs associated with renewable energy projects, Distributed Energy Resources, REC purchases, net metering, RPS expense, and renewable PPAs.

[5] EPA upgrade costs, emissions control & allowance purchase costs, nuclear decommissioning, and other costs to comply with state and federal environmental mandates.

[6] Pension expenses, bad debt costs, storm costs, vegetation management, RTO/Transmission Expense, capacity costs, transmission costs, government & franchise fees and taxes, economic development, and low income programs.

Sources: Company SEC Form 10-Ks; Operating company tariffs; Regulatory Research Associates, *Alternative Regulation/Incentive Plans: A State-by-State Overview*, November 19, 2013; Regulatory Research Associates, *Adjustment Clauses: A State-by-State Overview*, October 2, 2015.

Change in Net Plant and Asset Turnover
Proxy Group - Annual Average

Year	Average		
	Average Revenue/Net Plant	Change in Net Plant	Cumulative Change in Net Plant
2003	63.60%	11.60%	11.60%
2004	66.11%	7.43%	19.89%
2005	73.57%	3.26%	23.80%
2006	68.83%	6.33%	31.63%
2007	65.98%	5.86%	39.35%
2008	62.51%	10.88%	54.51%
2009	51.54%	7.68%	66.39%
2010	51.55%	6.15%	76.62%
2011	49.49%	5.81%	86.87%
2012	43.91%	5.84%	97.78%
2013	43.08%	4.59%	106.86%
2014	40.86%	10.06%	127.66%
2015	37.28%	7.48%	144.68%
3-5 Year Projection	38.00%	20.54%	194.93%

Change in Net Plant and Asset Turnover
Proxy Group - Individual Company Results

Ticker	Year	Revenue	Net Plant	Revenue/Net Plant	Change in Net Plant	Change in Revenue/Net Plant
ALE	2002	NA	NA			
ALE	2003	NA	NA			
ALE	2004	\$ 751.40	\$ 883.10	85.09%		
ALE	2005	737.40	860.40	85.70%	-2.57%	0.73%
ALE	2006	767.10	921.60	83.24%	7.11%	-2.88%
ALE	2007	841.70	1,104.50	76.21%	19.85%	-8.44%
ALE	2008	801.00	1,387.30	57.74%	25.60%	-24.23%
ALE	2009	759.10	1,622.70	46.78%	16.97%	-18.98%
ALE	2010	907.00	1,805.60	50.23%	11.27%	7.38%
ALE	2011	928.20	1,982.70	46.81%	9.81%	-6.80%
ALE	2012	961.20	2,347.60	40.94%	18.40%	-12.54%
ALE	2013	1,018.40	2,576.50	39.53%	9.75%	-3.46%
ALE	2014	1,136.80	3,286.40	34.59%	27.55%	-12.49%
ALE	2015	1,500.00	3,675.00	40.82%	11.82%	18.00%
ALE	2018-2020	1,675.00	4,075.00	41.10%	10.88%	0.71%
LNT	2002	\$ 2,608.80	\$ 3,729.20	69.96%		
LNT	2003	3,128.20	4,432.60	70.57%	18.86%	0.88%
LNT	2004	2,958.70	5,284.60	55.99%	19.22%	-20.67%
LNT	2005	3,279.60	4,866.20	67.40%	-7.92%	20.38%
LNT	2006	3,359.40	4,944.90	67.94%	1.62%	0.80%
LNT	2007	3,437.60	4,679.90	73.45%	-5.36%	8.12%
LNT	2008	3,681.70	5,353.50	68.77%	14.39%	-6.38%
LNT	2009	3,432.80	6,203.00	55.34%	15.87%	-19.53%
LNT	2010	3,416.10	6,730.60	50.75%	8.51%	-8.29%
LNT	2011	3,665.30	7,037.10	52.09%	4.55%	2.62%
LNT	2012	3,094.50	7,838.00	39.48%	11.38%	-24.20%
LNT	2013	3,276.80	7,147.30	45.85%	-8.81%	16.12%
LNT	2014	3,350.30	6,442.00	52.01%	-9.87%	13.44%
LNT	2015	3,400.00	7,800.00	43.59%	21.08%	-16.19%
LNT	2018-2020	4,000.00	9,000.00	44.44%	15.38%	1.96%
AEE	2002	\$ 3,841.00	\$ 8,914.00	43.09%		
AEE	2003	4,593.00	10,917.00	42.07%	22.47%	-2.36%
AEE	2004	5,160.00	13,297.00	38.81%	21.80%	-7.76%
AEE	2005	6,780.00	13,572.00	49.96%	2.07%	28.73%
AEE	2006	6,880.00	14,286.00	48.16%	5.26%	-3.60%
AEE	2007	7,546.00	15,069.00	50.08%	5.48%	3.98%
AEE	2008	7,839.00	16,567.00	47.32%	9.94%	-5.51%
AEE	2009	7,090.00	17,610.00	40.26%	6.30%	-14.91%
AEE	2010	7,638.00	17,853.00	42.78%	1.38%	6.26%

Change in Net Plant and Asset Turnover
Proxy Group - Individual Company Results

Ticker	Year	Revenue	Net Plant	Revenue/Net Plant	Change in Net Plant	Change in Revenue/Net Plant
AEE	2011	7,531.00	18,127.00	41.55%	1.53%	-2.89%
AEE	2012	6,828.00	16,096.00	42.42%	-11.20%	2.11%
AEE	2013	5,838.00	16,205.00	36.03%	0.68%	-15.07%
AEE	2014	6,053.00	17,424.00	34.74%	7.52%	-3.57%
AEE	2015	6,150.00	18,525.00	33.20%	6.32%	-4.44%
AEE	2018-2020	7,250.00	21,400.00	33.88%	15.52%	2.05%
AEP	2002	\$ 14,555.00	\$ 21,684.00	67.12%		
AEP	2003	14,545.00	22,029.00	66.03%	1.59%	-1.63%
AEP	2004	14,057.00	22,801.00	61.65%	3.50%	-6.63%
AEP	2005	12,111.00	24,284.00	49.87%	6.50%	-19.11%
AEP	2006	12,622.00	26,781.00	47.13%	10.28%	-5.50%
AEP	2007	13,380.00	29,870.00	44.79%	11.53%	-4.96%
AEP	2008	14,440.00	32,987.00	43.77%	10.44%	-2.28%
AEP	2009	13,489.00	34,344.00	39.28%	4.11%	-10.28%
AEP	2010	14,427.00	35,674.00	40.44%	3.87%	2.97%
AEP	2011	15,116.00	36,971.00	40.89%	3.64%	1.10%
AEP	2012	14,945.00	38,763.00	38.55%	4.85%	-5.70%
AEP	2013	15,357.00	40,997.00	37.46%	5.76%	-2.84%
AEP	2014	17,020.00	44,117.00	38.58%	7.61%	2.99%
AEP	2015	16,700.00	46,725.00	35.74%	5.91%	-7.36%
AEP	2018-2020	18,850.00	54,900.00	34.34%	17.50%	-3.93%
AVA	2002	\$ 980.40	\$ 1,563.70	62.70%		
AVA	2003	1,123.40	1,944.60	57.77%	24.36%	-7.86%
AVA	2004	1,151.60	1,956.10	58.87%	0.59%	1.91%
AVA	2005	1,359.60	2,126.40	63.94%	8.71%	8.61%
AVA	2006	1,506.30	2,215.00	68.00%	4.17%	6.36%
AVA	2007	1,417.80	2,351.30	60.30%	6.15%	-11.33%
AVA	2008	1,676.80	2,492.20	67.28%	5.99%	11.58%
AVA	2009	1,512.60	2,607.00	58.02%	4.61%	-13.76%
AVA	2010	1,558.70	2,714.20	57.43%	4.11%	-1.02%
AVA	2011	1,619.80	2,860.80	56.62%	5.40%	-1.41%
AVA	2012	1,547.00	3,023.70	51.16%	5.69%	-9.64%
AVA	2013	1,618.50	3,202.40	50.54%	5.91%	-1.22%
AVA	2014	1,472.60	3,620.00	40.68%	13.04%	-19.51%
AVA	2015	1,525.00	3,860.00	39.51%	6.63%	-2.88%
AVA	2018-2020	1,875.00	4,625.00	40.54%	27.76%	-0.34%
CMS	2002	\$ 8,687.00	\$ 5,234.00	165.97%		
CMS	2003	5,513.00	6,944.00	79.39%	32.67%	-52.17%
CMS	2004	5,472.00	8,636.00	63.36%	24.37%	-20.19%
CMS	2005	6,288.00	7,845.00	80.15%	-9.16%	26.50%
CMS	2006	6,810.00	7,976.00	85.38%	1.67%	6.52%
CMS	2007	6,519.00	8,728.00	74.69%	9.43%	-12.52%
CMS	2008	6,821.00	9,190.00	74.22%	5.29%	-0.63%
CMS	2009	6,205.00	9,682.00	64.09%	5.35%	-13.65%
CMS	2010	6,432.00	10,069.00	63.88%	4.00%	-0.33%
CMS	2011	6,503.00	10,633.00	61.16%	5.60%	-4.26%
CMS	2012	6,312.00	11,551.00	54.64%	8.63%	-10.65%
CMS	2013	6,566.00	12,246.00	53.62%	6.02%	-1.88%
CMS	2014	7,179.00	13,412.00	53.53%	9.52%	-0.17%
CMS	2015	6,550.00	14,300.00	45.80%	6.62%	-14.43%
CMS	2018-2020	7,500.00	16,800.00	44.64%	17.48%	-2.54%
D	2002	\$ 10,218.00	\$ 20,257.00	50.44%		
D	2003	12,078.00	25,850.00	46.72%	27.61%	-7.37%
D	2004	13,972.00	26,716.00	52.30%	3.35%	11.93%
D	2005	18,041.00	28,940.00	62.34%	8.32%	19.20%
D	2006	16,482.00	29,382.00	56.10%	1.53%	-10.02%
D	2007	15,674.00	21,352.00	73.41%	-27.33%	30.86%
D	2008	16,290.00	23,274.00	69.99%	9.00%	-4.65%
D	2009	15,131.00	25,592.00	59.12%	9.96%	-15.53%
D	2010	15,197.00	26,713.00	56.89%	4.38%	-3.78%
D	2011	14,379.00	29,670.00	48.46%	11.07%	-14.81%
D	2012	13,093.00	30,773.00	42.55%	3.72%	-12.21%
D	2013	13,120.00	32,628.00	40.21%	6.03%	-5.49%
D	2014	12,436.00	36,270.00	34.29%	11.16%	-14.73%
D	2015	12,000.00	40,425.00	29.68%	11.46%	-13.42%
D	2018-2020	13,250.00	51,700.00	25.63%	27.89%	-13.66%
DTE	2002	\$ 6,749.00	\$ 9,813.00	68.78%		

Change in Net Plant and Asset Turnover
Proxy Group - Individual Company Results

Ticker	Year	Revenue	Net Plant	Revenue/Net Plant	Change in Net Plant	Change in Revenue/Net Plant
DTE	2003	7,041.00	10,324.00	68.20%	5.21%	-0.84%
DTE	2004	7,114.00	10,491.00	67.81%	1.62%	-0.57%
DTE	2005	9,022.00	10,830.00	83.31%	3.23%	22.85%
DTE	2006	9,022.00	11,451.00	78.79%	5.73%	-5.42%
DTE	2007	8,861.00	11,408.00	77.67%	-0.38%	-1.41%
DTE	2008	9,329.00	12,231.00	76.27%	7.21%	-1.80%
DTE	2009	8,014.00	12,431.00	64.47%	1.64%	-15.48%
DTE	2010	8,557.00	12,992.00	65.86%	4.51%	2.17%
DTE	2011	8,897.00	13,746.00	64.72%	5.80%	-1.73%
DTE	2012	8,791.00	14,684.00	59.87%	6.82%	-7.50%
DTE	2013	9,661.00	15,800.00	61.15%	7.60%	2.13%
DTE	2014	12,301.00	16,820.00	73.13%	6.46%	19.61%
DTE	2015	10,700.00	18,375.00	58.23%	9.24%	-20.38%
DTE	2018-2020	13,000.00	23,500.00	55.32%	27.89%	-5.00%
IDA	2002	\$ 928.80	\$ 1,906.50	48.72%		
IDA	2003	782.70	2,088.30	37.48%	9.54%	-23.07%
IDA	2004	844.50	2,209.50	38.22%	5.80%	1.98%
IDA	2005	859.50	2,314.30	37.14%	4.74%	-2.83%
IDA	2006	926.30	2,419.10	38.29%	4.53%	3.10%
IDA	2007	879.40	2,616.60	33.61%	8.16%	-12.23%
IDA	2008	960.40	2,758.20	34.82%	5.41%	3.60%
IDA	2009	1,049.80	2,917.00	35.99%	5.76%	3.36%
IDA	2010	1,036.00	3,161.40	32.77%	8.38%	-8.94%
IDA	2011	1,026.80	3,406.60	30.14%	7.76%	-8.02%
IDA	2012	1,080.70	3,536.00	30.56%	3.80%	1.40%
IDA	2013	1,246.20	3,665.00	34.00%	3.65%	11.26%
IDA	2014	1,282.50	3,833.50	33.46%	4.60%	-1.61%
IDA	2015	1,280.00	4,095.00	31.26%	6.82%	-6.57%
IDA	2018-2020	1,405.00	4,975.00	28.24%	29.78%	-15.58%
NWE	2002	NA	NA			
NWE	2003	NA	NA			
NWE	2004	\$ 1,039.00	\$ 1,379.10	75.34%		
NWE	2005	1,165.80	1,409.20	82.73%	2.18%	9.81%
NWE	2006	1,132.70	1,491.90	75.92%	5.87%	-8.23%
NWE	2007	1,200.10	1,770.90	67.77%	18.70%	-10.74%
NWE	2008	1,260.80	1,839.70	68.53%	3.89%	1.13%
NWE	2009	1,141.90	1,964.10	58.14%	6.76%	-15.17%
NWE	2010	1,110.70	2,118.00	52.44%	7.84%	-9.80%
NWE	2011	1,117.30	2,213.30	50.48%	4.50%	-3.74%
NWE	2012	1,070.30	2,435.60	43.94%	10.04%	-12.95%
NWE	2013	1,154.50	2,690.10	42.92%	10.45%	-2.34%
NWE	2014	1,204.90	3,758.00	32.06%	39.70%	-25.29%
NWE	2015	1,200.00	4,060.00	29.56%	8.04%	-7.81%
NWE	2018-2020	1,475.00	4,525.00	32.60%	20.41%	1.67%
OGE	2002	3,023.90	3,204.30	94.37%		
OGE	2003	3,779.00	3,309.50	114.19%	3.28%	21.00%
OGE	2004	4,926.60	3,581.00	137.58%	8.20%	20.48%
OGE	2005	5,948.20	3,567.40	166.74%	-0.38%	21.20%
OGE	2006	4,005.60	3,867.50	103.57%	8.41%	-37.88%
OGE	2007	3,797.60	4,246.30	89.43%	9.79%	-13.65%
OGE	2008	4,070.70	5,249.80	77.54%	23.63%	-13.30%
OGE	2009	2,869.70	5,911.60	48.54%	12.61%	-37.40%
OGE	2010	3,716.90	6,464.40	57.50%	9.35%	18.45%
OGE	2011	3,915.90	7,474.00	52.39%	15.62%	-8.88%
OGE	2012	3,671.20	8,344.80	43.99%	11.65%	-16.03%
OGE	2013	2,867.70	6,672.80	42.98%	-20.04%	-2.31%
OGE	2014	2,453.10	6,979.90	35.15%	4.60%	-18.22%
OGE	2015	2,250.00	7,265.00	30.97%	4.08%	-11.88%
OGE	2018-2020	2,800.00	8,275.00	33.84%	18.55%	-3.72%
OTTR	2002	\$ 710.10	\$ 587.90	120.79%		
OTTR	2003	753.20	633.30	118.93%	7.72%	-1.53%
OTTR	2004	882.30	682.10	129.35%	7.71%	8.76%
OTTR	2005	1,046.40	697.10	150.11%	2.20%	16.05%
OTTR	2006	1,105.00	718.60	153.77%	3.08%	2.44%
OTTR	2007	1,238.90	854.00	145.07%	18.84%	-5.66%
OTTR	2008	1,311.20	1,037.60	126.37%	21.50%	-12.89%
OTTR	2009	1,039.50	1,098.60	94.62%	5.88%	-25.12%

Change in Net Plant and Asset Turnover
Proxy Group - Individual Company Results

Ticker	Year	Revenue	Net Plant	Revenue/Net Plant	Change in Net Plant	Change in Revenue/Net Plant
OTTR	2010	1,119.10	1,108.70	100.94%	0.92%	6.68%
OTTR	2011	1,077.90	1,077.50	100.04%	-2.81%	-0.89%
OTTR	2012	859.20	1,049.50	81.87%	-2.60%	-18.16%
OTTR	2013	893.30	1,167.00	76.55%	11.20%	-6.50%
OTTR	2014	799.30	1,268.50	63.01%	8.70%	-17.68%
OTTR	2015	800.00	1,400.00	57.14%	10.37%	-9.31%
OTTR	2018-2020	1,225.00	1,750.00	70.00%	25.00%	22.50%
PNW	2002	\$ 2,637.30	\$ 6,479.40	40.70%		
PNW	2003	2,817.90	7,480.10	37.67%	15.44%	-7.45%
PNW	2004	2,899.70	7,535.50	38.48%	0.74%	2.15%
PNW	2005	2,988.00	7,577.10	39.43%	0.55%	2.48%
PNW	2006	3,401.70	7,881.90	43.16%	4.02%	9.44%
PNW	2007	3,523.60	8,436.40	41.77%	7.04%	-3.22%
PNW	2008	3,367.10	8,916.70	37.76%	5.69%	-9.59%
PNW	2009	3,297.10	9,257.80	35.61%	3.83%	-5.69%
PNW	2010	3,263.60	9,578.80	34.07%	3.47%	-4.33%
PNW	2011	3,241.40	9,962.30	32.54%	4.00%	-4.50%
PNW	2012	3,301.80	10,396.00	31.76%	4.35%	-2.39%
PNW	2013	3,454.60	10,889.00	31.73%	4.74%	-0.11%
PNW	2014	3,491.60	11,194.00	31.19%	2.80%	-1.68%
PNW	2015	3,500.00	11,750.00	29.79%	4.97%	-4.50%
PNW	2018-2020	4,300.00	14,175.00	30.34%	26.63%	-2.75%
PNM	2002	\$ 1,169.00	\$ 1,867.30	62.60%		
PNM	2003	1,455.70	2,194.40	66.34%	17.52%	5.96%
PNM	2004	1,604.80	2,324.60	69.04%	5.93%	4.07%
PNM	2005	2,076.80	2,984.10	69.60%	28.37%	0.81%
PNM	2006	2,471.70	3,761.90	65.70%	26.06%	-5.59%
PNM	2007	1,914.00	2,935.40	65.20%	-21.97%	-0.76%
PNM	2008	1,959.50	3,192.00	61.39%	8.74%	-5.85%
PNM	2009	1,647.70	3,332.40	49.44%	4.40%	-19.45%
PNM	2010	1,673.50	3,444.40	48.59%	3.36%	-1.74%
PNM	2011	1,700.60	3,627.10	46.89%	5.30%	-3.50%
PNM	2012	1,342.40	3,746.50	35.83%	3.29%	-23.58%
PNM	2013	1,387.90	3,933.90	35.28%	5.00%	-1.54%
PNM	2014	1,435.90	4,270.00	33.63%	8.54%	-4.68%
PNM	2015	1,460.00	4,335.00	33.68%	1.52%	0.15%
PNM	2018-2020	1,625.00	5,270.00	30.83%	23.42%	-8.30%
POR	2002	NA	NA			
POR	2003	NA	NA			
POR	2004	1,454.00	2,275.00	63.91%		
POR	2005	1,446.00	2,436.00	59.36%	7.08%	-7.12%
POR	2006	1,520.00	2,718.00	55.92%	11.58%	-5.79%
POR	2007	1,743.00	3,066.00	56.85%	12.80%	1.66%
POR	2008	1,745.00	3,301.00	52.86%	7.66%	-7.01%
POR	2009	1,804.00	3,858.00	46.76%	16.87%	-11.54%
POR	2010	1,783.00	4,133.00	43.14%	7.13%	-7.74%
POR	2011	1,813.00	4,285.00	42.31%	3.68%	-1.92%
POR	2012	1,805.00	4,392.00	41.10%	2.50%	-2.87%
POR	2013	1,810.00	4,880.00	37.09%	11.11%	-9.75%
POR	2014	1,900.00	5,679.00	33.46%	16.37%	-9.80%
POR	2015	1,875.00	6,000.00	31.25%	5.65%	-6.60%
POR	2018-2020	2,175.00	6,000.00	36.25%	5.65%	8.35%
SCG	2002	\$ 2,954.00	\$ 5,474.00	53.96%		
SCG	2003	3,416.00	6,417.00	53.23%	17.23%	-1.35%
SCG	2004	3,885.00	6,762.00	57.45%	5.38%	7.93%
SCG	2005	4,777.00	6,734.00	70.94%	-0.41%	23.47%
SCG	2006	4,563.00	7,007.00	65.12%	4.05%	-8.20%
SCG	2007	4,621.00	7,538.00	61.30%	7.58%	-5.86%
SCG	2008	5,319.00	8,305.00	64.05%	10.18%	4.47%
SCG	2009	4,237.00	9,009.00	47.03%	8.48%	-26.57%
SCG	2010	4,601.00	9,662.00	47.62%	7.25%	1.25%
SCG	2011	4,409.00	10,047.00	43.88%	3.98%	-7.85%
SCG	2012	4,176.00	10,896.00	38.33%	8.45%	-12.66%
SCG	2013	4,495.00	11,643.00	38.61%	6.86%	0.73%
SCG	2014	4,951.00	12,232.00	40.48%	5.06%	4.84%
SCG	2015	4,550.00	12,975.00	35.07%	6.07%	-13.36%
SCG	2018-2020	5,500.00	17,325.00	31.75%	33.53%	-9.47%

Change in Net Plant and Asset Turnover
Proxy Group - Individual Company Results

Ticker	Year	Revenue	Net Plant	Revenue/Net Plant	Change in Net Plant	Change in Revenue/Net Plant
WR	2002	\$ 1,771.10	\$ 3,995.40	44.33%		
WR	2003	1,461.10	3,909.50	37.37%	-2.15%	-15.69%
WR	2004	1,464.50	3,911.00	37.45%	0.04%	0.19%
WR	2005	1,583.30	3,947.70	40.11%	0.94%	7.11%
WR	2006	1,605.70	4,071.60	39.44%	3.14%	-1.67%
WR	2007	1,726.80	4,803.70	35.95%	17.98%	-8.85%
WR	2008	1,839.00	5,533.50	33.23%	15.19%	-7.55%
WR	2009	1,858.20	5,771.70	32.20%	4.30%	-3.13%
WR	2010	2,056.20	6,309.50	32.59%	9.32%	1.22%
WR	2011	2,171.00	6,745.40	32.18%	6.91%	-1.24%
WR	2012	2,261.50	7,335.70	30.83%	8.75%	-4.21%
WR	2013	2,370.70	7,848.50	30.21%	6.99%	-2.02%
WR	2014	2,601.70	8,441.50	30.82%	7.56%	2.03%
WR	2015	2,580.00	8,500.00	30.35%	0.69%	-1.52%
WR	2018-2020	2,900.00	9,000.00	32.22%	5.88%	6.16%
XEL	2002	\$ 9,524.40	\$ 18,816.00	50.62%		
XEL	2003	7,937.50	13,667.00	58.08%	-27.37%	14.74%
XEL	2004	8,345.30	14,096.00	59.20%	3.14%	1.94%
XEL	2005	9,625.50	14,696.00	65.50%	4.26%	10.63%
XEL	2006	9,840.30	15,549.00	63.29%	5.80%	-3.38%
XEL	2007	10,034.00	16,676.00	60.17%	7.25%	-4.92%
XEL	2008	11,203.00	17,689.00	63.33%	6.07%	5.26%
XEL	2009	9,644.30	18,508.00	52.11%	4.63%	-17.72%
XEL	2010	10,311.00	20,663.00	49.90%	11.64%	-4.24%
XEL	2011	10,655.00	22,353.00	47.67%	8.18%	-4.48%
XEL	2012	10,128.00	23,809.00	42.54%	6.51%	-10.76%
XEL	2013	10,915.00	26,122.00	41.78%	9.71%	-1.77%
XEL	2014	11,686.00	28,757.00	40.64%	10.09%	-2.75%
XEL	2015	10,900.00	30,850.00	35.33%	7.28%	-13.05%
XEL	2018-2020	12,500.00	36,100.00	34.63%	25.53%	-14.79%

Source: Value Line

Change in Net Plant and Asset Turnover
Regression Analysis

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.412591333
R Square	0.170231608
Adjusted R Square	0.166830918
Standard Error	0.101639827
Observations	246

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.517131478	0.517131478	50.0579593	1.57326E-11
Residual	244	2.520679677	0.010330654		
Total	245	3.037811155			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.004718315	0.008785898	0.53703268	0.591734403	-0.012587568	0.022024197
Change in Net Plant	-0.518657798	0.073306813	-7.075164967	1.57326E-11	-0.66305272	-0.374262876

KCP&L GREATER MISSOURI OPERATIONS
 Capitalization
 July 31, 2016 Projected

(\$ in 000's)

KCP&L Greater Missouri Operations

CAPITAL COMPONENT	AMOUNT	PERCENT	REQUIRED RETURN	WEIGHTED RETURN
GMO Long-term Debt (Note 1)	\$1,081,364	45.17%	5.0886%	2.2986%
GMO Common Equity	1,312,557	54.83%	9.9000%	5.4280%
Total Capitalization	<u>\$2,393,921</u>	<u>100.00%</u>		<u>7.7266%</u>

Note 1: Includes amounts classified as current liabilities

KCP&L GREATER MISSOURI OPERATIONS
Capitalization
September 30, 2015 Actual

(\$ in 000's)

CAPITAL COMPONENT	AMOUNT	PERCENT
Long-Term Debt (Note 1)	<u>\$1,082,489</u>	<u>43.73%</u>
Common Equity	<u>1,392,999</u>	<u>56.27%</u>
	<u>\$2,475,488</u>	<u>100.00%</u>

Note 1: Includes amounts classified as current liabilities

KCP&L Greater Missouri Operations
Weighted Average Cost of Long-Term Debt Capital
July 31, 2016 Projected

Line	Issue	(a) Initial Offering	(b) Date of Offering	(c) Date of Maturity	(d) Price to Public	(e) Original Discount (Premium)	(f) Underwriting & Issuance Expense	(g) Net Proceeds to Company	(h) Cost to Company	(i) Long-term Debt Capital Outstanding	(j) Annual Cost of Long-term Debt Capital
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	\$21,835,347	9.745%	\$5,625,000	\$548,183
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
3	Medium Term Notes Due 2023 - 7.33% Coupon	\$3,000,000	11/30/93	11/30/23	\$3,000,000		\$163,606	\$2,836,394	7.803%	\$3,000,000	\$234,095
4	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
5	Senior Notes Series A Due 2025 - 3.49% Coupon	\$125,000,000	8/16/13	8/15/25	\$125,000,000		\$782,720	\$124,217,280	3.555%	\$125,000,000	\$4,443,193
6	Senior Notes Series B Due 2033 - 4.06% Coupon	\$75,000,000	8/16/13	8/15/33	\$75,000,000		\$467,003	\$74,532,997	4.106%	\$75,000,000	\$3,079,461
7	Senior Notes Series C Due 2043 - 4.74% Coupon	\$150,000,000	8/16/13	8/15/43	\$150,000,000		\$938,387	\$149,061,613	4.779%	\$150,000,000	\$7,169,204
Other Long-Term Debt											
8	Intercompany Debt - GPE Senior Notes due 2021	\$347,389,000	5/16/11	6/1/21	\$347,389,000			\$347,389,000	4.970%	\$347,389,000	\$17,265,233
9	Intercompany Debt - GPE Senior Notes due 2022	\$287,500,000	6/15/12	6/15/22	\$287,500,000			\$287,500,000	5.150%	\$287,500,000	\$14,806,250
10	Unamortized Discount on Senior Notes										
11	Unamortized Debt Expense										
12	Loss/(Gain) on Reacquired Debt										\$ 36,121
13	Weighted Cost of Interest Rate Management Products										
14	Total GMO Long-Term Debt Capital				July 31, 2016 Projected					\$1,081,364,000	\$55,026,431
15	GMO Weighted Avg. Cost of Long-Term Debt Capital				July 31, 2016 Projected			5.089%			

Cost of Long-Term Debt Comparison

Issue	Initial Offering	Date of Offering	Date of Maturity	Years to Maturity	Coupon	Bloomberg Fair Value Curve		
						BFV Term	A-Rated	BBB-Rated
Pledged General Mortgage Bonds								
SJLP First Mortgage Bonds - 9.44%	\$22,500,000	2/1/1991	2/1/2021	30	9.44%	30	NA	NA
Unsecured Notes								
Senior Notes Due 2021 - 8.27% Coupon	\$131,750,000	3/31/1999	11/15/2021	23	8.27%	25	6.71%	7.04%
Medium Term Notes Due 2023 - 7.33% Coupon	\$3,000,000	11/30/1993	11/30/2023	30	7.33%	30	6.74%	7.10%
Medium Term Notes Due 2023 - 7.17% Coupon	\$7,000,000	12/6/1993	12/1/2023	30	7.17%	30	6.80%	7.16%
Senior Notes Series A Due 2025 - 3.49% Coupon	\$125,000,000	8/16/2013	8/15/2025	12	3.49%	15	4.32%	4.80%
Senior Notes Series B Due 2033 - 4.06% Coupon	\$75,000,000	8/16/2013	8/15/2033	20	4.06%	20	4.67%	5.25%
Senior Notes Series C Due 2043 - 4.74% Coupon	\$150,000,000	8/16/2013	8/15/2043	30	4.74%	30	4.55%	5.01%
Other Long-Term Debt								
Intercompany Debt - GPE Senior Notes due 2021	\$347,389,000	5/16/2011	6/1/2021	10	4.97%	10	4.52%	4.71%
Intercompany Debt - GPE Senior Notes due 2022	\$287,500,000	3/19/2012	6/15/2022	10	5.15%	10	3.20%	3.92%
Unamortized Discount on Senior Notes								
Unamortized Debt Expense								
Loss/(Gain) on Reacquired Debt								
Weighted Cost of Interest Rate Management Products								

Issue	Offerings	Coupon	Bloomberg Fair Value Curve	
			A-Rated	BBB-Rated
TOTAL	\$1,149,139,000	Weighted Average: 5.07%	4.36%	4.79%

Sources: Schedule RBH-10 and Bloomberg Professional

Proxy Group Capital Structure

Company	Ticker	% Common Equity								Average
		2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	2014Q1	2013Q4	
ALLETE, Inc.	ALE	58.01%	58.93%	58.70%	56.98%	56.18%	55.83%	56.79%	56.37%	57.22%
Alliant Energy Corporation	LNT	51.27%	51.18%	50.32%	50.11%	54.23%	52.94%	52.81%	52.36%	51.90%
Ameren Corporation	AEE	53.40%	52.44%	52.88%	52.82%	54.54%	53.83%	56.09%	54.78%	53.85%
American Electric Power Company, Inc.	AEP	49.13%	49.63%	52.23%	52.11%	52.27%	52.31%	52.34%	52.36%	51.55%
Avista Corporation	AVA	54.95%	54.98%	54.81%	51.39%	52.62%	51.19%	49.76%	49.15%	52.36%
CMS Energy Corporation	CMS	51.44%	51.15%	51.35%	50.21%	49.99%	53.44%	52.63%	51.35%	51.44%
Dominion Resources, Inc.	D	52.22%	51.68%	53.24%	52.94%	53.47%	53.18%	53.17%	54.95%	53.11%
DTE Energy Company	DTE	50.32%	49.81%	48.42%	50.39%	49.32%	50.30%	50.54%	50.25%	49.92%
IDACORP, Inc.	IDA	52.25%	51.61%	49.38%	52.94%	52.92%	52.03%	51.72%	51.61%	51.81%
NorthWestern Corporation	NWE	46.01%	46.97%	47.54%	47.06%	47.78%	47.45%	48.19%	47.15%	47.27%
OGE Energy Corp.	OGE	54.38%	53.31%	52.98%	53.08%	55.43%	52.94%	52.53%	55.16%	53.73%
Otter Tail Corporation	OTTR	52.51%	52.32%	51.13%	49.80%	49.32%	47.60%	47.20%	53.72%	50.45%
Pinnacle West Capital Corporation	PNW	57.11%	55.72%	55.86%	57.54%	58.43%	57.32%	55.67%	57.39%	56.88%
PNM Resources, Inc.	PNM	44.76%	45.63%	46.11%	45.86%	47.43%	47.14%	46.70%	48.39%	46.50%
Portland General Electric Company	POR	50.31%	49.57%	44.11%	43.31%	44.86%	46.64%	49.21%	48.70%	47.09%
SCANA Corporation	SCG	52.55%	52.08%	53.72%	53.46%	53.47%	52.85%	54.36%	53.90%	53.30%
Westar Energy, Inc.	WR	68.96%	67.60%	66.54%	65.73%	65.95%	66.62%	63.45%	63.22%	66.01%
Xcel Energy Inc.	XEL	53.02%	53.88%	54.97%	54.62%	54.54%	53.41%	54.88%	54.92%	54.28%
Mean		52.92%	52.69%	52.46%	52.24%	52.93%	52.61%	52.67%	53.10%	52.70%

Operating Company Capital Structure

Operating Company	Parent	% Common Equity								Average
		2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	2014Q1	2013Q4	
ALLETE (Minnesota Power)	ALE	55.62%	57.67%	57.56%	55.24%	53.98%	53.01%	55.16%	55.93%	55.52%
Superior Water, Light and Power Company	ALE	60.40%	60.19%	59.83%	58.72%	58.39%	58.65%	58.42%	56.81%	58.93%
Interstate Power and Light Company	LNT	50.90%	51.72%	50.09%	49.90%	54.01%	52.05%	51.88%	51.35%	51.49%
Wisconsin Power and Light Company	LNT	51.63%	50.65%	50.54%	50.32%	54.45%	53.82%	53.74%	53.37%	52.32%
Ameren Illinois Company	AEE	55.55%	54.67%	54.39%	53.90%	56.91%	56.19%	59.29%	56.48%	55.92%
Union Electric Company	AEE	51.25%	50.21%	51.37%	51.74%	52.17%	51.48%	52.89%	53.08%	51.77%
AEP Texas Central Company	AEP	43.32%	47.46%	45.01%	42.39%	43.93%	43.18%	47.56%	46.75%	44.95%
AEP Texas North Company	AEP	45.03%	48.87%	47.15%	46.96%	47.06%	46.79%	46.82%	46.68%	46.92%
Appalachian Power Company	AEP	46.66%	46.50%	46.52%	45.83%	46.29%	46.00%	44.13%	43.52%	45.68%
Indiana Michigan Power Company	AEP	52.41%	52.08%	51.94%	51.36%	51.45%	51.39%	51.63%	50.80%	51.63%
Kentucky Power Company	AEP	43.72%	43.87%	44.19%	44.74%	46.25%	48.23%	50.30%	52.83%	46.77%
Kingsport Power Company	AEP	59.76%	60.44%	60.77%	61.00%	60.55%	60.91%	58.88%	60.85%	60.39%
Ohio Power Company	AEP	50.36%	50.33%	49.30%	48.96%	46.03%	44.79%	42.54%	39.71%	46.50%
Public Service Company of Oklahoma	AEP	46.30%	45.29%	44.66%	49.69%	49.43%	48.30%	47.51%	48.51%	47.46%
Southwestern Electric Power Company	AEP	49.88%	47.62%	46.25%	50.46%	50.60%	51.26%	51.18%	51.21%	49.81%
Wheeling Power Company	AEP	53.89%	53.82%	86.56%	79.75%	81.14%	82.27%	82.89%	82.79%	75.39%
Alaska Electric Light and Power Company	AVA	58.09%	58.07%	57.83%	NA	NA	NA	NA	NA	NA
Avista Corporation	AVA	51.80%	51.90%	51.78%	51.39%	52.62%	51.19%	49.76%	49.15%	51.20%
Consumers Energy Company	CMS	51.44%	51.15%	51.35%	50.21%	49.99%	53.44%	52.63%	51.35%	51.44%
Virginia Electric and Power Company	D	52.22%	51.68%	53.24%	52.94%	53.47%	53.18%	53.17%	54.95%	53.11%
DTE Electric Company	DTE	50.32%	49.81%	48.42%	50.39%	49.32%	50.30%	50.54%	50.25%	49.92%
Idaho Power Co.	IDA	52.25%	51.61%	49.38%	52.94%	52.92%	52.03%	51.72%	51.61%	51.81%
NorthWestern Corporation	NWE	46.01%	46.97%	47.54%	47.06%	47.78%	47.45%	48.19%	47.15%	47.27%
Oklahoma Gas and Electric Company	OGE	54.38%	53.31%	52.98%	53.08%	55.43%	52.94%	52.53%	55.16%	53.73%
Otter Tail Power Company	OTTR	52.51%	52.32%	51.13%	49.80%	49.32%	47.60%	47.20%	53.72%	50.45%
Arizona Public Service Company	PNW	57.11%	55.72%	55.86%	57.54%	58.43%	57.32%	55.67%	57.39%	56.88%
Public Service Company of New Mexico	PNM	44.76%	45.63%	46.11%	45.86%	47.43%	47.14%	46.70%	48.39%	46.50%
Texas-New Mexico Power Company	PNM	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portland General Electric Company	POR	50.31%	49.57%	44.11%	43.31%	44.86%	46.64%	49.21%	48.70%	47.09%
South Carolina Electric & Gas Co.	SCG	52.55%	52.08%	53.72%	53.46%	53.47%	52.85%	54.36%	53.90%	53.30%
Kansas Gas and Electric Company	WR	72.91%	72.43%	72.15%	71.99%	72.65%	77.67%	69.73%	69.54%	72.38%
Westar Energy (KPL)	WR	65.01%	62.76%	60.94%	59.48%	59.26%	55.58%	57.17%	56.90%	59.64%
Northern States Power Company - MN	XEL	51.95%	53.34%	53.03%	52.89%	52.84%	52.49%	54.32%	53.54%	53.05%
Northern States Power Company - WI	XEL	52.92%	52.53%	56.36%	55.18%	55.01%	52.92%	57.06%	56.42%	54.80%
Public Service Company of Colorado	XEL	56.00%	55.55%	56.94%	56.79%	56.51%	56.12%	54.21%	56.53%	56.08%
Southwestern Public Service Company	XEL	51.20%	54.08%	53.54%	53.62%	53.81%	52.10%	53.92%	53.20%	53.18%
Mean		52.58%	52.63%	53.22%	52.91%	53.46%	53.15%	53.32%	53.49%	53.04%

Source: SNL Financial

Proxy Group Capital Structure

Company	Ticker	% Long-Term Debt								Average
		2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	2014Q1	2013Q4	
ALLETE, Inc.	ALE	41.99%	41.07%	41.30%	43.02%	43.82%	44.17%	43.21%	43.63%	42.78%
Alliant Energy Corporation	LNT	48.73%	48.82%	49.68%	49.89%	45.77%	47.06%	47.19%	47.64%	48.10%
Ameren Corporation	AEE	46.60%	47.56%	47.12%	47.18%	45.46%	46.17%	43.91%	45.22%	46.15%
American Electric Power Company, Inc.	AEP	50.87%	50.37%	47.77%	47.89%	47.73%	47.69%	47.66%	47.64%	48.45%
Avista Corporation	AVA	45.05%	45.02%	45.19%	48.61%	47.38%	48.81%	50.24%	50.85%	47.64%
CMS Energy Corporation	CMS	48.56%	48.85%	48.65%	49.79%	50.01%	46.56%	47.37%	48.65%	48.56%
Dominion Resources, Inc.	D	47.78%	48.32%	46.76%	47.06%	46.53%	46.82%	46.83%	45.05%	46.89%
DTE Energy Company	DTE	49.68%	50.19%	51.58%	49.61%	50.68%	49.70%	49.46%	49.75%	50.08%
IDACORP, Inc.	IDA	47.75%	48.39%	50.62%	47.06%	47.08%	47.97%	48.28%	48.39%	48.19%
NorthWestern Corporation	NWE	53.99%	53.03%	52.46%	52.94%	52.22%	52.55%	51.81%	52.85%	52.73%
OGE Energy Corp.	OGE	45.62%	46.69%	47.02%	46.92%	44.57%	47.06%	47.47%	44.84%	46.27%
Otter Tail Corporation	OTTR	47.49%	47.68%	48.87%	50.20%	50.68%	52.40%	52.80%	46.28%	49.55%
Pinnacle West Capital Corporation	PNW	42.89%	44.28%	44.14%	42.46%	41.57%	42.68%	44.33%	42.61%	43.12%
PNM Resources, Inc.	PNM	55.24%	54.37%	53.89%	54.14%	52.57%	52.86%	53.30%	51.61%	53.50%
Portland General Electric Company	POR	49.69%	50.43%	55.89%	56.69%	55.14%	53.36%	50.79%	51.30%	52.91%
SCANA Corporation	SCG	47.45%	47.92%	46.28%	46.54%	46.53%	47.15%	45.64%	46.10%	46.70%
Westar Energy, Inc.	WR	31.04%	32.40%	33.46%	34.27%	34.05%	33.38%	36.55%	36.78%	33.99%
Xcel Energy Inc.	XEL	46.98%	46.12%	45.03%	45.38%	45.46%	46.59%	45.12%	45.08%	45.72%
Mean		47.08%	47.31%	47.54%	47.76%	47.07%	47.39%	47.33%	46.90%	47.30%

Operating Company Capital Structure

Operating Company	Parent	% Long-Term Debt								Average
		2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	2014Q1	2013Q4	
ALLETE (Minnesota Power)	ALE	44.38%	42.33%	42.44%	44.76%	46.02%	46.99%	44.84%	44.07%	44.48%
Superior Water, Light and Power Company	ALE	39.60%	39.81%	40.17%	41.28%	41.61%	41.35%	41.58%	43.19%	41.07%
Interstate Power and Light Company	LNT	49.10%	48.28%	49.91%	50.10%	45.99%	47.95%	48.12%	48.65%	48.51%
Wisconsin Power and Light Company	LNT	48.37%	49.35%	49.46%	49.68%	45.55%	46.18%	46.26%	46.63%	47.68%
Ameren Illinois Company	AEE	44.45%	45.33%	45.61%	46.10%	43.09%	43.81%	40.71%	43.52%	44.08%
Union Electric Company	AEE	48.75%	49.79%	48.63%	48.26%	47.83%	48.52%	47.11%	46.92%	48.23%
AEP Texas Central Company	AEP	56.68%	52.54%	54.99%	57.61%	56.07%	56.82%	52.44%	53.25%	55.05%
AEP Texas North Company	AEP	54.97%	51.13%	52.85%	53.04%	52.94%	53.21%	53.18%	53.32%	53.08%
Appalachian Power Company	AEP	53.34%	53.50%	53.48%	54.17%	53.71%	54.00%	55.87%	56.48%	54.32%
Indiana Michigan Power Company	AEP	47.59%	47.92%	48.06%	48.64%	48.55%	48.61%	48.37%	49.20%	48.37%
Kentucky Power Company	AEP	56.28%	56.13%	55.81%	55.26%	53.75%	51.77%	49.70%	47.17%	53.23%
Kingsport Power Company	AEP	40.24%	39.56%	39.23%	39.00%	39.45%	39.09%	41.12%	39.15%	39.61%
Ohio Power Company	AEP	49.64%	49.67%	50.70%	51.04%	53.97%	55.21%	57.46%	60.29%	53.50%
Public Service Company of Oklahoma	AEP	53.70%	54.71%	55.34%	50.31%	50.57%	51.70%	52.49%	51.49%	52.54%
Southwestern Electric Power Company	AEP	50.12%	52.38%	53.75%	49.54%	49.40%	48.74%	48.82%	48.79%	50.19%
Wheeling Power Company	AEP	46.11%	46.18%	13.44%	20.25%	18.86%	17.73%	17.11%	17.21%	24.61%
Alaska Electric Light and Power Company	AVA	41.91%	41.93%	42.17%	NA	NA	NA	NA	NA	NA
Avista Corporation	AVA	48.20%	48.10%	48.22%	48.61%	47.38%	48.81%	50.24%	50.85%	48.80%
Consumers Energy Company	CMS	48.56%	48.85%	48.65%	49.79%	50.01%	46.56%	47.37%	48.65%	48.56%
Virginia Electric and Power Company	D	47.78%	48.32%	46.76%	47.06%	46.53%	46.82%	46.83%	45.05%	46.89%
DTE Electric Company	DTE	49.68%	50.19%	51.58%	49.61%	50.68%	49.70%	49.46%	49.75%	50.08%
Idaho Power Co.	IDA	47.75%	48.39%	50.62%	47.06%	47.08%	47.97%	48.28%	48.39%	48.19%
NorthWestern Corporation	NWE	53.99%	53.03%	52.46%	52.94%	52.22%	52.55%	51.81%	52.85%	52.73%
Oklahoma Gas and Electric Company	OGE	45.62%	46.69%	47.02%	46.92%	44.57%	47.06%	47.47%	44.84%	46.27%
Otter Tail Power Company	OTTR	47.49%	47.68%	48.87%	50.20%	50.68%	52.40%	52.80%	46.28%	49.55%
Arizona Public Service Company	PNW	42.89%	44.28%	44.14%	42.46%	41.57%	42.68%	44.33%	42.61%	43.12%
Public Service Company of New Mexico	PNM	55.24%	54.37%	53.89%	54.14%	52.57%	52.86%	53.30%	51.61%	53.50%
Texas-New Mexico Power Company	PNM	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portland General Electric Company	POR	49.69%	50.43%	55.89%	56.69%	55.14%	53.36%	50.79%	51.30%	52.91%
South Carolina Electric & Gas Co.	SCG	47.45%	47.92%	46.28%	46.54%	47.15%	47.15%	45.64%	46.10%	46.70%
Kansas Gas and Electric Company	WR	27.09%	27.57%	27.85%	28.01%	27.35%	22.33%	30.27%	30.46%	27.62%
Westar Energy (KPL)	WR	34.99%	37.24%	39.06%	40.52%	40.74%	44.42%	42.83%	43.10%	40.36%
Northern States Power Company - MN	XEL	48.05%	46.66%	46.97%	47.11%	47.16%	47.51%	45.68%	46.46%	46.95%
Northern States Power Company - WI	XEL	47.08%	47.47%	43.64%	44.82%	44.99%	47.08%	42.94%	43.58%	45.20%
Public Service Company of Colorado	XEL	44.00%	44.45%	43.06%	43.21%	43.49%	43.88%	45.79%	43.47%	43.92%
Southwestern Public Service Company	XEL	48.80%	45.92%	46.46%	46.38%	46.19%	47.90%	46.08%	46.80%	46.82%
Mean		47.42%	47.37%	46.78%	47.09%	46.54%	46.85%	46.68%	46.51%	46.96%