

Exhibit No.:
Issue: Return on Equity
Witness: Robert B. Hevert
Type of Exhibit: Direct Testimony
Sponsoring Party: Union Electric Company
File No.: ER-2016-0179
Date Testimony Prepared: July 1, 2016

MISSOURI PUBLIC SERVICE COMMISSION

FILE NO: ER-2016-0179

DIRECT TESTIMONY

OF

ROBERT B. HEVERT

ON BEHALF OF

**UNION ELECTRIC COMPANY
d/b/a Ameren Missouri**

**Westborough, Massachusetts
July 1, 2016**

TABLE OF CONTENTS

I.	INTRODUCTION AND SUMMARY OF RECOMMENDATIONS	1
II.	PURPOSE AND OVERVIEW OF TESTIMONY.....	2
III.	SUMMARY OF ISSUES SURROUNDING COST OF EQUITY ESTIMATION IN REGULATORY PROCEEDINGS.....	5
IV.	PROXY GROUP SELECTION.....	11
V.	COST OF EQUITY ESTIMATION.....	13
VI.	BUSINESS RISKS AND OTHER CONSIDERATIONS.....	21
	A. <i>Regulatory Environment</i>	21
	B. <i>Generation Portfolio</i>	25
	C. <i>Declining Customer Usage and Operating Income Dilution</i>	27
VII.	CAPITAL MARKET ENVIRONMENT	35
VIII.	CONCLUSIONS AND RECOMMENDATION	40
	APPENDIX A.....	41
	A. <i>Proxy Group Selection</i>	41
	APPENDIX B	43
	A. <i>Constant Growth Discounted Cash Flow Model</i>	43
	B. <i>Multi-Stage DCF Model</i>	49
	C. <i>Capital Asset Pricing Model</i>	57
	D. <i>Bond Yield Plus Risk Premium Approach</i>	62

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.
Bond Yield Plus Risk Premium Approach	A risk premium model used to estimate the Cost of Equity. The Bond Yield Plus Risk Premium approach assumes that investors required a risk premium over the cost of debt as compensation for assuming the greater risk of common equity investment. The model is expressed as a bond yield plus equity risk premium.
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 annualized dividend divided by its 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 net exports (that is, exports minus 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.

TERM	DESCRIPTION
Multi-Stage DCF Model	A form of the DCF model that allows for changes in certain underlying assumptions over time.
Proxy Group	A group of publicly traded companies used as the “proxy” for the subject company (in this case, Ameren Missouri). Proxy companies are sometimes referred to as “Comparable Companies.”
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. Please note that the ROE in this context is distinct from the accounting measure sometimes referred to as the “Return on Average Common Equity”.
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 increases 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

File No. ER-2016-0179

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 ScottMadden, Inc.,
4 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
7 Public Service Commission (“Commission”) on behalf of Union Electric Company d/b/a
8 Ameren Missouri (“Ameren Missouri” 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
11 Delaware, 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
15 an executive and manager with consulting firms, a financial officer of a publicly-traded natural
16 gas utility (at the time, Bay State Gas Company), and an analyst at a telecommunications utility.
17 In my role as a consultant, I have advised numerous energy and utility clients on a wide range of
18 financial and economic issues, including corporate and asset-based transactions, asset and

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

6 **II. PURPOSE AND OVERVIEW OF TESTIMONY**

7 **Q. What is the purpose of your Direct Testimony?**

8 A. My Direct Testimony presents evidence and provides a recommendation
9 regarding the Company's ROE.¹ My analyses and conclusions are supported by the data
10 presented in Schedules RBH-1 through RBH-8, which have been prepared by me or under my
11 direction.

12 **Q. What are your conclusions regarding the appropriate Cost of Equity for the** 13 **Company?**

14 A. My analyses indicate that an ROE in the range of 9.75 percent to 10.50 percent
15 represents the range of equity investors' required return for investment in an electric utility such
16 as Ameren Missouri in today's capital markets. Based on the quantitative and qualitative
17 analyses discussed throughout my Direct Testimony, and taking into consideration the
18 Commission's decisions in prior proceedings, I propose an ROE of 9.90 percent.

19 Given the risks facing the utility sector in general, including the specific business risks to
20 which the Company is exposed, I believe my proposed range (9.75 percent to 10.50 percent) and
21 my specific proposal (9.90 percent) are reasonable, although conservative estimates of the

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

1 Company's Cost of Equity. In my view, the factors that weigh in estimating the Cost of Equity
2 likely indicate a higher range, and an ROE at the mid- to upper end of that higher range. The
3 Company has asked, however, that I give considerable weight to recent Commission Orders,²
4 including the types of data and analyses discussed in those Orders in developing my proposed
5 range and recommendation. Having done so, my proposed range and ROE estimate are lower
6 than otherwise would be the case.

7 Lastly, I note that the Cost of Equity, which is the return required by equity investors to
8 assume the risks of ownership, is a market-based concept. As opposed to the earned Return on
9 Common Equity, which is a directly observable accounting measure, the Cost of Equity is
10 unobservable and must be estimated based on carefully discerned market data. As a
11 consequence, there may be differences of opinion among analysts as to the data, assumptions and
12 models used in estimating the Cost of Equity. Because my recommendations reflect recent
13 Commission findings, it is my hope that any such differences will be minimized.

14 **Q. Have you considered your proposed ROE in the context of returns recently**
15 **authorized for vertically integrated electric utilities in other jurisdictions?**

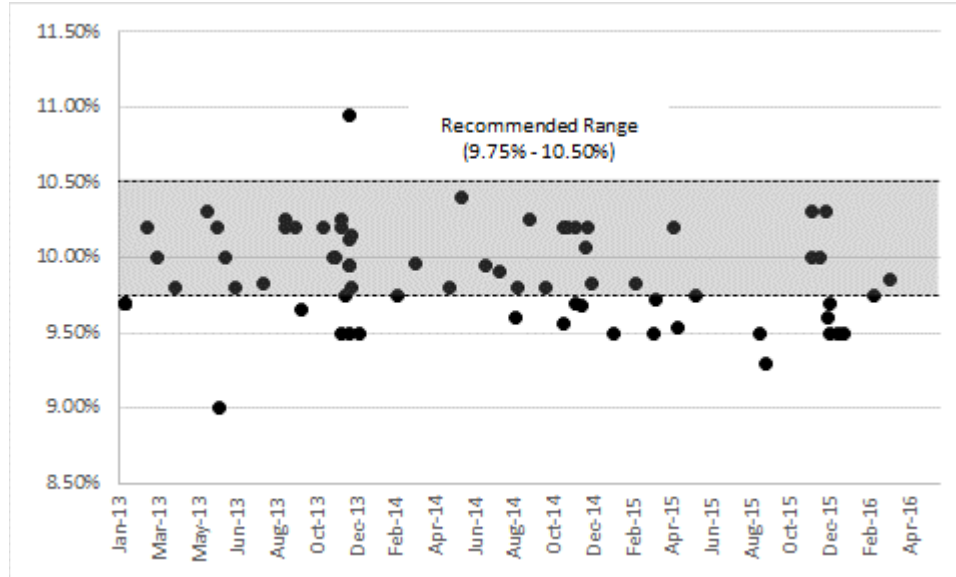
16 A. Yes, I have. As the Commission noted in prior Orders, it is appropriate to look to
17 authorized ROEs in other jurisdictions to evaluate the reasonableness of ROE proposals.³ As
18 shown in Chart 1, below, my proposed range is consistent with returns recently authorized for
19 vertically integrated electric utilities.

² See, for example, *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).

³ *Ibid.*, at p. 19.

1

Chart 1: Authorized Returns⁴



2

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

5 A. Because all financial models are subject to various assumptions and constraints,
6 equity analysts and investors tend to use multiple methods to develop their return requirements.
7 I therefore relied on three widely-accepted approaches to develop my ROE recommendation:
8 (1) the Discounted Cash Flow (“DCF”) model, including the Constant Growth, and Multi-Stage
9 forms; (2) the Capital Asset Pricing Model (“CAPM”); and (3) the Bond Yield Plus Risk
10 Premium approach. As discussed in Sections V, VI, and VII, I considered the results of those
11 methods in the context of both Company-specific, and general capital market factors. Based on
12 those analyses, I concluded that a range of 9.75 percent to 10.50 percent represents reasonable
13 estimates of the Company’s Cost of Equity.

⁴ Source: SNL Financial.

1 provided to debt or equity investors, has a cost. Individually, we speak of the “Cost of Debt” and
2 the “Cost of Equity;” together, they are referred to as the “Cost of Capital.”

3 The Cost of Capital (including the costs of both debt and equity) is based on the
4 economic principle of “opportunity costs.” Investing in any asset, whether debt or equity
5 securities, implies a forgone opportunity to invest in alternative assets. For any investment to be
6 sensible, its expected return must be at least equal to the return expected on alternative,
7 comparable investment opportunities. If it is not, investors will sell the “over-valued” security,
8 and buy the “under-valued” security until the expected returns on the two are aligned.

9 Although both debt and equity have required costs, they differ in certain fundamental
10 ways. Most noticeably, the Cost of Debt is contractually defined and can be directly observed as
11 the interest rate or yield on debt securities.⁵ The Cost of Equity, on the other hand, is neither
12 directly observable nor a contractual obligation. Rather, equity investors have a claim on cash
13 flows only after debt holders are paid; the uncertainty (or risk) associated with those residual
14 cash flows determines the Cost of Equity. Because equity investors bear that additional “residual
15 risk,” they require higher returns than debt holders. In that basic sense, equity and debt investors
16 differ: they invest in different securities, face different risks, and require different returns.

17 Whereas the Cost of Debt can be directly observed, the Cost of Equity must be estimated
18 or inferred based on market data and various financial models. As discussed throughout my
19 Direct Testimony, each of those models is subject to its own set of assumptions, which may be
20 more or less applicable under differing market conditions. In addition, because the Cost of
21 Equity is premised on opportunity costs, the models typically are applied to a group of
22 “comparable” or “proxy” companies. The choice of models (including their inputs), the

⁵ The observed interest rate may be adjusted to reflect issuance or other directly observable costs.

1 selection of proxy companies, and the interpretation of the model results all require the
2 application of reasoned judgment. That judgment should consider data and information, both
3 quantitative and qualitative, that is not necessarily included in the models themselves.

4 In the end, the estimated Cost of Equity should reflect the return that investors require in
5 light of the subject company's risks, and the returns available on comparable investments. A
6 given utility stock may require a higher return based on the risks to which it is exposed relative
7 to other utilities. That is, utilities may be viewed as a "sector," however, that does not mean that
8 all utilities require the same return. The assessment of relative risk and its effect on the Cost of
9 Equity requires the application of reasoned, experienced judgment applied to a variety of data,
10 much of which is qualitative in nature.

11 **Q. Please now provide a brief summary of the regulatory guidelines established**
12 **for the purpose of determining the ROE.**

13 A. The United States Supreme Court (the "Court") established the guiding principles
14 for establishing a fair return for capital in two cases: (1) *Bluefield Water Works and Improvement*
15 *Co. v. Public Service Comm'n of West Virginia*, 262 U.S. 679 (1923) ("*Bluefield*"); and
16 (2) *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*"). In those
17 cases, the Court recognized that the fair rate of return on equity should be: (1) comparable to
18 returns investors expect to earn on other investments of similar risk; (2) sufficient to assure
19 confidence in the company's financial integrity; and (3) adequate to maintain and support the
20 company's credit and to attract capital.

1 **Q. Does Missouri precedent provide similar guidance?**

2 A. Yes. In a prior order, the Commission cited the *Hope* and *Bluefield* decisions at
3 some length and acknowledged its authority and responsibility to set “just and reasonable” rates
4 for public utility service, stating that:

5 The standard for rates is “just and reasonable,” a standard founded on
6 constitutional provisions, as the United States Supreme Court has
7 explained. But the Commission must also consider the customers.
8 Balancing the interests of investor and consumer is not reducible to a
9 single formula, and making pragmatic adjustments is part of the
10 Commission’s duty. Thus, the law requires a just and reasonable end,
11 but does not specify a means. The Commission is charged with
12 approving rate schedules that are as “just and reasonable” to
13 consumers as they are to the utility.⁶

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

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

18 The cases also recognize that the fixing of rates is a matter largely of
19 prophecy and because of this commissions, in carrying out their
20 functions, necessarily deal in what are called ‘zones of
21 reasonableness’, the result of which is that they have some latitude in
22 exercising this most difficult function.⁷

23 That is, the Commission has found it appropriate to consider both quantitative and
24 qualitative information when developing its zone of reasonableness. Consistent with Missouri
25 precedent, I discuss throughout my Direct Testimony that the estimation of the market required
26 ROE (and the zone of reasonableness) does not lend itself to a strict mathematical solution.

⁶ *In the Matter of Kansas City Power & Light Company’s Request for Authority to Implement a General Rate Increase for Electric Service*, File No. ER-2012-0175, Report and Order (Jan. 9, 2013), at p. 11.

⁷ *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), at p. 21, citing *State ex rel. Laclède Gas Co. v. Public Service Commission*, 535 S.W.2d 561, 570 -571 (Mo. App. 1976).

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

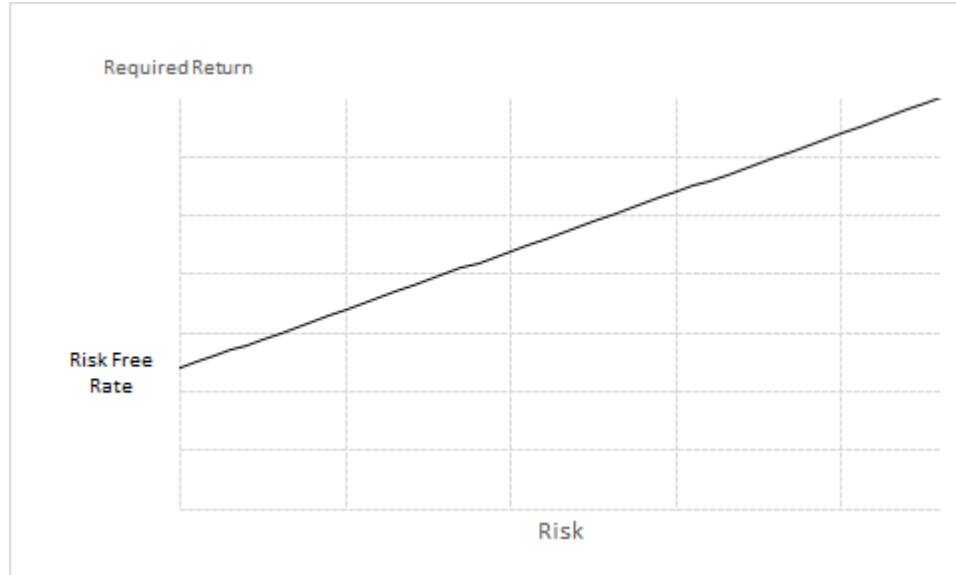
3 A. A return that is adequate to attract capital at reasonable terms enables the utility to
4 provide service while maintaining its financial integrity. As discussed above, and in keeping
5 with the *Hope* and *Bluefield* standards, that return should be commensurate with the returns
6 expected elsewhere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

15 **Q. How is the *Hope* and *Bluefield* “comparable risk” standard reflected in the**
16 **Cost of Equity estimation process?**

17 A. The “comparable risk” standard is a natural outcome of the risk/return
18 relationship, which is a fundamental principle of finance. Under the risk/return relationship,
19 investors require a higher return for taking on greater risk. Risk, in turn, relates to the
20 uncertainty of a given outcome. As illustrated in Chart 2 (below), as risk increases, so does the
21 required return.

1

Chart 2: Risk and Return Principle Illustration



2

3 The “comparable risk” standard indicates that the required return for companies with
4 “corresponding risks” should be the same. As a practical matter, however, no two companies are
5 identical, and no single model provides the most reliable estimate of investors’ required returns
6 under all market conditions. In essence, practitioners and academics recognize that financial
7 models are simply tools to be used in the ROE estimation process, and that strict adherence to
8 any single approach, or to the specific results of any single approach, can lead to flawed or
9 misleading conclusions. That position is consistent with another of the *Hope* and *Bluefield*
10 principles - that the analytical result, rather than the methodology employed, controls in arriving
11 at ROE determinations.

1 **IV. PROXY GROUP SELECTION**

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

4 A. Because the ROE is market-based, and given that Ameren Missouri is not a
5 publicly traded entity, it is necessary to establish a group of comparable, publicly traded
6 companies to serve as its “proxy.” Even if the Company were publicly traded, it is possible that
7 transitory events, such as asset impairment charges that are subsequently reversed, or temporary
8 trading activity associated with unfounded rumors, could bias its market value in one way or
9 another over a given period of time. A significant benefit of using a proxy group is that it
10 moderates the effects of anomalous, temporary events associated with any one company. Please
11 see Appendix A to this Direct Testimony for a description of how I selected the companies in the
12 proxy group. Applying the screening criteria discussed in Appendix A results in a proxy group
13 that, when taken as a whole, is fundamentally comparable to Ameren Missouri’s investment
14 profile.

15 **Q. Please provide a summary profile of Ameren Missouri.**

16 A. Ameren Missouri, which is a wholly owned subsidiary of Ameren Corporation,
17 provides electric service to approximately 1.2 million retail customers, and natural gas
18 distribution service to approximately 128,000 retail customers in Missouri. Ameren
19 Corporation’s and Ameren Missouri’s current long-term issuer credit ratings are as follows:

20 **Table 1: Current Credit Ratings**

	S&P	Moody’s	FitchRatings
Ameren Corporation	BBB+ (outlook: Stable)	Baa2 (outlook: Stable)	BBB+ (outlook: Stable)
Ameren Missouri	BBB+ (outlook: Stable)	Baa1 (outlook: Stable)	BBB+ (outlook: Stable)

1 those investors rely. As discussed in Appendix B, the models that I apply are commonly used in
2 practice. Second, the models focus on different aspects of return requirements, and provide
3 different insights to investors' views of risk and return. Using multiple models therefore
4 provides a broader, and therefore a more reliable perspective on investors' return requirements.

5 **Q. Please briefly describe the Constant Growth DCF model.**

6 A. The Constant Growth DCF approach defines the Cost of Equity as the sum of
7 (1) the expected dividend yield, and (2) expected long-term growth. The expected dividend yield
8 generally equals the expected annual dividend divided by the current stock price, and the growth
9 rate is based on analysts' expectations of earnings growth. Under the model's strict assumptions,
10 the growth rate equals the rate of capital appreciation (that is, the growth in the stock price).¹⁰ In
11 that regard, it does not matter whether the investor holds the stock in perpetuity, or whether they
12 hold the stock for some period of time, collect the dividends, then sell at the prevailing market
13 price. Under the model's assumptions, the result is the same regardless of the holding period.

14 **Q. Please briefly describe the Multi-Stage DCF model.**

15 A. The Multi-Stage DCF model, which is an extension of the Constant Growth DCF
16 model, enables the analyst to specify growth rates over multiple "stages." That is, whereas the
17 Constant Growth DCF model assumes one growth rate in perpetuity, the Multi-Stage DCF model
18 assumes varying growth rates over multiple stages. For example, the stages specified in my
19 Multi-Stage DCF model are described below:

20 **Table 3: Multi-Stage DCF Growth Rates**

⁹ 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 p. 214.

¹⁰ As discussed in Appendix B, the model assumes that earnings, dividends, book value, and the stock price all grow at the same constant rate in perpetuity.

Stage	Years	Growth Rate
Stage 1	Years 1 through 5	Near-Term Growth Rate
Stage 2	Years 6 through 10	Interim Growth Rate
Stage 3	Year 11 and beyond in perpetuity	Long-Term Growth Rate

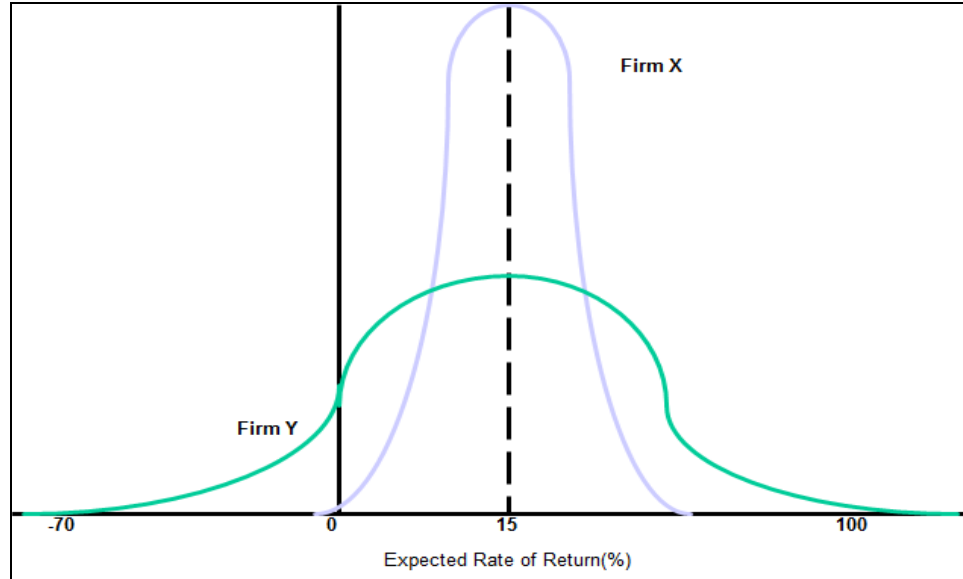
1 In the Multi-Stage DCF model I have used in this proceeding, the Cost of Equity equals
2 the discount rate that sets the present value of expected cash flows equal to the current stock
3 price. The model defines “cash flows” as dividends received by the investor, and the price at
4 which the stock is eventually sold. Because the amount of earnings paid out in dividends can
5 change over time (for example, it may fall when companies are undergoing large capital
6 investment programs), the Multi-Stage DCF model is more flexible than the Constant Growth
7 DCF model.

8 **Q. Please briefly describe the Capital Asset Pricing Model.**

9 A. Whereas Discounted Cash Flow models focus on expected cash flows, Risk
10 Premium-based models such as the CAPM focus on the additional return that investors require
11 for taking on additional risk. In finance, “risk” generally refers to the variation in expected
12 returns, rather than the expected return, itself. Consider two firms, X and Y, with expected
13 returns, and the expected variation in returns noted in Chart 3, below. Although the two have the
14 same expected return (15.00 percent), Firm Y’s are far more variable. From that perspective,
15 Firm Y would be considered the riskier investment.

1

Chart 3: Expected Return and Risk



2

3

Now consider two other firms, Firm A and Firm B. Both have expected returns of 15.00

4

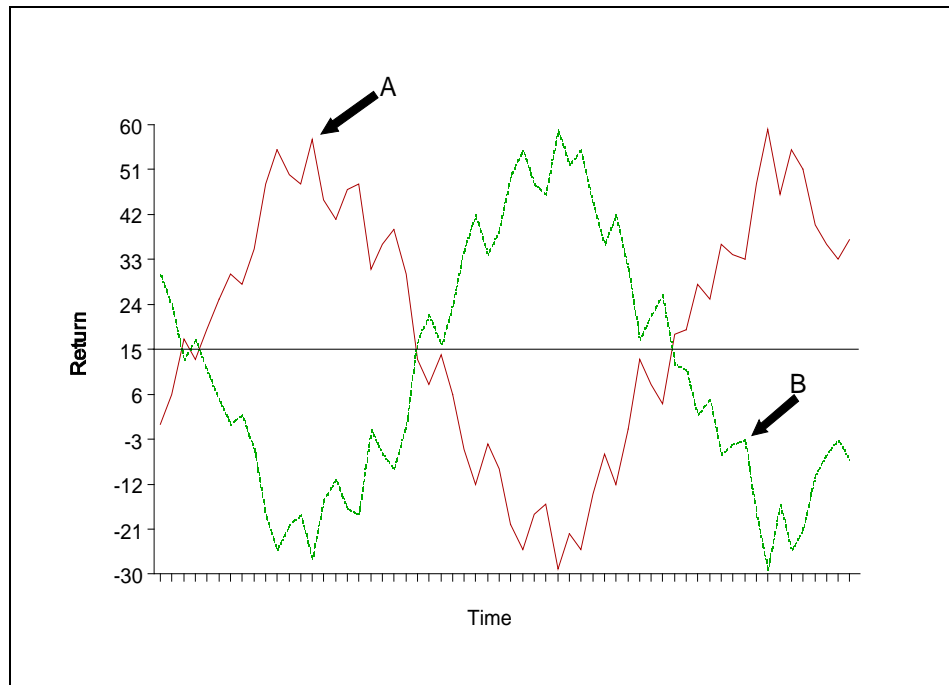
percent, and both are equally risky as measured by their volatility. But as Firm A's returns go

5

up, Firm B's returns go down. That is, the returns are negatively correlated.

6

Chart 4: Relative Risk



7

1 If we were to combine Firms A and B into a portfolio, we would expect a 15.00 percent
2 return with no uncertainty because of the opposing symmetry of their risk profiles. That is, we
3 can diversify the risk away. As long as two stocks are not perfectly correlated, we can achieve
4 diversification benefits by combining them into a portfolio. That is the essence of the Capital
5 Asset Pricing Model: because we can combine firms into a portfolio, the only risk that matters is
6 the risk that remains after diversification, *i.e.*, the “non-diversifiable” risk.

7 The CAPM defines the Cost of Equity as the sum of the “risk-free” rate, and a premium
8 to reflect the additional risk associated with equity investments. The “risk-free” rate is the yield
9 on a security viewed as having no default risk, such as long-term Treasury bonds. The risk-free
10 rate essentially sets the baseline of the CAPM. That is, an investor would expect a higher return
11 than the risk-free rate to purchase an asset that carries risk. The difference between that higher
12 return (*i.e.*, the required return) and the risk-free rate is the risk premium.

13 **Risk-Free Rate + Risk Premium = Required Return** [1]

14 The risk premium is defined as a security’s Beta coefficient multiplied by the risk
15 premium of the overall market (the “Market Risk Premium” or “MRP”). The Beta coefficient is
16 a measure of the subject company’s risk relative to the overall market, *i.e.*, the
17 “non-diversifiable” risk. A Beta coefficient of 1.00 means that the security is equally as risky as
18 the overall market; a value below 1.00 represents a security with less risk than the overall
19 market, and a value over 1.00 represents a security with more risk than the overall market.

20 **Risk-Free Rate + Beta coefficient x Market Risk Premium = Required Return** [2]

21 **Q. Please briefly describe the Bond Yield Plus Risk Premium.**

22 A. This approach is based on the basic financial principle that equity investors bear
23 the risk associated with ownership and therefore require a premium over the return they would

1 have earned as a bondholder. That is, because returns to equity holders are more risky than
2 returns to bondholders, equity investors must be compensated for bearing that additional risk
3 (that difference often is referred to as the “Equity Risk Premium”). Risk premium approaches
4 therefore estimate the Cost of Equity as the sum of the Equity Risk Premium and the yield on a
5 particular class of bonds.

$$\text{Bond Yield} + \text{Equity Risk Premium} = \text{Required Return} \quad [3]$$

7 **Q. What are the results of your Discounted Cash Flow-based analyses?**

8 A. The results of the models described above are provided in Table 4, below.¹¹

9 **Table 4: Summary of DCF Results**

	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
<i>Constant Growth DCF Results</i>			
180-Day Average	8.47%	8.98%	9.45%
<i>Multi-Stage DCF Results</i>			
180-Day Average	9.28%	9.41%	9.53%
<i>Multi-Stage DCF Results – Terminal P/E Ratio</i>			
180-Day Average	9.82%	10.13%	10.40%

10 The Constant Growth DCF model is subject to a number of assumptions that likely are
11 not consistent with current market conditions. For example, the model assumes that the current
12 payout ratio will remain constant in perpetuity, even though (on average, across the proxy
13 companies) it has fallen below long-term levels. Further, the model assumes that the return
14 estimated today will be the same return required in the future, even though the Federal Reserve
15 only recently has begun its move toward monetary policy normalization. That process of
16 normalization, together with the uncertainty surrounding the “unwinding” of the assets put on the

¹¹ See Appendix B for a more detailed description of the models, assumptions, and inputs described in Section V.

1 Federal Reserve's balance sheet during its "Quantitative Easing" initiatives introduce a degree of
2 risk, and a likelihood of increasing interest rates not present in the current market. As also
3 discussed later in my Direct Testimony, other methods more directly reflect the risk premium
4 required by investors in response to such risks. On balance, it is my view that the Constant
5 Growth DCF method should be given less weight than other methods in establishing the
6 Company's ROE.

7 **Q. With those points in mind, how did you reflect the Constant Growth DCF**
8 **results in your ROE range and recommendation?**

9 A. I first recognized that the model's mean and mean low results are well below a
10 reasonable estimate of the Company's Cost of Equity. For example, of the 1,471 electric utility
11 rate cases provided by Regulatory Research Associates that disclosed the awarded ROE since
12 1980, only one included an authorized ROE of 9.00 percent or lower for a vertically integrated
13 electric utility. On that basis alone, the mean low results are highly improbable.

14 I then considered why the Constant Growth model is producing such low estimates of the
15 Company's Cost of Equity. In one sense, relatively low dividend yields should be associated
16 with relatively high growth rates. That is, low dividend yields are the result of relatively high
17 stock prices which, in turn, should be associated with relatively high growth rates. If those
18 relationships do not hold, the model's results should be viewed with some caution. Further (and
19 as noted above), the relatively low payout ratios recently observed are not likely to remain
20 constant; as capital requirements fall in the future, it is quite likely that payout ratios would
21 increase. Although the Constant Growth DCF model cannot accommodate changing payout
22 ratios, the Multi-Stage model can.

1 I also recognize that whereas the Constant Growth DCF model essentially assumes that
2 existing capital market conditions will remain constant, Risk Premium-based methods (discussed
3 later in this Section) directly reflect the changing capital market environment (see Section VII).
4 Because it is important to reflect the results of different models, and the mean and mean low
5 Constant Growth DCF results are far-removed from recently authorized returns, I concluded that
6 they should be given less weight than other methods in determining the Company's ROE.

7 **Q. Please now summarize your remaining analytical results.**

8 A. The Risk Premium-based results, including the CAPM and Bond Yield Plus Risk
9 Premium methods, are provided below.

10 **Table 5: Summary of Risk Premium Results**

	<i>Bloomberg Derived Market Risk Premium</i>	<i>Value Line Derived Market Risk Premium</i>
<i>CAPM Results</i>		
<i>Average Bloomberg Beta Coefficient</i>		
Current 30-Year Treasury (2.65%)	9.11%	9.48%
Near Term Projected 30-Year Treasury (3.08%)	9.55%	9.92%
<i>Average Value Line Beta Coefficient</i>		
Current 30-Year Treasury (2.65%)	10.73%	11.19%
Near Term Projected 30-Year Treasury (3.08%)	11.17%	11.63%
<i>Bond Yield Plus Risk Premium Results</i>		
Current 30-Year Treasury (2.65%)	10.04%	
Near Term Projected 30-Year Treasury (3.08%)	10.05%	
Long Term Projected 30-Year Treasury (4.45%)	10.39%	

1 **VI. BUSINESS RISKS AND OTHER CONSIDERATIONS**

2 **Q. Do the mean DCF, CAPM, and Bond Yield Plus Risk Premium results for**
3 **the proxy group provide an appropriate estimate of the Cost of Equity for Ameren**
4 **Missouri?**

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

12 **A. Regulatory Environment**

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

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

1 for unexpected events) is of critical importance to debt investors. Two of the most important
2 metrics used to assess that ability are the ratios of FFO to debt, and FFO to interest expense, both
3 of which are directly affected by regulatory decisions regarding the appropriate rate of return and
4 capital structure.

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

12 **Q. Are there issues associated with regulatory lag that are a consideration for**
13 **equity investors?**

14 A. Yes, there are. As noted in an April 2013 report by Regulatory Research
15 Associates (“RRA”), Missouri is one of only five states that legally prohibit utilities from
16 including Construction Work in Progress (“CWIP”) in the rate base.¹² As a consequence, the
17 Company’s ability to maintain its revenue and cash flow is disadvantaged relative to others that
18 either have the ability to include CWIP in rate base during general rate cases (and therefore earn
19 a cash return on that investment), or are provided a more timely cash return through adjustment
20 clauses. When the revenue per dollar of assets decreases, the earned return on common equity
21 also will decrease. Because that earned return is a principal element of cash flow, the dilution in

¹² Regulatory Research Associates, *Construction Work in Progress; Getting acquainted with an old issue*, April 22, 2013, at p. 2; and Regulatory Research Associates, *Missouri Regulatory Review*, October 1, 2015, at pp. 2-3.

1 earnings resulting from the untimely recovery of capital investments diminishes the Company's
2 financial profile and increases its relative risk.

3 In addition, rates for Missouri utilities are set based on an historical test year, with limited
4 "known and measurable" changes.¹³ In contrast, other utilities, including utilities in the proxy
5 group, have the ability to recover rate base additions through forecast test years or alternative
6 rate plans. As RRA has noted, "[s]uch rate changes provide for improved cash flow and possibly
7 earnings through reduced regulatory lag."¹⁴ As with the inability to include CWIP in its rate
8 base, because it is subject to the regulatory lag otherwise mitigated by forecast test years or
9 alternative rate plans, Ameren Missouri's ability to generate earnings and cash flow is
10 disadvantaged relative to its peers.

11 **Q. Are revenue stabilization and cost recovery mechanisms common among the**
12 **proxy companies?**

13 A. Yes, they are. Schedule RBH-8 provides a summary of revenue stabilization
14 mechanisms and cost trackers currently in effect at each electric utility subsidiary held by the
15 proxy companies. As Schedule RBH-8 demonstrates, there are a substantial number of cost
16 recovery mechanisms in place at the proxy companies. Schedule RBH-8 also includes a
17 summary of the alternative regulation and incentive plans currently in effect at the proxy
18 companies, as well as the inclusion of CWIP in rate base and forecast test years.

19 **Q. In accordance with 4 CSR 240-3.161(3)(N), please provide a complete**
20 **explanation of any changes in business risk to the Company resulting from implementation**

¹³ Regulatory Research Associates, *Missouri Regulatory Review*, October 1, 2015, at pp. 2-3.

¹⁴ Regulatory Research Associates, *Alternative Regulation/Incentive Plans, A State-by-State Review*, November 2013, at p. 1.

1 **of the fuel adjustment clause (“FAC”) it proposes to continue in this proceeding, in**
2 **addition to any other changes in business risk experienced by the Company.**

3 A. First, the use of FAC mechanisms is prevalent throughout the industry. As shown
4 in Schedule RBH-8, each of the vertically integrated companies in my proxy group has a fuel
5 adjustment mechanism. As a consequence, the continuation of an FAC for Ameren Missouri
6 would leave its business and regulatory risk profile comparable to the risk profiles of other
7 electric utilities, as it relates to fuel cost recovery. Therefore, no downward adjustment to
8 Ameren Missouri’s rate of return would be reasonable or appropriate as a result of continuation
9 of an FAC. Of course, discontinuation of an FAC for Ameren Missouri likely would warrant an
10 upward adjustment to the Company’s return due to what would be an incremental risk for
11 Ameren Missouri in the area of fuel cost recovery relative to other electric utilities. I am not
12 aware of other changes in business risk experienced by Ameren Missouri.

13 **Q. What are your conclusions regarding the regulatory risk faced by the**
14 **Company, and how that risk weighs in your ROE recommendation?**

15 A. As noted earlier, although the Company does have some rate mechanisms in
16 place, it is not able to take advantage of other regulatory lag-reducing mechanisms, such as the
17 inclusion of CWIP in rate base and forecast test years, that are available to other proxy
18 companies. On balance, it therefore appears that the Company faces somewhat higher regulatory
19 risks than its peers. Although that risk would suggest a return toward the upper end of the range
20 of results, for the reasons discussed earlier my recommended ROE is lower than it otherwise
21 would be. In my view, therefore, the regulatory risks discussed above further support the
22 conservative nature of my recommendation.

1 **B. Generation Portfolio**

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

3 A. Ameren Missouri's operations depend heavily on coal-fired generation, which
4 represents more than 71.00 percent of its 2015 net generation. The Company's remaining
5 generation portfolio largely depends on a single nuclear plant, which represented approximately
6 24.00 percent of the Ameren Missouri's 2015 net generation.¹⁵

7 **Q. Please briefly describe the risks associated with Ameren Missouri's**
8 **generation portfolio.**

9 A. In general, highly capital-intensive generation assets are subject to certain risks
10 including the recovery of the investors' capital in the event of a change in market structure or a
11 plant failure, as well as the recovery of replacement power and repair costs in the event of
12 extended or unplanned outage. In addition, federal environmental and safety regulations present
13 a substantial risk of requiring investors to commit new capital to comply with new regulations or
14 operation restrictions or possibly closure. In fact, a report by the Staff of the Missouri Public
15 Service Commission estimated that known Environmental Protection Agency ("EPA")
16 regulations, which primarily affect coal-fired generating plants in Missouri, would cost state
17 electric utilities and their customers between approximately \$2.23 billion and \$2.47 billion from
18 2012 to 2022.¹⁶ That report further highlighted the level of uncertainty regarding emerging
19 environmental regulations and the potential consequences of those emerging environmental
20 regulations, including additional plant investments.

¹⁵ Source: SNL Financial.

¹⁶ See *Amended Updated Staff Report on The Cost of Compliance with Federal Environmental Regulations*, File No. EW-2012-0065 (Apr. 3, 2014) at p. 23. The report includes cost estimates for Kansas City Power & Light Company, KCP&L Greater Missouri Operations Co., Ameren Missouri, and The Empire District Electric Company.

1 In a September 2014 report, S&P noted that power generators have addressed carbon-
2 reduction policies that target coal-fired generating plants by implementing three strategies:
3 adding “scrubbers” to coal-fired plants; switching to burning natural gas; or retiring coal-fired
4 plants outright.¹⁷ To the extent these strategies increase costs for utilities, their credit profiles
5 may come under pressure. As noted by S&P:

6 Higher costs could become a key credit issue for regulated utilities given
7 the importance of managing customer rate increases, which has
8 implications for relations with regulators, as well as economic and
9 political ramifications that could heighten business risk. Any rating
10 actions would likely not occur until there is further clarity from a utility
11 about early plant retirements and related cost recovery. For utilities that
12 have significant coal-fired generation, recovery mechanisms will be
13 extremely important to continue to support operating cash flow and
14 maintain robust financial measures.¹⁸

15 **Q. Does the EPA’s Clean Power Plan present any additional risk to the**
16 **Company?**

17 A. Yes. Although the Supreme Court stayed the effect of the Clean Power Plan on
18 February 9, 2016, it still poses an additional risk to Ameren Missouri. The EPA’s Clean Power
19 Plan established “interim and final carbon dioxide emission performance rates for the two types
20 of electric generating units – steam electric and natural gas fired power plants – under
21 Section 111(d) of the Clean Air Act.”¹⁹ In addition, the Clean Power Plan established state-
22 specific interim and final goals for Missouri. Missouri may choose between a rate-based or
23 mass-based approach to meeting those goals. The rate-based goal is based on a reduction in CO₂
24 rates from 2,008 lbs./Net MWh in 2012 to 1,272 lbs./Net MWh in 2030. The mass-based goal is
25 based on a reduction in CO₂ emissions from 78 million short tons to 55 million short tons.

¹⁷ 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).

¹⁸ *Ibid.*

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

5 **Q. What are your conclusions regarding the Company's generating portfolio?**

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

15 **C. Declining Customer Usage and Operating Income Dilution**

16 **Q. Please summarize your conclusions regarding the operating income dilution**
17 **that Ameren Missouri faces and its effect on the Cost of Equity.**

18 A. As a preliminary observation, the Company has been vigilant in managing its
19 operating and maintenance ("O&M") expenses. As discussed in more detail below, whereas
20 many utilities can rely on load growth and O&M expense reductions to bridge the gap between
21 the revenues produced by rates and the revenues required to replace non-revenue producing

¹⁹ Clean Power Plan: Stage at a Glance, Missouri, Environmental Protection Agency, updated August 3, 2015.

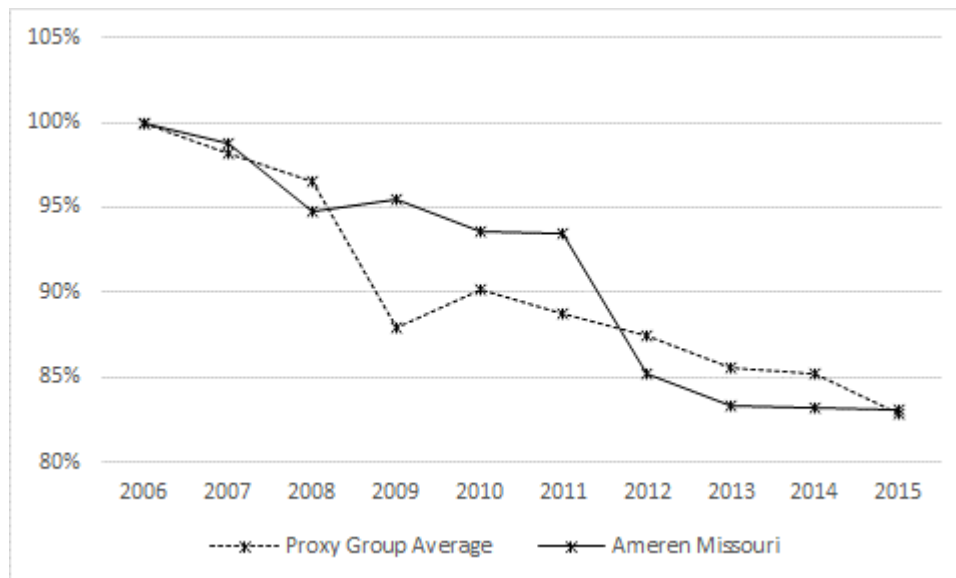
1 plant, Ameren Missouri faces greater challenges in doing so. That is, Ameren Missouri cannot
2 rely on load growth or increased profitability generated through reduced O&M costs to fund its
3 infrastructure replacements, or to sustain its financial integrity as those investment are being
4 undertaken. This condition presents considerable financial challenges especially for companies
5 that, like Ameren Missouri, have a continuing need to invest significant amounts of capital in
6 non-revenue producing infrastructure.

7 **Q. Has the Company experienced declining customer usage?**

8 A. Yes, it has. Ameren Missouri's average use per residential customer declined by
9 approximately 17.00 percent since 2006, which is consistent with the proxy group. That trend
10 has been driven by energy efficiency and conservation programs, the construction of more
11 energy efficient housing stock, and increased customer awareness regarding the importance of
12 energy conservation.

13

Chart 5: Use Per Customer Index



14

1 With all these incremental investments, a perfect regulatory storm
2 could arise if costs for fuel and purchased gas rise sharply at the same
3 time that utilities need to raise rates to recover the costs related to
4 infrastructure spending for mandated environmental upgrades, new
5 generation construction, renewable requirements, or pipeline
6 replacements. If this happens, regulators could decide to allow only
7 partial recovery of incurred capital costs through rate increases to
8 reduce rate spikes for customers and possibly defer the remaining
9 balance. Because deferrals do not provide the cash flow needed for
10 utilities to service their debt obligations, utility credit quality could be
11 affected. To retain critical access to the debt markets, utilities will
12 need to continue to seek and receive supportive cost recovery from
13 regulators.²¹

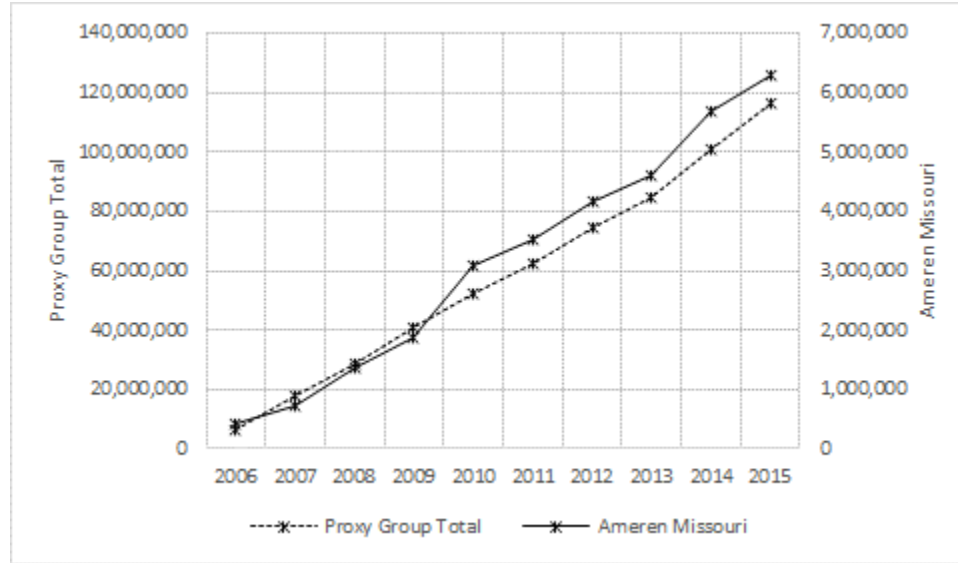
14 **Q. Has Ameren Missouri's rate of capital investment been consistent with other**
15 **electric utilities?**

16 A. Yes, it has. Since 2006, Ameren Missouri has invested in its system at a pace that
17 is generally consistent with that of its peers (*see* Chart 7, below).

²¹ Standard & Poor's, *U.S. Utilities' Capital Spending is Rising, and Cost-Recovery is Vital*, RatingsDirect, May 14, 2012, at p. 6.

1

Chart 7: Cumulative Capital Investments (2006 – 2015, \$000)²²



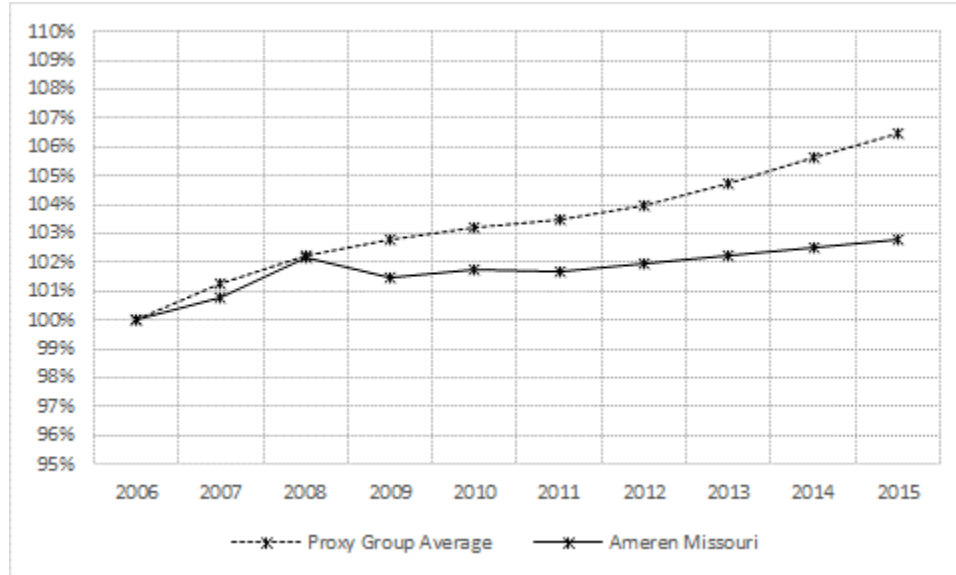
2

3 The Company’s ability to fund its invested capital with internally generated cash,
4 however, is complicated by the nature of those investments. A review of the Company’s recent
5 capital investments shows that its increasing capital expenditures are driven to a significant
6 degree by federal and state regulations, rather than by new customers that may bring additional
7 revenues. As such, Ameren Missouri is making steadily increased capital investments at the
8 same time it is experiencing only slightly increasing customer growths on its system. The proxy
9 group, in contrast, has experienced a comparatively higher level of positive customer growth (*see*
10 Chart 8, below).

²² Source: SNL Financial.

1

Chart 8: Average Electric Customer Growth (2006 – 2015)²³



2

In essence, the increasing capital investment together with the relatively low increase in

3

customers has created a circumstance under which each dollar of invested assets has produced

4

fewer dollars of revenue. As a consequence, the Company's ability to fund capital investments

5

through growth-related revenue increases has been, and will continue to be, severely limited -

6

especially when Ameren Missouri is compared to its peers.

7

Q. Is it likely that the Company would be able to increase the cash flow

8

available to fund capital investments by materially reducing its operating expenses?

9

A. It does not appear so. As discussed in the direct testimony of Mr. Moehn, the

10

Company has scrutinized and focused on reducing its non-energy cost related expenditures

11

which it has the ability to control. In doing so, Ameren Missouri has been able to control

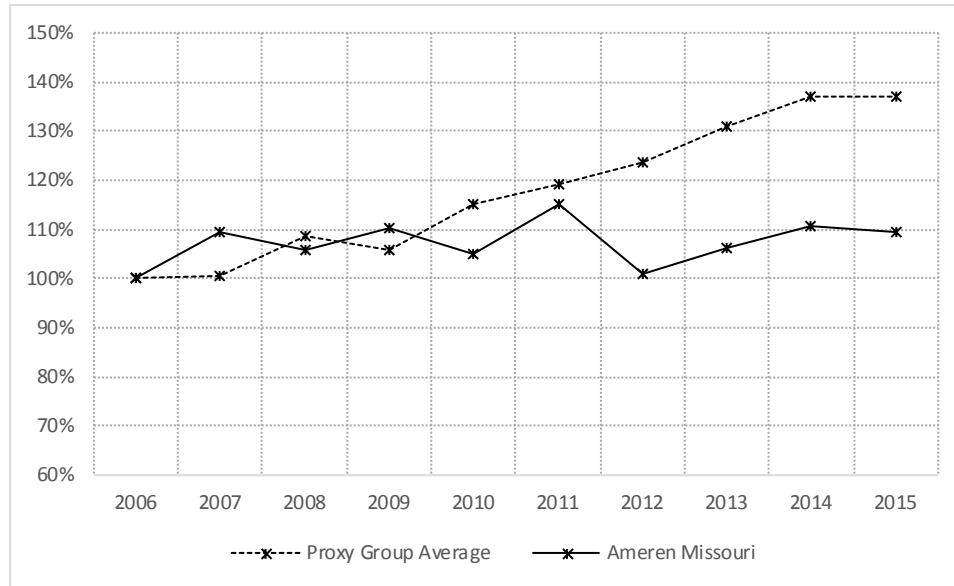
12

increases in operating expenses, with much of the increase driven by expenses over which the

²³ Source: SNL Financial.

1 Company has little control.²⁴ In fact, relative to its peers, the Company’s O&M expenses have
2 grown at a considerably slower pace (*see* Chart 9, below).

3 **Chart 9: Cumulative Change in Total Operating Expenses (2006 – 2015)**²⁵



4 **Q. Please now summarize how increasing capital investments, slower customer**
5 **growth, and the Company’s cost containment initiatives have combined to affect its overall**
6 **rate of return.**

7 A. The combined effect of those factors can be seen in the following relationships:

8 **Figure 1: Factors Determining Return on Rate Base**

$$\begin{array}{c}
 \textit{Operating Margin} \times \textit{Asset Turnover} = \textit{Return on Rate Base} \\
 \downarrow \qquad \qquad \qquad \downarrow \qquad \qquad \qquad \downarrow \\
 \frac{\textit{Operating Income}}{\textit{Non - Gas Revenue}} \times \frac{\textit{Non - Gas Revenue}}{\textit{Rate Base}} = \frac{\textit{Operating Income}}{\textit{Rate Base}}
 \end{array}$$

9

²⁴ Direct Testimony of Michael Moehn, at pp. 17-19.

²⁵ Source: SNL Financial.

1 Figure 1 notes that in general, the overall Return on Rate Base depends on: (1) the
2 percentage of margin generated by each dollar of revenue (*i.e.*, the Operating Margin; and (2) the
3 dollars of revenue generated by each dollar of assets (*i.e.*, the Asset Turnover). As Figure 1 also
4 suggests, the Company's diminished return is directly related to reduced revenue owing to
5 slower customer growth (which reduces both Operating Margin and Asset Turnover relative to
6 the proxy group), and increased non-growth related capital investments, which further reduce the
7 Asset Turnover.

8 **Q. What conclusions do you draw from the analyses discussed above?**

9 A. In essence, the need to invest increasing amounts of capital in non-revenue
10 producing assets, without the ability to fund those investments through additional, significant
11 reductions in operating costs, or increases in revenue from customer growth, puts greater
12 pressure on the Company's ability to earn a reasonable rate of return. That has been the case
13 despite Ameren Missouri's continuing focus on operating cost control. This problem is
14 particularly acute for Ameren Missouri because not only is it investing at a level that
15 significantly exceeds the depreciation expense used to set its rates, but also CWIP in rate base is
16 not allowed in Missouri. This means that as new projects go into service, the Company
17 immediately starts losing return and at the same time incurring depreciation expense until rates
18 can be reset at some point in the future. Absent the authorization of a reasonable ROE, it is
19 difficult to see how the Company will be able to mitigate those factors.

20 **Q. How do the business risks discussed above affect your ROE**
21 **recommendation?**

22 A. As discussed earlier, it is very difficult, and likely imprecise, to associate a given
23 area of risk with a specific increment to the required return. It is important, however, to reflect

1 the risks that investors recognize in selecting the ROE range and recommendation. I therefore
2 considered those risks in selecting my recommended range from the overall range of analytical
3 results.

4 VII. CAPITAL MARKET ENVIRONMENT

5 **Q. Do economic conditions influence the required cost of capital and required**
6 **return on common equity?**

7 A. Yes. As discussed in Section V, the models used to estimate the Cost of Equity
8 are influenced by current and expected capital market conditions. It therefore is important to
9 assess the reasonableness of any financial model's results in the context of observable market
10 data. To the extent that certain ROE estimates are incompatible with such data or inconsistent
11 with basic financial principles, we should consider whether alternative estimation techniques are
12 likely to provide more meaningful and reliable results.

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

15 A. Yes, I do. Much has been reported about the Federal Reserve's market
16 intervention since 2007, and its effect on interest rates. Although the Federal Reserve completed
17 its Quantitative Easing initiative in October 2014, it was not until December 2015 that it raised
18 the Federal Funds rate, and began the process of rate normalization.²⁶ A significant issue, then,
19 is how investors will react as that process continues, and eventually is completed. A viable
20 outcome is that investors will perceive greater chances for economic growth, which will increase
21 the growth rates included in the Constant Growth DCF model. At the same time, higher growth

²⁶ See Federal Reserve Press Release (December 16, 2015).

1 and the absence of Federal market intervention could provide the opportunity for interest rates to
2 increase, thereby increasing the dividend yield portion of the DCF model. In that case, both
3 terms of the Constant Growth DCF model would increase, producing increased ROE estimates.

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

10 **Q. Please summarize the effect of recent Federal Reserve policies on interest**
11 **rates and the cost of capital.**

12 A. Beginning in 2008, the Federal Reserve proceeded on a steady path of initiatives
13 intended to lower long-term Treasury yields.²⁷ The Federal Reserve policy actions "were
14 designed to put downward pressure on longer-term interest rates by having the Federal Reserve
15 take onto its balance sheet some of the duration and prepayment risks that would otherwise have
16 been borne by private investors."²⁸ Under that policy, "Securities held outright" on the Federal
17 Reserve's balance sheet increased from approximately \$489 billion at the beginning of October
18 2008 to \$4.24 trillion by the end of May 2016.²⁹ To put that increase in context, the securities
19 held by the Federal Reserve represented approximately 3.29 percent of GDP at the end of
20 September 2008, and had risen to approximately 23.25 percent of GDP in May 2016.³⁰ As such,

²⁷ See Federal Reserve Press Release (June 19, 2013).

²⁸ Federal Reserve Bank of New York, *Domestic Open Market Operations During 2012*, April 2013, at p. 29.

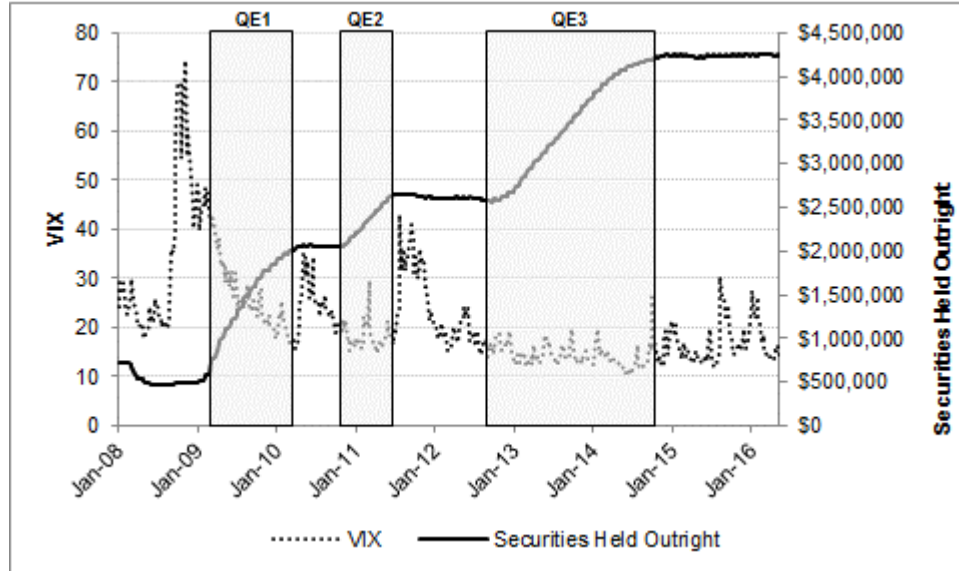
²⁹ Source: Federal Reserve Board Schedule H.4.1. "Securities held outright" include U.S. Treasury securities, Federal agency debt securities, and mortgage-backed securities.

³⁰ Source: Federal Reserve Board Schedule H.4.1; Bureau of Economic Analysis.

1 the Federal Reserve policy actions have represented a significant source of liquidity, and have
2 had a substantial effect on capital markets.

3 Just as market intervention by the Federal Reserve has reduced interest rates, it also has
4 had the effect of reducing market volatility. As shown in Chart 10 (below), each time the
5 Federal Reserve began to purchase bonds (as evidenced by the increase in “Securities Held
6 Outright” on its balance sheet), volatility subsequently declined. In fact, in September 2012,
7 when the Federal Reserve began to purchase long-term securities at a pace of \$85 billion per
8 month, volatility (as measured by the CBOE Volatility Index, known as the “VIX”) fell, and
9 through October 2014 remained in a relatively narrow range. The reason is quite straight-
10 forward: Investors became confident that the Federal Reserve would intervene if markets were to
11 become unstable.

12 **Chart 10: VIX and Federal Reserve Asset Purchases³¹**



13 The important analytical issue is whether we can infer that risk aversion among investors
14 is at a historically low level, implying a Cost of Equity that is well below recently authorized

³¹ Source: Federal Reserve Economic Data (FRED), Federal Reserve Bank of St. Louis; Federal Reserve Statistical Release H.4.1, Factors Affecting Reserve Balances.

1 returns. Given the negative correlation between the expansion of the Federal Reserve's balance
2 sheet and the VIX, it is difficult to conclude that fundamental risk aversion and investor return
3 requirements have fallen. If it were the case that investors believe that volatility will remain at
4 low levels (that is, that market risk and uncertainty will remain low), it is not clear why they
5 would decrease their return requirements for defensive sectors such as utilities. In that respect, it
6 appears that the Constant Growth DCF results are at odds with market conditions.

7 **Q. Has the Federal Reserve's Quantitative Easing policy been associated with**
8 **changes in the proxy companies' trading levels?**

9 A. Yes, that appears to be the case. From January 2000 through the end of August
10 2012 (that is, immediately prior to the third round of Quantitative Easing), the proxy group's
11 average Price/Earnings ("P/E") ratio traded at a 13.00 percent discount to the market. From
12 September 2012 through May 2013, when the Federal Reserve announced it would begin to taper
13 its asset purchases, the proxy group traded at a 6.00 percent premium to the market. More
14 recently, after the Federal Reserve began its process of rate normalization (in December 2015),
15 the proxy group's average P/E ratio was 99.00 percent of the market P/E through May 2016.

16 **Q. Have other economic events factored in the current level of interest rates?**

17 A. Yes. For example, given the recent vote on the United Kingdom European Union
18 membership referendum (commonly referred to as "Brexit") and subsequent capital market
19 reaction, the timing of Federal Reserve monetary policy normalization remains uncertain. The
20 Federal Reserve's monetary policy actions, including maintaining an expanded balance sheet and
21 keeping the Federal Funds rate low, have affected capital markets and led to utility valuations
22 that are elevated relative to historical levels, and to the overall market. With the pace of Federal

1 Reserve monetary policy normalization now uncertain, the sustainability of current utility
2 valuation levels likewise is uncertain.

3 **Q. Does your recommendation also consider the current interest rate**
4 **environment?**

5 A. Yes, it does. From an analytical perspective, it is important that the inputs and
6 assumptions used to arrive at an ROE recommendation, including assessments of capital market
7 conditions, are consistent with the recommendation itself. Because the Cost of Equity is
8 forward-looking, the salient issue is whether investors see the likelihood of increased interest
9 rates during the period in which the rates set in this proceeding will be in effect. In that regard,
10 the approximately 50 economists surveyed by *Blue Chip Financial Forecast* see the 30-year
11 Treasury yield as increasing to 3.90 percent by 2018.³² Those projections are supported by the
12 fact that investors currently are willing to pay about one and a half times the premium for the
13 option to sell long-term Government bonds in January 2018 (with an exercise price equal to the
14 current price) than they are will to pay for the option to buy those bonds.³³ Because the prices of
15 bonds move inversely to interest rates,³⁴ those option prices indicate that investors believe it is
16 considerably more likely that interest rates will increase over the coming year, than it is likely
17 that they will decrease.

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

³² See, *Blue Chip Financial Forecast*, Vol. 35 No. 6, June 1, 2016, at p. 14.

³³ Source: <http://www.nasdaq.com/symbol/tlt/option-chain?dateindex=7>

³⁴ That is, as interest rates move up (down), bond prices move down (up).

1 **VIII. CONCLUSIONS AND RECOMMENDATION**

2 **Q. What is your conclusion regarding the Company's Cost of Equity?**

3 A. As discussed in Section V (and as shown in Schedules RBH-1 through RBH-6), I
4 have performed several analyses to estimate Ameren Missouri's Cost of Equity. In light of those
5 results, and taking into consideration other relevant and observable market data and the
6 Commission's prior decisions, I believe that an ROE in the range of 9.75 percent to 10.50 percent
7 represents the range of returns required by equity investors under current and expected market
8 conditions. Within that range, I conclude that an ROE of 9.90 percent represents a reasonable,
9 although conservative, estimate of the Cost of Equity for Ameren Missouri. As discussed earlier
10 in my testimony, my recommendation reflects analytical results based on a proxy group of
11 electric utilities, and takes into consideration the Company's risk profile, including the regulatory
12 environment in which Ameren Missouri operates and its generation portfolio.

13 **Q. Does this conclude your Direct Testimony?**

14 A. Yes, it does.

Appendix A

1 A. Proxy Group Selection

2 Q. How did you select the companies included in your proxy group?

3 A. I began with the universe of companies that Value Line classifies as Electric
4 Utilities, and applied the following screening criteria.

- 5 • I excluded companies that do not consistently pay quarterly cash dividends;
- 6 • I excluded companies that were not covered by at least two utility industry equity
7 analysts;
- 8 • I excluded companies that do not have investment grade senior unsecured bond
9 and/or corporate credit ratings from S&P;
- 10 • I excluded companies that were not vertically-integrated, *i.e.* utilities that own and
11 operate regulated generation, transmission and distribution assets;
- 12 • I excluded any companies whose regulated operating income over the three most
13 recently reported fiscal years comprised less than 60.00 percent of the respective
14 totals for that company;
- 15 • I excluded any companies whose regulated electric operating income over the
16 three most recently reported fiscal years represented less than 60.00 percent of
17 total regulated operating income;³⁵ and
- 18 • I eliminated companies that are currently known to be party to a merger, or other
19 significant transaction.

³⁵ In the Ameren Missouri's most recent case (File No. ER-2014-0258), 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.

Appendix B

1 A. Constant Growth Discounted Cash Flow Model

2 Q. Please more fully describe the Constant Growth DCF approach.

3 A. The Constant Growth DCF approach is based on the theory that a stock's current
4 price represents the present value of all expected future cash flows. DCF theory assumes that an
5 investor buys a stock for an expected total return rate which is derived from cash flows received
6 in the form of dividends plus appreciation in market price (the expected growth rate). In its
7 simplest form, the Constant Growth DCF model expresses the Cost of Equity as the discount rate
8 that sets the current price equal to expected cash flows:

$$9 \quad P = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_{\infty}}{(1+k)^{\infty}} \quad [4]$$

10 where P represents the current stock price, $D_1 \dots D_{\infty}$ represent expected future dividends,
11 and k is the discount rate, or required ROE. Equation [4] is a standard present value calculation
12 that can be simplified and rearranged into the familiar form:

$$13 \quad k = \frac{D_0 (1+g)}{P} + g \quad [5]$$

14 Equation [5] often is referred to as the "Constant Growth DCF" model, in which the first
15 term is the expected dividend yield and the second term is the expected long-term annual growth
16 rate in perpetuity.

17 Q. What assumptions are inherent in the Constant Growth DCF model?

18 A. The Constant Growth DCF model assumes: (1) a constant average annual growth
19 rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant Price to
20 Earnings multiple; and (4) a discount rate greater than the expected growth rate. The model also
21 assumes that the current Cost of Equity will remain constant, also in perpetuity.

1 **Q. What market data did you use to calculate the dividend yield in your**
2 **Constant Growth DCF model?**

3 A. The dividend yield is based on the proxy companies' current annualized dividend,
4 and average closing stock prices over the 30, 90, and 180-trading day periods as of May 31,
5 2016.

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

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

11 **Q. Did you make any adjustments to the dividend yield to account for periodic**
12 **growth in dividends?**

13 A. Yes, I did. Because utility companies tend to increase their quarterly dividends at
14 different times throughout the year, it is reasonable to assume that dividend increases will be
15 evenly distributed over calendar quarters. Given that assumption, it is appropriate to calculate
16 the expected dividend yield by applying one-half of the long-term growth rate to the current
17 dividend yield. That adjustment ensures that the expected dividend yield is, on average,
18 representative of the coming twelve-month period, and does not overstate the dividends to be
19 paid during that time.

20 **Q. Is it important to select appropriate measures of long-term growth in**
21 **applying the DCF model?**

22 A. Yes. In its Constant Growth form, the DCF model (*i.e.*, as presented in Equation
23 [2] above) assumes a single growth estimate in perpetuity. Accordingly, in order to reduce the

1 long-term growth rate to a single measure, one must assume a fixed payout ratio, and the same
2 constant growth rate for earnings per share (“EPS”), dividends per share, and book value per
3 share. Since dividend growth can only be sustained by earnings growth, the model should
4 incorporate a variety of measures of long-term earnings growth. That can be accomplished by
5 averaging those measures of long-term growth that tend to be least influenced by capital
6 allocation decisions that companies may make in response to near-term changes in the business
7 environment. Because such decisions may directly affect near-term dividend payout ratios,
8 estimates of earnings growth are more indicative of long-term investor expectations than are
9 dividend growth estimates. For the purposes of the Constant Growth DCF model, therefore,
10 growth in EPS represents the appropriate measure of long-term growth.

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

13 A. The relationship between various growth rates and stock valuation metrics has
14 been the subject of much academic research.³⁶ As noted over 40 years ago by Charles Phillips in
15 The Economics of Regulation:

16 For many years, it was thought that investors bought utility stocks
17 largely on the basis of dividends. More recently, however, studies
18 indicate that the market is valuing utility stocks with reference to total
19 per share earnings, so that the earnings-price ratio has assumed
20 increased emphasis in rate cases.³⁷

21 Philips’ conclusion continues to hold true. Subsequent academic research has clearly and
22 consistently indicated that measures of earnings and cash flow are strongly related to returns, and
23 that analysts’ forecasts of growth are superior to other measures of growth in predicting stock

³⁶ See Robert S. Harris, *Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

³⁷ Charles F. Phillips, Jr., The Economics of Regulation, at 285 (Rev. ed. 1969).

1 prices.³⁸ For example, Vander Weide and Carleton state that, “[our] results ... are consistent
2 with the hypothesis that investors use analysts’ forecasts, rather than historically oriented growth
3 calculations, in making stock buy-and-sell decisions.”³⁹ Other research specifically notes the
4 importance of analysts’ growth estimates in determining the Cost of Equity, and in the valuation
5 of equity securities. Dr. Robert Harris noted that “a growing body of knowledge shows that
6 analysts’ earnings forecast are indeed reflected in stock prices.” Citing Cragg and Malkiel,
7 Dr. Harris notes that those authors “found that the evaluations of companies that analysts make
8 are the sorts of ones on which market valuation is based.”⁴⁰ Similarly, Brigham, Shome and
9 Vinson noted that “evidence in the current literature indicates that (i) analysts’ forecasts are
10 superior to forecasts based solely on time series data; and (ii) investors do rely on analysts’
11 forecasts.”⁴¹

12 To that point, the research of Vander Weide and Carleton demonstrates that earnings
13 growth projections have a statistically significant relationship to stock valuation levels, while
14 dividend growth rates do not.⁴² Those findings suggest that investors form their investment
15 decisions based on expectations of growth in earnings, not dividends. Consequently, earnings
16 growth, not dividend growth, is the appropriate estimate for the purpose of the Constant Growth
17 DCF model.

³⁸ See, e.g., Andreas C. Christofi, Petros C. Christofi, Marcus Lori and Donald M. 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).

³⁹ James H. Vander Weide and Willard T. Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

⁴⁰ Robert S. Harris, *Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

⁴¹ 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).

⁴² See Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

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

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

4 The average daily closing prices for the 30-trading days, 90-trading days, and 180-trading
5 days ended May 31, 2016, for the term P_0 ; and

- 6 • The annualized dividend per share as of May 31, 2016, for the term D_0 .
- 7 • I then calculated my DCF results using each of the following growth terms:
- 8 • The Zacks consensus long-term earnings growth estimates;
- 9 • The First Call consensus long-term earnings growth estimates; and
- 10 • The Value Line long-term earnings growth estimates.⁴³

11 **Q. In the recent Kansas City Power & Light Order, the Commission suggested**
12 **that your Constant Growth DCF results were based on unsustainably high growth rates.**⁴⁴
13 **Do you believe the EPS growth rates used in your Direct Testimony in this proceeding are**
14 **too high?**

15 A. No, I do not. First, from a practical standpoint, the Constant Growth form of the
16 DCF model is subject to the limiting assumptions discussed above. Among those assumptions
17 are model's requirement that the payout ratio remain constant, and that the current Cost of Equity
18 will remain constant, even as Federal monetary policy changes. It is for such reasons that I have
19 also provided a Multi-Stage DCF analysis (described below).

20 Second, the average long-term growth rate in GDP has been 6.24 percent. In that regard,
21 the median growth rate in my Constant Growth DCF analysis of 5.22 percent is reasonable

⁴³ See Schedule RBH-1.

⁴⁴ *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), at p. 19.

1 relative to historical measures.⁴⁵ That median growth rate is also below the long-term expected
2 GDP growth rate in my Multi-Stage DCF analysis⁴⁶ (see Schedule RBH-2)

3 Lastly, as discussed above, consensus EPS growth rate forecasts are the appropriate
4 measure of expected growth because earnings growth enables both dividend and book value
5 growth and investors rely on analyst forecasts. As such, I believe the growth rates used in my
6 Constant Growth DCF model are reasonable, while being consistent with academic research, and
7 historical and expected measures of long-term growth.

8 **Q. How did you calculate the DCF results?**

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

18 **Q. What are the results of your Constant Growth DCF analysis?**

19 A. My Constant Growth DCF results are summarized in Table 7, below (*see* also
20 Schedule RBH-1).

⁴⁵ *See* Schedule RBH-1.

⁴⁶ *See* Schedule RBH-2.

1 **Table 7: Constant Growth DCF Results⁴⁷**

	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	8.23%	8.74%	9.20%
90-Day Average	8.29%	8.80%	9.26%
180-Day Average	8.47%	8.98%	9.45%

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

3 **Q. What other forms of the DCF model have you used?**

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

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

12 A. The Multi-Stage DCF model sets the subject company's stock price equal to the
13 present value of future cash flows received over three "stages." In the first two stages, "cash
14 flows" are defined as projected dividends. In the third stage, "cash flows" equal both dividends
15 and the expected price at which the stock will be sold at the end of the period (*i.e.*, the "terminal
16 price"). I calculated the terminal price based on the Gordon model,⁴⁸ which defines the price as
17 the expected dividend divided by the difference between the Cost of Equity (*i.e.*, the discount
18 rate) and the long-term expected growth rate. In essence, the terminal price is defined by the

⁴⁷ See Schedule RBH-1.

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

1 present value of the remaining “cash flows” in perpetuity. In each of the three stages, the
 2 dividend is the product of the projected earnings per share and the expected dividend payout
 3 ratio. A summary description of the model is provided in Table 8 (below).

4 **Table 8: 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

5 **Q. What are the analytical benefits of your three-stage DCF model?**

6 A. The principal benefits relate to the flexibility provided by the model’s
 7 formulation. Since the model provides the ability to specify near, intermediate and long-term
 8 growth rates, for example, it avoids the sometimes limiting assumption that the subject company
 9 will grow at the same, constant rate in perpetuity. In addition, by calculating the dividend as the
 10 product of earnings per share and the dividend payout ratio, the model enables analysts to reflect
 11 assumptions regarding the timing and extent of changes in the payout ratio to reflect, for
 12 example, increases or decreases in expected capital spending, or transition from current payout
 13 levels to long-term expected levels. In that regard, because the model relies on multiple sources
 14 of earnings growth rate assumptions, it is not limited to a single source, such as Value Line, for

1 all inputs, and mitigates the potential bias associated with relying on a single source of growth
2 estimates.⁴⁹

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

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

11 A. I applied the Multi-Stage model to the proxy group described earlier in my Direct
12 Testimony. My assumptions with respect to the various model inputs are described in Table 9
13 (below).

⁴⁹ See Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts’ Growth Forecasts*, Financial Management 21 (Summer 1992).

Table 9: Multi-Stage DCF Model Assumptions

Stage	Initial	First	Transition	Terminal
Stock Price	30-, 90-, and 180-day average stock price as of May 31, 2016			
Earnings Growth	2015 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 5.28 percent is based on the real GDP growth rate of

4

3.24 percent from 1929 through 2015, and an inflation rate of 1.98 percent. The GDP growth

5

rate is calculated as the compound growth rate in the chain-weighted GDP for the period from

6

1929 through 2015.⁵⁰ The rate of inflation of 1.98 percent is an average of two components:

7

(1) the compound annual forward rate starting in ten years (*i.e.*, 2026, which is the beginning of

8

the terminal period) based on the 30-day average spread between yields on long-term nominal

9

Treasury Securities and long-term Treasury Inflation Protected Securities, known as the “TIPS

⁵⁰ See Bureau of Economic Analysis, “Current-Dollar and ‘Real’ Gross Domestic Product,” April 28, 2016 update.

1 spread” of 1.76 percent;⁵¹ and (2) and the projected Blue Chip Financial Forecast of CPI for
2 2023 – 2027 of 2.20 percent.⁵²

3 I averaged these two measures of inflation because nominal Treasury yields are related to
4 inflation, which includes the effect of commodities such as oil, which may cause the current
5 TIPS spread to somewhat understate long-term expected inflation. To account for that effect, I
6 also considered the 2.20 percent long-term projected rate of inflation as provided by Blue Chip
7 Financial Forecast.⁵³ My long-term inflation rate, therefore, is the average of those two
8 estimates, or 1.98 percent.

9 **Q. Have you compared your long-term growth rate to historical measures?**

10 A. Yes, I have. From 1929 through 2015, the long-term geometric average growth in
11 nominal GDP was 6.17 percent. The arithmetic average annual growth rate over that time was
12 6.40 percent. Considered in that context, my 5.28 percent assumption is approximately 96 basis
13 points below the long-term average. I also calculated the average five-year average annual
14 growth rates over the 1929 to 2015 period. I then arranged that data in histograms to provide a
15 perspective of how frequently various levels of growth have occurred.

16 As Chart 11 demonstrates, average annual growth of 5.28 percent and above has been
17 observed frequently. When measured over five-year periods, average annual growth exceeded
18 5.28 percent in 59 of 82 periods. That is, my result falls in approximately the 28th percentile of
19 observed growth rates in GDP. As such, I believe my long-term growth estimate is reasonable, if
20 not conservative.

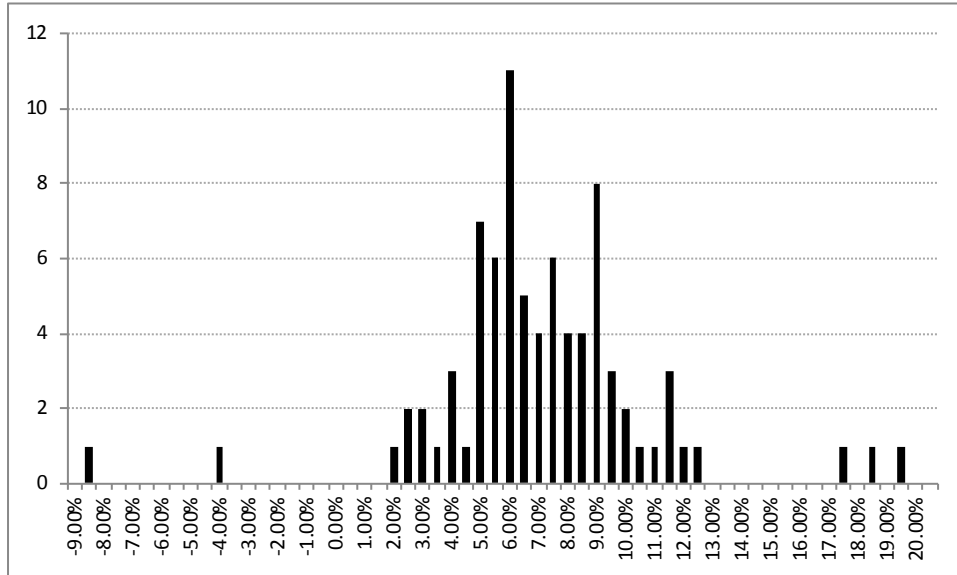
⁵¹ See Board of Governors of the Federal Reserve System, “Table H.15 Selected Interest Rates.”

⁵² See *Blue Chip Financial Forecasts*, Vol. 35, No. 6, June 1, 2016, at p. 14.

⁵³ *Blue Chip Financial Forecasts*, December 1, 2015, at p. 14.

1

Chart 11: Average Annual GDP Growth Measured over Five-Year Periods⁵⁴



2

3

Q. Have you compared other projections of GDP to historical measures?

4

A. Yes, I have. Specifically, I reviewed GDP projections from the Social Security Administration (“SSA”) and the Energy Information Administration (“EIA”). SSA forecasts a long-term GDP growth rate of 4.35 percent between 2025 and 2085 under its Intermediate scenario,⁵⁵ while EIA forecasts the GDP growth rate between 2013 and 2040 to be 4.24 percent in its Reference case.⁵⁶

9

Because they are perpetual, terminal growth rates that substantially deviate from the long-term historical average should be viewed with considerable caution. As Chart 11 demonstrates, average annual growth as low as 4.24 percent has been observed very infrequently.

10

11

⁵⁴ Source: Bureau of Economic Analysis.

⁵⁵ 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.

⁵⁶ 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.

1 In fact, average annual growth exceeded 4.24 percent in 71 of 82 five-year periods, which
2 represents the 13th percentile of observed results. While the long-term growth rate of 5.28
3 percent used in my Multi-Stage DCF model represents a conservative measure of the GDP
4 growth, the SSA and EIA forecasts are approximately 93 to 104 basis points lower. As such, I
5 believe my estimate of the long-term growth rate represents a more reasonable measure of
6 perpetual growth in the final stage of my Multi-Stage DCF model.

7 Furthermore, both SSA and EIA provide alternative scenarios in addition to their base
8 case scenarios (Intermediate and Reference, respectively). SSA's Low-cost and High-cost
9 scenarios produce a range of nominal GDP forecasts from 2.82 percent to 5.88 percent.⁵⁷ EIA
10 develops six scenarios which produce a range of nominal GDP forecasts of 4.14 percent to 5.36
11 percent.⁵⁸ My estimated long-term growth rate is within the ranges of scenarios produced by
12 both SSA and EIA.

13 **Q. What were your specific assumptions with respect to the payout ratio?**

14 A. As noted in Table 9, for the first two periods, I relied on the first year and long-
15 term projected payout ratios reported by Value Line⁵⁹ for each of the proxy companies. I then
16 assumed that by the end of the second period (*i.e.*, the end of year 10), the payout ratio will
17 converge to the historical industry average ratio of 66.88 percent.⁶⁰

⁵⁷ 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.

⁵⁸ 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.

⁵⁹ As reported in the Value Line Investment Survey company reports as "All Div'ds to Net Prof."

⁶⁰ Source: Bloomberg Professional.

1 would then trade at a P/E multiple of approximately 22.06. That multiple (*i.e.*, 22.06) is less than
2 one standard deviation from the long-term average market P/E ratio.

3 **Q. Did you undertake any additional analyses to support your**
4 **recommendation?**

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

6 **C. Capital Asset Pricing Model**

7 **Q. Please describe the general form of the CAPM.**

8 A. The CAPM is a risk premium method that estimates the Cost of Equity for a given
9 security as a function of a risk-free return plus a risk premium (to compensate investors for the
10 non-diversifiable or “systematic” risk of that security). The CAPM describes the relationship
11 between a security’s investment risk and the market rate of return. The CAPM assumes that all
12 other risk, *i.e.*, all non-market or unsystematic risk, can be eliminated through diversification.
13 The risk that cannot be eliminated through diversification is called market, or systematic, risk. In
14 addition, the CAPM presumes that investors require compensation only for systematic risk that is
15 the result of macroeconomic and other events that affect the returns on all assets.

16 As shown in Equation [6], the CAPM is defined by four components, each of which
17 theoretically must be a forward-looking estimate:

18
$$k = r_f + \beta(r_m - r_f) \quad [6]$$

19 where:

20 k = the required market ROE for a security;

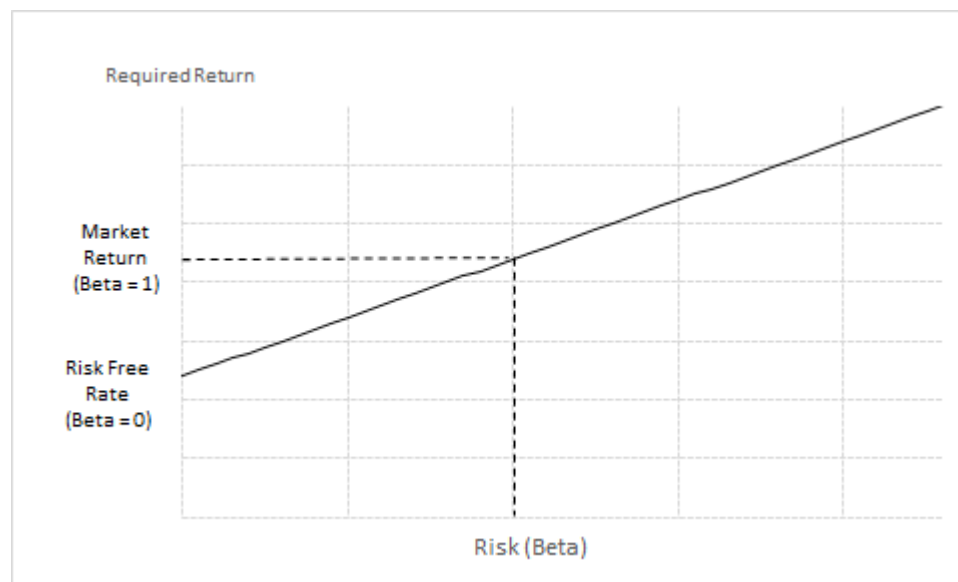
21 β = the Beta coefficient of that security;

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

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

2 Equation [6] describes the Security Market Line, or the CAPM risk-return relationship,
3 which is graphically depicted in Chart 12 below. The intercept is the risk-free rate (r_f) which has
4 a beta of zero, the slope is the expected market risk premium ($r_m - r_f$). By definition, r_m , the
5 return on the market has a beta of 1.0. CAPM states that in well-behaving capital markets, the
6 expected equity risk premium on a given security is proportional to its Beta coefficient.

7 **Chart 12: Security Market Line (“SML”)**



8
9 Intuitively, higher Beta coefficients indicate that the subject company’s returns have been
10 relatively volatile, and have moved in tandem with the overall market. Consequently, if a
11 company has a Beta coefficient of 1.00, it is as risky as the market and does not provide any
12 diversification benefit.

13 In Equation [6], the term ($r_m - r_f$) represents the Market Risk Premium.⁶⁵ According to
14 the theory underlying the CAPM, since unsystematic risk can be diversified away by adding
15 securities to investment portfolios, the market will not compensate investors for bearing that risk.

⁶⁵ The Market Risk Premium is defined as the incremental return of the market portfolio over the risk-free rate.

1 Therefore, investors should be concerned only with systematic or non-diversifiable risk.
2 Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

3
$$\beta_j = \frac{\sigma_j}{\sigma_m} \times \rho_{j,m} \quad [7]$$

4 Where σ_j is the standard deviation of returns for company “j,” σ_m is the standard
5 deviation of returns for the broad market (as measured, for example, by the S&P 500 Index), and
6 $\rho_{j,m}$ is the correlation of returns in between company j and the broad market. The Beta
7 coefficient therefore represents both relative volatility (*i.e.*, the standard deviation) of returns,
8 and the correlation in returns between the subject company and the overall market.

9 **Q. What assumptions did you include in your CAPM analysis?**

10 A. It is important to select the term (or maturity) of the risk-free rate that best
11 matches the life of the underlying investment. Electric utilities typically are long-duration
12 investments and, as such, the 30-year Treasury yield is more suitable for the purpose of
13 calculating the Cost of Equity. As such, I used two different measures of the risk-free rate:
14 (1) the current 30-day average yield on 30-year Treasury bonds (*i.e.*, 2.65 percent); and (2) the
15 projected 30-year Treasury yield (*i.e.*, 3.08 percent).

16 **Q. Why have you relied upon the 30-year Treasury yield for your CAPM**
17 **analysis?**

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

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

3 A. The approach is based on the market required return, less the current 30-year
4 Treasury yield. To estimate the market required return, I calculated the market capitalization
5 weighted average ROE based on the Constant Growth DCF model. To do so, I relied on data
6 from two sources: (1) Bloomberg; and (2) Value Line.⁶⁶ With respect to Bloomberg-derived
7 growth estimates, I calculated the expected dividend yield (using the same one-half growth rate
8 assumption described earlier), and combined that amount with the projected earnings growth rate
9 to arrive at the market capitalization weighted average DCF result. I performed that calculation
10 for each of the S&P 500 companies for which Bloomberg provided consensus growth rates. I
11 then subtracted the current 30-year Treasury yield from that amount to arrive at the market
12 DCF-derived *ex-ante* market risk premium estimate. In the case of Value Line, I performed the
13 same calculation, again using all companies for which five-year earnings growth rates were
14 available. The results of those calculations are provided in Schedule RBH-3.

15 As discussed above each input to the CAPM should be forward-looking. Witnesses in
16 prior rate cases have relied on historical measures of the MRP.⁶⁷ While it may be instructive to
17 review historical MRPs to inform the reasonableness of an *ex-ante* estimate (as I have done
18 below), they do not include investors’ expectations, and therefore are not appropriate for use in
19 the CAPM. As such, I believe my *ex-ante* approach is reasonable.

⁶⁶ See Schedule RBH-4.

⁶⁷ See, for example, Staff Report, Revenue Requirement and Cost of Service, Kansas City Power & Light Company, Case No. ER-2014-0370, at p. 55.

1 are more risky than returns to bondholders, equity investors must be compensated for bearing
2 that additional risk. Risk premium approaches, therefore, estimate the Cost of Equity as the sum
3 of the equity risk premium and the yield on a particular class of bonds. As noted in my
4 discussion of the CAPM, since the equity risk premium is not directly observable, it typically is
5 estimated using a variety of approaches, some of which incorporate *ex-ante*, or forward-looking
6 estimates of the Cost of Equity, and others that consider historical, or *ex-post*, estimates. An
7 alternative approach is to use actual authorized returns for electric utilities to estimate the Equity
8 Risk Premium.

9 **Q. Please explain how you performed your Bond Yield Plus Risk Premium**
10 **analysis.**

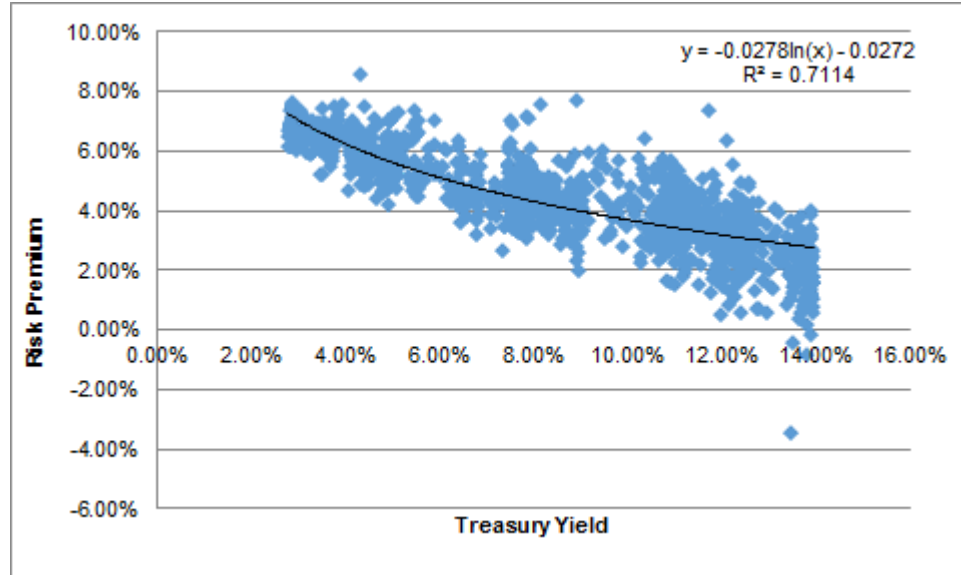
11 A. As indicated above, I first defined the Risk Premium as the difference between the
12 authorized ROE and the then-prevailing level of long-term (*i.e.*, 30-year) Treasury yield. I then
13 gathered data for 1,471 electric utility rate proceedings between January, 1980 and May 31,
14 2016. In addition to the authorized ROE, I also calculated the average period between the filing
15 of the case and the date of the final order (the “lag period”). In order to reflect the prevailing
16 level of interest rates during the pendency of the proceedings, I calculated the average 30-year
17 Treasury yield over the average lag period (approximately 200 days).

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

⁶⁹ See Schedule RBH-5.

1

Chart 14: Equity Risk Premium⁷⁰



2

3

4

5

6

7

8

As Chart 14 illustrates, over time there has been a statistically significant, negative relationship between the 30-year Treasury yield and the Equity Risk Premium. Consequently, simply applying the long-term average Equity Risk Premium of 4.50 percent would significantly understate the Cost of Equity and produce results well below any reasonable estimate. Based on the regression coefficients in Chart 14, however, the implied ROE is between 10.04 percent and 10.39 percent (see Table 12 and Schedule RBH-6).

9

Table 12: Summary of Bond Yield Plus Risk Premium Results⁷¹

	<i>Return on Equity</i>
Current 30-Year Treasury (2.65%)	10.04%
Near Term Projected 30-Year Treasury (3.08%)	10.05%
Long Term Projected 30-Year Treasury (4.45%)	10.39%

⁷⁰ See Schedule RBH-6.

⁷¹ See Schedule RBH-6.

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

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

6 KCPL must compete with other utilities all over the country for the
7 same capital. Therefore, the industry authorized return on equity
8 provides a reasonableness test for the recommendations offered by the
9 return on equity witnesses.⁷²

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

16 **Q. Have you provided an alternative Bond Yield Plus Risk Premium analysis to**
17 **account for how market conditions may affect the inverse relationship between interest**
18 **rates and the Equity Risk Premium?**

19 A. To address the prospect that the market conditions affect the relationship between
20 interest rates and the Equity Risk Premium, I first calculated the “credit spread”, or the
21 difference between the Moody’s A-Utility Bond yield and the 30-Year Treasury yield. To reflect
22 the risk of equity investments, I calculated the market volatility as measured by the CBOE

⁷² 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 p. 18; and *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), at pp. 18-19.

1 Volatility Index (the “VIX”) since 1990, the first year for which data was available. I then
2 performed a regression analysis in which the Equity Risk Premium is the dependent variable, and
3 Treasury yields, credit spreads, and the VIX were the explanatory variables. There were three
4 principal findings from those analyses (*see* Schedule RBH-7):

5 Credit spreads and the VIX do not negate the statistically significant inverse relationship
6 between Treasury yields and the Equity Risk Premium:

- 7 1. There is a high degree of correlation between credit spreads and the VIX,
8 indicating that the two move closely together. That is, the “relative risk” of the
9 two is not a meaningful factor.
- 10 2. Based on the current, and projected Treasury yields, the expected ROE falls in the
11 range of 9.74 percent to 10.04 percent. Those results overlap with my
12 recommended range, are consistent with the results of my updated Bond Yield
13 Plus Risk Premium analysis (*see* Schedule RBH-7).
- 14 3. Lastly, please note that neither the VIX nor credit spreads added significantly to
15 the explanatory value of the regression equations.

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

In the Matter of Union Electric Company)
d/b/a Ameren Missouri's Tariffs to)
Increase Its Revenues for Electric Service.) File No. ER-2016-0179

AFFIDAVIT OF ROBERT B. HEVERT

STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

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

1. My name is Robert B. Hevert and my office is located in Westborough, Massachusetts and I am Partner of ScottMadden, Inc.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Union Electric Company d/b/a Ameren Missouri consisting of 67 pages and Schedule(s) RBH-1 to RBH-8, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

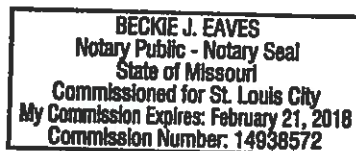


Robert B. Hevert

Subscribed and sworn to before me this 30th day of June, 2016.


Notary Public

My commission expires:
2-21-18





Resume of:
Robert B. Hevert
Partner

Summary

Bob Hevert is a financial and economic consultant with more than 30 years of 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. He has provided expert testimony on a wide range of financial, strategic, and economic matters on more than 100 occasions at the state, provincial, and federal levels.

Prior to joining ScottMadden, Bob served as managing partner at Sussex Economic Advisors, LLC. Throughout the course of his career, he has worked with numerous leading energy companies and financial institutions throughout North America. He has provided expert testimony and support of litigation in various regulatory proceedings on a variety of energy and economic issues. Bob earned a B.S. in business and economics from the University of Delaware and an M.B.A. with a concentration in finance from the University of Massachusetts at Amherst. Bob also holds the Chartered Financial Analyst designation.

Areas of Specialization

- Regulation and rates
- Utilities
- Fossil/hydro generation
- Markets and RTOs
- Nuclear generation
- Mergers and acquisitions
- Regulatory strategy and rate case support
- Capital project planning
- Strategic and business planning

Recent Expert Testimony Submission/Appearance

- Federal Energy Regulatory Commission – Return on Equity
- New Jersey Board of Public Utilities – Merger Approval
- New Mexico Public Regulation Commission – Cost of Capital and Financial Integrity
- United States District Court – PURPA and FERC Regulations
- Alberta Utilities Commission – Return on Equity and Capital Structure

Recent Assignments

- Provided expert testimony on the cost of capital for ratemaking purposes before numerous state utility regulatory agencies, the Alberta Utilities Commission, and the Federal Energy Regulatory Commission
- For an independent electric transmission provider in Texas, prepared an expert report on the economic damages with respect to failure to meet guaranteed completion dates. The report was filed as part of an arbitration proceeding and included a review of the ratemaking implications of economic damages
- Advised the board of directors of a publicly traded electric and natural gas combination utility on dividend policy issues, earnings payout trends and related capital market considerations
- Assisted a publicly traded utility with a strategic buy-side evaluation of a gas utility with more than \$1 billion in assets. The assignment included operational performance benchmarking, calculation of merger synergies, risk analysis, and review of the regulatory implications of the transaction
- Provided testimony before the Arkansas Public Service Commission in support of the acquisition of SourceGas LLC by Black Hills Corporation. The testimony addressed certain balance sheet capitalization and credit rating issues
- For the State of Maine Public Utility Commission, prepared a report that summarized the Northeast and Atlantic Canada natural gas power markets and analyzed the potential benefits and costs associated with natural gas pipeline expansions. The independent report was filed at the Maine Public Utility Commission



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Regulatory Commission of Alaska				
ENSTAR Natural Gas Company	06/16	ENSTAR Natural Gas Company	Matter No. TA 285-4	Return on Equity
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	05/16	Southwest Gas Corporation	Docket No. G-01551A-16-017	Return on Equity
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)
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)



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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				
Potomac Electric Power Company	05/16	Potomac Electric Power Company	Case No. 16-649 (Electric)	Return on Equity
Potomac Electric Power Company	05/16	Potomac Electric Power Company	Case No. 16-650 (Gas)	Return on Equity
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				
Washington Gas Light Company	02/16	Washington Gas Light Company	Formal Case No. FC1137	Return on Equity
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



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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
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				
Florida Power & Light Company	03/16	Florida Power & Light Company	Docket No. 160021-EI	Return on Equity
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



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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
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	06/16	Potomac Electric Power Company	Case No. 9418	Return on Equity
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



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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
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				
Otter Tail Power Corporation	02/16	Otter Tail Power Company	Docket No. E017/GR-15-1033	Return on Equity
Minnesota Energy Resources Corporation	09/15	Minnesota Energy Resources Corporation	Docket No. G-011/GR-15-736	Return on Equity



Resume of:
Robert B. Hevert
Partner

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
Missouri Public Service Commission				
Kansas City Power & Light Company	02/16	Kansas City Power & Light Company	Case No. ER-2016-0156	Return on Equity (electric)
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



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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				
Unitil Energy Systems, Inc.	04/16	Unitil Energy Systems, Inc.	Docket No. DE 16-384	Return on Equity
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
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., 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., 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				
The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	04/16	The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	BPU Docket No. GM15101196	Merger Approval
Atlantic City Electric Company	03/16	Atlantic City Electric Company	Docket No. ER16030252	Return on Equity
Pepco Holdings, Inc.	04/14	Atlantic City Electric Company	Docket No. ER14030245	Return on Equity



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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
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)



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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)
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				
Public Service Company of North Carolina, Inc.	03/16	Public Service Company of North Carolina, Inc.	Docket No. G-5, Sub 565	Return on Equity
Dominion North Carolina Power	03/16	Dominion North Carolina Power	Docket No. E-22, Sub 532	Return on Equity
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				
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/16	CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	Cause No. PUD201600094	Return on Equity
Oklahoma Gas & Electric Company	12/15	Oklahoma Gas & Electric Company	Cause No. PUD201500273	Return on Equity



Resume of:
Robert B. Hevert
 Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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
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				
Southwestern Public Service Company	02/16	Southwestern Public Service Company	Docket No. 44524	Return on Equity (electric)
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



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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
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
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



Resume of:
Robert B. Hevert
Partner

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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)
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

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	\$2.08	\$56.26	3.70%	3.77%	4.50%	3.00%	4.00%	3.83%	6.75%	7.60%	8.28%
Alliant Energy Corporation	LNT	\$1.18	\$35.91	3.27%	3.37%	6.10%	6.60%	6.00%	6.23%	9.37%	9.61%	9.98%
American Electric Power Company, Inc.	AEP	\$2.24	\$64.21	3.49%	3.57%	4.90%	4.10%	4.50%	4.50%	7.66%	8.07%	8.47%
Avista Corporation	AVA	\$1.37	\$40.20	3.41%	3.49%	5.00%	5.00%	5.00%	5.00%	8.49%	8.49%	8.49%
CMS Energy Corporation	CMS	\$1.24	\$40.94	3.03%	3.13%	6.40%	7.24%	6.00%	6.55%	9.12%	9.67%	10.38%
DTE Energy Company	DTE	\$2.92	\$89.05	3.28%	3.36%	5.80%	5.35%	4.50%	5.22%	7.85%	8.58%	9.17%
IDACORP, Inc.	IDA	\$2.04	\$72.54	2.81%	2.86%	4.00%	4.00%	3.00%	3.67%	5.85%	6.53%	6.87%
NorthWestern Corporation	NWE	\$2.00	\$57.42	3.48%	3.58%	5.00%	5.00%	6.50%	5.50%	8.57%	9.08%	10.10%
OGE Energy Corp.	OGE	\$1.10	\$29.76	3.70%	3.77%	5.20%	4.30%	2.50%	4.00%	6.24%	7.77%	8.99%
Otter Tail Corporation	OTTR	\$1.25	\$29.38	4.25%	4.38%	NA	6.00%	6.00%	6.00%	10.38%	10.38%	10.38%
Pinnacle West Capital Corporation	PNW	\$2.50	\$72.71	3.44%	3.51%	4.00%	3.73%	4.00%	3.91%	7.23%	7.42%	7.51%
PNM Resources, Inc.	PNM	\$0.88	\$32.12	2.74%	2.86%	7.60%	8.76%	9.00%	8.45%	10.44%	11.31%	11.86%
Portland General Electric Company	POR	\$1.28	\$40.21	3.18%	3.28%	6.40%	6.57%	5.50%	6.16%	8.77%	9.44%	9.86%
SCANA Corporation	SCG	\$2.30	\$68.85	3.34%	3.42%	5.30%	4.80%	4.50%	4.87%	7.92%	8.29%	8.73%
Xcel Energy Inc.	XEL	\$1.36	\$40.51	3.36%	3.45%	5.30%	5.27%	5.50%	5.36%	8.72%	8.80%	8.95%
PROXY GROUP MEAN				3.37%	3.45%	5.39%	5.31%	5.10%	5.28%	8.23%	8.74%	9.20%
PROXY GROUP MEDIAN				3.36%	3.45%	5.25%	5.00%	5.00%	5.22%	8.49%	8.58%	8.99%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals 30-trading day average as of May 31, 2016

[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	\$2.08	\$55.04	3.78%	3.85%	4.50%	3.00%	4.00%	3.83%	6.84%	7.68%	8.36%
Alliant Energy Corporation	LNT	\$1.18	\$35.24	3.33%	3.44%	6.10%	6.60%	6.00%	6.23%	9.43%	9.67%	10.04%
American Electric Power Company, Inc.	AEP	\$2.24	\$63.66	3.52%	3.60%	4.90%	4.10%	4.50%	4.50%	7.69%	8.10%	8.50%
Avista Corporation	AVA	\$1.37	\$39.22	3.49%	3.58%	5.00%	5.00%	5.00%	5.00%	8.58%	8.58%	8.58%
CMS Energy Corporation	CMS	\$1.24	\$40.55	3.06%	3.16%	6.40%	7.24%	6.00%	6.55%	9.15%	9.71%	10.41%
DTE Energy Company	DTE	\$2.92	\$87.58	3.33%	3.42%	5.80%	5.35%	4.50%	5.22%	7.91%	8.64%	9.23%
IDACORP, Inc.	IDA	\$2.04	\$72.14	2.83%	2.88%	4.00%	4.00%	3.00%	3.67%	5.87%	6.55%	6.88%
NorthWestern Corporation	NWE	\$2.00	\$58.61	3.41%	3.51%	5.00%	5.00%	6.50%	5.50%	8.50%	9.01%	10.02%
OGE Energy Corp.	OGE	\$1.10	\$27.90	3.94%	4.02%	5.20%	4.30%	2.50%	4.00%	6.49%	8.02%	9.24%
Otter Tail Corporation	OTTR	\$1.25	\$28.40	4.40%	4.53%	NA	6.00%	6.00%	6.00%	10.53%	10.53%	10.53%
Pinnacle West Capital Corporation	PNW	\$2.50	\$71.24	3.51%	3.58%	4.00%	3.73%	4.00%	3.91%	7.30%	7.49%	7.58%
PNM Resources, Inc.	PNM	\$0.88	\$32.35	2.72%	2.83%	7.60%	8.76%	9.00%	8.45%	10.42%	11.29%	11.84%
Portland General Electric Company	POR	\$1.28	\$39.34	3.25%	3.35%	6.40%	6.57%	5.50%	6.16%	8.84%	9.51%	9.93%
SCANA Corporation	SCG	\$2.30	\$67.31	3.42%	3.50%	5.30%	4.80%	4.50%	4.87%	7.99%	8.37%	8.81%
Xcel Energy Inc.	XEL	\$1.36	\$40.14	3.39%	3.48%	5.30%	5.27%	5.50%	5.36%	8.75%	8.84%	8.98%
PROXY GROUP MEAN				3.43%	3.52%	5.39%	5.31%	5.10%	5.28%	8.29%	8.80%	9.26%
PROXY GROUP MEDIAN				3.41%	3.50%	5.25%	5.00%	5.00%	5.22%	8.50%	8.64%	9.23%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals 90-trading day average as of May 31, 2016

[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
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	\$2.08	\$52.71	3.95%	4.02%	4.50%	3.00%	4.00%	3.83%	7.01%	7.86%	8.54%
Alliant Energy Corporation	LNT	\$1.18	\$32.61	3.60%	3.72%	6.10%	6.60%	6.00%	6.23%	9.71%	9.95%	10.32%
American Electric Power Company, Inc.	AEP	\$2.24	\$60.20	3.72%	3.80%	4.90%	4.10%	4.50%	4.50%	7.90%	8.30%	8.71%
Avista Corporation	AVA	\$1.37	\$36.62	3.74%	3.83%	5.00%	5.00%	5.00%	5.00%	8.83%	8.83%	8.83%
CMS Energy Corporation	CMS	\$1.24	\$38.00	3.26%	3.37%	6.40%	7.24%	6.00%	6.55%	9.36%	9.92%	10.62%
DTE Energy Company	DTE	\$2.92	\$83.96	3.48%	3.57%	5.80%	5.35%	4.50%	5.22%	8.06%	8.79%	9.38%
IDACORP, Inc.	IDA	\$2.04	\$69.33	2.94%	3.00%	4.00%	4.00%	3.00%	3.67%	5.99%	6.66%	7.00%
NorthWestern Corporation	NWE	\$2.00	\$56.25	3.56%	3.65%	5.00%	5.00%	6.50%	5.50%	8.64%	9.15%	10.17%
OGE Energy Corp.	OGE	\$1.10	\$27.27	4.03%	4.11%	5.20%	4.30%	2.50%	4.00%	6.58%	8.11%	9.34%
Otter Tail Corporation	OTTR	\$1.25	\$27.52	4.54%	4.68%	NA	6.00%	6.00%	6.00%	10.68%	10.68%	10.68%
Pinnacle West Capital Corporation	PNW	\$2.50	\$67.37	3.71%	3.78%	4.00%	3.73%	4.00%	3.91%	7.51%	7.69%	7.79%
PNM Resources, Inc.	PNM	\$0.88	\$30.47	2.89%	3.01%	7.60%	8.76%	9.00%	8.45%	10.60%	11.46%	12.02%
Portland General Electric Company	POR	\$1.28	\$37.99	3.37%	3.47%	6.40%	6.57%	5.50%	6.16%	8.96%	9.63%	10.05%
SCANA Corporation	SCG	\$2.30	\$62.73	3.67%	3.76%	5.30%	4.80%	4.50%	4.87%	8.25%	8.62%	9.06%
Xcel Energy Inc.	XEL	\$1.36	\$37.86	3.59%	3.69%	5.30%	5.27%	5.50%	5.36%	8.96%	9.05%	9.19%
PROXY GROUP MEAN				3.60%	3.70%	5.39%	5.31%	5.10%	5.28%	8.47%	8.98%	9.45%
PROXY GROUP MEDIAN				3.60%	3.72%	5.25%	5.00%	5.00%	5.22%	8.64%	8.83%	9.34%

Notes:

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional, equals 180-trading day average as of May 31, 2016
- [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
30 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
	Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution	Terminal	Terminal		
Company	Ticker	Price	Zacks	First Call	Value	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$56.26	4.50%	3.00%	4.00%	3.83%	5.28%	66.00%	64.00%	66.88%	\$0.00	9.36%	17.25	3.27
Alliant Energy Corporation	LNT	\$35.91	6.10%	6.60%	6.00%	6.23%	5.28%	64.00%	64.00%	66.88%	\$0.00	8.98%	19.00	3.60
American Electric Power Company, Inc.	AEP	\$64.21	4.90%	4.10%	4.50%	4.50%	5.28%	64.00%	66.00%	66.88%	\$0.00	9.26%	17.69	3.35
Avista Corporation	AVA	\$40.20	5.00%	5.00%	5.00%	5.00%	5.28%	68.00%	63.00%	66.88%	\$0.00	8.71%	20.49	3.88
CMS Energy Corporation	CMS	\$40.94	6.40%	7.24%	6.00%	6.55%	5.28%	63.00%	63.00%	66.88%	\$0.00	8.99%	18.99	3.60
DTE Energy Company	DTE	\$89.05	5.80%	5.35%	4.50%	5.22%	5.28%	61.00%	64.00%	66.88%	\$0.00	8.95%	19.16	3.63
IDACORP, Inc.	IDA	\$72.54	4.00%	4.00%	3.00%	3.67%	5.28%	53.00%	60.00%	66.88%	(\$0.00)	8.77%	20.17	3.82
NorthWestern Corporation	NWE	\$57.42	5.00%	5.00%	6.50%	5.50%	5.28%	65.00%	59.00%	66.88%	\$0.00	9.05%	18.68	3.54
OGE Energy Corp.	OGE	\$29.76	5.20%	4.30%	2.50%	4.00%	5.28%	64.00%	74.00%	66.88%	\$0.00	9.30%	17.50	3.32
Otter Tail Corporation	OTTR	\$29.38	NA	6.00%	6.00%	6.00%	5.28%	80.00%	63.00%	66.88%	\$0.00	9.48%	16.74	3.17
Pinnacle West Capital Corporation	PNW	\$72.71	4.00%	3.73%	4.00%	3.91%	5.28%	64.00%	65.00%	66.88%	\$0.00	8.95%	19.17	3.63
PNM Resources, Inc.	PNM	\$32.12	7.60%	8.76%	9.00%	8.45%	5.28%	51.00%	55.00%	66.88%	\$0.00	9.74%	15.77	2.99
Portland General Electric Company	POR	\$40.21	6.40%	6.57%	5.50%	6.16%	5.28%	56.00%	56.00%	66.88%	\$0.00	9.16%	18.14	3.44
SCANA Corporation	SCG	\$68.85	5.30%	4.80%	4.50%	4.87%	5.28%	59.00%	60.00%	66.88%	\$0.00	9.22%	17.85	3.38
Xcel Energy Inc.	XEL	\$40.51	5.30%	5.27%	5.50%	5.36%	5.28%	62.00%	63.00%	66.88%	\$0.00	9.13%	18.27	3.46

DCF Result			
Mean	9.14%	18.33	3.47
Max	9.74%	20.49	3.88
Min	8.71%	15.77	2.99

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.51	\$3.64	\$3.78	\$3.93	\$4.08	\$4.25	\$4.43	\$4.63	\$4.85	\$5.10	\$5.37	\$5.65	\$5.95	\$6.26	\$6.59	\$6.94
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.02	\$2.15	\$2.28	\$2.42	\$2.56	\$2.71	\$2.86	\$3.02	\$3.18	\$3.34	\$3.52	\$3.70	\$3.90	\$4.11
American Electric Power Company, Inc.	AEP	\$3.60	\$3.76	\$3.93	\$4.11	\$4.29	\$4.49	\$4.69	\$4.92	\$5.16	\$5.42	\$5.70	\$6.00	\$6.31	\$6.65	\$7.00	\$7.37	\$7.75
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$3.81	\$4.01	\$4.22
CMS Energy Corporation	CMS	\$1.89	\$2.01	\$2.15	\$2.29	\$2.44	\$2.60	\$2.76	\$2.93	\$3.10	\$3.28	\$3.46	\$3.64	\$3.83	\$4.04	\$4.25	\$4.47	\$4.71
DTE Energy Company	DTE	\$4.44	\$4.67	\$4.92	\$5.17	\$5.44	\$5.73	\$6.02	\$6.34	\$6.67	\$7.02	\$7.39	\$7.78	\$8.19	\$8.63	\$9.08	\$9.56	\$10.07
IDACORP, Inc.	IDA	\$3.87	\$4.01	\$4.16	\$4.31	\$4.47	\$4.63	\$4.82	\$5.02	\$5.24	\$5.49	\$5.77	\$6.07	\$6.39	\$6.73	\$7.08	\$7.46	\$7.85
NorthWestern Corporation	NWE	\$2.90	\$3.06	\$3.23	\$3.41	\$3.59	\$3.79	\$4.00	\$4.21	\$4.44	\$4.68	\$4.93	\$5.19	\$5.46	\$5.75	\$6.05	\$6.37	\$6.71
OGE Energy Corp.	OGE	\$1.71	\$1.78	\$1.85	\$1.92	\$2.00	\$2.08	\$2.17	\$2.26	\$2.37	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$3.38	\$3.55
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.89	\$3.04	\$3.20	\$3.37	\$3.55	\$3.74
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.23	\$4.40	\$4.57	\$4.75	\$4.95	\$5.16	\$5.40	\$5.66	\$5.94	\$6.26	\$6.59	\$6.94	\$7.30	\$7.69	\$8.09
PNM Resources, Inc.	PNM	\$1.64	\$1.78	\$1.93	\$2.09	\$2.27	\$2.46	\$2.66	\$2.85	\$3.05	\$3.24	\$3.43	\$3.61	\$3.80	\$4.00	\$4.21	\$4.43	\$4.67
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.30	\$2.44	\$2.59	\$2.75	\$2.92	\$3.09	\$3.26	\$3.44	\$3.63	\$3.82	\$4.03	\$4.24	\$4.46	\$4.70	\$4.94
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.19	\$4.39	\$4.61	\$4.83	\$5.07	\$5.32	\$5.59	\$5.88	\$6.19	\$6.51	\$6.86	\$7.22	\$7.60	\$8.00	\$8.43
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.46	\$2.59	\$2.73	\$2.87	\$3.02	\$3.19	\$3.35	\$3.53	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.50%	65.00%	64.50%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.50%	65.00%	65.50%	66.00%	66.15%	66.29%	66.44%	66.59%	66.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	63.00%	63.00%	63.00%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	61.00%	61.75%	62.50%	63.25%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	64.00%	66.50%	69.00%	71.50%	74.00%	72.81%	71.63%	70.44%	69.25%	68.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2031	Value
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.46	\$2.53	\$2.61	\$2.74	\$2.88	\$3.03	\$3.20	\$3.38	\$3.59	\$3.78	\$3.98	\$4.19	\$4.41	\$4.64	\$4.88	\$119.72
Alliant Energy Corporation	LNT	\$1.15	\$1.22	\$1.29	\$1.37	\$1.46	\$1.56	\$1.66	\$1.77	\$1.89	\$2.00	\$2.12	\$2.24	\$2.35	\$2.48	\$2.61	\$2.75	\$2.89	\$78.04
American Electric Power Company, Inc.	AEP	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.10	\$3.26	\$3.43	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.45	\$137.14
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.18	\$2.30	\$2.42	\$2.55	\$2.68	\$2.82	\$2.96	\$86.47
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.44	\$1.53	\$1.63	\$1.76	\$1.88	\$2.01	\$2.15	\$2.29	\$2.44	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.31	\$89.42
DTE Energy Company	DTE	\$2.85	\$3.04	\$3.23	\$3.44	\$3.66	\$3.88	\$4.12	\$4.37	\$4.63	\$4.91	\$5.21	\$5.48	\$5.77	\$6.07	\$6.40	\$6.73	\$7.07	\$192.85
IDACORP, Inc.	IDA	\$2.13	\$2.28	\$2.44	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.06	\$4.27	\$4.50	\$4.74	\$4.99	\$5.25	\$5.52	\$158.32
NorthWestern Corporation	NWE	\$1.99	\$2.05	\$2.11	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.65	\$3.85	\$4.05	\$4.26	\$4.49	\$4.73	\$125.34
OGE Energy Corp.	OGE	\$1.14	\$1.23	\$1.33	\$1.43	\$1.54	\$1.58	\$1.62	\$1.67	\$1.72	\$1.78	\$1.84	\$1.93	\$2.04	\$2.14	\$2.26	\$2.38	\$2.50	\$62.17
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04	\$2.14	\$2.26	\$2.38	\$2.50	\$2.61	\$62.61
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.64	\$4.88	\$5.14	\$5.41	\$5.69	\$155.17
PNM Resources, Inc.	PNM	\$0.91	\$1.00	\$1.11	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$2.97	\$3.12	\$3.27	\$73.62
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.00	\$2.18	\$2.36	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$3.48	\$89.69
SCANA Corporation	SCG	\$2.36	\$2.48	\$2.61	\$2.75	\$2.90	\$3.10	\$3.32	\$3.55	\$3.80	\$4.07	\$4.36	\$4.59	\$4.83	\$5.08	\$5.35	\$5.63	\$5.91	\$150.40
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.72	\$1.83	\$1.94	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.38	\$87.88

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial	5/31/16	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							

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Long-Term Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$56.26	4.50%	3.00%	4.00%	4.50%	5.28%	66.00%	64.00%	66.88%	\$0.00	9.54%	16.52	3.13
Alliant Energy Corporation	LNT	\$35.91	6.10%	6.60%	6.00%	6.60%	5.28%	64.00%	64.00%	66.88%	\$0.00	9.07%	18.56	3.52
American Electric Power Company, Inc.	AEP	\$64.21	4.90%	4.10%	4.50%	4.90%	5.28%	64.00%	66.00%	66.88%	\$0.00	9.36%	17.23	3.26
Avista Corporation	AVA	\$40.20	5.00%	5.00%	5.00%	5.00%	5.28%	68.00%	63.00%	66.88%	\$0.00	8.71%	20.49	3.88
CMS Energy Corporation	CMS	\$40.94	6.40%	7.24%	6.00%	7.24%	5.28%	63.00%	63.00%	66.88%	\$0.00	9.15%	18.17	3.44
DTE Energy Company	DTE	\$89.05	5.80%	5.35%	4.50%	5.80%	5.28%	61.00%	64.00%	66.88%	\$0.00	9.09%	18.45	3.50
IDACORP, Inc.	IDA	\$72.54	4.00%	4.00%	3.00%	4.00%	5.28%	53.00%	60.00%	66.88%	(\$0.00)	8.85%	19.73	3.74
NorthWestern Corporation	NWE	\$57.42	5.00%	5.00%	6.50%	6.50%	5.28%	65.00%	59.00%	66.88%	\$0.00	9.29%	17.53	3.32
OGE Energy Corp.	OGE	\$29.76	5.20%	4.30%	2.50%	5.20%	5.28%	64.00%	74.00%	66.88%	\$0.00	9.63%	16.17	3.06
Otter Tail Corporation	OTTR	\$29.38	NA	6.00%	6.00%	6.00%	5.28%	80.00%	63.00%	66.88%	\$0.00	9.48%	16.74	3.17
Pinnacle West Capital Corporation	PNW	\$72.71	4.00%	3.73%	4.00%	4.00%	5.28%	64.00%	65.00%	66.88%	\$0.00	8.97%	19.06	3.61
PNM Resources, Inc.	PNM	\$32.12	7.60%	8.76%	9.00%	9.00%	5.28%	51.00%	55.00%	66.88%	\$0.00	9.89%	15.26	2.89
Portland General Electric Company	POR	\$40.21	6.40%	6.57%	5.50%	6.57%	5.28%	56.00%	56.00%	66.88%	\$0.00	9.26%	17.67	3.35
SCANA Corporation	SCG	\$68.85	5.30%	4.80%	4.50%	5.30%	5.28%	59.00%	60.00%	66.88%	\$0.00	9.33%	17.36	3.29
Xcel Energy Inc.	XEL	\$40.51	5.30%	5.27%	5.50%	5.50%	5.28%	62.00%	63.00%	66.88%	\$0.00	9.17%	18.11	3.43

DCF Result			
Mean	9.25%	17.80	3.37
Max	9.89%	20.49	3.88
Min	8.71%	15.26	2.89

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.53	\$3.69	\$3.86	\$4.03	\$4.21	\$4.41	\$4.62	\$4.84	\$5.09	\$5.35	\$5.63	\$5.93	\$6.24	\$6.57	\$6.92	\$7.28
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.04	\$2.18	\$2.32	\$2.47	\$2.62	\$2.77	\$2.93	\$3.09	\$3.26	\$3.43	\$3.61	\$3.80	\$4.00	\$4.21
American Electric Power Company, Inc.	AEP	\$3.60	\$3.78	\$3.96	\$4.16	\$4.36	\$4.57	\$4.80	\$5.04	\$5.30	\$5.57	\$5.86	\$6.17	\$6.50	\$6.84	\$7.20	\$7.58	\$7.98
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$3.81	\$4.01	\$4.22
CMS Energy Corporation	CMS	\$1.89	\$2.03	\$2.17	\$2.33	\$2.50	\$2.68	\$2.87	\$3.05	\$3.25	\$3.44	\$3.63	\$3.82	\$4.02	\$4.24	\$4.46	\$4.70	\$4.94
DTE Energy Company	DTE	\$4.44	\$4.70	\$4.97	\$5.26	\$5.56	\$5.89	\$6.22	\$6.57	\$6.94	\$7.31	\$7.71	\$8.11	\$8.54	\$8.99	\$9.47	\$9.97	\$10.49
IDACORP, Inc.	IDA	\$3.87	\$4.02	\$4.19	\$4.35	\$4.53	\$4.71	\$4.91	\$5.12	\$5.36	\$5.62	\$5.91	\$6.22	\$6.55	\$6.89	\$7.26	\$7.64	\$8.04
NorthWestern Corporation	NWE	\$2.90	\$3.09	\$3.29	\$3.50	\$3.73	\$3.97	\$4.22	\$4.48	\$4.74	\$5.01	\$5.29	\$5.57	\$5.86	\$6.17	\$6.50	\$6.84	\$7.20
OGE Energy Corp.	OGE	\$1.71	\$1.80	\$1.89	\$1.99	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$3.49	\$3.68	\$3.87
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.89	\$3.04	\$3.20	\$3.37	\$3.55	\$3.74
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.08	\$4.24	\$4.41	\$4.59	\$4.77	\$4.97	\$5.19	\$5.43	\$5.69	\$5.98	\$6.30	\$6.63	\$6.98	\$7.35	\$7.74	\$8.15
PNM Resources, Inc.	PNM	\$1.64	\$1.79	\$1.95	\$2.12	\$2.31	\$2.52	\$2.73	\$2.95	\$3.16	\$3.36	\$3.56	\$3.75	\$3.95	\$4.16	\$4.38	\$4.61	\$4.85
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.32	\$2.47	\$2.63	\$2.80	\$2.98	\$3.17	\$3.35	\$3.54	\$3.74	\$3.94	\$4.14	\$4.36	\$4.59	\$4.84	\$5.09
SCANA Corporation	SCG	\$3.81	\$4.01	\$4.22	\$4.45	\$4.68	\$4.93	\$5.19	\$5.47	\$5.76	\$6.06	\$6.38	\$6.72	\$7.07	\$7.45	\$7.84	\$8.25	\$8.69
Xcel Energy Inc.	XEL	\$2.10	\$2.22	\$2.34	\$2.47	\$2.60	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$3.57	\$3.76	\$3.95	\$4.16	\$4.38	\$4.61	\$4.86

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.50%	65.00%	64.50%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.50%	65.00%	65.50%	66.00%	66.15%	66.29%	66.44%	66.59%	66.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	63.00%	63.00%	63.00%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	61.00%	61.75%	62.50%	63.25%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	64.00%	66.50%	69.00%	71.50%	74.00%	72.81%	71.63%	70.44%	69.25%	68.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2031	
ALLETE, Inc.	ALE	\$2.33	\$2.42	\$2.51	\$2.60	\$2.70	\$2.84	\$3.00	\$3.17	\$3.35	\$3.55	\$3.77	\$3.96	\$4.17	\$4.39	\$4.63	\$4.87	\$120.27	
Alliant Energy Corporation	LNT	\$1.15	\$1.23	\$1.31	\$1.39	\$1.48	\$1.59	\$1.70	\$1.82	\$1.93	\$2.06	\$2.18	\$2.29	\$2.42	\$2.54	\$2.68	\$2.82	\$78.23	
American Electric Power Company, Inc.	AEP	\$2.42	\$2.56	\$2.70	\$2.86	\$3.02	\$3.17	\$3.34	\$3.52	\$3.71	\$3.91	\$4.13	\$4.34	\$4.57	\$4.82	\$5.07	\$5.34	\$137.51	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.18	\$2.30	\$2.42	\$2.55	\$2.68	\$2.82	\$86.47	
CMS Energy Corporation	CMS	\$1.28	\$1.37	\$1.47	\$1.57	\$1.69	\$1.82	\$1.96	\$2.11	\$2.26	\$2.41	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$89.84	
DTE Energy Company	DTE	\$2.87	\$3.07	\$3.29	\$3.52	\$3.77	\$4.01	\$4.27	\$4.54	\$4.82	\$5.12	\$5.43	\$5.71	\$6.01	\$6.33	\$6.67	\$7.02	\$193.59	
IDACORP, Inc.	IDA	\$2.13	\$2.29	\$2.46	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.88	\$4.16	\$4.38	\$4.61	\$4.85	\$5.11	\$5.38	\$158.66	
NorthWestern Corporation	NWE	\$2.01	\$2.09	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.72	\$3.92	\$4.13	\$4.35	\$4.57	\$4.82	\$126.24	
OGE Energy Corp.	OGE	\$1.15	\$1.26	\$1.37	\$1.50	\$1.63	\$1.69	\$1.75	\$1.81	\$1.87	\$1.94	\$2.00	\$2.11	\$2.22	\$2.34	\$2.46	\$2.59	\$62.63	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04	\$2.14	\$2.26	\$2.38	\$2.50	\$62.61	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.77	\$3.98	\$4.21	\$4.43	\$4.67	\$4.92	\$5.17	\$5.45	\$155.26	
PNM Resources, Inc.	PNM	\$0.91	\$1.01	\$1.13	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.64	\$2.78	\$2.93	\$3.08	\$3.24	\$73.98	
Portland General Electric Company	POR	\$1.22	\$1.30	\$1.38	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.43	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$89.98	
SCANA Corporation	SCG	\$2.37	\$2.50	\$2.65	\$2.80	\$2.96	\$3.18	\$3.41	\$3.65	\$3.92	\$4.20	\$4.49	\$4.73	\$4.98	\$5.24	\$5.52	\$5.81	\$150.87	
Xcel Energy Inc.	XEL	\$1.37	\$1.46	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.36	\$2.51	\$2.65	\$2.78	\$2.93	\$3.09	\$3.25	\$87.97	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/31/16	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	6/30/31
ALLETE, Inc.	ALE	(\$56.26)	\$0.00	\$1.37	\$2.38	\$2.51	\$2.60	\$2.70	\$2.84	\$3.00	\$3.17	\$3.35							

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

Inputs	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	
	Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal	
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$56.26	4.50%	3.00%	4.00%	3.00%	5.28%	66.00%	64.00%	66.88%	\$0.00	9.14%	18.22	3.45
Alliant Energy Corporation	LNT	\$35.91	6.10%	6.60%	6.00%	6.00%	5.28%	64.00%	64.00%	66.88%	\$0.00	8.93%	19.29	3.66
American Electric Power Company, Inc.	AEP	\$64.21	4.90%	4.10%	4.50%	4.10%	5.28%	64.00%	66.00%	66.88%	\$0.00	9.16%	18.15	3.44
Avista Corporation	AVA	\$40.20	5.00%	5.00%	5.00%	5.00%	5.28%	68.00%	63.00%	66.88%	\$0.00	8.71%	20.49	3.88
CMS Energy Corporation	CMS	\$40.94	6.40%	7.24%	6.00%	6.00%	5.28%	63.00%	63.00%	66.88%	\$0.00	8.86%	19.67	3.73
DTE Energy Company	DTE	\$89.05	5.80%	5.35%	4.50%	4.50%	5.28%	61.00%	64.00%	66.88%	\$0.00	8.79%	20.08	3.80
IDACORP, Inc.	IDA	\$72.54	4.00%	4.00%	3.00%	3.00%	5.28%	53.00%	60.00%	66.88%	(\$0.00)	8.62%	21.07	3.99
NorthWestern Corporation	NWE	\$57.42	5.00%	5.00%	6.50%	5.00%	5.28%	65.00%	59.00%	66.88%	\$0.00	8.93%	19.29	3.66
OGE Energy Corp.	OGE	\$29.76	5.20%	4.30%	2.50%	2.50%	5.28%	64.00%	74.00%	66.88%	\$0.00	8.92%	19.35	3.67
Otter Tail Corporation	OTTR	\$29.38	NA	6.00%	6.00%	6.00%	5.28%	80.00%	63.00%	66.88%	\$0.00	9.48%	16.74	3.17
Pinnacle West Capital Corporation	PNW	\$72.71	4.00%	3.73%	4.00%	3.73%	5.28%	64.00%	65.00%	66.88%	\$0.00	8.91%	19.40	3.68
PNM Resources, Inc.	PNM	\$32.12	7.60%	8.76%	9.00%	7.60%	5.28%	51.00%	55.00%	66.88%	\$0.00	9.52%	16.61	3.15
Portland General Electric Company	POR	\$40.21	6.40%	6.57%	5.50%	5.50%	5.28%	56.00%	56.00%	66.88%	\$0.00	9.00%	18.91	3.58
SCANA Corporation	SCG	\$68.85	5.30%	4.80%	4.50%	4.50%	5.28%	59.00%	60.00%	66.88%	\$0.00	9.13%	18.28	3.46
Xcel Energy Inc.	XEL	\$40.51	5.30%	5.27%	5.50%	5.27%	5.28%	62.00%	63.00%	66.88%	\$0.00	9.11%	18.38	3.48

DCF Result			
Mean	9.01%	18.93	3.59
Max	9.52%	21.07	3.99
Min	8.62%	16.61	3.15

Projected Annual Earnings per Share	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.48	\$3.59	\$3.69	\$3.80	\$3.92	\$4.05	\$4.20	\$4.38	\$4.57	\$4.80	\$5.05	\$5.32	\$5.60	\$5.90	\$6.21	\$6.53
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.89	\$2.01	\$2.13	\$2.25	\$2.39	\$2.52	\$2.67	\$2.81	\$2.97	\$3.12	\$3.29	\$3.46	\$3.64	\$3.84	\$4.04
American Electric Power Company, Inc.	AEP	\$3.60	\$3.75	\$3.90	\$4.06	\$4.23	\$4.40	\$4.59	\$4.80	\$5.02	\$5.27	\$5.53	\$5.83	\$6.13	\$6.46	\$6.80	\$7.16	\$7.53
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$3.81	\$4.01	\$4.22
CMS Energy Corporation	CMS	\$1.89	\$2.00	\$2.12	\$2.25	\$2.39	\$2.53	\$2.68	\$2.83	\$2.99	\$3.16	\$3.33	\$3.50	\$3.69	\$3.88	\$4.09	\$4.30	\$4.53
DTE Energy Company	DTE	\$4.44	\$4.64	\$4.85	\$5.07	\$5.29	\$5.53	\$5.79	\$6.06	\$6.36	\$6.68	\$7.02	\$7.40	\$7.79	\$8.20	\$8.63	\$9.08	\$9.56
IDACORP, Inc.	IDA	\$3.87	\$3.99	\$4.11	\$4.23	\$4.36	\$4.49	\$4.64	\$4.81	\$5.01	\$5.24	\$5.49	\$5.78	\$6.09	\$6.41	\$6.75	\$7.11	\$7.48
NorthWestern Corporation	NWE	\$2.90	\$3.05	\$3.20	\$3.36	\$3.52	\$3.70	\$3.89	\$4.09	\$4.30	\$4.52	\$4.76	\$5.01	\$5.27	\$5.55	\$5.84	\$6.15	\$6.47
OGE Energy Corp.	OGE	\$1.71	\$1.75	\$1.80	\$1.84	\$1.89	\$1.93	\$1.99	\$2.06	\$2.14	\$2.23	\$2.34	\$2.46	\$2.59	\$2.73	\$2.88	\$3.03	\$3.19
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.89	\$3.04	\$3.20	\$3.37	\$3.55	\$3.74
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.22	\$4.38	\$4.54	\$4.71	\$4.90	\$5.10	\$5.33	\$5.59	\$5.87	\$6.18	\$6.50	\$6.85	\$7.21	\$7.59	\$7.99
PNM Resources, Inc.	PNM	\$1.64	\$1.76	\$1.90	\$2.04	\$2.20	\$2.37	\$2.54	\$2.71	\$2.88	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$4.18	\$4.40
Portland General Electric Company	POR	\$2.04	\$2.15	\$2.27	\$2.40	\$2.53	\$2.67	\$2.81	\$2.96	\$3.12	\$3.29	\$3.47	\$3.65	\$3.84	\$4.04	\$4.26	\$4.48	\$4.72
SCANA Corporation	SCG	\$3.81	\$3.98	\$4.16	\$4.35	\$4.54	\$4.75	\$4.97	\$5.20	\$5.46	\$5.73	\$6.03	\$6.35	\$6.68	\$7.03	\$7.40	\$7.80	\$8.21
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.71	\$2.86	\$3.01	\$3.17	\$3.33	\$3.51	\$3.70	\$3.89	\$4.10	\$4.31	\$4.54	\$4.78

Projected Annual Dividend Payout Ratio	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]	
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.50%	65.00%	64.50%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.50%	65.00%	65.50%	66.00%	66.15%	66.29%	66.44%	66.59%	66.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	63.00%	63.00%	63.00%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	61.00%	61.75%	62.50%	63.25%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	64.00%	66.50%	69.00%	71.50%	74.00%	72.81%	71.63%	70.44%	69.25%	68.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%

Projected Annual Cash Flows	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Value
ALLETE, Inc.	ALE	\$2.30	\$2.35	\$2.40	\$2.45	\$2.51	\$2.61	\$2.73	\$2.86	\$3.02	\$3.19	\$3.38	\$3.56	\$3.74	\$3.94	\$4.15	\$4.37	\$119.07
Alliant Energy Corporation	LNT	\$1.14	\$1.21	\$1.28	\$1.36	\$1.44	\$1.54	\$1.64	\$1.75	\$1.86	\$1.97	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$2.70	\$77.92
American Electric Power Company, Inc.	AEP	\$2.40	\$2.52	\$2.64	\$2.77	\$2.90	\$3.04	\$3.18	\$3.34	\$3.51	\$3.69	\$3.90	\$4.10	\$4.32	\$4.55	\$4.79	\$5.04	\$136.79
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.18	\$2.30	\$2.42	\$2.55	\$2.68	\$2.82	\$86.47
CMS Energy Corporation	CMS	\$1.26	\$1.34	\$1.42	\$1.50	\$1.59	\$1.70	\$1.82	\$1.94	\$2.07	\$2.20	\$2.34	\$2.47	\$2.60	\$2.73	\$2.88	\$3.03	\$89.10
DTE Energy Company	DTE	\$2.83	\$2.99	\$3.17	\$3.35	\$3.54	\$3.73	\$3.94	\$4.16	\$4.40	\$4.66	\$4.95	\$5.21	\$5.48	\$5.77	\$6.08	\$6.40	\$192.00
IDACORP, Inc.	IDA	\$2.11	\$2.25	\$2.39	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.38	\$3.61	\$3.87	\$4.07	\$4.29	\$4.51	\$4.75	\$5.00	\$157.66
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.24	\$2.32	\$2.40	\$2.49	\$2.58	\$2.67	\$2.76	\$2.85	\$2.94	\$3.03	\$3.12	\$124.91
OGE Energy Corp.	OGE	\$1.12	\$1.19	\$1.27	\$1.35	\$1.43	\$1.45	\$1.48	\$1.51	\$1.55	\$1.59	\$1.65	\$1.74	\$1.83	\$1.92	\$2.02	\$2.13	\$61.67
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04	\$2.14	\$2.26	\$2.38	\$2.50	\$62.61
Pinnacle West Capital Corporation	PNW	\$2.60	\$2.71	\$2.82	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.34	\$155.00
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.92	\$2.10	\$2.28	\$2.40	\$2.52	\$2.65	\$2.79	\$2.94	\$73.07
Portland General Electric Company	POR	\$1.21	\$1.27	\$1.34	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$89.26
SCANA Corporation	SCG	\$2.35	\$2.47	\$2.59	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.70	\$3.96	\$4.24	\$4.47	\$4.70	\$4.95	\$5.21	\$5.49	\$150.01
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$87.83

Projected Annual Data Investor Cash Flows	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]	
Company	Ticker	Initial Outflow	5/31/16	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	6/30/31
ALLETE, Inc.	ALE	(\$56.26)	\$0.00	\$1.35	\$2.33	\$2													

Multi-Stage DCF Notes:

- [1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of May 31, 2016
- [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 (1 + (Column [6] + (((Column [7] - Column [6]) / (2026 - 2021 + 1)) x (2021 - 2020)))) x Column [19]
- [21] Equals (1 + (Column [6] + (((Column [7] - Column [6]) / (2026 - 2021 + 1)) x (2022 - 2020)))) x Column [20]
- [22] Equals (1 + (Column [6] + (((Column [7] - Column [6]) / (2026 - 2021 + 1)) x (2023 - 2020)))) x Column [21]
- [23] Equals (1 + (Column [6] + (((Column [7] - Column [6]) / (2026 - 2021 + 1)) x (2024 - 2020)))) x Column [22]
- [24] Equals (1 + (Column [6] + (((Column [7] - Column [6]) / (2026 - 2021 + 1)) x (2025 - 2020)))) x Column [23]
- [25] Equals Column [24] x (1 + Column [6])
- [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 [35] - Column [31]) / 4)
- [33] Equals Column [32] + ((Column [35] - Column [31]) / 4)
- [34] Equals Column [33] + ((Column [35] - Column [31]) / 4)
- [35] Equals Column [8]
- [36] Equals Column [35] + ((Column [41] - Column [35]) / 6)
- [37] Equals Column [36] + ((Column [41] - Column [35]) / 6)
- [38] Equals Column [37] + ((Column [41] - Column [35]) / 6)
- [39] Equals Column [38] + ((Column [41] - Column [35]) / 6)
- [40] Equals Column [39] + ((Column [41] - Column [35]) / 6)
- [41] Equals Column [9]
- [42] Equals Column [9]
- [43] Equals Column [9]
- [44] Equals Column [9]
- [45] Equals Column [9]
- [46] Equals Column [9]
- [47] Equals Column [15] x Column [31]
- [48] Equals Column [16] x Column [32]
- [49] Equals Column [17] x Column [33]
- [50] Equals Column [18] x Column [34]
- [51] Equals Column [19] x Column [35]
- [52] Equals Column [20] x Column [36]
- [53] Equals Column [21] x Column [37]
- [54] Equals Column [22] x Column [38]
- [55] Equals Column [23] x Column [39]
- [56] Equals Column [24] x Column [40]
- [57] Equals Column [25] x Column [41]
- [58] Equals Column [26] x Column [42]
- [59] Equals Column [27] x Column [43]
- [60] Equals Column [28] x Column [44]
- [61] Equals Column [29] x Column [45]
- [62] Equals Column [30] x Column [46]
- [63] Equals (Column [62] x (1 + Column [6])) / (Column [11] - Column [6])
- [64] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [65] through Column [81]
- [65] Equals \$0.00
- [66] Equals Column [47] x (12/31/2016 - 5/31/2016) / 365
- [67] Equals Column [47] + (0.5 x Column [5])
- [68] Equals Column [49]
- [69] Equals Column [50]
- [70] Equals Column [51]
- [71] Equals Column [52]
- [72] Equals Column [53]
- [73] Equals Column [54]
- [74] Equals Column [55]
- [75] Equals Column [56]
- [76] Equals Column [57]
- [77] Equals Column [58]
- [78] Equals Column [59]
- [79] Equals Column [60]
- [80] Equals Column [61]
- [81] Equals Column [62] + [63]

Multi-Stage DCF Notes:

- [1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of May 31, 2016
- [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 $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2026 - 2021 + 1)) \times (2021 - 2020)))) \times \text{Column [19]}$
- [21] Equals $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2026 - 2021 + 1)) \times (2022 - 2020)))) \times \text{Column [20]}$
- [22] Equals $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2026 - 2021 + 1)) \times (2023 - 2020)))) \times \text{Column [21]}$
- [23] Equals $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2026 - 2021 + 1)) \times (2024 - 2020)))) \times \text{Column [22]}$
- [24] Equals $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2026 - 2021 + 1)) \times (2025 - 2020)))) \times \text{Column [23]}$
- [25] Equals Column [24] x (1 + Column [6])
- [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 [35] - Column [31]) / 4)
- [33] Equals Column [32] + ((Column [35] - Column [31]) / 4)
- [34] Equals Column [33] + ((Column [35] - Column [31]) / 4)
- [35] Equals Column [8]
- [36] Equals Column [35] + ((Column [41] - Column [35]) / 6)
- [37] Equals Column [36] + ((Column [41] - Column [35]) / 6)
- [38] Equals Column [37] + ((Column [41] - Column [35]) / 6)
- [39] Equals Column [38] + ((Column [41] - Column [35]) / 6)
- [40] Equals Column [39] + ((Column [41] - Column [35]) / 6)
- [41] Equals Column [9]
- [42] Equals Column [9]
- [43] Equals Column [9]
- [44] Equals Column [9]
- [45] Equals Column [9]
- [46] Equals Column [9]
- [47] Equals Column [15] x Column [31]
- [48] Equals Column [16] x Column [32]
- [49] Equals Column [17] x Column [33]
- [50] Equals Column [18] x Column [34]
- [51] Equals Column [19] x Column [35]
- [52] Equals Column [20] x Column [36]
- [53] Equals Column [21] x Column [37]
- [54] Equals Column [22] x Column [38]
- [55] Equals Column [23] x Column [39]
- [56] Equals Column [24] x Column [40]
- [57] Equals Column [25] x Column [41]
- [58] Equals Column [26] x Column [42]
- [59] Equals Column [27] x Column [43]
- [60] Equals Column [28] x Column [44]
- [61] Equals Column [29] x Column [45]
- [62] Equals Column [30] x Column [46]
- [63] Equals Column [12] x Column [30]
- [64] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [65] through Column [81]
- [65] Equals \$0.00
- [66] Equals Column [47] x (12/31/2016 - 5/31/2016) / 365
- [67] Equals Column [47] + (0.5 x Column [5])
- [68] Equals Column [49]
- [69] Equals Column [50]
- [70] Equals Column [51]
- [71] Equals Column [52]
- [72] Equals Column [53]
- [73] Equals Column [54]
- [74] Equals Column [55]
- [75] Equals Column [56]
- [76] Equals Column [57]
- [77] Equals Column [58]
- [78] Equals Column [59]
- [79] Equals Column [60]
- [80] Equals Column [61]
- [81] Equals Column [62] + [63]

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

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-day	Implied Market
Market Return	average)	Risk Premium
13.14%	2.65%	10.50%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	15,041.37	0.08%	0.97%	10.13%	11.15%	0.0087%
ALCOA INC	AA	12,191.04	0.06%	1.31%	5.00%	6.34%	0.0040%
AMERICAN AIRLINES GROUP INC	AAL	18,449.46	0.10%	1.36%	-15.44%	-14.19%	-0.0136%
ADVANCE AUTO PARTS INC	AAP	11,312.89	0.06%	0.17%	11.01%	11.18%	0.0066%
APPLE INC	AAPL	546,975.66	2.84%	2.19%	11.56%	13.88%	0.3946%
ABBVIE INC	ABBV	101,780.38	0.53%	3.62%	12.01%	15.85%	0.0838%
AMERISOURCEBERGEN CORP	ABC	16,184.79	0.08%	1.80%	12.50%	14.41%	0.0121%
ABBOTT LABORATORIES	ABT	58,222.50	0.30%	2.64%	11.73%	14.53%	0.0439%
ACCENTURE PLC-CL A	ACN	77,763.18	0.40%	1.93%	9.72%	11.75%	0.0475%
ADOBE SYSTEMS INC	ADBE	49,755.84	0.26%	0.00%	20.29%	20.29%	0.0524%
ANALOG DEVICES INC	ADI	17,979.96	0.09%	2.83%	8.92%	11.88%	0.0111%
ARCHER-DANIELS-MIDLAND CO	ADM	25,130.89	0.13%	2.81%	6.29%	9.19%	0.0120%
AUTOMATIC DATA PROCESSING	ADP	40,014.18	0.21%	2.36%	10.29%	12.76%	0.0265%
ALLIANCE DATA SYSTEMS CORP	ADS	13,095.83	0.07%	0.00%	14.20%	14.20%	0.0097%
AUTODESK INC	ADSK	13,086.79	0.07%	0.00%	20.96%	20.96%	0.0143%
AMEREN CORPORATION	AEE	12,022.55	0.06%	3.51%	5.28%	8.88%	0.0055%
AMERICAN ELECTRIC POWER	AEP	31,802.72	0.17%	3.49%	5.05%	8.62%	0.0143%
AES CORP	AES	7,308.32	0.04%	3.98%	4.92%	8.99%	0.0034%
AETNA INC	AET	39,698.44	0.21%	0.89%	11.11%	12.05%	0.0248%
AFLAC INC	AFL	28,755.54	0.15%	2.40%	4.64%	7.10%	0.0106%
ALLERGAN PLC	AGN	93,252.54	0.48%	0.00%	13.50%	13.50%	0.0654%
AMERICAN INTERNATIONAL GROUP	AIG	64,769.59	0.34%	2.20%	9.50%	11.81%	0.0397%
APARTMENT INVT & MGMT CO -A	AIV	6,679.21	0.03%	3.10%	11.77%	15.05%	0.0052%
ASSURANT INC	AIZ	5,412.67	0.03%	2.25%	12.36%	14.75%	0.0041%
ARTHUR J GALLAGHER & CO	AJG	8,560.64	0.04%	3.15%	9.16%	12.45%	0.0055%
AKAMAI TECHNOLOGIES INC	AKAM	9,583.80	0.05%	0.00%	17.33%	17.33%	0.0086%
ALASKA AIR GROUP INC	ALK	8,183.97	0.04%	1.60%	5.49%	7.14%	0.0030%
ALLSTATE CORP	ALL	25,273.53	0.13%	1.96%	8.25%	10.29%	0.0135%
ALLEGION PLC	ALLE	6,475.43	0.03%	0.72%	13.57%	14.34%	0.0048%
ALEXION PHARMACEUTICALS INC	ALXN	33,804.64	0.18%	0.00%	26.10%	26.10%	0.0458%
APPLIED MATERIALS INC	AMAT	26,596.89	0.14%	1.66%	15.43%	17.22%	0.0238%
AMETEK INC	AME	11,161.67	0.06%	0.83%	10.30%	11.18%	0.0065%
AFFILIATED MANAGERS GROUP	AMG	9,337.38	0.05%	0.00%	13.91%	13.91%	0.0067%
AMGEN INC	AMGN	118,654.74	0.62%	2.52%	7.97%	10.59%	0.0653%
AMERIPRISE FINANCIAL INC	AMP	16,858.25	0.09%	2.85%	11.00%	14.00%	0.0123%
AMERICAN TOWER CORP	AMT	44,916.81	0.23%	2.05%	20.41%	22.68%	0.0529%
AMAZON.COM INC	AMZN	341,032.53	1.77%	0.00%	50.75%	50.75%	0.8992%
AUTONATION INC	AN	5,200.55	0.03%	0.00%	8.64%	8.64%	0.0023%
ANTHEM INC	ANTM	34,751.87	0.18%	1.97%	8.91%	10.96%	0.0198%
AON PLC	AON	28,948.00	0.15%	1.19%	11.23%	12.48%	0.0188%
APACHE CORP	APA	21,629.41	0.11%	1.76%	7.00%	8.82%	0.0099%
ANADARKO PETROLEUM CORP	APC	26,470.72	0.14%	0.39%	0.46%	0.84%	0.0012%
AIR PRODUCTS & CHEMICALS INC	APD	30,821.82	0.16%	2.33%	8.17%	10.60%	0.0170%
AMPHENOL CORP-CL A	APH	18,081.48	0.09%	0.98%	9.26%	10.29%	0.0097%
ACTIVISION BLIZZARD INC	ATVI	28,982.82	0.15%	0.66%	12.00%	12.70%	0.0191%
AVALONBAY COMMUNITIES INC	AVB	24,672.79	0.13%	2.99%	7.42%	10.53%	0.0135%
BROADCOM LTD	AVGO	60,269.55	0.31%	1.20%	15.14%	16.43%	0.0515%
AVERY DENNISON CORP	AVY	6,632.91	0.03%	2.20%	8.20%	10.49%	0.0036%
AMERICAN WATER WORKS CO INC	AWK	13,168.64	0.07%	1.99%	7.34%	9.41%	0.0064%
AMERICAN EXPRESS CO	AXP	62,539.94	0.32%	1.85%	8.20%	10.12%	0.0329%
ACUITY BRANDS INC	AYI	11,352.59	0.06%	0.20%	19.60%	19.82%	0.0117%
AUTOZONE INC	AZO	22,758.45	0.12%	0.00%	11.93%	11.93%	0.0141%
BOEING CO/THE	BA	80,358.96	0.42%	3.46%	12.08%	15.75%	0.0658%
BANK OF AMERICA CORP	BAC	151,921.63	0.79%	1.81%	7.90%	9.78%	0.0772%
BAXTER INTERNATIONAL INC	BAX	23,835.66	0.12%	1.11%	10.50%	11.67%	0.0145%
BED BATH & BEYOND INC	BBBY	6,907.91	0.04%	1.04%	6.76%	7.83%	0.0028%
BB&T CORP	BBT	29,534.20	0.15%	3.10%	5.60%	8.78%	0.0135%
BEST BUY CO INC	BBY	10,425.60	0.05%	3.97%	10.18%	14.35%	0.0078%
CR BARD INC	BCR	16,059.73	0.08%	0.45%	10.75%	11.22%	0.0094%
BECTON DICKINSON AND CO	BDX	35,321.02	0.18%	1.59%	11.51%	13.19%	0.0242%
FRANKLIN RESOURCES INC	BEN	21,847.19	0.11%	1.93%	6.19%	8.18%	0.0093%
BROWN-FORMAN CORP-CLASS B	BF/B	20,207.95	0.10%	1.35%	6.92%	8.31%	0.0087%
BAKER HUGHES INC	BHI	20,310.44	0.11%	1.47%	14.00%	15.57%	0.0164%
BIOGEN INC	BIIB	63,465.79	0.33%	0.00%	8.27%	8.27%	0.0273%
BANK OF NEW YORK MELLON CORP	BK	45,302.10	0.24%	1.75%	9.57%	11.40%	0.0268%
BLACKROCK INC	BLK	60,018.36	0.31%	2.52%	13.54%	16.22%	0.0506%
BALL CORP	BLL	10,251.93	0.05%	0.71%	4.40%	5.13%	0.0027%
BRISTOL-MYERS SQUIBB CO	BMJ	119,689.33	0.62%	2.13%	20.56%	22.91%	0.1425%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	347,227.31	1.80%	0.00%	7.10%	7.10%	0.1281%
BOSTON SCIENTIFIC CORP	BSX	30,814.45	0.16%	0.00%	11.26%	11.26%	0.0180%
BORGWARNER INC	BWA	7,405.58	0.04%	1.54%	12.79%	14.42%	0.0055%
BAXALTA INC	BXLT	30,916.51	N/A	0.64%	N/A	N/A	N/A
BOSTON PROPERTIES INC	BXP	19,298.19	0.10%	2.29%	6.55%	8.92%	0.0089%
CITIGROUP INC	C	136,679.65	0.71%	0.83%	9.91%	10.78%	0.0766%
CA INC	CA	13,470.10	0.07%	3.20%	5.50%	8.78%	0.0061%
CONAGRA FOODS INC	CAG	19,944.16	0.10%	2.18%	7.75%	10.02%	0.0104%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
CARDINAL HEALTH INC	CAH	25,723.12	0.13%	1.76%	12.00%	13.86%	0.0185%
CATERPILLAR INC	CAT	42,337.98	0.22%	4.29%	7.23%	11.67%	0.0257%
CHUBB LTD	CB	58,807.62	0.31%	2.17%	9.50%	11.77%	0.0360%
CBRE GROUP INC - A	CBG	10,012.76	0.05%	0.00%	12.50%	12.50%	0.0065%
CBS CORP-CLASS B NON VOTING	CBS	25,141.75	0.13%	1.18%	17.77%	19.06%	0.0249%
CROWN CASTLE INTL CORP	CCI	30,653.80	0.16%	3.95%	15.50%	19.76%	0.0315%
CARNIVAL CORP	CCL	36,239.23	0.19%	2.58%	17.01%	19.80%	0.0373%
CELGENE CORP	CELG	81,735.95	0.42%	0.00%	22.37%	22.37%	0.0950%
CERNER CORP	CERN	18,800.73	0.10%	0.00%	16.30%	16.30%	0.0159%
CF INDUSTRIES HOLDINGS INC	CF	6,447.37	0.03%	4.35%	17.15%	21.87%	0.0073%
CITIZENS FINANCIAL GROUP	CFG	12,457.48	0.06%	1.99%	9.00%	11.08%	0.0072%
CHURCH & DWIGHT CO INC	CHD	12,637.95	0.07%	1.44%	9.29%	10.80%	0.0071%
CHESAPEAKE ENERGY CORP	CHK	2,936.96	0.02%	0.00%	-3.63%	-3.63%	-0.0006%
C.H. ROBINSON WORLDWIDE INC	CHRW	10,704.64	0.06%	2.32%	10.28%	12.72%	0.0071%
CIGNA CORP	CI	32,861.89	0.17%	0.03%	8.62%	8.66%	0.0148%
CINCINNATI FINANCIAL CORP	CINF	11,365.54	N/A	0.00%	N/A	N/A	N/A
COLGATE-PALMOLIVE CO	CL	62,877.38	0.33%	2.23%	9.08%	11.42%	0.0373%
CLOROX COMPANY	CLX	16,625.42	0.09%	2.42%	6.56%	9.06%	0.0078%
COMERICA INC	CMA	8,248.81	0.04%	1.84%	6.55%	8.45%	0.0036%
COMCAST CORP-CLASS A	CMCSA	153,641.48	0.80%	1.75%	11.35%	13.20%	0.1054%
CME GROUP INC	CME	33,149.76	0.17%	5.37%	13.12%	18.84%	0.0325%
CHIPOTLE MEXICAN GRILL INC	CMG	12,905.86	0.07%	0.00%	16.88%	16.88%	0.0113%
CUMMINS INC	CMI	19,501.06	0.10%	3.46%	4.26%	7.80%	0.0079%
CMS ENERGY CORP	CMS	11,708.00	0.06%	2.97%	6.00%	9.05%	0.0055%
CENTENE CORP	CNC	10,628.99	0.06%	0.00%	17.17%	17.17%	0.0095%
CENTERPOINT ENERGY INC	CNP	9,701.86	0.05%	4.58%	4.00%	8.68%	0.0044%
CAPITAL ONE FINANCIAL CORP	COF	37,506.16	0.19%	2.32%	6.74%	9.14%	0.0178%
CABOT OIL & GAS CORP	COG	11,146.06	0.06%	0.34%	40.79%	41.19%	0.0239%
COACH INC	COH	10,959.93	0.06%	3.42%	10.96%	14.58%	0.0083%
ROCKWELL COLLINS INC	COL	11,509.17	0.06%	1.53%	8.32%	9.92%	0.0059%
CONOCOPHILLIPS	COP	54,228.98	0.28%	2.29%	6.67%	9.03%	0.0254%
COSTCO WHOLESALE CORP	COST	65,315.25	0.34%	1.14%	10.79%	11.99%	0.0407%
CAMPBELL SOUP CO	CPB	18,725.03	0.10%	2.23%	7.32%	9.62%	0.0094%
COLUMBIA PIPELINE GROUP	CPGX	10,226.25	N/A	2.20%	N/A	N/A	N/A
SALESFORCE.COM INC	CRM	56,713.53	0.29%	0.00%	25.39%	25.39%	0.0748%
CISCO SYSTEMS INC	CSCO	146,113.13	0.76%	3.24%	8.77%	12.14%	0.0922%
CSRA INC	CSRA	4,044.96	0.02%	1.61%	10.00%	11.70%	0.0025%
CSX CORP	CSX	25,263.57	0.13%	2.81%	5.87%	8.76%	0.0115%
CINTAS CORP	CTAS	10,143.90	0.05%	1.12%	11.95%	13.13%	0.0069%
CENTURYLINK INC	CTL	14,808.93	0.08%	7.96%	-1.19%	6.73%	0.0052%
COGNIZANT TECH SOLUTIONS-A	CTSH	37,224.62	0.19%	0.00%	13.78%	13.78%	0.0267%
CITRIX SYSTEMS INC	CTXS	13,171.26	0.07%	0.00%	16.70%	16.70%	0.0114%
CABLEVISION SYSTEMS-NY GRP-A	CVC	9,583.01	0.05%	0.00%	9.25%	9.25%	0.0046%
CVS HEALTH CORP	CVS	103,589.43	0.54%	1.71%	14.04%	15.87%	0.0854%
CHEVRON CORP	CVX	190,354.94	0.99%	4.26%	7.38%	11.79%	0.1166%
CONCHO RESOURCES INC	CXO	15,962.36	0.08%	0.00%	25.00%	25.00%	0.0207%
DOMINION RESOURCES INC/VA	D	44,521.77	0.23%	3.86%	6.60%	10.59%	0.0245%
DELTA AIR LINES INC	DAL	33,533.40	0.17%	1.35%	18.50%	19.97%	0.0348%
DU PONT (E.I.) DE NEMOURS	DD	57,136.42	0.30%	2.42%	8.25%	10.77%	0.0320%
DEERE & CO	DE	25,860.36	0.13%	2.93%	7.44%	10.48%	0.0141%
DISCOVER FINANCIAL SERVICES	DFS	23,418.52	0.12%	2.11%	9.90%	12.11%	0.0147%
DOLLAR GENERAL CORP	DG	25,511.67	0.13%	0.91%	13.85%	14.82%	0.0196%
QUEST DIAGNOSTICS INC	DGX	10,916.25	0.06%	2.06%	8.91%	11.05%	0.0063%
DR HORTON INC	DHI	11,335.48	0.06%	1.05%	15.28%	16.41%	0.0097%
DANAHER CORP	DHR	67,740.08	0.35%	0.63%	11.98%	12.65%	0.0445%
WALT DISNEY CO/THE	DIS	160,978.57	0.84%	1.47%	10.08%	11.62%	0.0972%
DISCOVERY COMMUNICATIONS-A	DISCA	16,825.71	0.09%	0.00%	13.45%	13.45%	0.0118%
DELPHI AUTOMOTIVE PLC	DLPH	18,551.52	0.10%	1.71%	10.08%	11.88%	0.0115%
DIGITAL REALTY TRUST INC	DLR	15,207.71	0.08%	3.69%	6.88%	10.69%	0.0085%
DOLLAR TREE INC	DLTR	21,328.09	0.11%	0.00%	17.67%	17.67%	0.0196%
DUN & BRADSTREET CORP	DNB	4,601.19	0.02%	1.52%	11.75%	13.36%	0.0032%
DIAMOND OFFSHORE DRILLING	DO	3,541.72	N/A	0.00%	N/A	N/A	N/A
DOVER CORP	DOV	10,356.18	0.05%	2.58%	10.48%	13.19%	0.0071%
DOW CHEMICAL CO/THE	DOW	57,668.44	0.30%	3.62%	6.00%	9.73%	0.0291%
DR PEPPER SNAPPLE GROUP INC	DPS	16,983.22	0.09%	2.30%	13.24%	15.70%	0.0138%
DARDEN RESTAURANTS INC	DRI	8,595.80	0.04%	3.01%	14.06%	17.28%	0.0077%
DTE ENERGY COMPANY	DTE	16,271.20	0.08%	3.30%	5.54%	8.94%	0.0076%
DUKE ENERGY CORP	DUK	53,884.27	0.28%	4.34%	4.71%	9.15%	0.0256%
DAVITA HEALTHCARE PARTNERS I	DVA	15,966.58	0.08%	0.00%	11.36%	11.36%	0.0094%
DEVON ENERGY CORP	DVN	18,911.16	0.10%	1.16%	8.23%	9.44%	0.0093%
ELECTRONIC ARTS INC	EA	23,148.54	0.12%	0.00%	11.27%	11.27%	0.0136%
EBAY INC	EBAY	28,102.20	0.15%	0.00%	8.89%	8.89%	0.0130%
ECOLAB INC	ECL	34,387.10	0.18%	1.22%	12.36%	13.66%	0.0244%
CONSOLIDATED EDISON INC	ED	22,282.79	0.12%	3.66%	3.14%	6.86%	0.0079%
EQUIFAX INC	EFX	14,963.62	0.08%	1.05%	12.23%	13.35%	0.0104%
EDISON INTERNATIONAL	EIX	23,337.86	0.12%	2.69%	4.76%	7.51%	0.0091%
ESTEE LAUDER COMPANIES-CL A	EL	33,888.65	0.18%	1.24%	11.86%	13.17%	0.0232%
EMC CORP/MA	EMC	54,591.85	0.28%	1.73%	10.78%	12.60%	0.0357%
EASTMAN CHEMICAL CO	EMN	10,845.30	0.06%	2.50%	5.50%	8.07%	0.0045%
EMERSON ELECTRIC CO	EMR	33,467.12	0.17%	3.65%	7.33%	11.11%	0.0193%
ENDO INTERNATIONAL PLC	ENDP	3,520.28	0.02%	0.00%	4.70%	4.70%	0.0009%
EOG RESOURCES INC	EOG	44,770.50	0.23%	0.79%	-16.56%	-15.83%	-0.0368%
EQUINIX INC	EQIX	25,133.33	0.13%	1.94%	22.05%	24.20%	0.0316%
EQUITY RESIDENTIAL	EQR	25,296.40	0.13%	18.81%	6.43%	25.85%	0.0340%
EQT CORP	EQT	12,652.99	0.07%	0.16%	25.00%	25.18%	0.0166%
EVERSOURCE ENERGY	ES	17,522.52	0.09%	3.23%	7.13%	10.47%	0.0095%
EXPRESS SCRIPTS HOLDING CO	ESRX	47,788.09	0.25%	0.00%	13.80%	13.80%	0.0343%
ESSEX PROPERTY TRUST INC	ESS	14,867.68	0.08%	2.80%	6.83%	9.72%	0.0075%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
E*TRADE FINANCIAL CORP	ETFC	7,773.74	0.04%	0.03%	18.07%	18.10%	0.0073%
EATON CORP PLC	ETN	28,226.54	0.15%	3.73%	8.42%	12.31%	0.0180%
ENERGY CORP	ETR	13,570.01	0.07%	4.52%	0.75%	5.29%	0.0037%
EDWARDS LIFESCIENCES CORP	EW	20,858.63	0.11%	0.00%	17.60%	17.60%	0.0191%
EXELON CORP	EXC	31,586.48	0.16%	3.69%	4.57%	8.35%	0.0137%
EXPEDITORS INTL WASH INC	EXPD	8,838.97	0.05%	1.57%	8.53%	10.17%	0.0047%
EXPEDIA INC	EXPE	16,586.28	0.09%	0.77%	22.29%	23.14%	0.0199%
EXTRA SPACE STORAGE INC	EXR	11,640.56	0.06%	2.87%	7.03%	10.00%	0.0060%
FORD MOTOR CO	F	53,593.55	0.28%	5.05%	6.67%	11.89%	0.0331%
FASTENAL CO	FAST	13,297.30	0.07%	2.61%	12.68%	15.45%	0.0107%
FACEBOOK INC-A	FB	340,177.47	1.77%	0.00%	31.34%	31.34%	0.5539%
FREEMPORT-MCMORAN INC	FCX	13,873.73	0.07%	0.00%	-146.00%	-146.00%	-0.1052%
FEDEX CORP	FDX	44,281.87	0.23%	0.61%	13.06%	13.70%	0.0315%
FIRSTENERGY CORP	FE	13,934.81	0.07%	4.39%	0.09%	4.48%	0.0032%
F5 NETWORKS INC	FFIV	7,381.34	0.04%	0.00%	13.18%	13.18%	0.0051%
FIDELITY NATIONAL INFO SERV	FIS	24,245.73	0.13%	1.42%	12.00%	13.51%	0.0170%
FISERV INC	FISV	23,418.01	0.12%	0.00%	12.74%	12.74%	0.0155%
FIFTH THIRD BANCORP	FITB	14,486.84	0.08%	2.90%	3.83%	6.79%	0.0051%
FOOT LOCKER INC	FL	7,610.40	0.04%	1.97%	10.44%	12.51%	0.0049%
FLIR SYSTEMS INC	FLIR	4,287.23	0.02%	1.48%	15.00%	16.59%	0.0037%
FLUOR CORP	FLR	7,348.57	0.04%	1.59%	1.36%	2.96%	0.0011%
FLOWSERVE CORP	FLS	6,274.56	0.03%	1.58%	11.67%	13.34%	0.0043%
FMC CORP	FMC	6,351.86	0.03%	1.42%	9.53%	11.02%	0.0036%
TWENTY-FIRST CENTURY FOX - B	FOX	54,993.32	0.29%	1.09%	13.84%	15.01%	0.0429%
FEDERAL REALTY INVS TRUST	FRT	10,861.80	0.06%	2.52%	6.26%	8.85%	0.0050%
FIRST SOLAR INC	FSLR	5,076.47	0.03%	0.00%	5.50%	5.50%	0.0015%
FMC TECHNOLOGIES INC	FTI	6,163.66	0.03%	0.00%	-8.10%	-8.10%	-0.0026%
FRONTIER COMMUNICATIONS CORP	FTR	6,064.80	0.03%	8.12%	11.55%	20.14%	0.0063%
AGL RESOURCES INC	GAS	7,940.75	0.04%	3.22%	6.00%	9.32%	0.0038%
GENERAL DYNAMICS CORP	GD	43,362.14	0.23%	2.06%	7.65%	9.79%	0.0221%
GENERAL ELECTRIC CO	GE	277,984.71	1.44%	3.08%	9.98%	13.21%	0.1909%
GENERAL GROWTH PROPERTIES	GGP	23,731.49	0.12%	2.88%	6.92%	9.89%	0.0122%
GILEAD SCIENCES INC	GILD	115,948.38	0.60%	2.11%	1.46%	3.59%	0.0216%
GENERAL MILLS INC	GIS	37,316.53	0.19%	2.81%	10.16%	13.11%	0.0254%
CORNING INC	GLW	22,464.03	0.12%	2.60%	12.34%	15.10%	0.0176%
GENERAL MOTORS CO	GM	48,165.74	0.25%	4.84%	9.58%	14.65%	0.0367%
ALPHABET INC-CL C	GOOG	509,292.95	2.65%	0.00%	15.66%	15.66%	0.4144%
GENUINE PARTS CO	GPC	14,501.47	0.08%	2.72%	6.33%	9.13%	0.0069%
GLOBAL PAYMENTS INC	GPN	11,964.31	0.06%	0.07%	13.44%	13.51%	0.0084%
GAP INC/THE	GPS	7,157.74	0.04%	5.07%	8.05%	13.32%	0.0050%
GARMIN LTD	GRMN	8,038.57	0.04%	4.82%	7.43%	12.43%	0.0052%
GOLDMAN SACHS GROUP INC	GS	69,246.38	0.36%	1.70%	15.15%	16.98%	0.0611%
GOODYEAR TIRE & RUBBER CO	GT	7,438.46	0.04%	1.01%	7.00%	8.05%	0.0031%
WW GRAINGER INC	GWV	14,002.92	0.07%	2.14%	9.36%	11.60%	0.0084%
HALLIBURTON CO	HAL	36,243.80	0.19%	1.71%	13.15%	14.97%	0.0282%
HARMAN INTERNATIONAL	HAR	5,520.20	0.03%	1.81%	17.50%	19.47%	0.0056%
HASBRO INC	HAS	10,885.24	0.06%	2.34%	10.40%	12.86%	0.0073%
HUNTINGTON BANCSHARES INC	HBAN	8,348.16	0.04%	2.78%	5.88%	8.74%	0.0038%
HANESBRANDS INC	HBI	10,219.40	0.05%	1.62%	16.58%	18.33%	0.0097%
HCA HOLDINGS INC	HCA	30,510.03	0.16%	0.00%	10.75%	10.75%	0.0170%
WELLTOWER INC	HCN	24,600.53	0.13%	4.96%	4.67%	9.75%	0.0125%
HCP INC	HCP	15,353.17	0.08%	6.94%	1.22%	8.20%	0.0065%
HOME DEPOT INC	HD	164,358.25	0.85%	1.94%	13.47%	15.54%	0.1327%
HESS CORP	HES	18,980.99	0.10%	1.64%	-20.09%	-18.62%	-0.0184%
HARTFORD FINANCIAL SVCS GRP	HIG	17,769.20	0.09%	1.95%	9.33%	11.37%	0.0105%
HARLEY-DAVIDSON INC	HOG	8,400.77	0.04%	2.99%	11.08%	14.23%	0.0062%
HOLOGIC INC	HOLX	9,594.53	0.05%	0.00%	8.94%	8.94%	0.0045%
HONEYWELL INTERNATIONAL INC	HON	86,751.60	0.45%	2.16%	9.32%	11.58%	0.0522%
STARWOOD HOTELS & RESORTS	HOT	12,449.15	0.06%	2.04%	7.26%	9.37%	0.0061%
HELMERICH & PAYNE	HP	6,606.60	0.03%	4.51%	-1.40%	3.08%	0.0011%
HEWLETT PACKARD ENTERPRIS	HPE	31,704.94	0.16%	1.19%	6.42%	7.65%	0.0126%
HP INC	HPQ	23,102.68	0.12%	3.84%	3.76%	7.68%	0.0092%
H&R BLOCK INC	HRB	4,793.31	0.02%	3.81%	11.00%	15.02%	0.0037%
HORMEL FOODS CORP	HRL	18,234.46	0.09%	1.88%	5.90%	7.84%	0.0074%
HARRIS CORP	HRS	9,824.66	N/A	2.51%	N/A	N/A	N/A
HENRY SCHEIN INC	HSIC	14,257.39	0.07%	0.00%	11.53%	11.53%	0.0085%
HOST HOTELS & RESORTS INC	HST	11,508.66	0.06%	5.40%	5.00%	10.54%	0.0063%
HERSHEY CO/THE	HSY	19,811.67	0.10%	2.54%	9.18%	11.83%	0.0122%
HUMANA INC	HUM	25,710.31	0.13%	0.69%	13.14%	13.88%	0.0185%
INTL BUSINESS MACHINES CORP	IBM	147,584.54	0.77%	3.48%	3.54%	7.09%	0.0543%
INTERCONTINENTAL EXCHANGE IN	ICE	32,275.65	0.17%	1.25%	13.67%	15.01%	0.0252%
INTL FLAVORS & FRAGRANCES	IFF	10,283.09	0.05%	1.76%	10.50%	12.36%	0.0066%
ILLUMINA INC	ILMN	21,318.98	0.11%	0.00%	14.48%	14.48%	0.0160%
INTEL CORP	INTC	149,167.98	0.78%	3.28%	8.52%	11.94%	0.0925%
INTUIT INC	INTU	27,291.23	0.14%	1.13%	17.11%	18.33%	0.0260%
INTERNATIONAL PAPER CO	IP	17,335.11	0.09%	4.22%	7.50%	11.88%	0.0107%
INTERPUBLIC GROUP OF COS INC	IPG	9,617.48	0.05%	2.45%	8.00%	10.55%	0.0053%
INGERSOLL-RAND PLC	IR	17,201.15	0.09%	1.92%	9.63%	11.64%	0.0104%
IRON MOUNTAIN INC	IRM	7,787.12	0.04%	5.17%	9.40%	14.81%	0.0060%
INTUITIVE SURGICAL INC	ISRG	24,157.29	0.13%	0.00%	13.07%	13.07%	0.0164%
ILLINOIS TOOL WORKS	ITW	38,104.04	0.20%	2.15%	7.85%	10.08%	0.0200%
INVESCO LTD	IVZ	13,102.16	0.07%	3.59%	11.28%	15.07%	0.0103%
HUNT (JB) TRANSPRT SVCS INC	JBHT	9,318.77	0.05%	1.06%	13.74%	14.87%	0.0072%
JOHNSON CONTROLS INC	JCI	28,625.54	0.15%	2.59%	9.20%	11.91%	0.0177%
JACOBS ENGINEERING GROUP INC	JEC	6,180.39	0.03%	0.00%	6.55%	6.55%	0.0021%
JOHNSON & JOHNSON	JNJ	309,970.10	1.61%	2.80%	6.04%	8.92%	0.1436%
JUNIPER NETWORKS INC	JNPR	8,988.15	0.05%	1.81%	9.63%	11.53%	0.0054%
JPMORGAN CHASE & CO	JPM	238,670.13	1.24%	2.83%	4.21%	7.10%	0.0880%

		[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
NORDSTROM INC	JWN	6,567.51	0.03%	4.05%	7.68%	11.89%	0.0041%
KELLOGG CO	K	26,033.08	0.14%	2.77%	5.82%	8.67%	0.0117%
KEYCORP	KEY	10,799.22	0.06%	2.63%	6.33%	9.04%	0.0051%
KRAFT HEINZ CO/THE	KHC	101,155.32	0.53%	2.87%	21.69%	24.87%	0.1307%
KIMCO REALTY CORP	KIM	11,825.71	0.06%	3.66%	5.67%	9.44%	0.0058%
KLA-TENCOR CORP	KLAC	11,355.81	0.06%	2.88%	5.55%	8.51%	0.0050%
KIMBERLY-CLARK CORP	KMB	45,750.64	0.24%	2.89%	7.64%	10.64%	0.0253%
KINDER MORGAN INC	KMI	40,346.53	0.21%	2.77%	14.65%	17.62%	0.0369%
CARMAX INC	KMX	10,382.09	0.05%	0.00%	13.55%	13.55%	0.0073%
COCA-COLA CO/THE	KO	192,948.46	1.00%	3.12%	5.72%	8.93%	0.0895%
MICHAEL KORS HOLDINGS LTD	KORS	7,665.29	0.04%	0.00%	4.52%	4.52%	0.0018%
KROGER CO	KR	34,107.41	0.18%	1.22%	9.90%	11.19%	0.0198%
KOHL'S CORP	KSS	6,673.49	0.03%	5.61%	3.75%	9.47%	0.0033%
KANSAS CITY SOUTHERN	KSU	10,053.65	0.05%	1.45%	7.78%	9.28%	0.0048%
LOEWS CORP	L	13,723.38	N/A	0.62%	N/A	N/A	N/A
L BRANDS INC	LB	19,674.12	0.10%	6.45%	10.94%	17.74%	0.0181%
LEGGETT & PLATT INC	LEG	6,751.22	0.04%	2.60%	10.00%	12.73%	0.0045%
LENNAR CORP-A	LEN	9,503.49	0.05%	0.35%	8.75%	9.12%	0.0045%
LABORATORY CRP OF AMER HLDGS	LH	13,102.08	0.07%	0.00%	11.29%	11.29%	0.0077%
LKQ CORP	LKQ	10,141.88	0.05%	0.00%	15.47%	15.47%	0.0082%
L-3 COMMUNICATIONS HOLDINGS	LLL	10,558.68	0.05%	2.07%	9.94%	12.12%	0.0066%
LINEAR TECHNOLOGY CORP	LLTC	11,314.13	0.06%	2.62%	6.91%	9.62%	0.0057%
ELI LILLY & CO	LLY	82,820.89	0.43%	2.73%	11.52%	14.40%	0.0620%
LEGG MASON INC	LM	3,636.38	0.02%	2.64%	18.36%	21.25%	0.0040%
LOCKHEED MARTIN CORP	LMT	71,920.94	0.37%	2.86%	7.61%	10.57%	0.0395%
LINCOLN NATIONAL CORP	LNC	10,958.48	0.06%	2.22%	11.80%	14.15%	0.0081%
LOWE'S COS INC	LOW	71,911.76	0.37%	1.53%	16.56%	18.22%	0.0681%
LAM RESEARCH CORP	LRCX	13,216.28	0.07%	1.44%	9.72%	11.22%	0.0077%
LEUCADIA NATIONAL CORP	LUK	6,558.18	0.03%	1.38%	18.00%	19.51%	0.0066%
SOUTHWEST AIRLINES CO	LUV	27,131.42	0.14%	0.85%	9.08%	9.97%	0.0141%
LEVEL 3 COMMUNICATIONS INC	LVL	19,310.48	0.10%	0.00%	-0.69%	-0.69%	-0.0007%
LYONDELLBASELL INDU-CL A	LYB	34,718.52	0.18%	4.19%	5.67%	9.97%	0.0180%
MACY'S INC	M	10,241.96	0.05%	4.55%	9.67%	14.44%	0.0077%
MASTERCARD INC-CLASS A	MA	105,365.08	0.55%	0.83%	15.00%	15.89%	0.0870%
MACERICH CO/THE	MAC	11,332.96	0.06%	5.85%	7.12%	13.18%	0.0078%
MARRIOTT INTERNATIONAL -CL A	MAR	16,789.46	0.09%	1.62%	11.96%	13.67%	0.0119%
MASCO CORP	MAS	10,860.83	0.06%	1.17%	14.48%	15.73%	0.0089%
MATTEL INC	MAT	10,853.41	0.06%	4.77%	10.15%	15.16%	0.0085%
MCDONALD'S CORP	MCD	107,151.29	0.56%	3.00%	10.31%	13.47%	0.0750%
MICROCHIP TECHNOLOGY INC	MCHP	11,101.65	0.06%	2.71%	9.64%	12.48%	0.0072%
MCKESSON CORP	MCK	41,210.26	0.21%	0.63%	12.70%	13.37%	0.0286%
MOODY'S CORP	MCO	19,165.75	0.10%	1.46%	11.00%	12.55%	0.0125%
MONDELEZ INTERNATIONAL INC-A	MDLZ	69,051.18	0.36%	1.54%	12.99%	14.63%	0.0525%
MEDTRONIC PLC	MDT	112,755.96	0.59%	2.13%	8.49%	10.71%	0.0628%
METLIFE INC	MET	50,044.27	0.26%	3.55%	7.10%	10.77%	0.0280%
MOHAWK INDUSTRIES INC	MHK	14,573.02	0.08%	0.00%	11.10%	11.10%	0.0084%
MEAD JOHNSON NUTRITION CO	MJN	15,358.71	0.08%	2.15%	9.84%	12.09%	0.0096%
MCCORMICK & CO-NON VTG SHRS	MKC	12,331.70	0.06%	1.76%	9.10%	10.94%	0.0070%
MARTIN MARIETTA MATERIALS	MLM	12,009.18	0.06%	0.86%	22.16%	23.11%	0.0144%
MARSH & MCLENNAN COS	MMC	34,437.87	0.18%	1.99%	11.62%	13.72%	0.0246%
3M CO	MMM	102,088.53	0.53%	2.64%	9.10%	11.86%	0.0629%
MALLINCKRODT PLC	MNK	6,926.86	0.04%	0.00%	9.15%	9.15%	0.0033%
MONSTER BEVERAGE CORP	MNST	30,456.40	0.16%	0.00%	18.96%	18.96%	0.0300%
ALTRIA GROUP INC	MO	124,506.88	0.65%	3.74%	7.65%	11.53%	0.0746%
MONSANTO CO	MON	49,131.96	0.26%	1.93%	7.85%	9.86%	0.0252%
MOSAIC CO/THE	MOS	8,825.87	0.05%	4.36%	0.85%	5.23%	0.0024%
MARATHON PETROLEUM CORP	MPC	18,454.15	0.10%	3.81%	8.35%	12.32%	0.0118%
MERCK & CO. INC.	MRK	155,729.11	0.81%	3.27%	5.70%	9.06%	0.0733%
MARATHON OIL CORP	MRO	11,078.76	0.06%	1.53%	-2.44%	-0.93%	-0.0005%
MORGAN STANLEY	MS	53,016.36	0.28%	2.47%	6.43%	8.98%	0.0247%
MICROSOFT CORP	MSFT	416,604.74	2.16%	2.66%	8.46%	11.23%	0.2432%
MOTOROLA SOLUTIONS INC	MSI	12,094.84	0.06%	2.37%	5.28%	7.70%	0.0048%
M & T BANK CORP	MTB	19,000.38	0.10%	2.37%	5.45%	7.88%	0.0078%
MICRON TECHNOLOGY INC	MU	13,191.19	0.07%	0.00%	6.10%	6.10%	0.0042%
MURPHY OIL CORP	MUR	5,322.55	N/A	4.50%	N/A	N/A	N/A
MYLAN NV	MYL	22,032.66	0.11%	0.00%	9.42%	9.42%	0.0108%
NAVIENT CORP	NAVI	4,531.34	N/A	4.72%	N/A	N/A	N/A
NOBLE ENERGY INC	NBL	15,357.92	0.08%	1.12%	10.00%	11.17%	0.0089%
NASDAQ INC	NDAQ	10,859.61	0.06%	1.79%	7.92%	9.78%	0.0055%
NEXTERA ENERGY INC	NEE	55,428.89	0.29%	2.90%	6.42%	9.42%	0.0271%
NEWMONT MINING CORP	NEM	17,194.51	0.09%	0.32%	6.13%	6.47%	0.0058%
NETFLIX INC	NFLX	43,930.61	0.23%	0.00%	35.50%	35.50%	0.0810%
NEWFIELD EXPLORATION CO	NFX	8,092.25	0.04%	0.00%	16.49%	16.49%	0.0069%
NISOURCE INC	NI	7,672.05	N/A	2.67%	N/A	N/A	N/A
NIKE INC -CL B	NKE	93,030.34	0.48%	1.11%	13.91%	15.10%	0.0730%
NIELSEN HOLDINGS PLC	NLSN	19,263.38	0.10%	2.27%	12.33%	14.75%	0.0148%
NORTHROP GRUMMAN CORP	NOC	38,376.65	0.20%	1.61%	7.54%	9.21%	0.0184%
NATIONAL OILWELL VARCO INC	NOV	12,424.16	0.06%	1.85%	-9.35%	-7.59%	-0.0049%
NRG ENERGY INC	NRG	5,158.19	0.03%	1.20%	-27.35%	-26.32%	-0.0071%
NORFOLK SOUTHERN CORP	NSC	24,859.72	0.13%	2.86%	11.77%	14.80%	0.0191%
NETAPP INC	NTAP	7,380.29	0.04%	2.95%	8.97%	12.05%	0.0046%
NORTHERN TRUST CORP	NTRS	16,906.93	0.09%	2.01%	11.45%	13.57%	0.0119%
NUCOR CORP	NUE	15,422.72	0.08%	3.09%	8.20%	11.42%	0.0092%
NVIDIA CORP	NVDA	24,948.48	0.13%	0.99%	9.67%	10.70%	0.0139%
NEWELL BRANDS INC	NWL	22,793.52	0.12%	1.58%	13.77%	15.46%	0.0183%
NEWS CORP - CLASS A	NWSA	7,012.47	0.04%	1.67%	8.89%	10.64%	0.0039%
REALTY INCOME CORP	O	15,481.05	0.08%	3.99%	3.67%	7.73%	0.0062%
OWENS-ILLINOIS INC	OI	3,060.27	0.02%	0.00%	7.00%	7.00%	0.0011%

		[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
ONEOK INC	OKE	9,087.02	0.05%	5.69%	7.30%	13.20%	0.0062%
OMNICOM GROUP	OMC	19,811.70	0.10%	2.58%	6.45%	9.11%	0.0094%
ORACLE CORP	ORCL	166,824.57	0.87%	1.49%	7.69%	9.24%	0.0801%
O'REILLY AUTOMOTIVE INC	ORLY	25,505.82	0.13%	0.00%	15.54%	15.54%	0.0206%
OCCIDENTAL PETROLEUM CORP	OXY	57,616.66	0.30%	4.00%	8.00%	12.16%	0.0364%
PAYCHEX INC	PAYX	19,525.76	0.10%	3.10%	9.78%	13.02%	0.0132%
PEOPLE'S UNITED FINANCIAL	PBCT	4,936.47	N/A	4.27%	N/A	N/A	N/A
PITNEY BOWES INC	PBI	3,514.00	0.02%	4.03%	14.00%	18.31%	0.0033%
PACCAR INC	PCAR	19,538.30	0.10%	3.42%	7.83%	11.39%	0.0116%
P G & E CORP	PCG	29,802.22	0.15%	3.22%	3.00%	6.27%	0.0097%
PRICELINE GROUP INC/THE	PCLN	62,760.56	0.33%	0.00%	18.10%	18.10%	0.0590%
PATTERSON COS INC	PDCO	4,836.53	0.03%	2.06%	7.67%	9.80%	0.0025%
PUBLIC SERVICE ENTERPRISE GP	PEG	22,640.34	0.12%	3.67%	3.43%	7.16%	0.0084%
PEPSICO INC	PEP	146,131.67	0.76%	2.93%	6.42%	9.44%	0.0717%
PFIZER INC	PFE	210,450.27	1.09%	3.45%	6.20%	9.75%	0.1067%
PRINCIPAL FINANCIAL GROUP	PFG	12,915.84	0.07%	3.54%	8.14%	11.82%	0.0079%
PROCTER & GAMBLE CO/THE	PG	215,716.48	1.12%	3.31%	6.25%	9.66%	0.1083%
PROGRESSIVE CORP	PGR	19,413.78	0.10%	1.87%	8.84%	10.79%	0.0109%
PARKER HANNIFIN CORP	PH	15,466.82	0.08%	2.19%	8.21%	10.50%	0.0084%
PULTEGROUP INC	PHM	6,491.56	0.03%	1.92%	14.04%	16.09%	0.0054%
PERKINELMER INC	PKI	5,969.42	0.03%	0.51%	19.78%	20.35%	0.0063%
PROLOGIS INC	PLD	24,957.09	0.13%	3.52%	5.18%	8.79%	0.0114%
PHILIP MORRIS INTERNATIONAL	PM	153,078.76	0.80%	4.21%	9.19%	13.59%	0.1081%
PNC FINANCIAL SERVICES GROUP	PNC	44,809.31	0.23%	2.36%	6.05%	8.48%	0.0198%
PENTAIR PLC	PNR	10,886.35	0.06%	2.24%	9.25%	11.59%	0.0066%
PINNACLE WEST CAPITAL	PNW	8,178.79	0.04%	3.45%	4.65%	8.18%	0.0035%
PPG INDUSTRIES INC	PPG	28,649.71	0.15%	1.46%	8.50%	10.02%	0.0149%
PPL CORP	PPL	26,089.47	0.14%	3.95%	4.78%	8.82%	0.0120%
PERRIGO CO PLC	PRGO	13,726.46	0.07%	0.61%	9.76%	10.39%	0.0074%
PRUDENTIAL FINANCIAL INC	PRU	35,028.50	0.18%	3.59%	9.55%	13.31%	0.0242%
PUBLIC STORAGE	PSA	43,988.75	0.23%	2.80%	5.48%	8.36%	0.0191%
PHILLIPS 66	PSX	42,235.73	0.22%	2.95%	6.80%	9.86%	0.0216%
PVH CORP	PVH	7,601.58	0.04%	1.16%	6.66%	6.82%	0.0027%
QUANTA SERVICES INC	PWR	3,629.39	0.02%	0.00%	8.00%	8.00%	0.0015%
PRAXAIR INC	PX	31,339.20	0.16%	2.75%	7.11%	9.95%	0.0162%
PIONEER NATURAL RESOURCES CO	PXD	26,221.40	0.14%	0.06%	20.00%	20.06%	0.0273%
PAYPAL HOLDINGS INC	PYPL	45,802.49	0.24%	0.00%	16.08%	16.08%	0.0383%
QUALCOMM INC	QCOM	80,672.82	0.42%	3.57%	10.40%	14.16%	0.0593%
QORVO INC	QRVO	6,988.23	0.04%	0.00%	15.50%	15.50%	0.0056%
RYDER SYSTEM INC	R	3,738.83	0.02%	2.42%	9.92%	12.46%	0.0024%
REYNOLDS AMERICAN INC	RAI	70,938.86	0.37%	3.40%	9.49%	13.04%	0.0481%
ROYAL CARIBBEAN CRUISES LTD	RCL	16,657.53	0.09%	1.98%	24.87%	27.09%	0.0234%
REGENERON PHARMACEUTICALS	REGN	41,919.00	0.22%	0.00%	23.29%	23.29%	0.0507%
REGIONS FINANCIAL CORP	RF	12,451.79	0.06%	2.67%	4.91%	7.64%	0.0049%
ROBERT HALF INTL INC	RHI	5,461.54	0.03%	2.10%	11.63%	13.85%	0.0039%
RED HAT INC	RHT	14,054.04	0.07%	0.00%	17.70%	17.70%	0.0129%
TRANSOCEAN LTD	RIG	3,575.32	0.02%	0.00%	-6.20%	-6.20%	-0.0012%
RALPH LAUREN CORP	RL	7,820.15	0.04%	2.24%	7.62%	9.94%	0.0040%
ROCKWELL AUTOMATION INC	ROK	15,117.08	0.08%	2.64%	6.93%	9.65%	0.0076%
ROPER TECHNOLOGIES INC	ROP	17,313.44	0.09%	0.68%	11.43%	12.15%	0.0109%
ROSS STORES INC	ROST	21,456.35	0.11%	1.01%	12.46%	13.53%	0.0151%
RANGE RESOURCES CORP	RRC	7,229.46	0.04%	0.25%	-25.54%	-25.32%	-0.0095%
REPUBLIC SERVICES INC	RSG	16,603.40	0.09%	2.54%	7.87%	10.50%	0.0091%
RAYTHEON COMPANY	RTN	38,509.40	0.20%	2.23%	7.94%	10.25%	0.0205%
STARBUCKS CORP	SBUX	80,408.36	0.42%	1.48%	18.62%	20.25%	0.0846%
SCANA CORP	SCG	9,991.32	0.05%	3.29%	5.80%	9.18%	0.0048%
SCHWAB (CHARLES) CORP	SCHW	40,417.31	0.21%	0.84%	19.00%	19.92%	0.0418%
SPECTRA ENERGY CORP	SE	22,330.98	0.12%	5.11%	10.20%	15.57%	0.0181%
SEALED AIR CORP	SEE	9,155.32	0.05%	1.26%	4.27%	5.55%	0.0026%
SHERWIN-WILLIAMS CO/THE	SHW	26,924.40	0.14%	1.15%	17.70%	18.96%	0.0265%
SIGNET JEWELERS LTD	SIG	7,762.62	0.04%	1.05%	14.40%	15.52%	0.0063%
JM SMUCKER CO/THE	SJM	15,457.23	0.08%	2.06%	14.50%	16.71%	0.0134%
SCHLUMBERGER LTD	SLB	106,150.64	0.55%	2.60%	7.23%	9.92%	0.0547%
SL GREEN REALTY CORP	SLG	10,565.50	0.05%	2.93%	4.85%	7.85%	0.0043%
SNAP-ON INC	SNA	9,409.24	0.05%	1.98%	4.80%	6.83%	0.0033%
SCRIPPS NETWORKS INTER-CL A	SNI	8,296.99	0.04%	1.57%	11.73%	13.39%	0.0058%
SOUTHERN CO/THE	SO	46,402.03	0.24%	4.51%	3.90%	8.50%	0.0205%
SIMON PROPERTY GROUP INC	SPG	61,153.14	0.32%	3.31%	7.92%	11.36%	0.0361%
S&P GLOBAL INC	SPGI	29,584.93	0.15%	1.30%	10.00%	11.36%	0.0175%
STAPLES INC	SPLS	5,687.33	0.03%	5.45%	1.84%	7.34%	0.0022%
STERICYCLE INC	SRCL	8,320.59	0.04%	0.00%	14.45%	14.45%	0.0062%
SEMPRA ENERGY	SRE	26,726.09	0.14%	2.82%	8.33%	11.27%	0.0156%
SUNTRUST BANKS INC	STI	21,959.41	0.11%	2.32%	6.88%	9.28%	0.0106%
ST JUDE MEDICAL INC	STJ	22,275.98	0.12%	1.59%	10.63%	12.30%	0.0142%
STATE STREET CORP	STT	24,968.00	0.13%	2.27%	8.63%	11.00%	0.0143%
SEAGATE TECHNOLOGY	STX	6,733.79	0.03%	10.61%	5.05%	15.93%	0.0056%
CONSTELLATION BRANDS INC-A	STZ	30,630.39	0.16%	1.02%	12.96%	14.04%	0.0224%
STANLEY BLACK & DECKER INC	SWK	16,990.20	0.09%	2.00%	10.50%	12.61%	0.0111%
SKYWORKS SOLUTIONS INC	SWKS	12,700.30	0.07%	1.58%	16.67%	18.38%	0.0121%
SOUTHWESTERN ENERGY CO	SWN	5,367.75	0.03%	0.00%	-15.98%	-15.98%	-0.0045%
SYNCHRONY FINANCIAL	SYF	26,018.32	0.14%	0.87%	7.16%	8.07%	0.0109%
STRYKER CORP	SYK	41,571.74	0.22%	1.38%	12.49%	13.96%	0.0301%
SYMANTEC CORP	SYMC	10,629.39	0.06%	1.75%	8.69%	10.51%	0.0058%
SYSCO CORP	SYI	27,110.75	0.14%	2.55%	10.00%	12.68%	0.0179%
AT&T INC	T	241,007.40	1.25%	4.91%	4.25%	9.27%	0.1161%
MOLSON COORS BREWING CO -B	TAP	21,291.09	0.11%	1.68%	19.77%	21.62%	0.0239%
TERADATA CORP	TDC	3,684.20	0.02%	0.00%	9.60%	9.60%	0.0018%
TECO ENERGY INC	TE	6,487.05	0.03%	3.38%	5.00%	8.46%	0.0029%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
TE CONNECTIVITY LTD	TEL	21,456.97	0.11%	2.27%	12.20%	14.61%	0.0163%
TEGNA INC	TGNA	4,995.82	0.03%	2.44%	8.03%	10.57%	0.0027%
TARGET CORP	TGT	40,530.30	0.21%	3.35%	10.35%	13.88%	0.0292%
TIFFANY & CO	TIF	7,808.05	0.04%	2.66%	8.32%	11.09%	0.0045%
TJX COMPANIES INC	TJX	50,321.68	0.26%	1.35%	11.56%	12.99%	0.0340%
TORCHMARK CORP	TMK	7,435.70	0.04%	0.92%	7.98%	8.93%	0.0035%
THERMO FISHER SCIENTIFIC INC	TMO	59,723.35	0.31%	0.40%	11.83%	12.25%	0.0380%
TRIPADVISOR INC	TRIP	9,870.14	0.05%	0.00%	16.31%	16.31%	0.0084%
T ROWE PRICE GROUP INC	TROW	19,126.53	0.10%	2.81%	10.91%	13.87%	0.0138%
TRAVELERS COS INC/THE	TRV	33,373.92	0.17%	2.30%	7.13%	9.51%	0.0165%
TRACTOR SUPPLY COMPANY	TSCO	12,822.33	0.07%	0.89%	15.76%	16.72%	0.0111%
TYSON FOODS INC-CL A	TSN	25,668.11	0.13%	0.96%	12.03%	13.04%	0.0174%
TESORO CORP	TSO	9,367.71	0.05%	2.64%	-0.50%	2.13%	0.0010%
TOTAL SYSTEM SERVICES INC	TSS	9,859.97	0.05%	0.74%	11.00%	11.79%	0.0060%
TIME WARNER INC	TWX	59,498.59	0.31%	2.13%	14.38%	16.66%	0.0515%
TEXAS INSTRUMENTS INC	TXN	60,856.15	0.32%	2.54%	10.00%	12.66%	0.0400%
TEXTRON INC	TXT	10,231.74	0.05%	0.22%	7.31%	7.54%	0.0040%
TYCO INTERNATIONAL PLC	TYC	18,134.72	0.09%	2.04%	13.00%	15.17%	0.0143%
UNDER ARMOUR INC-CLASS A	UA	15,770.68	0.08%	0.00%	22.89%	22.89%	0.0188%
UNITED CONTINENTAL HOLDINGS	UAL	15,136.70	0.08%	0.00%	-11.42%	-11.42%	-0.0090%
UDR INC	UDR	9,624.96	0.05%	3.26%	6.73%	10.10%	0.0050%
UNIVERSAL HEALTH SERVICES-B	UHS	13,087.66	0.07%	0.30%	8.88%	9.19%	0.0063%
ULTA SALON COSMETICS & FRAGR	ULTA	14,594.11	0.08%	0.00%	21.00%	21.00%	0.0159%
UNITEDHEALTH GROUP INC	UNH	127,093.99	0.66%	1.51%	13.02%	14.62%	0.0966%
UNUM GROUP	UNM	8,778.05	0.05%	2.12%	7.60%	9.80%	0.0045%
UNION PACIFIC CORP	UNP	70,806.68	0.37%	2.68%	12.38%	15.23%	0.0560%
UNITED PARCEL SERVICE-CL B	UPS	90,994.36	0.47%	3.03%	9.61%	12.79%	0.0605%
URBAN OUTFITTERS INC	URBN	3,349.46	0.02%	0.00%	14.84%	14.84%	0.0026%
UNITED RENTALS INC	URI	6,165.96	0.03%	0.00%	14.13%	14.13%	0.0045%
US BANCORP	USB	73,924.58	0.38%	2.51%	5.86%	8.44%	0.0324%
UNITED TECHNOLOGIES CORP	UTX	84,171.95	0.44%	2.58%	9.56%	12.26%	0.0536%
VISA INC-CLASS A SHARES	V	188,264.55	0.98%	0.72%	16.64%	17.42%	0.1704%
VARIAN MEDICAL SYSTEMS INC	VAR	7,882.81	0.04%	0.00%	12.05%	12.05%	0.0049%
VF CORP	VFC	25,988.58	0.14%	2.43%	10.77%	13.33%	0.0180%
VIACOM INC-CLASS B	VIAB	17,761.76	0.09%	3.65%	6.49%	10.26%	0.0095%
VALERO ENERGY CORP	VLO	25,698.20	0.13%	4.42%	4.21%	8.72%	0.0116%
VULCAN MATERIALS CO	VMC	15,549.72	0.08%	0.69%	23.08%	23.85%	0.0193%
VORNADO REALTY TRUST	VNO	18,031.41	0.09%	2.72%	5.45%	8.24%	0.0077%
VERISK ANALYTICS INC	VRSK	13,350.73	0.07%	0.00%	12.00%	12.00%	0.0083%
VERISIGN INC	VRSN	9,270.32	0.05%	0.00%	9.85%	9.85%	0.0047%
VERTEX PHARMACEUTICALS INC	VRTX	23,040.64	0.12%	0.00%	50.53%	50.53%	0.0605%
VENTAS INC	VTR	22,428.30	0.12%	4.44%	5.12%	9.67%	0.0113%
VERIZON COMMUNICATIONS INC	VZ	207,483.06	1.08%	4.49%	3.95%	8.53%	0.0919%
WATERS CORP	WAT	11,133.50	0.06%	0.00%	8.59%	8.59%	0.0050%
WALGREENS BOOTS ALLIANCE INC	WBA	83,611.02	0.43%	1.88%	13.20%	15.21%	0.0661%
WESTERN DIGITAL CORP	WDC	13,098.09	0.07%	4.08%	1.94%	6.06%	0.0041%
WEC ENERGY GROUP INC	WEC	18,983.02	0.10%	3.29%	6.00%	9.39%	0.0093%
WELLS FARGO & CO	WFC	257,507.86	1.34%	3.06%	9.88%	13.09%	0.1752%
WHOLE FOODS MARKET INC	WFM	10,385.23	0.05%	1.67%	7.97%	9.71%	0.0052%
WHIRLPOOL CORP	WHR	13,265.33	0.07%	2.16%	17.04%	19.38%	0.0134%
WILLIS TOWERS WATSON PLC	WLTW	17,723.19	0.09%	1.50%	21.47%	23.13%	0.0213%
WASTE MANAGEMENT INC	WM	27,077.75	0.14%	2.69%	8.33%	11.13%	0.0157%
WILLIAMS COS INC	WMB	16,632.62	0.09%	11.55%	-2.07%	9.37%	0.0081%
WAL-MART STORES INC	WMT	222,162.30	1.15%	2.82%	2.91%	5.77%	0.0666%
WESTROCK CO	WRK	10,005.87	0.05%	3.79%	2.85%	6.69%	0.0035%
WESTERN UNION CO	WU	9,552.61	0.05%	3.26%	6.83%	10.20%	0.0051%
WEYERHAEUSER CO	WY	23,532.82	0.12%	4.02%	12.27%	16.54%	0.0202%
WYNDHAM WORLDWIDE CORP	WYN	7,544.42	0.04%	2.97%	7.65%	10.73%	0.0042%
WYNN RESORTS LTD	WYNN	9,790.25	0.05%	2.12%	10.00%	12.23%	0.0062%
CIMAREX ENERGY CO	XEC	11,025.09	0.06%	0.33%	-4.37%	-4.05%	-0.0023%
XCEL ENERGY INC	XEL	21,014.01	0.11%	3.29%	4.83%	8.19%	0.0089%
XL GROUP PLC	XL	9,733.71	0.05%	2.40%	9.00%	11.51%	0.0058%
XILINX INC	XLNX	12,110.04	0.06%	2.75%	8.23%	11.10%	0.0070%
EXXON MOBIL CORP	XOM	369,131.34	1.92%	3.35%	11.52%	15.07%	0.2890%
DENTSPLY SIRONA INC	XRAY	14,559.80	0.08%	0.47%	9.42%	9.91%	0.0075%
XEROX CORP	XRX	10,099.63	0.05%	3.14%	11.60%	14.92%	0.0078%
XYLEM INC	XYL	7,989.56	0.04%	1.39%	15.00%	16.49%	0.0068%
YAHOO! INC	YHOO	36,039.93	0.19%	0.00%	6.54%	6.54%	0.0122%
YUM! BRANDS INC	YUM	33,446.81	0.17%	2.31%	11.60%	14.04%	0.0244%
ZIMMER BIOMET HOLDINGS INC	ZBH	24,329.06	0.13%	0.78%	10.49%	11.31%	0.0143%
ZIONS BANCORPORATION	ZION	5,733.55	0.03%	1.09%	9.00%	10.14%	0.0030%
ZOETIS INC	ZTS	23,529.92	0.12%	0.80%	15.40%	16.26%	0.0199%
		19,245,929.81					13.14%

[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 Est. Required Market Return	Current 30-Year Treasury (30-day average)	Implied Market Risk Premium
13.75%	2.65%	11.10%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	14,927.28	0.08%	1.01%	4.50%	5.53%	0.0046%
ALCOA INC	AA	12,459.62	0.07%	1.26%	11.50%	12.83%	0.0089%
AMERICAN AIRLINES GROUP INC	AAL	19,681.84	N/A	1.27%	N/A	N/A	N/A
ADVANCE AUTO PARTS INC	AAP	11,485.37	0.06%	0.15%	11.50%	11.66%	0.0075%
APPLE INC	AAPL	550,090.80	3.07%	2.27%	11.50%	13.90%	0.4268%
ABBVIE INC	ABBV	99,652.38	0.56%	3.68%	13.00%	16.92%	0.0941%
AMERISOURCEBERGEN CORP	ABC	16,506.63	0.09%	1.85%	11.00%	12.95%	0.0119%
ABBOTT LABORATORIES	ABT	57,271.94	0.32%	2.67%	7.50%	10.27%	0.0328%
ACCENTURE PLC-CL A	ACN	76,573.14	0.43%	1.98%	6.50%	8.54%	0.0365%
ADOBE SYSTEMS INC	ADBE	49,753.86	0.28%	0.00%	35.50%	35.50%	0.0986%
ANALOG DEVICES INC	ADI	17,915.43	0.10%	2.88%	11.00%	14.04%	0.0140%
ARCHER-DANIELS-MIDLAND CO	ADM	25,626.65	0.14%	2.79%	6.00%	8.87%	0.0127%
AUTOMATIC DATA PROCESSING	ADP	39,999.97	0.22%	2.59%	9.50%	12.21%	0.0273%
ALLIANCE DATA SYSTEMS CORP	ADS	12,908.97	0.07%	0.00%	10.50%	10.50%	0.0076%
AUTODESK INC	ADSK	13,039.88	N/A	0.00%	N/A	N/A	N/A
AMEREN CORPORATION	AEE	11,605.18	0.06%	3.62%	5.00%	8.71%	0.0056%
AMERICAN ELECTRIC POWER	AEP	31,589.38	0.18%	3.58%	4.50%	8.16%	0.0144%
AES CORP	AES	7,261.55	0.04%	4.04%	3.50%	7.61%	0.0031%
AETNA INC	AET	39,517.97	0.22%	0.88%	10.00%	10.92%	0.0241%
AFLAC INC	AFL	29,358.61	0.16%	2.43%	4.50%	6.98%	0.0114%
ALLERGAN PLC	AGN	91,549.84	0.51%	0.00%	15.00%	15.00%	0.0767%
AMERICAN INTERNATIONAL GROUP	AIG	68,948.70	0.38%	2.22%	5.00%	7.28%	0.0280%
APARTMENT INVT & MGMT CO -A	AIV	-	N/A	3.10%	N/A	N/A	N/A
ASSURANT INC	AIZ	5,702.61	0.03%	2.31%	7.00%	9.39%	0.0030%
ARTHUR J GALLAGHER & CO	AJG	8,267.32	0.05%	3.17%	15.00%	18.41%	0.0085%
AKAMAI TECHNOLOGIES INC	AKAM	9,565.90	0.05%	0.00%	13.00%	13.00%	0.0069%
ALASKA AIR GROUP INC	ALK	8,279.07	0.05%	1.66%	13.50%	15.27%	0.0071%
ALLSTATE CORP	ALL	25,721.31	0.14%	1.96%	6.50%	8.52%	0.0122%
ALLEGION PLC	ALLE	6,501.47	0.04%	0.71%	10.50%	11.25%	0.0041%
ALEXION PHARMACEUTICALS INC	ALXN	33,434.12	0.19%	0.00%	27.50%	27.50%	0.0513%
APPLIED MATERIALS INC	AMAT	25,845.39	0.14%	1.69%	15.00%	16.82%	0.0243%
AMETEK INC	AME	11,257.62	0.06%	0.75%	6.00%	6.77%	0.0043%
AFFILIATED MANAGERS GROUP	AMG	9,162.14	0.05%	0.00%	8.50%	8.50%	0.0043%
AMGEN INC	AMGN	117,284.70	0.65%	2.64%	8.50%	11.25%	0.0737%
AMERIPRISE FINANCIAL INC	AMP	17,132.38	0.10%	3.00%	11.00%	14.17%	0.0135%
AMERICAN TOWER CORP	AMT	44,594.23	0.25%	2.13%	12.50%	14.76%	0.0367%
AMAZON.COM INC	AMZN	336,722.60	1.88%	0.00%	90.00%	90.00%	1.6915%
AUTONATION INC	AN	5,469.29	0.03%	0.00%	9.00%	9.00%	0.0027%
ANTHEM INC	ANTM	33,859.05	0.19%	2.01%	7.00%	9.08%	0.0172%
AON PLC	AON	28,863.20	0.16%	1.23%	12.00%	13.30%	0.0214%
APACHE CORP	APA	21,937.31	0.12%	1.72%	5.00%	6.76%	0.0083%
ANADARKO PETROLEUM CORP	APC	26,573.92	N/A	0.38%	N/A	N/A	N/A
AIR PRODUCTS & CHEMICALS INC	APD	30,914.71	0.17%	2.40%	12.00%	14.54%	0.0251%
AMPHENOL CORP-CL A	APH	17,860.92	0.10%	0.97%	8.00%	9.01%	0.0090%
ACTIVISION BLIZZARD INC	ATVI	28,711.68	0.16%	0.72%	8.00%	8.75%	0.0140%
AVALONBAY COMMUNITIES INC	AVB	-	N/A	3.06%	N/A	N/A	N/A
BROADCOM LTD	AVGO	42,556.54	0.24%	1.28%	23.00%	24.43%	0.0580%
AVERY DENNISON CORP	AVY	6,775.26	0.04%	2.25%	9.50%	11.86%	0.0045%
AMERICAN WATER WORKS CO INC	AWK	13,189.30	0.07%	2.03%	8.00%	10.11%	0.0074%
AMERICAN EXPRESS CO	AXP	63,207.87	0.35%	1.96%	3.00%	4.99%	0.0176%
ACUITY BRANDS INC	AYI	11,172.91	0.06%	0.20%	19.50%	19.72%	0.0123%
AUTOZONE INC	AZO	23,098.91	0.13%	0.00%	11.50%	11.50%	0.0148%
BOEING CO/THE	BA	86,201.15	0.48%	3.47%	10.00%	13.64%	0.0656%
BANK OF AMERICA CORP	BAC	153,281.40	0.86%	1.63%	22.00%	23.81%	0.2037%
BAXTER INTERNATIONAL INC	BAX	23,784.66	0.13%	1.20%	-4.50%	-3.33%	-0.0044%
BED BATH & BEYOND INC	BBBY	7,194.56	0.04%	1.14%	3.00%	4.16%	0.0017%
BB&T CORP	BBT	28,193.57	0.16%	3.32%	7.50%	10.94%	0.0172%
BEST BUY CO INC	BBY	10,344.74	0.06%	3.51%	8.00%	11.65%	0.0067%
CR BARD INC	BCR	16,182.39	0.09%	0.46%	9.00%	9.48%	0.0086%
BECTON DICKINSON AND CO	BDX	35,413.68	0.20%	1.65%	9.50%	11.23%	0.0222%
FRANKLIN RESOURCES INC	BEN	21,704.54	0.12%	2.11%	4.50%	6.66%	0.0081%
BROWN-FORMAN CORP-CLASS B	BF/B	19,485.69	0.11%	1.43%	8.00%	9.49%	0.0103%
BAKER HUGHES INC	BHI	19,914.09	0.11%	1.49%	30.00%	31.71%	0.0353%
BIOGEN INC	BIIB	61,645.20	0.34%	0.00%	10.50%	10.50%	0.0361%
BANK OF NEW YORK MELLON CORP	BK	45,616.96	0.25%	1.62%	11.00%	12.71%	0.0324%
BLACKROCK INC	BLK	59,352.68	0.33%	2.52%	8.00%	10.62%	0.0352%
BALL CORP	BLL	10,219.20	0.06%	0.72%	11.00%	11.76%	0.0067%
BRISTOL-MYERS SQUIBB CO	BMY	117,482.50	0.66%	2.15%	17.50%	19.84%	0.1301%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	178.53	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	30,380.38	0.17%	0.00%	18.00%	18.00%	0.0305%
BORGWARNER INC	BWA	7,314.49	0.04%	1.56%	8.00%	9.62%	0.0039%
BAXALTA INC	BXLT	N/A	N/A	0.00%	N/A	N/A	N/A
BOSTON PROPERTIES INC	BXP	-	N/A	2.08%	N/A	N/A	N/A
CITIGROUP INC	C	137,361.20	0.77%	0.43%	12.00%	12.46%	0.0955%
CA INC	CA	13,206.39	0.07%	3.19%	4.50%	7.76%	0.0057%
CONAGRA FOODS INC	CAG	19,835.06	0.11%	2.20%	6.00%	8.27%	0.0092%

		[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
CARDINAL HEALTH INC	CAH	25,196.54	0.14%	2.41%	14.00%	16.58%	0.0233%
CATERPILLAR INC	CAT	41,973.77	0.23%	4.27%	5.00%	9.38%	0.0220%
CHUBB LTD	CB	40,951.71	0.23%	2.18%	7.50%	9.76%	0.0223%
CBRE GROUP INC - A	CBG	9,823.02	0.05%	0.00%	10.00%	10.00%	0.0055%
CBS CORP-CLASS B NON VOTING	CBS	25,164.05	0.14%	1.10%	13.00%	14.17%	0.0199%
CROWN CASTLE INTL CORP	CCI	30,309.74	0.17%	4.10%	21.00%	25.53%	0.0432%
CARNIVAL CORP	CCL	35,930.45	0.20%	2.94%	15.50%	18.67%	0.0374%
CELGENE CORP	CELG	83,206.55	0.46%	0.00%	24.00%	24.00%	0.1115%
CERNER CORP	CERN	18,690.89	0.10%	0.00%	14.50%	14.50%	0.0151%
CF INDUSTRIES HOLDINGS INC	CF	6,750.03	0.04%	4.66%	8.00%	12.85%	0.0048%
CITIZENS FINANCIAL GROUP	CFG	12,320.32	N/A	2.06%	N/A	N/A	N/A
CHURCH & DWIGHT CO INC	CHD	12,760.18	0.07%	1.45%	7.50%	9.00%	0.0064%
CHESAPEAKE ENERGY CORP	CHK	2,806.00	N/A	0.00%	N/A	N/A	N/A
C.H. ROBINSON WORLDWIDE INC	CHRW	10,754.82	0.06%	2.29%	7.50%	9.88%	0.0059%
CIGNA CORP	CI	33,060.82	0.18%	0.03%	12.50%	12.53%	0.0231%
CINCINNATI FINANCIAL CORP	CINF	11,243.23	0.06%	2.80%	7.50%	10.41%	0.0065%
COLGATE-PALMOLIVE CO	CL	62,929.18	0.35%	2.24%	13.50%	15.89%	0.0558%
CLOROX COMPANY	CLX	16,749.13	0.09%	2.47%	8.00%	10.57%	0.0099%
COMERICA INC	CMA	8,191.51	0.05%	1.89%	6.00%	7.95%	0.0036%
COMCAST CORP-CLASS A	CMCSA	152,137.00	0.85%	1.77%	10.00%	11.86%	0.1007%
CME GROUP INC	CME	32,841.64	0.18%	2.46%	9.50%	12.08%	0.0221%
CHIPOTLE MEXICAN GRILL INC	CMG	13,824.89	0.08%	0.00%	13.50%	13.50%	0.0104%
CUMMINS INC	CMI	19,885.20	0.11%	3.44%	5.00%	8.53%	0.0095%
CMS ENERGY CORP	CMS	11,482.86	0.06%	3.04%	6.00%	9.13%	0.0059%
CENTENE CORP	CNC	7,340.86	0.04%	0.00%	27.00%	27.00%	0.0111%
CENTERPOINT ENERGY INC	CNP	9,610.50	N/A	4.65%	N/A	N/A	N/A
CAPITAL ONE FINANCIAL CORP	COF	38,257.98	0.21%	2.21%	3.50%	5.75%	0.0123%
CABOT OIL & GAS CORP	COG	9,797.62	0.05%	0.34%	39.00%	39.41%	0.0216%
COACH INC	COH	10,929.81	0.06%	3.43%	4.50%	8.01%	0.0049%
ROCKWELL COLLINS INC	COL	11,582.13	0.06%	1.55%	8.00%	9.61%	0.0062%
CONOCOPHILLIPS	COP	55,286.11	0.31%	2.24%	6.50%	8.81%	0.0272%
COSTCO WHOLESALE CORP	COST	65,761.02	0.37%	1.20%	9.00%	10.25%	0.0376%
CAMPBELL SOUP CO	CPB	18,929.34	0.11%	2.04%	5.50%	7.60%	0.0080%
COLUMBIA PIPELINE GROUP	CPGX	10,227.93	N/A	2.11%	N/A	N/A	N/A
SALESFORCE.COM INC	CRM	56,469.63	N/A	0.00%	N/A	N/A	N/A
CISCO SYSTEMS INC	CSCO	145,482.60	0.81%	3.60%	6.00%	9.71%	0.0788%
CSRA INC	CSRA	3,930.55	N/A	1.66%	N/A	N/A	N/A
CSX CORP	CSX	24,642.25	0.14%	2.79%	7.00%	9.89%	0.0136%
CINTAS CORP	CTAS	10,058.66	0.06%	1.12%	11.00%	12.18%	0.0068%
CENTURYLINK INC	CTL	14,481.39	0.08%	8.11%	13.50%	22.16%	0.0179%
COGNIZANT TECH SOLUTIONS-A	CTSH	37,916.34	0.21%	0.00%	12.50%	12.50%	0.0265%
CITRIX SYSTEMS INC	CTXS	13,052.91	0.07%	0.00%	11.00%	11.00%	0.0080%
CABLEVISION SYSTEMS-NY GRP-A	CVC	9,579.67	0.05%	0.00%	6.00%	6.00%	0.0032%
CVS HEALTH CORP	CVS	107,614.50	0.60%	1.75%	12.00%	13.86%	0.0832%
CHEVRON CORP	CVX	191,105.60	1.07%	4.22%	4.50%	8.81%	0.0940%
CONCHO RESOURCES INC	CXO	15,806.37	0.09%	0.00%	16.50%	16.50%	0.0146%
DOMINION RESOURCES INC/VA	D	42,677.20	0.24%	4.07%	8.00%	12.23%	0.0291%
DELTA AIR LINES INC	DAL	33,300.80	0.19%	1.87%	14.50%	16.51%	0.0307%
DU PONT (E.I.) DE NEMOURS	DD	58,345.40	0.33%	2.39%	7.00%	9.47%	0.0309%
DEERE & CO	DE	25,225.57	0.14%	2.99%	-1.50%	1.47%	0.0021%
DISCOVER FINANCIAL SERVICES	DFS	23,694.14	0.13%	1.99%	5.00%	7.04%	0.0093%
DOLLAR GENERAL CORP	DG	24,975.30	0.14%	1.19%	13.50%	14.77%	0.0206%
QUEST DIAGNOSTICS INC	DGX	11,045.32	0.06%	2.07%	9.00%	11.16%	0.0069%
DR HORTON INC	DHI	11,340.66	0.06%	1.05%	13.50%	14.62%	0.0093%
DANAHER CORP	DHR	68,130.55	0.38%	0.65%	13.00%	13.69%	0.0521%
WALT DISNEY CO/THE	DIS	169,677.00	0.95%	1.42%	10.00%	11.49%	0.1088%
DISCOVERY COMMUNICATIONS-A	DISCA	14,509.52	0.08%	0.00%	17.00%	17.00%	0.0138%
DELPHI AUTOMOTIVE PLC	DLPH	18,692.80	0.10%	1.85%	14.50%	16.48%	0.0172%
DIGITAL REALTY TRUST INC	DLR	-	N/A	3.81%	N/A	N/A	N/A
DOLLAR TREE INC	DLTR	20,764.12	0.12%	0.00%	21.00%	21.00%	0.0243%
DUN & BRADSTREET CORP	DNB	4,513.94	0.03%	1.54%	5.00%	6.58%	0.0017%
DIAMOND OFFSHORE DRILLING	DO	3,470.12	0.02%	0.00%	11.50%	11.50%	0.0022%
DOVER CORP	DOV	10,337.22	0.06%	2.52%	2.00%	4.55%	0.0026%
DOW CHEMICAL CO/THE	DOW	58,069.76	0.32%	3.69%	9.50%	13.37%	0.0433%
DR PEPPER SNAPPLE GROUP INC	DPS	17,315.18	0.10%	2.32%	8.00%	10.41%	0.0101%
DARDEN RESTAURANTS INC	DRI	8,526.13	0.05%	2.97%	13.50%	16.67%	0.0079%
DTE ENERGY COMPANY	DTE	16,102.05	0.09%	3.39%	4.50%	7.97%	0.0072%
DUKE ENERGY CORP	DUK	53,636.48	0.30%	4.35%	4.50%	8.95%	0.0268%
DAVITA HEALTHCARE PARTNERS I	DVA	16,140.57	0.09%	0.00%	10.50%	10.50%	0.0095%
DEVON ENERGY CORP	DVN	15,006.20	0.08%	0.67%	1.00%	1.67%	0.0014%
ELECTRONIC ARTS INC	EA	23,284.10	0.13%	0.00%	17.00%	17.00%	0.0221%
EBAY INC	EBAY	28,558.08	0.16%	0.00%	3.50%	3.50%	0.0056%
ECOLAB INC	ECL	34,987.20	0.20%	1.18%	8.50%	9.73%	0.0190%
CONSOLIDATED EDISON INC	ED	21,309.89	0.12%	3.74%	1.50%	5.27%	0.0063%
EQUIFAX INC	EFX	14,845.81	0.08%	1.06%	9.50%	10.61%	0.0088%
EDISON INTERNATIONAL	EIX	23,080.45	0.13%	2.81%	3.50%	6.36%	0.0082%
ESTEE LAUDER COMPANIES-CL A	EL	33,757.09	0.19%	1.31%	8.00%	9.36%	0.0176%
EMC CORP/MA	EMC	54,093.12	0.30%	1.65%	3.50%	5.18%	0.0156%
EASTMAN CHEMICAL CO	EMN	10,885.63	0.06%	2.50%	9.50%	12.12%	0.0074%
EMERSON ELECTRIC CO	EMR	33,462.43	0.19%	3.65%	2.00%	5.69%	0.0106%
ENDO INTERNATIONAL PLC	ENDP	3,380.73	0.02%	0.00%	39.00%	39.00%	0.0074%
EOG RESOURCES INC	EOG	45,253.32	0.25%	0.94%	4.50%	5.46%	0.0138%
EQUINIX INC	EQIX	22,547.89	0.13%	1.93%	24.50%	26.67%	0.0336%
EQUITY RESIDENTIAL	EQR	-	N/A	2.98%	N/A	N/A	N/A
EQT CORP	EQT	11,154.75	0.06%	0.16%	12.00%	12.17%	0.0076%
EVERSOURCE ENERGY	ES	17,382.07	0.10%	3.36%	6.00%	9.46%	0.0092%
EXPRESS SCRIPTS HOLDING CO	ESRX	50,571.20	0.28%	0.00%	15.50%	15.50%	0.0438%
ESSEX PROPERTY TRUST INC	ESS	-	N/A	2.88%	N/A	N/A	N/A

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
E*TRADE FINANCIAL CORP	ETFC	7,973.84	0.04%	0.00%	17.50%	17.50%	0.0078%
EATON CORP PLC	ETN	28,471.45	0.16%	3.71%	4.50%	8.29%	0.0132%
ENERGY CORP	ETR	13,482.64	0.08%	4.55%	2.50%	7.11%	0.0053%
EDWARDS LIFESCIENCES CORP	EW	21,417.22	0.12%	0.00%	17.00%	17.00%	0.0203%
EXELON CORP	EXC	31,433.80	0.18%	3.72%	7.00%	10.85%	0.0190%
EXPEDITORS INTL WASH INC	EXPD	8,904.90	0.05%	1.64%	11.00%	12.73%	0.0063%
EXPEDIA INC	EXPE	16,801.96	0.09%	0.86%	23.00%	23.96%	0.0225%
EXTRA SPACE STORAGE INC	EXR	-	N/A	2.89%	N/A	N/A	N/A
FORD MOTOR CO	F	53,301.60	0.30%	4.46%	7.00%	11.62%	0.0346%
FASTENAL CO	FAST	13,343.94	0.07%	2.60%	7.00%	9.69%	0.0072%
FACEBOOK INC-A	FB	339,892.20	1.90%	0.00%	34.00%	34.00%	0.6450%
FREEMPORT-MCMORAN INC	FCX	14,129.64	0.08%	0.00%	36.50%	36.50%	0.0288%
FEDEX CORP	FDX	51,961.20	0.29%	0.61%	12.50%	13.15%	0.0381%
FIRSTENERGY CORP	FE	13,702.17	0.08%	4.45%	9.00%	13.65%	0.0104%
F5 NETWORKS INC	FFIV	7,301.60	0.04%	0.00%	9.00%	9.00%	0.0037%
FIDELITY NATIONAL INFO SERV	FIS	24,022.73	0.13%	1.41%	13.50%	15.01%	0.0201%
FISERV INC	FISV	23,489.78	0.13%	0.00%	9.50%	9.50%	0.0125%
FIFTH THIRD BANCORP	FITB	14,602.49	0.08%	3.01%	3.50%	6.56%	0.0053%
FOOT LOCKER INC	FL	7,494.01	0.04%	2.01%	9.00%	11.10%	0.0046%
FLIR SYSTEMS INC	FLIR	4,208.40	0.02%	1.60%	8.00%	9.66%	0.0023%
FLUOR CORP	FLR	7,312.35	0.04%	1.60%	1.50%	3.11%	0.0013%
FLOWSERVE CORP	FLS	6,250.54	0.03%	1.57%	2.50%	4.09%	0.0014%
FMC CORP	FMC	6,395.39	0.04%	1.42%	4.50%	5.95%	0.0021%
TWENTY-FIRST CENTURY FOX - B	FOX	N/A	N/A	0.00%	N/A	N/A	N/A
FEDERAL REALTY INVS TRUST	FRT	-	N/A	2.59%	N/A	N/A	N/A
FIRST SOLAR INC	FSLR	5,060.87	0.03%	0.00%	8.50%	8.50%	0.0024%
FMC TECHNOLOGIES INC	FTI	6,064.77	0.03%	0.00%	-1.00%	-1.00%	-0.0003%
FRONTIER COMMUNICATIONS CORP	FTR	6,027.91	0.03%	8.14%	16.00%	24.79%	0.0083%
AGL RESOURCES INC	GAS	7,895.53	0.04%	3.23%	5.00%	8.31%	0.0037%
GENERAL DYNAMICS CORP	GD	44,443.12	0.25%	2.13%	7.00%	9.20%	0.0228%
GENERAL ELECTRIC CO	GE	303,479.30	1.69%	3.07%	9.50%	12.72%	0.2154%
GENERAL GROWTH PROPERTIES	GGP	-	N/A	2.91%	N/A	N/A	N/A
GILEAD SCIENCES INC	GILD	121,282.40	0.68%	2.20%	10.00%	12.31%	0.0833%
GENERAL MILLS INC	GIS	37,319.63	0.21%	2.93%	5.00%	8.00%	0.0167%
CORNING INC	GLW	22,746.90	0.13%	2.68%	6.50%	9.27%	0.0118%
GENERAL MOTORS CO	GM	50,064.00	0.28%	4.86%	11.00%	16.13%	0.0451%
ALPHABET INC-CL C	GOOG	497,722.40	2.78%	0.00%	15.00%	15.00%	0.4167%
GENUINE PARTS CO	GPC	14,455.80	0.08%	2.73%	6.50%	9.32%	0.0075%
GLOBAL PAYMENTS INC	GPN	9,871.51	0.06%	0.05%	14.00%	14.05%	0.0077%
GAP INC/THE	GPS	7,169.82	0.04%	5.15%	1.50%	6.69%	0.0027%
GARMIN LTD	GRMN	7,842.05	N/A	4.92%	N/A	N/A	N/A
GOLDMAN SACHS GROUP INC	GS	66,789.61	0.37%	1.63%	7.00%	8.69%	0.0324%
GOODYEAR TIRE & RUBBER CO	GT	7,308.28	0.04%	1.10%	8.50%	9.65%	0.0039%
WW GRAINGER INC	GWV	14,112.84	0.08%	2.15%	6.00%	8.21%	0.0065%
HALLIBURTON CO	HAL	36,499.84	0.20%	1.69%	8.00%	9.76%	0.0199%
HARMAN INTERNATIONAL	HAR	5,427.80	0.03%	1.82%	17.00%	18.97%	0.0057%
HASBRO INC	HAS	10,832.04	0.06%	2.35%	11.00%	13.48%	0.0081%
HUNTINGTON BANCSHARES INC	HBAN	8,314.95	0.05%	2.87%	7.50%	10.48%	0.0049%
HANESBRANDS INC	HBI	10,676.43	0.06%	1.61%	11.50%	13.20%	0.0079%
HCA HOLDINGS INC	HCA	30,782.65	0.17%	0.00%	11.50%	11.50%	0.0198%
WELLTOWER INC	HCN	-	N/A	5.06%	N/A	N/A	N/A
HCP INC	HCP	-	0.00%	7.04%	74.00%	83.64%	0.0000%
HOME DEPOT INC	HD	166,892.20	0.93%	2.06%	13.00%	15.19%	0.1415%
HESS CORP	HES	17,288.56	0.10%	1.66%	-1.00%	0.65%	0.0006%
HARTFORD FINANCIAL SVCS GRP	HIG	18,094.00	0.10%	1.87%	11.50%	13.48%	0.0136%
HARLEY-DAVIDSON INC	HOG	8,225.11	0.05%	3.08%	9.00%	12.22%	0.0056%
HOLOGIC INC	HOLX	9,469.88	0.05%	0.00%	21.00%	21.00%	0.0111%
HONEYWELL INTERNATIONAL INC	HON	87,971.98	0.49%	2.08%	8.50%	10.67%	0.0524%
STARWOOD HOTELS & RESORTS	HOT	12,329.17	0.07%	2.05%	5.50%	7.61%	0.0052%
HELMERICH & PAYNE	HP	6,549.32	0.04%	4.54%	-6.00%	-1.60%	-0.0006%
HEWLETT PACKARD ENTERPRIS	HPE	30,136.87	N/A	1.27%	N/A	N/A	N/A
HP INC	HPQ	22,650.48	N/A	3.83%	N/A	N/A	N/A
H&R BLOCK INC	HRB	4,647.43	0.03%	3.86%	8.00%	12.01%	0.0031%
HORMEL FOODS CORP	HRL	18,474.87	0.10%	1.78%	14.00%	15.90%	0.0164%
HARRIS CORP	HRS	9,928.60	0.06%	2.58%	8.00%	10.68%	0.0059%
HENRY SCHEIN INC	HSIC	14,173.40	0.08%	0.00%	9.00%	9.00%	0.0071%
HOST HOTELS & RESORTS INC	HST	-	N/A	5.26%	N/A	N/A	N/A
HERSHEY CO/THE	HSY	19,976.00	0.11%	2.53%	6.00%	8.61%	0.0096%
HUMANA INC	HUM	25,841.80	0.14%	0.67%	10.50%	11.21%	0.0162%
INTL BUSINESS MACHINES CORP	IBM	147,215.70	0.82%	3.67%	0.50%	4.18%	0.0343%
INTERCONTINENTAL EXCHANGE IN	ICE	31,892.00	0.18%	1.27%	14.00%	15.36%	0.0273%
INTL FLAVORS & FRAGRANCES	IFF	10,317.24	0.06%	1.74%	4.50%	6.28%	0.0036%
ILLUMINA INC	ILMN	20,979.10	0.12%	0.00%	22.50%	22.50%	0.0263%
INTEL CORP	INTC	148,790.30	0.83%	3.30%	8.50%	11.94%	0.0992%
INTUIT INC	INTU	27,826.33	0.16%	1.12%	13.00%	14.19%	0.0220%
INTERNATIONAL PAPER CO	IP	17,243.27	0.10%	4.21%	15.00%	19.53%	0.0188%
INTERPUBLIC GROUP OF COS INC	IPG	9,471.17	0.05%	2.68%	13.00%	15.85%	0.0084%
INGERSOLL-RAND PLC	IR	17,315.78	0.10%	1.93%	8.50%	10.51%	0.0102%
IRON MOUNTAIN INC	IRM	7,781.54	0.04%	5.27%	13.00%	18.61%	0.0081%
INTUITIVE SURGICAL INC	ISRG	23,831.28	0.13%	0.00%	11.50%	11.50%	0.0153%
ILLINOIS TOOL WORKS	ITW	38,284.11	0.21%	2.09%	9.50%	11.69%	0.0250%
INVESCO LTD	IVZ	12,984.25	0.07%	3.60%	7.00%	10.73%	0.0078%
HUNT (JB) TRANSPRT SVCS INC	JBHT	9,269.67	0.05%	1.08%	11.00%	12.14%	0.0063%
JOHNSON CONTROLS INC	JCI	28,560.70	0.16%	2.63%	9.50%	12.25%	0.0195%
JACOBS ENGINEERING GROUP INC	JEC	6,109.74	0.03%	0.00%	4.00%	4.00%	0.0014%
JOHNSON & JOHNSON	JNJ	311,039.50	1.74%	2.88%	8.50%	11.50%	0.1997%
JUNIPER NETWORKS INC	JNPR	8,828.16	0.05%	1.87%	11.00%	12.97%	0.0064%
JPMORGAN CHASE & CO	JPM	239,383.90	1.34%	2.95%	6.50%	9.55%	0.1275%

		[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
NORDSTROM INC	JWN	6,534.01	0.04%	3.98%	4.00%	8.06%	0.0029%
KELLOGG CO	K	26,367.31	0.15%	2.71%	5.00%	7.78%	0.0114%
KEYCORP	KEY	10,655.83	0.06%	2.67%	7.50%	10.27%	0.0061%
KRAFT HEINZ CO/THE	KHC	101,743.50	N/A	2.80%	N/A	N/A	N/A
KIMCO REALTY CORP	KIM	-	N/A	3.78%	N/A	N/A	N/A
KLA-TENCOR CORP	KLAC	11,198.52	0.06%	2.89%	12.50%	15.57%	0.0097%
KIMBERLY-CLARK CORP	KMB	46,166.33	0.26%	2.88%	10.00%	13.02%	0.0336%
KINDER MORGAN INC	KMI	39,947.69	0.22%	2.79%	13.00%	15.97%	0.0356%
CARMAX INC	KMX	10,547.89	0.06%	0.00%	12.50%	12.50%	0.0074%
COCA-COLA CO/THE	KO	193,239.60	1.08%	3.13%	4.00%	7.19%	0.0776%
MICHAEL KORS HOLDINGS LTD	KORS	7,502.76	0.04%	0.00%	9.00%	9.00%	0.0038%
KROGER CO	KR	34,415.53	0.19%	1.32%	10.50%	11.89%	0.0228%
KOHL'S CORP	KSS	6,616.02	0.04%	5.74%	8.00%	13.97%	0.0052%
KANSAS CITY SOUTHERN	KSU	10,132.43	0.06%	1.41%	9.00%	10.47%	0.0059%
LOEWS CORP	L	14,667.54	0.08%	0.62%	12.50%	13.16%	0.0108%
L BRANDS INC	LB	19,270.50	0.11%	3.61%	8.00%	11.75%	0.0126%
LEGGETT & PLATT INC	LEG	6,697.28	0.04%	2.75%	11.00%	13.90%	0.0052%
LENNAR CORP-A	LEN	9,760.67	0.05%	0.35%	13.00%	13.37%	0.0073%
LABORATORY CRP OF AMER HLDGS	LH	12,896.50	0.07%	0.00%	8.50%	8.50%	0.0061%
LKQ CORP	LKQ	10,001.18	0.06%	0.00%	13.50%	13.50%	0.0075%
L-3 COMMUNICATIONS HOLDINGS	LLL	10,656.82	0.06%	2.03%	6.50%	8.60%	0.0051%
LINEAR TECHNOLOGY CORP	LLTC	11,256.28	0.06%	2.72%	5.50%	8.29%	0.0052%
ELI LILLY & CO	LLY	83,469.77	0.47%	2.70%	9.50%	12.33%	0.0574%
LEGG MASON INC	LM	3,634.88	0.02%	2.61%	10.50%	13.25%	0.0027%
LOCKHEED MARTIN CORP	LMT	73,537.58	0.41%	2.80%	8.00%	10.91%	0.0448%
LINCOLN NATIONAL CORP	LNC	11,038.41	0.06%	2.30%	7.00%	9.38%	0.0058%
LOWE'S COS INC	LOW	73,506.73	0.41%	1.55%	15.50%	17.17%	0.0704%
LAM RESEARCH CORP	LRCX	12,908.03	0.07%	1.48%	16.00%	17.60%	0.0127%
LEUCADIA NATIONAL CORP	LUK	N/A	N/A	0.00%	N/A	N/A	N/A
SOUTHWEST AIRLINES CO	LUV	27,063.29	0.15%	0.96%	17.50%	18.54%	0.0280%
LEVEL 3 COMMUNICATIONS INC	LVLT	19,033.94	0.11%	0.00%	38.00%	38.00%	0.0404%
LYONDELLBASELL INDU-CL A	LYB	35,815.00	0.20%	4.18%	6.50%	10.82%	0.0216%
MACY'S INC	M	9,794.78	0.05%	4.78%	3.00%	7.85%	0.0043%
MASTERCARD INC-CLASS A	MA	107,560.10	0.60%	0.79%	11.00%	11.83%	0.0710%
MACERICH CO/THE	MAC	-	N/A	3.67%	N/A	N/A	N/A
MARRIOTT INTERNATIONAL -CL A	MAR	16,803.03	0.09%	1.83%	12.50%	14.44%	0.0135%
MASCO CORP	MAS	10,698.29	0.06%	1.17%	13.50%	14.75%	0.0088%
MATTEL INC	MAT	10,744.71	0.06%	4.81%	6.50%	11.47%	0.0069%
MCDONALD'S CORP	MCD	112,252.80	0.63%	2.91%	6.00%	9.00%	0.0564%
MICROCHIP TECHNOLOGY INC	MCHP	10,309.26	0.06%	2.84%	8.00%	10.95%	0.0063%
MCKESSON CORP	MCK	41,047.37	0.23%	0.62%	12.00%	12.66%	0.0290%
MOODY'S CORP	MCO	19,129.17	0.11%	1.52%	7.50%	9.08%	0.0097%
MONDELEZ INTERNATIONAL INC-A	MDLZ	70,074.46	0.39%	1.67%	11.50%	13.27%	0.0519%
MEDTRONIC PLC	MDT	113,736.70	0.63%	1.95%	7.00%	9.02%	0.0573%
METLIFE INC	MET	49,499.11	0.28%	3.55%	6.50%	10.17%	0.0281%
MOHAWK INDUSTRIES INC	MHK	14,490.08	0.08%	0.00%	10.50%	10.50%	0.0085%
MEAD JOHNSON NUTRITION CO	MJN	15,445.93	0.09%	1.99%	6.50%	8.55%	0.0074%
MCCORMICK & CO-NON VTG SHRS	MKC	12,378.02	0.07%	1.76%	7.50%	9.33%	0.0064%
MARTIN MARIETTA MATERIALS	MLM	12,360.63	0.07%	0.84%	20.50%	21.43%	0.0148%
MARSH & MCLENNAN COS	MMC	34,220.86	0.19%	2.07%	9.00%	11.16%	0.0213%
3M CO	MMM	102,921.90	0.57%	2.63%	8.50%	11.24%	0.0646%
MALLINCKRODT PLC	MNK	6,719.58	N/A	0.00%	N/A	N/A	N/A
MONSTER BEVERAGE CORP	MNST	30,437.03	0.17%	0.00%	13.50%	13.50%	0.0229%
ALTRIA GROUP INC	MO	125,443.80	0.70%	3.56%	9.50%	13.23%	0.0926%
MONSANTO CO	MON	47,875.11	0.27%	1.97%	6.00%	8.03%	0.0215%
MOSAIC CO/THE	MOS	9,211.22	0.05%	4.59%	5.00%	9.70%	0.0050%
MARATHON PETROLEUM CORP	MPC	18,346.05	0.10%	3.76%	6.50%	10.38%	0.0106%
MERCK & CO. INC.	MRK	156,827.80	0.88%	3.26%	6.00%	9.36%	0.0819%
MARATHON OIL CORP	MRO	8,916.09	0.05%	1.52%	9.00%	10.59%	0.0053%
MORGAN STANLEY	MS	53,703.93	0.30%	2.19%	14.50%	16.85%	0.0505%
MICROSOFT CORP	MSFT	408,374.30	2.28%	2.78%	7.00%	9.88%	0.2251%
MOTOROLA SOLUTIONS INC	MSI	12,096.42	0.07%	2.36%	8.00%	10.45%	0.0071%
M & T BANK CORP	MTB	15,793.35	0.09%	2.36%	5.00%	7.42%	0.0065%
MICRON TECHNOLOGY INC	MU	13,025.50	0.07%	0.00%	1.00%	1.00%	0.0007%
MURPHY OIL CORP	MUR	6,054.51	N/A	4.51%	N/A	N/A	N/A
MYLAN NV	MYL	21,027.85	0.12%	0.00%	20.50%	20.50%	0.0241%
NAVIENT CORP	NAVI	4,836.81	N/A	4.79%	N/A	N/A	N/A
NOBLE ENERGY INC	NBL	15,389.10	N/A	1.12%	N/A	N/A	N/A
NASDAQ INC	NDAQ	10,684.35	0.06%	1.97%	10.00%	12.07%	0.0072%
NEXTERA ENERGY INC	NEE	55,237.02	0.31%	3.00%	6.00%	9.09%	0.0280%
NEWMONT MINING CORP	NEM	17,187.14	0.10%	0.31%	-1.00%	-0.69%	-0.0007%
NETFLIX INC	NFLX	43,996.51	0.25%	0.00%	35.00%	35.00%	0.0860%
NEWFIELD EXPLORATION CO	NFX	6,670.39	0.04%	0.00%	11.50%	11.50%	0.0043%
NISOURCE INC	NI	7,671.41	0.04%	2.75%	1.50%	4.27%	0.0018%
NIKE INC -CL B	NKE	94,090.39	0.53%	1.15%	15.00%	16.24%	0.0853%
NIELSEN HOLDINGS PLC	NLSN	19,334.36	0.11%	2.32%	9.00%	11.42%	0.0123%
NORTHROP GRUMMAN CORP	NOC	38,789.78	0.22%	1.68%	7.50%	9.24%	0.0200%
NATIONAL OILWELL VARCO INC	NOV	12,242.39	0.07%	0.61%	-9.00%	-8.42%	-0.0058%
NRG ENERGY INC	NRG	4,917.07	0.03%	0.77%	19.50%	20.35%	0.0056%
NORFOLK SOUTHERN CORP	NSC	24,964.15	0.14%	2.82%	6.50%	9.41%	0.0131%
NETAPP INC	NTAP	7,245.90	0.04%	2.89%	1.50%	4.41%	0.0018%
NORTHERN TRUST CORP	NTRS	16,915.02	0.09%	1.95%	8.50%	10.53%	0.0099%
NUCOR CORP	NUE	15,424.34	0.09%	3.09%	19.00%	22.38%	0.0193%
NVIDIA CORP	NVDA	24,377.10	0.14%	1.01%	10.00%	11.06%	0.0150%
NEWELL BRANDS INC	NWL	12,750.78	0.07%	1.59%	17.00%	18.73%	0.0133%
NEWS CORP - CLASS A	NWSA	6,877.82	0.04%	1.69%	27.50%	29.42%	0.0113%
REALTY INCOME CORP	O	-	N/A	3.99%	N/A	N/A	N/A
OWENS-ILLINOIS INC	OI	2,974.58	0.02%	0.00%	6.50%	6.50%	0.0011%

		[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
ONEOK INC	OKE	8,928.25	0.05%	5.90%	12.50%	18.77%	0.0094%
OMNICOM GROUP	OMC	19,700.94	0.11%	2.75%	9.00%	11.87%	0.0131%
ORACLE CORP	ORCL	165,787.10	0.93%	1.50%	4.50%	6.03%	0.0558%
O'REILLY AUTOMOTIVE INC	ORLY	25,814.30	0.14%	0.00%	11.00%	11.00%	0.0158%
OCCIDENTAL PETROLEUM CORP	OXY	58,123.53	0.32%	4.02%	4.00%	8.10%	0.0263%
PAYCHEX INC	PAYX	19,435.73	0.11%	3.34%	9.00%	12.49%	0.0136%
PEOPLE'S UNITED FINANCIAL	PBCT	4,856.17	0.03%	4.34%	10.50%	15.07%	0.0041%
PITNEY BOWES INC	PBI	3,591.72	0.02%	4.08%	5.00%	9.18%	0.0018%
PACCAR INC	PCAR	19,436.69	0.11%	3.97%	7.00%	11.11%	0.0121%
P G & E CORP	PCG	29,221.36	0.16%	3.30%	12.00%	15.50%	0.0253%
PRICELINE GROUP INC/THE	PCLN	62,957.35	0.35%	0.00%	15.50%	15.50%	0.0545%
PATTERSON COS INC	PDCO	4,775.10	0.03%	2.05%	9.50%	11.65%	0.0031%
PUBLIC SERVICE ENTERPRISE GP	PEG	22,363.78	0.12%	3.75%	3.00%	6.81%	0.0085%
PEPSICO INC	PEP	147,347.40	0.82%	2.95%	7.00%	10.05%	0.0827%
PFIZER INC	PFE	212,605.30	1.19%	3.49%	12.00%	15.70%	0.1863%
PRINCIPAL FINANCIAL GROUP	PFG	13,123.92	0.07%	3.54%	5.00%	8.63%	0.0063%
PROCTER & GAMBLE CO/THE	PG	216,195.60	1.21%	3.30%	6.50%	9.91%	0.1196%
PROGRESSIVE CORP	PGR	19,404.70	0.11%	2.68%	10.00%	12.81%	0.0139%
PARKER HANNIFIN CORP	PH	15,305.15	0.09%	2.22%	5.50%	7.78%	0.0066%
PULTEGROUP INC	PHM	6,584.93	0.04%	1.91%	10.50%	12.51%	0.0046%
PERKINELMER INC	PKI	6,158.51	0.03%	0.51%	6.50%	7.03%	0.0024%
PROLOGIS INC	PLD	-	N/A	3.57%	N/A	N/A	N/A
PHILIP MORRIS INTERNATIONAL	PM	153,400.50	0.86%	4.12%	5.00%	9.22%	0.0790%
PNC FINANCIAL SERVICES GROUP	PNC	48,503.58	0.27%	2.28%	4.00%	6.33%	0.0171%
PENTAIR PLC	PNR	10,981.62	0.06%	2.17%	12.50%	14.81%	0.0091%
PINNACLE WEST CAPITAL	PNW	8,087.11	0.05%	3.51%	4.00%	7.58%	0.0034%
PPG INDUSTRIES INC	PPG	29,405.55	0.16%	1.49%	9.50%	11.06%	0.0182%
PPL CORP	PPL	25,977.19	0.14%	4.02%	4.00%	8.10%	0.0117%
PERRIGO CO PLC	PRGO	14,083.68	0.08%	0.60%	15.00%	15.65%	0.0123%
PRUDENTIAL FINANCIAL INC	PRU	35,084.02	0.20%	3.57%	2.00%	5.61%	0.0110%
PUBLIC STORAGE	PSA	-	N/A	2.83%	N/A	N/A	N/A
PHILLIPS 66	PSX	42,373.97	0.24%	3.21%	2.50%	5.75%	0.0136%
PVH CORP	PVH	7,637.78	0.04%	0.16%	5.50%	5.66%	0.0024%
QUANTA SERVICES INC	PWR	3,766.09	0.02%	0.00%	6.50%	6.50%	0.0014%
PRAXAIR INC	PX	31,499.07	0.18%	2.80%	6.50%	9.39%	0.0165%
PIONEER NATURAL RESOURCES CO	PXD	24,244.37	0.14%	0.05%	18.50%	18.55%	0.0251%
PAYPAL HOLDINGS INC	PYPL	46,597.68	N/A	0.00%	N/A	N/A	N/A
QUALCOMM INC	QCOM	81,770.58	0.46%	3.80%	4.50%	8.39%	0.0383%
QRVO INC	QRVO	6,925.19	N/A	0.00%	N/A	N/A	N/A
RYDER SYSTEM INC	R	3,701.58	0.02%	2.37%	9.00%	11.48%	0.0024%
REYNOLDS AMERICAN INC	RAI	71,952.27	0.40%	3.33%	10.00%	13.50%	0.0542%
ROYAL CARIBBEAN CRUISES LTD	RCL	16,449.75	0.09%	1.99%	16.50%	18.65%	0.0171%
REGENERON PHARMACEUTICALS	REGN	41,183.57	0.23%	0.00%	27.00%	27.00%	0.0621%
REGIONS FINANCIAL CORP	RF	12,623.03	0.07%	2.78%	7.50%	10.38%	0.0073%
ROBERT HALF INTL INC	RHI	5,321.00	0.03%	2.19%	11.00%	13.31%	0.0040%
RED HAT INC	RHT	13,809.92	0.08%	0.00%	16.50%	16.50%	0.0127%
TRANSOCEAN LTD	RIG	3,607.59	0.02%	0.00%	-19.00%	-19.00%	-0.0038%
RALPH LAUREN CORP	RL	7,883.40	0.04%	2.24%	4.50%	6.79%	0.0030%
ROCKWELL AUTOMATION INC	ROK	15,210.93	0.08%	2.48%	3.00%	5.52%	0.0047%
ROPER TECHNOLOGIES INC	ROP	17,320.39	0.10%	0.70%	7.00%	7.72%	0.0075%
ROSS STORES INC	ROST	21,821.67	0.12%	1.04%	9.00%	10.09%	0.0123%
RANGE RESOURCES CORP	RRC	7,045.24	0.04%	0.19%	12.00%	12.20%	0.0048%
REPUBLIC SERVICES INC	RSG	16,661.38	0.09%	2.61%	8.50%	11.22%	0.0104%
RAYTHEON COMPANY	RTN	38,878.71	0.22%	2.25%	9.00%	11.35%	0.0246%
STARBUCKS CORP	SBUX	80,972.20	0.45%	1.61%	16.50%	18.24%	0.0825%
SCANA CORP	SCG	9,918.69	0.06%	3.36%	4.50%	7.94%	0.0044%
SCHWAB (CHARLES) CORP	SCHW	39,689.07	0.22%	0.93%	12.00%	12.99%	0.0288%
SPECTRA ENERGY CORP	SE	21,123.08	0.12%	5.15%	11.50%	16.95%	0.0200%
SEALED AIR CORP	SEE	9,122.45	0.05%	1.38%	16.00%	17.49%	0.0089%
SHERWIN-WILLIAMS CO/THE	SHW	26,605.88	0.15%	1.19%	12.00%	13.26%	0.0197%
SIGNET JEWELERS LTD	SIG	7,701.80	0.04%	1.07%	15.00%	16.15%	0.0069%
JM SMUCKER CO/THE	SJM	15,495.62	0.09%	2.14%	7.00%	9.21%	0.0080%
SCHLUMBERGER LTD	SLB	97,845.95	0.55%	2.57%	10.00%	12.70%	0.0694%
SL GREEN REALTY CORP	SLG	-	N/A	2.87%	N/A	N/A	N/A
SNAP-ON INC	SNA	9,447.25	0.05%	1.50%	10.00%	11.58%	0.0061%
SCRIPPS NETWORKS INTER-CL A	SNI	8,064.94	0.05%	1.60%	9.00%	10.67%	0.0048%
SOUTHERN CO/THE	SO	44,874.91	0.25%	4.59%	2.50%	7.15%	0.0179%
SIMON PROPERTY GROUP INC	SPG	-	N/A	3.25%	N/A	N/A	N/A
S&P GLOBAL INC	SPGI	29,275.43	0.16%	1.30%	11.00%	12.37%	0.0202%
STAPLES INC	SPLS	5,551.61	0.03%	5.59%	-2.00%	3.53%	0.0011%
STERICYCLE INC	SRCL	8,344.44	0.05%	0.00%	9.00%	9.00%	0.0042%
SEMPRA ENERGY	SRE	26,014.18	0.15%	2.94%	10.00%	13.09%	0.0190%
SUNTRUST BANKS INC	STI	22,047.58	0.12%	2.35%	7.00%	9.43%	0.0116%
ST JUDE MEDICAL INC	STJ	22,063.75	0.12%	1.64%	5.50%	7.19%	0.0088%
STATE STREET CORP	STT	25,126.06	0.14%	2.29%	5.50%	7.85%	0.0110%
SEAGATE TECHNOLOGY	STX	6,431.81	0.04%	11.69%	0.50%	12.22%	0.0044%
CONSTELLATION BRANDS INC-A	STZ	31,467.59	0.18%	1.03%	16.50%	17.61%	0.0309%
STANLEY BLACK & DECKER INC	SWK	17,011.87	0.09%	1.94%	8.50%	10.52%	0.0100%
SKYWORKS SOLUTIONS INC	SWKS	12,585.53	0.07%	1.57%	18.00%	19.71%	0.0138%
SOUTHWESTERN ENERGY CO	SWN	5,121.90	0.03%	0.00%	-5.00%	-5.00%	-0.0014%
SYNCHRONY FINANCIAL	SYF	25,756.95	N/A	0.00%	N/A	N/A	N/A
STRYKER CORP	SYK	41,619.34	0.23%	1.36%	18.50%	19.99%	0.0464%
SYMANTEC CORP	SYMC	11,293.83	0.06%	1.75%	-1.00%	0.74%	0.0005%
SYSCO CORP	SYI	27,592.25	0.15%	2.58%	10.50%	13.22%	0.0204%
AT&T INC	T	238,669.50	1.33%	4.97%	6.50%	11.63%	0.1550%
MOLSON COORS BREWING CO -B	TAP	18,331.92	0.10%	1.65%	8.00%	9.72%	0.0099%
TERADATA CORP	TDC	3,621.70	0.02%	0.00%	3.50%	3.50%	0.0007%
TECO ENERGY INC	TE	6,475.46	0.04%	3.38%	7.50%	11.01%	0.0040%

		[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
TE CONNECTIVITY LTD	TEL	21,149.76	0.12%	2.50%	8.50%	11.11%	0.0131%
TEGNA INC	TGNA	4,951.06	0.03%	2.49%	1.00%	3.50%	0.0010%
TARGET CORP	TGT	40,903.88	0.23%	3.43%	11.00%	14.62%	0.0334%
TIFFANY & CO	TIF	7,881.30	0.04%	2.69%	7.50%	10.29%	0.0045%
TJX COMPANIES INC	TJX	50,372.61	0.28%	1.37%	10.00%	11.44%	0.0322%
TORCHMARK CORP	TMK	7,392.37	0.04%	0.93%	7.00%	7.96%	0.0033%
THERMO FISHER SCIENTIFIC INC	TMO	60,343.62	0.34%	0.40%	9.00%	9.42%	0.0317%
TRIPADVISOR INC	TRIP	9,673.19	0.05%	0.00%	16.50%	16.50%	0.0089%
T ROWE PRICE GROUP INC	TROW	19,200.95	0.11%	2.86%	7.50%	10.47%	0.0112%
TRAVELERS COS INC/THE	TRV	33,614.24	0.19%	2.36%	3.50%	5.90%	0.0111%
TRACTOR SUPPLY COMPANY	TSCO	12,762.33	0.07%	1.00%	14.00%	15.07%	0.0107%
TYSON FOODS INC-CL A	TSN	24,101.80	0.13%	0.98%	12.50%	13.54%	0.0182%
TESORO CORP	TSO	9,233.85	0.05%	2.59%	5.50%	8.16%	0.0042%
TOTAL SYSTEM SERVICES INC	TSS	9,787.42	0.05%	0.75%	12.00%	12.80%	0.0070%
TIME WARNER INC	TWX	58,885.66	0.33%	2.17%	11.50%	13.79%	0.0453%
TEXAS INSTRUMENTS INC	TXN	61,454.75	0.34%	2.50%	7.50%	10.09%	0.0346%
TEXTRON INC	TXT	10,489.22	0.06%	0.21%	15.50%	15.73%	0.0092%
TYCO INTERNATIONAL PLC	TYC	18,112.85	0.10%	1.92%	9.50%	11.51%	0.0116%
UNDER ARMOUR INC-CLASS A	UA	16,319.57	0.09%	0.00%	24.50%	24.50%	0.0223%
UNITED CONTINENTAL HOLDINGS	UAL	16,225.10	0.09%	0.00%	7.00%	7.00%	0.0063%
UDR INC	UDR	-	N/A	3.29%	N/A	N/A	N/A
UNIVERSAL HEALTH SERVICES-B	UHS	13,215.90	0.07%	0.30%	12.00%	12.32%	0.0091%
ULTA SALON COSMETICS & FRAGR	ULTA	13,577.86	0.08%	0.00%	18.00%	18.00%	0.0136%
UNITEDHEALTH GROUP INC	UNH	126,730.00	0.71%	1.50%	12.50%	14.09%	0.0997%
UNUM GROUP	UNM	8,759.74	0.05%	2.04%	11.00%	13.15%	0.0064%
UNION PACIFIC CORP	UNP	69,924.03	0.39%	2.67%	7.00%	9.76%	0.0381%
UNITED PARCEL SERVICE-CL B	UPS	90,770.70	0.51%	3.08%	9.50%	12.73%	0.0645%
URBAN OUTFITTERS INC	URBN	3,358.90	0.02%	0.00%	13.50%	13.50%	0.0025%
UNITED RENTALS INC	URI	6,330.80	0.04%	0.00%	13.00%	13.00%	0.0046%
US BANCORP	USB	74,467.26	0.42%	2.46%	4.00%	6.51%	0.0271%
UNITED TECHNOLOGIES CORP	UTX	84,178.13	0.47%	2.63%	6.50%	9.22%	0.0433%
VISA INC-CLASS A SHARES	V	173,010.00	0.97%	0.76%	12.00%	12.81%	0.1237%
VARIAN MEDICAL SYSTEMS INC	VAR	7,862.32	0.04%	0.00%	7.50%	7.50%	0.0033%
VF CORP	VFC	26,479.93	0.15%	2.38%	11.00%	13.51%	0.0200%
VIACOM INC-CLASS B	VIAB	16,850.39	0.09%	3.76%	5.00%	8.85%	0.0083%
VALERO ENERGY CORP	VLO	25,586.68	0.14%	4.44%	5.50%	10.06%	0.0144%
VULCAN MATERIALS CO	VMC	15,882.09	0.09%	0.67%	33.50%	34.28%	0.0304%
VORNADO REALTY TRUST	VNO	17,858.60	0.10%	2.66%	22.50%	25.46%	0.0254%
VERISK ANALYTICS INC	VRSK	13,381.11	0.07%	0.00%	11.00%	11.00%	0.0082%
VERISIGN INC	VRSN	9,329.70	0.05%	0.00%	11.50%	11.50%	0.0060%
VERTEX PHARMACEUTICALS INC	VRTX	21,968.03	N/A	0.00%	N/A	N/A	N/A
VENTAS INC	VTR	-	N/A	4.46%	N/A	N/A	N/A
VERIZON COMMUNICATIONS INC	VZ	204,101.10	1.14%	4.51%	5.00%	9.62%	0.1096%
WATERS CORP	WAT	11,138.04	0.06%	0.00%	9.00%	9.00%	0.0056%
WALGREENS BOOTS ALLIANCE INC	WBA	82,896.30	0.46%	1.88%	13.50%	15.51%	0.0718%
WESTERN DIGITAL CORP	WDC	10,340.54	0.06%	4.51%	-0.50%	4.00%	0.0023%
WEC ENERGY GROUP INC	WEC	18,836.80	0.11%	3.37%	6.00%	9.47%	0.0100%
WELLS FARGO & CO	WFC	258,233.40	1.44%	3.01%	5.00%	8.09%	0.1165%
WHOLE FOODS MARKET INC	WFM	10,559.25	0.06%	1.72%	8.00%	9.79%	0.0058%
WHIRLPOOL CORP	WHR	13,435.50	0.07%	2.32%	11.50%	13.95%	0.0105%
WILLIS TOWERS WATSON PLC	WLTW	N/A	N/A	0.00%	N/A	N/A	N/A
WASTE MANAGEMENT INC	WM	27,326.99	0.15%	2.72%	7.50%	10.32%	0.0157%
WILLIAMS COS INC	WMB	15,586.69	0.09%	12.69%	16.50%	30.24%	0.0263%
WAL-MART STORES INC	WMT	224,027.70	1.25%	2.82%	2.00%	4.85%	0.0606%
WESTROCK CO	WRK	9,924.37	N/A	3.82%	N/A	N/A	N/A
WESTERN UNION CO	WU	9,681.25	0.05%	3.32%	8.00%	11.45%	0.0062%
WEYERHAEUSER CO	WY	15,952.59	0.09%	3.97%	12.00%	16.21%	0.0144%
WYNDHAM WORLDWIDE CORP	WYN	7,581.62	0.04%	3.00%	5.50%	8.58%	0.0036%
WYNN RESORTS LTD	WYNN	9,610.74	0.05%	2.11%	6.50%	8.68%	0.0047%
CIMAREX ENERGY CO	XEC	11,240.08	0.06%	0.27%	11.00%	11.28%	0.0071%
XCEL ENERGY INC	XEL	20,753.11	0.12%	3.38%	5.50%	8.97%	0.0104%
XL GROUP PLC	XL	8,732.36	0.05%	2.34%	8.50%	10.94%	0.0053%
XILINX INC	XLNX	12,038.49	0.07%	2.80%	7.00%	9.90%	0.0067%
EXXON MOBIL CORP	XOM	373,208.80	2.08%	3.34%	5.00%	8.42%	0.1755%
DENTSPLY SIRONA INC	XRAY	8,646.97	0.05%	0.50%	8.00%	8.52%	0.0041%
XEROX CORP	XRX	9,733.36	0.05%	3.23%	5.50%	8.82%	0.0048%
XYLEM INC	XYL	7,981.62	0.04%	1.39%	9.50%	10.96%	0.0049%
YAHOO! INC	YHOO	34,769.59	N/A	0.00%	N/A	N/A	N/A
YUM! BRANDS INC	YUM	33,557.15	0.19%	2.38%	10.00%	12.50%	0.0234%
ZIMMER BIOMET HOLDINGS INC	ZBH	24,828.72	0.14%	0.80%	13.00%	13.85%	0.0192%
ZIONS BANCORPORATION	ZION	5,690.97	0.03%	1.15%	11.00%	12.21%	0.0039%
ZOETIS INC	ZTS	23,541.94	0.13%	0.80%	0.11	11.84%	0.0156%
		17,915,583					13.75%

[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] Bloomberg	[2] Value Line
ALLETE, Inc.	ALE	0.626	0.80
Alliant Energy Corporation	LNT	0.617	0.80
American Electric Power Company, Inc.	AEP	0.565	0.70
Avista Corporation	AVA	0.591	0.75
CMS Energy Corporation	CMS	0.549	0.75
DTE Energy Company	DTE	0.608	0.75
IDACORP, Inc.	IDA	0.685	0.80
NorthWestern Corporation	NWE	0.619	0.70
OGE Energy Corp.	OGE	0.713	0.95
Otter Tail Corporation	OTTR	0.713	0.85
Pinnacle West Capital Corporation	PNW	0.611	0.75
PNM Resources, Inc.	PNM	0.641	0.80
Portland General Electric Company	POR	0.609	0.80
SCANA Corporation	SCG	0.597	0.70
Xcel Energy Inc.	XEL	0.488	0.65
Mean		0.615	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				CAPM Result	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg Market DCF Derived	Value Line Market DCF Derived
PROXY GROUP BLOOMBERG BETA COEFFICIENT						
Current 30-Year Treasury (30-day average) [7]	2.65%	0.615	10.50%	11.10%	9.11%	9.48%
Near-Term Projected 30-Year Treasury [8]	3.08%	0.615	10.50%	11.10%	9.55%	9.92%
Mean					9.33%	9.70%
	Ex-Ante Market Risk Premium				CAPM Result	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg Market DCF Derived	Value Line Market DCF Derived
PROXY GROUP VALUE LINE AVERAGE BETA COEFFICIENT						
Current 30-Year Treasury (30-day average) [7]	2.65%	0.770	10.50%	11.10%	10.73%	11.19%
Near-Term Projected 30-Year Treasury [8]	3.08%	0.770	10.50%	11.10%	11.17%	11.63%
Mean					10.95%	11.41%

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])

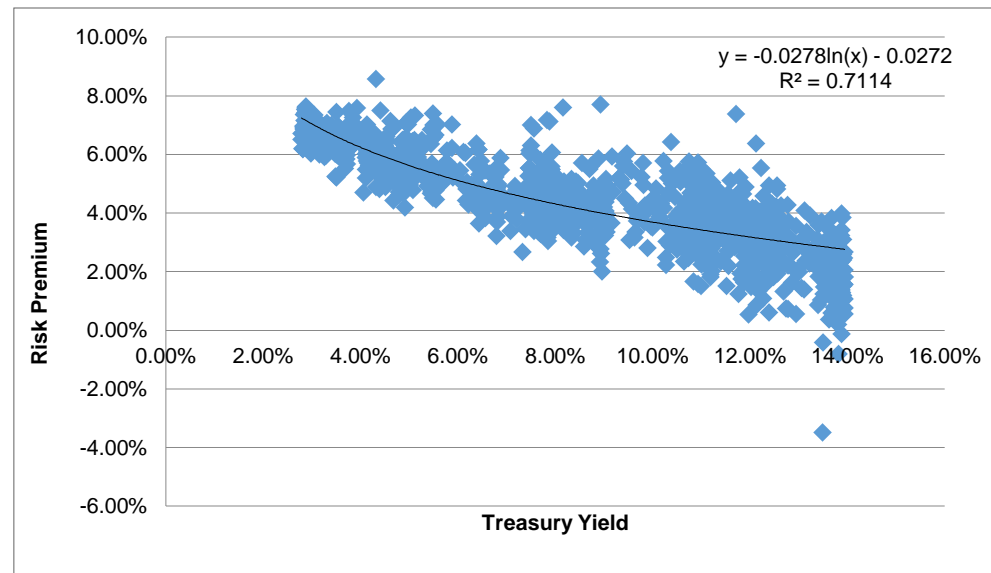
[6] Equals Col. [1] + (Col. [2] x Col. [4])

[7] Source: Bloomberg Professional

[8] Source: Blue Chip Financial Forecasts, Vol. 35, No. 6, June 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%	-2.78%			
		Current 30-Year Treasury	2.65%	7.39%
		Near-Term Projected 30-Year Treasury	3.08%	6.97%
		Long-Term Projected 30-Year Treasury	4.45%	5.94%
				10.04%
				10.05%
				10.39%



Notes:

- [1] Constant of regression equation
- [2] Slope of regression equation
- [3] Source: Current = Bloomberg Professional,
Near Term Projection = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 2,
Long Term Projection = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, 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]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
01/01/1980	14.50%	9.36%	5.14%
01/07/1980	14.39%	9.39%	5.00%
01/09/1980	15.00%	9.40%	5.60%
01/14/1980	15.17%	9.42%	5.75%
01/17/1980	13.93%	9.44%	4.49%
01/23/1980	15.50%	9.47%	6.03%
01/30/1980	13.86%	9.52%	4.34%
01/31/1980	12.61%	9.53%	3.08%
02/06/1980	13.71%	9.58%	4.13%
02/13/1980	12.80%	9.64%	3.16%
02/14/1980	13.00%	9.65%	3.35%
02/19/1980	13.50%	9.68%	3.82%
02/27/1980	13.75%	9.78%	3.97%
02/29/1980	13.75%	9.81%	3.94%
02/29/1980	14.00%	9.81%	4.19%
02/29/1980	14.77%	9.81%	4.96%
03/07/1980	12.70%	9.90%	2.80%
03/14/1980	13.50%	9.97%	3.53%
03/26/1980	14.16%	10.11%	4.05%
03/27/1980	14.24%	10.12%	4.12%
03/28/1980	14.50%	10.14%	4.36%
04/11/1980	12.75%	10.28%	2.47%
04/14/1980	13.85%	10.29%	3.56%
04/16/1980	15.50%	10.32%	5.18%
04/22/1980	13.90%	10.36%	3.54%
04/22/1980	13.25%	10.36%	2.89%
04/24/1980	16.80%	10.38%	6.42%
04/29/1980	15.50%	10.41%	5.09%
05/06/1980	13.70%	10.45%	3.25%
05/07/1980	15.00%	10.46%	4.54%
05/08/1980	13.75%	10.47%	3.28%
05/09/1980	14.35%	10.47%	3.88%
05/13/1980	13.60%	10.49%	3.11%
05/15/1980	13.25%	10.50%	2.75%
05/19/1980	13.75%	10.52%	3.23%
05/27/1980	14.60%	10.55%	4.05%
05/27/1980	13.62%	10.55%	3.07%
05/29/1980	16.00%	10.56%	5.44%
05/30/1980	13.80%	10.57%	3.23%
06/02/1980	15.63%	10.58%	5.05%
06/09/1980	15.90%	10.61%	5.29%
06/10/1980	13.78%	10.61%	3.17%
06/12/1980	14.25%	10.62%	3.63%
06/19/1980	13.40%	10.63%	2.77%
06/30/1980	13.00%	10.65%	2.35%
06/30/1980	13.40%	10.65%	2.75%
07/09/1980	14.75%	10.68%	4.07%
07/10/1980	15.00%	10.69%	4.31%
07/15/1980	15.80%	10.70%	5.10%
07/18/1980	13.80%	10.72%	3.08%
07/22/1980	14.10%	10.73%	3.37%
07/24/1980	15.00%	10.73%	4.27%
07/25/1980	13.48%	10.74%	2.74%
07/31/1980	14.58%	10.76%	3.82%
08/08/1980	14.00%	10.78%	3.22%
08/08/1980	13.50%	10.78%	2.72%
08/08/1980	15.45%	10.78%	4.67%
08/11/1980	14.85%	10.78%	4.07%
08/14/1980	14.00%	10.79%	3.21%
08/14/1980	16.25%	10.79%	5.46%
08/25/1980	13.75%	10.82%	2.93%
08/27/1980	13.80%	10.83%	2.97%
08/29/1980	12.50%	10.84%	1.66%
09/15/1980	15.80%	10.88%	4.92%
09/15/1980	13.93%	10.88%	3.05%
09/15/1980	13.50%	10.88%	2.62%
09/24/1980	12.50%	10.93%	1.57%
09/24/1980	15.00%	10.93%	4.07%
09/26/1980	13.75%	10.95%	2.80%
09/30/1980	14.20%	10.96%	3.24%
09/30/1980	14.10%	10.96%	3.14%
10/01/1980	13.90%	10.97%	2.93%
10/03/1980	15.50%	10.99%	4.51%
10/07/1980	12.50%	11.00%	1.50%
10/09/1980	14.50%	11.01%	3.49%
10/09/1980	14.50%	11.01%	3.49%
10/09/1980	13.25%	11.01%	2.24%
10/16/1980	16.10%	11.03%	5.07%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	14.25%	11.11%	3.14%
10/31/1980	13.75%	11.11%	2.64%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/04/1980	15.00%	11.12%	3.88%
11/05/1980	14.00%	11.13%	2.87%
11/05/1980	13.75%	11.13%	2.62%
11/08/1980	13.75%	11.15%	2.60%
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%	11.20%	2.80%
11/26/1980	14.00%	11.21%	2.79%
12/08/1980	15.10%	11.22%	3.88%
12/08/1980	14.15%	11.22%	2.93%
12/09/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.22%	4.23%
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%	11.22%	2.23%
12/22/1980	15.00%	11.22%	3.78%
12/30/1980	14.50%	11.21%	3.29%
12/30/1980	14.95%	11.21%	3.74%
12/31/1980	13.39%	11.21%	2.18%
01/02/1981	15.25%	11.21%	4.04%
01/07/1981	14.30%	11.21%	3.09%
01/19/1981	15.25%	11.19%	4.06%
01/23/1981	14.40%	11.20%	3.20%
01/23/1981	13.10%	11.20%	1.90%
01/26/1981	15.25%	11.20%	4.05%
01/27/1981	15.00%	11.20%	3.80%
01/31/1981	13.47%	11.21%	2.26%
02/03/1981	15.25%	11.23%	4.02%
02/05/1981	15.75%	11.25%	4.50%
02/11/1981	15.60%	11.28%	4.32%
02/20/1981	15.25%	11.34%	3.91%
03/11/1981	15.40%	11.50%	3.90%
03/12/1981	14.51%	11.51%	3.00%
03/12/1981	16.00%	11.51%	4.49%
03/13/1981	13.02%	11.52%	1.50%
03/18/1981	16.19%	11.55%	4.64%
03/19/1981	13.75%	11.56%	2.19%
03/23/1981	14.30%	11.58%	2.72%
03/25/1981	15.30%	11.61%	3.69%
04/01/1981	14.53%	11.69%	2.84%
04/03/1981	19.10%	11.72%	7.38%
04/09/1981	15.00%	11.79%	3.21%
04/09/1981	15.30%	11.79%	3.51%
04/09/1981	17.00%	11.79%	5.21%
04/09/1981	16.50%	11.79%	4.71%
04/10/1981	13.75%	11.81%	1.94%
04/13/1981	13.57%	11.83%	1.74%
04/15/1981	15.30%	11.86%	3.44%
04/16/1981	13.50%	11.88%	1.62%
04/17/1981	14.10%	11.88%	2.22%
04/21/1981	16.80%	11.91%	4.89%
04/21/1981	14.00%	11.91%	2.09%
04/24/1981	16.00%	11.96%	4.04%
04/27/1981	13.61%	11.98%	1.63%
04/27/1981	12.50%	11.98%	0.52%
04/29/1981	13.65%	12.01%	1.64%
04/30/1981	13.50%	12.02%	1.48%
05/04/1981	16.22%	12.06%	4.16%
05/05/1981	14.40%	12.08%	2.32%
05/07/1981	16.25%	12.12%	4.13%
05/07/1981	16.27%	12.12%	4.15%
05/08/1981	13.00%	12.14%	0.86%
05/08/1981	16.00%	12.14%	3.86%
05/12/1981	13.50%	12.17%	1.33%
05/15/1981	15.75%	12.23%	3.52%
05/18/1981	14.88%	12.24%	2.64%
05/20/1981	16.00%	12.27%	3.73%
05/21/1981	14.00%	12.28%	1.72%
05/26/1981	14.90%	12.31%	2.59%
05/27/1981	15.00%	12.32%	2.68%
05/29/1981	15.50%	12.34%	3.16%
06/01/1981	16.50%	12.35%	4.15%
06/03/1981	14.67%	12.38%	2.29%
06/05/1981	13.00%	12.40%	0.60%
06/10/1981	16.75%	12.42%	4.33%
06/17/1981	14.40%	12.46%	1.94%
06/18/1981	16.33%	12.47%	3.86%
06/25/1981	14.75%	12.52%	2.23%
06/26/1981	16.00%	12.53%	3.47%
06/30/1981	15.25%	12.55%	2.70%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
07/01/1981	15.50%	12.56%	2.94%
07/01/1981	17.50%	12.56%	4.94%
07/10/1981	16.00%	12.62%	3.38%
07/14/1981	16.90%	12.64%	4.26%
07/15/1981	16.00%	12.65%	3.35%
07/17/1981	15.00%	12.67%	2.33%
07/20/1981	15.00%	12.68%	2.32%
07/21/1981	14.00%	12.69%	1.31%
07/28/1981	13.48%	12.75%	0.73%
07/31/1981	13.50%	12.79%	0.71%
07/31/1981	16.00%	12.79%	3.21%
07/31/1981	15.00%	12.79%	2.21%
08/05/1981	15.71%	12.83%	2.88%
08/10/1981	14.50%	12.87%	1.63%
08/11/1981	15.00%	12.88%	2.12%
08/20/1981	16.50%	12.95%	3.55%
08/20/1981	13.50%	12.95%	0.55%
08/24/1981	15.00%	12.97%	2.03%
08/28/1981	15.00%	13.01%	1.99%
09/03/1981	14.50%	13.06%	1.44%
09/10/1981	14.50%	13.11%	1.39%
09/11/1981	16.00%	13.12%	2.88%
09/16/1981	16.00%	13.15%	2.85%
09/17/1981	16.50%	13.16%	3.34%
09/23/1981	15.85%	13.20%	2.65%
09/28/1981	15.50%	13.23%	2.27%
10/09/1981	15.75%	13.34%	2.41%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	16.50%	13.39%	3.11%
10/16/1981	15.50%	13.39%	2.11%
10/19/1981	14.25%	13.40%	0.85%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.46%	2.54%
10/27/1981	10.00%	13.49%	-3.49%
10/29/1981	16.50%	13.52%	2.98%
10/29/1981	14.75%	13.52%	1.23%
11/03/1981	15.17%	13.54%	1.63%
11/05/1981	16.60%	13.56%	3.04%
11/06/1981	15.17%	13.57%	1.60%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
12/01/1981	16.50%	13.61%	2.89%
12/01/1981	15.70%	13.61%	2.09%
12/01/1981	16.49%	13.61%	2.88%
12/01/1981	16.00%	13.61%	2.39%
12/04/1981	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%	13.64%	2.86%
12/18/1981	15.45%	13.64%	1.81%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/30/1981	14.25%	13.67%	0.58%
12/31/1981	16.15%	13.68%	2.47%
01/04/1982	15.50%	13.68%	1.82%
01/11/1982	14.50%	13.73%	0.77%
01/11/1982	17.00%	13.73%	3.27%
01/13/1982	14.75%	13.74%	1.01%
01/14/1982	15.75%	13.75%	2.00%
01/15/1982	15.00%	13.76%	1.24%
01/15/1982	16.50%	13.76%	2.74%
01/22/1982	16.25%	13.80%	2.45%
01/27/1982	16.84%	13.81%	3.03%
01/28/1982	13.00%	13.82%	-0.82%
01/29/1982	15.50%	13.82%	1.68%
02/01/1982	15.85%	13.83%	2.02%
02/03/1982	16.44%	13.84%	2.60%
02/08/1982	15.50%	13.86%	1.64%
02/11/1982	16.00%	13.88%	2.12%
02/11/1982	16.20%	13.88%	2.32%
02/17/1982	15.00%	13.89%	1.11%
02/19/1982	15.17%	13.89%	1.28%
02/26/1982	15.25%	13.89%	1.36%
03/01/1982	15.03%	13.89%	1.14%
03/01/1982	16.00%	13.89%	2.11%
03/03/1982	15.00%	13.88%	1.12%
03/08/1982	17.10%	13.88%	3.22%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
03/12/1982	16.25%	13.88%	2.37%
03/17/1982	17.30%	13.88%	3.42%
03/22/1982	15.10%	13.89%	1.21%
03/27/1982	15.40%	13.90%	1.50%
03/30/1982	15.50%	13.91%	1.59%
03/31/1982	17.00%	13.91%	3.09%
04/01/1982	16.50%	13.92%	2.58%
04/01/1982	14.70%	13.92%	0.78%
04/02/1982	15.50%	13.92%	1.58%
04/05/1982	15.50%	13.93%	1.57%
04/08/1982	16.40%	13.94%	2.46%
04/13/1982	14.50%	13.94%	0.56%
04/23/1982	15.75%	13.94%	1.81%
04/27/1982	15.00%	13.94%	1.06%
04/28/1982	15.75%	13.94%	1.81%
04/30/1982	15.50%	13.94%	1.56%
04/30/1982	14.70%	13.94%	0.76%
05/03/1982	16.60%	13.94%	2.66%
05/04/1982	16.00%	13.94%	2.06%
05/14/1982	15.50%	13.92%	1.58%
05/18/1982	15.42%	13.92%	1.50%
05/19/1982	14.69%	13.92%	0.77%
05/20/1982	15.10%	13.91%	1.19%
05/20/1982	15.50%	13.91%	1.59%
05/20/1982	16.30%	13.91%	2.39%
05/20/1982	15.00%	13.91%	1.09%
05/21/1982	17.75%	13.91%	3.84%
05/27/1982	15.00%	13.89%	1.11%
05/28/1982	15.50%	13.89%	1.61%
05/28/1982	17.00%	13.89%	3.11%
06/01/1982	13.75%	13.89%	-0.14%
06/01/1982	16.60%	13.89%	2.71%
06/09/1982	17.86%	13.88%	3.98%
06/14/1982	15.75%	13.88%	1.87%
06/15/1982	14.85%	13.87%	0.98%
06/18/1982	15.50%	13.86%	1.64%
06/21/1982	14.90%	13.86%	1.04%
06/23/1982	16.00%	13.86%	2.14%
06/23/1982	16.17%	13.86%	2.31%
06/24/1982	14.85%	13.86%	0.99%
06/25/1982	14.70%	13.85%	0.85%
07/01/1982	16.00%	13.84%	2.16%
07/02/1982	15.62%	13.83%	1.79%
07/02/1982	17.00%	13.83%	3.17%
07/13/1982	14.00%	13.82%	0.18%
07/13/1982	16.80%	13.82%	2.98%
07/14/1982	15.76%	13.81%	1.95%
07/14/1982	16.02%	13.81%	2.21%
07/19/1982	16.50%	13.79%	2.71%
07/22/1982	17.00%	13.76%	3.24%
07/22/1982	14.50%	13.76%	0.74%
07/27/1982	16.75%	13.74%	3.01%
07/29/1982	16.50%	13.73%	2.77%
08/11/1982	17.50%	13.68%	3.82%
08/18/1982	17.07%	13.62%	3.45%
08/20/1982	15.73%	13.60%	2.13%
08/25/1982	16.00%	13.57%	2.43%
08/26/1982	15.50%	13.56%	1.94%
08/30/1982	15.00%	13.55%	1.45%
09/03/1982	16.20%	13.53%	2.67%
09/08/1982	15.00%	13.52%	1.48%
09/15/1982	13.08%	13.51%	-0.43%
09/15/1982	16.25%	13.51%	2.74%
09/16/1982	16.00%	13.50%	2.50%
09/17/1982	15.25%	13.50%	1.75%
09/23/1982	17.17%	13.47%	3.70%
09/24/1982	14.50%	13.47%	1.03%
09/27/1982	15.25%	13.46%	1.79%
10/01/1982	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%
11/01/1982	15.50%	13.14%	2.36%
11/03/1982	17.20%	13.12%	4.08%
11/04/1982	16.25%	13.10%	3.15%
11/05/1982	16.20%	13.09%	3.11%
11/09/1982	16.00%	13.05%	2.95%
11/23/1982	15.85%	12.88%	2.97%
11/23/1982	15.50%	12.88%	2.62%
11/30/1982	16.50%	12.80%	3.70%
12/01/1982	17.04%	12.78%	4.26%
12/06/1982	15.00%	12.72%	2.28%
12/06/1982	16.35%	12.72%	3.63%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.64%	3.36%
12/14/1982	16.40%	12.62%	3.78%
12/14/1982	15.30%	12.62%	2.68%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	15.85%	12.55%	3.30%
12/21/1982	14.75%	12.55%	2.20%
12/22/1982	16.75%	12.54%	4.21%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.25%	12.54%	3.71%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.35%	12.46%	3.89%
12/30/1982	16.00%	12.46%	3.54%
12/30/1982	16.77%	12.46%	4.31%
01/05/1983	17.33%	12.40%	4.93%
01/11/1983	15.90%	12.34%	3.56%
01/12/1983	15.50%	12.32%	3.18%
01/12/1983	14.63%	12.32%	2.31%
01/20/1983	17.75%	12.23%	5.52%
01/21/1983	15.00%	12.21%	2.79%
01/24/1983	14.50%	12.20%	2.30%
01/24/1983	15.50%	12.20%	3.30%
01/25/1983	15.85%	12.19%	3.66%
01/27/1983	16.14%	12.16%	3.98%
02/01/1983	18.50%	12.13%	6.37%
02/04/1983	14.00%	12.09%	1.91%
02/10/1983	15.00%	12.05%	2.95%
02/21/1983	15.50%	11.98%	3.52%
02/22/1983	15.50%	11.96%	3.54%
02/23/1983	15.10%	11.95%	3.15%
02/23/1983	16.00%	11.95%	4.05%
03/02/1983	15.25%	11.89%	3.36%
03/09/1983	15.20%	11.82%	3.38%
03/15/1983	13.00%	11.76%	1.24%
03/18/1983	15.25%	11.72%	3.53%
03/23/1983	15.40%	11.68%	3.72%
03/24/1983	15.00%	11.66%	3.34%
03/29/1983	15.50%	11.62%	3.88%
03/30/1983	16.71%	11.60%	5.11%
03/31/1983	15.00%	11.58%	3.42%
04/04/1983	15.20%	11.57%	3.63%
04/08/1983	15.50%	11.49%	4.01%
04/11/1983	14.81%	11.48%	3.33%
04/19/1983	14.50%	11.36%	3.14%
04/20/1983	16.00%	11.35%	4.65%
04/29/1983	16.00%	11.23%	4.77%
05/01/1983	14.50%	11.23%	3.27%
05/09/1983	15.50%	11.14%	4.36%
05/11/1983	16.46%	11.11%	5.35%
05/12/1983	14.14%	11.10%	3.04%
05/18/1983	15.00%	11.04%	3.96%
05/23/1983	14.90%	11.00%	3.90%
05/23/1983	15.50%	11.00%	4.50%
05/25/1983	15.50%	10.97%	4.53%
05/27/1983	15.00%	10.95%	4.05%
05/31/1983	15.50%	10.94%	4.56%
05/31/1983	14.00%	10.94%	3.06%
06/02/1983	14.50%	10.92%	3.58%
06/17/1983	15.03%	10.83%	4.20%
07/01/1983	14.80%	10.77%	4.03%
07/01/1983	14.90%	10.77%	4.13%
07/08/1983	16.25%	10.75%	5.50%
07/13/1983	13.20%	10.75%	2.45%
07/19/1983	15.10%	10.74%	4.36%
07/19/1983	15.00%	10.74%	4.26%
07/25/1983	16.25%	10.73%	5.52%
07/28/1983	15.90%	10.74%	5.16%
08/03/1983	16.50%	10.75%	5.75%
08/03/1983	16.34%	10.75%	5.59%
08/19/1983	15.00%	10.80%	4.20%
08/22/1983	16.40%	10.80%	5.60%
08/22/1983	15.50%	10.80%	4.70%
08/31/1983	14.75%	10.85%	3.90%
09/07/1983	15.00%	10.87%	4.13%
09/14/1983	15.78%	10.89%	4.89%
09/16/1983	15.00%	10.90%	4.10%
09/19/1983	14.50%	10.91%	3.59%
09/20/1983	16.50%	10.91%	5.59%
09/28/1983	14.50%	10.94%	3.56%
09/29/1983	15.50%	10.95%	4.55%
09/30/1983	16.15%	10.95%	5.20%
09/30/1983	15.25%	10.95%	4.30%
10/04/1983	14.80%	10.96%	3.84%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/07/1983	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	16.50%	11.01%	5.49%
10/19/1983	16.25%	11.01%	5.24%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/01/1983	16.00%	11.06%	4.94%
11/09/1983	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%
12/05/1983	15.25%	11.15%	4.10%
12/06/1983	15.07%	11.16%	3.91%
12/08/1983	15.90%	11.16%	4.74%
12/09/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.18%	3.32%
12/15/1983	15.56%	11.20%	4.36%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	16.00%	11.22%	4.78%
12/20/1983	14.69%	11.22%	3.47%
12/20/1983	16.25%	11.22%	5.03%
12/22/1983	15.75%	11.23%	4.52%
12/22/1983	14.75%	11.23%	3.52%
01/03/1984	14.75%	11.27%	3.48%
01/10/1984	15.90%	11.30%	4.60%
01/12/1984	15.60%	11.31%	4.29%
01/18/1984	13.75%	11.33%	2.42%
01/19/1984	15.90%	11.33%	4.57%
01/30/1984	16.10%	11.37%	4.73%
01/31/1984	15.25%	11.38%	3.87%
02/01/1984	14.80%	11.39%	3.41%
02/06/1984	14.75%	11.41%	3.34%
02/06/1984	13.75%	11.41%	2.34%
02/09/1984	15.25%	11.43%	3.82%
02/15/1984	15.70%	11.45%	4.25%
02/20/1984	15.00%	11.46%	3.54%
02/20/1984	15.00%	11.46%	3.54%
02/22/1984	14.75%	11.48%	3.27%
02/28/1984	14.50%	11.52%	2.98%
03/02/1984	14.25%	11.54%	2.71%
03/20/1984	16.00%	11.65%	4.35%
03/23/1984	15.50%	11.67%	3.83%
03/26/1984	14.71%	11.68%	3.03%
04/02/1984	15.50%	11.72%	3.78%
04/06/1984	14.74%	11.76%	2.98%
04/11/1984	15.72%	11.78%	3.94%
04/17/1984	15.00%	11.81%	3.19%
04/18/1984	16.20%	11.82%	4.38%
04/25/1984	14.64%	11.85%	2.79%
04/30/1984	14.40%	11.88%	2.52%
05/16/1984	14.69%	11.99%	2.70%
05/16/1984	15.00%	11.99%	3.01%
05/22/1984	14.40%	12.02%	2.38%
05/29/1984	15.10%	12.06%	3.04%
06/13/1984	15.25%	12.16%	3.09%
06/15/1984	15.60%	12.17%	3.43%
06/22/1984	16.25%	12.21%	4.04%
06/29/1984	15.25%	12.26%	2.99%
07/02/1984	13.35%	12.27%	1.08%
07/10/1984	16.00%	12.31%	3.69%
07/12/1984	16.50%	12.33%	4.17%
07/13/1984	16.25%	12.34%	3.91%
07/17/1984	14.14%	12.35%	1.79%
07/18/1984	15.50%	12.36%	3.14%
07/18/1984	15.30%	12.36%	2.94%
07/19/1984	14.30%	12.37%	1.93%
07/24/1984	16.79%	12.40%	4.39%
07/31/1984	16.00%	12.43%	3.57%
08/03/1984	14.25%	12.45%	1.80%
08/17/1984	14.30%	12.49%	1.81%
08/20/1984	15.00%	12.49%	2.51%
08/27/1984	16.30%	12.51%	3.79%
08/31/1984	15.55%	12.53%	3.02%
09/06/1984	16.00%	12.54%	3.46%
09/10/1984	14.75%	12.55%	2.20%
09/13/1984	15.00%	12.55%	2.45%
09/17/1984	17.38%	12.56%	4.82%
09/26/1984	14.50%	12.57%	1.93%
09/28/1984	16.25%	12.57%	3.68%
09/28/1984	15.00%	12.57%	2.43%
10/09/1984	14.75%	12.58%	2.17%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.59%	3.81%
10/31/1984	16.25%	12.59%	3.66%
11/07/1984	15.60%	12.58%	3.02%
11/09/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.59%	3.16%
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%
12/03/1984	15.80%	12.57%	3.23%
12/04/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.54%	3.86%
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%
01/03/1985	14.75%	12.49%	2.26%
01/10/1985	15.75%	12.47%	3.28%
01/11/1985	16.30%	12.46%	3.84%
01/23/1985	15.80%	12.43%	3.37%
01/24/1985	15.82%	12.43%	3.39%
01/25/1985	16.75%	12.42%	4.33%
01/30/1985	14.90%	12.40%	2.50%
01/31/1985	14.75%	12.39%	2.36%
02/08/1985	14.47%	12.35%	2.12%
03/01/1985	13.84%	12.30%	1.54%
03/08/1985	16.85%	12.28%	4.57%
03/14/1985	15.50%	12.25%	3.25%
03/15/1985	15.62%	12.25%	3.37%
03/29/1985	15.62%	12.16%	3.46%
04/03/1985	14.60%	12.13%	2.47%
04/09/1985	15.50%	12.10%	3.40%
04/16/1985	15.70%	12.05%	3.65%
04/22/1985	14.00%	12.01%	1.99%
04/26/1985	15.50%	11.97%	3.53%
04/29/1985	15.00%	11.96%	3.04%
05/02/1985	14.68%	11.93%	2.75%
05/08/1985	15.62%	11.88%	3.74%
05/10/1985	16.50%	11.86%	4.64%
05/29/1985	14.61%	11.73%	2.88%
05/31/1985	16.00%	11.71%	4.29%
06/14/1985	15.50%	11.60%	3.90%
07/09/1985	15.00%	11.44%	3.56%
07/16/1985	14.50%	11.39%	3.11%
07/26/1985	14.50%	11.32%	3.18%
08/02/1985	14.80%	11.29%	3.51%
08/07/1985	15.00%	11.26%	3.74%
08/28/1985	14.25%	11.15%	3.10%
08/28/1985	15.50%	11.15%	4.35%
08/29/1985	14.50%	11.14%	3.36%
09/09/1985	14.90%	11.11%	3.79%
09/09/1985	14.60%	11.11%	3.49%
09/17/1985	14.90%	11.08%	3.82%
09/23/1985	15.00%	11.06%	3.94%
09/27/1985	15.80%	11.04%	4.76%
09/27/1985	15.50%	11.04%	4.46%
10/02/1985	14.75%	11.03%	3.72%
10/02/1985	14.00%	11.03%	2.97%
10/03/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.85%	10.96%	4.89%
10/24/1985	15.82%	10.96%	4.86%
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%
11/04/1985	14.50%	10.91%	3.59%
11/07/1985	15.50%	10.89%	4.61%
11/08/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	15.00%	10.66%	4.34%
12/20/1985	14.50%	10.66%	3.84%
12/20/1985	14.50%	10.66%	3.84%
01/24/1986	15.40%	10.40%	5.00%
01/31/1986	15.00%	10.35%	4.65%
02/05/1986	15.00%	10.32%	4.68%
02/05/1986	15.75%	10.32%	5.43%
02/10/1986	13.30%	10.29%	3.01%
02/11/1986	12.50%	10.27%	2.23%
02/14/1986	14.40%	10.24%	4.16%
02/18/1986	16.00%	10.22%	5.78%
02/24/1986	14.50%	10.17%	4.33%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
02/26/1986	14.00%	10.15%	3.85%
03/05/1986	14.90%	10.07%	4.83%
03/11/1986	14.50%	10.01%	4.49%
03/12/1986	13.50%	10.00%	3.50%
03/27/1986	14.10%	9.85%	4.25%
03/31/1986	13.50%	9.84%	3.66%
04/01/1986	14.00%	9.82%	4.18%
04/02/1986	15.50%	9.81%	5.69%
04/04/1986	15.00%	9.78%	5.22%
04/14/1986	13.40%	9.68%	3.72%
04/23/1986	15.00%	9.57%	5.43%
05/16/1986	14.50%	9.31%	5.19%
05/16/1986	14.50%	9.31%	5.19%
05/29/1986	13.90%	9.19%	4.71%
05/30/1986	15.10%	9.17%	5.93%
06/02/1986	12.81%	9.16%	3.65%
06/11/1986	14.00%	9.06%	4.94%
06/24/1986	16.63%	8.93%	7.70%
06/26/1986	12.00%	8.90%	3.10%
06/26/1986	14.75%	8.90%	5.85%
06/30/1986	13.00%	8.86%	4.14%
07/10/1986	14.34%	8.74%	5.60%
07/11/1986	12.75%	8.72%	4.03%
07/14/1986	12.60%	8.71%	3.89%
07/17/1986	12.40%	8.65%	3.75%
07/25/1986	14.25%	8.56%	5.69%
08/06/1986	13.50%	8.43%	5.07%
08/14/1986	13.50%	8.34%	5.16%
09/16/1986	12.75%	8.06%	4.69%
09/19/1986	13.25%	8.02%	5.23%
10/01/1986	14.00%	7.94%	6.06%
10/03/1986	13.40%	7.92%	5.48%
10/31/1986	13.50%	7.77%	5.73%
11/05/1986	13.00%	7.74%	5.26%
12/03/1986	12.90%	7.58%	5.32%
12/04/1986	14.44%	7.57%	6.87%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.50%	6.30%
12/30/1986	13.00%	7.49%	5.51%
01/02/1987	13.00%	7.48%	5.52%
01/12/1987	12.40%	7.46%	4.94%
01/27/1987	12.71%	7.46%	5.25%
03/02/1987	12.47%	7.47%	5.00%
03/03/1987	13.60%	7.47%	6.13%
03/04/1987	12.38%	7.47%	4.91%
03/10/1987	13.50%	7.47%	6.03%
03/13/1987	13.00%	7.47%	5.53%
03/31/1987	13.00%	7.46%	5.54%
04/06/1987	13.00%	7.47%	5.53%
04/14/1987	12.50%	7.49%	5.01%
04/16/1987	14.50%	7.50%	7.00%
04/27/1987	12.00%	7.54%	4.46%
05/05/1987	12.85%	7.58%	5.27%
05/12/1987	12.65%	7.62%	5.03%
05/28/1987	13.50%	7.70%	5.80%
06/15/1987	13.20%	7.78%	5.42%
06/29/1987	15.00%	7.84%	7.16%
06/30/1987	12.50%	7.84%	4.66%
07/08/1987	12.00%	7.86%	4.14%
07/10/1987	12.90%	7.87%	5.03%
07/15/1987	13.50%	7.88%	5.62%
07/16/1987	15.00%	7.88%	7.12%
07/16/1987	13.50%	7.88%	5.62%
07/27/1987	13.00%	7.92%	5.08%
07/27/1987	13.40%	7.92%	5.48%
07/27/1987	13.50%	7.92%	5.58%
07/31/1987	12.98%	7.95%	5.03%
08/26/1987	12.63%	8.06%	4.57%
08/26/1987	12.75%	8.06%	4.69%
08/27/1987	13.25%	8.07%	5.18%
09/09/1987	13.00%	8.14%	4.86%
09/30/1987	13.00%	8.31%	4.69%
09/30/1987	12.75%	8.31%	4.44%
10/02/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.44%	4.56%
11/02/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.69%	3.31%
12/03/1987	14.20%	8.71%	5.49%
12/15/1987	13.25%	8.78%	4.47%
12/16/1987	13.72%	8.79%	4.93%
12/16/1987	13.50%	8.79%	4.71%
12/17/1987	11.75%	8.80%	2.95%
12/18/1987	13.50%	8.80%	4.70%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.75%	8.82%	3.93%
12/22/1987	12.00%	8.82%	3.18%
12/22/1987	12.00%	8.82%	3.18%
12/22/1987	13.00%	8.82%	4.18%
01/20/1988	13.80%	8.94%	4.86%
01/26/1988	13.90%	8.96%	4.94%
01/29/1988	13.20%	8.96%	4.24%
02/04/1988	12.60%	8.96%	3.64%
03/01/1988	11.56%	8.94%	2.62%
03/23/1988	12.87%	8.92%	3.95%
03/24/1988	11.24%	8.92%	2.32%
03/30/1988	12.72%	8.92%	3.80%
04/01/1988	12.50%	8.92%	3.58%
04/07/1988	13.25%	8.93%	4.32%
04/25/1988	10.96%	8.96%	2.00%
05/03/1988	12.91%	8.98%	3.93%
05/11/1988	13.50%	8.99%	4.51%
05/16/1988	13.00%	8.99%	4.01%
06/30/1988	12.75%	8.99%	3.76%
07/01/1988	12.75%	8.99%	3.76%
07/20/1988	13.40%	8.96%	4.44%
08/05/1988	12.75%	8.91%	3.84%
08/23/1988	11.70%	8.93%	2.77%
08/29/1988	12.75%	8.94%	3.81%
08/30/1988	13.50%	8.94%	4.56%
09/08/1988	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	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
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%
01/27/1989	13.00%	9.06%	3.94%
01/31/1989	13.00%	9.06%	3.94%
02/17/1989	13.00%	9.05%	3.95%
02/20/1989	12.40%	9.05%	3.35%
03/01/1989	12.76%	9.05%	3.71%
03/08/1989	13.00%	9.05%	3.95%
03/30/1989	14.00%	9.05%	4.95%
04/05/1989	14.20%	9.05%	5.15%
04/18/1989	13.00%	9.05%	3.95%
05/05/1989	12.40%	9.05%	3.35%
06/02/1989	13.20%	9.00%	4.20%
06/08/1989	13.50%	8.98%	4.52%
06/27/1989	13.25%	8.91%	4.34%
06/30/1989	13.00%	8.90%	4.10%
08/14/1989	12.50%	8.77%	3.73%
09/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/09/1989	13.00%	8.48%	4.52%
12/15/1989	13.00%	8.33%	4.67%
12/20/1989	12.90%	8.31%	4.59%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	13.00%	8.29%	4.71%
12/27/1989	12.50%	8.29%	4.21%
01/10/1990	12.80%	8.24%	4.56%
01/11/1990	12.90%	8.23%	4.67%
01/17/1990	12.80%	8.22%	4.58%
01/26/1990	12.00%	8.19%	3.81%
02/09/1990	12.10%	8.17%	3.93%
02/24/1990	12.86%	8.15%	4.71%
03/30/1990	12.90%	8.16%	4.74%
04/04/1990	15.76%	8.17%	7.59%
04/12/1990	12.52%	8.18%	4.34%
04/19/1990	12.75%	8.20%	4.55%
05/21/1990	12.10%	8.28%	3.82%
05/29/1990	12.40%	8.30%	4.10%
05/31/1990	12.00%	8.30%	3.70%
06/04/1990	12.90%	8.30%	4.60%
06/06/1990	12.25%	8.31%	3.94%
06/15/1990	13.20%	8.32%	4.88%
06/20/1990	12.92%	8.32%	4.60%
06/27/1990	12.90%	8.33%	4.57%
06/29/1990	12.50%	8.34%	4.16%
07/06/1990	12.35%	8.34%	4.01%
07/06/1990	12.10%	8.34%	3.76%
08/10/1990	12.55%	8.41%	4.14%
08/16/1990	13.21%	8.43%	4.78%
08/22/1990	13.10%	8.45%	4.65%
08/24/1990	13.00%	8.46%	4.54%
09/26/1990	11.45%	8.59%	2.86%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/02/1990	13.00%	8.61%	4.39%
10/05/1990	12.84%	8.63%	4.21%
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%
01/02/1991	13.10%	8.66%	4.44%
01/04/1991	12.50%	8.65%	3.85%
01/15/1991	12.75%	8.65%	4.10%
01/25/1991	11.70%	8.63%	3.07%
02/04/1991	12.50%	8.60%	3.90%
02/07/1991	12.50%	8.59%	3.91%
02/12/1991	13.00%	8.57%	4.43%
02/14/1991	12.72%	8.56%	4.16%
02/22/1991	12.80%	8.55%	4.25%
03/06/1991	13.10%	8.53%	4.57%
03/08/1991	13.00%	8.52%	4.48%
03/08/1991	12.30%	8.52%	3.78%
04/22/1991	13.00%	8.49%	4.51%
05/07/1991	13.50%	8.47%	5.03%
05/13/1991	13.25%	8.47%	4.78%
05/30/1991	12.75%	8.43%	4.32%
06/12/1991	12.00%	8.41%	3.59%
06/25/1991	11.70%	8.38%	3.32%
06/28/1991	12.50%	8.38%	4.12%
07/01/1991	12.00%	8.37%	3.63%
07/03/1991	12.50%	8.36%	4.14%
07/19/1991	12.10%	8.34%	3.76%
08/01/1991	12.90%	8.32%	4.58%
08/16/1991	13.20%	8.29%	4.91%
09/27/1991	12.50%	8.23%	4.27%
09/30/1991	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%
11/01/1991	12.00%	8.19%	3.81%
11/05/1991	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	12.50%	8.18%	4.32%
11/26/1991	11.60%	8.18%	3.42%
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%
01/09/1992	12.80%	8.09%	4.71%
01/16/1992	12.75%	8.07%	4.68%
01/21/1992	12.00%	8.06%	3.94%
01/22/1992	13.00%	8.06%	4.94%
01/27/1992	12.65%	8.05%	4.60%
01/31/1992	12.00%	8.04%	3.96%
02/11/1992	12.40%	8.03%	4.37%
02/25/1992	12.50%	8.01%	4.49%
03/16/1992	11.43%	7.98%	3.45%
03/18/1992	12.28%	7.98%	4.30%
04/02/1992	12.10%	7.95%	4.15%
04/09/1992	11.45%	7.93%	3.52%
04/10/1992	11.50%	7.93%	3.57%
04/14/1992	11.50%	7.92%	3.58%
05/05/1992	11.50%	7.89%	3.61%
05/12/1992	12.46%	7.88%	4.58%
05/12/1992	11.87%	7.88%	3.99%
06/01/1992	12.30%	7.86%	4.44%
06/12/1992	10.90%	7.85%	3.05%
06/26/1992	12.35%	7.85%	4.50%
06/29/1992	11.00%	7.85%	3.15%
06/30/1992	13.00%	7.85%	5.15%
07/13/1992	13.50%	7.84%	5.66%
07/13/1992	11.90%	7.84%	4.06%
07/22/1992	11.20%	7.83%	3.37%
08/03/1992	12.00%	7.81%	4.19%
08/06/1992	12.50%	7.80%	4.70%
09/22/1992	12.00%	7.71%	4.29%
09/28/1992	11.40%	7.71%	3.69%
09/30/1992	11.75%	7.71%	4.04%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/02/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.71%	5.45%
10/30/1992	11.75%	7.71%	4.04%
11/03/1992	12.00%	7.71%	4.29%
12/03/1992	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	12.40%	7.65%	4.75%
12/22/1992	12.30%	7.65%	4.65%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.62%	4.28%
01/12/1993	12.00%	7.61%	4.39%
01/21/1993	11.25%	7.59%	3.66%
02/02/1993	11.40%	7.56%	3.84%
02/15/1993	12.30%	7.52%	4.78%
02/24/1993	11.90%	7.49%	4.41%
02/26/1993	11.80%	7.48%	4.32%
02/26/1993	12.20%	7.48%	4.72%
04/23/1993	11.75%	7.29%	4.46%
05/11/1993	11.75%	7.24%	4.51%
05/14/1993	11.50%	7.24%	4.26%
05/25/1993	11.50%	7.22%	4.28%
05/28/1993	11.00%	7.22%	3.78%
06/03/1993	12.00%	7.21%	4.79%
06/16/1993	11.50%	7.19%	4.31%
06/18/1993	12.10%	7.18%	4.92%
06/25/1993	11.67%	7.17%	4.50%
07/21/1993	11.38%	7.10%	4.28%
07/23/1993	10.46%	7.09%	3.37%
08/24/1993	11.50%	6.95%	4.55%
09/21/1993	10.50%	6.80%	3.70%
09/29/1993	11.47%	6.76%	4.71%
09/30/1993	11.60%	6.76%	4.84%
11/02/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.56%	5.44%
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%
01/04/1994	10.07%	6.44%	3.63%
01/13/1994	11.00%	6.42%	4.58%
01/21/1994	11.00%	6.40%	4.60%
01/28/1994	11.35%	6.39%	4.96%
02/03/1994	11.40%	6.38%	5.02%
02/17/1994	10.60%	6.36%	4.24%
02/25/1994	11.25%	6.35%	4.90%
02/25/1994	12.00%	6.35%	5.65%
03/01/1994	11.00%	6.35%	4.65%
03/04/1994	11.00%	6.34%	4.66%
04/25/1994	11.00%	6.40%	4.60%
05/10/1994	11.75%	6.44%	5.31%
05/13/1994	10.50%	6.46%	4.04%
06/03/1994	11.00%	6.54%	4.46%
06/27/1994	11.40%	6.65%	4.75%
08/05/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/09/1994	10.85%	7.40%	3.45%
11/09/1994	10.85%	7.40%	3.45%
11/18/1994	11.20%	7.46%	3.74%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.50%	3.56%
12/08/1994	11.70%	7.55%	4.15%
12/08/1994	11.50%	7.55%	3.95%
12/14/1994	10.95%	7.57%	3.38%
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%
01/09/1995	12.28%	7.64%	4.64%
01/31/1995	11.00%	7.69%	3.31%
02/10/1995	12.60%	7.70%	4.90%
02/17/1995	11.90%	7.70%	4.20%
03/09/1995	11.50%	7.72%	3.78%
03/20/1995	12.00%	7.72%	4.28%
03/23/1995	12.81%	7.72%	5.09%
03/29/1995	11.60%	7.72%	3.88%
04/06/1995	11.10%	7.72%	3.38%
04/07/1995	11.00%	7.71%	3.29%
04/19/1995	11.00%	7.70%	3.30%
05/12/1995	11.63%	7.68%	3.95%
05/25/1995	11.20%	7.65%	3.55%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
06/09/1995	11.25%	7.60%	3.65%
06/21/1995	12.25%	7.56%	4.69%
06/30/1995	11.10%	7.51%	3.59%
09/11/1995	11.30%	7.20%	4.10%
09/27/1995	11.50%	7.12%	4.38%
09/27/1995	11.75%	7.12%	4.63%
09/27/1995	11.30%	7.12%	4.18%
09/29/1995	11.00%	7.11%	3.89%
11/09/1995	12.36%	6.89%	5.47%
11/09/1995	11.38%	6.89%	4.49%
11/17/1995	11.00%	6.85%	4.15%
12/04/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.69%	4.91%
12/27/1995	12.00%	6.66%	5.34%
02/05/1996	12.25%	6.48%	5.77%
03/29/1996	10.67%	6.42%	4.25%
04/08/1996	11.00%	6.42%	4.58%
04/11/1996	12.59%	6.43%	6.16%
04/11/1996	12.59%	6.43%	6.16%
04/24/1996	11.25%	6.43%	4.82%
04/30/1996	11.00%	6.43%	4.57%
05/13/1996	11.00%	6.44%	4.56%
05/23/1996	11.25%	6.43%	4.82%
06/25/1996	11.25%	6.48%	4.77%
06/27/1996	11.20%	6.48%	4.72%
08/12/1996	10.40%	6.57%	3.83%
09/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/05/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%
12/18/1996	11.75%	6.84%	4.91%
12/31/1996	11.50%	6.83%	4.67%
01/03/1997	10.70%	6.83%	3.87%
02/13/1997	11.80%	6.82%	4.98%
02/20/1997	11.80%	6.82%	4.98%
03/31/1997	10.02%	6.80%	3.22%
04/02/1997	11.65%	6.80%	4.85%
04/28/1997	11.50%	6.81%	4.69%
04/29/1997	11.70%	6.81%	4.89%
07/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
02/02/1998	12.75%	6.39%	6.36%
03/02/1998	11.25%	6.28%	4.97%
03/06/1998	10.75%	6.27%	4.48%
03/20/1998	10.50%	6.22%	4.28%
04/30/1998	12.20%	6.12%	6.08%
07/10/1998	11.40%	5.94%	5.46%
09/15/1998	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%
02/05/1999	10.30%	5.38%	4.92%
03/04/1999	10.50%	5.34%	5.16%
04/06/1999	10.94%	5.32%	5.62%
07/29/1999	10.75%	5.52%	5.23%
09/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
01/07/2000	11.50%	6.05%	5.45%
01/07/2000	11.50%	6.05%	5.45%
02/17/2000	10.60%	6.17%	4.43%
03/28/2000	11.25%	6.20%	5.05%
05/24/2000	11.00%	6.18%	4.82%
07/18/2000	12.20%	6.16%	6.04%
09/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
01/23/2001	11.25%	5.79%	5.46%
02/08/2001	11.50%	5.77%	5.73%
05/08/2001	10.75%	5.62%	5.13%
06/26/2001	11.00%	5.62%	5.38%
07/25/2001	11.02%	5.60%	5.42%
07/25/2001	11.02%	5.60%	5.42%
07/31/2001	11.00%	5.59%	5.41%
08/31/2001	10.50%	5.56%	4.94%
09/07/2001	10.75%	5.55%	5.20%
09/10/2001	11.00%	5.55%	5.45%
09/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/03/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
01/22/2002	10.00%	5.50%	4.50%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
03/27/2002	10.10%	5.45%	4.65%
04/22/2002	11.80%	5.45%	6.35%
05/28/2002	10.17%	5.46%	4.71%
06/10/2002	12.00%	5.47%	6.53%
06/18/2002	11.16%	5.48%	5.68%
06/20/2002	11.00%	5.48%	5.52%
06/20/2002	12.30%	5.48%	6.82%
07/15/2002	11.00%	5.48%	5.52%
09/12/2002	12.30%	5.45%	6.85%
09/26/2002	10.45%	5.41%	5.04%
12/04/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
01/08/2003	11.10%	5.19%	5.91%
01/31/2003	12.45%	5.13%	7.32%
02/28/2003	12.30%	5.04%	7.26%
03/06/2003	10.75%	5.02%	5.73%
03/07/2003	9.96%	5.02%	4.94%
03/20/2003	12.00%	4.98%	7.02%
04/03/2003	12.00%	4.95%	7.05%
04/15/2003	11.15%	4.93%	6.22%
06/25/2003	10.75%	4.79%	5.96%
06/26/2003	10.75%	4.79%	5.96%
07/09/2003	9.75%	4.79%	4.96%
07/16/2003	9.75%	4.79%	4.96%
07/25/2003	9.50%	4.79%	4.71%
08/26/2003	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%
01/13/2004	12.00%	4.95%	7.05%
03/02/2004	10.75%	4.99%	5.76%
03/26/2004	10.25%	5.02%	5.23%
04/05/2004	11.25%	5.03%	6.22%
05/18/2004	10.50%	5.07%	5.43%
05/25/2004	10.25%	5.07%	5.18%
05/27/2004	10.25%	5.08%	5.17%
06/02/2004	11.22%	5.08%	6.14%
06/30/2004	10.50%	5.10%	5.40%
06/30/2004	10.50%	5.10%	5.40%
07/16/2004	11.60%	5.11%	6.49%
08/25/2004	10.25%	5.10%	5.15%
09/09/2004	10.40%	5.10%	5.30%
11/09/2004	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%	5.08%	4.77%
01/06/2005	10.70%	5.08%	5.62%
02/18/2005	10.30%	4.98%	5.32%
02/25/2005	10.50%	4.96%	5.54%
03/10/2005	11.00%	4.93%	6.07%
03/24/2005	10.30%	4.89%	5.41%
04/04/2005	10.00%	4.87%	5.13%
04/07/2005	10.25%	4.87%	5.38%
05/18/2005	10.25%	4.78%	5.47%
05/25/2005	10.75%	4.76%	5.99%
05/26/2005	9.75%	4.76%	4.99%
06/01/2005	9.75%	4.75%	5.00%
07/19/2005	11.50%	4.64%	6.86%
08/05/2005	11.75%	4.62%	7.13%
08/15/2005	10.13%	4.61%	5.52%
09/28/2005	10.00%	4.54%	5.46%
10/04/2005	10.75%	4.53%	6.22%
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	11.15%	4.54%	6.61%
12/22/2005	11.00%	4.54%	6.46%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
01/05/2006	11.00%	4.53%	6.47%
01/27/2006	9.75%	4.52%	5.23%
03/03/2006	10.39%	4.53%	5.86%
04/17/2006	10.20%	4.62%	5.58%
04/26/2006	10.60%	4.64%	5.96%
05/17/2006	11.60%	4.69%	6.91%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
06/06/2006	10.00%	4.75%	5.25%
06/27/2006	10.75%	4.80%	5.95%
07/06/2006	10.20%	4.83%	5.37%
07/24/2006	9.60%	4.86%	4.74%
07/26/2006	10.50%	4.86%	5.64%
07/28/2006	10.05%	4.87%	5.18%
08/23/2006	9.55%	4.89%	4.66%
09/01/2006	10.54%	4.90%	5.64%
09/14/2006	10.00%	4.91%	5.09%
10/06/2006	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%
12/01/2006	10.50%	4.96%	5.54%
12/01/2006	10.25%	4.96%	5.29%
12/07/2006	10.75%	4.96%	5.79%
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%
01/05/2007	10.00%	4.95%	5.05%
01/11/2007	10.10%	4.95%	5.15%
01/11/2007	10.10%	4.95%	5.15%
01/11/2007	10.90%	4.95%	5.95%
01/12/2007	10.10%	4.95%	5.15%
01/13/2007	10.40%	4.95%	5.45%
01/19/2007	10.80%	4.94%	5.86%
03/21/2007	11.35%	4.86%	6.49%
03/22/2007	9.75%	4.86%	4.89%
05/15/2007	10.00%	4.81%	5.19%
05/17/2007	10.25%	4.80%	5.45%
05/17/2007	10.25%	4.80%	5.45%
05/22/2007	10.20%	4.80%	5.40%
05/22/2007	10.50%	4.80%	5.70%
05/23/2007	10.70%	4.80%	5.90%
05/25/2007	9.67%	4.80%	4.87%
06/15/2007	9.90%	4.82%	5.08%
06/21/2007	10.20%	4.83%	5.37%
06/22/2007	10.50%	4.83%	5.67%
06/28/2007	10.75%	4.84%	5.91%
07/12/2007	9.67%	4.86%	4.81%
07/19/2007	10.00%	4.87%	5.13%
07/19/2007	10.00%	4.87%	5.13%
08/15/2007	10.40%	4.88%	5.52%
10/09/2007	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%
12/06/2007	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%	4.86%	5.34%
12/20/2007	11.00%	4.86%	6.14%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
01/08/2008	10.75%	4.83%	5.92%
01/17/2008	10.75%	4.81%	5.94%
01/28/2008	9.40%	4.80%	4.60%
01/30/2008	10.00%	4.79%	5.21%
01/31/2008	10.71%	4.79%	5.92%
02/29/2008	10.25%	4.75%	5.50%
03/12/2008	10.25%	4.73%	5.52%
03/25/2008	9.10%	4.68%	4.42%
04/22/2008	10.25%	4.60%	5.65%
04/24/2008	10.10%	4.60%	5.50%
05/01/2008	10.70%	4.58%	6.12%
05/19/2008	11.00%	4.56%	6.44%
05/27/2008	10.00%	4.55%	5.45%
06/10/2008	10.70%	4.54%	6.16%
06/27/2008	11.04%	4.54%	6.50%
06/27/2008	10.50%	4.54%	5.96%
07/10/2008	10.43%	4.52%	5.91%
07/16/2008	9.40%	4.51%	4.89%
07/30/2008	10.80%	4.51%	6.29%
07/31/2008	10.70%	4.51%	6.19%
08/11/2008	10.25%	4.50%	5.75%
08/26/2008	10.18%	4.50%	5.68%
09/10/2008	10.30%	4.50%	5.80%
09/24/2008	10.65%	4.48%	6.17%
09/24/2008	10.65%	4.48%	6.17%
09/24/2008	10.65%	4.48%	6.17%
09/30/2008	10.20%	4.47%	5.73%
10/08/2008	10.15%	4.46%	5.69%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/13/2008	10.55%	4.45%	6.10%
11/17/2008	10.20%	4.44%	5.76%
12/01/2008	10.25%	4.39%	5.86%
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%
01/14/2009	10.50%	4.15%	6.35%
01/21/2009	10.50%	4.11%	6.39%
01/21/2009	10.50%	4.11%	6.39%
01/21/2009	10.50%	4.11%	6.39%
01/27/2009	10.76%	4.09%	6.67%
01/30/2009	10.50%	4.07%	6.43%
02/04/2009	8.75%	4.06%	4.69%
03/04/2009	10.50%	3.96%	6.54%
03/12/2009	11.50%	3.93%	7.57%
04/02/2009	11.10%	3.85%	7.25%
04/21/2009	10.61%	3.80%	6.81%
04/24/2009	10.00%	3.78%	6.22%
04/30/2009	11.25%	3.77%	7.48%
05/04/2009	10.74%	3.77%	6.97%
05/20/2009	10.25%	3.74%	6.51%
05/28/2009	10.50%	3.74%	6.76%
06/22/2009	10.00%	3.76%	6.24%
06/24/2009	10.80%	3.76%	7.04%
07/08/2009	10.63%	3.76%	6.87%
07/17/2009	10.50%	3.77%	6.73%
08/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.02%	6.68%
10/23/2009	10.88%	4.06%	6.82%
11/02/2009	10.70%	4.10%	6.60%
11/03/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.16%	6.09%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/03/2009	10.50%	4.18%	6.32%
12/07/2009	10.70%	4.19%	6.51%
12/16/2009	11.00%	4.22%	6.78%
12/16/2009	10.90%	4.22%	6.68%
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%
01/04/2010	10.80%	4.28%	6.52%
01/11/2010	11.00%	4.31%	6.69%
01/26/2010	10.13%	4.35%	5.78%
01/27/2010	10.40%	4.36%	6.04%
01/27/2010	10.40%	4.36%	6.04%
01/27/2010	10.70%	4.36%	6.34%
02/09/2010	9.80%	4.38%	5.42%
02/18/2010	10.60%	4.40%	6.20%
02/24/2010	10.18%	4.41%	5.77%
03/02/2010	9.63%	4.41%	5.22%
03/04/2010	10.50%	4.41%	6.09%
03/05/2010	10.50%	4.41%	6.09%
03/11/2010	11.90%	4.42%	7.48%
03/17/2010	10.00%	4.41%	5.59%
03/25/2010	10.15%	4.42%	5.73%
04/02/2010	10.10%	4.43%	5.67%
04/27/2010	10.00%	4.46%	5.54%
04/29/2010	9.90%	4.46%	5.44%
04/29/2010	10.06%	4.46%	5.60%
04/29/2010	10.26%	4.46%	5.80%
05/12/2010	10.30%	4.45%	5.85%
05/12/2010	10.30%	4.45%	5.85%
05/28/2010	10.20%	4.44%	5.76%
05/28/2010	10.10%	4.44%	5.66%
06/07/2010	10.30%	4.44%	5.86%
06/16/2010	10.00%	4.44%	5.56%
06/28/2010	10.50%	4.43%	6.07%
06/28/2010	9.67%	4.43%	5.24%
06/30/2010	9.40%	4.43%	4.97%
07/01/2010	10.25%	4.43%	5.82%
07/15/2010	10.70%	4.43%	6.27%
07/15/2010	10.53%	4.43%	6.10%
07/30/2010	10.70%	4.41%	6.29%
08/04/2010	10.50%	4.41%	6.09%
08/06/2010	9.83%	4.41%	5.42%
08/25/2010	9.90%	4.37%	5.53%
09/03/2010	10.60%	4.35%	6.25%
09/14/2010	10.70%	4.33%	6.37%
09/16/2010	10.00%	4.32%	5.68%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
09/16/2010	10.00%	4.32%	5.68%
09/30/2010	9.75%	4.28%	5.47%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/02/2010	10.38%	4.20%	6.18%
11/04/2010	10.70%	4.19%	6.51%
11/19/2010	10.20%	4.17%	6.03%
11/22/2010	10.00%	4.17%	5.83%
12/01/2010	10.13%	4.16%	5.97%
12/06/2010	9.86%	4.15%	5.71%
12/09/2010	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%	4.14%	5.86%
12/20/2010	10.60%	4.14%	6.46%
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%
01/05/2011	10.15%	4.13%	6.02%
01/12/2011	10.30%	4.12%	6.18%
01/13/2011	10.30%	4.12%	6.18%
01/18/2011	10.00%	4.12%	5.88%
01/20/2011	9.30%	4.12%	5.18%
01/20/2011	10.13%	4.12%	6.01%
01/31/2011	9.60%	4.11%	5.49%
02/03/2011	10.00%	4.11%	5.89%
02/25/2011	10.00%	4.14%	5.86%
03/25/2011	9.80%	4.18%	5.62%
03/30/2011	10.00%	4.18%	5.82%
04/12/2011	10.00%	4.21%	5.79%
04/25/2011	10.74%	4.23%	6.51%
04/26/2011	9.67%	4.24%	5.43%
04/27/2011	10.40%	4.24%	6.16%
05/04/2011	10.00%	4.25%	5.75%
05/04/2011	10.00%	4.25%	5.75%
05/24/2011	10.50%	4.27%	6.23%
06/08/2011	10.75%	4.30%	6.45%
06/16/2011	9.20%	4.32%	4.88%
06/17/2011	9.95%	4.32%	5.63%
07/13/2011	10.20%	4.37%	5.83%
08/01/2011	9.20%	4.39%	4.81%
08/08/2011	10.00%	4.38%	5.62%
08/11/2011	10.00%	4.38%	5.62%
08/12/2011	10.35%	4.38%	5.97%
08/19/2011	10.25%	4.36%	5.89%
09/02/2011	12.88%	4.32%	8.56%
09/22/2011	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%
12/14/2011	10.00%	3.79%	6.21%
12/14/2011	10.30%	3.79%	6.51%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.75%	6.45%
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%
01/25/2012	10.50%	3.57%	6.93%
01/27/2012	10.50%	3.55%	6.95%
02/15/2012	10.20%	3.47%	6.73%
02/23/2012	9.90%	3.43%	6.47%
02/27/2012	10.25%	3.42%	6.83%
02/29/2012	10.40%	3.41%	6.99%
03/29/2012	10.37%	3.31%	7.06%
04/04/2012	10.00%	3.29%	6.71%
04/26/2012	10.00%	3.20%	6.80%
05/02/2012	10.00%	3.18%	6.82%
05/07/2012	9.80%	3.16%	6.64%
05/15/2012	10.00%	3.14%	6.86%
05/29/2012	10.05%	3.11%	6.94%
06/07/2012	10.30%	3.07%	7.23%
06/14/2012	9.40%	3.06%	6.34%
06/15/2012	10.40%	3.06%	7.34%
06/18/2012	9.60%	3.05%	6.55%
06/19/2012	9.25%	3.05%	6.20%
06/26/2012	10.10%	3.04%	7.06%
06/29/2012	10.00%	3.04%	6.96%
07/09/2012	10.20%	3.03%	7.17%
07/16/2012	9.80%	3.02%	6.78%
07/20/2012	9.81%	3.01%	6.80%
07/20/2012	9.31%	3.01%	6.30%
09/13/2012	9.80%	2.94%	6.86%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
09/19/2012	10.05%	2.94%	7.11%
09/19/2012	9.80%	2.94%	6.86%
09/26/2012	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%
11/09/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.88%	2.89%	6.99%
11/29/2012	9.75%	2.89%	6.86%
12/05/2012	9.71%	2.89%	6.82%
12/05/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	10.50%	2.88%	7.62%
12/13/2012	9.50%	2.88%	6.62%
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	10.40%	2.87%	7.53%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.45%	2.87%	7.58%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	9.50%	2.87%	6.63%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
01/09/2013	9.70%	2.84%	6.86%
01/09/2013	9.70%	2.84%	6.86%
01/09/2013	9.70%	2.84%	6.86%
01/16/2013	9.60%	2.84%	6.76%
01/16/2013	9.60%	2.84%	6.76%
02/13/2013	10.20%	2.84%	7.36%
02/22/2013	9.75%	2.85%	6.90%
02/27/2013	10.00%	2.86%	7.14%
03/14/2013	9.30%	2.88%	6.42%
03/27/2013	9.80%	2.90%	6.90%
05/01/2013	9.84%	2.94%	6.90%
05/15/2013	10.30%	2.96%	7.34%
05/30/2013	10.20%	2.98%	7.22%
05/31/2013	9.00%	2.98%	6.02%
06/11/2013	10.00%	3.00%	7.00%
06/21/2013	9.75%	3.02%	6.73%
06/25/2013	9.80%	3.03%	6.77%
07/12/2013	9.36%	3.08%	6.28%
08/08/2013	9.83%	3.14%	6.69%
08/14/2013	9.15%	3.16%	5.99%
09/11/2013	10.25%	3.27%	6.98%
09/11/2013	10.20%	3.27%	6.93%
09/24/2013	10.20%	3.31%	6.89%
10/03/2013	9.65%	3.33%	6.32%
11/06/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/03/2013	10.25%	3.47%	6.78%
12/04/2013	9.50%	3.47%	6.03%
12/05/2013	10.20%	3.48%	6.72%
12/09/2013	8.72%	3.49%	5.23%
12/09/2013	9.75%	3.49%	6.26%
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%
02/20/2014	9.20%	3.69%	5.51%
02/26/2014	9.75%	3.70%	6.05%
03/17/2014	9.55%	3.72%	5.83%
03/26/2014	9.40%	3.73%	5.67%
03/26/2014	9.96%	3.73%	6.23%
04/02/2014	9.70%	3.73%	5.97%
05/16/2014	9.80%	3.70%	6.10%
05/30/2014	9.70%	3.68%	6.02%
06/06/2014	10.40%	3.67%	6.73%
06/30/2014	9.55%	3.64%	5.91%
07/02/2014	9.62%	3.64%	5.98%
07/10/2014	9.95%	3.63%	6.32%
07/23/2014	9.75%	3.61%	6.14%
07/29/2014	9.45%	3.60%	5.85%
07/31/2014	9.90%	3.60%	6.30%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
08/20/2014	9.75%	3.56%	6.19%
08/25/2014	9.60%	3.56%	6.04%
08/29/2014	9.80%	3.54%	6.26%
09/11/2014	9.60%	3.51%	6.09%
09/15/2014	10.25%	3.51%	6.74%
10/09/2014	9.80%	3.44%	6.36%
11/06/2014	9.56%	3.37%	6.19%
11/06/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.32%	6.38%
11/26/2014	10.20%	3.32%	6.88%
12/04/2014	9.68%	3.30%	6.38%
12/10/2014	9.25%	3.29%	5.96%
12/10/2014	9.25%	3.29%	5.96%
12/11/2014	10.07%	3.28%	6.79%
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%
01/23/2015	9.50%	3.14%	6.36%
02/24/2015	9.83%	3.04%	6.79%
03/18/2015	9.75%	2.98%	6.77%
03/25/2015	9.50%	2.95%	6.55%
03/26/2015	9.72%	2.95%	6.77%
04/23/2015	10.20%	2.87%	7.33%
04/29/2015	9.53%	2.86%	6.67%
05/01/2015	9.60%	2.85%	6.75%
05/26/2015	9.75%	2.83%	6.92%
06/17/2015	9.00%	2.82%	6.18%
06/17/2015	9.00%	2.82%	6.18%
09/02/2015	9.50%	2.79%	6.71%
09/10/2015	9.30%	2.79%	6.51%
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.30%	2.88%	7.42%
11/19/2015	10.00%	2.88%	7.12%
12/03/2015	10.00%	2.90%	7.10%
12/09/2015	9.14%	2.90%	6.24%
12/09/2015	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%
01/06/2016	9.50%	2.94%	6.56%
02/23/2016	9.75%	2.94%	6.81%
03/16/2016	9.85%	2.91%	6.94%
04/29/2016	9.80%	2.83%	6.97%

of Cases: 1,471
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	2.65%	3.96%	1.31%	14.61
Near-Term Projected	3.08%	3.96%	0.87%	14.61
Long-Term Projected	4.45%	3.96%	-0.49%	14.61

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.829178
R Square	0.687536
Adjusted R Square	0.686019
Standard Error	0.005384
Observations	622

ANOVA

	df	SS	MS	F	Significance F
Regression	3	0.039411448	0.0131371	453.2757954	1.2887E-155
Residual	618	0.017911299	2.898E-05		
Total	621	0.057322747			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.02857	0.002391017	-11.948025	9.4919E-30	-0.03326344	-0.023872429	-0.03326344	-0.02387243
LN(30-Year Treasury)	-0.02609	0.000787407	-33.131135	3.7853E-139	-0.027634	-0.024541369	-0.027634	-0.02454137
Moody's Utility A Credit Spread	0.08211	0.04092542	2.0063321	0.045256051	0.001740232	0.162479731	0.00174023	0.16247973
VIX	0.000254	3.52127E-05	7.2220171	1.51195E-12	0.000185156	0.000323458	0.00018516	0.00032346

	Risk Premium	Return on Equity
Regression Result - Credit Spread, VIX	7.10%	9.74%
Regression Result - Credit Spread, VIX	6.66%	9.75%
Regression Result - Credit Spread, VIX	5.59%	10.04%

Notes:

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional
- [3] Equals [2] - [1]
- [4] Source: Bloomberg Professional
- [5] Source: SNL Financial
- [6] Source: SNL Financial
- [7] Source: Bloomberg Professional, equals 199-trading day average (i.e. lag period) as of May 31, 2016
- [8] Source: Bloomberg Professional, equals 199-trading day average (i.e. lag period) as of May 31, 2016
- [9] Equals LN[8]
- [10] Equals [8] - [7]
- [11] Source: Bloomberg Professional, equals 199-trading day average (i.e. lag period) as of May 31, 2016
- [12] Equals [6] - [7]

[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
01/01/1980	14.50%	9.36%		-2.37			5.14%
01/07/1980	14.39%	9.39%		-2.37			5.00%
01/09/1980	15.00%	9.40%		-2.36			5.60%
01/14/1980	15.17%	9.42%		-2.36			5.75%
01/17/1980	13.93%	9.44%		-2.36			4.49%
01/23/1980	15.50%	9.47%		-2.36			6.03%
01/30/1980	13.86%	9.52%		-2.35			4.34%
01/31/1980	12.61%	9.53%		-2.35			3.08%
02/06/1980	13.71%	9.58%		-2.35			4.13%
02/13/1980	12.80%	9.64%		-2.34			3.16%
02/14/1980	13.00%	9.65%		-2.34			3.35%
02/19/1980	13.50%	9.68%		-2.34			3.82%
02/27/1980	13.75%	9.78%		-2.32			3.97%
02/29/1980	13.75%	9.81%		-2.32			3.94%
02/29/1980	14.00%	9.81%		-2.32			4.19%
02/29/1980	14.77%	9.81%		-2.32			4.96%
03/07/1980	12.70%	9.90%		-2.31			2.80%
03/14/1980	13.50%	9.97%		-2.31			3.53%
03/26/1980	14.16%	10.11%		-2.29			4.05%
03/27/1980	14.24%	10.12%		-2.29			4.12%
03/28/1980	14.50%	10.14%		-2.29			4.36%
04/11/1980	12.75%	10.28%		-2.27			2.47%
04/14/1980	13.85%	10.29%		-2.27			3.56%
04/16/1980	15.50%	10.32%		-2.27			5.18%
04/22/1980	13.90%	10.36%		-2.27			3.54%
04/22/1980	13.25%	10.36%		-2.27			2.89%
04/24/1980	16.80%	10.38%		-2.27			6.42%
04/29/1980	15.50%	10.41%		-2.26			5.09%
05/06/1980	13.70%	10.45%		-2.26			3.25%
05/07/1980	15.00%	10.46%		-2.26			4.54%
05/08/1980	13.75%	10.47%		-2.26			3.28%
05/09/1980	14.35%	10.47%		-2.26			3.88%
05/13/1980	13.60%	10.49%		-2.25			3.11%
05/15/1980	13.25%	10.50%		-2.25			2.75%
05/19/1980	13.75%	10.52%		-2.25			3.23%
05/27/1980	14.60%	10.55%		-2.25			4.05%
05/27/1980	13.62%	10.55%		-2.25			3.07%
05/29/1980	16.00%	10.56%		-2.25			5.44%
05/30/1980	13.80%	10.57%		-2.25			3.23%
06/02/1980	15.63%	10.58%		-2.25			5.05%
06/09/1980	15.90%	10.61%		-2.24			5.29%
06/10/1980	13.78%	10.61%		-2.24			3.17%
06/12/1980	14.25%	10.62%		-2.24			3.63%
06/19/1980	13.40%	10.63%		-2.24			2.77%
06/30/1980	13.00%	10.65%		-2.24			2.35%
06/30/1980	13.40%	10.65%		-2.24			2.75%
07/09/1980	14.75%	10.68%		-2.24			4.07%
07/10/1980	15.00%	10.69%		-2.24			4.31%
07/15/1980	15.80%	10.70%		-2.23			5.10%
07/18/1980	13.80%	10.72%		-2.23			3.08%
07/22/1980	14.10%	10.73%		-2.23			3.37%
07/24/1980	15.00%	10.73%		-2.23			4.27%
07/25/1980	13.48%	10.74%		-2.23			2.74%
07/31/1980	14.58%	10.76%		-2.23			3.82%
08/08/1980	14.00%	10.78%		-2.23			3.22%
08/08/1980	13.50%	10.78%		-2.23			2.72%
08/08/1980	15.45%	10.78%		-2.23			4.67%
08/11/1980	14.85%	10.78%		-2.23			4.07%
08/14/1980	14.00%	10.79%		-2.23			3.21%
08/14/1980	16.25%	10.79%		-2.23			5.46%
08/25/1980	13.75%	10.82%		-2.22			2.93%
08/27/1980	13.80%	10.83%		-2.22			2.97%
08/29/1980	12.50%	10.84%		-2.22			1.66%
09/15/1980	15.80%	10.88%		-2.22			4.92%
09/15/1980	13.93%	10.88%		-2.22			3.05%
09/15/1980	13.50%	10.88%		-2.22			2.62%
09/24/1980	12.50%	10.93%		-2.21			1.57%
09/24/1980	15.00%	10.93%		-2.21			4.07%
09/26/1980	13.75%	10.95%		-2.21			2.80%
09/30/1980	14.20%	10.96%		-2.21			3.24%
09/30/1980	14.10%	10.96%		-2.21			3.14%
10/01/1980	13.90%	10.97%		-2.21			2.93%
10/03/1980	15.50%	10.99%		-2.21			4.51%
10/07/1980	12.50%	11.00%		-2.21			1.50%
10/09/1980	14.50%	11.01%		-2.21			3.49%
10/09/1980	14.50%	11.01%		-2.21			3.49%
10/09/1980	13.25%	11.01%		-2.21			2.24%
10/16/1980	16.10%	11.03%		-2.20			5.07%
10/17/1980	14.50%	11.03%		-2.20			3.47%
10/31/1980	14.25%	11.11%		-2.20			3.14%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
10/31/1980	13.75%	11.11%		-2.20			2.64%
11/04/1980	15.00%	11.12%		-2.20			3.88%
11/05/1980	14.00%	11.13%		-2.20			2.87%
11/05/1980	13.75%	11.13%		-2.20			2.62%
11/08/1980	13.75%	11.15%		-2.19			2.60%
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%	11.20%		-2.19			2.80%
11/26/1980	14.00%	11.21%		-2.19			2.79%
12/08/1980	15.10%	11.22%		-2.19			3.88%
12/08/1980	14.15%	11.22%		-2.19			2.93%
12/09/1980	15.35%	11.22%		-2.19			4.13%
12/12/1980	15.45%	11.22%		-2.19			4.23%
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%	11.22%		-2.19			2.23%
12/22/1980	15.00%	11.22%		-2.19			3.78%
12/30/1980	14.50%	11.21%		-2.19			3.29%
12/30/1980	14.95%	11.21%		-2.19			3.74%
12/31/1980	13.39%	11.21%		-2.19			2.18%
01/02/1981	15.25%	11.21%		-2.19			4.04%
01/07/1981	14.30%	11.21%		-2.19			3.09%
01/19/1981	15.25%	11.19%		-2.19			4.06%
01/23/1981	14.40%	11.20%		-2.19			3.20%
01/23/1981	13.10%	11.20%		-2.19			1.90%
01/26/1981	15.25%	11.20%		-2.19			4.05%
01/27/1981	15.00%	11.20%		-2.19			3.80%
01/31/1981	13.47%	11.21%		-2.19			2.26%
02/03/1981	15.25%	11.23%		-2.19			4.02%
02/05/1981	15.75%	11.25%		-2.19			4.50%
02/11/1981	15.60%	11.28%		-2.18			4.32%
02/20/1981	15.25%	11.34%		-2.18			3.91%
03/11/1981	15.40%	11.50%		-2.16			3.90%
03/12/1981	14.51%	11.51%		-2.16			3.00%
03/12/1981	16.00%	11.51%		-2.16			4.49%
03/13/1981	13.02%	11.52%		-2.16			1.50%
03/18/1981	16.19%	11.55%		-2.16			4.64%
03/19/1981	13.75%	11.56%		-2.16			2.19%
03/23/1981	14.30%	11.58%		-2.16			2.72%
03/25/1981	15.30%	11.61%		-2.15			3.69%
04/01/1981	14.53%	11.69%		-2.15			2.84%
04/03/1981	19.10%	11.72%		-2.14			7.38%
04/09/1981	15.00%	11.79%		-2.14			3.21%
04/09/1981	15.30%	11.79%		-2.14			3.51%
04/09/1981	17.00%	11.79%		-2.14			5.21%
04/09/1981	16.50%	11.79%		-2.14			4.71%
04/10/1981	13.75%	11.81%		-2.14			1.94%
04/13/1981	13.57%	11.83%		-2.13			1.74%
04/15/1981	15.30%	11.86%		-2.13			3.44%
04/16/1981	13.50%	11.88%		-2.13			1.62%
04/17/1981	14.10%	11.88%		-2.13			2.22%
04/21/1981	16.80%	11.91%		-2.13			4.89%
04/21/1981	14.00%	11.91%		-2.13			2.09%
04/24/1981	16.00%	11.96%		-2.12			4.04%
04/27/1981	13.61%	11.98%		-2.12			1.63%
04/27/1981	12.50%	11.98%		-2.12			0.52%
04/29/1981	13.65%	12.01%		-2.12			1.64%
04/30/1981	13.50%	12.02%		-2.12			1.48%
05/04/1981	16.22%	12.06%		-2.12			4.16%
05/05/1981	14.40%	12.08%		-2.11			2.32%
05/07/1981	16.25%	12.12%		-2.11			4.13%
05/07/1981	16.27%	12.12%		-2.11			4.15%
05/08/1981	13.00%	12.14%		-2.11			0.86%
05/08/1981	16.00%	12.14%		-2.11			3.86%
05/12/1981	13.50%	12.17%		-2.11			1.33%
05/15/1981	15.75%	12.23%		-2.10			3.52%
05/18/1981	14.88%	12.24%		-2.10			2.64%
05/20/1981	16.00%	12.27%		-2.10			3.73%
05/21/1981	14.00%	12.28%		-2.10			1.72%
05/26/1981	14.90%	12.31%		-2.09			2.59%
05/27/1981	15.00%	12.32%		-2.09			2.68%
05/29/1981	15.50%	12.34%		-2.09			3.16%
06/01/1981	16.50%	12.35%		-2.09			4.15%
06/03/1981	14.67%	12.38%		-2.09			2.29%
06/05/1981	13.00%	12.40%		-2.09			0.60%
06/10/1981	16.75%	12.42%		-2.09			4.33%
06/17/1981	14.40%	12.46%		-2.08			1.94%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
06/18/1981	16.33%	12.47%		-2.08			3.86%
06/25/1981	14.75%	12.52%		-2.08			2.23%
06/26/1981	16.00%	12.53%		-2.08			3.47%
06/30/1981	15.25%	12.55%		-2.08			2.70%
07/01/1981	15.50%	12.56%		-2.07			2.94%
07/01/1981	17.50%	12.56%		-2.07			4.94%
07/10/1981	16.00%	12.62%		-2.07			3.38%
07/14/1981	16.90%	12.64%		-2.07			4.26%
07/15/1981	16.00%	12.65%		-2.07			3.35%
07/17/1981	15.00%	12.67%		-2.07			2.33%
07/20/1981	15.00%	12.68%		-2.07			2.32%
07/21/1981	14.00%	12.69%		-2.06			1.31%
07/28/1981	13.48%	12.75%		-2.06			0.73%
07/31/1981	13.50%	12.79%		-2.06			0.71%
07/31/1981	16.00%	12.79%		-2.06			3.21%
07/31/1981	15.00%	12.79%		-2.06			2.21%
08/05/1981	15.71%	12.83%		-2.05			2.88%
08/10/1981	14.50%	12.87%		-2.05			1.63%
08/11/1981	15.00%	12.88%		-2.05			2.12%
08/20/1981	16.50%	12.95%		-2.04			3.55%
08/20/1981	13.50%	12.95%		-2.04			0.55%
08/24/1981	15.00%	12.97%		-2.04			2.03%
08/28/1981	15.00%	13.01%		-2.04			1.99%
09/03/1981	14.50%	13.06%		-2.04			1.44%
09/10/1981	14.50%	13.11%		-2.03			1.39%
09/11/1981	16.00%	13.12%		-2.03			2.88%
09/16/1981	16.00%	13.15%		-2.03			2.85%
09/17/1981	16.50%	13.16%		-2.03			3.34%
09/23/1981	15.85%	13.20%		-2.03			2.65%
09/28/1981	15.50%	13.23%		-2.02			2.27%
10/09/1981	15.75%	13.34%		-2.01			2.41%
10/15/1981	16.25%	13.37%		-2.01			2.88%
10/16/1981	16.50%	13.39%		-2.01			3.11%
10/16/1981	15.50%	13.39%		-2.01			2.11%
10/19/1981	14.25%	13.40%		-2.01			0.85%
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%	13.46%		-2.01			2.54%
10/27/1981	10.00%	13.49%		-2.00			-3.49%
10/29/1981	16.50%	13.52%		-2.00			2.98%
10/29/1981	14.75%	13.52%		-2.00			1.23%
11/03/1981	15.17%	13.54%		-2.00			1.63%
11/05/1981	16.60%	13.56%		-2.00			3.04%
11/06/1981	15.17%	13.57%		-2.00			1.60%
11/24/1981	15.50%	13.61%		-1.99			1.89%
11/25/1981	16.10%	13.61%		-1.99			2.49%
11/25/1981	16.10%	13.61%		-1.99			2.49%
11/25/1981	15.25%	13.61%		-1.99			1.64%
11/25/1981	15.35%	13.61%		-1.99			1.74%
12/01/1981	16.50%	13.61%		-1.99			2.89%
12/01/1981	15.70%	13.61%		-1.99			2.09%
12/01/1981	16.49%	13.61%		-1.99			2.88%
12/01/1981	16.00%	13.61%		-1.99			2.39%
12/04/1981	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%	13.64%		-1.99			2.86%
12/18/1981	15.45%	13.64%		-1.99			1.81%
12/30/1981	16.00%	13.67%		-1.99			2.33%
12/30/1981	16.25%	13.67%		-1.99			2.58%
12/30/1981	14.25%	13.67%		-1.99			0.58%
12/31/1981	16.15%	13.68%		-1.99			2.47%
01/04/1982	15.50%	13.68%		-1.99			1.82%
01/11/1982	14.50%	13.73%		-1.99			0.77%
01/11/1982	17.00%	13.73%		-1.99			3.27%
01/13/1982	14.75%	13.74%		-1.98			1.01%
01/14/1982	15.75%	13.75%		-1.98			2.00%
01/15/1982	15.00%	13.76%		-1.98			1.24%
01/15/1982	16.50%	13.76%		-1.98			2.74%
01/22/1982	16.25%	13.80%		-1.98			2.45%
01/27/1982	16.84%	13.81%		-1.98			3.03%
01/28/1982	13.00%	13.82%		-1.98			-0.82%
01/29/1982	15.50%	13.82%		-1.98			1.68%
02/01/1982	15.85%	13.83%		-1.98			2.02%
02/03/1982	16.44%	13.84%		-1.98			2.60%
02/08/1982	15.50%	13.86%		-1.98			1.64%
02/11/1982	16.00%	13.88%		-1.97			2.12%
02/11/1982	16.20%	13.88%		-1.97			2.32%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
02/17/1982	15.00%	13.89%		-1.97			1.11%
02/19/1982	15.17%	13.89%		-1.97			1.28%
02/26/1982	15.25%	13.89%		-1.97			1.36%
03/01/1982	15.03%	13.89%		-1.97			1.14%
03/01/1982	16.00%	13.89%		-1.97			2.11%
03/03/1982	15.00%	13.88%		-1.97			1.12%
03/08/1982	17.10%	13.88%		-1.97			3.22%
03/12/1982	16.25%	13.88%		-1.97			2.37%
03/17/1982	17.30%	13.88%		-1.97			3.42%
03/22/1982	15.10%	13.89%		-1.97			1.21%
03/27/1982	15.40%	13.90%		-1.97			1.50%
03/30/1982	15.50%	13.91%		-1.97			1.59%
03/31/1982	17.00%	13.91%		-1.97			3.09%
04/01/1982	16.50%	13.92%		-1.97			2.58%
04/01/1982	14.70%	13.92%		-1.97			0.78%
04/02/1982	15.50%	13.92%		-1.97			1.58%
04/05/1982	15.50%	13.93%		-1.97			1.57%
04/08/1982	16.40%	13.94%		-1.97			2.46%
04/13/1982	14.50%	13.94%		-1.97			0.56%
04/23/1982	15.75%	13.94%		-1.97			1.81%
04/27/1982	15.00%	13.94%		-1.97			1.06%
04/28/1982	15.75%	13.94%		-1.97			1.81%
04/30/1982	15.50%	13.94%		-1.97			1.56%
04/30/1982	14.70%	13.94%		-1.97			0.76%
05/03/1982	16.60%	13.94%		-1.97			2.66%
05/04/1982	16.00%	13.94%		-1.97			2.06%
05/14/1982	15.50%	13.92%		-1.97			1.58%
05/18/1982	15.42%	13.92%		-1.97			1.50%
05/19/1982	14.69%	13.92%		-1.97			0.77%
05/20/1982	15.10%	13.91%		-1.97			1.19%
05/20/1982	15.50%	13.91%		-1.97			1.59%
05/20/1982	16.30%	13.91%		-1.97			2.39%
05/20/1982	15.00%	13.91%		-1.97			1.09%
05/21/1982	17.75%	13.91%		-1.97			3.84%
05/27/1982	15.00%	13.89%		-1.97			1.11%
05/28/1982	15.50%	13.89%		-1.97			1.61%
05/28/1982	17.00%	13.89%		-1.97			3.11%
06/01/1982	13.75%	13.89%		-1.97			-0.14%
06/01/1982	16.60%	13.89%		-1.97			2.71%
06/09/1982	17.86%	13.88%		-1.97			3.98%
06/14/1982	15.75%	13.88%		-1.97			1.87%
06/15/1982	14.85%	13.87%		-1.98			0.98%
06/18/1982	15.50%	13.86%		-1.98			1.64%
06/21/1982	14.90%	13.86%		-1.98			1.04%
06/23/1982	16.00%	13.86%		-1.98			2.14%
06/23/1982	16.17%	13.86%		-1.98			2.31%
06/24/1982	14.85%	13.86%		-1.98			0.99%
06/25/1982	14.70%	13.85%		-1.98			0.85%
07/01/1982	16.00%	13.84%		-1.98			2.16%
07/02/1982	15.62%	13.83%		-1.98			1.79%
07/02/1982	17.00%	13.83%		-1.98			3.17%
07/13/1982	14.00%	13.82%		-1.98			0.18%
07/13/1982	16.80%	13.82%		-1.98			2.98%
07/14/1982	15.76%	13.81%		-1.98			1.95%
07/14/1982	16.02%	13.81%		-1.98			2.21%
07/19/1982	16.50%	13.79%		-1.98			2.71%
07/22/1982	17.00%	13.76%		-1.98			3.24%
07/22/1982	14.50%	13.76%		-1.98			0.74%
07/27/1982	16.75%	13.74%		-1.98			3.01%
07/29/1982	16.50%	13.73%		-1.99			2.77%
08/11/1982	17.50%	13.68%		-1.99			3.82%
08/18/1982	17.07%	13.62%		-1.99			3.45%
08/20/1982	15.73%	13.60%		-2.00			2.13%
08/25/1982	16.00%	13.57%		-2.00			2.43%
08/26/1982	15.50%	13.56%		-2.00			1.94%
08/30/1982	15.00%	13.55%		-2.00			1.45%
09/03/1982	16.20%	13.53%		-2.00			2.67%
09/08/1982	15.00%	13.52%		-2.00			1.48%
09/15/1982	13.08%	13.51%		-2.00			-0.43%
09/15/1982	16.25%	13.51%		-2.00			2.74%
09/16/1982	16.00%	13.50%		-2.00			2.50%
09/17/1982	15.25%	13.50%		-2.00			1.75%
09/23/1982	17.17%	13.47%		-2.00			3.70%
09/24/1982	14.50%	13.47%		-2.01			1.03%
09/27/1982	15.25%	13.46%		-2.01			1.79%
10/01/1982	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%
11/01/1982	15.50%	13.14%		-2.03			2.36%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
11/03/1982	17.20%	13.12%		-2.03			4.08%
11/04/1982	16.25%	13.10%		-2.03			3.15%
11/05/1982	16.20%	13.09%		-2.03			3.11%
11/09/1982	16.00%	13.05%		-2.04			2.95%
11/23/1982	15.85%	12.88%		-2.05			2.97%
11/23/1982	15.50%	12.88%		-2.05			2.62%
11/30/1982	16.50%	12.80%		-2.06			3.70%
12/01/1982	17.04%	12.78%		-2.06			4.26%
12/06/1982	15.00%	12.72%		-2.06			2.28%
12/06/1982	16.35%	12.72%		-2.06			3.63%
12/10/1982	15.50%	12.66%		-2.07			2.84%
12/13/1982	16.00%	12.64%		-2.07			3.36%
12/14/1982	16.40%	12.62%		-2.07			3.78%
12/14/1982	15.30%	12.62%		-2.07			2.68%
12/20/1982	16.00%	12.57%		-2.07			3.43%
12/21/1982	15.85%	12.55%		-2.08			3.30%
12/21/1982	14.75%	12.55%		-2.08			2.20%
12/22/1982	16.75%	12.54%		-2.08			4.21%
12/22/1982	16.58%	12.54%		-2.08			4.04%
12/22/1982	16.25%	12.54%		-2.08			3.71%
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	16.35%	12.46%		-2.08			3.89%
12/30/1982	16.00%	12.46%		-2.08			3.54%
12/30/1982	16.77%	12.46%		-2.08			4.31%
01/05/1983	17.33%	12.40%		-2.09			4.93%
01/11/1983	15.90%	12.34%		-2.09			3.56%
01/12/1983	15.50%	12.32%		-2.09			3.18%
01/12/1983	14.63%	12.32%		-2.09			2.31%
01/20/1983	17.75%	12.23%		-2.10			5.52%
01/21/1983	15.00%	12.21%		-2.10			2.79%
01/24/1983	14.50%	12.20%		-2.10			2.30%
01/24/1983	15.50%	12.20%		-2.10			3.30%
01/25/1983	15.85%	12.19%		-2.10			3.66%
01/27/1983	16.14%	12.16%		-2.11			3.98%
02/01/1983	18.50%	12.13%		-2.11			6.37%
02/04/1983	14.00%	12.09%		-2.11			1.91%
02/10/1983	15.00%	12.05%		-2.12			2.95%
02/21/1983	15.50%	11.98%		-2.12			3.52%
02/22/1983	15.50%	11.96%		-2.12			3.54%
02/23/1983	15.10%	11.95%		-2.12			3.15%
02/23/1983	16.00%	11.95%		-2.12			4.05%
03/02/1983	15.25%	11.89%		-2.13			3.36%
03/09/1983	15.20%	11.82%		-2.14			3.38%
03/15/1983	13.00%	11.76%		-2.14			1.24%
03/18/1983	15.25%	11.72%		-2.14			3.53%
03/23/1983	15.40%	11.68%		-2.15			3.72%
03/24/1983	15.00%	11.66%		-2.15			3.34%
03/29/1983	15.50%	11.62%		-2.15			3.88%
03/30/1983	16.71%	11.60%		-2.15			5.11%
03/31/1983	15.00%	11.58%		-2.16			3.42%
04/04/1983	15.20%	11.57%		-2.16			3.63%
04/08/1983	15.50%	11.49%		-2.16			4.01%
04/11/1983	14.81%	11.48%		-2.16			3.33%
04/19/1983	14.50%	11.36%		-2.17			3.14%
04/20/1983	16.00%	11.35%		-2.18			4.65%
04/29/1983	16.00%	11.23%		-2.19			4.77%
05/01/1983	14.50%	11.23%		-2.19			3.27%
05/09/1983	15.50%	11.14%		-2.19			4.36%
05/11/1983	16.46%	11.11%		-2.20			5.35%
05/12/1983	14.14%	11.10%		-2.20			3.04%
05/18/1983	15.00%	11.04%		-2.20			3.96%
05/23/1983	14.90%	11.00%		-2.21			3.90%
05/23/1983	15.50%	11.00%		-2.21			4.50%
05/25/1983	15.50%	10.97%		-2.21			4.53%
05/27/1983	15.00%	10.95%		-2.21			4.05%
05/31/1983	15.50%	10.94%		-2.21			4.56%
05/31/1983	14.00%	10.94%		-2.21			3.06%
06/02/1983	14.50%	10.92%		-2.21			3.58%
06/17/1983	15.03%	10.83%		-2.22			4.20%
07/01/1983	14.80%	10.77%		-2.23			4.03%
07/01/1983	14.90%	10.77%		-2.23			4.13%
07/08/1983	16.25%	10.75%		-2.23			5.50%
07/13/1983	13.20%	10.75%		-2.23			2.45%
07/19/1983	15.10%	10.74%		-2.23			4.36%
07/19/1983	15.00%	10.74%		-2.23			4.26%
07/25/1983	16.25%	10.73%		-2.23			5.52%
07/28/1983	15.90%	10.74%		-2.23			5.16%
08/03/1983	16.50%	10.75%		-2.23			5.75%
08/03/1983	16.34%	10.75%		-2.23			5.59%
08/19/1983	15.00%	10.80%		-2.23			4.20%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
08/22/1983	16.40%	10.80%		-2.23			5.60%
08/22/1983	15.50%	10.80%		-2.23			4.70%
08/31/1983	14.75%	10.85%		-2.22			3.90%
09/07/1983	15.00%	10.87%		-2.22			4.13%
09/14/1983	15.78%	10.89%		-2.22			4.89%
09/16/1983	15.00%	10.90%		-2.22			4.10%
09/19/1983	14.50%	10.91%		-2.22			3.59%
09/20/1983	16.50%	10.91%		-2.22			5.59%
09/28/1983	14.50%	10.94%		-2.21			3.56%
09/29/1983	15.50%	10.95%		-2.21			4.55%
09/30/1983	16.15%	10.95%		-2.21			5.20%
09/30/1983	15.25%	10.95%		-2.21			4.30%
10/04/1983	14.80%	10.96%		-2.21			3.84%
10/07/1983	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	16.50%	11.01%		-2.21			5.49%
10/19/1983	16.25%	11.01%		-2.21			5.24%
10/26/1983	15.00%	11.04%		-2.20			3.96%
10/27/1983	15.20%	11.04%		-2.20			4.16%
11/01/1983	16.00%	11.06%		-2.20			4.94%
11/09/1983	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%
12/05/1983	15.25%	11.15%		-2.19			4.10%
12/06/1983	15.07%	11.16%		-2.19			3.91%
12/08/1983	15.90%	11.16%		-2.19			4.74%
12/09/1983	14.75%	11.17%		-2.19			3.58%
12/12/1983	14.50%	11.18%		-2.19			3.32%
12/15/1983	15.56%	11.20%		-2.19			4.36%
12/19/1983	14.80%	11.21%		-2.19			3.59%
12/20/1983	16.00%	11.22%		-2.19			4.78%
12/20/1983	14.69%	11.22%		-2.19			3.47%
12/20/1983	16.25%	11.22%		-2.19			5.03%
12/22/1983	15.75%	11.23%		-2.19			4.52%
12/22/1983	14.75%	11.23%		-2.19			3.52%
01/03/1984	14.75%	11.27%		-2.18			3.48%
01/10/1984	15.90%	11.30%		-2.18			4.60%
01/12/1984	15.60%	11.31%		-2.18			4.29%
01/18/1984	13.75%	11.33%		-2.18			2.42%
01/19/1984	15.90%	11.33%		-2.18			4.57%
01/30/1984	16.10%	11.37%		-2.17			4.73%
01/31/1984	15.25%	11.38%		-2.17			3.87%
02/01/1984	14.80%	11.39%		-2.17			3.41%
02/06/1984	14.75%	11.41%		-2.17			3.34%
02/06/1984	13.75%	11.41%		-2.17			2.34%
02/09/1984	15.25%	11.43%		-2.17			3.82%
02/15/1984	15.70%	11.45%		-2.17			4.25%
02/20/1984	15.00%	11.46%		-2.17			3.54%
02/20/1984	15.00%	11.46%		-2.17			3.54%
02/22/1984	14.75%	11.48%		-2.16			3.27%
02/28/1984	14.50%	11.52%		-2.16			2.98%
03/02/1984	14.25%	11.54%		-2.16			2.71%
03/20/1984	16.00%	11.65%		-2.15			4.35%
03/23/1984	15.50%	11.67%		-2.15			3.83%
03/26/1984	14.71%	11.68%		-2.15			3.03%
04/02/1984	15.50%	11.72%		-2.14			3.78%
04/06/1984	14.74%	11.76%		-2.14			2.98%
04/11/1984	15.72%	11.78%		-2.14			3.94%
04/17/1984	15.00%	11.81%		-2.14			3.19%
04/18/1984	16.20%	11.82%		-2.14			4.38%
04/25/1984	14.64%	11.85%		-2.13			2.79%
04/30/1984	14.40%	11.88%		-2.13			2.52%
05/16/1984	14.69%	11.99%		-2.12			2.70%
05/16/1984	15.00%	11.99%		-2.12			3.01%
05/22/1984	14.40%	12.02%		-2.12			2.38%
05/29/1984	15.10%	12.06%		-2.12			3.04%
06/13/1984	15.25%	12.16%		-2.11			3.09%
06/15/1984	15.60%	12.17%		-2.11			3.43%
06/22/1984	16.25%	12.21%		-2.10			4.04%
06/29/1984	15.25%	12.26%		-2.10			2.99%
07/02/1984	13.35%	12.27%		-2.10			1.08%
07/10/1984	16.00%	12.31%		-2.09			3.69%
07/12/1984	16.50%	12.33%		-2.09			4.17%
07/13/1984	16.25%	12.34%		-2.09			3.91%
07/17/1984	14.14%	12.35%		-2.09			1.79%
07/18/1984	15.50%	12.36%		-2.09			3.14%
07/18/1984	15.30%	12.36%		-2.09			2.94%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
07/19/1984	14.30%	12.37%		-2.09			1.93%
07/24/1984	16.79%	12.40%		-2.09			4.39%
07/31/1984	16.00%	12.43%		-2.08			3.57%
08/03/1984	14.25%	12.45%		-2.08			1.80%
08/17/1984	14.30%	12.49%		-2.08			1.81%
08/20/1984	15.00%	12.49%		-2.08			2.51%
08/27/1984	16.30%	12.51%		-2.08			3.79%
08/31/1984	15.55%	12.53%		-2.08			3.02%
09/06/1984	16.00%	12.54%		-2.08			3.46%
09/10/1984	14.75%	12.55%		-2.08			2.20%
09/13/1984	15.00%	12.55%		-2.08			2.45%
09/17/1984	17.38%	12.56%		-2.07			4.82%
09/26/1984	14.50%	12.57%		-2.07			1.93%
09/28/1984	16.25%	12.57%		-2.07			3.68%
09/28/1984	15.00%	12.57%		-2.07			2.43%
10/09/1984	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%	12.59%		-2.07			3.81%
10/31/1984	16.25%	12.59%		-2.07			3.66%
11/07/1984	15.60%	12.58%		-2.07			3.02%
11/09/1984	16.00%	12.58%		-2.07			3.42%
11/14/1984	15.75%	12.59%		-2.07			3.16%
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%
12/03/1984	15.80%	12.57%		-2.07			3.23%
12/04/1984	16.50%	12.56%		-2.07			3.94%
12/18/1984	16.40%	12.54%		-2.08			3.86%
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%
01/03/1985	14.75%	12.49%		-2.08			2.26%
01/10/1985	15.75%	12.47%		-2.08			3.28%
01/11/1985	16.30%	12.46%		-2.08			3.84%
01/23/1985	15.80%	12.43%		-2.08			3.37%
01/24/1985	15.82%	12.43%		-2.09			3.39%
01/25/1985	16.75%	12.42%		-2.09			4.33%
01/30/1985	14.90%	12.40%		-2.09			2.50%
01/31/1985	14.75%	12.39%		-2.09			2.36%
02/08/1985	14.47%	12.35%		-2.09			2.12%
03/01/1985	13.84%	12.30%		-2.10			1.54%
03/08/1985	16.85%	12.28%		-2.10			4.57%
03/14/1985	15.50%	12.25%		-2.10			3.25%
03/15/1985	15.62%	12.25%		-2.10			3.37%
03/29/1985	15.62%	12.16%		-2.11			3.46%
04/03/1985	14.60%	12.13%		-2.11			2.47%
04/09/1985	15.50%	12.10%		-2.11			3.40%
04/16/1985	15.70%	12.05%		-2.12			3.65%
04/22/1985	14.00%	12.01%		-2.12			1.99%
04/26/1985	15.50%	11.97%		-2.12			3.53%
04/29/1985	15.00%	11.96%		-2.12			3.04%
05/02/1985	14.68%	11.93%		-2.13			2.75%
05/08/1985	15.62%	11.88%		-2.13			3.74%
05/10/1985	16.50%	11.86%		-2.13			4.64%
05/29/1985	14.61%	11.73%		-2.14			2.88%
05/31/1985	16.00%	11.71%		-2.15			4.29%
06/14/1985	15.50%	11.60%		-2.15			3.90%
07/09/1985	15.00%	11.44%		-2.17			3.56%
07/16/1985	14.50%	11.39%		-2.17			3.11%
07/26/1985	14.50%	11.32%		-2.18			3.18%
08/02/1985	14.80%	11.29%		-2.18			3.51%
08/07/1985	15.00%	11.26%		-2.18			3.74%
08/28/1985	14.25%	11.15%		-2.19			3.10%
08/28/1985	15.50%	11.15%		-2.19			4.35%
08/29/1985	14.50%	11.14%		-2.19			3.36%
09/09/1985	14.90%	11.11%		-2.20			3.79%
09/09/1985	14.60%	11.11%		-2.20			3.49%
09/17/1985	14.90%	11.08%		-2.20			3.82%
09/23/1985	15.00%	11.06%		-2.20			3.94%
09/27/1985	15.80%	11.04%		-2.20			4.76%
09/27/1985	15.50%	11.04%		-2.20			4.46%
10/02/1985	14.75%	11.03%		-2.20			3.72%
10/02/1985	14.00%	11.03%		-2.20			2.97%
10/03/1985	15.25%	11.03%		-2.20			4.22%
10/24/1985	15.40%	10.96%		-2.21			4.44%
10/24/1985	15.85%	10.96%		-2.21			4.89%
10/24/1985	15.82%	10.96%		-2.21			4.86%
10/28/1985	16.00%	10.95%		-2.21			5.05%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	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%
11/04/1985	14.50%	10.91%		-2.22			3.59%
11/07/1985	15.50%	10.89%		-2.22			4.61%
11/08/1985	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	15.00%	10.66%		-2.24			4.34%
12/20/1985	14.50%	10.66%		-2.24			3.84%
12/20/1985	14.50%	10.66%		-2.24			3.84%
01/24/1986	15.40%	10.40%		-2.26			5.00%
01/31/1986	15.00%	10.35%		-2.27			4.65%
02/05/1986	15.00%	10.32%		-2.27			4.68%
02/05/1986	15.75%	10.32%		-2.27			5.43%
02/10/1986	13.30%	10.29%		-2.27			3.01%
02/11/1986	12.50%	10.27%		-2.28			2.23%
02/14/1986	14.40%	10.24%		-2.28			4.16%
02/18/1986	16.00%	10.22%		-2.28			5.78%
02/24/1986	14.50%	10.17%		-2.29			4.33%
02/26/1986	14.00%	10.15%		-2.29			3.85%
03/05/1986	14.90%	10.07%		-2.30			4.83%
03/11/1986	14.50%	10.01%		-2.30			4.49%
03/12/1986	13.50%	10.00%		-2.30			3.50%
03/27/1986	14.10%	9.85%		-2.32			4.25%
03/31/1986	13.50%	9.84%		-2.32			3.66%
04/01/1986	14.00%	9.82%		-2.32			4.18%
04/02/1986	15.50%	9.81%		-2.32			5.69%
04/04/1986	15.00%	9.78%		-2.32			5.22%
04/14/1986	13.40%	9.68%		-2.33			3.72%
04/23/1986	15.00%	9.57%		-2.35			5.43%
05/16/1986	14.50%	9.31%		-2.37			5.19%
05/16/1986	14.50%	9.31%		-2.37			5.19%
05/29/1986	13.90%	9.19%		-2.39			4.71%
05/30/1986	15.10%	9.17%		-2.39			5.93%
06/02/1986	12.81%	9.16%		-2.39			3.65%
06/11/1986	14.00%	9.06%		-2.40			4.94%
06/24/1986	16.63%	8.93%		-2.42			7.70%
06/26/1986	12.00%	8.90%		-2.42			3.10%
06/26/1986	14.75%	8.90%		-2.42			5.85%
06/30/1986	13.00%	8.86%		-2.42			4.14%
07/10/1986	14.34%	8.74%		-2.44			5.60%
07/11/1986	12.75%	8.72%		-2.44			4.03%
07/14/1986	12.60%	8.71%		-2.44			3.89%
07/17/1986	12.40%	8.65%		-2.45			3.75%
07/25/1986	14.25%	8.56%		-2.46			5.69%
08/06/1986	13.50%	8.43%		-2.47			5.07%
08/14/1986	13.50%	8.34%		-2.48			5.16%
09/16/1986	12.75%	8.06%		-2.52			4.69%
09/19/1986	13.25%	8.02%		-2.52			5.23%
10/01/1986	14.00%	7.94%		-2.53			6.06%
10/03/1986	13.40%	7.92%		-2.54			5.48%
10/31/1986	13.50%	7.77%		-2.56			5.73%
11/05/1986	13.00%	7.74%		-2.56			5.26%
12/03/1986	12.90%	7.58%		-2.58			5.32%
12/04/1986	14.44%	7.57%		-2.58			6.87%
12/16/1986	13.60%	7.52%		-2.59			6.08%
12/22/1986	13.80%	7.50%		-2.59			6.30%
12/30/1986	13.00%	7.49%		-2.59			5.51%
01/02/1987	13.00%	7.48%		-2.59			5.52%
01/12/1987	12.40%	7.46%		-2.60			4.94%
01/27/1987	12.71%	7.46%		-2.60			5.25%
03/02/1987	12.47%	7.47%		-2.59			5.00%
03/03/1987	13.60%	7.47%		-2.59			6.13%
03/04/1987	12.38%	7.47%		-2.59			4.91%
03/10/1987	13.50%	7.47%		-2.59			6.03%
03/13/1987	13.00%	7.47%		-2.59			5.53%
03/31/1987	13.00%	7.46%		-2.60			5.54%
04/06/1987	13.00%	7.47%		-2.59			5.53%
04/14/1987	12.50%	7.49%		-2.59			5.01%
04/16/1987	14.50%	7.50%		-2.59			7.00%
04/27/1987	12.00%	7.54%		-2.58			4.46%
05/05/1987	12.85%	7.58%		-2.58			5.27%
05/12/1987	12.65%	7.62%		-2.57			5.03%
05/28/1987	13.50%	7.70%		-2.56			5.80%
06/15/1987	13.20%	7.78%		-2.55			5.42%
06/29/1987	15.00%	7.84%		-2.55			7.16%
06/30/1987	12.50%	7.84%		-2.55			4.66%
07/08/1987	12.00%	7.86%		-2.54			4.14%
07/10/1987	12.90%	7.87%		-2.54			5.03%
07/15/1987	13.50%	7.88%		-2.54			5.62%
07/16/1987	15.00%	7.88%		-2.54			7.12%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
07/16/1987	13.50%	7.88%		-2.54			5.62%
07/27/1987	13.00%	7.92%		-2.54			5.08%
07/27/1987	13.40%	7.92%		-2.54			5.48%
07/27/1987	13.50%	7.92%		-2.54			5.58%
07/31/1987	12.98%	7.95%		-2.53			5.03%
08/26/1987	12.63%	8.06%		-2.52			4.57%
08/26/1987	12.75%	8.06%		-2.52			4.69%
08/27/1987	13.25%	8.07%		-2.52			5.18%
09/09/1987	13.00%	8.14%		-2.51			4.86%
09/30/1987	13.00%	8.31%		-2.49			4.69%
09/30/1987	12.75%	8.31%		-2.49			4.44%
10/02/1987	11.50%	8.33%		-2.48			3.17%
10/15/1987	13.00%	8.44%		-2.47			4.56%
11/02/1987	13.00%	8.55%		-2.46			4.45%
11/19/1987	13.00%	8.64%		-2.45			4.36%
11/30/1987	12.00%	8.69%		-2.44			3.31%
12/03/1987	14.20%	8.71%		-2.44			5.49%
12/15/1987	13.25%	8.78%		-2.43			4.47%
12/16/1987	13.72%	8.79%		-2.43			4.93%
12/16/1987	13.50%	8.79%		-2.43			4.71%
12/17/1987	11.75%	8.80%		-2.43			2.95%
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	12.75%	8.82%		-2.43			3.93%
12/22/1987	12.00%	8.82%		-2.43			3.18%
12/22/1987	12.00%	8.82%		-2.43			3.18%
12/22/1987	13.00%	8.82%		-2.43			4.18%
01/20/1988	13.80%	8.94%		-2.41			4.86%
01/26/1988	13.90%	8.96%		-2.41			4.94%
01/29/1988	13.20%	8.96%		-2.41			4.24%
02/04/1988	12.60%	8.96%		-2.41			3.64%
03/01/1988	11.56%	8.94%		-2.41			2.62%
03/23/1988	12.87%	8.92%		-2.42			3.95%
03/24/1988	11.24%	8.92%		-2.42			2.32%
03/30/1988	12.72%	8.92%		-2.42			3.80%
04/01/1988	12.50%	8.92%		-2.42			3.58%
04/07/1988	13.25%	8.93%		-2.42			4.32%
04/25/1988	10.96%	8.96%		-2.41			2.00%
05/03/1988	12.91%	8.98%		-2.41			3.93%
05/11/1988	13.50%	8.99%		-2.41			4.51%
05/16/1988	13.00%	8.99%		-2.41			4.01%
06/30/1988	12.75%	8.99%		-2.41			3.76%
07/01/1988	12.75%	8.99%		-2.41			3.76%
07/20/1988	13.40%	8.96%		-2.41			4.44%
08/05/1988	12.75%	8.91%		-2.42			3.84%
08/23/1988	11.70%	8.93%		-2.42			2.77%
08/29/1988	12.75%	8.94%		-2.41			3.81%
08/30/1988	13.50%	8.94%		-2.41			4.56%
09/08/1988	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	13.00%	9.02%		-2.41			3.98%
12/20/1988	12.25%	9.02%		-2.41			3.23%
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%
01/27/1989	13.00%	9.06%		-2.40			3.94%
01/31/1989	13.00%	9.06%		-2.40			3.94%
02/17/1989	13.00%	9.05%		-2.40			3.95%
02/20/1989	12.40%	9.05%		-2.40			3.35%
03/01/1989	12.76%	9.05%		-2.40			3.71%
03/08/1989	13.00%	9.05%		-2.40			3.95%
03/30/1989	14.00%	9.05%		-2.40			4.95%
04/05/1989	14.20%	9.05%		-2.40			5.15%
04/18/1989	13.00%	9.05%		-2.40			3.95%
05/05/1989	12.40%	9.05%		-2.40			3.35%
06/02/1989	13.20%	9.00%		-2.41			4.20%
06/08/1989	13.50%	8.98%		-2.41			4.52%
06/27/1989	13.25%	8.91%		-2.42			4.34%
06/30/1989	13.00%	8.90%		-2.42			4.10%
08/14/1989	12.50%	8.77%		-2.43			3.73%
09/28/1989	12.25%	8.63%		-2.45			3.62%
10/24/1989	12.50%	8.54%		-2.46			3.96%
11/09/1989	13.00%	8.48%		-2.47			4.52%
12/15/1989	13.00%	8.33%		-2.48			4.67%
12/20/1989	12.90%	8.31%		-2.49			4.59%
12/21/1989	12.90%	8.31%		-2.49			4.59%
12/27/1989	13.00%	8.29%		-2.49			4.71%
12/27/1989	12.50%	8.29%		-2.49			4.21%
01/10/1990	12.80%	8.24%		-2.50		19.95	4.56%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
01/11/1990	12.90%	8.23%		-2.50		19.96	4.67%
01/17/1990	12.80%	8.22%		-2.50		21.59	4.58%
01/26/1990	12.00%	8.19%		-2.50		22.87	3.81%
02/09/1990	12.10%	8.17%		-2.50		23.58	3.93%
02/24/1990	12.86%	8.15%		-2.51		23.35	4.71%
03/30/1990	12.90%	8.16%		-2.51		22.17	4.74%
04/04/1990	15.76%	8.17%		-2.51		22.16	7.59%
04/12/1990	12.52%	8.18%		-2.50		22.04	4.34%
04/19/1990	12.75%	8.20%		-2.50		22.01	4.55%
05/21/1990	12.10%	8.28%		-2.49		21.42	3.82%
05/29/1990	12.40%	8.30%		-2.49		21.25	4.10%
05/31/1990	12.00%	8.30%		-2.49		21.17	3.70%
06/04/1990	12.90%	8.30%		-2.49		21.11	4.60%
06/06/1990	12.25%	8.31%		-2.49		21.06	3.94%
06/15/1990	13.20%	8.32%		-2.49		20.80	4.88%
06/20/1990	12.92%	8.32%		-2.49		20.68	4.60%
06/27/1990	12.90%	8.33%		-2.48		20.52	4.57%
06/29/1990	12.50%	8.34%		-2.48		20.45	4.16%
07/06/1990	12.35%	8.34%		-2.48		20.33	4.01%
07/06/1990	12.10%	8.34%		-2.48		20.33	3.76%
08/10/1990	12.55%	8.41%		-2.48		20.52	4.14%
08/16/1990	13.21%	8.43%		-2.47		20.64	4.78%
08/22/1990	13.10%	8.45%		-2.47		20.82	4.65%
08/24/1990	13.00%	8.46%		-2.47		21.00	4.54%
09/26/1990	11.45%	8.59%		-2.45		21.96	2.86%
10/02/1990	13.00%	8.61%		-2.45		22.09	4.39%
10/05/1990	12.84%	8.63%		-2.45		22.18	4.21%
10/19/1990	13.00%	8.67%		-2.45		22.69	4.33%
10/25/1990	12.30%	8.68%		-2.44		22.80	3.62%
11/21/1990	12.70%	8.69%		-2.44		22.98	4.01%
12/13/1990	12.30%	8.67%		-2.44		22.97	3.63%
12/17/1990	12.87%	8.67%		-2.45		23.00	4.20%
12/18/1990	13.10%	8.67%		-2.45		23.02	4.43%
12/19/1990	12.00%	8.66%		-2.45		23.04	3.34%
12/20/1990	12.75%	8.66%		-2.45		23.05	4.09%
12/21/1990	12.50%	8.66%		-2.45		23.07	3.84%
12/27/1990	12.79%	8.66%		-2.45		23.13	4.13%
01/02/1991	13.10%	8.66%		-2.45		23.25	4.44%
01/04/1991	12.50%	8.65%		-2.45		23.31	3.85%
01/15/1991	12.75%	8.65%		-2.45		23.75	4.10%
01/25/1991	11.70%	8.63%		-2.45		23.94	3.07%
02/04/1991	12.50%	8.60%		-2.45		23.92	3.90%
02/07/1991	12.50%	8.59%		-2.45		23.95	3.91%
02/12/1991	13.00%	8.57%		-2.46		23.99	4.43%
02/14/1991	12.72%	8.56%		-2.46		24.02	4.16%
02/22/1991	12.80%	8.55%		-2.46		24.08	4.25%
03/06/1991	13.10%	8.53%		-2.46		24.18	4.57%
03/08/1991	13.00%	8.52%		-2.46		24.21	4.48%
03/08/1991	12.30%	8.52%		-2.46		24.21	3.78%
04/22/1991	13.00%	8.49%		-2.47		24.23	4.51%
05/07/1991	13.50%	8.47%		-2.47		24.22	5.03%
05/13/1991	13.25%	8.47%		-2.47		24.15	4.78%
05/30/1991	12.75%	8.43%		-2.47		23.59	4.32%
06/12/1991	12.00%	8.41%		-2.48		23.03	3.59%
06/25/1991	11.70%	8.38%		-2.48		22.47	3.32%
06/28/1991	12.50%	8.38%		-2.48		22.31	4.12%
07/01/1991	12.00%	8.37%		-2.48		22.25	3.63%
07/03/1991	12.50%	8.36%		-2.48		22.15	4.14%
07/19/1991	12.10%	8.34%		-2.48		21.55	3.76%
08/01/1991	12.90%	8.32%		-2.49		20.89	4.58%
08/16/1991	13.20%	8.29%		-2.49		20.12	4.91%
09/27/1991	12.50%	8.23%		-2.50		19.02	4.27%
09/30/1991	12.25%	8.23%		-2.50		18.99	4.02%
10/17/1991	13.00%	8.20%		-2.50		18.47	4.80%
10/23/1991	12.50%	8.20%		-2.50		18.20	4.30%
10/23/1991	12.55%	8.20%		-2.50		18.20	4.35%
10/31/1991	11.80%	8.19%		-2.50		17.68	3.61%
11/01/1991	12.00%	8.19%		-2.50		17.63	3.81%
11/05/1991	12.25%	8.19%		-2.50		17.55	4.06%
11/12/1991	12.50%	8.18%		-2.50		17.35	4.32%
11/12/1991	13.25%	8.18%		-2.50		17.35	5.07%
11/25/1991	12.40%	8.18%		-2.50		17.21	4.22%
11/26/1991	12.50%	8.18%		-2.50		17.20	4.32%
11/26/1991	11.60%	8.18%		-2.50		17.20	3.42%
11/27/1991	12.10%	8.18%		-2.50		17.19	3.92%
12/18/1991	12.25%	8.15%		-2.51		17.07	4.10%
12/19/1991	12.60%	8.15%		-2.51		17.06	4.45%
12/19/1991	12.80%	8.15%		-2.51		17.06	4.65%
12/20/1991	12.65%	8.14%		-2.51		17.04	4.51%
01/09/1992	12.80%	8.09%		-2.51		17.13	4.71%
01/16/1992	12.75%	8.07%		-2.52		17.14	4.68%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
01/21/1992	12.00%	8.06%		-2.52		17.12	3.94%
01/22/1992	13.00%	8.06%		-2.52		17.10	4.94%
01/27/1992	12.65%	8.05%		-2.52		17.09	4.60%
01/31/1992	12.00%	8.04%		-2.52		17.12	3.96%
02/11/1992	12.40%	8.03%		-2.52		17.16	4.37%
02/25/1992	12.50%	8.01%		-2.52		17.14	4.49%
03/16/1992	11.43%	7.98%		-2.53		17.25	3.45%
03/18/1992	12.28%	7.98%		-2.53		17.26	4.30%
04/02/1992	12.10%	7.95%		-2.53		17.24	4.15%
04/09/1992	11.45%	7.93%		-2.53		17.24	3.52%
04/10/1992	11.50%	7.93%		-2.53		17.23	3.57%
04/14/1992	11.50%	7.92%		-2.54		17.21	3.58%
05/05/1992	11.50%	7.89%		-2.54		17.08	3.61%
05/12/1992	12.46%	7.88%		-2.54		17.09	4.58%
05/12/1992	11.87%	7.88%		-2.54		17.09	3.99%
06/01/1992	12.30%	7.86%		-2.54		17.02	4.44%
06/12/1992	10.90%	7.85%		-2.54		16.97	3.05%
06/26/1992	12.35%	7.85%		-2.54		16.91	4.50%
06/29/1992	11.00%	7.85%		-2.55		16.88	3.15%
06/30/1992	13.00%	7.85%		-2.55		16.86	5.15%
07/13/1992	13.50%	7.84%		-2.55		16.78	5.66%
07/13/1992	11.90%	7.84%		-2.55		16.78	4.06%
07/22/1992	11.20%	7.83%		-2.55		16.65	3.37%
08/03/1992	12.00%	7.81%		-2.55		16.52	4.19%
08/06/1992	12.50%	7.80%		-2.55		16.48	4.70%
09/22/1992	12.00%	7.71%		-2.56		15.88	4.29%
09/28/1992	11.40%	7.71%		-2.56		15.78	3.69%
09/30/1992	11.75%	7.71%		-2.56		15.75	4.04%
10/02/1992	13.00%	7.70%		-2.56		15.74	5.30%
10/12/1992	12.20%	7.70%		-2.56		15.85	4.50%
10/16/1992	13.16%	7.71%		-2.56		15.82	5.45%
10/30/1992	11.75%	7.71%		-2.56		15.75	4.04%
11/03/1992	12.00%	7.71%		-2.56		15.74	4.29%
12/03/1992	11.85%	7.68%		-2.57		15.36	4.17%
12/15/1992	11.00%	7.66%		-2.57		15.17	3.34%
12/16/1992	11.90%	7.66%		-2.57		15.14	4.24%
12/16/1992	12.40%	7.66%		-2.57		15.14	4.74%
12/17/1992	12.00%	7.66%		-2.57		15.10	4.34%
12/22/1992	12.40%	7.65%		-2.57		14.99	4.75%
12/22/1992	12.30%	7.65%		-2.57		14.99	4.65%
12/29/1992	12.25%	7.63%	7.68%	-2.57	0.05%	14.86	4.62%
12/30/1992	12.00%	7.63%	7.68%	-2.57	0.05%	14.84	4.37%
12/31/1992	11.90%	7.62%	7.67%	-2.57	0.04%	14.82	4.28%
01/12/1993	12.00%	7.61%	7.62%	-2.58	0.02%	14.72	4.39%
01/21/1993	11.25%	7.59%	7.59%	-2.58	0.00%	14.52	3.66%
02/02/1993	11.40%	7.56%	7.55%	-2.58	0.00%	14.35	3.84%
02/15/1993	12.30%	7.52%	7.52%	-2.59	0.01%	14.22	4.78%
02/24/1993	11.90%	7.49%	7.50%	-2.59	0.01%	14.18	4.41%
02/26/1993	11.80%	7.48%	7.49%	-2.59	0.01%	14.16	4.32%
02/26/1993	12.20%	7.48%	7.49%	-2.59	0.01%	14.16	4.72%
04/23/1993	11.75%	7.29%	7.39%	-2.62	0.10%	13.85	4.46%
05/11/1993	11.75%	7.24%	7.37%	-2.62	0.13%	13.86	4.51%
05/14/1993	11.50%	7.24%	7.37%	-2.63	0.13%	13.87	4.26%
05/25/1993	11.50%	7.22%	7.36%	-2.63	0.14%	13.87	4.28%
05/28/1993	11.00%	7.22%	7.36%	-2.63	0.15%	13.84	3.78%
06/03/1993	12.00%	7.21%	7.36%	-2.63	0.15%	13.83	4.79%
06/16/1993	11.50%	7.19%	7.37%	-2.63	0.18%	13.77	4.31%
06/18/1993	12.10%	7.18%	7.37%	-2.63	0.19%	13.77	4.92%
06/25/1993	11.67%	7.17%	7.39%	-2.64	0.22%	13.74	4.50%
07/21/1993	11.38%	7.10%	7.45%	-2.65	0.35%	13.42	4.28%
07/23/1993	10.46%	7.09%	7.45%	-2.65	0.36%	13.34	3.37%
08/24/1993	11.50%	6.95%	7.55%	-2.67	0.60%	12.79	4.55%
09/21/1993	10.50%	6.80%	7.68%	-2.69	0.87%	12.72	3.70%
09/29/1993	11.47%	6.76%	7.72%	-2.69	0.96%	12.73	4.71%
09/30/1993	11.60%	6.76%	7.73%	-2.69	0.97%	12.74	4.84%
11/02/1993	10.80%	6.60%	7.89%	-2.72	1.29%	12.67	4.20%
11/12/1993	12.00%	6.56%	7.93%	-2.72	1.36%	12.76	5.44%
11/26/1993	11.00%	6.52%	7.98%	-2.73	1.46%	12.85	4.48%
12/14/1993	10.55%	6.48%	8.06%	-2.74	1.58%	12.75	4.07%
12/16/1993	10.60%	6.48%	8.08%	-2.74	1.60%	12.72	4.12%
12/21/1993	11.30%	6.47%	8.10%	-2.74	1.63%	12.66	4.83%
01/04/1994	10.07%	6.44%	8.17%	-2.74	1.72%	12.49	3.63%
01/13/1994	11.00%	6.42%	8.22%	-2.75	1.80%	12.45	4.58%
01/21/1994	11.00%	6.40%	8.27%	-2.75	1.87%	12.39	4.60%
01/28/1994	11.35%	6.39%	8.31%	-2.75	1.92%	12.37	4.96%
02/03/1994	11.40%	6.38%	8.35%	-2.75	1.97%	12.34	5.02%
02/17/1994	10.60%	6.36%	8.42%	-2.76	2.06%	12.38	4.24%
02/25/1994	11.25%	6.35%	8.45%	-2.76	2.10%	12.39	4.90%
02/25/1994	12.00%	6.35%	8.45%	-2.76	2.10%	12.39	5.65%
03/01/1994	11.00%	6.35%	8.46%	-2.76	2.12%	12.40	4.65%
03/04/1994	11.00%	6.34%	8.48%	-2.76	2.13%	12.43	4.66%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
04/25/1994	11.00%	6.40%	8.59%	-2.75	2.19%	13.03	4.60%
05/10/1994	11.75%	6.44%	8.61%	-2.74	2.16%	13.20	5.31%
05/13/1994	10.50%	6.46%	8.61%	-2.74	2.14%	13.25	4.04%
06/03/1994	11.00%	6.54%	8.61%	-2.73	2.07%	13.32	4.46%
06/27/1994	11.40%	6.65%	8.61%	-2.71	1.96%	13.42	4.75%
08/05/1994	12.75%	6.88%	8.56%	-2.68	1.68%	13.42	5.87%
10/31/1994	10.00%	7.33%	8.28%	-2.61	0.95%	13.77	2.67%
11/09/1994	10.85%	7.40%	8.24%	-2.60	0.85%	13.94	3.45%
11/09/1994	10.85%	7.40%	8.24%	-2.60	0.85%	13.94	3.45%
11/18/1994	11.20%	7.46%	8.20%	-2.60	0.75%	14.12	3.74%
11/22/1994	11.60%	7.47%	8.19%	-2.59	0.72%	14.14	4.13%
11/28/1994	11.06%	7.50%	8.17%	-2.59	0.67%	14.20	3.56%
12/08/1994	11.70%	7.55%	8.12%	-2.58	0.57%	14.29	4.15%
12/08/1994	11.50%	7.55%	8.12%	-2.58	0.57%	14.29	3.95%
12/14/1994	10.95%	7.57%	8.10%	-2.58	0.53%	14.28	3.38%
12/15/1994	11.50%	7.57%	8.09%	-2.58	0.52%	14.26	3.93%
12/19/1994	11.50%	7.58%	8.08%	-2.58	0.50%	14.24	3.92%
12/28/1994	12.15%	7.61%	8.04%	-2.58	0.43%	14.14	4.54%
01/09/1995	12.28%	7.64%	8.00%	-2.57	0.35%	14.14	4.64%
01/31/1995	11.00%	7.69%	7.89%	-2.57	0.20%	13.71	3.31%
02/10/1995	12.60%	7.70%	7.85%	-2.56	0.15%	13.56	4.90%
02/17/1995	11.90%	7.70%	7.82%	-2.56	0.12%	13.49	4.20%
03/09/1995	11.50%	7.72%	7.74%	-2.56	0.02%	13.37	3.78%
03/20/1995	12.00%	7.72%	7.70%	-2.56	-0.02%	13.35	4.28%
03/23/1995	12.81%	7.72%	7.68%	-2.56	-0.04%	13.32	5.09%
03/29/1995	11.60%	7.72%	7.66%	-2.56	-0.06%	13.31	3.88%
04/06/1995	11.10%	7.72%	7.63%	-2.56	-0.09%	13.30	3.38%
04/07/1995	11.00%	7.71%	7.62%	-2.56	-0.09%	13.28	3.29%
04/19/1995	11.00%	7.70%	7.59%	-2.56	-0.12%	13.20	3.30%
05/12/1995	11.63%	7.68%	7.52%	-2.57	-0.15%	13.21	3.95%
05/25/1995	11.20%	7.65%	7.51%	-2.57	-0.13%	13.22	3.55%
06/09/1995	11.25%	7.60%	7.52%	-2.58	-0.08%	13.26	3.65%
06/21/1995	12.25%	7.56%	7.53%	-2.58	-0.03%	13.24	4.69%
06/30/1995	11.10%	7.51%	7.54%	-2.59	0.03%	13.20	3.59%
09/11/1995	11.30%	7.20%	7.60%	-2.63	0.40%	12.48	4.10%
09/27/1995	11.50%	7.12%	7.63%	-2.64	0.51%	12.24	4.38%
09/27/1995	11.75%	7.12%	7.63%	-2.64	0.51%	12.24	4.63%
09/27/1995	11.30%	7.12%	7.63%	-2.64	0.51%	12.24	4.18%
09/29/1995	11.00%	7.11%	7.63%	-2.64	0.52%	12.24	3.89%
11/09/1995	12.36%	6.89%	7.69%	-2.67	0.80%	12.47	5.47%
11/09/1995	11.38%	6.89%	7.69%	-2.67	0.80%	12.47	4.49%
11/17/1995	11.00%	6.85%	7.71%	-2.68	0.86%	12.51	4.15%
12/04/1995	11.35%	6.78%	7.74%	-2.69	0.96%	12.52	4.57%
12/11/1995	11.40%	6.74%	7.76%	-2.70	1.02%	12.52	4.66%
12/20/1995	11.60%	6.69%	7.78%	-2.70	1.08%	12.50	4.91%
12/27/1995	12.00%	6.66%	7.79%	-2.71	1.13%	12.48	5.34%
02/05/1996	12.25%	6.48%	7.84%	-2.74	1.36%	12.63	5.77%
03/29/1996	10.67%	6.42%	7.85%	-2.75	1.43%	13.49	4.25%
04/08/1996	11.00%	6.42%	7.85%	-2.75	1.43%	13.63	4.58%
04/11/1996	12.59%	6.43%	7.84%	-2.74	1.42%	13.74	6.16%
04/11/1996	12.59%	6.43%	7.84%	-2.74	1.42%	13.74	6.16%
04/24/1996	11.25%	6.43%	7.84%	-2.74	1.40%	13.93	4.82%
04/30/1996	11.00%	6.43%	7.83%	-2.74	1.40%	13.99	4.57%
05/13/1996	11.00%	6.44%	7.81%	-2.74	1.38%	14.15	4.56%
05/23/1996	11.25%	6.43%	7.81%	-2.74	1.38%	14.24	4.82%
06/25/1996	11.25%	6.48%	7.80%	-2.74	1.33%	14.73	4.77%
06/27/1996	11.20%	6.48%	7.80%	-2.74	1.32%	14.77	4.72%
08/12/1996	10.40%	6.57%	7.80%	-2.72	1.22%	15.35	3.83%
09/27/1996	11.00%	6.71%	7.74%	-2.70	1.03%	15.98	4.29%
10/16/1996	12.25%	6.76%	7.72%	-2.69	0.96%	16.22	5.49%
11/05/1996	11.00%	6.81%	7.71%	-2.69	0.89%	16.44	4.19%
11/26/1996	11.30%	6.83%	7.71%	-2.68	0.88%	16.58	4.47%
12/18/1996	11.75%	6.84%	7.70%	-2.68	0.86%	16.80	4.91%
12/31/1996	11.50%	6.83%	7.69%	-2.68	0.86%	16.84	4.67%
01/03/1997	10.70%	6.83%	7.69%	-2.68	0.85%	16.85	3.87%
02/13/1997	11.80%	6.82%	7.62%	-2.68	0.80%	17.23	4.98%
02/20/1997	11.80%	6.82%	7.61%	-2.69	0.80%	17.29	4.98%
03/31/1997	10.02%	6.80%	7.52%	-2.69	0.72%	17.83	3.22%
04/02/1997	11.65%	6.80%	7.51%	-2.69	0.71%	17.86	4.85%
04/28/1997	11.50%	6.81%	7.43%	-2.69	0.62%	18.20	4.69%
04/29/1997	11.70%	6.81%	7.42%	-2.69	0.61%	18.20	4.89%
07/17/1997	12.00%	6.77%	7.26%	-2.69	0.48%	19.04	5.23%
12/12/1997	11.00%	6.60%	7.07%	-2.72	0.47%	22.58	4.40%
12/23/1997	11.12%	6.57%	7.06%	-2.72	0.50%	22.85	4.55%
02/02/1998	12.75%	6.39%	7.06%	-2.75	0.67%	23.45	6.36%
03/02/1998	11.25%	6.28%	7.04%	-2.77	0.76%	23.41	4.97%
03/06/1998	10.75%	6.27%	7.04%	-2.77	0.77%	23.39	4.48%
03/20/1998	10.50%	6.22%	7.03%	-2.78	0.81%	23.36	4.28%
04/30/1998	12.20%	6.12%	7.01%	-2.79	0.88%	23.68	6.08%
07/10/1998	11.40%	5.94%	7.04%	-2.82	1.11%	23.14	5.46%
09/15/1998	11.90%	5.78%	7.18%	-2.85	1.40%	23.80	6.12%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	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%	7.40%	-2.89	1.82%	26.06	7.02%
12/10/1998	12.20%	5.54%	7.44%	-2.89	1.90%	26.34	6.66%
12/17/1998	12.10%	5.52%	7.46%	-2.90	1.95%	26.58	6.58%
02/05/1999	10.30%	5.38%	7.63%	-2.92	2.25%	27.54	4.92%
03/04/1999	10.50%	5.34%	7.71%	-2.93	2.38%	28.19	5.16%
04/06/1999	10.94%	5.32%	7.83%	-2.93	2.51%	28.47	5.62%
07/29/1999	10.75%	5.52%	8.15%	-2.90	2.63%	25.77	5.23%
09/23/1999	10.75%	5.70%	8.26%	-2.86	2.55%	24.95	5.05%
11/17/1999	11.10%	5.90%	8.29%	-2.83	2.39%	24.31	5.20%
01/07/2000	11.50%	6.05%	8.30%	-2.81	2.26%	23.49	5.45%
01/07/2000	11.50%	6.05%	8.30%	-2.81	2.26%	23.49	5.45%
02/17/2000	10.60%	6.17%	8.28%	-2.78	2.10%	23.35	4.43%
03/28/2000	11.25%	6.20%	8.21%	-2.78	2.01%	22.96	5.05%
05/24/2000	11.00%	6.18%	8.06%	-2.78	1.88%	23.84	4.82%
07/18/2000	12.20%	6.16%	7.97%	-2.79	1.81%	23.36	6.04%
09/29/2000	11.16%	6.03%	7.89%	-2.81	1.86%	22.44	5.13%
11/28/2000	12.90%	5.89%	7.79%	-2.83	1.91%	22.97	7.01%
11/30/2000	12.10%	5.88%	7.79%	-2.83	1.91%	23.03	6.22%
01/23/2001	11.25%	5.79%	7.75%	-2.85	1.96%	23.49	5.46%
02/08/2001	11.50%	5.77%	7.75%	-2.85	1.98%	23.15	5.73%
05/08/2001	10.75%	5.62%	7.71%	-2.88	2.09%	24.39	5.13%
06/26/2001	11.00%	5.62%	7.67%	-2.88	2.05%	24.93	5.38%
07/25/2001	11.02%	5.60%	7.64%	-2.88	2.05%	25.07	5.42%
07/25/2001	11.02%	5.60%	7.64%	-2.88	2.05%	25.07	5.42%
07/31/2001	11.00%	5.59%	7.64%	-2.88	2.04%	24.96	5.41%
08/31/2001	10.50%	5.56%	7.62%	-2.89	2.06%	24.49	4.94%
09/07/2001	10.75%	5.55%	7.62%	-2.89	2.06%	24.53	5.20%
09/10/2001	11.00%	5.55%	7.62%	-2.89	2.06%	24.55	5.45%
09/20/2001	10.00%	5.55%	7.60%	-2.89	2.06%	24.84	4.45%
10/24/2001	10.30%	5.54%	7.54%	-2.89	2.00%	25.69	4.76%
11/28/2001	10.60%	5.49%	7.51%	-2.90	2.02%	26.17	5.11%
12/03/2001	12.88%	5.49%	7.50%	-2.90	2.01%	26.22	7.39%
12/20/2001	12.50%	5.50%	7.44%	-2.90	1.95%	26.14	7.00%
01/22/2002	10.00%	5.50%	7.40%	-2.90	1.91%	25.49	4.50%
03/27/2002	10.10%	5.45%	7.28%	-2.91	1.83%	24.65	4.65%
04/22/2002	11.80%	5.45%	7.23%	-2.91	1.78%	24.49	6.35%
05/28/2002	10.17%	5.46%	7.15%	-2.91	1.68%	24.29	4.71%
06/10/2002	12.00%	5.47%	7.12%	-2.91	1.64%	24.33	6.53%
06/18/2002	11.16%	5.48%	7.09%	-2.90	1.62%	24.42	5.68%
06/20/2002	11.00%	5.48%	7.09%	-2.90	1.61%	24.46	5.52%
06/20/2002	12.30%	5.48%	7.09%	-2.90	1.61%	24.46	6.82%
07/15/2002	11.00%	5.48%	7.03%	-2.90	1.55%	24.08	5.52%
09/12/2002	12.30%	5.45%	6.83%	-2.91	1.38%	25.15	6.85%
09/26/2002	10.45%	5.41%	6.80%	-2.92	1.39%	25.82	5.04%
12/04/2002	11.55%	5.29%	6.70%	-2.94	1.41%	28.03	6.26%
12/13/2002	11.75%	5.27%	6.67%	-2.94	1.41%	28.29	6.48%
12/20/2002	11.40%	5.25%	6.65%	-2.95	1.41%	28.48	6.15%
01/08/2003	11.10%	5.19%	6.62%	-2.96	1.44%	28.93	5.91%
01/31/2003	12.45%	5.13%	6.57%	-2.97	1.45%	29.66	7.32%
02/28/2003	12.30%	5.04%	6.51%	-2.99	1.47%	30.74	7.26%
03/06/2003	10.75%	5.02%	6.50%	-2.99	1.48%	30.99	5.73%
03/07/2003	9.96%	5.02%	6.50%	-2.99	1.48%	31.04	4.94%
03/20/2003	12.00%	4.98%	6.47%	-3.00	1.49%	31.54	7.02%
04/03/2003	12.00%	4.95%	6.44%	-3.00	1.48%	31.74	7.05%
04/15/2003	11.15%	4.93%	6.42%	-3.01	1.48%	31.70	6.22%
06/25/2003	10.75%	4.79%	6.35%	-3.04	1.56%	28.27	5.96%
06/26/2003	10.75%	4.79%	6.35%	-3.04	1.56%	28.19	5.96%
07/09/2003	9.75%	4.79%	6.36%	-3.04	1.57%	27.44	4.96%
07/16/2003	9.75%	4.79%	6.36%	-3.04	1.56%	26.97	4.96%
07/25/2003	9.50%	4.79%	6.36%	-3.04	1.56%	26.27	4.71%
08/26/2003	10.50%	4.83%	6.33%	-3.03	1.50%	24.78	5.67%
12/17/2003	9.85%	4.94%	6.22%	-3.01	1.29%	20.47	4.91%
12/17/2003	10.70%	4.94%	6.22%	-3.01	1.29%	20.47	5.76%
12/18/2003	11.50%	4.94%	6.22%	-3.01	1.29%	20.40	6.56%
12/19/2003	12.00%	4.94%	6.22%	-3.01	1.28%	20.31	7.06%
12/19/2003	12.00%	4.94%	6.22%	-3.01	1.28%	20.31	7.06%
12/23/2003	10.50%	4.94%	6.22%	-3.01	1.28%	20.15	5.56%
01/13/2004	12.00%	4.95%	6.20%	-3.01	1.25%	19.31	7.05%
03/02/2004	10.75%	4.99%	6.17%	-3.00	1.18%	18.17	5.76%
03/26/2004	10.25%	5.02%	6.17%	-2.99	1.15%	17.96	5.23%
04/05/2004	11.25%	5.03%	6.16%	-2.99	1.12%	17.85	6.22%
05/18/2004	10.50%	5.07%	6.04%	-2.98	0.97%	17.43	5.43%
05/25/2004	10.25%	5.07%	6.02%	-2.98	0.94%	17.36	5.18%
05/27/2004	10.25%	5.08%	6.01%	-2.98	0.93%	17.33	5.17%
06/02/2004	11.22%	5.08%	6.00%	-2.98	0.92%	17.30	6.14%
06/30/2004	10.50%	5.10%	5.93%	-2.98	0.83%	16.96	5.40%
06/30/2004	10.50%	5.10%	5.93%	-2.98	0.83%	16.96	5.40%
07/16/2004	11.60%	5.11%	5.89%	-2.97	0.78%	16.69	6.49%
08/25/2004	10.25%	5.10%	5.79%	-2.98	0.69%	16.53	5.15%
09/09/2004	10.40%	5.10%	5.76%	-2.98	0.66%	16.35	5.30%
11/09/2004	10.50%	5.07%	5.66%	-2.98	0.60%	15.94	5.43%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	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%	5.64%	-2.98	0.57%	15.75	5.94%
12/14/2004	10.97%	5.07%	5.61%	-2.98	0.54%	15.59	5.90%
12/21/2004	11.25%	5.07%	5.60%	-2.98	0.53%	15.51	6.18%
12/21/2004	11.50%	5.07%	5.60%	-2.98	0.53%	15.51	6.43%
12/22/2004	10.70%	5.07%	5.60%	-2.98	0.53%	15.47	5.63%
12/22/2004	11.50%	5.07%	5.60%	-2.98	0.53%	15.47	6.43%
12/29/2004	9.85%	5.08%	5.60%	-2.98	0.52%	15.30	4.77%
01/06/2005	10.70%	5.08%	5.60%	-2.98	0.52%	15.12	5.62%
02/18/2005	10.30%	4.98%	5.63%	-3.00	0.65%	14.59	5.32%
02/25/2005	10.50%	4.96%	5.63%	-3.00	0.67%	14.46	5.54%
03/10/2005	11.00%	4.93%	5.63%	-3.01	0.71%	14.18	6.07%
03/24/2005	10.30%	4.89%	5.62%	-3.02	0.73%	14.05	5.41%
04/04/2005	10.00%	4.87%	5.62%	-3.02	0.75%	14.02	5.13%
04/07/2005	10.25%	4.87%	5.62%	-3.02	0.75%	14.00	5.38%
05/18/2005	10.25%	4.78%	5.65%	-3.04	0.87%	13.89	5.47%
05/25/2005	10.75%	4.76%	5.66%	-3.04	0.90%	13.75	5.99%
05/26/2005	9.75%	4.76%	5.67%	-3.04	0.91%	13.71	4.99%
06/01/2005	9.75%	4.75%	5.67%	-3.05	0.93%	13.64	5.00%
07/19/2005	11.50%	4.64%	5.80%	-3.07	1.16%	13.17	6.86%
08/05/2005	11.75%	4.62%	5.86%	-3.07	1.24%	12.94	7.13%
08/15/2005	10.13%	4.61%	5.88%	-3.08	1.27%	12.84	5.52%
09/28/2005	10.00%	4.54%	6.03%	-3.09	1.49%	12.77	5.46%
10/04/2005	10.75%	4.53%	6.04%	-3.09	1.51%	12.78	6.22%
12/12/2005	11.00%	4.55%	6.12%	-3.09	1.57%	12.97	6.45%
12/13/2005	10.75%	4.55%	6.12%	-3.09	1.57%	12.96	6.20%
12/21/2005	10.29%	4.54%	6.12%	-3.09	1.58%	12.91	5.75%
12/21/2005	10.40%	4.54%	6.12%	-3.09	1.58%	12.91	5.86%
12/22/2005	11.15%	4.54%	6.12%	-3.09	1.58%	12.90	6.61%
12/22/2005	11.00%	4.54%	6.12%	-3.09	1.58%	12.90	6.46%
12/28/2005	10.00%	4.54%	6.12%	-3.09	1.59%	12.87	5.46%
12/28/2005	10.00%	4.54%	6.12%	-3.09	1.59%	12.87	5.46%
01/05/2006	11.00%	4.53%	6.13%	-3.09	1.61%	12.82	6.47%
01/27/2006	9.75%	4.52%	6.15%	-3.10	1.63%	12.72	5.23%
03/03/2006	10.39%	4.53%	6.14%	-3.09	1.61%	12.39	5.86%
04/17/2006	10.20%	4.62%	6.12%	-3.08	1.50%	12.34	5.58%
04/26/2006	10.60%	4.64%	6.11%	-3.07	1.47%	12.34	5.96%
05/17/2006	11.60%	4.69%	6.06%	-3.06	1.37%	12.47	6.91%
06/06/2006	10.00%	4.75%	6.03%	-3.05	1.28%	12.72	5.25%
06/27/2006	10.75%	4.80%	6.00%	-3.04	1.20%	13.07	5.95%
07/06/2006	10.20%	4.83%	5.98%	-3.03	1.15%	13.12	5.37%
07/24/2006	9.60%	4.86%	5.95%	-3.02	1.10%	13.29	4.74%
07/26/2006	10.50%	4.86%	5.95%	-3.02	1.09%	13.29	5.64%
07/28/2006	10.05%	4.87%	5.94%	-3.02	1.08%	13.27	5.18%
08/23/2006	9.55%	4.89%	5.93%	-3.02	1.04%	13.20	4.66%
09/01/2006	10.54%	4.90%	5.94%	-3.02	1.04%	13.19	5.64%
09/14/2006	10.00%	4.91%	5.95%	-3.01	1.04%	13.25	5.09%
10/06/2006	9.67%	4.92%	5.98%	-3.01	1.06%	13.30	4.75%
11/21/2006	10.08%	4.95%	6.02%	-3.01	1.07%	13.12	5.13%
11/21/2006	10.08%	4.95%	6.02%	-3.01	1.07%	13.12	5.13%
11/21/2006	10.12%	4.95%	6.02%	-3.01	1.07%	13.12	5.17%
12/01/2006	10.50%	4.96%	6.04%	-3.00	1.08%	13.07	5.54%
12/01/2006	10.25%	4.96%	6.04%	-3.00	1.08%	13.07	5.29%
12/07/2006	10.75%	4.96%	6.05%	-3.00	1.09%	13.06	5.79%
12/21/2006	10.90%	4.95%	6.07%	-3.00	1.11%	12.98	5.95%
12/21/2006	11.25%	4.95%	6.07%	-3.00	1.11%	12.98	6.30%
12/22/2006	10.25%	4.95%	6.07%	-3.00	1.12%	12.98	5.30%
01/05/2007	10.00%	4.95%	6.08%	-3.01	1.13%	12.98	5.05%
01/11/2007	10.10%	4.95%	6.08%	-3.01	1.13%	12.98	5.15%
01/11/2007	10.10%	4.95%	6.08%	-3.01	1.13%	12.98	5.15%
01/11/2007	10.90%	4.95%	6.08%	-3.01	1.13%	12.98	5.95%
01/12/2007	10.10%	4.95%	6.08%	-3.01	1.14%	12.98	5.15%
01/13/2007	10.40%	4.95%	6.08%	-3.01	1.14%	12.98	5.45%
01/19/2007	10.80%	4.94%	6.08%	-3.01	1.14%	12.96	5.86%
03/21/2007	11.35%	4.86%	6.12%	-3.02	1.25%	12.81	6.49%
03/22/2007	9.75%	4.86%	6.12%	-3.02	1.26%	12.78	4.89%
05/15/2007	10.00%	4.81%	6.15%	-3.04	1.35%	12.22	5.19%
05/17/2007	10.25%	4.80%	6.16%	-3.04	1.35%	12.21	5.45%
05/17/2007	10.25%	4.80%	6.16%	-3.04	1.35%	12.21	5.45%
05/22/2007	10.20%	4.80%	6.16%	-3.04	1.36%	12.19	5.40%
05/22/2007	10.50%	4.80%	6.16%	-3.04	1.36%	12.19	5.70%
05/23/2007	10.70%	4.80%	6.16%	-3.04	1.36%	12.18	5.90%
05/25/2007	9.67%	4.80%	6.16%	-3.04	1.36%	12.16	4.87%
06/15/2007	9.90%	4.82%	6.16%	-3.03	1.34%	12.27	5.08%
06/21/2007	10.20%	4.83%	6.16%	-3.03	1.33%	12.30	5.37%
06/22/2007	10.50%	4.83%	6.16%	-3.03	1.33%	12.31	5.67%
06/28/2007	10.75%	4.84%	6.16%	-3.03	1.32%	12.38	5.91%
07/12/2007	9.67%	4.86%	6.16%	-3.02	1.30%	12.56	4.81%
07/19/2007	10.00%	4.87%	6.16%	-3.02	1.29%	12.65	5.13%
07/19/2007	10.00%	4.87%	6.16%	-3.02	1.29%	12.65	5.13%
08/15/2007	10.40%	4.88%	6.17%	-3.02	1.29%	13.76	5.52%
10/09/2007	10.00%	4.91%	6.20%	-3.01	1.29%	15.94	5.09%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	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%	6.21%	-3.01	1.29%	16.15	4.19%
10/31/2007	9.96%	4.90%	6.23%	-3.02	1.32%	16.62	5.06%
11/29/2007	10.90%	4.87%	6.25%	-3.02	1.39%	18.14	6.03%
12/06/2007	10.75%	4.86%	6.27%	-3.02	1.41%	18.45	5.89%
12/13/2007	9.96%	4.86%	6.29%	-3.02	1.43%	18.60	5.10%
12/14/2007	10.70%	4.86%	6.29%	-3.02	1.43%	18.62	5.84%
12/14/2007	10.80%	4.86%	6.29%	-3.02	1.43%	18.62	5.94%
12/19/2007	10.20%	4.86%	6.30%	-3.02	1.44%	18.74	5.34%
12/20/2007	10.20%	4.86%	6.30%	-3.03	1.45%	18.77	5.34%
12/20/2007	11.00%	4.86%	6.30%	-3.03	1.45%	18.77	6.14%
12/28/2007	10.25%	4.85%	6.33%	-3.03	1.48%	18.84	5.40%
12/31/2007	11.25%	4.85%	6.34%	-3.03	1.49%	18.88	6.40%
01/08/2008	10.75%	4.83%	6.38%	-3.03	1.55%	19.16	5.92%
01/17/2008	10.75%	4.81%	6.45%	-3.03	1.64%	19.51	5.94%
01/28/2008	9.40%	4.80%	6.50%	-3.04	1.71%	19.99	4.60%
01/30/2008	10.00%	4.79%	6.52%	-3.04	1.73%	20.14	5.21%
01/31/2008	10.71%	4.79%	6.53%	-3.04	1.74%	20.21	5.92%
02/29/2008	10.25%	4.75%	6.62%	-3.05	1.87%	21.45	5.50%
03/12/2008	10.25%	4.73%	6.62%	-3.05	1.89%	21.99	5.52%
03/25/2008	9.10%	4.68%	6.63%	-3.06	1.94%	22.55	4.42%
04/22/2008	10.25%	4.60%	6.64%	-3.08	2.04%	23.32	5.65%
04/24/2008	10.10%	4.60%	6.64%	-3.08	2.04%	23.35	5.50%
05/01/2008	10.70%	4.58%	6.63%	-3.08	2.05%	23.46	6.12%
05/19/2008	11.00%	4.56%	6.64%	-3.09	2.08%	23.32	6.44%
05/27/2008	10.00%	4.55%	6.64%	-3.09	2.09%	23.18	5.45%
06/10/2008	10.70%	4.54%	6.65%	-3.09	2.11%	22.89	6.16%
06/27/2008	11.04%	4.54%	6.65%	-3.09	2.11%	22.73	6.50%
06/27/2008	10.50%	4.54%	6.65%	-3.09	2.11%	22.73	5.96%
07/10/2008	10.43%	4.52%	6.66%	-3.10	2.14%	22.88	5.91%
07/16/2008	9.40%	4.51%	6.66%	-3.10	2.15%	23.08	4.89%
07/30/2008	10.80%	4.51%	6.66%	-3.10	2.15%	23.33	6.29%
07/31/2008	10.70%	4.51%	6.66%	-3.10	2.16%	23.34	6.19%
08/11/2008	10.25%	4.50%	6.67%	-3.10	2.16%	23.37	5.75%
08/26/2008	10.18%	4.50%	6.67%	-3.10	2.17%	23.23	5.68%
09/10/2008	10.30%	4.50%	6.66%	-3.10	2.16%	23.01	5.80%
09/24/2008	10.65%	4.48%	6.63%	-3.11	2.15%	23.46	6.17%
09/24/2008	10.65%	4.48%	6.63%	-3.11	2.15%	23.46	6.17%
09/24/2008	10.65%	4.48%	6.63%	-3.11	2.15%	23.46	6.17%
09/30/2008	10.20%	4.47%	6.61%	-3.11	2.14%	23.77	5.73%
10/08/2008	10.15%	4.46%	6.59%	-3.11	2.12%	24.61	5.69%
11/13/2008	10.55%	4.45%	6.34%	-3.11	1.89%	29.58	6.10%
11/17/2008	10.20%	4.44%	6.32%	-3.11	1.87%	29.98	5.76%
12/01/2008	10.25%	4.39%	6.24%	-3.12	1.84%	31.79	5.86%
12/23/2008	11.00%	4.27%	6.14%	-3.15	1.87%	34.13	6.73%
12/29/2008	10.00%	4.24%	6.13%	-3.16	1.89%	34.34	5.76%
12/29/2008	10.20%	4.24%	6.13%	-3.16	1.89%	34.34	5.96%
12/31/2008	10.75%	4.22%	6.13%	-3.17	1.90%	34.47	6.53%
01/14/2009	10.50%	4.15%	6.09%	-3.18	1.94%	35.25	6.35%
01/21/2009	10.50%	4.11%	6.08%	-3.19	1.97%	35.81	6.39%
01/21/2009	10.50%	4.11%	6.08%	-3.19	1.97%	35.81	6.39%
01/21/2009	10.50%	4.11%	6.08%	-3.19	1.97%	35.81	6.39%
01/27/2009	10.76%	4.09%	6.06%	-3.20	1.98%	36.26	6.67%
01/30/2009	10.50%	4.07%	6.05%	-3.20	1.98%	36.58	6.43%
02/04/2009	8.75%	4.06%	6.04%	-3.20	1.98%	36.94	4.69%
03/04/2009	10.50%	3.96%	5.98%	-3.23	2.02%	39.59	6.54%
03/12/2009	11.50%	3.93%	5.97%	-3.24	2.04%	40.42	7.57%
04/02/2009	11.10%	3.85%	5.92%	-3.26	2.07%	42.04	7.25%
04/21/2009	10.61%	3.80%	5.87%	-3.27	2.08%	42.91	6.81%
04/24/2009	10.00%	3.78%	5.86%	-3.27	2.08%	43.10	6.22%
04/30/2009	11.25%	3.77%	5.85%	-3.28	2.08%	43.29	7.48%
05/04/2009	10.74%	3.77%	5.85%	-3.28	2.08%	43.40	6.97%
05/20/2009	10.25%	3.74%	5.81%	-3.29	2.07%	43.96	6.51%
05/28/2009	10.50%	3.74%	5.79%	-3.29	2.05%	44.24	6.76%
06/22/2009	10.00%	3.76%	5.76%	-3.28	1.99%	45.01	6.24%
06/24/2009	10.80%	3.76%	5.76%	-3.28	1.99%	45.06	7.04%
07/08/2009	10.63%	3.76%	5.75%	-3.28	1.98%	44.95	6.87%
07/17/2009	10.50%	3.77%	5.74%	-3.28	1.96%	44.55	6.73%
08/31/2009	10.25%	3.82%	5.69%	-3.27	1.87%	38.96	6.43%
10/14/2009	10.70%	4.02%	5.66%	-3.21	1.64%	33.90	6.68%
10/23/2009	10.88%	4.06%	5.64%	-3.20	1.58%	33.22	6.82%
11/02/2009	10.70%	4.10%	5.63%	-3.20	1.53%	32.57	6.60%
11/03/2009	10.70%	4.10%	5.62%	-3.19	1.52%	32.48	6.60%
11/24/2009	10.25%	4.16%	5.57%	-3.18	1.41%	30.89	6.09%
11/25/2009	10.75%	4.16%	5.57%	-3.18	1.41%	30.79	6.59%
11/30/2009	10.35%	4.17%	5.56%	-3.18	1.39%	30.58	6.18%
12/03/2009	10.50%	4.18%	5.55%	-3.18	1.37%	30.18	6.32%
12/07/2009	10.70%	4.19%	5.55%	-3.17	1.36%	29.90	6.51%
12/16/2009	11.00%	4.22%	5.52%	-3.17	1.30%	28.98	6.78%
12/16/2009	10.90%	4.22%	5.52%	-3.17	1.30%	28.98	6.68%
12/18/2009	10.40%	4.22%	5.51%	-3.16	1.29%	28.70	6.18%
12/18/2009	10.40%	4.22%	5.51%	-3.16	1.29%	28.70	6.18%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	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%	5.50%	-3.16	1.27%	28.46	5.97%
12/22/2009	10.40%	4.23%	5.50%	-3.16	1.27%	28.46	6.17%
12/22/2009	10.40%	4.23%	5.50%	-3.16	1.27%	28.46	6.17%
12/30/2009	10.00%	4.26%	5.48%	-3.16	1.22%	27.91	5.74%
01/04/2010	10.80%	4.28%	5.47%	-3.15	1.19%	27.67	6.52%
01/11/2010	11.00%	4.31%	5.46%	-3.15	1.15%	27.09	6.69%
01/26/2010	10.13%	4.35%	5.43%	-3.13	1.08%	26.08	5.78%
01/27/2010	10.40%	4.36%	5.43%	-3.13	1.07%	26.01	6.04%
01/27/2010	10.40%	4.36%	5.43%	-3.13	1.07%	26.01	6.04%
01/27/2010	10.70%	4.36%	5.43%	-3.13	1.07%	26.01	6.34%
02/09/2010	9.80%	4.38%	5.41%	-3.13	1.03%	25.43	5.42%
02/18/2010	10.60%	4.40%	5.40%	-3.12	1.00%	25.05	6.20%
02/24/2010	10.18%	4.41%	5.39%	-3.12	0.98%	24.80	5.77%
03/02/2010	9.63%	4.41%	5.38%	-3.12	0.97%	24.54	5.22%
03/04/2010	10.50%	4.41%	5.38%	-3.12	0.97%	24.43	6.09%
03/05/2010	10.50%	4.41%	5.38%	-3.12	0.97%	24.37	6.09%
03/11/2010	11.90%	4.42%	5.38%	-3.12	0.96%	24.10	7.48%
03/17/2010	10.00%	4.41%	5.37%	-3.12	0.96%	23.85	5.59%
03/25/2010	10.15%	4.42%	5.36%	-3.12	0.95%	23.47	5.73%
04/02/2010	10.10%	4.43%	5.35%	-3.12	0.92%	23.15	5.67%
04/27/2010	10.00%	4.46%	5.34%	-3.11	0.88%	22.16	5.54%
04/29/2010	9.90%	4.46%	5.34%	-3.11	0.88%	22.11	5.44%
04/29/2010	10.06%	4.46%	5.34%	-3.11	0.88%	22.11	5.60%
04/29/2010	10.26%	4.46%	5.34%	-3.11	0.88%	22.11	5.80%
05/12/2010	10.30%	4.45%	5.34%	-3.11	0.89%	22.26	5.85%
05/12/2010	10.30%	4.45%	5.34%	-3.11	0.89%	22.26	5.85%
05/28/2010	10.20%	4.44%	5.35%	-3.11	0.90%	22.81	5.76%
05/28/2010	10.10%	4.44%	5.35%	-3.11	0.90%	22.81	5.66%
06/07/2010	10.30%	4.44%	5.35%	-3.11	0.90%	23.00	5.86%
06/16/2010	10.00%	4.44%	5.35%	-3.11	0.91%	23.16	5.56%
06/28/2010	10.50%	4.43%	5.35%	-3.12	0.92%	23.19	6.07%
06/28/2010	9.67%	4.43%	5.35%	-3.12	0.92%	23.19	5.24%
06/30/2010	9.40%	4.43%	5.36%	-3.12	0.93%	23.30	4.97%
07/01/2010	10.25%	4.43%	5.36%	-3.12	0.93%	23.34	5.82%
07/15/2010	10.70%	4.43%	5.37%	-3.12	0.94%	23.43	6.27%
07/15/2010	10.53%	4.43%	5.37%	-3.12	0.94%	23.43	6.10%
07/30/2010	10.70%	4.41%	5.37%	-3.12	0.96%	23.39	6.29%
08/04/2010	10.50%	4.41%	5.38%	-3.12	0.96%	23.40	6.09%
08/06/2010	9.83%	4.41%	5.38%	-3.12	0.97%	23.41	5.42%
08/25/2010	9.90%	4.37%	5.39%	-3.13	1.02%	23.38	5.53%
09/03/2010	10.60%	4.35%	5.41%	-3.14	1.06%	23.44	6.25%
09/14/2010	10.70%	4.33%	5.41%	-3.14	1.08%	23.46	6.37%
09/16/2010	10.00%	4.32%	5.42%	-3.14	1.09%	23.44	5.68%
09/16/2010	10.00%	4.32%	5.42%	-3.14	1.09%	23.44	5.68%
09/30/2010	9.75%	4.28%	5.43%	-3.15	1.15%	23.47	5.47%
10/14/2010	10.35%	4.24%	5.44%	-3.16	1.20%	23.50	6.11%
10/28/2010	10.70%	4.21%	5.42%	-3.17	1.21%	23.55	6.49%
11/02/2010	10.38%	4.20%	5.41%	-3.17	1.21%	23.60	6.18%
11/04/2010	10.70%	4.19%	5.41%	-3.17	1.21%	23.54	6.51%
11/19/2010	10.20%	4.17%	5.36%	-3.18	1.19%	23.28	6.03%
11/22/2010	10.00%	4.17%	5.36%	-3.18	1.19%	23.24	5.83%
12/01/2010	10.13%	4.16%	5.33%	-3.18	1.18%	23.21	5.97%
12/06/2010	9.86%	4.15%	5.32%	-3.18	1.17%	23.18	5.71%
12/09/2010	10.25%	4.15%	5.30%	-3.18	1.15%	23.14	6.10%
12/13/2010	10.70%	4.15%	5.29%	-3.18	1.14%	23.13	6.55%
12/14/2010	10.13%	4.15%	5.28%	-3.18	1.14%	23.12	5.98%
12/15/2010	10.44%	4.15%	5.28%	-3.18	1.13%	23.12	6.29%
12/17/2010	10.00%	4.14%	5.26%	-3.18	1.12%	23.11	5.86%
12/20/2010	10.60%	4.14%	5.26%	-3.18	1.11%	23.10	6.46%
12/21/2010	10.30%	4.14%	5.25%	-3.18	1.11%	23.09	6.16%
12/27/2010	9.90%	4.14%	5.24%	-3.18	1.10%	23.07	5.76%
12/29/2010	11.15%	4.14%	5.23%	-3.19	1.09%	23.07	7.01%
01/05/2011	10.15%	4.13%	5.20%	-3.19	1.07%	23.08	6.02%
01/12/2011	10.30%	4.12%	5.18%	-3.19	1.06%	23.07	6.18%
01/13/2011	10.30%	4.12%	5.17%	-3.19	1.05%	23.06	6.18%
01/18/2011	10.00%	4.12%	5.16%	-3.19	1.04%	23.05	5.88%
01/20/2011	9.30%	4.12%	5.15%	-3.19	1.03%	23.06	5.18%
01/20/2011	10.13%	4.12%	5.15%	-3.19	1.03%	23.06	6.01%
01/31/2011	9.60%	4.11%	5.10%	-3.19	0.99%	23.12	5.49%
02/03/2011	10.00%	4.11%	5.08%	-3.19	0.97%	23.13	5.89%
02/25/2011	10.00%	4.14%	4.98%	-3.18	0.83%	22.58	5.86%
03/25/2011	9.80%	4.18%	4.85%	-3.18	0.68%	21.29	5.62%
03/30/2011	10.00%	4.18%	4.83%	-3.17	0.65%	21.16	5.82%
04/12/2011	10.00%	4.21%	4.78%	-3.17	0.57%	20.69	5.79%
04/25/2011	10.74%	4.23%	4.73%	-3.16	0.50%	20.17	6.51%
04/26/2011	9.67%	4.24%	4.72%	-3.16	0.49%	20.13	5.43%
04/27/2011	10.40%	4.24%	4.72%	-3.16	0.48%	20.08	6.16%
05/04/2011	10.00%	4.25%	4.69%	-3.16	0.45%	19.84	5.75%
05/04/2011	10.00%	4.25%	4.69%	-3.16	0.45%	19.84	5.75%
05/24/2011	10.50%	4.27%	4.62%	-3.15	0.35%	19.44	6.23%
06/08/2011	10.75%	4.30%	4.59%	-3.15	0.28%	19.02	6.45%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
06/16/2011	9.20%	4.32%	4.57%	-3.14	0.25%	18.83	4.88%
06/17/2011	9.95%	4.32%	4.56%	-3.14	0.24%	18.83	5.63%
07/13/2011	10.20%	4.37%	4.48%	-3.13	0.12%	18.48	5.83%
08/01/2011	9.20%	4.39%	4.42%	-3.13	0.03%	18.46	4.81%
08/08/2011	10.00%	4.38%	4.40%	-3.13	0.02%	18.77	5.62%
08/11/2011	10.00%	4.38%	4.40%	-3.13	0.02%	19.05	5.62%
08/12/2011	10.35%	4.38%	4.39%	-3.13	0.02%	19.13	5.97%
08/19/2011	10.25%	4.36%	4.38%	-3.13	0.02%	19.53	5.89%
09/02/2011	12.88%	4.32%	4.35%	-3.14	0.03%	20.31	8.56%
09/22/2011	10.00%	4.24%	4.32%	-3.16	0.08%	21.34	5.76%
10/12/2011	10.30%	4.14%	4.29%	-3.19	0.15%	22.82	6.16%
10/20/2011	10.50%	4.10%	4.27%	-3.19	0.17%	23.27	6.40%
11/30/2011	10.90%	3.87%	4.22%	-3.25	0.35%	25.28	7.03%
11/30/2011	10.90%	3.87%	4.22%	-3.25	0.35%	25.28	7.03%
12/14/2011	10.00%	3.79%	4.21%	-3.27	0.41%	25.67	6.21%
12/14/2011	10.30%	3.79%	4.21%	-3.27	0.41%	25.67	6.51%
12/20/2011	10.20%	3.76%	4.20%	-3.28	0.44%	25.76	6.44%
12/21/2011	10.20%	3.75%	4.20%	-3.28	0.44%	25.76	6.45%
12/22/2011	9.90%	3.75%	4.20%	-3.28	0.45%	25.77	6.15%
12/22/2011	10.40%	3.75%	4.20%	-3.28	0.45%	25.77	6.65%
12/23/2011	10.19%	3.74%	4.20%	-3.29	0.46%	25.76	6.45%
01/25/2012	10.50%	3.57%	4.15%	-3.33	0.59%	25.89	6.93%
01/27/2012	10.50%	3.55%	4.14%	-3.34	0.59%	25.91	6.95%
02/15/2012	10.20%	3.47%	4.11%	-3.36	0.64%	26.12	6.73%
02/23/2012	9.90%	3.43%	4.10%	-3.37	0.66%	26.14	6.47%
02/27/2012	10.25%	3.42%	4.10%	-3.37	0.67%	26.15	6.83%
02/29/2012	10.40%	3.41%	4.09%	-3.38	0.68%	26.16	6.99%
03/29/2012	10.37%	3.31%	4.05%	-3.41	0.74%	25.99	7.06%
04/04/2012	10.00%	3.29%	4.05%	-3.41	0.75%	25.89	6.71%
04/26/2012	10.00%	3.20%	4.03%	-3.44	0.83%	25.91	6.80%
05/02/2012	10.00%	3.18%	4.03%	-3.45	0.85%	25.85	6.82%
05/07/2012	9.80%	3.16%	4.02%	-3.45	0.86%	25.85	6.64%
05/15/2012	10.00%	3.14%	4.02%	-3.46	0.88%	25.79	6.86%
05/29/2012	10.05%	3.11%	4.02%	-3.47	0.92%	25.23	6.94%
06/07/2012	10.30%	3.07%	4.03%	-3.48	0.95%	24.77	7.23%
06/14/2012	9.40%	3.06%	4.03%	-3.49	0.97%	24.45	6.34%
06/15/2012	10.40%	3.06%	4.03%	-3.49	0.97%	24.40	7.34%
06/18/2012	9.60%	3.05%	4.03%	-3.49	0.97%	24.33	6.55%
06/19/2012	9.25%	3.05%	4.03%	-3.49	0.98%	24.25	6.20%
06/26/2012	10.10%	3.04%	4.03%	-3.49	0.99%	23.82	7.06%
06/29/2012	10.00%	3.04%	4.02%	-3.49	0.99%	23.58	6.96%
07/09/2012	10.20%	3.03%	4.02%	-3.50	0.99%	23.14	7.17%
07/16/2012	9.80%	3.02%	4.02%	-3.50	1.00%	22.59	6.78%
07/20/2012	9.81%	3.01%	4.02%	-3.50	1.02%	22.07	6.80%
07/20/2012	9.31%	3.01%	4.02%	-3.50	1.02%	22.07	6.30%
09/13/2012	9.80%	2.94%	4.11%	-3.53	1.17%	19.11	6.86%
09/19/2012	10.05%	2.94%	4.13%	-3.53	1.19%	18.84	7.11%
09/19/2012	9.80%	2.94%	4.13%	-3.53	1.19%	18.84	6.86%
09/26/2012	9.50%	2.94%	4.14%	-3.53	1.20%	18.51	6.56%
10/12/2012	9.60%	2.93%	4.18%	-3.53	1.25%	18.04	6.67%
10/23/2012	9.75%	2.93%	4.21%	-3.53	1.27%	17.84	6.82%
10/24/2012	10.30%	2.93%	4.21%	-3.53	1.28%	17.83	7.37%
11/09/2012	10.30%	2.92%	4.26%	-3.53	1.34%	17.75	7.38%
11/28/2012	10.40%	2.90%	4.32%	-3.54	1.42%	17.60	7.50%
11/29/2012	9.88%	2.89%	4.32%	-3.54	1.43%	17.58	6.99%
11/29/2012	9.75%	2.89%	4.32%	-3.54	1.43%	17.58	6.86%
12/05/2012	9.71%	2.89%	4.34%	-3.54	1.45%	17.53	6.82%
12/05/2012	10.40%	2.89%	4.34%	-3.54	1.45%	17.53	7.51%
12/12/2012	9.80%	2.88%	4.36%	-3.55	1.48%	17.48	6.92%
12/13/2012	10.50%	2.88%	4.36%	-3.55	1.48%	17.47	7.62%
12/13/2012	9.50%	2.88%	4.36%	-3.55	1.48%	17.47	6.62%
12/14/2012	10.40%	2.88%	4.37%	-3.55	1.49%	17.47	7.52%
12/19/2012	9.71%	2.87%	4.38%	-3.55	1.51%	17.44	6.84%
12/19/2012	10.25%	2.87%	4.38%	-3.55	1.51%	17.44	7.38%
12/20/2012	10.40%	2.87%	4.38%	-3.55	1.51%	17.43	7.53%
12/20/2012	10.30%	2.87%	4.38%	-3.55	1.51%	17.43	7.43%
12/20/2012	10.45%	2.87%	4.38%	-3.55	1.51%	17.43	7.58%
12/20/2012	10.25%	2.87%	4.38%	-3.55	1.51%	17.43	7.38%
12/20/2012	10.25%	2.87%	4.38%	-3.55	1.51%	17.43	7.38%
12/20/2012	9.80%	2.87%	4.38%	-3.55	1.51%	17.43	6.93%
12/20/2012	9.50%	2.87%	4.38%	-3.55	1.51%	17.43	6.63%
12/21/2012	10.20%	2.87%	4.38%	-3.55	1.52%	17.43	7.33%
12/26/2012	9.80%	2.86%	4.39%	-3.55	1.53%	17.46	6.94%
01/09/2013	9.70%	2.84%	4.42%	-3.56	1.57%	17.50	6.86%
01/09/2013	9.70%	2.84%	4.42%	-3.56	1.57%	17.50	6.86%
01/09/2013	9.70%	2.84%	4.42%	-3.56	1.57%	17.50	6.86%
01/16/2013	9.60%	2.84%	4.43%	-3.56	1.59%	17.45	6.76%
01/16/2013	9.60%	2.84%	4.43%	-3.56	1.59%	17.45	6.76%
02/13/2013	10.20%	2.84%	4.49%	-3.56	1.64%	17.01	7.36%
02/22/2013	9.75%	2.85%	4.51%	-3.56	1.65%	16.89	6.90%
02/27/2013	10.00%	2.86%	4.52%	-3.56	1.66%	16.85	7.14%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
03/14/2013	9.30%	2.88%	4.55%	-3.55	1.67%	16.34	6.42%
03/27/2013	9.80%	2.90%	4.57%	-3.54	1.67%	15.88	6.90%
05/01/2013	9.84%	2.94%	4.64%	-3.53	1.70%	15.25	6.90%
05/15/2013	10.30%	2.96%	4.66%	-3.52	1.70%	15.02	7.34%
05/30/2013	10.20%	2.98%	4.68%	-3.51	1.69%	14.88	7.22%
05/31/2013	9.00%	2.98%	4.68%	-3.51	1.69%	14.89	6.02%
06/11/2013	10.00%	3.00%	4.68%	-3.51	1.68%	14.96	7.00%
06/21/2013	9.75%	3.02%	4.68%	-3.50	1.66%	14.99	6.73%
06/25/2013	9.80%	3.03%	4.68%	-3.50	1.65%	15.02	6.77%
07/12/2013	9.36%	3.08%	4.65%	-3.48	1.58%	15.07	6.28%
08/08/2013	9.83%	3.14%	4.62%	-3.46	1.47%	14.82	6.69%
08/14/2013	9.15%	3.16%	4.61%	-3.45	1.45%	14.72	5.99%
09/11/2013	10.25%	3.27%	4.56%	-3.42	1.30%	14.57	6.98%
09/11/2013	10.20%	3.27%	4.56%	-3.42	1.30%	14.57	6.93%
09/24/2013	10.20%	3.31%	4.54%	-3.41	1.23%	14.47	6.89%
10/03/2013	9.65%	3.33%	4.52%	-3.40	1.18%	14.45	6.32%
11/06/2013	10.20%	3.41%	4.46%	-3.38	1.05%	14.40	6.79%
11/21/2013	10.00%	3.44%	4.42%	-3.37	0.98%	14.36	6.56%
11/26/2013	10.00%	3.45%	4.42%	-3.37	0.96%	14.36	6.55%
12/03/2013	10.25%	3.47%	4.41%	-3.36	0.94%	14.38	6.78%
12/04/2013	9.50%	3.47%	4.40%	-3.36	0.93%	14.38	6.03%
12/05/2013	10.20%	3.48%	4.40%	-3.36	0.92%	14.38	6.72%
12/09/2013	8.72%	3.49%	4.40%	-3.36	0.91%	14.34	5.23%
12/09/2013	9.75%	3.49%	4.40%	-3.36	0.91%	14.34	6.26%
12/13/2013	9.75%	3.50%	4.38%	-3.35	0.88%	14.34	6.25%
12/16/2013	9.95%	3.50%	4.38%	-3.35	0.88%	14.35	6.45%
12/16/2013	9.95%	3.50%	4.38%	-3.35	0.88%	14.35	6.45%
12/16/2013	10.12%	3.50%	4.38%	-3.35	0.88%	14.35	6.62%
12/17/2013	9.50%	3.51%	4.38%	-3.35	0.87%	14.37	5.99%
12/17/2013	10.95%	3.51%	4.38%	-3.35	0.87%	14.37	7.44%
12/18/2013	8.72%	3.51%	4.37%	-3.35	0.86%	14.37	5.21%
12/18/2013	9.80%	3.51%	4.37%	-3.35	0.86%	14.37	6.29%
12/19/2013	10.15%	3.51%	4.37%	-3.35	0.86%	14.38	6.64%
12/30/2013	9.50%	3.54%	4.35%	-3.34	0.81%	14.41	5.96%
02/20/2014	9.20%	3.69%	4.25%	-3.30	0.57%	14.62	5.51%
02/26/2014	9.75%	3.70%	4.24%	-3.30	0.55%	14.65	6.05%
03/17/2014	9.55%	3.72%	4.20%	-3.29	0.48%	14.72	5.83%
03/26/2014	9.40%	3.73%	4.17%	-3.29	0.45%	14.66	5.67%
03/26/2014	9.96%	3.73%	4.17%	-3.29	0.45%	14.66	6.23%
04/02/2014	9.70%	3.73%	4.15%	-3.29	0.42%	14.58	5.97%
05/16/2014	9.80%	3.70%	4.04%	-3.30	0.34%	14.38	6.10%
05/30/2014	9.70%	3.68%	4.02%	-3.30	0.34%	14.35	6.02%
06/06/2014	10.40%	3.67%	4.00%	-3.30	0.33%	14.26	6.73%
06/30/2014	9.55%	3.64%	3.96%	-3.31	0.32%	13.95	5.91%
07/02/2014	9.62%	3.64%	3.95%	-3.31	0.31%	13.91	5.98%
07/10/2014	9.95%	3.63%	3.94%	-3.32	0.31%	13.86	6.32%
07/23/2014	9.75%	3.61%	3.93%	-3.32	0.32%	13.68	6.14%
07/29/2014	9.45%	3.60%	3.93%	-3.32	0.32%	13.57	5.85%
07/31/2014	9.90%	3.60%	3.93%	-3.32	0.33%	13.55	6.30%
08/20/2014	9.75%	3.56%	3.93%	-3.33	0.37%	13.61	6.19%
08/25/2014	9.60%	3.56%	3.94%	-3.34	0.38%	13.59	6.04%
08/29/2014	9.80%	3.54%	3.94%	-3.34	0.40%	13.57	6.26%
09/11/2014	9.60%	3.51%	3.95%	-3.35	0.44%	13.57	6.09%
09/15/2014	10.25%	3.51%	3.96%	-3.35	0.45%	13.57	6.74%
10/09/2014	9.80%	3.44%	3.97%	-3.37	0.53%	13.62	6.36%
11/06/2014	9.56%	3.37%	3.99%	-3.39	0.62%	14.09	6.19%
11/06/2014	10.20%	3.37%	3.99%	-3.39	0.62%	14.09	6.83%
11/14/2014	10.20%	3.35%	4.00%	-3.40	0.65%	13.94	6.85%
11/26/2014	9.70%	3.32%	4.01%	-3.40	0.69%	13.82	6.38%
11/26/2014	10.20%	3.32%	4.01%	-3.40	0.69%	13.82	6.88%
12/04/2014	9.68%	3.30%	4.02%	-3.41	0.72%	13.78	6.38%
12/10/2014	9.25%	3.29%	4.03%	-3.41	0.74%	13.80	5.96%
12/10/2014	9.25%	3.29%	4.03%	-3.41	0.74%	13.80	5.96%
12/11/2014	10.07%	3.28%	4.03%	-3.42	0.75%	13.83	6.79%
12/12/2014	10.20%	3.28%	4.03%	-3.42	0.75%	13.86	6.92%
12/17/2014	9.17%	3.27%	4.04%	-3.42	0.77%	13.96	5.90%
12/18/2014	9.83%	3.26%	4.04%	-3.42	0.78%	13.98	6.57%
01/23/2015	9.50%	3.14%	4.11%	-3.46	0.97%	14.37	6.36%
02/24/2015	9.83%	3.04%	4.19%	-3.49	1.15%	14.67	6.79%
03/18/2015	9.75%	2.98%	4.23%	-3.51	1.26%	14.90	6.77%
03/25/2015	9.50%	2.95%	4.25%	-3.52	1.30%	14.96	6.55%
03/26/2015	9.72%	2.95%	4.26%	-3.52	1.31%	14.98	6.77%
04/23/2015	10.20%	2.87%	4.31%	-3.55	1.45%	15.21	7.33%
04/29/2015	9.53%	2.86%	4.33%	-3.56	1.47%	15.22	6.67%
05/01/2015	9.60%	2.85%	4.33%	-3.56	1.48%	15.23	6.75%
05/26/2015	9.75%	2.83%	4.35%	-3.57	1.52%	15.16	6.92%
06/17/2015	9.00%	2.82%	4.35%	-3.57	1.53%	15.30	6.18%
06/17/2015	9.00%	2.82%	4.35%	-3.57	1.53%	15.30	6.18%
09/02/2015	9.50%	2.79%	4.35%	-3.58	1.56%	15.68	6.71%
09/10/2015	9.30%	2.79%	4.35%	-3.58	1.56%	15.99	6.51%
10/15/2015	9.00%	2.81%	4.35%	-3.57	1.54%	16.66	6.19%

Date of Electric Rate Case	Return on Equity (%)	30 Year Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
11/19/2015	10.30%	2.88%	4.35%	-3.55	1.47%	16.28	7.42%
11/19/2015	10.00%	2.88%	4.35%	-3.55	1.47%	16.28	7.12%
12/03/2015	10.00%	2.90%	4.35%	-3.54	1.45%	16.28	7.10%
12/09/2015	9.14%	2.90%	4.34%	-3.54	1.44%	16.33	6.24%
12/09/2015	9.14%	2.90%	4.34%	-3.54	1.44%	16.33	6.24%
12/11/2015	10.30%	2.90%	4.34%	-3.54	1.44%	16.42	7.40%
12/15/2015	9.60%	2.91%	4.34%	-3.54	1.44%	16.50	6.69%
12/17/2015	9.70%	2.91%	4.34%	-3.54	1.43%	16.54	6.79%
12/18/2015	9.50%	2.91%	4.34%	-3.54	1.43%	16.57	6.59%
12/30/2015	9.50%	2.93%	4.33%	-3.53	1.41%	16.60	6.57%
01/06/2016	9.50%	2.94%	4.30%	-3.53	1.36%	16.72	6.56%
02/23/2016	9.75%	2.94%	4.23%	-3.53	1.29%	18.32	6.81%
03/16/2016	9.85%	2.91%	4.23%	-3.54	1.32%	18.69	6.94%
04/29/2016	9.80%	2.83%	4.23%	-3.56	1.40%	18.60	6.97%

Average: 4.50%
of Rate Cases: 1,471

Summary of Adjustment Clauses & Alternative Regulation/Incentive Plans

Company	Parent	State	Adjustment Clauses						Alternative Regulation / Incentive Plans					CWIP		
			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	Merger Savings	Allowed in Rate Base (L/F) [7]
ALLETE (Minnesota Power)	ALE	Minnesota	✓			✓	✓	✓							L	✓
Interstate Power and Light Company	LNT	Iowa	✓			✓	✓	✓							L	✓
Wisconsin Power and Light Company	LNT	Wisconsin	✓												L	✓
Southwestern Electric Power Company	AEP	Arkansas	✓	P	✓	✓									F	
Indiana Michigan Power Company	AEP	Indiana	✓	P		✓		✓							F	
Kentucky Power Company	AEP	Kentucky	✓	P	✓	✓		✓							F	
Southwestern Electric Power Company	AEP	Louisiana	✓	P		✓		✓		✓					L	
Indiana Michigan Power Company	AEP	Michigan	✓			✓		✓							L	✓
Ohio Power Company	AEP	Ohio		P	✓	✓		✓							F	✓
Public Service Company of Oklahoma	AEP	Oklahoma	✓	P	✓	✓		✓							F	
Kingsport Power Company	AEP	Tennessee	✓												F	
AEP Texas Central Company	AEP	Texas			✓	✓		✓							L	
AEP Texas North Company	AEP	Texas			✓	✓		✓							L	
Southwestern Electric Power Company	AEP	Texas	✓		✓	✓									L	
Appalachian Power Company	AEP	Virginia	✓		✓	✓		✓				✓	✓		F	
Appalachian Power Company	AEP	West Virginia	✓												L	
Wheeling Power Company	AEP	West Virginia	✓												L	✓
Alaska Electric Light and Power Company	AVA	Alaska	✓													
Avista Corporation	AVA	Idaho	✓			✓										
Avista Corporation	AVA	Washington	✓	F											L	
Consumers Energy Company	CMS	Michigan	✓			✓		✓							L	✓
DTE Electric Company	DTE	Michigan	✓			✓		✓							L	✓
Idaho Power Co.	IDA	Idaho	✓	P		✓						✓				✓
Idaho Power Co.	IDA	Oregon	✓					✓								✓
NorthWestern Energy	NWE	Montana	✓	P		✓										
NorthWestern Energy	NWE	South Dakota	✓			✓									L	
Oklahoma Gas and Electric Company	OGE	Arkansas	✓	P	✓	✓		✓							F	
Oklahoma Gas and Electric Company	OGE	Oklahoma	✓	P	✓	✓		✓							F	
Otter Tail Power Company	OTTR	Minnesota	✓			✓		✓							L	
Otter Tail Power Company	OTTR	North Dakota	✓		✓	✓		✓							F	
Arizona Public Service Company	PNW	Arizona	✓	P	✓	✓		✓				✓				
Public Service Company of New Mexico	PNM	New Mexico	✓			✓		✓							F	
Texas-New Mexico Power Company	PNM	Texas			✓	✓		✓							L	
Portland General Electric Company	POR	Oregon	✓	P				✓								✓
South Carolina Electric & Gas Co.	SCG	South Carolina	✓		✓			✓				✓			F	
Public Service Company of Colorado	XEL	Colorado	✓		✓	✓		✓				✓	✓		L	
Northern States Power Company - MN	XEL	Minnesota	✓			✓		✓							L	✓
Southwestern Public Service Company	XEL	New Mexico	✓			✓		✓				✓			F	
Northern States Power Company - MN	XEL	North Dakota	✓		✓	✓		✓							F	
Northern States Power Company - MN	XEL	South Dakota	✓	P	✓	✓		✓				✓			L	
Southwestern Public Service Company	XEL	Texas	✓		✓	✓		✓				✓			L	
Northern States Power Company - WI	XEL	Wisconsin	✓					✓							L	✓

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.

[7] Limited or fully allowed in rate base.

[8] Represents if a company used a forward test year in its most recent rate case.

Sources: *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*; *Regulatory Research Associates, State Commission Profiles and rate case history*.