

BEFORE THE ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF)
OKLAHOMA GAS AND ELECTRIC COMPANY)
FOR APPROVAL OF A GENERAL CHANGE IN) DOCKET NO. 16-052-U
RATES, CHARGES AND TARIFFS)

Direct Testimony

of

Robert B. Hevert

on behalf of

Oklahoma Gas and Electric Company

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I. WITNESS IDENTIFICATION AND QUALIFICATIONS

1 **Q. Please state your name, affiliation, and business address.**

2 A. My name is Robert B. Hevert. I am a Partner at ScottMadden, Inc. (“ScottMadden”).
3 My business address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts
4 01581.

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

6 A. I am submitting this direct testimony (“Direct Testimony”) before the Arkansas Public
7 Service Commission (“Commission”) on behalf of Oklahoma Gas and Electric Company,
8 Inc. (“OG&E”, or the “Company”), which is a wholly-owned subsidiary of OGE Energy
9 Corp..

10 **Q. Please describe your educational background.**

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

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

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

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

II. PURPOSE AND OVERVIEW OF TESTIMONY

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

8 A. The purpose of my Direct Testimony is to present evidence and provide the Commission
9 with a recommendation regarding the Company's return on equity ("ROE"),¹ and assess
10 the reasonableness of OG&E's capital structure to be used for ratemaking purposes. The
11 analyses and conclusions contained in my Direct Testimony are supported by the data
12 presented in Direct Exhibit RBH-1 through Direct Exhibit RBH-11, which have been
13 prepared by me or under my direction.

14 **Q. What are your conclusions regarding the appropriate Cost of Equity and capital**
15 **structure for OG&E?**

16 A. My analyses indicate that OG&E's Cost of Equity currently is in the range of 10.00
17 percent to 10.75 percent. The Company's proposed ROE, 10.25 percent, lies at the low
18 end of that range. Based on the quantitative and qualitative analyses discussed
19 throughout my Direct Testimony and the Company's risk profile, I conclude that the
20 Company's proposal is reasonable, if not conservative. As to OG&E's requested capital

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

1 structure, which includes 53.11 percent common equity and 46.89 percent long-term
2 debt, I conclude that it is within the range of those in place at similarly situated utilities,
3 whose capital structures include common equity ratios in the range of 45.95 percent to
4 57.69 percent.

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

7 A. Because all financial models are subject to various assumptions and constraints, equity
8 analysts and investors tend to use multiple methods to develop their return requirements.
9 I therefore relied on three widely accepted approaches: (1) the Discounted Cash Flow
10 (“DCF”) model, including the Constant Growth, and Multi-Stage forms; (2) the Capital
11 Asset Pricing Model (“CAPM”); and (3) the Bond Yield Plus Risk Premium approach.

12 In addition to the methodologies noted above, my recommendation also takes into
13 consideration: (1) the risk associated with cost recovery for compliance with
14 environmental regulations; (2) the risks associated with the Company’s need to fund
15 substantial future capital expenditures; (3) the need to account for flotation costs; and (4)
16 the effect of OG&E’s rate mechanisms on the Company’s relative risk profile. While I
17 did not make any explicit adjustments to my ROE estimates for those factors, I did take
18 them into consideration in determining where the Company’s Cost of Equity falls within
19 the range of analytical results.

20 **Q. Are there other factors that should be considered in determining the weight given to**
21 **the methods summarized above?**

22 A. All of the models used to estimate the Cost of Equity are subject to certain assumptions,
23 which may become more or less relevant as market conditions, and market data, change.

1 An important consideration is the consistency of each model’s underlying assumptions
2 with current and expected market conditions, and the reasonableness of its results relative
3 to observable benchmarks. For example, utility Price/Earnings (“P/E”) ratios recently
4 have been well in excess of their historical averages. Those pricing levels, which had
5 been associated with Federal Reserve monetary policy initiatives, weighed on utility
6 dividend yields and, therefore, DCF-based ROE estimates.

7 An important analytical concern is whether the increase in P/E ratios represents a
8 fundamental shift in utility valuation, or a temporary trading position to be unwound as
9 market conditions change. Given that the utility sector (as measured by the S&P 500
10 Electric Utility Index) lost approximately 15.50 percent of its value during the last major
11 uptrend in interest rates (when long-term Treasury yields increased from 2.22 percent to
12 3.12 percent over the five month period ending June 30, 2015), even as the S&P500
13 index increased by almost 3.50 percent, there is reason to believe that current utility P/E
14 ratios will contract as interest rates rise.² Because the proxy group’s average P/E ratio
15 recently has surpassed the levels seen before the 15.50 percent decline in the first half of
16 2015, that concern is particularly timely and relevant. The Constant Growth DCF model,
17 for example, assumes that the conditions underlying current valuation levels, including
18 continued central bank intervention in the capital markets, will continue in perpetuity.
19 Given that the Federal Reserve has begun to move toward its goal of policy
20 “normalization”, the Constant Growth DCF model results should be viewed with
21 considerable caution.

² Stock prices from SNL Financial. Proxy company price measured as a weighted index, as reported by SNL Financial. 30-year Treasury yield data from Bloomberg Professional.

1 Risk Premium-based methods (such as the Capital Asset Pricing Model), on the
2 other hand, provide a measure of market risk, and have the benefit of directly considering
3 investors' expectations regarding future market returns. Other Risk Premium approaches
4 (the Bond Yield Plus Risk Premium approach) reflect the well-documented finding that
5 the Cost of Equity does not move in lock-step with interest rates. For example, at times
6 interest rates fall because investors are so risk averse that they would rather accept a very
7 modest return on Treasury securities than take on the risk of equity ownership. In those
8 circumstances low interest rates suggest an increasing, not a decreasing Cost of Equity.
9 The important analytical issue, therefore, is understanding each model's fundamental
10 structure and assumptions, and interpreting its results in the context of current and
11 expected market conditions.

12 As noted earlier, every model has its own strengths and weaknesses, and it is
13 important to reflect those relative strengths in estimating the Cost of Equity. On balance,
14 I believe the Constant Growth DCF model results in particular should be viewed with
15 caution, and should be given less weight than the other approaches. Because the Multi-
16 Stage DCF analysis enables us to relax some of the rigid assumptions underlying the
17 Constant Growth model, it provides a more realistic estimate of investors' current return
18 requirements, and should be given more weight than the Constant Growth form. In
19 addition, because Risk Premium-based methods provide the ability to reflect investors'
20 views of risk, future market returns, and the relationship between interest rates and the
21 Cost of Equity, those methods likewise should be given more weight than the Constant
22 Growth DCF method. With those considerations in mind, I believe that my
23 recommendation reasonably reflects investors' current return requirements.

1 **Q. How is the remainder of your Direct Testimony organized?**

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

- 3 • Section III – discusses the regulatory guidelines and financial considerations
4 pertinent to the development of the cost of capital;
- 5 • Section IV – explains my selection of the proxy companies used to develop my
6 analytical results;
- 7 • Section V – explains my analyses and the analytical bases for my ROE
8 recommendation;
- 9 • Section VI – provides a discussion of specific business risks and other
10 considerations that have a direct bearing on OG&E's Cost of Equity;
- 11 • Section VII – highlights the current capital market conditions and their effect on
12 OG&E's Cost of Equity;
- 13 • Section VIII – addresses the reasonableness of my ROE recommendation relative
14 to authorized ROEs;
- 15 • Section IX – provides my analysis of OG&E's capital structure; and
- 16 • Section X – summarizes my conclusions and recommendations.

17 **III. REGULATORY GUIDELINES AND FINANCIAL CONSIDERATIONS**

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

20 A. In very general terms, the Cost of Equity is the return that investors require to make an
21 equity investment in a firm. That is, investors will provide funds to a firm only if the
return that they *expect* is equal to, or greater than, the return that they *require* to accept

1 the risk of providing funds to the firm. From the firm's perspective, that required return,
2 whether it is provided to debt or equity investors, has a cost. Individually, we speak of
3 the "cost of debt" and the "Cost of Equity" as measures of those costs; together, they are
4 referred to as the "cost of capital."

5 The cost of capital (including the costs of both debt and equity) is based on the
6 economic principle of "opportunity costs." Investing in any asset, whether debt or equity
7 securities, implies a forgone opportunity to invest in alternative assets. For an investment
8 to be sensible, its expected return must be at least equal to the return expected on
9 alternative, comparable risk investment opportunities.

10 Although both debt and equity have required costs, they differ in certain
11 fundamental ways. Most noticeably, the cost of debt is contractually defined and can be
12 directly observed as the interest rate or yield on debt securities.³ The Cost of Equity, on
13 the other hand, is neither directly observable nor a contractual obligation. Rather, equity
14 investors have a claim on cash flows only after debt holders are paid; the uncertainty (or
15 risk) associated with those residual cash flows determines the Cost of Equity. Because
16 equity investors bear the "residual risk," they take greater risks and require higher returns
17 than debt holders. In that basic sense, equity and debt investors differ: they invest in
18 different securities, face different risks, and require different returns.

19 Whereas the cost of debt can be directly observed, the Cost of Equity must be
20 estimated or inferred based on market data and various financial models. As discussed
21 throughout my Direct Testimony, each of those models is subject to certain assumptions,
22 which may be more or less applicable under differing market conditions. In addition,

³ The observed interest rate may be adjusted to reflect issuance or other directly observable costs.

1 because the Cost of Equity is premised on opportunity costs, the models typically are
2 applied to a group of “comparable” or “proxy” companies. The choice of models
3 (including their inputs), the selection of proxy companies, and the interpretation of the
4 model results all require the application of well supported and reasoned judgment. That
5 judgment should consider data and information that is not necessarily included in the
6 models themselves. In the end, the estimated Cost of Equity should reflect the return that
7 investors require in light of the subject company’s risks, and the returns available on
8 comparable investments.

9 **Q. Please provide a brief summary of the guidelines established by the United States**
10 **Supreme Court (“the Court”) for the purpose of determining the Return on Equity.**

11 A. The Court established the guiding principles for establishing a fair return for capital in
12 two cases: (1) *Bluefield Water Works and Improvement Co. v. Public Service Comm’n.*
13 (*“Bluefield”*);⁴ and (2) *Federal Power Comm’n v. Hope Natural Gas Co.* (*“Hope”*).⁵ In
14 *Bluefield*, the Court stated:

15 A public utility is entitled to such rates as will permit it to earn a return on
16 the value of the property which it employs for the convenience of the
17 public equal to that generally being made at the same time and in the same
18 general part of the country on investments in other business undertakings
19 which are attended by corresponding, risks and uncertainties; but it has no
20 constitutional right to profits such as are realized or anticipated in highly
21 profitable enterprises or speculative ventures. The return should be
22 reasonably sufficient to assure confidence in the financial soundness of the
23 utility and should be adequate, under efficient and economical
24 management, to maintain and support its credit and enable it to raise the
25 money necessary for the proper discharge of its public duties.⁶

⁴ *Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia*, 262 U.S. 679, 692-93 (1923).

⁵ *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944).

⁶ *Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia*, 262 U.S. 679, 692-93 (1923).

1 The Court therefore recognized that: (1) a regulated company cannot remain financially
2 sound unless the return it is allowed to earn on its invested capital is at least equal to the
3 cost of capital (the principle relating to the demand for capital); and (2) a regulated
4 company will not be able to attract capital if it does not offer investors an opportunity to
5 earn a return on their investment equal to the return they expect to earn on other
6 investments of the same risk (the principle relating to the supply of capital).

7 In *Hope*, the Court reiterated the financial integrity and capital attraction
8 principles of the *Bluefield* case:

9 From the investor or company point of view it is important that there be
10 enough revenue not only for operating expenses but also for the capital
11 costs of the business. These include service on the debt and dividends on
12 the stock... By that standard the return to the equity owner should be
13 commensurate with returns on investments in other enterprises having
14 corresponding risks. That return, moreover, should be sufficient to assure
15 confidence in the financial integrity of the enterprise, so as to maintain its
16 credit and to attract capital.⁷

17 In summary, the Court clearly has recognized that the fair Rate of Return on
18 Equity should be: (1) comparable to returns investors expect to earn on other investments
19 of similar risk; (2) sufficient to assure confidence in the company's financial integrity;
20 and (3) adequate to maintain and support the company's credit and to attract capital.

21 **Q. Does the Arkansas Public Service Commission provide similar guidance regarding**
22 **the overall cost of capital to be adopted in establishing utility rates?**

23 A. Yes, the Commission has adopted both the comparable earnings and capital attraction
24 standards. In Docket No. 04-121-U, the Commission stated that a utility's allowed ROE

⁷ Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591, 603 (1944).

1 should (1) afford the utility the opportunity to “attract capital” and (2) be “commensurate
2 with the returns on investments of similar risk.”⁸

3 **Q. Does Arkansas State Law provide guidance as to the information that the**
4 **Commission should consider in setting the authorized ROE?**

5 A. Yes. Arkansas Code § 23-4-410 (referred to below as “Act 725”) states that a public
6 utility or any other party to a rate proceeding may present evidence including, without
7 limitation:

- 8 (1) The basis for the requested return on common equity, including
9 quantitative analysis based on widely accepted methodologies, current
10 market data, qualitative discussion, and analysis of factors that influence
11 the requested return on common equity;
12 (2) Evidence that the requested return on common equity is comparable to
13 values that have recently been approved for public utilities that are
14 delivering similar services with corresponding risks within this state and in
15 other similar regulatory jurisdictions in the same general part of the
16 country;
17 (3) Evidence of the financial, business, and other risks faced by the utility,
18 including regulatory oversight, numbers and types of customers, rate
19 mechanisms, cost allocation methods, rate levels, rate design, reliability,
20 and quality of service, as compared to those faced by utilities delivering
21 similar services within this state and in other similar regulatory
22 jurisdictions in the same general part of the country; and
23 (4) Any other information, including without limitation:
24 (A) Macroeconomic data;
25 (B) Relevant commentary from ratings agencies and investment
26 analysts;
27 (C) Independent analysis of utility industry trends;
28 (D) Customer impact; and
29 (E) Any other relevant information.⁹

⁸ *In the Matter of an Application for a General Change or Modification in CenterPoint Energy Arkla, a Division of CenterPoint Energy Resources Corp’s Rates, Charges, and Tariffs* Docket No. 04-121-U, Arkansas Public Service Commission Order No. 16, at 42.

⁹ Arkansas Code § 23-4-410, Section 1.

1 Act 725 requires the Commission to consider the evidence noted above in determining
2 the appropriate ROE for a public utility, and “make its findings based on substantial
3 evidence.”¹⁰

4 **Q. Does your Direct Testimony included analyses similar to those cited by Act 725?**

5 A. Yes. Throughout my Direct Testimony I provide quantitative analyses based on widely
6 accepted methodologies, the current market context in which to evaluate the results of
7 those analyses, and various factors and business risks that affect OG&E’s Cost of Equity.
8 As discussed throughout my Direct Testimony, the use of both quantitative and
9 qualitative information in determining the ROE is consistent with the fact that the ROE
10 must be based on a comprehensive review of relevant data and information, and does not
11 necessarily lend itself to a strict mathematical solution.

12 **Q. Aside from the standards established by the Court and the Commission, why is it**
13 **important for a utility to be allowed the opportunity to earn a return adequate to**
14 **attract equity capital at reasonable terms?**

15 A. A return that is adequate to attract capital at reasonable terms enables the utility to
16 provide service while maintaining its financial integrity. As discussed above, and in
17 keeping with the *Hope* and *Bluefield* standards, that return should be commensurate with
18 the returns expected elsewhere in the market for investments of equivalent risk. Based on
19 those standards, the Commission’s decision in this case should provide the Company
20 with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable
21 terms, thereby enabling it to continue to provide safe and reliable electric service; (2)

¹⁰ *Ibid.*

1 sufficient to ensure its financial integrity; and (3) commensurate with returns on
2 investments in enterprises having corresponding risks. To the extent the Company is
3 provided a reasonable opportunity to earn its market-based Cost of Equity, neither
4 customers nor shareholders should be disadvantaged. In fact, a return that is adequate to
5 attract capital at reasonable terms enables OG&E to provide safe, reliable electric utility
6 service while maintaining its financial integrity.

7 **Q. How is the Cost of Equity estimated in regulatory proceedings?**

8 A. As noted earlier (and as discussed in more detail later in my Direct Testimony), in
9 regulatory proceedings the Cost of Equity is estimated by the use of various financial
10 models. By their very nature, those models produce a range of results from which the
11 ROE is determined. In regulatory proceedings, therefore, the ROE determination should
12 be based on a comprehensive review of relevant data and information; it does not
13 necessarily lend itself to a strict mathematical or formulaic solution. The key
14 consideration for regulators in determining the ROE is to ensure that the overall analysis
15 reasonably reflects investors' view of the financial markets in general, and the subject
16 company (in the context of the proxy companies) in particular. Both practitioners and
17 academics, however, recognize that financial models simply are tools to be used in the
18 ROE estimation process, and that strict adherence to any single approach, or to the results
19 of any single approach, can lead to flawed or misleading conclusions. That position is
20 consistent with the *Hope* and *Bluefield* principle that it is the analytical result, as opposed
21 to the methodology employed that is controlling in arriving at ROE determinations.¹¹
22 Thus, a reasonable ROE estimate arising from regulatory proceedings appropriately

¹¹ See, *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944).

1 considers alternative methodologies and the reasonableness of their individual and
2 collective results in the context of observable, relevant market information.

3 In summary, the Cost of Equity is established by the market, but estimated in the
4 regulatory process. That is, the market-required ROE is not established by regulatory
5 decisions, it is estimated based on the various analyses and data presented to the
6 presiding commission. Although the standards established in prior cases provide
7 considerable guidance in assessing that information, the authorized return may not always
8 approximate the market-required return. To the extent that the authorized return falls
9 well short of investors' return requirements, it is quite possible that investors would see
10 an additional element of risk, and the market-required return would increase. In that
11 regard, regulatory commissions have the considerable task of estimating the return
12 required by investors without influencing that return by virtue of their ROE
13 determination. The analyses and information provided in the balance of my Direct
14 Testimony are meant to assist the Commission in that task.

IV. PROXY GROUP SELECTION

15 **Q. As a preliminary matter, why is it necessary to select a group of proxy companies to**
16 **determine the Cost of Equity for OG&E?**

17 A. Since the ROE is a market-based concept and OG&E (which is a wholly owned operating
18 subsidiary of OGE Energy Corp.) is not a publicly traded entity, it is necessary to
19 establish a group of comparable, publicly traded companies to serve as its "proxy". Even
20 if OG&E were a publicly traded entity, short-term events could bias its market value

1 during a given period of time.¹² A significant benefit of using a proxy group is that it
2 moderates the effects of anomalous, temporary events associated with any one company.

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

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

13 **Q. Please provide a summary profile of OG&E.**

14 A. OG&E provides electric generation, transmission and distribution services to
15 approximately 825,000 customers across a 30,000 square mile service territory that
16 includes 241 communities in Oklahoma and 26 communities in western Arkansas.¹³ The
17 Company generated 20.9 million of the 28.9 million megawatt-hours of electric energy it
18 sold in 2015. On a megawatt-hour basis, approximately 53.00 percent of OG&E's 2015

¹² For example, on May 6, 2010, the market sustained what has come to be known as the "flash crash", in which stock prices moved significantly during the course of the trading day without any specific information that would support such erratic movement. While that is an extreme example, there is little question that events and information affect securities prices every day; at times, those effects can be due to unusual, extraneous factors.

¹³ See OGE Energy Corp., SEC Form 10-K for the period ended December 31, 2015, at 3, 4.

1 system sales were for commercial and industrial customers.¹⁴ OG&E's long-term issuer
2 credit ratings from Standard & Poor's ("S&P"), Moody's Investors Service ("Moody's"),
3 and Fitch Ratings currently are A-, A1, and A, respectively.¹⁵

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

5 A. Because it is used as the basis of estimating the Cost of Equity for the subject company,
6 the chosen proxy group should include companies that are fundamentally comparable to
7 the subject company, and should be large enough in number to have confidence in the
8 analytical results. In selecting a proxy group, my objective, therefore, was to balance
9 these objectives by selecting companies that are highly representative of the risks and
10 prospects faced by OG&E, while at the same time ensuring that there are a sufficient
11 number of companies in the proxy group. Based on those two considerations, I began
12 with the universe of companies that Value Line classifies as Electric Utilities, and applied
13 the following screening criteria:

- 14 • Because certain of the models used in my analyses assume that earnings and
15 dividends grow over time, I excluded companies that do not consistently pay
16 quarterly cash dividends;
- 17 • To ensure that the growth rates used in my analyses are not biased by a single
18 analyst, I excluded companies that were not covered by at least two utility
19 industry equity analysts;
- 20 • I excluded companies that do not have investment grade senior unsecured bond
21 and/or corporate credit ratings from S&P;

¹⁴ *Ibid.*, at 4. Commercial and industrial sales include oilfields.

¹⁵ Source: SNL Financial.

- I included only vertically integrated electric utilities, *i.e.* utilities that own and operate regulated generation, transmission and distribution assets;
- To ensure that the analytical results represent regulated utility operations, I excluded companies with less than 60.00 percent of total net operating income derived from regulated utility operations over the three most recently reported fiscal years;
- To ensure that the analytical results represent regulated electric utility operations, I excluded companies whose regulated electric operating income over the three most recently reported fiscal years represented less than 60.00 percent of total regulated operating income;
- I excluded companies whose coal-fired generation constituted less than 10.00 percent of net generation; and
- To ensure that the results of my analyses are not skewed by event-driven swings in market data, I eliminated companies that are currently known to be party to a merger or other significant transaction.

Q. Why do you exclude utilities that derive less than 60.00 percent of their total regulated net operating income from electric operations?

A. The Value Line Electric universe contains both electric-only, and combination electric and gas utilities. Because the operational risks and financial characteristics of natural gas distribution operations may differ from those of electric distribution operations, I believe it is important to limit the proxy group to utilities that derive a predominant proportion of their net income from regulated electric operations.

1 **Q. Did you include OGE Energy Corp. in your analysis?**

2 A. No. In order to avoid the circular logic that otherwise would occur, it is my practice to
3 exclude the subject company, or its parent holding company, from the proxy group.

4 **Q. What companies met those screening criteria?**

5 A. The criteria discussed above resulted in a proxy group of the following 15 companies:

Table 1: Proxy Group Screening Results

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

6 **Q. Why was Entergy Corporation excluded from your proxy group?**

7 A. While I recognize Entergy Corporation has operations in Arkansas, the company was
8 eliminated from my proxy group because it had negative consensus analyst earnings
9 growth rate projections that would be applied to the DCF-based models. Although not a
10 specific screening criterion, negative growth rates are incompatible with the assumption
11 of a going concern in perpetuity. In addition, Entergy Corporation's acquisition of the

1 Union Power Station from Entegra TC LLC, which was completed on March 3, 2016,¹⁶
2 overlaps the 180-day stock price averaging period used in my DCF analyses as well as
3 the calculation period of the Beta coefficients used in my Capital Asset Pricing Model
4 analyses (see Section V below). Consequently, I exclude Entergy Corporation from the
5 proxy group because it fails my screening criteria that eliminate companies that are party
6 to significant transactions.

V. COST OF EQUITY ESTIMATION

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

8 A. Regulated utilities principally use common stock and long-term debt to finance their
9 permanent property, plant, and equipment. The rate of return (“ROR”) for a regulated
10 utility is based on its weighted average cost of capital, in which the costs of the individual
11 sources of capital are weighted by their respective book values. As noted above, the Cost
12 of Equity is market-based and, therefore, must be estimated based on observable market
13 information.

14 **Q. How is the market-required ROE estimated?**

15 A. Because the Cost of Equity is not directly observable, it must be estimated based on both
16 quantitative and qualitative information. Although a number of empirical models have
17 been developed for that purpose, all are subject to limiting assumptions or other
18 constraints. Consequently, many finance texts recommend using multiple approaches to
19 estimate the Cost of Equity.¹⁷ When faced with the task of estimating the Cost of Equity,

¹⁶ See, Entergy Louisiana LLC, SEC Form 8-K, March 3, 2016.

¹⁷ See, e.g., Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed., 1994, at

analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed and, therefore, rely on multiple analytical approaches.

As a practical matter, no individual model is more reliable than all others under all market conditions, and equity analysts and investors tend to use multiple methodologies in developing their return requirements. Therefore, it is both prudent and appropriate to use multiple methodologies in order to mitigate the effects of assumptions and inputs associated with any single approach. As such, I have considered the results of the Constant Growth and Multi-Stage forms of the DCF model, the Capital Asset Pricing Model, and the Bond Yield Plus Risk Premium approach.

Constant Growth DCF Model

Q. Please describe the Constant Growth DCF approach.

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

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_\infty}{(1+k)^\infty} \text{ Equation [1]}$$

where P_0 represents the current stock price, $D_1 \dots D_\infty$ represent expected future dividends, and k is the discount rate, or required ROE. Equation [1] is a standard present value calculation that can be simplified and rearranged into the familiar form:

$$k = \frac{D(1+g)}{P_0} + g \text{ Equation [2]}$$

341, and Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd ed., 2000, at 214.

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

Q. What principal assumptions are required under the Constant Growth DCF model?

A. The Constant Growth DCF model assumes: (1) earnings, book value, and dividends all grow at the same, constant rate in perpetuity; (2) the dividend payout ratio remains constant; (3) the discount rate is greater than the expected growth rate; and (4) the P/E multiple, and the estimated Cost of Equity both remain constant in perpetuity.

Q. What market data did you use to calculate the dividend yield in your DCF model?

A. The dividend yield is based on the proxy companies’ current annualized dividend and average closing stock prices over the 30-, 90-, and 180-trading day periods as of July 15, 2016.

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

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

Q. Did you make any adjustments to the dividend yield to account for expected growth in dividends during the current year?

A. Yes, I did. Since utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be

1 evenly distributed over calendar quarters. Given that assumption, it is appropriate to
2 calculate the expected dividend yield by applying one-half of the long-term growth rate
3 to the current dividend yield. That adjustment ensures that the expected dividend yield is,
4 on average, representative of the coming twelve-month period, and does not overstate the
5 dividends to be paid during that time.

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

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

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

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

1 • The average daily closing prices for the 30-trading days, 90-trading days, and
2 180-trading days ended July 15, 2016, for the term P_0 ; and

3 • The annualized dividend per share as of July 15, 2016 for the term D_0 .

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

5 • The Zacks consensus long-term earnings growth estimates;

6 • The First Call consensus long-term earnings growth estimates; and

7 • The Value Line earnings growth estimates.¹⁸

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

¹⁸ Zacks Investment Research and Thomson Reuters First Call are widely known for providing consensus EPS estimates compiled from equity analysts. Value Line Investment Survey is a widely referenced financial publication.

1 **Q. What are the results of your DCF analyses?**

2 A. My Constant Growth DCF results are summarized in Table 2 below (*see* also Direct
3 Exhibit RBH-1). As discussed in more detail in Section VII, the proxy companies have
4 traded at P/E ratios well in excess of their historical average and for a time, in excess of
5 the market. Because that condition is unlikely to persist, it violates two principal
6 assumptions of the Constant Growth DCF model, *i.e.*, that the P/E ratio will not change,
7 and that the ROE stays constant in perpetuity. As such, the model's results should be
8 viewed with considerable caution.

Table 2: Mean DCF Results

	Mean Low	Mean	Mean High
30-Day Average	8.24%	8.68%	9.08%
90-Day Average	8.39%	8.83%	9.23%
180-Day Average	8.59%	9.03%	9.43%

9 **Q. Have you reviewed the model structure and inputs used by Staff in Docket Nos. 13-**
10 **028-U and 15-015-U?**

11 A. Yes, I have. In Docket No. 13-028-U (Entergy Arkansas), Staff Witness Daniel
12 calculated the Constant Growth DCF results by reference to four separate growth rates,
13 referred to as "g1" through "g4":

14 g1: Average of Value Line's, Zack's, and Yahoo's projected five-year annual EPS
15 growth rates;

16 g2: Average of Value Line's projected five-year annual growth in BVPS, DPS,
17 and EPS;

18 g3: Value Line's five-year historical EPS growth; and

1 g4: Average projected Gross Domestic Product (“GDP”) growth rate as reported
2 by the CBO for 2013-2017¹⁹

3 In Docket No. 15-015-U (Entergy Arkansas), Staff Witness Davis considered a
4 somewhat different array of growth rates:

5 g1: Value Line's projected five-year growth in EPS;

6 g2: Value Line's projected five year dividend calculation (2019);

7 g3: Value Line's five-year historical EPS growth; and

8 g4: Average of Value Line's ten-year historical EPS, BVPS and DPS growth.²⁰

9 I agree with Staff that Value Line, Zacks, and Yahoo²¹ are reasonable sources of
10 earnings growth estimates; as discussed earlier, I applied the same sources in my DCF
11 analyses. There is a significant body of academic research indicating that projected
12 earnings growth is the best predictor of stock prices and, therefore, the appropriate
13 measure of growth for the purpose of the DCF model. For example, Dr. Robert Harris
14 noted that “a growing body of knowledge shows that analysts’ earnings forecasts are
15 indeed reflected in stock prices.” Citing Cragg and Malkiel, Dr. Harris noted that those
16 authors “found that the evaluations of companies that analysts make are the sorts of ones
17 on which market valuation is based.”²² Similarly, Brigham, Shome and Vinson noted
18 that “evidence in the current literature indicates that (1) analysts’ forecasts are superior to

¹⁹ Docket No. 13-028-U, Direct Testimony of Robert Daniel, at 32.

²⁰ Docket No. 15-015-U, Direct Testimony of Kim O. Davis, at 32.

²¹ The long-term growth rates provided by Yahoo are the same as the First Call growth rates I rely on in my DCF analyses.

²² Robert S. Harris, Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rate of Return, Financial Management, Spring 1986, at 59.

1 forecasts based solely on time series data; and (2) investors do rely on analysts'
2 forecasts.”²³

3 Regarding historical growth rates, the research of Carleton and Vander Weide
4 demonstrates that earnings growth projections have a statistically significant relationship
5 to stock valuation levels, while the other historical and projected growth rates that were
6 assessed (dividend growth and book value growth) do not.²⁴ Consequently, earnings
7 growth projections are the appropriate estimate for the purpose of the Constant Growth
8 DCF model.

9 That relationship makes sense, since book value can increase over time only
10 through the addition of retained earnings, or with the issuance of new equity. Both of
11 those factors are derivative of earnings: retained earnings increases with the amount of
12 earnings not distributed as dividends; and the price at which new equity is issued is a
13 function of the EPS and the then-current Price/Earnings ratio. Similarly, as noted earlier
14 earnings are the fundamental driver of a company’s ability to pay dividends. Corporate
15 decisions to manage the dividend payout ratio for the purpose of minimizing future
16 dividend reductions, or to signal future earnings prospects can influence dividend growth
17 rates in near-term periods in a manner that is disproportionate to earnings growth.

18 I also note that under the strict assumptions of the Constant Growth DCF model,
19 earnings, dividends, and stock prices all grow at the same constant rate. Under those
20 assumptions, the assumed growth rate equals the rate of capital appreciation (*i.e.*, the
21 stock price growth rate). Given that investors tend to value common equity on the basis

²³ 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, at 36.

²⁴ Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management, Spring 1988.

of P/E ratios, the expected (and required) Return on Equity is a function of the long-term growth in earnings, not dividends or book value.

Lastly, to the extent that analysts such as those included in the Yahoo consensus earnings growth estimates already consider historical information in arriving at their conclusions and recommendations, any additional consideration would over-weight the informational content of historical growth rates.

Multi-Stage DCF Model

Q. What other form of the DCF model have you used to estimate the Company's Cost of Equity?

A. To address certain limiting assumptions underlying the Constant Growth form of the DCF model, I also considered the Multi-Stage (three-stage) DCF Model. The Multi-Stage model, which is an extension of the Constant Growth form, enables the analyst to specify growth rates over three distinct stages. As with the Constant Growth form of the DCF model, the Multi-Stage form defines the Cost of Equity as the discount rate that sets the current price equal to the discounted value of future cash flows. Unlike the Constant Growth form, however, the Multi-Stage model must be solved in an iterative fashion.²⁵

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

A. The Multi-Stage DCF model sets the subject company's stock price equal to the present value of future cash flows received over three "stages." In the first two stages, "cash flows" are defined as projected dividends. In the third stage, "cash flows" equal both dividends and the expected price at which the stock will be sold at the end of the period

²⁵ That is, an iterative function must be used to determine the internal rate of return such that present value of cash flows equals the subject company's stock price.

(i.e., the terminal price). I calculated the terminal price based on the Gordon model,²⁶ which defines the price as the expected dividend divided by the difference between the Cost of Equity (i.e., the discount rate) and the long-term expected growth rate. In essence, the terminal price is defined by the present value of the remaining “cash flows” in perpetuity. In each of the three stages, the dividend is the product of the projected earnings per share and the expected dividend payout ratio. A summary description of the model is provided in Table 3 (below).

Table 3: Multi-Stage DCF Structure

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

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

A. The principal benefits relate to the flexibility provided by the model’s formulation. Since the model provides the ability to specify near, intermediate, and long-term growth rates, for example, it avoids the sometimes limiting assumption that the subject company will

²⁶ See Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 48-52.

1 grow at the same, constant rate in perpetuity. In addition, by calculating the dividend as
2 the product of earnings per share and the dividend payout ratio, the model enables
3 analysts to reflect assumptions regarding the timing and extent of changes in the payout
4 ratio to reflect, for example, increases or decreases in expected capital spending, or
5 transition from current payout levels to long-term expected levels. In that regard,
6 because the model relies on multiple sources of earnings growth rate assumptions, it is
7 not limited to a single source, such as Value Line, for all inputs, and mitigates the
8 potential bias associated with relying on a single source of growth estimates.²⁷

9 The model also enables analysts to assess the reasonableness of the inputs and
10 results by reference to certain market-based metrics. For example, the estimated terminal
11 stock price can be divided by the expected EPS (in the terminal year) to calculate an
12 average P/E ratio. Similarly, the terminal P/E ratio can be divided by the terminal growth
13 rate to develop a Price to Earnings Growth (“PEG”) ratio. To the extent that either the
14 projected P/E or PEG ratios are inconsistent with either historical or expected levels, it
15 may indicate incorrect or inconsistent assumptions within the balance of the model.

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

17 A. I applied the Multi-Stage DCF model to the proxy group described earlier in my Direct
18 Testimony. My assumptions with respect to the various model inputs are described in
19 Table 4 (below).

²⁷ See Harris and Marston, Estimating Shareholder Risk Premia Using Analysts’ Growth Forecasts, Financial Management 21 (Summer 1992).

Table 4: Multi-Stage DCF Model Assumptions

Stage	Initial	First	Transition	Terminal
Stock Price	30-, 90-, and 180-day average stock price as of July 15, 2016 Direct Exhibit RBH-2 Col. [1]			
Earnings Growth	2015 actual EPS escalated by Period 1 growth rate Direct Exhibit RBH-2 Col. [14]	EPS growth as average of (1) Value Line; (2) Zacks; and (3) First Call Direct Exhibit RBH-2 Col [5] applied to Cols. [15] – [19]	Transition to Long-term GDP ²⁸ growth Direct Exhibit RBH-2 applied to Cols. [20] – [24]	Long-term GDP growth Direct Exhibit RBH-2 Col [6] applied to Cols. [25] – [30]
Payout Ratio	Value Line company-specific	Value Line company-specific Direct Exhibit RBH-2 Cols. [31] – [35]	Transition to long-term industry payout ratio Direct Exhibit RBH-2 Cols. [36] – [40]	Long-term expected payout ratio Direct Exhibit RBH-2 Cols. [41] – [46]
Terminal Value				Expected dividend in final year divided by solved Cost of Equity less long-term growth rate Direct Exhibit RBH-2 Col. [63]

1 **Q. How did you calculate the long-term Gross Domestic Product (“GDP”) growth rate?**

2 A. The long-term growth rate of 5.27 percent is based on the real GDP growth rate of 3.24
3 percent from 1929 through 2015,²⁹ and an inflation rate of 1.97 percent. The GDP
4 growth rate is calculated as the compound growth rate in the chain-weighted GDP for the
5 period from 1929 through 2015. The rate of inflation of 1.97 percent is an average of two
6 components: (1) the compound annual forward rate starting in ten years (*i.e.*, 2026, which
7 is the beginning of the terminal period) and is based on the 180-day average projected
8 inflation based on the spread between yields on long-term nominal Treasury Securities
9 and long-term Treasury Inflation Protected Securities, known as the “TIPS spread” of
10 1.75 percent;³⁰ and (2) the projected Blue Chip Financial Forecast of CPI for 2023 – 2027
11 of 2.20 percent.³¹

12 In essence, the real GDP growth rate projection is based on the assumption that
13 absent specific knowledge to the contrary, it is reasonable to assume that over time real
14 GDP growth will revert to its long-term mean. Moreover, since estimating the Cost of
15 Equity is a market-based exercise, it is important to reflect the sentiments and
16 expectations of investors to the extent possible. In that important respect, the TIPS
17 spread represents the collective views of investors regarding long-term inflation
18 expectations. Equally important, by using forward yields we are able to infer the level of
19 long-term inflation expected by investors as of the terminal period of the Multi-Stage
20 model (that is, ten years in the future).

²⁹ See Bureau of Economic Analysis, “Current-Dollar and ‘Real’ Gross Domestic Product,” June 28, 2016 update.

³⁰ See Board of Governors of the Federal Reserve System, “Table H.15 Selected Interest Rates.”

³¹ See *Blue Chip Financial Forecast*, Vol. 35 No. 6, June 1, 2016, at 14.

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

2 A. As noted in Table 4, for the first two periods, I relied on the first year and long-term
3 projected payout ratios reported by Value Line³² for each of the proxy companies. I then
4 assumed that by the end of the second period (*i.e.*, the end of year 10), the payout ratio
5 will converge to the historical industry average payout ratio of 66.88 percent.³³

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

7 A. Although I performed a series of analyses in which the terminal value is calculated based
8 on the assumed long-term nominal GDP growth rate, I also performed a series of
9 analyses in which the terminal value is based on the current P/E ratio.³⁴ Table 5 (*see also*
10 Direct Exhibit RBH-2) presents those Multi-Stage DCF analysis results.

Table 5: Multi-Stage DCF Model Results

	Mean Low	Mean	Mean High
30-Day Average	8.91%	9.17%	9.40%
90-Day Average	9.33%	9.59%	9.82%
180-Day Average	9.86%	10.12%	10.35%

11 ***CAPM Analysis***

12 **Q. Please briefly describe the general form of the CAPM.**

13 A. The CAPM is a risk premium method that estimates the Cost of Equity for a given
14 security as a function of a risk-free return plus a risk premium (to compensate investors
15 for the non-diversifiable or “systematic” risk of that security). As shown in Equation [3],

³² As reported in the Value Line Investment Survey company reports as “All Div’ds to Net Prof.”

³³ Source: Bloomberg Professional

³⁴ Source: SNL Financial. Defined as the 30-day average of the proxy group P/E ratio, calculated as an index.

the CAPM is defined by four components, each of which theoretically must be a forward-looking estimate:

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

where:

K_e = the required market ROE;

β = Beta of an individual security;

r_f = the risk free rate of return; and

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

In Equation [3], the term $(r_m - r_f)$ represents the Market Risk Premium.³⁵ According to the theory underlying the CAPM, since unsystematic risk can be diversified away by adding securities to investment portfolios, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

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

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

³⁵

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

1 market. Intuitively, higher Beta coefficients indicate that the subject company's returns
2 have moved in tandem with the overall market. Consequently, a company with a Beta
3 coefficient of 1.00 is as risky as the market.

4 **Q. What estimates of the risk-free rate did you include in your CAPM analysis?**

5 A. I used two different measures of the risk-free rate: (1) the current 30-day average yield
6 on 30-year Treasury bonds (*i.e.*, 2.35 percent); and (2) the near-term (that is, through the
7 fourth calendar quarter of 2017) projected 30-year Treasury yield (*i.e.*, 3.00 percent).³⁶

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

9 A. Investors in utility equity securities commit capital to an investment that will produce
10 cash flows over an indefinite time period. In determining the security most relevant to
11 the application of the CAPM, it is important to select the term (or maturity) that best
12 matches the life of the underlying investment.³⁷ Electric utilities typically are long-
13 duration investments and, as such, the 30-year Treasury yield is more suitable for the
14 purpose of calculating the Cost of Equity.³⁸

³⁶ See *Blue Chip Financial Forecast*, Vol. 35 No. 7, July 1, 2016, at 2.

³⁷ See, for example, 2011 CFA Curriculum Level I, Volume 4 at 52.

³⁸ In finance, "duration" (whether for bonds or equity) typically refers to the present value weighted time to receive the security's cash flows. In terms of its practical application, duration is a measure of the percentage change in the market price of a given stock in response to a change in the implied long-term return of that stock. A common investment strategy is to match the duration of investments with the term of the underlying asset in which the funds are being invested, or the term of a liability being funded. Since the term of the risk-free rate should match the life of the underlying investment, it is appropriate to consider the Equity Duration of the subject company when selecting the Treasury yield used as the risk-free rate in the CAPM.

1 **Q. Please describe your *ex-ante* (i.e., forward-looking) approach to estimating the**
2 **Market Risk Premium.**

3 A. The approach is based on the market-required return, less the current 30-year Treasury
4 yield. To estimate the market required return, I calculated the market capitalization
5 weighted average total return based on the Constant Growth DCF model. To do so, I
6 relied on data from two sources: (1) Bloomberg; and (2) Value Line.³⁹ With respect to
7 Bloomberg-derived growth estimates, I calculated the expected dividend yield (using the
8 same one-half growth rate assumption described earlier), and combined that amount with
9 the projected earnings growth rate to arrive at the market capitalization weighted average
10 DCF result. I performed that calculation for each of the S&P 500 companies for which
11 Bloomberg provided consensus growth rates. I then subtracted the current 30-year
12 Treasury yield from that amount to arrive at the market DCF-derived *ex-ante* market risk
13 premium estimate. In the case of Value Line, I performed the same calculation, again
14 using all companies for which five-year earnings growth rates were available. The results
15 of those calculations are provided in Direct Exhibit RBH-3.

16 **Q. How did you apply your expected Market Risk Premium and risk-free rate**
17 **estimates?**

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

³⁹ See Direct Exhibit RBH-3.

1 **Q. What Beta coefficient did you use in your CAPM model?**

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

7 **Q. What are the results of your CAPM analyses?**

8 A. As shown in Table 6 (below) the CAPM analyses suggest an ROE range of 8.84 percent
9 to 11.40 percent (*see* also Direct Exhibit RBH-5).

Table 6: Summary of CAPM Results⁴⁰

	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
<i>Average Bloomberg Beta Coefficient</i>		
Current 30-Year Treasury (2.35%)	8.84%	9.25%
Near-Term Projected 30-Year Treasury (3.00%)	9.49%	9.89%
<i>Average Value Line Beta Coefficient</i>		
Current 30-Year Treasury (2.35%)	10.26%	10.75%
Near-Term Projected 30-Year Treasury (3.00%)	10.90%	11.40%

10 ***Bond Yield Plus Risk Premium Analysis***

11 **Q. Please describe the Bond Yield Plus Risk Premium approach.**

12 A. This approach is based on the basic financial tenet that equity investors bear the residual
13 risk associated with ownership and therefore require a premium over the return they
14 would have earned as a bondholder. That is, since returns to equity holders are more

⁴⁰ See Direct Exhibit RBH-5.

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

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

10 A. As suggested above, I first defined the Risk Premium as the difference between the
11 authorized ROE and the then-prevailing level of long-term (*i.e.*, 30-year) Treasury yield.
12 I then gathered data for 1,475 electric utility rate proceedings between January 1980 and
13 July 15, 2016. In addition to the authorized ROE, I also calculated the average period
14 between the filing of the case and the date of the final order (the “lag period”). In order
15 to reflect the prevailing level of interest rates during the pendency of the proceedings, I
16 calculated the average 30-year Treasury yield over the average lag period (approximately
17 200 days).

18 Because the data cover a number of economic cycles, the analysis also may be
19 used to assess the stability of the Equity Risk Premium. Prior research, for example, has

1 shown that the Equity Risk Premium is inversely related to the level of interest rates.⁴¹

2 That analysis is particularly relevant given the relatively low, but increasing level of
3 current Treasury yields.

4 **Q. How did you analyze the relationship between interest rates and the Equity Risk**
5 **Premium?**

6 A. The basic method used was regression analysis, in which the observed Equity Risk
7 Premium is the dependent variable, and the average 30-year Treasury yield is the
8 independent variable. Relative to the long-term historical average, the analytical period
9 includes interest rates and authorized ROEs that are quite high during one period (*i.e.*, the
10 1980s) and that are quite low during another (*i.e.*, the post-Lehman bankruptcy period).
11 To account for that variability, I used the semi-log regression,⁴² in which the Equity Risk
12 Premium is expressed as a function of the natural log of the 30-year Treasury yield
13 (“T₃₀”):

14
$$RP = \alpha + \beta(\text{LN}(T_{30})) \text{ Equation [5]}^{43}$$

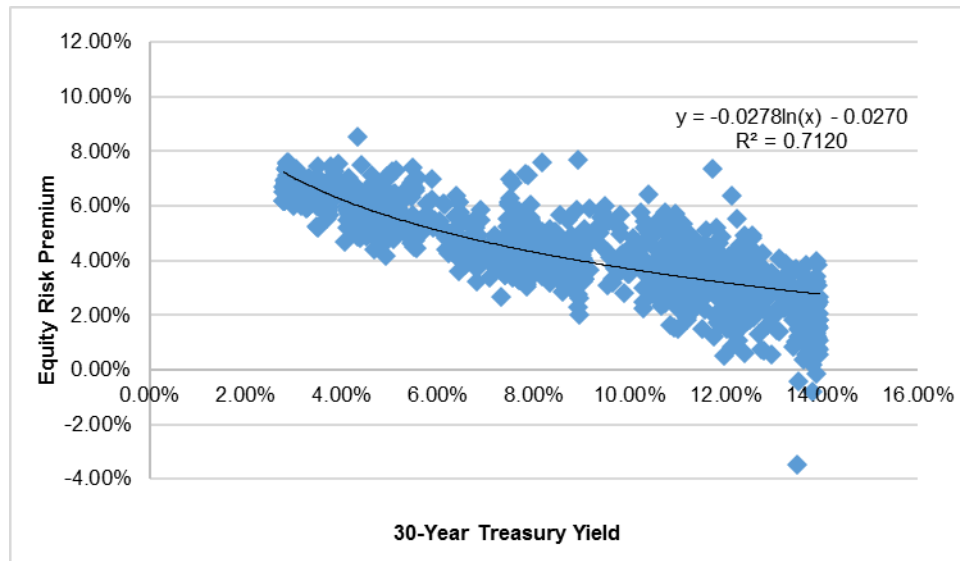
⁴¹ See, e.g., Robert S. Harris and Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, Summer 1992, at 63-70; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at 33-45; and Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, *An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry*, Financial Management, Autumn 1995, at 89-95.

⁴² The semi-log regression transforms the observed Treasury yields to their natural log, but the observed Equity Risk Premium is not so transformed. In the case of historically low or high interest rates, the semi-log model allows us to examine the relationship between a proportional change in interest rates, rather than an absolute basis point change, and the Equity Risk Premium.

⁴³ In Equation [5], “α” is the constant term and “β” is the slope coefficient. “LN” represents the natural logarithm.

As shown on Figure 1 (below), the semi-log form is useful when measuring an absolute change in the dependent variable (in this case, the Risk Premium) relative to a proportional change in the independent variable (the 30-year Treasury yield).

Figure 1: Equity Risk Premium⁴⁴



As Figure 1 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 4.51 percent would significantly understate the Cost of Equity and produce results well below any reasonable estimate. Based on the regression coefficients in Figure 1, however, the implied ROE is between 10.03 percent and 10.39 percent (*see* Table 7 and Direct Exhibit RBH-6).

⁴⁴ See Direct Exhibit RBH-6.

Table 7: Summary of Bond Yield Plus Risk Premium Results

	Return on Equity
Current 30-Year Treasury (2.35%)	10.06%
Near-Term Projected 30-Year Treasury (3.00%)	10.03%
Long-Term Projected 30-Year Treasury (4.45%)	10.39%

VI. BUSINESS RISKS AND OTHER CONSIDERATIONS

1 **Q. Do the mean DCF, CAPM, and Risk Premium results for the proxy group provide**
2 **an appropriate estimate for the Cost of Equity for OG&E?**

3 A. No, the mean results do not necessarily provide an appropriate estimate of OG&E's Cost
4 of Equity. In my view, there are additional factors that must be taken into consideration
5 when determining where OG&E's Cost of Equity falls within the range of results,
6 including: (1) the risk associated with cost recovery for compliance with environmental
7 regulations; (2) OG&E's planned capital investment program; (3) flotation costs; and (4)
8 the effect, if any, of OG&E's rate mechanisms on the Company's relative risk profile.
9 Those factors, which are discussed below, should be considered in terms of their overall
10 effect on OG&E's business risk and investor earnings and, therefore, its Cost of Equity.

11 ***Cost Recovery for Environmental Compliance Plans***

12 **Q. Please provide an overview of the recovery risks associated with OG&E's**
13 **environmental compliance plan.**

14 A. OG&E announced a compliance plan to comply with the Environmental Protection
15 Agency's ("EPA") Regional Haze Rule ("RHR") and the Mercury and Air Toxics
16 Standards ("MATS") Rule. That plan includes the installation of scrubbers on the two

1 Sooner coal-fired generating units, the installation of Activated Carbon Injection on all
2 five of OG&E's existing coal-fired units, and the ultimate conversion of Muskogee Units
3 4 and 5 to natural gas-fired units. This plan will reduce OG&E's coal-fired generation
4 from approximately 2,500 megawatts to 1,500 megawatts by the year 2019.

5 In a 2014 report, S&P noted that power generators have addressed environmental
6 compliance for coal-fired generating plants by implementing three strategies: (1) adding
7 environmental controls to coal-fired plants; (2) switching to burning natural gas; or (3)
8 retiring coal-fired plants outright.⁴⁵ To the extent those strategies increase costs for
9 utilities, the companies' credit profiles may come under pressure, especially without cost
10 recovery mechanisms. As noted by S&P:

11 Higher costs could become a key credit issue for regulated utilities given
12 the importance of managing customer rate increases, which has
13 implications for relations with regulators, as well as economic and
14 political ramifications that could heighten business risk. Any rating
15 actions would likely not occur until there is further clarity from a utility
16 about early plant retirements and related cost recovery. For utilities that
17 have significant coal-fired generation, recovery mechanisms will be
18 extremely important to continue to support operating cash flow and
19 maintain robust financial measures.⁴⁶

20 **Q. What are your conclusions regarding the cost recovery risk associated with**
21 **OG&E's environmental compliance plan?**

22 A. There are substantial uncertainties with regard to funding the capital asset investments
23 required to meet environmental regulations. In Cause No. PUD 201400229, OG&E
24 requested from the Oklahoma Corporation Commission ("OCC") approval of its
25 environmental compliance plan, including associated cost recovery. However, on

⁴⁵ 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), at 2.

⁴⁶ *Ibid.*

1 December 2, 2015, the OCC denied the Company's application in that Cause.⁴⁷ In a
2 subsequent proceeding (Cause No. 201600059), OG&E received approval of its decision
3 to install scrubbers at the Sooner facility.⁴⁸ However, in that order, the OCC specifically
4 stated that "cost recovery of the scrubbers, including but not limited to, the mitigation of
5 cost, the appropriate level of funding, and the appropriate funding mechanism shall be
6 ultimately determined in a subsequent proceeding."⁴⁹ Also, the OCC has not yet
7 preapproved the other portions of the environmental compliance plan or granted cost
8 recovery for those other portions. In Arkansas, while OG&E has begun to recover its
9 costs for some of the environmental compliance projects, the cost recovery associated
10 with scrubbers at Sooner and the conversion of the Muskogee units will be subject to
11 future regulatory proceedings.

12 As a result, the Company faces significant uncertainty associated with its
13 environmental compliance plan and its ability to recover the associated costs in a timely
14 manner. Consistent with observations expressed in recent equity analyst reports,⁵⁰ such
15 conditions increase the risk faced by shareholders and, therefore, increase the Company's
16 required ROE. Because investors consider such increased risks in establishing their
17 return requirements, the Commission likewise should consider the effect of the additional
18 risk associated with environmental mandates in determining OG&E's authorized ROE.

⁴⁷ See, Order No. 647346, Cause No. PUD 201400229, Application of Oklahoma Gas and Electric Company for Commission Authorization of a Plan to Comply with the Federal Clean Air Act and Cost Recovery; and for Approval of the Mustang Modernization and Cost Recovery, issued December 2, 2015, at 22.

⁴⁸ See Order No. 652208, Cause No. 201600059, Application of Oklahoma Gas and Electric Company for Commission Approval of the Company's Plan to Install Dry Scrubbers at the Sooner Generating Facility, issued April 28, 2016.

⁴⁹ *Id.* at 12.

⁵⁰ See, for example, Wells Fargo Equity Research, OGE Energy Corp., *OGE: Still Waiting for the Skies to Part*, November 5, 2015 at 1.

Capital Expenditures

Q. Please summarize OG&E's capital expenditure plans.

A. OG&E currently plans to invest approximately \$2.85 billion of additional capital over the period including 2016-2020. That amount includes environmental compliance expenditures, plant modernization costs, and additional infrastructure investments in OG&E's distribution, transmission, and generation systems.⁵¹

Q. Do credit rating agencies recognize risk associated with increased capital expenditures?

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

For regulated utilities, infrastructure spending leads to rate-base growth. But for a company to preserve its financial strength, it must be able to quickly begin recovering this spending.

With all these incremental investments, a perfect regulatory storm could arise if costs for fuel and purchased gas rise sharply at the same time that utilities need to raise rates to recover the costs related to infrastructure spending for mandated environmental upgrades, new generation construction, renewable requirements, or pipeline replacements. If this happens, regulators could decide to allow only partial recovery of incurred capital costs through rate increases to reduce rate spikes for customers and possibly defer the remaining balance. Because deferrals do not provide the cash flow needed for utilities to service their debt obligations, utility credit quality could be affected. To retain critical access to the debt markets, utilities will need to continue to seek and receive supportive cost recovery from regulators.⁵²

⁵¹ See OGE Energy Corp., SEC Form 10-Q for the fiscal quarter ended June 30, 2016, at 27.

⁵² Standard & Poor's, *U.S. Utilities' Capital Spending is Rising, and Cost-Recovery is Vital*, RatingsDirect, May 14, 2012, at 6.

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

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

9 A. The allowed ROE should enable the subject utility to finance capital expenditures and
10 working capital requirements at reasonable rates, and to maintain its financial integrity in
11 a variety of economic and capital market conditions. As discussed throughout my Direct
12 Testimony, a return that is adequate to attract capital at reasonable terms enables the
13 utility to provide safe, reliable service while maintaining its financial soundness. To the
14 extent a utility is provided the opportunity to earn its market-based cost of capital, neither
15 customers nor shareholders should be disadvantaged.

16 The ratemaking process is based on the principle that, in order for investors and
17 companies to commit the capital needed to provide safe and reliable utility services, the
18 utility must have the opportunity to recover the return of, and the market-required return
19 on, invested capital. Regulatory commissions recognize that since utility operations are
20 capital intensive, regulatory decisions should enable the utility to attract capital at
21 reasonable terms; doing so balances the long-term interests of the utility and its
22 ratepayers.

1 Further, the financial community carefully monitors utility companies' current
2 and expected financial conditions, as well as the regulatory environment in which those
3 companies operate. In that respect, the regulatory environment is one of the most
4 important factors considered in both debt and equity investors' assessments of risk. That
5 is especially important during periods in which the utility expects to make significant
6 capital investments and, therefore, may require access to capital markets.

7 **Q. How do these considerations apply to OG&E and its capital spending plans?**

8 A. It is clear that OG&E's capital expenditure program is significant, and is an important
9 concern for investors. In that regard, OGE Energy Corp., OG&E's parent, believes the
10 risks associated with capital expenditures are of sufficient interest to be disclosed in its
11 Securities and Exchange Commission 10-K filings. The "Risk Factors" section of OGE
12 Energy Corp.'s 2015 10-K filing noted:

13 *We may not be able to recover the costs of our substantial planned*
14 *investment in capital improvements and additions.*

15 OG&E's business plan calls for extensive investment in capital
16 improvements and additions, including the installation of environmental
17 upgrades and retrofits and modernizing existing infrastructure as well as
18 other initiatives. Significant portions of OG&E's facilities were
19 constructed many years ago. Older generation equipment, even if
20 maintained in accordance with good engineering practices, may require
21 significant capital expenditures to maintain efficiency, to comply with
22 changing environmental requirements or to provide reliable operations.
23 OG&E currently provides service at rates approved by one or more
24 regulatory commissions. If these regulatory commissions do not approve
25 adjustments to the rates OG&E charges, it would not be able to recover the
26 costs associated with its planned extensive investment. This could
27 adversely affect OG&E's financial position and results of operations.
28 While OG&E may seek to limit the impact of any denied recovery by
29 attempting to reduce the scope of its capital investment, there can be no
30 assurance as to the effectiveness of any such mitigation efforts,

1 particularly with respect to previously incurred costs and commitments.⁵³

2
3 It also is clear that the financial community recognizes the need for timely cost recovery
4 for those capital expenditures. For example, in an October 2015 report regarding OG&E,
5 Moody's specifically noted that absent sufficient regulatory support and timely cost
6 recovery, the Company's sizable capital spending program negatively affects its financial
7 metrics. As Moody's explained:

8 Cost recovery and timely regulatory rate approvals will be increasingly
9 important over the next five years as OG&E embarks on a \$1.1 billion
10 capital plan to fit its generation fleet for environmental compliance
11 standards.

12 ...

13 The execution of these projects and securing timely cost recovery for
14 investments of this magnitude, duration and importance is the greatest
15 challenge to OG&E's credit profile over the next five years. Beyond the
16 traditional regulatory risk that exists for about \$305 million of annual base
17 capex and \$130 million of transmission capex through 2018, OG&E is
18 attempting to address recovery of its environmental expenditures
19 according to allowances made under HB 1910, which pertain to pre-
20 approval of capital expenditures related to the Federal Clean Air Act,
21 construction of new generation facilities and the implementation of
22 interim rates to recover such costs. As such, OG&E filed a plan with the
23 OCC asking the commission to predetermine the prudence of certain costs
24 associated with the environmental remediation and for approval of
25 recovery mechanisms for associated costs (including recovery of
26 Construction Work In Progress). The result of this application and OCC's
27 ultimate recovery decisions will dictate the impact to OG&E's key
28 financial metrics and credit profile in the years ahead.

29 While OG&E has provided the aforementioned plans to the OCC for over
30 one year, there has yet to be regulatory clarity provided to the company for
31 these environmental investments. We view this as a credit negative since
32 the regulatory overhang and uncertainty is providing OG&E with a small
33 window of opportunity to adjust plans if needed. We expect that these
34 investments will commence in time to comply with Federal regulations,
35 therefore reducing financial metrics, which could pressure the rating over

⁵³

See OGE Energy Corp., SEC Form 10-K, for the Fiscal Year Ended December 31, 2015, at 16.

1 the intermediate-term.⁵⁴

2 From the investor's perspective, the additional pressure on cash flows associated with
3 high levels of capital expenditures exerts corresponding pressure on credit metrics and,
4 therefore, credit ratings. That view also is consistent with certain observations discussed
5 in Section III of my Direct Testimony: (1) the benefits of maintaining a strong financial
6 profile are significant when capital access is required; and (2) the Commission's decision
7 in this proceeding will have a direct bearing on the Company's credit profile, and on its
8 ability to access the capital needed to fund its investments.⁵⁵

9 **Q. Have you also considered the relationship between capital expenditures and the**
10 **earned return on common equity?**

11 A. Yes. In particular, I considered the relationship between capital expenditures and the
12 "DuPont" formula determinants of earned ROE. The DuPont formula is commonly used
13 by financial analysts to monitor specific operational and financial drivers of a company's
14 earned ROE. The formula expands the calculation of the Return on Common Equity into
15 the product of three financial metrics: (1) the Profit Margin (net income/revenues); (2)
16 Asset Turnover (revenues/net plant); and (3) the Equity Multiplier (net plant/equity).⁵⁶

17 As Schedule RBH-10 demonstrates, based on the proxy companies, the Asset
18 Turnover rate declined from 2003 through 2015 (the historical period covered by Value
19 Line) and is expected to remain at its current level through Value Line's 2019 – 2021
20 projection period. Over that same period, according to Value Line data, average Net

⁵⁴ Moody's Investor Service, *Credit Opinion: Oklahoma Gas & Electric Company*, October 30, 2015, at 2-3.
⁵⁵ Moody's, Global Infrastructure Finance, Rating Methodology: Regulated Electric and Gas Utilities, August 2009, at 7.

⁵⁶ That is, $ROE = (\text{earnings} / \text{revenue}) \times (\text{revenue} / \text{assets}) \times (\text{assets} / \text{equity})$.

1 Plant is expected to experience a cumulative increase of approximately 207.91percent.
2 Since, as noted above, the utility industry is going through a period of increased capital
3 investment, the lag between the addition of net plant and revenue generated by those
4 investments dilute the Asset Turnover ratio, at least in the near term.

5 To gain an additional perspective on the relationship between plant additions and
6 Asset Turnover, I performed a regression analysis in which the annual change in the
7 Asset Turnover rate was the dependent variable, and the annual change in Net Plant was
8 the independent variable. As shown in Direct Exhibit RBH-10, that analysis indicates a
9 statistically significant negative relationship between the two variables, such that as
10 annual net plant increases, the Asset Turnover ratio decreases. This, in turn, suggests that
11 an increase in capital expenditures also negatively affects the Return on Common Equity,
12 causing greater financial stress to the utility. Recall that under the “DuPont” formula, the
13 Asset Turnover ratio is a component of the Return on Common Equity. As capital
14 expenditures (*i.e.*, net plant) increase, absent a proportionate increase in revenues, the
15 Asset Turnover ratio will decrease, resulting in a decrease in the Return on Common
16 Equity. To the extent investors value companies such as OG&E based on earnings and
17 cash flow, this additional financial strain is a key concern.

18 **Q. What are your conclusions regarding the effect of OG&E’s capital investment plan**
19 **on its risk profile and cost of capital?**

20 A. OG&E’s capital expenditure program is significant and will place additional pressure on
21 its cash flows making regulatory support more important in terms of OG&E’s ability to
22 finance these expenditures and earn a reasonable return on its planned investments. As
23 such, the Commission’s decision in this proceeding will have a direct bearing on

OG&E's ability to maintain its financial profile, and its ability to access the capital market at reasonable cost rates.

Flotation Costs

Q. What are flotation costs?

A. Flotation costs are the costs associated with the sale of new issues of common stock. These costs include out-of-pocket expenditures for preparation, filing, underwriting, and other issuance costs of common stock.

Q. Why is it important to recognize flotation costs in the allowed ROE?

A. In order to attract and retain new investors, a regulated utility must have the opportunity to earn a return that is both competitive and compensatory. To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diminishing its ability to attract adequate capital on reasonable terms.

Q. Are flotation costs part of the utility's invested costs or part of the utility's expenses?

A. Flotation costs are part of the invested costs of the utility, which are properly reflected on the balance sheet under "paid in capital." They are not current expenses, and therefore are not reflected on the income statement. Rather, like investments in rate base or the issuance costs of long-term debt, flotation costs are incurred over time. As a result, the great majority of a utility's flotation cost is incurred prior to the test year, but remains part of the cost structure that exists during the test year and beyond, and as such, should be recognized for ratemaking purposes. Therefore, recovery of flotation costs is

1 appropriate even if no new issuances are planned in the near future because failure to
2 allow such cost recovery may deny OG&E the opportunity to earn its required rate of
3 return in the future.

4 **Q. Is the need to consider flotation costs eliminated because OG&E is a wholly-owned**
5 **subsidiary of OGE Energy Corp.?**

6 A. No. Although the Company is a wholly owned subsidiary of OGE Energy Corp., it is
7 appropriate to consider flotation costs because wholly owned subsidiaries receive equity
8 capital from their parents and provide returns on the capital that roll up to the parent,
9 which is designated to attract and raise capital based on the returns of those subsidiaries.
10 To deny recovery of issuance costs associated with the capital that is invested in the
11 subsidiaries ultimately would penalize the investors that fund the utility operations and
12 would inhibit the utility's ability to obtain new equity capital at a reasonable cost. This is
13 important for companies such as OG&E that are planning continued capital expenditures
14 in the near term, and for which access to capital (at reasonable cost rates) to fund such
15 required expenditures will be critical.

16 **Q. Do the DCF and CAPM models already incorporate investor expectations of a**
17 **return in order to compensate for flotation costs?**

18 A. No. The models used to estimate the appropriate ROE assume no "friction" or
19 transaction costs, as these costs are not reflected in the market price (in the case of the
20 DCF model) or risk premium (in the case of the CAPM and the Bond Yield Plus Risk
21 Premium model). Therefore, it is appropriate to consider flotation costs when
22 determining where within the range of reasonable results OG&E's return should fall.

1 **Q. Is the need to consider flotation costs recognized by the academic and financial**
2 **communities?**

3 A. Yes. The need to reimburse investors for equity issuance costs is recognized by the
4 academic and financial communities in the same spirit that investors are reimbursed for
5 the costs of issuing debt. This treatment is consistent with the philosophy of a fair rate of
6 return. As explained by Dr. Shannon Pratt:

7 Flotation costs occur when a company issues new stock. The business
8 usually incurs several kinds of flotation or transaction costs, which reduce
9 the actual proceeds received by the business. Some of these are direct out-
10 of-pocket outlays, such as fees paid to underwriters, legal expenses, and
11 prospectus preparation costs. Because of this reduction in proceeds, the
12 business's required returns must be greater to compensate for the
13 additional costs. Flotation costs can be accounted for either by amortizing
14 the cost, thus reducing the net cash flow to discount, or by incorporating
15 the cost into the cost of equity capital. Since flotation costs typically are
16 not applied to operating cash flow, they must be incorporated into the cost
17 of equity capital.⁵⁷
18

19 **Q. Has the Commission recognized the need to recover flotation costs in prior orders?**

20 A. Yes it has. In the SourceGas 2004 rate case (operating at the time as Arkansas Western
21 Gas Company), both Staff and the Northwest Arkansas Gas Consumers ("NWAGC")
22 presented adjustments for flotation costs. NWAGC Witness Cassidy applied an
23 adjustment of 0.24 percent (24 basis points) to his recommended ROE.⁵⁸ Although Staff
24 Witness Brown estimated flotation costs of five basis points, he did not recommend a
25 specific adjustment to his ROE recommendation because his point recommendation was
26 rounded to the nearest tenth of a percentage point, and there was "an implicit allowance

⁵⁷ Shannon P. Pratt, Roger J. Grabowski, *Cost of Capital: Applications and Examples*, 4th ed. (John Wiley & Sons, Inc., 2010), page 586.

⁵⁸ See, Arkansas Public Service Commission, *In The Matter of the Application of Arkansas Western Gas Company for Rates and Tariffs*, Docket No. 04-176-U, Order No. 6, at 21.

1 in [his] recommendation that more than covers a reasonable amount of flotation costs.”⁵⁹

2 In its Order, the Commission agreed that “including some level of valid, sustainable,
3 measurable, and material flotation costs in equity return is appropriate”.⁶⁰

4 **Q. Have you calculated the effect of flotation costs on the return on equity?**

5 A. Yes, I have. I modified the DCF calculation to derive the dividend yield that would
6 reimburse investors for direct issuance costs. Based on the weighted average issuance
7 costs shown in Direct Exhibit RBH-8, a reasonable estimate of flotation costs is
8 approximately 0.11 percent (11 basis points).

9 **Q. Are you proposing to adjust your recommended ROE by 11 basis points to reflect**
10 **the effect of flotation costs on OG&E’s ROE?**

11 A. No. Rather, I have considered the effect of flotation costs, in addition to the Company’s
12 other business risks, in determining where the Company’s ROE falls within the range of
13 results.

14 ***Rate Mechanisms***

15 **Q. How common are cost recovery mechanisms?**

16 A. Adjustment mechanisms to recover fuel costs, purchased power expenses, energy
17 efficiency and demand-side program costs, new plant investment, and other expenses are
18 very common.⁶¹ The implementation of alternative regulation mechanisms has become
19 an increasingly visible issue to investors.

⁵⁹ See, Arkansas Public Service Commission, *In The Matter of the Application of Arkansas Western Gas Company for Rates and Tariffs*, Docket No. 04-176-U, Prepared Testimony of Johnny Brown, at 38.

⁶⁰ See, Arkansas Public Service Commission, *In The Matter of the Application of Arkansas Western Gas Company for Rates and Tariffs*, Docket No. 04-176-U, Order No. 6, at 34.

⁶¹ See Direct Exhibit RBH-9.

1 **Q. Are cost recovery mechanisms common among the proxy companies?**

2 A. Yes, they are. Direct Exhibit RBH-9 provides a summary of revenue stabilization
3 mechanisms and cost trackers currently in effect at each electric utility subsidiary within
4 the proxy group. As Direct Exhibit RBH-9 demonstrates, there are a substantial number
5 of cost recovery mechanisms in place at the proxy companies. Direct Exhibit RBH-9
6 also includes a summary of the alternative regulation and incentive plans currently in
7 effect at the proxy companies. Those regulatory constructs include formula-based rate
8 plans, which provide comprehensive adjustment mechanisms that automatically adjust
9 rates in the event that earned return is above or below an authorized range.

10 **Q. Do the Company's regulatory recovery mechanisms reduce its Cost of Equity?**

11 A. No, they do not. The principal analytical issue is whether the Company is so less risky
12 than its peers as a direct result of its recovery mechanisms that investors would
13 specifically and measurably reduce their return requirements. The fact that the
14 Company's existing recovery mechanisms may, to a degree, stabilize the Company's
15 revenues will not affect its Cost of Equity unless it can be demonstrated that: (1) the
16 Company is materially less risky than the proxy group by virtue of those mechanisms;
17 and (2) investors are likely to react to the incremental effect of those mechanisms.
18 Because revenue stabilization and cost recovery mechanisms are common among the
19 proxy companies, there is no reason to assume that OG&E would be materially less risky,
20 and that its Cost of Equity would be lower than its peers' as a result of its recovery
21 mechanisms.

22 Moreover, I note that OG&E was recently unable to obtain rider recovery from
23 the OCC for the large capital investments needed install scrubbers on the two Sooner

1 Generating Station coal-fired units.⁶² In light of the OCC’s prior rejection of OG&E’s
2 Environmental Compliance Plan and challenges from opposing parties,⁶³ the lack of
3 predictability associated with environmental recovery costs is an incremental risk for
4 OG&E. Fitch Ratings, for example, has noted there are “uncertainties associated with the
5 cost recovery of the dry scrubbers and the other elements of the rejected environmental
6 compliance plan” and indicated “[n]egative rating action could occur if the environmental
7 projects experience material disallowance or lag in recovery.”⁶⁴ The lack of certainty
8 associated with the recovery of OG&E’s large environmental and plant modernization
9 spending serve to increase the Company’s risk and, therefore, Cost of Equity.

VII. CAPITAL MARKET ENVIRONMENT

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

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

⁶² See Final Order, Cause No. PUD 201600059, In the Matter of the Application of Oklahoma Gas and Electric Company for Commission Approval of the Company’s Plan to Install Dry Scrubbers at the Sooner Generating Facility, issued April 28, 2016.

⁶³ Final Order, Cause No. PUD 201400229, Application of Oklahoma Gas and Electric Company for Commission Authorization of a Plan to Comply with the Federal Clean Air Act and Cost Recovery; and for Approval of the Mustang Modernization and Cost Recovery, issued December 2, 2015.

⁶⁴ “Oklahoma Gas & Electric Co., Subsidiary of OGE Energy Corp., Full Ratings Report,” Fitch Ratings, August 5, 2016.

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

3 **Q. Please summarize how current capital markets have affected DCF model results?**

4 A. As discussed below, the Federal Reserve took unprecedented actions in response to the
5 2008/2009 financial crisis which served to lower long-term Treasury yields and caused
6 investors to “reach for yield.” Risk averse investors have consequently bid up prices of
7 relatively low risk equity securities, such as utility stocks, as they sought alternate
8 sources of yield. As prices have increased, yields have declined. Because the Constant
9 Growth DCF model estimates the required return as the expected yield plus expected
10 growth, and because DCF model ROE results in general are a function of stock price, the
11 decline in yields has led to an anomalous decline in DCF model results.

12 **Q. Do you have any general observations regarding the relationship between current
13 capital market conditions and OG&E’s Cost of Equity?**

14 A. Yes, I do. Much has been reported about the Federal Reserve’s market intervention since
15 2007, and its effect on interest rates. Although the Federal Reserve completed its
16 Quantitative Easing initiative in October 2014, it was not until December 2015 that it
17 raised the Federal Funds rate, and began the process of rate normalization.⁶⁵ A
18 significant issue, then, is how investors will react as that process continues. A viable
19 outcome is that investors will perceive greater chances for economic growth, which will
20 increase the growth rates included in the Constant Growth DCF model. At the same
21 time, higher growth and the absence of Federal market intervention could provide the

⁶⁵ See Federal Reserve Press Release (December 16, 2015).

1 opportunity for interest rates to increase, thereby increasing the dividend yield portion of
2 the DCF model. In that case, both terms of the Constant Growth DCF model would
3 increase, producing higher ROE estimates.

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

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

13 A. Beginning in 2008, the Federal Reserve proceeded on a steady path of initiatives intended
14 to lower long-term Treasury yields.⁶⁶ The Federal Reserve policy actions “were designed
15 to put downward pressure on longer-term interest rates by having the Federal Reserve
16 take onto its balance sheet some of the duration and prepayment risks that would
17 otherwise have been borne by private investors.”⁶⁷ Under that policy, “Securities held
18 outright” on the Federal Reserve’s balance sheet increased from approximately \$489
19 billion at the beginning of October 2008 to \$4.23 trillion by mid July 2016.⁶⁸ To put that
20 increase in context, the securities held by the Federal Reserve represented approximately

⁶⁶ See Federal Reserve Press Release (June 19, 2013).

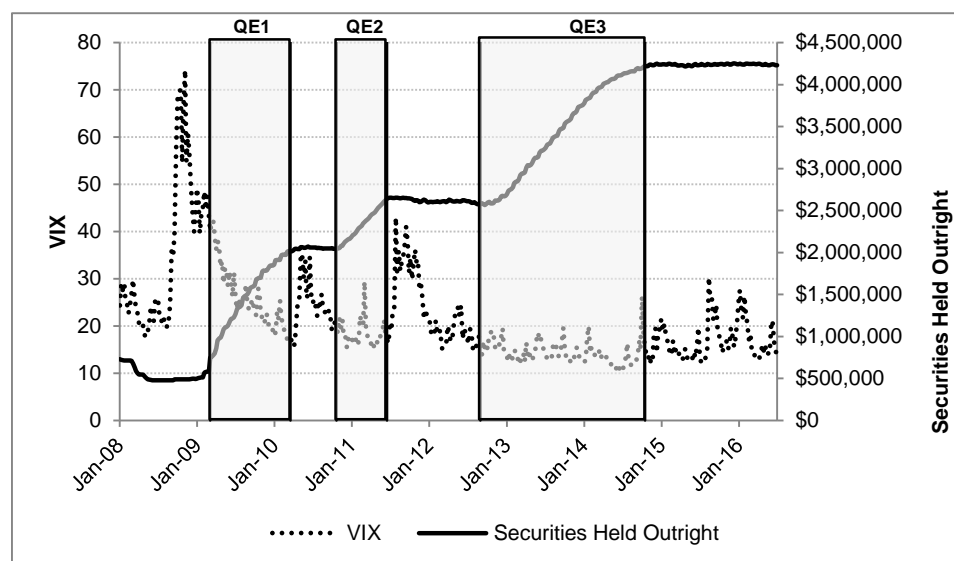
⁶⁷ Federal Reserve Bank of New York, *Domestic Open Market Operations During 2012*, April 2013, at 29.

⁶⁸ Source: Federal Reserve Board Schedule H.4.1. “Securities held outright” include U.S. Treasury securities, Federal agency debt securities, and mortgage-backed securities.

3.29 percent of GDP at the end of September 2008, and had risen to approximately 23.21 percent of GDP in July 2016.⁶⁹ As such, the Federal Reserve policy actions have represented a significant source of liquidity, and have had a substantial effect on capital markets.

Just as market intervention by the Federal Reserve has reduced interest rates, it also has had the effect of reducing market volatility. As shown in Figure 2 (below), each time the Federal Reserve began to purchase bonds (as evidenced by the increase in “Securities Held Outright” on its balance sheet), volatility subsequently declined. In fact, in September 2012, when the Federal Reserve began to purchase long-term securities at a pace of \$85 billion per month, volatility (as measured by the CBOE Volatility Index, known as the “VIX”) fell, and through October 2014 remained in a relatively narrow range. The reason is quite straight-forward: Investors became confident that the Federal Reserve would intervene if markets were to become unstable.

Figure 2: VIX and Federal Reserve Asset Purchases



⁶⁹ Source: Federal Reserve Board Schedule H.4.1; Bureau of Economic Analysis.

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

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

12 A. Yes, that appears to be the case. From January 2000 through the end of August 2012
13 (that is, immediately prior to the third round of Quantitative Easing), the proxy group's
14 average P/E ratio traded at a 12.00 percent discount to the market. From September 2012
15 through May 2013, when the Federal Reserve announced it would begin to taper its asset
16 purchases, the proxy group traded at an 18.00 percent premium to the market. More
17 recently, after the Federal Reserve began its process of rate normalization in December
18 2015, the proxy group's average P/E ratio fell to approximately the same level as the
19 market P/E, closer to the long-term relationship.

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

21 A. Yes. For example, given the recent vote on the United Kingdom European Union
22 membership referendum (commonly referred to as "Brexit") and subsequent capital
23 market reaction, the timing of Federal Reserve monetary policy normalization remains

1 uncertain. The Federal Reserve's monetary policy actions, including maintaining an
2 expanded balance sheet and keeping the Federal Funds rate low, have affected capital
3 markets and led to utility valuations that are elevated relative to historical levels, and to
4 the overall market. With Federal Reserve monetary policy now uncertain, the
5 sustainability of current utility valuation levels is likewise uncertain.

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

7 A. Yes, it does. From an analytical perspective, it is important that the inputs and
8 assumptions used to arrive at an ROE recommendation, including assessments of capital
9 market conditions, are consistent with the recommendation itself. Because the Cost of
10 Equity is forward-looking, the salient issue is whether investors see the likelihood of
11 increased interest rates during the period in which the rates set in this proceeding will be
12 in effect. In that regard, the approximately 50 economists surveyed by Blue Chip
13 Financial Forecast see the 30-year Treasury yield as increasing to 3.90 percent by 2018.⁷⁰
14 Those projections are supported by the fact that investors recently have been willing to
15 pay about one and a half times the premium for the option to sell long-term Government
16 bonds in January 2018 (with an exercise price equal to the current price) than they have
17 been willing to pay for the option to buy those bonds.⁷¹ Because the prices of bonds
18 move inversely to interest rates,⁷² those option prices indicate that investors believe it is
19 considerably more likely that interest rates will increase over the coming year, than it is
20 likely that they will decrease. As noted in Section V (above), all else remaining equal an
21 increase in interest rates would increase the return required by equity holders.

⁷⁰ See, *Blue Chip Financial Forecast*, Vol. 35 No. 6, June 1, 2016, at 14.

⁷¹ Source: <http://www.nasdaq.com/symbol/tlt/option-chain?dateindex=7>

⁷² That is, as interest rates move up (down), bond prices move down (up).

1 **Q. Please summarize the conclusions you draw from current capital market conditions,**
2 **and how those conclusions affect your ROE recommendation?**

3 A. The Federal Reserve's monetary policy actions, including maintaining an expanded
4 balance sheet and keeping the Federal Funds rate low, have affected capital markets and
5 led to utility valuations that are relatively high compared to the overall market. With
6 Federal Reserve monetary policy moving toward a process of normalization, the
7 sustainability of current utility valuation levels is uncertain. Because the Constant
8 Growth DCF model assumes P/E ratios will remain constant in perpetuity, and because
9 DCF model results are particularly sensitive to industry valuation levels, I currently give
10 less weight to DCF-based ROE estimates. That approach is also consistent with the
11 possibility that the relatively high premium that equity investors are paying for defensive
12 sectors, such as utilities, is a consequence of ongoing investor caution and risk aversion
13 rather than analytical reassessment of intrinsic valuations.

14 Although the timing of Federal Reserve monetary policy normalization remains
15 uncertain, market data and practitioner forecasts suggest investors expect interest rates to
16 increase. As noted in Section V (above), all else remaining equal an increase in interest
17 rates would increase the return required by equity holders. Because they are able to
18 reflect forward looking capital market expectations, I believe it is reasonable to give more
19 weight to risk-premium based Cost of Equity models, such as the CAPM, in the current
20 capital market environment.

21 As also discussed earlier, it is important that the inputs and assumptions used to
22 arrive at an ROE determination, including assessments of capital market conditions, are
23 consistent with the conclusion, itself. Although I appreciate that all analyses require an

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

8 Given that: (1) Federal monetary policy has begun its process of “normalization”;
9 and (2) economists and market data indicate expectations for increasing interest rates into
10 2018 and beyond, I believe that an ROE in the range of 10.00 percent to 10.75 percent
11 reflects the prevailing and expected interest rate environment.

VIII. VALIDATION OF RETURN ON EQUITY RECOMMENDATION

12 **Q. Did you review any additional data to corroborate the reasonableness of your ROE**
13 **recommendations?**

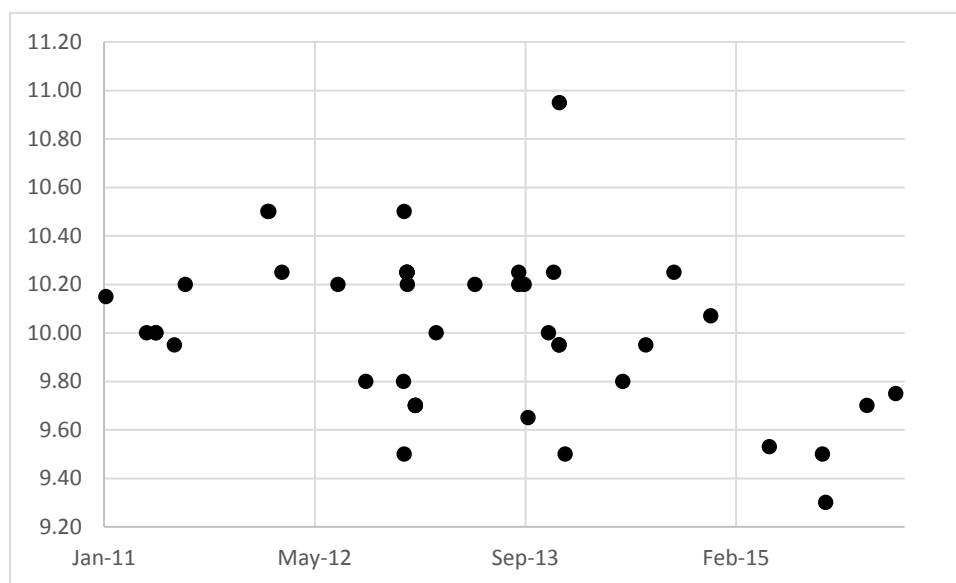
14 A. Yes, consistent with Act 725, I reviewed authorized returns in jurisdictions in the same
15 part of the United States as OG&E. I also reviewed recently authorized returns across the
16 Country, in general.

17 **Q. Please describe those reviews, and the conclusions drawn from the data.**

18 A. As noted above, I first reviewed authorized returns for vertically integrated electric
19 utilities in the same geographic area as OG&E for the years 2011 through July 15, 2016.
20 Those jurisdictions include other southeast states and the states surrounding Arkansas
21 (*i.e.*, Alabama, Arkansas, Florida, Georgia, Kansas, Kentucky, Louisiana, Mississippi,

Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas). As shown in Figure 3, below, (see also Direct Exhibit RBH-11), over half of the 42 returns authorized in those jurisdictions since 2011 were 10.00 percent or higher (*i.e.*, within my recommended range). Because it is a relatively small sample, one means of assessing the comparability of those returns is by reference to Regulatory Research Associates' ("RRA") commission rankings. In that regard, RRA provides an assessment of the extent to which regulatory jurisdictions are constructive, or not, from an investor's perspective. Direct Exhibit RBH-11 demonstrates that the average authorized return for vertically integrated utilities in the southeast region that operate in jurisdictions ranked "Average" is 9.96 percent; Arkansas falls within that group. However, the mean return for vertically integrated utilities operating in "Above Average" jurisdictions is 10.36 percent.

Figure 3: Authorized ROEs in Nearby Jurisdictions⁷³



⁷³

Source: Regulatory Research Associates.

1 I next reviewed returns authorized for vertically integrated electric utilities across
2 the United States since July 2014, and found that approximately one third of those returns
3 were 10.00 percent or higher.⁷⁴ Based on that data, it appears that my recommended
4 range is consistent with authorized returns for vertically integrated electric utilities within
5 the same geographic region as OG&E in particular, and across the Country, in general.

IX. CAPITAL STRUCTURE

6 **Q. What is OG&E's recommended capital structure?**

7 A. OG&E's proposed capital structure includes 53.11 percent common equity, and 46.89
8 percent long-term debt.

9 **Q. How does the capital structure affect the Cost of Equity?**

10 A. The capital structure relates to financial risk, which represents the risk that a company
11 may not have adequate cash flows to meet its financial obligations, and is a function of
12 the percentage of debt (or financial leverage) in its capital structure. In that regard, as the
13 percentage of debt in the capital structure increases, so do the fixed obligations for the
14 repayment of that debt. Consequently, as the degree of financial leverage increases, the
15 risk of financial distress (*i.e.*, financial risk) also increases. Since the capital structure can
16 affect the subject company's overall level of risk, it is an important consideration in
17 establishing a just and reasonable Return on Equity.

⁷⁴ Source: Regulatory Research Associates.

1 **Q. How did you assess the reasonableness of OG&E’s recommended capital structure**
2 **with respect to the proxy group?**

3 A. As discussed in Section IV, the proxy group has been selected to reflect comparable
4 companies in terms of financial, business, and regulatory risks. Therefore, it is
5 appropriate to compare the capital structures of the proxy group companies to that of the
6 subject company in order to assess whether the proposed capital structure is consistent
7 with industry standards for companies with commensurate risk profiles. To the extent
8 that OG&E’s capital structure differs from industry standards, the difference in financial
9 risk should be considered when estimating its required ROE.

10 **Q. Please describe your analysis of OG&E’s capital structure relative to industry**
11 **practice.**

12 A. As a measure of industry practice, I calculated the average capital structure for each of
13 the utility operating companies held by the proxy companies over the last eight fiscal
14 quarters. As shown in Direct Exhibit RBH-7, the proxy group average capital structure
15 over that period includes 51.68 percent common equity and 48.32 percent long-term debt;
16 the average common equity ratios (on a company-specific basis) range from 45.95
17 percent to 57.69 percent. Based on that review, it is apparent that OG&E’s capital
18 structure is consistent with those in place at the proxy companies.

19 **Q. What is the basis for using average capital components rather than a point-in-time**
20 **measurement?**

21 A. Measuring the capital components at a particular point in time can skew the capital
22 structure by the specific circumstances of a particular period. Therefore, it is more

appropriate to normalize the relative relationship between the components over a period of time.

Q. What is your conclusion regarding an appropriate capital structure for OG&E?

A. Considering the range of proxy company average equity ratios from 45.95 percent to 57.69 percent, I believe that 53.11 percent common equity ratio is appropriate.

X. CONCLUSIONS AND RECOMMENDATIONS

Q. What is your conclusion regarding the Company's Cost of Equity and capital structure?

A. As discussed throughout my Direct Testimony, all of the models used to estimate the Cost of Equity are subject to certain assumptions, which may become more or less relevant as market conditions, and market data, change. It therefore is important to consider a variety of empirical and qualitative information in reviewing analytical results and arriving at ROE recommendations. That review includes an assessment of the various models used, and the consistency of their underlying assumptions with current and expected market conditions. In the end, it is the reasonableness and consistency of the ROE determination that is of principal concern to investors. With those points in mind, I applied and reviewed the following models:

- *Constant Growth DCF Model* – As discussed earlier in my Direct Testimony, the proxy companies have traded at P/E ratios well in excess of their historical average and, for a time, in excess of the market. Because that condition is unlikely to persist, it violates two principal assumptions of the Constant Growth DCF model, *i.e.*, that the P/E ratio

will not change, and that the ROE stays constant in perpetuity. Moreover, the Federal Reserve's actions to lower interest rates drove investors to utility stocks that lowered yields and therefore created anomalously low DCF results. As a practical matter, the Constant Growth DCF results are well below a highly observable and relevant benchmark: the returns authorized for vertically integrated electric utilities. As such, considering multiple methods, including the Multi-Stage DCF model, the CAPM approach, and the Bond Yield Plus Risk Premium model, is more appropriate in current market conditions.

- *Multi-Stage DCF Model* – Because the Multi-Stage DCF Model provides the ability to specify near, intermediate, and long-term growth rates, it avoids the sometimes limiting assumption that the subject company will grow at the same, constant rate in perpetuity. The model also enables analysts to assess the reasonableness of the inputs and results by reference to certain market-based metrics. Using a terminal value based on the current P/E ratio, the Multi-Stage DCF analysis produces a range of results from 8.91 percent to 10.35 percent.
- *CAPM Approach* – Unlike the DCF-based methods, the CAPM, is a risk premium-based method, assumes that investors must be compensated for the time value of money and for taking on additional risk. The time value of money is measured by long-term Treasury yields; compensation for additional risk is measured by the stock's Beta coefficient and the expected Market Risk Premium. The Market Risk Premium reflects the

1 additional return that investors expect to receive by investing in the market
2 as a whole over the return they would receive by investing only in long-
3 term Treasury bonds. The CAPM analyses produce an ROE range of
4 8.84 percent to 11.40 percent.

- 5 • *Bond Yield Plus Risk Premium Analysis* – This risk premium-based
6 method assumes that the Cost of Equity equals the sum of (1) long-term
7 Treasury bond yields, and (2) an Equity Risk Premium, which represents
8 the additional risk associated with investing in utility stocks. This model
9 focuses on the relationship between interest rates and the Equity Risk
10 Premium and demonstrates that over time, there has been a statistically
11 significant, negative relationship between the two. Based a regression
12 analysis of that relationship, the estimated Cost of Equity is for an electric
13 utility is between 10.03 percent and 10.39 percent.

14 In addition, to the models discussed above, I reviewed other factors related to the capital
15 market environment and the Company's relative risk profile:

- 16 • *Cost Recovery for Compliance with Environmental Regulations* – The
17 Company's proposed environmental compliance plan was denied by the
18 Commission. As such, shareholders face additional risks associated with
19 the uncertainty surrounding the plan by which the Company will comply
20 with federal environmental mandates, including its ability to recover
21 associated costs on a timely basis.
- 22 • *Capital Expenditures* – OG&E's capital expenditure program is significant
23 and will place additional pressure on its cash flows, making regulatory

support more important in terms of the Company's ability to finance these expenditures and earn a reasonable return on its planned investments.

- *Flotation Costs* – Because the issuance (or “flotation”) costs reduce the amount of equity received when the Company sells stock, it is reasonable to reflect those necessary, legitimate expenses when estimating the Cost of Equity. Based on the weighted average issuance costs shown in Direct Exhibit RBH-8, a reasonable estimate of flotation costs is approximately 0.11 percent (11 basis points). Rather than adjusting my recommended ROE by 11 basis points, I have considered the effect of flotation costs in determining where the Company's ROE falls within the range of results.

- *Rate Mechanisms* – Because revenue stabilization and cost recovery mechanisms are common among the proxy companies, there is no reason to assume that OG&E would be materially less risky, and that its Cost of Equity would be lower than its peers' as a result of its recovery mechanisms. As a result, I do not believe that it is appropriate to adjust the Company's ROE for any reduction in risk related to cost recovery riders.

- *Capital Market Environment* – Federal Reserve monetary policy is likely moving toward a process of “normalization” and economists and market data indicate expectations for increasing interest rates into 2017. As such, it is important to remember that the Cost of Equity is a forward-looking concept, and that the model inputs used should reflect investors' expectations regarding future capital market conditions. Therefore, to the

1 extent that certain Cost of Equity models are incompatible with such data,
2 it is appropriate to consider whether alternative estimation techniques are
3 likely to provide more meaningful and reliable results.
4

5 Reviewing the results of the DCF, CAPM, and Bond Yield Plus Risk Premium
6 models, I believe that an ROE in the range of 10.00 percent to 10.75 percent represents
7 the range of equity investors' required ROE for investment in vertically integrated
8 electric utilities with a risk profile comparable to OG&E in today's capital markets.

9 My recommended range recognizes that certain models, in particular Discounted
10 Cash Flow-based approaches, are based on assumptions that are inconsistent with current
11 and expected market conditions. As discussed earlier, for example, the Constant Growth
12 DCF model assumes that the Cost of Equity, estimated during a period in which the
13 Federal Reserve has directly influenced long-term interest rates and equity market
14 volatility, will remain constant forever. That is the case even though Federal monetary
15 policy eventually will be "normalized". In my view, that fundamental inconsistency
16 suggests that the Constant Growth DCF results should be viewed with considerable
17 caution, and given less weight than under more "normal" market conditions.

18 My ROE recommendation also considers a variety of factors including the current
19 financial environment, flotation costs, and OG&E's relative risk profile. As to the
20 Company's relative risk, I have considered the risks associated with environmental
21 regulations, OG&E's planned capital investment program, and the effect, if any, of
22 OG&E's rate mechanisms on the Company's relative risk profile. As discussed
23 throughout my testimony, although those factors are very relevant to investors, they do

1 not lend themselves to direct quantification. Consequently, the application of judgment in
2 assessing their effects on the Cost of Equity is unavoidable.

3 On balance, considering the applicability of models to market conditions, and
4 taking into consideration both company-specific factors and general market conditions, I
5 believe that a reasonable estimate of the Company's Cost of Equity lies in the range of
6 10.00 percent to 10.75 percent. The Company's proposed ROE, 10.25 percent, falls at the
7 low end of that range. As such, I conclude that the Company's proposal is reasonable, if
8 not quite conservative. Lastly, I conclude that OG&E's proposed capital structure, which
9 consists of 53.11 percent common equity and 46.89 percent long-term debt, is reasonable.

10 **Q. Does this conclude your pre-filed Direct Testimony?**

11 A. Yes, it does.

Constant Growth Discounted Cash Flow Model
30 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth	[9] Low ROE	[10] Mean ROE	[11] High ROE
ALLETE, Inc.	ALE	\$2.08	\$62.26	3.34%	3.42%	5.50%	5.00%	4.00%	4.83%	7.41%	8.25%	8.93%
Alliant Energy Corporation	LNT	\$1.18	\$39.38	2.98%	3.08%	6.10%	6.60%	6.00%	6.23%	9.07%	9.31%	9.68%
Ameren Corporation	AEE	\$1.70	\$51.80	3.28%	3.38%	6.10%	5.20%	6.00%	5.77%	8.57%	9.14%	9.48%
American Electric Power Company, Inc.	AEP	\$2.24	\$68.11	3.29%	3.36%	4.70%	3.77%	4.00%	4.16%	7.12%	7.51%	8.07%
Avista Corporation	AVA	\$1.37	\$43.03	3.18%	3.26%	5.00%	5.00%	5.00%	5.00%	8.26%	8.26%	8.26%
CMS Energy Corporation	CMS	\$1.24	\$44.28	2.80%	2.89%	6.60%	7.24%	6.00%	6.61%	8.88%	9.51%	10.14%
DTE Energy Company	DTE	\$3.08	\$95.92	3.21%	3.30%	5.80%	5.35%	5.00%	5.38%	8.29%	8.68%	9.10%
IDACORP, Inc.	IDA	\$2.04	\$77.51	2.63%	2.68%	4.00%	4.00%	3.00%	3.67%	5.67%	6.35%	6.68%
NorthWestern Corporation	NWE	\$2.00	\$61.25	3.27%	3.36%	5.00%	5.00%	6.50%	5.50%	8.35%	8.86%	9.87%
Otter Tail Corporation	OTTR	\$1.25	\$32.42	3.86%	3.97%	NA	6.00%	6.00%	6.00%	9.97%	9.97%	9.97%
Pinnacle West Capital Corporation	PNW	\$2.50	\$78.53	3.18%	3.25%	4.00%	3.73%	4.00%	3.91%	6.97%	7.16%	7.25%
PNM Resources, Inc.	PNM	\$0.88	\$34.39	2.56%	2.67%	7.60%	8.76%	9.00%	8.45%	10.26%	11.12%	11.67%
Portland General Electric Company	POR	\$1.28	\$43.04	2.97%	3.07%	6.50%	6.57%	5.50%	6.19%	8.56%	9.26%	9.64%
SCANA Corporation	SCG	\$2.30	\$72.88	3.16%	3.24%	5.30%	5.40%	4.50%	5.07%	7.73%	8.30%	8.64%
Xcel Energy Inc.	XEL	\$1.36	\$43.38	3.14%	3.22%	5.20%	5.27%	5.50%	5.32%	8.42%	8.54%	8.72%
PROXY GROUP MEAN				3.12%	3.21%	5.53%	5.53%	5.33%	5.47%	8.24%	8.68%	9.08%
PROXY GROUP MEDIAN				3.18%	3.25%	5.40%	5.27%	5.50%	5.38%	8.35%	8.68%	9.10%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 30-trading day average as of July 15, 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] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth	[9] Low ROE	[10] Mean ROE	[11] High ROE
ALLETE, Inc.	ALE	\$2.08	\$58.23	3.57%	3.66%	5.50%	5.00%	4.00%	4.83%	7.64%	8.49%	9.17%
Alliant Energy Corporation	LNT	\$1.18	\$37.26	3.15%	3.25%	6.10%	6.60%	6.00%	6.23%	9.25%	9.49%	9.86%
Ameren Corporation	AEE	\$1.70	\$49.54	3.43%	3.53%	6.10%	5.20%	6.00%	5.77%	8.72%	9.30%	9.64%
American Electric Power Company, Inc.	AEP	\$2.24	\$65.90	3.40%	3.47%	4.70%	3.77%	4.00%	4.16%	7.23%	7.63%	8.18%
Avista Corporation	AVA	\$1.37	\$41.13	3.33%	3.41%	5.00%	5.00%	5.00%	5.00%	8.41%	8.41%	8.41%
CMS Energy Corporation	CMS	\$1.24	\$42.28	2.93%	3.03%	6.60%	7.24%	6.00%	6.61%	9.02%	9.64%	10.28%
DTE Energy Company	DTE	\$3.08	\$91.42	3.37%	3.46%	5.80%	5.35%	5.00%	5.38%	8.45%	8.84%	9.27%
IDACORP, Inc.	IDA	\$2.04	\$74.60	2.73%	2.78%	4.00%	4.00%	3.00%	3.67%	5.78%	6.45%	6.79%
NorthWestern Corporation	NWE	\$2.00	\$59.79	3.34%	3.44%	5.00%	5.00%	6.50%	5.50%	8.43%	8.94%	9.95%
Otter Tail Corporation	OTTR	\$1.25	\$30.15	4.15%	4.27%	NA	6.00%	6.00%	6.00%	10.27%	10.27%	10.27%
Pinnacle West Capital Corporation	PNW	\$2.50	\$74.94	3.34%	3.40%	4.00%	3.73%	4.00%	3.91%	7.13%	7.31%	7.40%
PNM Resources, Inc.	PNM	\$0.88	\$33.21	2.65%	2.76%	7.60%	8.76%	9.00%	8.45%	10.35%	11.22%	11.77%
Portland General Electric Company	POR	\$1.28	\$40.90	3.13%	3.23%	6.50%	6.57%	5.50%	6.19%	8.72%	9.42%	9.80%
SCANA Corporation	SCG	\$2.30	\$70.23	3.27%	3.36%	5.30%	5.40%	4.50%	5.07%	7.85%	8.42%	8.76%
Xcel Energy Inc.	XEL	\$1.36	\$41.65	3.27%	3.35%	5.20%	5.27%	5.50%	5.32%	8.55%	8.68%	8.86%
PROXY GROUP MEAN				3.27%	3.36%	5.53%	5.53%	5.33%	5.47%	8.39%	8.83%	9.23%
PROXY GROUP MEDIAN				3.33%	3.40%	5.40%	5.27%	5.50%	5.38%	8.45%	8.84%	9.27%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 90-trading day average as of July 15, 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] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth	[9] Low ROE	[10] Mean ROE	[11] High ROE
ALLETE, Inc.	ALE	\$2.08	\$54.79	3.80%	3.89%	5.50%	5.00%	4.00%	4.83%	7.87%	8.72%	9.40%
Alliant Energy Corporation	LNT	\$1.18	\$34.37	3.42%	3.52%	6.10%	6.60%	6.00%	6.23%	9.52%	9.76%	10.13%
Ameren Corporation	AEE	\$1.70	\$46.89	3.63%	3.73%	6.10%	5.20%	6.00%	5.77%	8.92%	9.50%	9.84%
American Electric Power Company, Inc.	AEP	\$2.24	\$62.20	3.60%	3.68%	4.70%	3.77%	4.00%	4.16%	7.44%	7.83%	8.39%
Avista Corporation	AVA	\$1.37	\$38.37	3.57%	3.66%	5.00%	5.00%	5.00%	5.00%	8.66%	8.66%	8.66%
CMS Energy Corporation	CMS	\$1.24	\$39.59	3.13%	3.24%	6.60%	7.24%	6.00%	6.61%	9.23%	9.85%	10.49%
DTE Energy Company	DTE	\$3.08	\$86.64	3.55%	3.65%	5.80%	5.35%	5.00%	5.38%	8.64%	9.03%	9.46%
IDACORP, Inc.	IDA	\$2.04	\$71.49	2.85%	2.91%	4.00%	4.00%	3.00%	3.67%	5.90%	6.57%	6.91%
NorthWestern Corporation	NWE	\$2.00	\$57.54	3.48%	3.57%	5.00%	5.00%	6.50%	5.50%	8.56%	9.07%	10.09%
Otter Tail Corporation	OTTR	\$1.25	\$28.49	4.39%	4.52%	NA	6.00%	6.00%	6.00%	10.52%	10.52%	10.52%
Pinnacle West Capital Corporation	PNW	\$2.50	\$69.95	3.57%	3.64%	4.00%	3.73%	4.00%	3.91%	7.37%	7.55%	7.65%
PNM Resources, Inc.	PNM	\$0.88	\$31.69	2.78%	2.89%	7.60%	8.76%	9.00%	8.45%	10.48%	11.35%	11.90%
Portland General Electric Company	POR	\$1.28	\$39.05	3.28%	3.38%	6.50%	6.57%	5.50%	6.19%	8.87%	9.57%	9.96%
SCANA Corporation	SCG	\$2.30	\$65.81	3.49%	3.58%	5.30%	5.40%	4.50%	5.07%	8.07%	8.65%	8.99%
Xcel Energy Inc.	XEL	\$1.36	\$39.28	3.46%	3.55%	5.20%	5.27%	5.50%	5.32%	8.75%	8.88%	9.06%
PROXY GROUP MEAN				3.47%	3.56%	5.53%	5.53%	5.33%	5.47%	8.59%	9.03%	9.43%
PROXY GROUP MEDIAN				3.49%	3.58%	5.40%	5.27%	5.50%	5.38%	8.66%	9.03%	9.46%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 180-trading day average as of July 15, 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		
		Value												
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALTE	\$62.26	5.50%	5.00%	4.00%	4.83%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.22%	17.84	3.38
Alliant Energy Corporation	LNT	\$39.38	6.10%	6.00%	6.00%	6.23%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.67%	20.75	3.93
Ameren Corporation	AEE	\$51.80	6.10%	5.20%	6.00%	5.77%	5.27%	68.00%	64.00%	66.88%	\$0.00	8.83%	19.78	3.75
American Electric Power Company, Inc.	AEP	\$68.11	4.70%	3.77%	4.00%	4.16%	5.27%	64.00%	67.00%	66.88%	\$0.00	8.96%	19.09	3.62
Avista Corporation	AVA	\$43.03	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.50%	21.81	4.14
CMS Energy Corporation	CMS	\$44.28	6.60%	7.24%	6.00%	6.61%	5.27%	63.00%	62.00%	66.88%	\$0.00	8.74%	20.34	3.86
EDS Energy Company	DTE	\$95.92	5.80%	5.35%	5.00%	5.38%	5.27%	63.00%	61.00%	66.88%	\$0.00	8.74%	20.31	3.85
IDACORP, Inc.	IDA	\$77.51	4.00%	4.00%	3.00%	3.67%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.57%	21.39	4.06
NorthWestern Corporation	NWE	\$61.25	5.00%	5.00%	6.50%	5.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	8.83%	19.79	3.75
Otter Tail Corporation	OTTR	\$32.42	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.10%	18.39	3.49
Pinnacle West Capital Corporation	PNW	\$78.53	4.00%	3.73%	4.00%	3.91%	5.27%	64.00%	65.00%	66.88%	\$0.00	8.69%	20.60	3.91
PNM Resources, Inc.	PNM	\$34.39	7.60%	8.76%	9.00%	8.45%	5.27%	51.00%	55.00%	66.88%	\$0.00	9.49%	16.70	3.17
Portland General Electric Company	POR	\$43.04	6.50%	6.57%	5.50%	6.19%	5.27%	56.00%	56.00%	66.88%	\$0.00	8.94%	19.21	3.64
SCANA Corporation	SCG	\$72.88	5.30%	5.40%	4.50%	5.07%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.08%	18.52	3.51
Xcel Energy Inc.	XL	\$43.38	5.20%	5.27%	5.50%	5.32%	5.27%	62.00%	63.00%	66.88%	\$0.00	8.89%	19.48	3.69
											DCF Result			
											Mean	8.88%	19.60	3.72
											Max	9.49%	21.81	4.14
											Min	8.50%	16.70	3.17

Projected Annual Earnings per Share														
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
ALLETE, Inc.	ALE	\$3.38	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.76	\$6.07
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35
Ameren Corporation	AEP	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57
American Electric Power Company, Inc.	AEP	\$3.59	\$3.74	\$3.89	\$4.06	\$4.23	\$4.40	\$4.59	\$4.80	\$5.03	\$5.27	\$5.54	\$5.83	\$6.14
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
CMS Energy Corporation	CMS	\$1.89	\$2.01	\$2.15	\$2.29	\$2.44	\$2.60	\$2.77	\$2.94	\$3.12	\$3.29	\$3.47	\$3.66	\$3.85
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.76	\$7.12	\$7.50	\$7.89	\$8.31
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
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
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
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
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
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.30	\$2.44	\$2.59	\$2.75	\$2.92	\$3.09	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.96	\$6.28	\$6.61	\$6.96
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35	\$3.52	\$3.71	\$3.90

Projected Annual Dividend Payout Ratio														
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%
Ameren Corporation	AEP	68.00%	67.00%	66.00%	65.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%
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%
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%
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%
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%
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%
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%
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%

Projected Annual Cash Flows														
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.41	\$3.63	\$3.86	\$4.06	\$4.27
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$1.99	\$2.13	\$2.24	\$2.36
Ameren Corporation	AEP	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.90	\$3.05	\$3.22
American Electric Power Company, Inc.	AEP	\$2.39	\$2.52	\$2.66	\$2.80	\$2.95	\$3.08	\$3.21	\$3.36	\$3.53	\$3.71	\$3.90	\$4.11	\$4.32
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
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.30	\$2.45	\$2.58	\$2.71
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.32	\$4.62	\$4.94	\$5.28	\$5.65	\$6.01
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
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	\$3.84
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
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	\$4.18	\$4.41	\$4.64
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
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.13	\$3.36	\$3.60	\$3.85	\$4.13	\$4.42	\$4.65	\$4.90
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.94	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75

Projected Annual Data Investor Cash Flows														
Company	Ticker	Initial	7/15/16	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
ALLETE, Inc.	ALE	(\$62.26)	\$0.00	\$1.08	\$2.40	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.41	\$3.63	\$3.86
Alliant Energy Corporation	LNT	(\$39.38)	\$0.00	\$0.53	\$1.18	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$1.99	\$2.13
Ameren Corporation	AEP	(\$51.80)	\$0.00	\$0.79	\$1.76	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.90
American Electric Power Company, Inc.	AEP	(\$68.11)	\$0.00	\$1.11	\$2.44	\$2.66	\$2.80	\$2.95	\$3.08	\$3.21	\$3.36	\$3.53	\$3.71	\$3.90
Avista Corporation	AVA	(\$43.03)	\$0.00	\$0.62	\$1.38	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.18
CMS Energy Corporation	CMS	(\$44.28)	\$0.00	\$0.59	\$1.31	\$1.43	\$1.52	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.30	\$2.45
DTE Energy Company	DTE	(\$95.92)	\$0.00	\$1.37	\$3.03	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.32	\$4.62	\$4.94	\$5.28
IDACORP, Inc.	IDA	(\$77.51)	\$0.00	\$0.98	\$2.17	\$2.44	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.06
NorthWestern Corporation	NWE	(\$61.24)	\$0.00	\$0.92	\$2.04	\$2.11	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47
Otter Tail Corporation	OTTR	(\$32.42)	\$0.00	\$0.61	\$1.36	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93
Pinnacle West Capital Corporation	PNW	(\$78.53)	\$0.00	\$1.21	\$2.66	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.18
PNM Resources, Inc.	PNM	(\$34.39)	\$0.00	\$0.42	\$0.95	\$1.11	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.41
Portland General Electric Company	POR	(\$43.04)	\$0.00	\$0.56	\$1.25	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56
SCANA Corporation	SCG	(\$72.88)	\$0.00	\$1.09	\$2.42	\$2.63	\$2.77	\$2.93	\$3.13	\$3.36	\$3.60	\$3.85	\$4.13	\$4.42
Xcel Energy Inc.	XEL	(\$43.38)	\$0.00	\$0.63	\$1.41	\$1.53	\$1.62	\$1.71	\$1.82	\$1.94	\$2.06	\$2.19	\$2.33	\$2.48

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]	
	Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative	Solution	Terminal	Terminal		
					Value	High									
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	
ALLETE, Inc.	ALTE	\$62.26	5.50%	5.00%	4.00%	5.50%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.40%	17.08	3.24	
Alliant Energy Corporation	LNT	\$39.38	6.10%	6.00%	6.00%	6.60%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.75%	20.27	3.84	
Ameren Corporation	AEE	\$51.80	6.10%	5.20%	6.00%	6.10%	5.27%	68.00%	64.00%	66.88%	\$0.00	8.91%	19.36	3.67	
American Electric Power Company, Inc.	AEP	\$68.11	4.70%	3.77%	4.00%	4.70%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.10%	18.42	3.49	
Avista Corporation	AVA	\$43.03	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.50%	21.81	4.14	
CMS Energy Corporation	CMS	\$44.28	6.60%	7.24%	6.00%	7.24%	5.27%	63.00%	62.00%	66.88%	\$0.00	8.88%	19.54	3.71	
EDS Energy Company	DTE	\$95.92	5.80%	5.35%	5.00%	5.80%	5.27%	63.00%	61.00%	66.88%	\$0.00	8.84%	19.77	3.75	
ITACORP, Inc.	IDA	\$77.51	4.00%	4.00%	3.00%	4.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.64%	20.92	3.97	
NorthWestern Corporation	NWE	\$61.25	5.00%	5.00%	6.00%	6.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.07%	18.56	3.52	
Oter Tail Corporation	OTTR	\$32.42	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.10%	18.39	3.49	
Pinnacle West Capital Corporation	PW/N	\$78.53	4.00%	3.73%	4.00%	4.00%	5.27%	64.00%	65.00%	66.88%	\$0.00	8.71%	20.48	3.88	
PNM Resources, Inc.	PNM	\$34.39	7.60%	8.76%	9.00%	9.00%	5.27%	51.00%	55.00%	66.88%	\$0.00	9.63%	16.15	3.06	
Portland General Electric Company	POR	\$43.04	6.50%	6.57%	5.50%	6.57%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.03%	18.75	3.55	
SCANA Corporation	SCG	\$72.88	5.30%	5.40%	4.50%	5.40%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.16%	18.13	3.44	
Xcel Energy Inc.	XEL	\$43.38	5.20%	5.27%	5.50%	5.50%	5.27%	62.00%	63.00%	66.88%	\$0.00	8.93%	19.26	3.65	
												DCF Result			
												Mean	8.98%	19.13	3.63
												Max	9.63%	21.81	4.14
												Min	8.50%	16.15	3.06

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	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.45	\$5.74	\$6.05	\$6.36	\$6.70	\$7.05	\$7.43	\$7.82
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.10	\$3.27	\$3.44	\$3.62	\$3.81	\$4.01	\$4.23
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.92	\$5.18	\$5.46	\$5.74
American Electric Power Company, Inc.	AEP	\$3.59	\$3.76	\$3.94	\$4.12	\$4.31	\$4.52	\$4.73	\$4.96	\$5.21	\$5.48	\$5.76	\$6.06	\$6.38	\$6.72	\$7.08	\$7.45	\$7.84
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	\$4.69	\$4.94
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.33	\$7.72	\$8.13	\$8.56	\$9.01	\$9.49	\$9.99	\$10.51
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	\$7.25	\$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
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	\$8.14
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	\$4.15	\$4.37	\$4.60	\$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	\$4.83	\$5.09
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.10	\$6.43	\$6.77	\$7.12	\$7.50	\$7.89	\$8.31	\$8.75
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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.96%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$133.55
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.68	\$2.83	\$85.63
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.84	\$111.19
American Electric Power Company, Inc.	AEP	\$2.41	\$2.55	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27	\$4.50	\$4.73	\$4.98	\$5.24	\$144.44
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	\$92.00
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$96.58
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72	\$6.03	\$6.34	\$6.68	\$7.03	\$207.83
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	\$168.22
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	\$4.34	\$4.57	\$4.81	\$133.60
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	\$2.37	\$2.50	\$68.76
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	\$4.91	\$5.17	\$5.45	\$166.74
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	\$78.31
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	\$95.42
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76	\$5.02	\$5.28	\$5.56	\$5.85	\$158.58
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	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$93.52

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	7/15/16	6/30/16	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	(\$62.26)	\$0.00	\$1.09	\$2.42	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$138.78
Alliant Energy Corporation	LNT	(\$39.38)	\$0.00	\$0.53	\$1.19	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.68	\$88.46
Ameren Corporation	AEE	(\$51.80)	\$0.00	\$0.80	\$1.77	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$115.03
American Electric Power Company, Inc.	AEP	(\$68.11)	\$0.00	\$1.11	\$2.46	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27	\$4.50	\$4.73	\$4.98	\$149.69
Avista Corporation	AVA	(\$43.03)	\$0.00	\$0.62	\$1.38	\$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	\$94.82
CMS Energy Corporation	CMS	(\$44.28)	\$0.00	\$0.59	\$1.32	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$99.89
DTE Energy Company	DTE	(\$95.92)	\$0.00	\$1.37	\$3.05	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72	\$6.03	\$6.34	\$6.68	\$214.86
IDACORP, Inc.	IDA	(\$77.51)	\$0.00	\$0.99	\$2.18	\$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	\$173.60
NorthWestern Corporation	NWE	(\$61.24)	\$0.00	\$0.93	\$2.07	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.72	\$3.92	\$4.13	\$4.34	\$4.57	\$138.41
Otter Tail Corporation	OTTR	(\$32.42)	\$0.00	\$0.61	\$1.36	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04	\$2.14	\$2.26	\$2.37	\$71.26
Pinnacle West Capital Corporation	PNW	(\$78.53)	\$0.00	\$1.21	\$2.66	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.77	\$3.98	\$4.21	\$4.43	\$4.67	\$4.91	\$5.17	\$172.18
PNM Resources, Inc.	PNM	(\$34.39)	\$0.00	\$0.42	\$0.95	\$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	\$81.55
Portland General Electric Company	POR	(\$43.04)	\$0.00	\$0.56	\$1.26	\$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	\$98.82
SCANA Corporation	SCG	(\$72.88)	\$0.00	\$1.10	\$2.43	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76	\$5.02	\$5.28	\$5.56	\$164.43
Xcel Energy Inc.	XL	(\$43.38)	\$0.00	\$0.64	\$1.41	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.36	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$96.77

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
						Value	Low							
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$62.26	5.50%	5.00%	4.00%	4.00%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.01%	18.84	3.57
Alliant Energy Corporation	LNT	\$39.38	6.10%	6.60%	6.00%	6.00%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.62%	21.07	3.99
Ameren Corporation	AEE	\$51.80	6.10%	5.20%	6.00%	5.20%	5.27%	68.00%	64.00%	66.88%	\$0.00	8.70%	20.53	3.89
American Electric Power Company, Inc.	AEP	\$68.11	4.70%	3.77%	4.00%	3.77%	5.27%	64.00%	67.00%	66.88%	\$0.00	8.87%	19.59	3.71
Avista Corporation	AVA	\$43.03	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.50%	21.81	4.14
CMS Energy Corporation	CMS	\$44.28	6.60%	7.24%	6.00%	6.00%	5.27%	63.00%	62.00%	66.88%	\$0.00	8.60%	21.16	4.01
DTE Energy Company	DTE	\$95.92	5.80%	5.35%	5.00%	5.00%	5.27%	63.00%	61.00%	66.88%	\$0.00	8.65%	20.83	3.95
IDACORP, Inc.	IDA	\$77.51	4.00%	4.00%	3.00%	3.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.42%	22.36	4.24
NorthWestern Corporation	NWE	\$61.25	5.00%	5.00%	6.50%	5.00%	5.27%	65.00%	59.00%	66.88%	\$0.00	8.72%	20.44	3.88
Otter Tail Corporation	OTTR	\$32.42	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.10%	18.39	3.49
Pinnacle West Capital Corporation	PNW	\$78.53	4.00%	3.73%	4.00%	3.73%	5.27%	64.00%	65.00%	66.88%	\$0.00	8.65%	20.85	3.95
PNM Resources, Inc.	PNM	\$34.39	7.60%	8.76%	9.00%	7.60%	5.27%	51.00%	55.00%	66.88%	\$0.00	9.27%	17.60	3.34
Portland General Electric Company	POR	\$43.04	6.50%	6.57%	5.50%	5.50%	5.27%	56.00%	56.00%	66.88%	\$0.00	8.78%	20.08	3.81
SCANA Corporation	SCG	\$72.88	5.30%	5.40%	4.50%	4.50%	5.27%	59.00%	60.00%	66.88%	\$0.00	8.94%	19.21	3.64
Xcel Energy Inc.	XEL	\$43.38	5.20%	5.27%	5.50%	5.20%	5.27%	62.00%	63.00%	66.88%	\$0.00	8.86%	19.63	3.72
DCF Result														
Mean 8.78% 20.16 3.82														
Max 9.27% 22.36 4.24														
Min 8.42% 17.60 3.34														

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	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.43	\$5.72	\$6.02	\$6.34	\$6.67	\$7.02
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.13	\$3.30	\$3.47	\$3.65	\$3.85	\$4.05
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.86	\$5.12	\$5.39
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.87	\$4.01	\$4.16	\$4.32	\$4.49	\$4.69	\$4.90	\$5.13	\$5.39	\$5.67	\$5.97	\$6.29	\$6.62	\$6.97	\$7.34
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	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.93	\$7.30	\$7.68	\$8.09	\$8.51	\$8.96	\$9.43	\$9.93
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	\$7.10	\$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	\$4.75	\$5.01	\$5.27	\$5.55	\$5.84	\$6.15	\$6.47
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	\$7.79	\$8.20
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.87	\$4.07	\$4.29	\$4.52	\$4.75

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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.99%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.63	\$3.82	\$4.02	\$4.24	\$4.46	\$4.70	\$132.27
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.09	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$85.32
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.93	\$3.09	\$3.25	\$3.42	\$3.60	\$110.60
American Electric Power Company, Inc.	AEP	\$2.38	\$2.50	\$2.63	\$2.76	\$2.89	\$3.01	\$3.14	\$3.28	\$3.43	\$3.61	\$3.79	\$3.99	\$4.20	\$4.43	\$4.66	\$4.91	\$143.67
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	\$92.00
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.34	\$2.47	\$2.60	\$2.73	\$2.88	\$3.03	\$95.85
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.21	\$4.50	\$4.81	\$5.14	\$5.41	\$5.69	\$5.99	\$6.31	\$6.64	\$206.83
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	\$167.25
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.34	\$2.52	\$2.70	\$2.90	\$3.12	\$3.35	\$3.52	\$3.71	\$3.91	\$4.11	\$4.33	\$132.31
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	\$2.37	\$2.50	\$68.76
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	\$5.07	\$5.34	\$166.49
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.92	\$2.10	\$2.27	\$2.39	\$2.52	\$2.65	\$2.79	\$2.94	\$77.42
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	\$2.70	\$2.85	\$3.00	\$3.16	\$94.71
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	\$157.64
Xcel Energry Inc.	CEL	\$1.37	\$1.45	\$1.53	\$1.61	\$1.70	\$1.81	\$1.93	\$2.05	\$2.18	\$2.31	\$2.46	\$2.59	\$2.73	\$2.87	\$3.02	\$3.18	\$93.36

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

Inputs	Stock	EPS Growth Rate Estimates					Long-Term		Payout Ratio		Iterative Solution		Terminal	
		Value					Growth		2016		2020		2026	
		Price	Zacks	First Call	Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$58.23	5.50%	5.00%	4.00%	4.83%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.50%	16.67	3.16
Alliant Energy Corporation	LNT	\$37.26	6.10%	6.60%	6.00%	6.23%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.86%	19.64	3.72
Ameren Corporation	AEE	\$49.54	6.10%	5.20%	6.00%	5.77%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.00%	18.91	3.59
American Electric Power Company, Inc.	AEP	\$65.90	4.70%	3.77%	4.00%	4.16%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.09%	18.46	3.50
Avista Corporation	AVA	\$41.13	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.65%	20.84	3.95
CMS Energy Corporation	CMS	\$42.28	6.60%	7.24%	6.00%	6.61%	5.27%	63.00%	62.00%	66.88%	\$0.00	8.90%	19.43	3.68
DTE Energy Company	DTE	\$91.42	5.80%	5.35%	5.00%	5.38%	5.27%	63.00%	61.00%	66.88%	\$0.00	8.91%	19.36	3.67
IDACORP, Inc.	IDA	\$74.60	4.00%	4.00%	3.00%	3.67%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.69%	20.59	3.90
NorthWestern Corporation	NWE	\$59.79	5.00%	5.00%	6.50%	5.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	8.92%	19.32	3.66
Otter Tail Corporation	OTTR	\$30.15	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.39%	17.09	3.24
Pinnacle West Capital Corporation	PNW	\$74.94	4.00%	3.73%	4.00%	3.91%	5.27%	64.00%	65.00%	66.88%	\$0.00	8.86%	19.64	3.72
PNM Resources, Inc.	PNM	\$33.21	7.60%	8.76%	9.00%	8.45%	5.27%	51.00%	55.00%	66.88%	\$0.00	9.63%	16.15	3.06
Portland General Electric Company	POR	\$40.90	6.50%	6.57%	5.50%	6.19%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.13%	18.27	3.46
SCANA Corporation	SCG	\$70.23	5.30%	5.40%	4.50%	5.07%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.22%	17.85	3.38
Xcel Energy Inc.	XEL	\$41.65	5.20%	5.27%	5.50%	5.32%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.04%	18.70	3.55
DCF Result														
											Mean	9.05%	18.73	3.55
											Max	9.63%	20.84	3.95
											Min	8.65%	16.15	3.06

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	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.76	\$6.07	\$6.39	\$6.73	\$7.08	\$7.45
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35	\$3.53	\$3.71	\$3.91	\$4.12
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.06	\$5.33	\$5.61
American Electric Power Company, Inc.	AEP	\$3.59	\$3.74	\$3.89	\$4.06	\$4.23	\$4.40	\$4.59	\$4.80	\$5.03	\$5.27	\$5.54	\$5.83	\$6.14	\$6.46	\$6.81	\$7.16	\$7.54
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	\$2.77	\$2.94	\$3.12	\$3.29	\$3.47	\$3.66	\$3.85	\$4.05	\$4.27	\$4.49	\$4.73
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.76	\$7.12	\$7.50	\$7.89	\$8.31	\$8.75	\$9.21	\$9.70	\$10.21
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
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	\$6.93	\$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	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.95
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.96	\$6.28	\$6.61	\$6.96	\$7.32	\$7.71	\$8.12	\$8.54
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35	\$3.52	\$3.71	\$3.90	\$4.11	\$4.33	\$4.56	\$4.80

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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.41	\$3.63	\$3.86	\$4.06	\$4.27	\$4.50	\$4.74	\$4.99	\$124.26
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$1.99	\$2.13	\$2.24	\$2.36	\$2.48	\$2.62	\$2.75	\$80.86
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.90	\$3.05	\$3.22	\$3.39	\$3.56	\$3.75	\$106.08
American Electric Power Company, Inc.	AEP	\$2.39	\$2.52	\$2.66	\$2.80	\$2.95	\$3.08	\$3.21	\$3.36	\$3.53	\$3.71	\$3.90	\$4.11	\$4.32	\$4.55	\$4.79	\$5.04	\$139.21
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	\$87.90
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.30	\$2.45	\$2.58	\$2.71	\$2.85	\$3.00	\$3.16	\$91.89
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.32	\$4.62	\$4.94	\$5.28	\$5.56	\$5.85	\$6.16	\$6.48	\$6.83	\$197.57
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	\$161.61
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	\$3.84	\$4.05	\$4.26	\$4.49	\$129.58
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	\$2.37	\$2.50	\$63.87
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	\$4.18	\$4.41	\$4.64	\$4.88	\$5.14	\$5.41	\$158.91
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	\$75.39
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.31	\$90.53
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.13	\$3.36	\$3.60	\$3.85	\$4.13	\$4.42	\$4.65	\$4.90	\$5.16	\$5.43	\$5.71	\$152.50
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.94	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$89.69

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[
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Multi-Stage Growth Discounted Cash Flow Model
90 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]	
	Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative	Solution	Terminal	Terminal		
					Value	High									
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	
ALLETE, Inc.	ALTE	\$58.23	5.50%	5.00%	4.00%	5.50%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.68%	15.97	3.03	
Alliant Energy Corporation	LNT	\$37.26	6.10%	6.00%	6.00%	6.60%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.94%	19.18	3.64	
Ameren Corporation	AEE	\$49.54	6.10%	5.20%	6.00%	6.10%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.08%	18.51	3.51	
American Electric Power Company, Inc.	AEP	\$65.90	4.70%	3.77%	4.00%	4.70%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.23%	17.81	3.38	
Avista Corporation	AVA	\$41.13	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.65%	20.84	3.95	
CMS Energy Corporation	CMS	\$42.28	6.60%	7.24%	6.00%	7.24%	5.27%	63.00%	62.00%	66.88%	\$0.00	9.05%	18.67	3.54	
EDS Energy Company	DTE	\$91.42	5.80%	5.35%	5.00%	5.80%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.01%	18.84	3.57	
ITACORP, Inc.	IDA	\$74.60	4.00%	4.00%	3.00%	4.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.77%	20.14	3.82	
NorthWestern Corporation	NWE	\$59.79	5.00%	5.00%	6.50%	6.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.16%	18.12	3.44	
Otter Tail Corporation	OTTR	\$30.15	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.39%	17.09	3.44	
Pinnacle West Capital Corporation	PW/N	\$74.94	4.00%	3.73%	4.00%	4.00%	5.27%	64.00%	65.00%	66.88%	\$0.00	8.88%	19.52	3.70	
PNM Resources, Inc.	PNM	\$33.21	7.60%	8.76%	9.00%	9.00%	5.27%	51.00%	55.00%	66.88%	\$0.00	9.78%	15.62	2.96	
Portland General Electric Company	POR	\$40.90	6.50%	6.57%	5.50%	6.57%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.22%	17.84	3.38	
SCANA Corporation	SCG	\$70.23	5.30%	5.40%	4.50%	5.40%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.30%	17.47	3.31	
Xcel Energy Inc.	XL	\$41.65	5.20%	5.27%	5.50%	5.50%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.08%	18.49	3.51	
												DCF Result			
												Mean	9.15%	18.27	3.46
												Max	9.78%	20.84	3.95
												Min	8.65%	15.62	2.96

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	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.45	\$5.74	\$6.05	\$6.36	\$6.70	\$7.05	\$7.43	\$7.82
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.10	\$3.27	\$3.44	\$3.62	\$3.81	\$4.01	\$4.23
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.92	\$5.18	\$5.46	\$5.74
American Electric Power Company, Inc.	AEP	\$3.59	\$3.76	\$3.94	\$4.12	\$4.31	\$4.52	\$4.73	\$4.96	\$5.21	\$5.48	\$5.76	\$6.06	\$6.38	\$6.72	\$7.08	\$7.45	\$7.84
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	\$4.69	\$4.94
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.33	\$7.72	\$8.13	\$8.56	\$9.01	\$9.49	\$9.99	\$10.51
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	\$7.25	\$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
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	\$8.14
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	\$4.15	\$4.37	\$4.60	\$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	\$4.83	\$5.09
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.10	\$6.43	\$6.77	\$7.12	\$7.50	\$7.89	\$8.31	\$8.75
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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.99%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$124.84
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.68	\$2.83	\$81.05
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.84	\$106.30
American Electric Power Company, Inc.	AEP	\$2.41	\$2.55	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27	\$4.50	\$4.73	\$4.98	\$5.24	\$139.67
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	\$87.90
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$92.26
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72	\$6.03	\$6.34	\$6.68	\$7.03	\$198.10
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	\$161.94
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	\$4.34	\$4.57	\$4.81	\$130.45
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	\$2.37	\$2.50	\$63.87
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	\$4.91	\$5.17	\$5.45	\$158.99
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	\$75.74
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	\$90.78
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76	\$5.02	\$5.28	\$5.56	\$5.85	\$152.86
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	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$89.79

Projected Annual Data		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]	
Investor Cash Flows																				
Company	Ticker	Initial Outflow	7/15/16	6/31/16	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	(\$58.23)	\$0.00	\$1.09	\$2.42	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$130.07	
Alliant Energy Corporation	LNT	(\$37.26)	\$0.00	\$0.53	\$1.19	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.68	\$83.87	
Ameren Corporation	AEE	(\$49.54)	\$0.00	\$0.80	\$1.77	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$110.14	
American Electric Power Company, Inc.	AEP	(\$65.90)	\$0.00	\$1.11	\$2.46	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27	\$4.50	\$4.73	\$4.98	\$144.91	
Avista Corporation	AVA	(\$41.13)	\$0.00	\$0.62	\$1.38	\$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	\$90.72	
CMS Energy Corporation	CMS	(\$42.28)	\$0.00	\$0.59	\$1.32	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$95.57	
DTE Energy Company	DTE	(\$91.42)	\$0.00	\$1.37	\$3.05	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72	\$6.03	\$6.34	\$6.68	\$205.13	
IDACORP, Inc.	IDA	(\$74.60)	\$0.00	\$0.99	\$2.18	\$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	\$167.32	
NorthWestern Corporation	NWE	(\$59.79)	\$0.00	\$0.93	\$2.07	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.72	\$3.92	\$4.13	\$4.34	\$4.57	\$135.27	
Otter Tail Corporation	OTTR	(\$30.15)	\$0.00	\$0.61	\$1.36	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04	\$2.14	\$2.26	\$2.37	\$66.37	
Pinnacle West Capital Corporation	PNW	(\$74.94)	\$0.00	\$1.21	\$2.66	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.77	\$3.98	\$4.21	\$4.43	\$4.67	\$4.91	\$5.17	\$164.43	
PNM Resources, Inc.	PNM	(\$33.21)	\$0.00	\$0.42	\$0.95	\$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	\$78.98	
Portland General Electric Company	PG	(\$40.90)	\$0.00	\$0.56	\$1.26	\$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	\$94.19	
SCANA Corporation	SCG	(\$70.23)	\$0.00	\$1.10	\$2.43	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76	\$5.02	\$5.28	\$5.56	\$158.71	
Xcel Energy Inc.	XL	(\$41.65)	\$0.00	\$0.64	\$1.41	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.36	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$93.04	

Multi-Stage Growth Discounted Cash Flow Model
90 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
					Value	Low								
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALLE	\$58.23	5.50%	5.00%	4.00%	4.00%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.27%	17.60	3.34
Alliant Energy Corporation	LNT	\$37.26	6.10%	6.60%	6.00%	6.00%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.81%	19.94	3.78
Ameren Corporation	AEE	\$49.54	6.10%	5.20%	6.00%	5.20%	5.27%	68.00%	64.00%	66.88%	\$0.00	8.86%	19.62	3.72
American Electric Power Company, Inc.	AEP	\$65.90	4.70%	3.77%	4.00%	3.77%	5.27%	64.00%	67.00%	66.88%	\$0.00	8.99%	18.94	3.59
Avista Corporation	AVA	\$41.13	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.65%	20.84	3.95
CMS Energy Corporation	CMS	\$42.28	6.60%	7.24%	6.00%	6.00%	5.27%	63.00%	62.00%	66.88%	\$0.00	8.76%	20.21	3.83
DTE Energy Company	DTE	\$91.42	5.80%	5.35%	5.00%	5.00%	5.27%	63.00%	61.00%	66.88%	\$0.00	8.82%	19.85	3.76
IDACORP, Inc.	IDA	\$74.60	4.00%	4.00%	3.00%	3.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.55%	21.52	4.08
NorthWestern Corporation	NWE	\$59.79	5.00%	5.00%	6.50%	5.00%	5.27%	65.00%	59.00%	66.88%	\$0.00	8.80%	19.96	3.78
Otter Tail Corporation	OTTR	\$30.15	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.39%	17.09	3.24
Pinnacle West Capital Corporation	PNW	\$74.94	4.00%	3.73%	4.00%	3.73%	5.27%	64.00%	65.00%	66.88%	\$0.00	8.82%	19.88	3.77
PNM Resources, Inc.	PNM	\$33.21	7.60%	8.76%	9.00%	7.60%	5.27%	51.00%	55.00%	66.88%	\$0.00	9.41%	17.02	3.23
Portland General Electric Company	POR	\$40.90	6.50%	6.57%	5.50%	5.50%	5.27%	56.00%	56.00%	66.88%	\$0.00	8.96%	19.09	3.62
SCANA Corporation	SCG	\$70.23	5.30%	5.40%	4.50%	4.50%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.08%	18.52	3.51
Xcel Energy Inc.	XEL	\$41.65	5.20%	5.27%	5.50%	5.20%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.01%	18.85	3.57
DCF Result														
Mean												8.95%	19.26	3.65
Max												9.41%	21.52	4.08
Min												8.55%	17.02	3.23

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	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.43	\$5.72	\$6.02	\$6.34	\$6.67	\$7.02
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.13	\$3.30	\$3.47	\$3.65	\$3.85	\$4.05
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.86	\$5.12	\$5.39
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.87	\$4.01	\$4.16	\$4.32	\$4.49	\$4.69	\$4.90	\$5.13	\$5.39	\$5.67	\$5.97	\$6.29	\$6.62	\$6.97	\$7.34
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	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.93	\$7.30	\$7.68	\$8.09	\$8.51	\$8.96	\$9.43	\$9.93
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	\$7.10	\$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	\$4.75	\$5.01	\$5.27	\$5.55	\$5.84	\$6.15	\$6.47
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	\$7.79	\$8.20
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.87	\$4.07	\$4.29	\$4.52	\$4.75

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.	ALLE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.99%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.63	\$3.82	\$4.02	\$4.24	\$4.46	\$4.70	\$123.57
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.09	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$80.74
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.93	\$3.09	\$3.25	\$3.42	\$3.60	\$105.72
American Electric Power Company, Inc.	AEP	\$2.38	\$2.50	\$2.63	\$2.76	\$2.89	\$3.01	\$3.14	\$3.28	\$3.43	\$3.61	\$3.79	\$3.99	\$4.20	\$4.43	\$4.66	\$4.91	\$138.90
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	\$87.90
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.34	\$2.47	\$2.60	\$2.73	\$2.88	\$3.03	\$91.54
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.21	\$4.50	\$4.81	\$5.14	\$5.41	\$5.69	\$5.99	\$6.31	\$6.64	\$197.10
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	\$160.98
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.34	\$2.52	\$2.70	\$2.90	\$3.12	\$3.35	\$3.52	\$3.71	\$3.91	\$4.11	\$4.33	\$129.17
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	\$2.37	\$2.50	\$63.87
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	\$5.07	\$5.34	\$158.74
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.92	\$2.10	\$2.27	\$2.39	\$2.52	\$2.65	\$2.79	\$2.94	\$74.86
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	\$2.70	\$2.85	\$3.00	\$3.16	\$90.08
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	\$151.92
Xcel Energy Inc.	XL	\$1.37	\$1.45	\$1.53	\$1.61	\$1.70	\$1.81	\$1.93	\$2.05	\$2.18	\$2.31	\$2.46	\$2.59	\$2.73	\$2.87	\$3.02	\$3.18	\$89.62

Multi-Stage Growth Discounted Cash Flow Model
180 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	
		Value												
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$54.79	5.50%	5.00%	4.00%	4.83%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.77%	15.67	2.97
Alliant Energy Corporation	LNT	\$34.37	6.10%	6.00%	6.00%	6.23%	5.27%	64.00%	61.00%	66.88%	\$0.00	9.16%	18.12	3.44
Ameren Corporation	AEE	\$46.89	6.10%	5.20%	6.00%	5.77%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.21%	17.89	3.39
American Electric Power Company, Inc.	AEP	\$62.20	4.70%	3.77%	4.00%	4.16%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.32%	17.40	3.30
Avista Corporation	AVA	\$38.37	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.90%	19.43	3.68
CMS Energy Corporation	CMS	\$39.59	6.60%	7.24%	6.00%	6.61%	5.27%	63.00%	62.00%	66.88%	\$0.00	9.14%	18.20	3.45
EDS Energy Company	DTE	\$86.64	5.80%	5.35%	5.00%	5.38%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.11%	18.34	3.48
ITACORP, Inc.	IDA	\$71.49	4.00%	4.00%	3.00%	3.67%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.84%	19.73	3.74
NorthWestern Corporation	NWE	\$57.54	5.00%	5.00%	6.00%	5.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.06%	18.59	3.53
Otter Tail Corporation	OTTR	\$28.49	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.64%	16.13	3.06
Pinnacle West Capital Corporation	PWNV	\$69.95	4.00%	3.73%	4.00%	3.91%	5.27%	64.00%	65.00%	66.88%	\$0.00	9.12%	18.31	3.47
PNM Resources, Inc.	PNM	\$31.69	7.60%	8.76%	9.00%	8.45%	5.27%	51.00%	55.00%	66.88%	\$0.00	9.83%	15.44	2.93
Portland General Electric Company	POR	\$39.05	6.50%	6.57%	5.00%	6.19%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.31%	17.46	3.31
SCANA Corporation	SCG	\$65.81	5.30%	5.40%	4.50%	5.07%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.48%	16.73	3.17
Xcel Energy Inc.	XEL	\$39.28	5.20%	5.27%	5.50%	5.32%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.27%	17.63	3.34
DCF Result														
											Mean	9.28%	17.67	3.35
											Max	9.83%	19.73	3.74
											Min	8.84%	15.44	2.93

Multi-Stage Growth Discounted Cash Flow Model
180 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]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
					Value	High								
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$54.79	5.50%	5.00%	4.00%	5.50%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.96%	15.02	2.85
Alliant Energy Corporation	LNT	\$34.37	6.10%	6.60%	6.00%	6.60%	5.27%	64.00%	61.00%	66.88%	\$0.00	9.25%	17.71	3.36
Ameren Corporation	AEE	\$46.89	6.10%	5.20%	6.00%	6.10%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.29%	17.51	3.32
American Electric Power Company, Inc.	AEP	\$62.20	4.70%	3.77%	4.00%	4.70%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.47%	16.79	3.18
Avista Corporation	AVA	\$38.37	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.90%	19.43	3.68
CMS Energy Corporation	CMS	\$39.59	6.60%	7.24%	6.00%	7.24%	5.27%	63.00%	62.00%	66.88%	\$0.00	9.30%	17.49	3.38
DTE Energy Company	DTE	\$86.64	5.80%	5.35%	5.00%	5.80%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.22%	17.86	3.39
IDACORP, Inc.	IDA	\$71.49	4.00%	4.00%	3.00%	4.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.92%	19.31	3.66
NorthWestern Corporation	NWE	\$57.54	5.00%	5.00%	6.50%	6.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.31%	17.44	3.31
Outer Tail Corporation	OTTR	\$28.49	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.64%	16.13	3.06
Pinnacle West Capital Corporation	PNW	\$69.95	4.00%	3.73%	4.00%	4.00%	5.27%	64.00%	65.00%	66.88%	\$0.00	9.14%	18.20	3.45
PNM Resources, Inc.	PNM	\$31.69	7.60%	8.76%	9.00%	9.00%	5.27%	51.00%	55.00%	66.88%	\$0.00	9.99%	14.94	2.83
Portland General Electric Company	POR	\$39.05	6.50%	6.57%	5.50%	6.57%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.40%	17.05	3.23
SCANA Corporation	SCG	\$65.81	5.30%	5.40%	4.50%	5.40%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.57%	16.38	3.11
Xcel Energy Inc.	XEL	\$39.28	5.20%	5.27%	5.50%	5.50%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.31%	17.43	3.31
DCF Result														
Mean 9.38%														
Max 9.99%														
Min 8.90%														

Projected Annual Earnings per Share															
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
ALLETE, Inc.	ALE	\$3.38	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.45	\$5.74	\$6.05	\$6.36	\$6.70
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.10	\$3.27	\$3.44	\$3.62
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.92
American Electric Power Company, Inc.	AEP	\$3.59	\$3.76	\$3.94	\$4.12	\$4.31	\$4.52	\$4.73	\$4.96	\$5.21	\$5.48	\$5.76	\$6.06	\$6.38	\$6.72
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
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
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.33	\$7.72	\$8.13	\$8.56	\$9.01
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
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
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
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
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	\$4.15
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
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.10	\$6.43	\$6.77	\$7.12	\$7.50
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

Projected Annual Dividend Payout Ratio															
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.93%	63.44%	64.59%	65.73%	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%
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%
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%
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%
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%
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%
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%

Projected Annual Cash Flows															
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26	\$4.48	\$4.72
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47
American Electric Power Company, Inc.	AEP	\$2.41	\$2.55	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27	\$4.50	\$4.73
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
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69	\$2.83	\$2.98
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72	\$6.03	\$6.34
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
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	\$4.34
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
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	\$4.91
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
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
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76	\$5.02	\$5.28
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	\$2.64	\$2.78	\$2.93

Projected Annual Data Investor Cash Flows															
Company	Ticker	Initial	7/15/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27
ALLETE, Inc.	ALE	(\$54.79)	\$0.00	\$1.09	\$2.42	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26
Alliant Energy Corporation	LNT	(\$34.37)	\$0.00	\$0.53	\$1.19	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30
Ameren Corporation	AEE	(\$46.89)	\$0.00	\$0.80	\$1.77	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13
American Electric Power Company, Inc.	AEP	(\$62.20)	\$0.00	\$1.11	\$2.46	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27
Avista Corporation	AVA	(\$38.37)	\$0.00	\$0.62	\$1.38	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.18	\$2.30
CMS Energy Corporation	CMS	(\$39.59)	\$0.00	\$0.59	\$1.32	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69
DTE Energy Company	DTE	(\$86.64)	\$0.00	\$1.37	\$3.05	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72
IDACORP, Inc.	IDA	(\$71.49)	\$0.00	\$0.99	\$2.18	\$2.46	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.88	\$4.16	\$4.38
NorthWestern Corporation	NWE	(\$57.54)	\$0.00	\$0.93	\$2.07	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.72	\$3.92
Otter Tail Corporation	OTTR	(\$28.49)	\$0.00	\$0.61	\$1.36	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04
Pinnacle West Capital Corporation	PNW	(\$69.95)	\$0.00	\$1.21	\$2.66	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.77	\$3.98	\$4.21	\$4.43
PNM Resources, Inc.	PNM	(\$31.69)	\$0.00	\$0.42	\$0.95	\$1.13	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.64
Portland General Electric Company	POR	(\$39.05)	\$0.00	\$0.56	\$1.26	\$1.38	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.43	\$2.63	\$2.77
SCANA Corporation	SCG	(\$65.81)	\$0.00	\$1.10	\$2.43	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76
Xcel Energy Inc.	XEL	(\$39.28)	\$0.00	\$0.64	\$1.41	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.36	\$2.51	\$2.64

Multi-Stage Growth Discounted Cash Flow Model
180 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	Line	Low Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALLE	\$54.79	5.50%	5.00%	4.00%	4.00%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.53%	16.54	3.14
Alliant Energy Corporation	LNT	\$34.37	6.10%	6.60%	6.00%	6.00%	5.27%	64.00%	61.00%	66.88%	\$0.00	9.10%	18.40	3.49
Ameren Corporation	AEE	\$46.89	6.10%	5.20%	6.00%	5.20%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.07%	18.56	3.52
American Electric Power Company, Inc.	AEP	\$62.20	4.70%	3.77%	4.00%	3.77%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.22%	17.85	3.38
Avista Corporation	AVA	\$38.37	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.90%	19.43	3.68
CMS Energy Corporation	CMS	\$39.59	6.60%	7.24%	6.00%	6.00%	5.27%	63.00%	62.00%	66.88%	\$0.00	8.99%	18.93	3.59
DTE Energy Company	DTE	\$86.64	5.80%	5.35%	5.00%	5.00%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.02%	18.81	3.57
IDACORP, Inc.	IDA	\$71.49	4.00%	4.00%	3.00%	3.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.69%	20.63	3.91
NorthWestern Corporation	NWE	\$57.54	5.00%	5.00%	6.50%	5.00%	5.27%	65.00%	59.00%	66.88%	\$0.00	8.94%	19.21	3.64
Otter Tail Corporation	OTTR	\$28.49	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.64%	16.13	3.06
Pinnacle West Capital Corporation	PNW	\$69.95	4.00%	3.73%	4.00%	3.73%	5.27%	64.00%	65.00%	66.88%	\$0.00	9.07%	18.53	3.51
PNM Resources, Inc.	PNM	\$31.69	7.60%	8.76%	9.00%	7.60%	5.27%	51.00%	55.00%	66.88%	\$0.00	9.60%	16.27	3.08
Portland General Electric Company	POR	\$39.05	6.50%	6.57%	5.50%	5.50%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.13%	18.25	3.46
SCANA Corporation	SCG	\$65.81	5.30%	5.40%	4.50%	4.50%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.33%	17.35	3.29
Xcel Energy Inc.	XEL	\$39.28	5.20%	5.27%	5.50%	5.20%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.24%	17.78	3.37
DCF Result														
Mean												9.16%	18.18	3.45
Max												9.64%	20.63	3.91
Min												8.69%	16.13	3.06

Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
		Price																
ALLETE, Inc.	ALLE	\$3.38	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.43	\$5.72	\$6.02	\$6.34	\$6.67	\$7.02
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.13	\$3.30	\$3.47	\$3.65	\$3.85	\$4.05
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.86	\$5.12	\$5.39
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.87	\$4.01	\$4.16	\$4.32	\$4.49	\$4.69	\$4.90	\$5.13	\$5.39	\$5.67	\$5.97	\$6.29	\$6.62	\$6.97	\$7.34
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	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.93	\$7.30	\$7.68	\$8.09	\$8.51	\$8.96	\$9.43	\$9.93
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	\$7.10	\$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	\$4.75	\$5.01	\$5.27	\$5.55	\$5.84	\$6.15	\$6.47
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	\$7.79	\$8.20
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.87	\$4.07	\$4.29	\$4.52	\$4.75

Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
		Dividend Payout Ratio															
ALLETE, Inc.	ALLE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.99%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.63	\$3.82	\$4.02	\$4.24	\$4.46	\$4.70	\$116.14
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.09	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$74.50
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.93	\$3.09	\$3.25	\$3.42	\$3.60	\$99.99
American Electric Power Company, Inc.	AEP	\$2.38	\$2.50	\$2.63	\$2.76	\$2.89	\$3.01	\$3.14	\$3.28	\$3.43	\$3.61	\$3.79	\$3.99	\$4.20	\$4.43	\$4.66	\$4.91	\$130.92
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	\$81.94
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.34	\$2.47	\$2.60	\$2.73	\$2.88	\$3.03	\$85.72
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.21	\$4.50	\$4.81	\$5.14	\$5.41	\$5.69	\$5.99	\$6.31	\$6.64	\$186.76
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	\$154.26
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.34	\$2.52	\$2.70	\$2.90	\$3.12	\$3.35	\$3.52	\$3.71	\$3.91	\$4.11	\$4.33	\$124.30
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	\$2.37	\$2.50	\$60.29
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	\$5.07	\$5.34	\$147.98
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.92	\$2.10	\$2.27	\$2.39	\$2.52	\$2.65	\$2.79	\$2.94	\$71.54
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	\$2.70	\$2.85	\$3.00	\$3.16	\$86.09
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	\$142.36
Xcel Energy Inc.	XL	\$1.37	\$1.45	\$1.53	\$1.61	\$1.70	\$1.81	\$1.93	\$2.05	\$2.18	\$2.31	\$2.46	\$2.59	\$2.73	\$2.87	\$3.02	\$3.18	\$84.51

Multi-Stage DCF Notes:

- [1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of July 15, 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 - 7/15/2016) / 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 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]
		Price	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution	Terminal	Terminal	
			Stock	Value										
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$62.26	5.50%	5.00%	4.00%	4.83%	5.27%	66.00%	63.00%	66.88%	\$0.00	10.01%	20.84	3.95
Alliant Energy Corporation	LNT	\$39.38	6.10%	6.60%	6.00%	6.23%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.63%	20.84	3.95
Ameren Corporation	AEE	\$51.80	6.10%	5.20%	6.00%	5.77%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.06%	20.84	3.95
American Electric Power Company, Inc.	AEP	\$68.11	4.70%	3.77%	4.00%	4.16%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.38%	20.84	3.95
Avista Corporation	AVA	\$43.03	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.19%	20.84	3.95
CMS Energy Corporation	CMS	\$44.28	6.60%	7.24%	6.00%	6.61%	5.27%	63.00%	62.00%	66.88%	\$0.00	8.81%	20.84	3.95
DTE Energy Company	DTE	\$95.92	5.80%	5.35%	5.00%	5.38%	5.27%	63.00%	61.00%	66.88%	\$0.00	8.82%	20.84	3.95
IDACORP, Inc.	IDA	\$77.51	4.00%	4.00%	3.00%	3.67%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.36%	20.84	3.95
NorthWestern Corporation	NWE	\$61.25	5.00%	5.00%	6.50%	5.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.06%	20.84	3.95
Otter Tail Corporation	OTTR	\$32.42	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.73%	20.84	3.95
Pinnacle West Capital Corporation	PNW	\$78.53	4.00%	3.73%	4.00%	3.91%	5.27%	64.00%	65.00%	66.88%	\$0.00	8.70%	20.84	3.95
PNM Resources, Inc.	PNM	\$34.39	7.60%	8.76%	9.00%	8.45%	5.27%	51.00%	55.00%	66.88%	\$0.00	10.62%	20.84	3.95
Portland General Electric Company	POR	\$43.04	6.50%	6.57%	5.50%	6.19%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.33%	20.84	3.95
SCANA Corporation	SCG	\$72.88	5.30%	5.40%	4.50%	5.07%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.66%	20.84	3.95
Xcel Energy Inc.	XEL	\$43.38	5.20%	5.27%	5.50%	5.32%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.20%	20.84	3.95

DCF Result			
Mean	9.17%	20.84	3.95
Max	10.62%	20.84	3.95
Min	8.19%	20.84	3.95

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	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.76	\$6.07	\$6.39	\$6.73	\$7.08	\$7.45
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35	\$3.53	\$3.71	\$3.91	\$4.12
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.06	\$5.33	\$5.61
American Electric Power Company, Inc.	AEP	\$3.59	\$3.74	\$3.89	\$4.06	\$4.23	\$4.40	\$4.59	\$4.80	\$5.03	\$5.27	\$5.54	\$5.83	\$6.14	\$6.46	\$6.81	\$7.16	\$7.54
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	\$2.77	\$2.94	\$3.12	\$3.29	\$3.47	\$3.66	\$3.85	\$4.05	\$4.27	\$4.49	\$4.73
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.76	\$7.12	\$7.50	\$7.89	\$8.31	\$8.75	\$9.21	\$9.70	\$10.21
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
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	\$6.93	\$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	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.95
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.96	\$6.28	\$6.61	\$6.96	\$7.32	\$7.71	\$8.12	\$8.54
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35	\$3.52	\$3.71	\$3.90	\$4.11	\$4.33	\$4.56	\$4.80

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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.41	\$3.63	\$3.86	\$4.06	\$4.27	\$4.50	\$4.74	\$4.99	\$155.34
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$1.99	\$2.13	\$2.24	\$2.36	\$2.48	\$2.62	\$2.75	\$85.80
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.90	\$3.05	\$3.22	\$3.39	\$3.56	\$3.75	\$116.90
American Electric Power Company, Inc.	AEP	\$2.39	\$2.52	\$2.66	\$2.80	\$2.95	\$3.08	\$3.21	\$3.36	\$3.53	\$3.71	\$3.90	\$4.11	\$4.32	\$4.55	\$4.79	\$5.04	\$157.18
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	\$87.90
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.30	\$2.45	\$2.58	\$2.71	\$2.85	\$3.00	\$3.16	\$98.56
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.32	\$4.62	\$4.94	\$5.28	\$5.56	\$5.85	\$6.16	\$6.48	\$6.83	\$121.71
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	\$163.56
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	\$3.84	\$4.05	\$4.26	\$4.49	\$139.77
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	\$2.37	\$2.50	\$77.90
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	\$4.18	\$4.41	\$4.64	\$4.88	\$5.14	\$5.41	\$168.61
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	\$97.27
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.31	\$103.25
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.13	\$3.36	\$3.60	\$3.85	\$4.13	\$4.42	\$4.65	\$4.90	\$5.16	\$5.43	\$5.71	\$178.05
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.94	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$99.95

Projected Annual Data		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]	
Investor Cash Flows																				
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	(\$62.26)	\$0.00	\$1.37	\$2.40	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.41	\$3.63	\$3.86	\$4.06	\$4.27	\$4.50	\$4.74	\$160.33	
Alliant Energy Corporation	LNT	(\$39.38)	\$0.00	\$0.67	\$1.18	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$1.99	\$2.13	\$2.24	\$2.36	\$2.48	\$2.62	\$88.65	
Ameren Corporation	AEE	(\$51.80)	\$0.00	\$1.00	\$1.76	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.90	\$3.05	\$3.22	\$3.39	\$3.56	\$120.65	
American Electric Power Company, Inc.	AEP	(\$68.11)	\$0.00	\$1.40	\$2.44	\$2.66	\$2.80	\$2.95	\$3.08	\$3.21	\$3.36	\$3.53	\$3.71	\$3.90	\$4.11	\$4.32	\$4.55	\$4.79	\$162.23	
Avista Corporation	AVA	(\$43.03)	\$0.00	\$0.79	\$1.38	\$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	\$90.73	
CMS Energy Corporation	CMS	(\$44.28)	\$0.00	\$0.74	\$1.31	\$1.43	\$1.52	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.30	\$2.45	\$2.58	\$2.71	\$2.85	\$3.00	\$101.73	
DTE Energy Company	DTE	(\$95.92)	\$0.00	\$1.73	\$3.03	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.32	\$4.62	\$4.94	\$5.28	\$5.56	\$5.85	\$6.16	\$6.48	\$219.53	
IDACORP, Inc.	IDA	(\$77.51)	\$0.00	\$1.25	\$2.17	\$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	\$168.81	
NorthWestern Corporation	NWE	(\$61.24)	\$0.00	\$1.17	\$2.04	\$2.11	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.65	\$3.84	\$4.05	\$4.26	\$144.26	
Otter Tail Corporation	OTTR	(\$32.42)	\$0.00	\$0.78	\$1.36	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04	\$2.14	\$2.26	\$2.37	\$80.40	
Pinnacle West Capital Corporation	PNW	(\$78.53)	\$0.00	\$1.53	\$2.66	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.18	\$4.41	\$4.64	\$4.88	\$5.14	\$174.02	
PNM Resources, Inc.	PNM	(\$34.39)	\$0.00	\$0.53	\$0.95	\$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	\$100.39	
Portland General Electric Company	POR	(\$43.04)	\$0.00	\$0.71	\$1.25	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$106.97	
SCANA Corporation	SCG	(\$72.88)	\$0.00	\$1.38	\$2.42	\$2.63	\$2.77	\$2.93	\$3.13	\$3.36	\$3.60	\$3.85	\$4.13	\$4.42	\$4.65	\$4.90	\$5.16	\$5.43	\$183.76	
Xcel Energy Inc.	XL	(\$43.37)	\$0.00	\$0.80	\$1.41	\$1.53	\$1.62	\$1.71	\$1.82	\$1.94	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$103.16	

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]	
		Stock	EPS Growth Rate Estimates					Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Line	High Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	
ALLETE, Inc.	ALE	\$62.26	5.50%	5.00%	4.00%	5.50%	5.27%	66.00%	63.00%	66.88%	\$0.00	10.41%	20.84	3.95	
Alliant Energy Corporation	LNT	\$39.38	6.10%	6.60%	6.00%	6.60%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.84%	20.84	3.95	
Ameren Corporation	AEE	\$51.80	6.10%	5.20%	6.00%	6.10%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.26%	20.84	3.95	
American Electric Power Company, Inc.	AEP	\$68.11	4.70%	3.77%	4.00%	4.70%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.71%	20.84	3.95	
Avista Corporation	AVA	\$43.03	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.19%	20.84	3.95	
CMS Energy Corporation	CMS	\$44.28	6.60%	7.24%	6.00%	7.24%	5.27%	63.00%	62.00%	66.88%	\$0.00	9.17%	20.84	3.95	
DTE Energy Company	DTE	\$95.92	5.80%	5.35%	5.00%	5.80%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.07%	20.84	3.95	
IDACORP, Inc.	IDA	\$77.51	4.00%	4.00%	3.00%	4.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.55%	20.84	3.95	
NorthWestern Corporation	NWE	\$61.25	5.00%	5.00%	6.50%	6.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.64%	20.84	3.95	
Otter Tail Corporation	OTTR	\$32.42	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.73%	20.84	3.95	
Pinnacle West Capital Corporation	PNW	\$78.53	4.00%	3.73%	4.00%	4.00%	5.27%	64.00%	65.00%	66.88%	\$0.00	8.75%	20.84	3.95	
PNM Resources, Inc.	PNM	\$34.39	7.60%	8.76%	9.00%	9.00%	5.27%	51.00%	55.00%	66.88%	\$0.00	10.94%	20.84	3.95	
Portland General Electric Company	POR	\$43.04	6.50%	6.57%	5.50%	6.57%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.55%	20.84	3.95	
SCANA Corporation	SCG	\$72.88	5.30%	5.40%	4.50%	5.40%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.86%	20.84	3.95	
Xcel Energy Inc.	XEL	\$43.38	5.20%	5.27%	5.50%	5.50%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.30%	20.84	3.95	

DCF Result			
Mean	9.40%	20.84	3.95
Max	10.94%	20.84	3.95
Min	8.19%	20.84	3.95

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	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.45	\$5.74	\$6.05	\$6.36	\$6.70	\$7.05	\$7.43	\$7.82
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.10	\$3.27	\$3.44	\$3.62	\$3.81	\$4.01	\$4.23
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.92	\$5.18	\$5.46	\$5.74
American Electric Power Company, Inc.	AEP	\$3.59	\$3.76	\$3.94	\$4.12	\$4.31	\$4.52	\$4.73	\$4.96	\$5.21	\$5.48	\$5.76	\$6.06	\$6.38	\$6.72	\$7.08	\$7.45	\$7.84
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	\$4.69	\$4.94
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.33	\$7.72	\$8.13	\$8.56	\$9.01	\$9.49	\$9.99	\$10.51
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	\$7.25	\$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
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	\$8.14
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	\$4.15	\$4.37	\$4.60	\$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	\$4.83	\$5.09
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.10	\$6.43	\$6.77	\$7.12	\$7.50	\$7.89	\$8.31	\$8.75
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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.39%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$162.91
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.68	\$2.83	\$88.05
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.84	\$119.70
American Electric Power Company, Inc.	AEP	\$2.41	\$2.55	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27	\$4.50	\$4.73	\$4.98	\$5.24	\$163.43
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	\$87.90
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$103.00
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72	\$6.03	\$6.34	\$6.68	\$7.03	\$219.10
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	\$167.54
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	\$4.34	\$4.57	\$4.81	\$150.03
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	\$2.37	\$2.50	\$77.90
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	\$4.91	\$5.17	\$5.45	\$169.71
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	\$101.02
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	\$106.06
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76	\$5.02	\$5.28	\$5.56	\$5.85	\$182.33
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	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$101.21

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	Line	Low Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALTE	\$62.26	5.50%	5.00%	4.00%	4.00%	5.27%	66.00%	63.00%	66.88%	\$0.00	9.51%	20.84	3.95
Alliant Energy Corporation	LNT	\$39.38	6.10%	6.60%	6.00%	6.00%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.50%	20.84	3.95
Ameren Corporation	AEE	\$51.80	6.10%	5.20%	6.00%	5.20%	5.27%	68.00%	64.00%	66.88%	\$0.00	8.73%	20.84	3.95
American Electric Power Company, Inc.	AEP	\$68.11	4.70%	3.77%	4.00%	3.77%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.15%	20.84	3.95
Avista Corporation	AVA	\$43.03	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.19%	20.84	3.95
CMS Energy Corporation	CMS	\$44.28	6.60%	7.24%	6.00%	6.00%	5.27%	63.00%	62.00%	66.88%	\$0.00	8.45%	20.84	3.95
DTE Energy Company	DTE	\$95.92	5.80%	5.35%	5.00%	5.00%	5.27%	63.00%	61.00%	66.88%	\$0.00	8.60%	20.84	3.95
IDACORP, Inc.	IDA	\$77.51	4.00%	4.00%	3.00%	3.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	7.97%	20.84	3.95
NorthWestern Corporation	NWE	\$61.25	5.00%	5.00%	6.50%	5.00%	5.27%	65.00%	59.00%	66.88%	\$0.00	8.77%	20.84	3.95
Otter Tail Corporation	OTTR	\$32.42	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	9.73%	20.84	3.95
Pinnacle West Capital Corporation	PNW	\$78.53	4.00%	3.73%	4.00%	3.73%	5.27%	64.00%	65.00%	66.88%	\$0.00	8.59%	20.84	3.95
PNM Resources, Inc.	PNM	\$34.39	7.60%	8.76%	9.00%	7.60%	5.27%	51.00%	55.00%	66.88%	\$0.00	10.13%	20.84	3.95
Portland General Electric Company	POR	\$43.04	6.50%	6.57%	5.50%	5.50%	5.27%	56.00%	56.00%	66.88%	\$0.00	8.93%	20.84	3.95
SCANA Corporation	SCG	\$72.88	5.30%	5.40%	4.50%	4.50%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.32%	20.84	3.95
Xcel Energy Inc.	XEL	\$43.38	5.20%	5.27%	5.50%	5.20%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.13%	20.84	3.95
DCF Result														
Mean												8.91%	20.84	3.95
Max												10.13%	20.84	3.95
Min												7.97%	20.84	3.95

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	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.43	\$5.72	\$6.02	\$6.34	\$6.67	\$7.02
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.13	\$3.30	\$3.47	\$3.65	\$3.85	\$4.05
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.86	\$5.12	\$5.39
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.87	\$4.01	\$4.16	\$4.32	\$4.49	\$4.69	\$4.90	\$5.13	\$5.39	\$5.67	\$5.97	\$6.29	\$6.62	\$6.97	\$7.34
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	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.93	\$7.30	\$7.68	\$8.09	\$8.51	\$8.96	\$9.43	\$9.93
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	\$7.10	\$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	\$4.75	\$5.01	\$5.27	\$5.55	\$5.84	\$6.15	\$6.47
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	\$7.79	\$8.20
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.87	\$4.07	\$4.29	\$4.52	\$4.75

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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.39%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.63	\$3.82	\$4.02	\$4.24	\$4.46	\$4.70	\$146.33
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.09	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$84.40
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.93	\$3.09	\$3.25	\$3.42	\$3.60	\$112.29
American Electric Power Company, Inc.	AEP	\$2.38	\$2.50	\$2.63	\$2.76	\$2.89	\$3.01	\$3.14	\$3.28	\$3.43	\$3.61	\$3.79	\$3.99	\$4.20	\$4.43	\$4.66	\$4.91	\$152.86
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	\$87.90
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.34	\$2.47	\$2.60	\$2.73	\$2.88	\$3.03	\$94.38
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.21	\$4.50	\$4.81	\$5.14	\$5.41	\$5.69	\$5.99	\$6.31	\$6.64	\$206.97
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	\$155.85
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.34	\$2.52	\$2.70	\$2.90	\$3.12	\$3.35	\$3.52	\$3.71	\$3.91	\$4.11	\$4.33	\$134.88
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	\$2.37	\$2.50	\$77.90
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	\$5.07	\$5.34	\$166.43
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.92	\$2.10	\$2.27	\$2.39	\$2.52	\$2.65	\$2.79	\$2.94	\$91.66
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	\$2.70	\$2.85	\$3.00	\$3.16	\$98.32
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	\$170.98
Xcel Energy Inc.	XL	\$1.37	\$1.45	\$1.53	\$1.61	\$1.70	\$1.81	\$1.93	\$2.05	\$2.18	\$2.31	\$2.46	\$2.59	\$2.73	\$2.87	\$3.02	\$3.18	\$99.08

Multi-Stage Growth Discounted Cash Flow Model
90 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			
					Value										
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	
ALLETE, Inc.	ALE	\$58.23	5.50%	5.00%	4.00%	4.83%	5.27%	66.00%	63.00%	66.88%	\$0.00	10.64%	20.84	3.95	
Alliant Energy Corporation	LNT	\$37.26	6.10%	6.60%	6.00%	6.23%	5.27%	64.00%	61.00%	66.88%	\$0.00	9.13%	20.84	3.95	
Ameren Corporation	AEE	\$49.54	6.10%	5.20%	6.00%	5.77%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.47%	20.84	3.95	
American Electric Power Company, Inc.	AEP	\$65.90	4.70%	3.77%	4.00%	4.16%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.69%	20.84	3.95	
Avista Corporation	AVA	\$41.13	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.60%	20.84	3.95	
CMS Energy Corporation	CMS	\$42.28	6.60%	7.24%	6.00%	6.61%	5.27%	63.00%	62.00%	66.88%	\$0.00	9.22%	20.84	3.95	
DTE Energy Company	DTE	\$91.42	5.80%	5.35%	5.00%	5.38%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.26%	20.84	3.95	
IDACORP, Inc.	IDA	\$74.60	4.00%	4.00%	3.00%	3.67%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.70%	20.84	3.95	
NorthWestern Corporation	NWE	\$59.79	5.00%	5.00%	6.50%	5.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.28%	20.84	3.95	
Other Tail Corporation	OTTR	\$30.15	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	10.41%	20.84	3.95	
Pinnacle West Capital Corporation	PNW	\$74.94	4.00%	3.73%	4.00%	3.91%	5.27%	64.00%	65.00%	66.88%	\$0.00	9.13%	20.84	3.95	
PNM Resources, Inc.	PNM	\$33.21	7.60%	8.76%	9.00%	8.45%	5.27%	51.00%	55.00%	66.88%	\$0.00	10.94%	20.84	3.95	
Portland General Electric Company	POR	\$40.90	6.50%	6.57%	5.50%	6.19%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.78%	20.84	3.95	
SCANA Corporation	SCG	\$70.23	5.30%	5.40%	4.50%	5.07%	5.27%	59.00%	60.00%	66.88%	\$0.00	10.00%	20.84	3.95	
Xcel Energy Inc.	XEL	\$41.65	5.20%	5.27%	5.50%	5.32%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.57%	20.84	3.95	
												DCF Result			
												Mean	9.59%	20.84	3.95
												Max	10.94%	20.84	3.95
												Min	8.60%	20.84	3.95

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	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.76	\$6.07	\$6.39	\$6.73	\$7.08	\$7.45
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35	\$3.53	\$3.71	\$3.91	\$4.12
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.06	\$5.33	\$5.61
American Electric Power Company, Inc.	AEP	\$3.59	\$3.74	\$3.89	\$4.06	\$4.23	\$4.40	\$4.59	\$4.80	\$5.03	\$5.27	\$5.54	\$5.83	\$6.14	\$6.46	\$6.81	\$7.16	\$7.54
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	\$2.77	\$2.94	\$3.12	\$3.29	\$3.47	\$3.66	\$3.85	\$4.05	\$4.27	\$4.49	\$4.73
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.76	\$7.12	\$7.50	\$7.89	\$8.31	\$8.75	\$9.21	\$9.70	\$10.21
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
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	\$6.93	\$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	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.95
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.96	\$6.28	\$6.61	\$6.96	\$7.32	\$7.71	\$8.12	\$8.54
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35	\$3.52	\$3.71	\$3.90	\$4.11	\$4.33	\$4.56	\$4.80

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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.48%	64.94%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%
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		
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.41	\$3.63	\$3.86	\$4.06	\$4.27	\$4.50	\$4.74	\$4.99	\$155.34	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$1.99	\$2.13	\$2.24	\$2.36	\$2.48	\$2.62	\$2.75	\$85.80	
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.90	\$3.05	\$3.22	\$3.39	\$3.56	\$3.75	\$116.90	
American Electric Power Company, Inc.	AEP	\$2.39	\$2.52	\$2.66	\$2.80	\$2.95	\$3.08	\$3.21	\$3.36	\$3.53	\$3.71	\$3.90	\$4.11	\$4.32	\$4.55	\$4.79	\$5.04	\$157.18	
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	\$87.90	
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.30	\$2.45	\$2.58	\$2.71	\$2.85	\$3.00	\$3.16	\$98.56	
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.32	\$4.62	\$4.94	\$5.28	\$5.56	\$5.85	\$6.16	\$6.48	\$6.83	\$212.71	
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	\$163.56	
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	\$3.84	\$4.05	\$4.26	\$4.49	\$139.77	
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	\$2.37	\$2.50	\$77.90	
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	\$4.18	\$4.41	\$4.64	\$4.88	\$5.14	\$5.41	\$168.61	
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	\$97.27	
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.31	\$103.25	
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.13	\$3.36	\$3.60	\$3.85	\$4.13	\$4.42	\$4.65	\$4.90	\$5.16	\$5.43	\$5.71	\$178.05	
Xcel Energry Inc.	XL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.94	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$99.99	

Projected Annual Data			[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Investor Cash Flows		Initial																		
Company	Ticker	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	(\$58.23)	\$0.00	\$1.37	\$2.40	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.41	\$3.63	\$3.86	\$4.06	\$4.27	\$4.50	\$4.74	\$160.33	
Alliant Energy Corporation	LNT	(\$37.26)	\$0.00	\$0.67	\$1.18	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$1.99	\$2.13	\$2.24	\$2.36	\$2.48	\$2.62	\$88.55	
Ameren Corporation	AEE	(\$49.54)	\$0.00	\$1.00	\$1.76	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.90	\$3.05	\$3.22	\$3.39	\$3.56	\$120.65	
American Electric Power Company, Inc.	AEP	(\$65.90)	\$0.00	\$1.40	\$2.44	\$2.66	\$2.80	\$2.95	\$3.08	\$3.21	\$3.36	\$3.53	\$3.71	\$3.90	\$4.11	\$4.32	\$4.55	\$4.79	\$162.23	
Avista Corporation	AVA	(\$41.13)	\$0.00	\$0.79	\$1.38	\$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	\$90.73	
CMS Energy Corporation	CMS	(\$42.28)	\$0.00	\$0.74	\$1.31	\$1.43	\$1.52	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.30	\$2.45	\$2.58	\$2.71	\$2.85	\$3.00	\$101.73	
DTE Energy Company	DTE	(\$91.42)	\$0.00	\$1.73	\$3.03	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.32	\$4.62	\$4.94	\$5.28	\$5.56	\$5.85	\$6.16	\$6.48	\$219.53	
IDACORP, Inc.	IDA	(\$74.60)	\$0.00	\$1.25	\$2.17	\$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	\$168.81	
NorthWestern Corporation	NWE	(\$59.79)	\$0.00	\$1.17	\$2.04	\$2.22	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.65	\$3.84	\$4.05	\$4.26	\$144.26	
Otter Tail Corporation	OTTR	(\$30.15)	\$0.00	\$0.78	\$1.36	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04	\$2.14	\$2.26	\$2.37	\$80.40	
Pinnacle West Capital Corporation	PNW	(\$74.94)	\$0.00	\$1.53	\$2.66	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.18	\$4.41	\$4.64	\$4.88	\$5.14	\$174.02	
PNM Resources, Inc.	PNM	(\$33.21)	\$0.00	\$0.53	\$0.95	\$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	\$100.39	
Portland General Electric Company	POR	(\$40.90)	\$0.00	\$0.71	\$1.25	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$106.57	
SCANA Corporation	SCG	(\$70.23)	\$0.00	\$1.38	\$2.42	\$2.63	\$2.77	\$2.93	\$3.13	\$3.36	\$3.60	\$3.85	\$4.13	\$4.42	\$4.65	\$4.90	\$5.16	\$5.43	\$183.76	
Xcel Energy Inc.	XEL	(\$41.65)	\$0.00	\$0.80	\$1.41	\$1.53	\$1.62	\$1.71	\$1.82	\$1.94	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$103.16	

Multi-Stage Growth Discounted Cash Flow Model
90 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]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution	Terminal	Terminal	
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALTE	\$58.23	5.50%	5.00%	4.00%	5.50%	5.27%	66.00%	63.00%	66.88%	\$0.00	11.04%	20.84	3.95
Alliant Energy Corporation	LNT	\$37.26	6.10%	6.60%	6.00%	6.60%	5.27%	64.00%	61.00%	66.88%	\$0.00	9.34%	20.84	3.95
Ameren Corporation	AEE	\$49.54	6.10%	5.20%	6.00%	6.10%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.67%	20.84	3.95
American Electric Power Company, Inc.	AEP	\$65.90	4.70%	3.77%	4.00%	4.70%	5.27%	64.00%	67.00%	66.88%	\$0.00	10.02%	20.84	3.95
Avista Corporation	AVA	\$41.13	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.60%	20.84	3.95
CMS Energy Corporation	CMS	\$42.28	6.60%	7.24%	6.00%	7.24%	5.27%	63.00%	62.00%	66.88%	\$0.00	9.59%	20.84	3.95
DTE Energy Company	DTE	\$91.42	5.80%	5.35%	5.00%	5.80%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.50%	20.84	3.95
IDACORP, Inc.	IDA	\$74.60	4.00%	4.00%	3.00%	4.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.90%	20.84	3.95
NorthWestern Corporation	NWE	\$59.79	5.00%	5.00%	6.50%	6.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.86%	20.84	3.95
Otter Tail Corporation	OTTR	\$30.15	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	10.41%	20.84	3.95
Pinnacle West Capital Corporation	PNW	\$74.94	4.00%	3.73%	4.00%	4.00%	5.27%	64.00%	65.00%	66.88%	\$0.00	9.18%	20.84	3.95
PNM Resources, Inc.	PNM	\$33.21	7.60%	8.76%	9.00%	9.00%	5.27%	51.00%	55.00%	66.88%	\$0.00	11.26%	20.84	3.95
Portland General Electric Company	POR	\$40.90	6.50%	6.57%	5.50%	6.57%	5.27%	56.00%	56.00%	66.88%	\$0.00	10.01%	20.84	3.95
SCANA Corporation	SCG	\$70.23	5.30%	5.40%	4.50%	5.40%	5.27%	59.00%	60.00%	66.88%	\$0.00	10.20%	20.84	3.95
Xcel Energy Inc.	XEL	\$41.65	5.20%	5.27%	5.50%	5.50%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.67%	20.84	3.95

DCF Result			
Mean	9.82%	20.84	3.95
Max	11.26%	20.84	3.95
Min	8.60%	20.84	3.95

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.	ALTE	\$3.38	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.45	\$5.74	\$6.05	\$6.36	\$6.70	\$7.05	\$7.43	\$7.82
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.10	\$3.27	\$3.44	\$3.62	\$3.81	\$4.01	\$4.23
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.92	\$5.18	\$5.46	\$5.74
American Electric Power Company, Inc.	AEP	\$3.59	\$3.76	\$3.94	\$4.12	\$4.31	\$4.52	\$4.73	\$4.96	\$5.21	\$5.48	\$5.76	\$6.06	\$6.38	\$6.72	\$7.08	\$7.45	\$7.84
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	\$4.69	\$4.94
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.33	\$7.72	\$8.13	\$8.56	\$9.01	\$9.49	\$9.99	\$10.51
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	\$7.25	\$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
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	\$8.14
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	\$4.15	\$4.37	\$4.60	\$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	\$4.83	\$5.09
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.10	\$6.43	\$6.77	\$7.12	\$7.50	\$7.89	\$8.31	\$8.75
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.	ALTE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.96%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALTE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$162.91
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.68	\$2.83	\$88.05
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.84	\$119.70
American Electric Power Company, Inc.	AEP	\$2.41	\$2.55	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27	\$4.50	\$4.73	\$4.98	\$5.24	\$163.43
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	\$87.90
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$103.00
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72	\$6.03	\$6.34	\$6.68	\$7.03	\$219.10
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	\$167.54
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	\$4.34	\$4.57	\$4.81	\$157.03
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	\$2.37	\$2.50	\$70.90
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	\$4.91	\$5.17	\$5.45	\$169.71
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	\$101.02
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	\$106.06
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76	\$5.02	\$5.28	\$5.56	\$5.85	\$182.33
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	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$101.21

Projected Annual Data			[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Investor Cash Flows																				
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	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	
ALLETE, Inc.	ALE	(\$58.23)	\$0.00	\$1.38	\$2.42	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$168.14	
Alliant Energy Corporation	LNT	(\$37.26)	\$0.00	\$0.68	\$1.19	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.68	\$90.88	
Ameren Corporation	AEE	(\$49.54)	\$0.00	\$1.01	\$1.77	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$123.54	
American Electric Power Company, Inc.	AEP	(\$65.90)	\$0.00	\$1.41	\$2.46	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27	\$4.50	\$4.73	\$4.98	\$168.67	
Avista Corporation	AVA	(\$41.13)	\$0.00	\$0.79	\$1.38	\$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	\$90.73	
CMS Energy Corporation	CMS	(\$42.28)	\$0.00	\$0.75	\$1.32	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$106.31	
DTE Energy Company	DTE	(\$91.42)	\$0.00	\$1.74	\$3.05	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72	\$6.03	\$6.34	\$6.68	\$226.13	
IDACORP, Inc.	IDA	(\$74.60)	\$0.00	\$1.25	\$2.18	\$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	\$172.92	
NorthWestern Corporation	NWE	(\$59.79)	\$0.00	\$1.18	\$2.07	\$2.12	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.72	\$3.92	\$4.13	\$4.34	\$4.57	\$154.84	
Otter Tail Corporation	OTTR	(\$30.15)	\$0.00	\$0.78	\$1.36	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04	\$2.14	\$2.26	\$2.37	\$80.40	
Pinnacle West Capital Corporation	PNW	(\$74.94)	\$0.00	\$1.53	\$2.66	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.77	\$3.98	\$4.21	\$4.43	\$4.67	\$4.91	\$5.17	\$175.15	
PNM Resources, Inc.	PNM	(\$33.21)	\$0.00	\$0.53	\$0.95	\$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	\$104.27	
Portland General Electric Company	POR	(\$40.90)	\$0.00	\$0.71	\$1.26	\$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	\$109.46	
SCANA Corporation	SCG	(\$70.23)	\$0.00	\$1.39	\$2.43	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76	\$5.02	\$5.28	\$5.56	\$188.18	
Xcel Energy Inc.	XL	(\$41.65)	\$0.00	\$0.81	\$1.41	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.36	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$104.46	

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

Inputs	Company	Ticker	Price	EPS Growth Rate Estimates					Long-Term				Payout Ratio				Iterative Solution			
				Value		Low			Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	Terminal			
				Stock	Zacks	First Call	Line	Growth												
	ALLETE, Inc.	ALT	\$58.23	5.50%	5.00%	4.00%	4.00%	5.27%	66.00%	63.00%	66.88%	\$0.00	10.13%	20.84	3.95					
	Alliant Energy Corporation	LNT	\$37.26	6.10%	6.60%	6.00%	6.00%	5.27%	64.00%	61.00%	66.88%	\$0.00	8.99%	20.84	3.95					
	Ameren Corporation	AEE	\$49.54	6.10%	5.20%	6.00%	5.20%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.14%	20.84	3.95					
	American Electric Power Company, Inc.	AEP	\$65.90	4.70%	3.77%	4.00%	3.77%	5.27%	64.00%	67.00%	66.88%	\$0.00	9.46%	20.84	3.95					
	Avista Corporation	AVA	\$41.13	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	8.60%	20.84	3.95					
	CMS Energy Corporation	CMS	\$42.28	6.60%	7.24%	6.00%	6.00%	5.27%	63.00%	62.00%	66.88%	\$0.00	8.87%	20.84	3.95					
	DTE Energy Company	DTE	\$91.42	5.80%	5.35%	5.00%	5.00%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.03%	20.84	3.95					
	IDACORP, Inc.	IDA	\$74.60	4.00%	4.00%	3.00%	3.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.30%	20.84	3.95					
	NorthWestern Corporation	NWE	\$59.79	5.00%	5.00%	6.50%	5.00%	5.27%	65.00%	59.00%	66.88%	\$0.00	8.98%	20.84	3.95					
	Otter Tail Corporation	OTTR	\$30.15	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	10.41%	20.84	3.95					
	Pinnacle West Capital Corporation	PNW	\$74.94	4.00%	3.73%	4.00%	3.73%	5.27%	64.00%	65.00%	66.88%	\$0.00	9.02%	20.84	3.95					
	PNM Resources, Inc.	PNM	\$33.21	7.60%	8.76%	9.00%	7.60%	5.27%	51.00%	55.00%	66.88%	\$0.00	10.44%	20.84	3.95					
	Portland General Electric Company	POR	\$40.90	6.50%	6.57%	5.50%	5.50%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.38%	20.84	3.95					
	SCANA Corporation	SCG	\$70.23	5.30%	5.40%	4.50%	4.50%	5.27%	59.00%	60.00%	66.88%	\$0.00	9.66%	20.84	3.95					
	Xcel Energy Inc.	XEL	\$41.65	5.20%	5.27%	5.50%	5.20%	5.27%	62.00%	63.00%	66.88%	\$0.00	9.50%	20.84	3.95					

DCF Result			
Mean	9.33%	20.84	3.95
Max	10.44%	20.84	3.95
Min	8.30%	20.84	3.95

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	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.43	\$5.72	\$6.02	\$6.34	\$6.67	\$7.02
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.13	\$3.30	\$3.47	\$3.65	\$3.85	\$4.05
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.86	\$5.12	\$5.39
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.87	\$4.01	\$4.16	\$4.32	\$4.49	\$4.69	\$4.90	\$5.13	\$5.39	\$5.67	\$5.97	\$6.29	\$6.62	\$6.97	\$7.34
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	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.93	\$7.30	\$7.68	\$8.09	\$8.51	\$8.96	\$9.43	\$9.93
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	\$7.10	\$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	\$4.75	\$5.01	\$5.27	\$5.55	\$5.84	\$6.15	\$6.47
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	\$7.79	\$8.20
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.87	\$4.07	\$4.29	\$4.52	\$4.75

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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.63	\$3.82	\$4.02	\$4.24	\$4.46	\$4.70	\$146.33
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.09	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$84.40
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.93	\$3.09	\$3.25	\$3.42	\$3.60	\$112.29
American Electric Power Company, Inc.	AEP	\$2.38	\$2.50	\$2.63	\$2.76	\$2.89	\$3.01	\$3.14	\$3.28	\$3.43	\$3.61	\$3.79	\$3.99	\$4.20	\$4.43	\$4.66	\$4.91	\$152.86
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	\$87.90
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.34	\$2.47	\$2.60	\$2.73	\$2.88	\$3.03	\$94.38
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.21	\$4.50	\$4.81	\$5.14	\$5.41	\$5.69	\$5.99	\$6.31	\$6.64	\$206.97
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	\$155.85
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.34	\$2.52	\$2.70	\$2.90	\$3.12	\$3.35	\$3.52	\$3.71	\$3.91	\$4.11	\$4.33	\$134.88
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	\$2.37	\$2.50	\$77.90
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	\$5.07	\$5.34	\$166.43
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.92	\$2.10	\$2.27	\$2.39	\$2.52	\$2.65	\$2.79	\$2.94	\$91.66
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	\$2.70	\$2.85	\$3.00	\$3.16	\$98.32
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	\$170.98
Xcel Energy Inc.	XL	\$1.37	\$1.45	\$1.53	\$1.61	\$1.70	\$1.81	\$1.93	\$2.05	\$2.18	\$2.31	\$2.46	\$2.59	\$2.73	\$2.87	\$3.02	\$3.18	\$99.08

Multi-Stage Growth Discounted Cash Flow Model
180 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	Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$54.79	5.50%	5.00%	4.00%	4.83%	5.27%	66.00%	63.00%	66.88%	\$0.00	11.22%	20.84	3.95
Alliant Energy Corporation	LNT	\$34.37	6.10%	6.00%	6.00%	6.23%	5.27%	64.00%	61.00%	66.88%	\$0.00	9.86%	20.84	3.95
Ameren Corporation	AEE	\$46.89	6.10%	5.20%	6.00%	5.77%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.98%	20.84	3.95
American Electric Power Company, Inc.	AEP	\$62.20	4.70%	3.77%	4.00%	4.16%	5.27%	64.00%	67.00%	66.88%	\$0.00	10.23%	20.84	3.95
Avista Corporation	AVA	\$38.37	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	9.23%	20.84	3.95
CMS Energy Corporation	CMS	\$39.59	6.60%	7.24%	6.00%	6.61%	5.27%	63.00%	62.00%	66.88%	\$0.00	9.82%	20.84	3.95
IDT Energy Company	DTE	\$86.64	5.80%	5.35%	5.00%	5.38%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.75%	20.84	3.95
IDA CORP, Inc.	IDA	\$71.49	4.00%	4.00%	3.00%	3.67%	5.27%	53.00%	60.00%	66.88%	\$0.00	9.08%	20.84	3.95
NorthWestern Corporation	NWE	\$57.54	5.00%	5.00%	6.50%	5.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.63%	20.84	3.95
Oter Tail Corporation	OTTR	\$28.49	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	10.95%	20.84	3.95
Pinnacle West Capital Corporation	PNW	\$69.95	4.00%	3.73%	4.00%	3.91%	5.27%	64.00%	65.00%	66.88%	\$0.00	9.76%	20.84	3.95
PNM Resources, Inc.	PNM	\$31.69	7.60%	8.76%	9.00%	8.45%	5.27%	51.00%	55.00%	66.88%	\$0.00	11.37%	20.84	3.95
Portland General Electric Company	POR	\$35.05	6.50%	6.57%	5.50%	6.19%	5.27%	56.00%	56.00%	66.88%	\$0.00	10.20%	20.84	3.95
SCANA Corporation	SCG	\$69.81	5.30%	5.40%	4.50%	5.07%	5.27%	59.00%	60.00%	66.88%	\$0.00	10.60%	20.84	3.95
Xcel Energy Inc.	XEL	\$39.28	5.20%	5.27%	5.50%	5.32%	5.27%	62.00%	63.00%	66.88%	\$0.00	10.11%	20.84	3.95
DCF Result														
Mean												10.12%	20.84	3.95
Max												11.37%	20.84	3.95
Min												9.08%	20.84	3.95

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	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.76	\$6.07	\$6.39	\$6.73	\$7.08	\$7.45
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35	\$3.53	\$3.71	\$3.91	\$4.12
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.06	\$5.33	\$5.61
American Electric Power Company, Inc.	AEP	\$3.59	\$3.74	\$3.89	\$4.06	\$4.23	\$4.40	\$4.59	\$4.80	\$5.03	\$5.27	\$5.54	\$5.83	\$6.14	\$6.46	\$6.81	\$7.16	\$7.54
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	\$2.77	\$2.94	\$3.12	\$3.29	\$3.47	\$3.66	\$3.85	\$4.05	\$4.27	\$4.49	\$4.73
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.76	\$7.12	\$7.50	\$7.89	\$8.31	\$8.75	\$9.21	\$9.69	\$10.21
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
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	\$6.93	\$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	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.95
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.96	\$6.28	\$6.61	\$6.96	\$7.32	\$7.71	\$8.12	\$8.54
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$2.87	\$3.02	\$3.18	\$3.35	\$3.52	\$3.71	\$3.90	\$4.11	\$4.33	\$4.56	\$4.80

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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDW	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%
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	PGE	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		
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.41	\$3.63	\$3.86	\$4.06	\$4.27	\$4.50	\$4.74	\$4.99	\$155.34	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$1.99	\$2.13	\$2.24	\$2.36	\$2.48	\$2.62	\$2.75	\$85.80	
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.90	\$3.05	\$3.22	\$3.39	\$3.56	\$3.75	\$116.90	
American Electric Power Company, Inc.	AEP	\$2.39	\$2.52	\$2.66	\$2.80	\$2.95	\$3.08	\$3.21	\$3.36	\$3.53	\$3.71	\$3.90	\$4.11	\$4.32	\$4.55	\$4.79	\$5.04	\$157.18	
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	\$87.90	
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.30	\$2.45	\$2.58	\$2.71	\$2.85	\$3.00	\$3.16	\$98.56	
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.32	\$4.62	\$4.94	\$5.28	\$5.56	\$5.85	\$6.16	\$6.48	\$6.83	\$212.71	
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	\$163.56	
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	\$3.84	\$4.05	\$4.26	\$4.49	\$139.77	
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	\$2.37	\$2.50	\$77.90	
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	\$4.18	\$4.41	\$4.64	\$4.88	\$5.14	\$5.41	\$168.61	
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	\$97.27	
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.31	\$103.25	
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.13	\$3.36	\$3.60	\$3.85	\$4.13	\$4.42	\$4.65	\$4.90	\$5.16	\$5.43	\$5.71	\$178.05	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.94	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$99.90	

Projected Annual Data		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]	
Investor Cash Flows		Initial																		
Company	Ticker	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	(\$54.79)	\$0.00	\$1.37	\$2.40	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.41	\$3.63	\$3.86	\$4.06	\$4.27	\$4.50	\$4.74	\$160.33	
Alliant Energy Corporation	LNT	(\$34.37)	\$0.00	\$0.67	\$1.18	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$1.99	\$2.13	\$2.24	\$2.36	\$2.48	\$2.62	\$88.55	
Ameren Corporation	AEE	(\$46.89)	\$0.00	\$1.00	\$1.76	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.90	\$3.05	\$3.22	\$3.39	\$3.56	\$120.65	
American Electric Power Company, Inc.	AEP	(\$62.19)	\$0.00	\$1.40	\$2.44	\$2.66	\$2.80	\$2.95	\$3.08	\$3.21	\$3.36	\$3.53	\$3.71	\$3.90	\$4.11	\$4.32	\$4.55	\$4.79	\$162.23	
Avista Corporation	AVA	(\$38.37)	\$0.00	\$0.79	\$1.38	\$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	\$90.73	
CMS Energy Corporation	CMS	(\$39.59)	\$0.00	\$0.74	\$1.31	\$1.43	\$1.52	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.30	\$2.45	\$2.58	\$2.71	\$2.85	\$3.00	\$101.73	
DTE Energy Company	DTE	(\$86.64)	\$0.00	\$1.73	\$3.03	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.32	\$4.62	\$4.94	\$5.28	\$5.56	\$5.85	\$6.16	\$6.48	\$219.53	
IDACORP, Inc.	IDA	(\$71.49)	\$0.00	\$1.25	\$2.17	\$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	\$168.81	
NorthWestern Corporation	NWE	(\$57.54)	\$0.00	\$1.17	\$2.02	\$2.12	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.65	\$3.84	\$4.05	\$4.26	\$144.26	
Otter Tail Corporation	OTTR	(\$28.49)	\$0.00	\$0.78	\$1.36	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.93	\$2.04	\$2.14	\$2.26	\$2.37	\$80.40	
Pinnacle West Capital Corporation	PNW	(\$69.95)	\$0.00	\$1.53	\$2.66	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.18	\$4.41	\$4.64	\$4.88	\$5.14	\$174.02	
PNM Resources, Inc.	PNM	(\$31.69)	\$0.00	\$0.53	\$0.95	\$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	\$100.39	
Portland General Electric Company	POR	(\$39.05)	\$0.00	\$0.71	\$1.25	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$106.57	
SCANA Corporation	SCG	(\$65.81)	\$0.00	\$1.38	\$2.42	\$2.63	\$2.77	\$2.93	\$3.13	\$3.36	\$3.60	\$3.85	\$4.13	\$4.42	\$4.65	\$4.90	\$5.16	\$5.43	\$183.76	
Xcel Energy Inc.	XEL	(\$39.28)	\$0.00	\$0.80	\$1.41	\$1.53	\$1.62	\$1.71	\$1.82	\$1.94	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$103.16	

Multi-Stage Growth Discounted Cash Flow Model
180 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)													
	Price	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Tercial	
		Value	High											
Company	Ticker	Stock	Zacks	First Call	Line	Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$54.79	5.50%	5.00%	4.00%	5.50%	5.27%	66.00%	63.00%	66.88%	\$0.00	11.63%	20.84	3.95
Alliant Energy Corporation	LNT	\$34.37	6.10%	6.60%	6.00%	6.60%	5.27%	64.00%	61.00%	66.88%	\$0.00	10.07%	20.84	3.95
Ameren Corporation	AEE	\$46.89	6.10%	5.20%	6.00%	6.10%	5.27%	68.00%	64.00%	66.88%	\$0.00	10.18%	20.84	3.95
American Electric Power Company, Inc.	AEP	\$62.20	4.70%	3.77%	4.00%	4.70%	5.27%	64.00%	67.00%	66.88%	\$0.00	10.56%	20.84	3.95
Avista Corporation	AVA	\$38.37	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	9.23%	20.84	3.95
CMS Energy Corporation	CMS	\$39.59	6.60%	7.24%	6.00%	7.24%	5.27%	63.00%	62.00%	66.88%	\$0.00	10.19%	20.84	3.95
DTE Energy Company	DTE	\$86.64	5.80%	5.35%	5.00%	5.80%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.99%	20.84	3.95
IDACORP, Inc.	IDA	\$71.49	4.00%	4.00%	3.00%	4.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	9.28%	20.84	3.95
NorthWestern Corporation	NWE	\$57.54	5.00%	5.00%	6.50%	6.50%	5.27%	65.00%	59.00%	66.88%	\$0.00	10.22%	20.84	3.95
Otter Tail Corporation	OTTR	\$28.49	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	10.95%	20.84	3.95
Pinnacle West Capital Corporation	PNW	\$69.95	4.00%	3.73%	4.00%	4.00%	5.27%	64.00%	65.00%	66.88%	\$0.00	9.82%	20.84	3.95
PNM Resources, Inc.	PNM	\$31.69	7.60%	8.76%	9.00%	9.00%	5.27%	51.00%	55.00%	66.88%	\$0.00	11.70%	20.84	3.95
Portland General Electric Company	POR	\$39.05	6.50%	6.57%	5.50%	6.57%	5.27%	56.00%	56.00%	66.88%	\$0.00	10.43%	20.84	3.95
SCANA Corporation	SCG	\$65.81	5.30%	5.40%	4.50%	5.40%	5.27%	59.00%	60.00%	66.88%	\$0.00	10.80%	20.84	3.95
Xcel Energy Inc.	XEL	\$39.28	5.20%	5.27%	5.50%	5.50%	5.27%	62.00%	63.00%	66.88%	\$0.00	10.22%	20.84	3.95

DCF Result			
Mean	10.35%	20.84	3.95
Max	11.70%	20.84	3.95
Min	9.23%	20.84	3.95

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	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.45	\$5.74	\$6.05	\$6.36	\$6.70	\$7.05	\$7.43	\$7.82
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.10	\$3.27	\$3.44	\$3.62	\$3.81	\$4.01	\$4.23
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.92	\$5.18	\$5.46	\$5.74
American Electric Power Company, Inc.	AEP	\$3.59	\$3.76	\$3.94	\$4.12	\$4.31	\$4.52	\$4.73	\$4.96	\$5.21	\$5.48	\$5.76	\$6.06	\$6.38	\$6.72	\$7.08	\$7.45	\$7.84
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	\$4.69	\$4.94
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.33	\$7.72	\$8.13	\$8.56	\$9.01	\$9.49	\$9.99	\$10.51
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	\$7.25	\$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
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	\$8.14
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	\$4.15	\$4.37	\$4.60	\$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	\$4.83	\$5.09
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.10	\$6.43	\$6.77	\$7.12	\$7.50	\$7.89	\$8.31	\$8.75
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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.99%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.80	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$162.91
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.68	\$2.83	\$88.05
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.84	\$119.70
American Electric Power Company, Inc.	AEP	\$2.41	\$2.55	\$2.70	\$2.86	\$3.03	\$3.17	\$3.32	\$3.49	\$3.67	\$3.85	\$4.06	\$4.27	\$4.50	\$4.73	\$4.98	\$5.24	\$163.43
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	\$87.90
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.24	\$2.40	\$2.56	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$103.00
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.44	\$4.76	\$5.09	\$5.44	\$5.72	\$6.03	\$6.34	\$6.68	\$7.03	\$219.10
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	\$167.54
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	\$4.34	\$4.57	\$4.81	\$150.03
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	\$2.37	\$2.50	\$77.90
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	\$4.91	\$5.17	\$5.45	\$169.71
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	\$101.02
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	\$106.06
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.94	\$4.22	\$4.53	\$4.76	\$5.02	\$5.28	\$5.56	\$5.85	\$182.33
Xcel Energy Inc.	XL	\$1.37	\$1.46	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.36	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$101.21

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

Inputs	Company	Ticker	Price	EPS Growth Rate Estimates					Long-Term			Payout Ratio			Iterative Solution		Terminal	
				Value		Line	Low	Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio		
				Zacks	First Call													
Company																		
ALLETE, Inc.	ALTE	\$54.79	5.50%	5.00%	4.00%	4.00%	4.00%	5.27%	66.00%	63.00%	66.88%	\$0.00	10.71%	20.84	3.95			
Alliant Energy Corporation	LNT	\$34.37	6.10%	6.60%	6.00%	6.00%	6.00%	5.27%	64.00%	61.00%	66.88%	\$0.00	9.72%	20.84	3.95			
Ameren Corporation	AEE	\$46.89	6.10%	5.20%	6.00%	5.20%	5.27%	68.00%	64.00%	66.88%	\$0.00	9.64%	20.84	3.95				
American Electric Power Company, Inc.	AEP	\$62.20	4.70%	3.77%	4.00%	3.77%	5.27%	64.00%	67.00%	66.88%	\$0.00	10.00%	20.84	3.95				
Avista Corporation	AVA	\$38.37	5.00%	5.00%	5.00%	5.00%	5.27%	68.00%	63.00%	66.88%	\$0.00	9.23%	20.84	3.95				
CMS Energy Corporation	CMS	\$39.59	6.60%	7.24%	6.00%	6.00%	5.27%	63.00%	62.00%	66.88%	\$0.00	9.46%	20.84	3.95				
DTE Energy Company	DTE	\$86.64	5.80%	5.35%	5.00%	5.00%	5.27%	63.00%	61.00%	66.88%	\$0.00	9.52%	20.84	3.95				
IDACORP, Inc.	IDA	\$71.49	4.00%	4.00%	3.00%	3.00%	5.27%	53.00%	60.00%	66.88%	\$0.00	8.68%	20.84	3.95				
NorthWestern Corporation	NWE	\$57.54	5.00%	5.00%	6.50%	5.00%	5.27%	65.00%	59.00%	66.88%	\$0.00	9.33%	20.84	3.95				
Otter Tail Corporation	OTTR	\$28.49	NA	6.00%	6.00%	6.00%	5.27%	80.00%	63.00%	66.88%	\$0.00	10.95%	20.84	3.95				
Pinnacle West Capital Corporation	PNW	\$69.95	4.00%	3.73%	4.00%	3.73%	5.27%	64.00%	65.00%	66.88%	\$0.00	9.65%	20.84	3.95				
PNM Resources, Inc.	PNM	\$31.69	7.60%	8.76%	9.00%	7.60%	5.27%	51.00%	55.00%	66.88%	\$0.00	10.87%	20.84	3.95				
Portland General Electric Company	POR	\$39.05	6.50%	6.57%	5.50%	5.50%	5.27%	56.00%	56.00%	66.88%	\$0.00	9.80%	20.84	3.95				
SCANA Corporation	SCG	\$65.81	5.30%	5.40%	4.50%	4.50%	5.27%	59.00%	60.00%	66.88%	\$0.00	10.26%	20.84	3.95				
Xcel Energy Inc.	XEL	\$39.28	5.20%	5.27%	5.50%	5.20%	5.27%	62.00%	63.00%	66.88%	\$0.00	10.04%	20.84	3.95				

DCF Result			
Mean	9.86%	20.84	3.95
Max	10.95%	20.84	3.95
Min	8.68%	20.84	3.95

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	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.43	\$5.72	\$6.02	\$6.34	\$6.67	\$7.02
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.13	\$3.30	\$3.47	\$3.65	\$3.85	\$4.05
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.86	\$5.12	\$5.39
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.87	\$4.01	\$4.16	\$4.32	\$4.49	\$4.69	\$4.90	\$5.13	\$5.39	\$5.67	\$5.97	\$6.29	\$6.62	\$6.97	\$7.34
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	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.93	\$7.30	\$7.68	\$8.09	\$8.51	\$8.96	\$9.43	\$9.93
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	\$7.10	\$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	\$4.75	\$5.01	\$5.27	\$5.55	\$5.84	\$6.15	\$6.47
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	\$7.79	\$8.20
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.87	\$4.07	\$4.29	\$4.52	\$4.75

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%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	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%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	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%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	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%	62.99%	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%
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]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.63	\$3.82	\$4.02	\$4.24	\$4.46	\$4.70	\$146.33
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.09	\$2.21	\$2.32	\$2.44	\$2.57	\$2.71	\$84.40
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.93	\$3.09	\$3.25	\$3.42	\$3.60	\$112.29
American Electric Power Company, Inc.	AEP	\$2.38	\$2.50	\$2.63	\$2.76	\$2.89	\$3.01	\$3.14	\$3.28	\$3.43	\$3.61	\$3.79	\$3.99	\$4.20	\$4.43	\$4.66	\$4.91	\$152.86
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	\$87.90
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.34	\$2.47	\$2.60	\$2.73	\$2.88	\$3.03	\$94.38
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.21	\$4.50	\$4.81	\$5.14	\$5.41	\$5.69	\$5.99	\$6.31	\$6.64	\$206.97
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	\$155.85
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.34	\$2.52	\$2.70	\$2.90	\$3.12	\$3.35	\$3.52	\$3.71	\$3.91	\$4.11	\$4.33	\$134.88
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	\$2.37	\$2.50	\$77.90
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	\$5.07	\$5.34	\$166.43
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.92	\$2.10	\$2.27	\$2.39	\$2.52	\$2.65	\$2.79	\$2.94	\$91.66
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	\$2.70	\$2.85	\$3.00	\$3.16	\$98.32
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	\$170.98
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.61	\$1.70	\$1.81	\$1.93	\$2.05	\$2.18	\$2.31	\$2.46	\$2.59	\$2.73	\$2.87	\$3.02	\$3.18	\$99.08

Multi-Stage DCF Notes:

-
- [1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of July 15, 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 [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]
	Current 30- Year	
S&P 500 Est. Required Market Return	Treasury (30-day average)	Implied Market Risk Premium
13.03%	2.35%	10.68%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	15,192.10	0.08%	0.96%	10.13%	11.14%	0.0085%
ALCOA INC	AA	14,360.97	0.07%	1.10%	5.00%	6.13%	0.0044%
AMERICAN AIRLINES GROUP INC	AAL	20,750.58	0.10%	1.19%	-19.46%	-18.39%	-0.0193%
ADVANCE AUTO PARTS INC	AAP	12,106.59	0.06%	0.16%	12.01%	12.17%	0.0074%
APPLE INC	AAPL	541,060.04	2.73%	2.22%	11.56%	13.91%	0.3797%
ABBVIE INC	ABBV	102,411.15	0.52%	3.61%	12.65%	16.49%	0.0852%
AMERISOURCEBERGEN CORP	ABC	18,466.37	0.09%	1.58%	11.20%	12.86%	0.0120%
ABBOTT LABORATORIES	ABT	61,851.30	0.31%	2.48%	11.68%	14.31%	0.0447%
ACCENTURE PLC-CL A	ACN	75,024.04	0.38%	2.00%	9.82%	11.92%	0.0451%
ADOBE SYSTEMS INC	ADBE	48,747.80	0.25%	0.00%	17.36%	17.36%	0.0427%
ANALOG DEVICES INC	ADI	18,487.09	0.09%	2.76%	8.92%	11.80%	0.0110%
ARCHER-DANIELS-MIDLAND CO	ADM	25,824.23	0.13%	2.74%	7.15%	9.99%	0.0130%
AUTOMATIC DATA PROCESSING	ADP	43,303.14	0.22%	2.18%	10.33%	12.62%	0.0276%
ALLIANCE DATA SYSTEMS CORP	ADS	12,564.19	0.06%	0.00%	14.20%	14.20%	0.0090%
AUTODESK INC	ADSK	13,025.56	0.07%	0.00%	20.96%	20.96%	0.0138%
AMEREN CORPORATION	AEE	12,740.75	0.06%	3.31%	4.43%	7.81%	0.0050%
AMERICAN ELECTRIC POWER	AEP	34,215.06	0.17%	3.24%	4.88%	8.20%	0.0142%
AES CORP	AES	8,323.18	0.04%	3.49%	7.33%	10.95%	0.0046%
AETNA INC	AET	41,591.68	0.21%	0.85%	10.57%	11.46%	0.0241%
AFLAC INC	AFL	30,370.09	0.15%	2.28%	4.64%	6.97%	0.0107%
ALLERGAN PLC	AGN	95,926.51	0.48%	0.00%	12.32%	12.32%	0.0596%
AMERICAN INTERNATIONAL GROUP	AIG	60,920.12	0.31%	2.36%	9.50%	11.98%	0.0368%
APARTMENT INVT & MGMT CO -A	AIV	7,127.10	0.04%	2.90%	6.88%	9.88%	0.0036%
ASSURANT INC	AIZ	5,446.11	0.03%	2.35%	12.36%	14.86%	0.0041%
ARTHUR J GALLAGHER & CO	AJG	8,682.86	0.04%	3.10%	9.16%	12.41%	0.0054%
AKAMAI TECHNOLOGIES INC	AKAM	10,052.63	0.05%	0.00%	15.60%	15.60%	0.0079%
ALBEMARLE CORP	ALB	9,696.87	0.05%	1.40%	8.30%	9.76%	0.0048%
ALASKA AIR GROUP INC	ALK	8,016.35	0.04%	1.69%	2.65%	4.36%	0.0018%
ALLSTATE CORP	ALL	26,014.78	0.13%	1.88%	9.00%	10.96%	0.0144%
ALLEGION PLC	ALLE	6,830.60	0.03%	0.68%	13.10%	13.83%	0.0048%
ALEXION PHARMACEUTICALS INC	ALXN	28,132.45	0.14%	0.00%	27.50%	27.50%	0.0390%
APPLIED MATERIALS INC	AMAT	28,688.05	0.14%	1.55%	15.43%	17.10%	0.0247%
AMETEK INC	AME	11,114.99	0.06%	0.83%	10.30%	11.17%	0.0063%
AFFILIATED MANAGERS GROUP	AMG	8,199.14	0.04%	0.00%	13.73%	13.73%	0.0057%
AMGEN INC	AMGN	122,658.72	0.62%	2.44%	7.92%	10.45%	0.0647%
AMERIPRISE FINANCIAL INC	AMP	15,957.89	0.08%	2.94%	10.95%	14.05%	0.0113%
AMERICAN TOWER CORP	AMT	49,604.67	0.25%	1.86%	20.37%	22.43%	0.0561%
AMAZON.COM INC	AMZN	347,001.15	1.75%	0.00%	47.03%	47.03%	0.8235%
AUTONATION INC	AN	5,239.73	0.03%	0.00%	8.33%	8.33%	0.0022%
ANTHEM INC	ANTM	35,317.22	0.18%	1.94%	8.87%	10.89%	0.0194%
AON PLC	AON	29,363.93	0.15%	1.16%	11.48%	12.71%	0.0188%
APACHE CORP	APA	21,621.84	0.11%	1.75%	8.50%	10.33%	0.0113%
ANADARKO PETROLEUM CORP	APC	28,078.57	0.14%	0.36%	8.33%	8.71%	0.0123%
AIR PRODUCTS & CHEMICALS INC	APD	32,271.73	0.16%	2.25%	8.17%	10.51%	0.0171%
AMPHENOL CORP-CL A	APH	18,195.41	0.09%	0.98%	9.26%	10.28%	0.0094%
ACTIVISION BLIZZARD INC	ATVI	31,221.18	0.16%	0.59%	10.95%	11.57%	0.0182%
AVALONBAY COMMUNITIES INC	AVB	25,136.40	0.13%	2.94%	7.27%	10.31%	0.0131%
BROADCOM LTD	AVGO	63,741.77	0.32%	1.19%	15.70%	16.98%	0.0546%
AVERY DENNISON CORP	AVY	6,557.11	0.03%	2.24%	8.20%	10.54%	0.0035%
AMERICAN WATER WORKS CO INC	AWK	14,499.73	0.07%	1.77%	7.34%	9.17%	0.0067%
AMERICAN EXPRESS CO	AXP	60,656.89	0.31%	1.91%	9.00%	11.00%	0.0337%
ACUITY BRANDS INC	AYI	11,648.51	0.06%	0.20%	19.60%	19.82%	0.0116%
AUTOZONE INC	AZO	23,360.49	0.12%	0.00%	12.72%	12.72%	0.0150%
BOEING CO/THE	BA	84,333.91	0.43%	3.31%	12.08%	15.59%	0.0663%
BANK OF AMERICA CORP	BAC	140,314.37	0.71%	1.87%	7.50%	9.44%	0.0669%
BAXTER INTERNATIONAL INC	BAX	25,829.33	0.13%	1.06%	12.04%	13.16%	0.0172%
BED BATH & BEYOND INC	BBBY	6,853.49	0.03%	1.07%	7.06%	8.17%	0.0028%
BB&T CORP	BBT	29,859.02	0.15%	3.10%	5.50%	8.68%	0.0131%
BEST BUY CO INC	BBY	10,127.98	0.05%	4.14%	10.51%	14.87%	0.0076%
CR BARD INC	BCR	17,026.80	0.09%	0.42%	10.75%	11.19%	0.0096%
BECTON DICKINSON AND CO	BDX	37,152.33	0.19%	1.51%	11.20%	12.80%	0.0240%

FRANKLIN RESOURCES INC	BEN	20,291.27	0.10%	2.08%	4.98%	7.11%	0.0073%
BROWN-FORMAN CORP-CLASS B	BF/B	20,010.36	0.10%	1.43%	11.50%	13.01%	0.0131%
BAKER HUGHES INC	BHI	20,109.00	0.10%	1.49%	14.00%	15.59%	0.0158%
BIOGEN INC	BIIB	57,019.10	0.29%	0.00%	8.26%	8.26%	0.0238%
BANK OF NEW YORK MELLON CORP	BK	42,857.12	0.22%	1.82%	15.87%	17.83%	0.0386%
BLACKROCK INC	BLK	58,863.69	0.30%	2.57%	11.95%	14.67%	0.0436%
BALL CORP	BLL	12,189.60	0.06%	0.63%	4.60%	5.24%	0.0032%
BRISTOL-MYERS SQUIBB CO	BMJ	126,867.35	0.64%	2.01%	22.95%	25.19%	0.1613%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	359,929.79	1.82%	0.00%	7.10%	7.10%	0.1289%
BOSTON SCIENTIFIC CORP	BSX	31,994.92	0.16%	0.00%	11.97%	11.97%	0.0193%
BORGWARNER INC	BWA	6,933.35	0.03%	1.64%	13.00%	14.75%	0.0052%
BOSTON PROPERTIES INC	BXP	20,898.82	0.11%	2.18%	6.53%	8.78%	0.0093%
CITIGROUP INC	C	130,105.41	0.66%	0.95%	8.32%	9.31%	0.0611%
CA INC	CA	14,363.77	0.07%	3.02%	5.50%	8.61%	0.0062%
CONAGRA FOODS INC	CAG	21,049.79	0.11%	2.22%	8.00%	10.30%	0.0109%
CARDINAL HEALTH INC	CAH	26,834.15	0.14%	1.85%	11.90%	13.86%	0.0188%
CATERPILLAR INC	CAT	47,120.05	0.24%	3.85%	7.23%	11.21%	0.0267%
CHUBB LTD	CB	60,182.48	0.30%	2.12%	8.68%	10.89%	0.0331%
CBRE GROUP INC - A	CBG	9,224.49	0.05%	0.00%	12.50%	12.50%	0.0058%
CBS CORP-CLASS B NON VOTING	CBS	25,435.09	0.13%	1.18%	16.38%	17.65%	0.0227%
CROWN CASTLE INTL CORP	CCI	33,793.10	0.17%	3.59%	15.50%	19.37%	0.0330%
CARNIVAL CORP	CCL	33,744.19	0.17%	2.85%	16.49%	19.58%	0.0333%
CELGENE CORP	CELG	79,667.76	0.40%	0.00%	22.42%	22.42%	0.0901%
CERNER CORP	CERN	20,481.00	0.10%	0.00%	16.13%	16.13%	0.0167%
CF INDUSTRIES HOLDINGS INC	CF	6,396.09	0.03%	4.38%	18.43%	23.21%	0.0075%
CITIZENS FINANCIAL GROUP	CFG	11,098.00	0.06%	2.21%	9.00%	11.31%	0.0063%
CHURCH & DWIGHT CO INC	CHD	12,870.22	0.06%	1.42%	9.29%	10.77%	0.0070%
CHESAPEAKE ENERGY CORP	CHK	3,025.96	0.02%	0.00%	-3.48%	-3.48%	-0.0005%
C.H. ROBINSON WORLDWIDE INC	CHRW	10,270.63	0.05%	2.42%	10.28%	12.82%	0.0066%
CIGNA CORP	CI	33,775.08	0.17%	0.03%	8.62%	8.65%	0.0147%
CINCINNATI FINANCIAL CORP	CINF	12,493.87	N/A	0.00%	N/A	N/A	N/A
COLGATE-PALMOLIVE CO	CL	66,726.28	0.34%	2.10%	8.38%	10.57%	0.0356%
CLOROX COMPANY	CLX	17,665.32	0.09%	2.27%	6.47%	8.81%	0.0079%
COMERICA INC	CMA	7,646.35	0.04%	2.02%	9.05%	11.16%	0.0043%
COMCAST CORP-CLASS A	CMCSA	162,330.84	0.82%	1.65%	11.32%	13.06%	0.1070%
CME GROUP INC	CME	34,484.01	0.17%	4.89%	12.78%	17.97%	0.0313%
CHIPOTLE MEXICAN GRILL INC	CMG	11,822.48	0.06%	0.00%	18.20%	18.20%	0.0109%
CUMMINS INC	CMI	20,274.49	0.10%	3.33%	4.26%	7.66%	0.0078%
CMS ENERGY CORP	CMS	12,547.88	0.06%	2.77%	6.03%	8.87%	0.0056%
CENTENE CORP	CNC	12,159.84	0.06%	0.00%	16.97%	16.97%	0.0104%
CENTERPOINT ENERGY INC	CNP	10,360.70	0.05%	4.29%	5.67%	10.08%	0.0053%
CAPITAL ONE FINANCIAL CORP	COF	34,899.58	0.18%	2.41%	6.58%	9.07%	0.0160%
CABOT OIL & GAS CORP	COG	11,652.91	0.06%	0.32%	38.64%	39.02%	0.0229%
COACH INC	COH	11,760.66	0.06%	3.19%	14.90%	18.33%	0.0109%
ROCKWELL COLLINS INC	COL	11,173.27	0.06%	1.56%	7.66%	9.28%	0.0052%
CONOCOPHILLIPS	COP	53,176.35	0.27%	2.33%	6.67%	9.08%	0.0244%
COSTCO WHOLESALE CORP	COST	72,898.49	0.37%	1.02%	10.66%	11.73%	0.0432%
CAMPBELL SOUP CO	CPB	20,562.07	0.10%	2.01%	7.09%	9.17%	0.0095%
SALESFORCE.COM INC	CRM	55,148.50	0.28%	0.00%	25.17%	25.17%	0.0700%
CISCO SYSTEMS INC	CSCO	149,986.01	0.76%	3.15%	8.77%	12.06%	0.0913%
CSRA INC	CSRA	4,005.51	0.02%	1.63%	10.00%	11.71%	0.0024%
CSX CORP	CSX	26,979.66	0.14%	2.57%	7.25%	9.91%	0.0135%
CINTAS CORP	CTAS	10,443.51	0.05%	1.08%	11.84%	12.99%	0.0068%
CENTURYLINK INC	CTL	17,102.35	0.09%	6.89%	-1.52%	5.32%	0.0046%
COGNIZANT TECH SOLUTIONS-A	CTSH	34,995.02	0.18%	0.00%	13.52%	13.52%	0.0239%
CITRIX SYSTEMS INC	CTXS	13,158.85	0.07%	0.00%	16.70%	16.70%	0.0111%
CVS HEALTH CORP	CVS	104,276.80	0.53%	1.71%	13.59%	15.42%	0.0811%
CHEVRON CORP	CVX	201,719.70	1.02%	4.02%	3.25%	7.33%	0.0746%
CONCHO RESOURCES INC	CXO	16,178.10	0.08%	0.00%	25.00%	25.00%	0.0204%
DOMINION RESOURCES INC/VA	D	47,775.41	0.24%	3.61%	6.25%	9.97%	0.0240%
DELTA AIR LINES INC	DAL	29,941.33	0.15%	1.63%	15.54%	17.29%	0.0261%
DU PONT (E.I.) DE NEMOURS	DD	58,695.55	0.30%	2.36%	8.25%	10.70%	0.0317%
DEERE & CO	DE	26,212.33	0.13%	2.89%	7.76%	10.77%	0.0142%
DISCOVER FINANCIAL SERVICES	DFS	23,669.98	0.12%	2.03%	8.13%	10.24%	0.0122%
DOLLAR GENERAL CORP	DG	26,025.31	0.13%	1.08%	14.14%	15.29%	0.0201%
QUEST DIAGNOSTICS INC	DGX	11,783.38	0.06%	1.91%	8.91%	10.89%	0.0065%
DR HORTON INC	DHI	12,537.28	0.06%	0.96%	14.71%	15.74%	0.0100%
DANAHER CORP	DHR	55,729.24	0.28%	0.79%	9.11%	9.93%	0.0279%
WALT DISNEY CO/THE	DIS	161,919.58	0.82%	1.46%	9.80%	11.33%	0.0926%
DISCOVERY COMMUNICATIONS-A	DISCA	15,297.51	0.08%	0.00%	20.00%	20.00%	0.0154%
DELPHI AUTOMOTIVE PLC	DLPH	18,308.57	0.09%	1.74%	9.78%	11.60%	0.0107%
DIGITAL REALTY TRUST INC	DLR	16,977.82	0.09%	3.30%	5.94%	9.34%	0.0080%
DOLLAR TREE INC	DLTR	22,232.74	0.11%	0.00%	17.67%	17.67%	0.0198%
DUN & BRADSTREET CORP	DNB	4,624.03	0.02%	1.51%	11.75%	13.35%	0.0031%
DIAMOND OFFSHORE DRILLING	DO	3,544.46	N/A	0.00%	N/A	N/A	N/A
DOVER CORP	DOV	11,342.92	0.06%	2.35%	10.48%	12.95%	0.0074%
DOW CHEMICAL CO/THE	DOW	58,609.10	0.30%	3.58%	6.00%	9.68%	0.0286%
DR PEPPER SNAPPLE GROUP INC	DPS	18,025.62	0.09%	2.17%	13.22%	15.54%	0.0141%
DARDEN RESTAURANTS INC	DRI	7,917.82	0.04%	3.60%	11.74%	15.55%	0.0062%

DTE ENERGY COMPANY	DTE	17,523.66	0.09%	3.07%	5.54%	8.69%	0.0077%
DUKE ENERGY CORP	DUK	58,492.30	0.30%	3.99%	4.71%	8.79%	0.0259%
DAVITA HEALTHCARE PARTNERS I	DVA	16,051.25	0.08%	0.00%	10.11%	10.11%	0.0082%
DEVON ENERGY CORP	DVN	20,063.96	0.10%	1.10%	8.15%	9.29%	0.0094%
ELECTRONIC ARTS INC	EA	23,456.66	0.12%	0.00%	11.27%	11.27%	0.0133%
EBAY INC	EBAY	30,262.14	0.15%	0.00%	8.89%	8.89%	0.0136%
ECOLAB INC	ECL	35,475.27	0.18%	1.18%	12.36%	13.61%	0.0244%
CONSOLIDATED EDISON INC	ED	24,074.29	0.12%	3.39%	3.07%	6.50%	0.0079%
EQUIFAX INC	EFX	15,953.81	0.08%	0.98%	9.21%	10.24%	0.0082%
EDISON INTERNATIONAL	EIX	25,146.11	0.13%	2.51%	5.44%	8.02%	0.0102%
ESTEE LAUDER COMPANIES-CL A	EL	34,856.05	0.18%	1.20%	11.64%	12.91%	0.0227%
EMC CORP/MA	EMC	53,851.07	0.27%	1.75%	10.58%	12.43%	0.0338%
EASTMAN CHEMICAL CO	EMN	10,548.14	0.05%	2.59%	5.50%	8.16%	0.0043%
EMERSON ELECTRIC CO	EMR	36,175.63	0.18%	3.38%	7.33%	10.83%	0.0198%
ENDO INTERNATIONAL PLC	ENDP	3,925.52	0.02%	0.00%	4.70%	4.70%	0.0009%
EOG RESOURCES INC	EOG	46,278.26	0.23%	0.80%	-9.66%	-8.90%	-0.0208%
EQUINIX INC	EQIX	26,380.97	0.13%	1.84%	22.05%	24.09%	0.0321%
EQUITY RESIDENTIAL	EQR	25,427.98	0.13%	18.68%	6.08%	25.32%	0.0325%
EQT CORP	EQT	13,052.01	0.07%	0.16%	25.00%	25.18%	0.0166%
EVERSOURCE ENERGY	ES	18,356.77	0.09%	3.07%	7.00%	10.18%	0.0094%
EXPRESS SCRIPTS HOLDING CO	ESRX	50,179.08	0.25%	0.00%	12.09%	12.09%	0.0306%
ESSEX PROPERTY TRUST INC	ESS	14,826.46	0.07%	2.81%	6.83%	9.73%	0.0073%
E*TRADE FINANCIAL CORP	ETFC	6,940.34	0.04%	0.03%	17.87%	17.90%	0.0063%
EATON CORP PLC	ETN	29,234.14	0.15%	3.58%	8.42%	12.15%	0.0179%
ENTERGY CORP	ETR	14,349.32	0.07%	4.28%	1.56%	5.87%	0.0043%
EDWARDS LIFSCIENCES CORP	EW	22,292.26	0.11%	0.00%	15.11%	15.11%	0.0170%
EXELON CORP	EXC	33,632.64	0.17%	3.46%	4.00%	7.52%	0.0128%
EXPEDITORS INTL WASH INC	EXPD	9,102.95	0.05%	1.52%	8.24%	9.82%	0.0045%
EXPEDIA INC	EXPE	17,090.25	0.09%	0.75%	22.29%	23.12%	0.0199%
EXTRA SPACE STORAGE INC	EXR	11,608.01	0.06%	3.00%	7.35%	10.47%	0.0061%
FORD MOTOR CO	F	53,911.37	0.27%	4.42%	6.72%	11.29%	0.0307%
FASTENAL CO	FAST	12,555.57	0.06%	2.77%	13.22%	16.17%	0.0102%
FACEBOOK INC-A	FB	334,255.30	1.69%	0.00%	31.69%	31.69%	0.5345%
FORTUNE BRANDS HOME & SECURI	FBHS	9,400.42	0.05%	1.05%	18.63%	19.78%	0.0094%
FREEPORT-MCMORAN INC	FCX	16,415.58	N/A	0.00%	N/A	N/A	N/A
FEDEX CORP	FDX	43,106.17	0.22%	0.97%	12.25%	13.28%	0.0289%
FIRSTENERGY CORP	FE	15,370.34	0.08%	3.98%	-1.55%	2.40%	0.0019%
F5 NETWORKS INC	FFIV	7,794.61	0.04%	0.00%	13.18%	13.18%	0.0052%
FIDELITY NATIONAL INFO SERV	FIS	24,986.78	0.13%	1.40%	12.17%	13.65%	0.0172%
FISERV INC	FISV	24,531.88	0.12%	0.00%	13.00%	13.00%	0.0161%
FIFTH THIRD BANCORP	FITB	14,233.49	0.07%	2.91%	3.83%	6.80%	0.0049%
FOOT LOCKER INC	FL	7,800.57	0.04%	1.90%	9.69%	11.68%	0.0046%
FLIR SYSTEMS INC	FLIR	4,408.35	0.02%	1.50%	15.00%	16.61%	0.0037%
FLUOR CORP	FLR	7,384.77	0.04%	1.59%	1.83%	3.43%	0.0013%
FLOWERVE CORP	FLS	6,330.62	0.03%	1.57%	11.67%	13.32%	0.0043%
FMC CORP	FMC	6,535.10	0.03%	1.38%	9.53%	10.98%	0.0036%
TWENTY-FIRST CENTURY FOX-A	FOXA	53,542.91	0.27%	1.17%	11.57%	12.80%	0.0346%
FEDERAL REALTY INVS TRUST	FRT	11,773.62	0.06%	2.31%	6.26%	8.64%	0.0051%
FIRST SOLAR INC	FSLR	4,880.16	0.02%	0.00%	10.00%	10.00%	0.0025%
FMC TECHNOLOGIES INC	FTI	6,184.03	0.03%	0.00%	-8.10%	-8.10%	-0.0025%
FRONTIER COMMUNICATIONS CORP	FTR	6,064.80	0.03%	8.12%	11.55%	20.14%	0.0062%
FORTIVE CORP	FTV	17,686.52	0.09%	0.00%	12.00%	12.00%	0.0107%
GENERAL DYNAMICS CORP	GD	43,429.38	0.22%	2.09%	7.83%	10.00%	0.0219%
GENERAL ELECTRIC CO	GE	302,353.20	1.53%	2.84%	9.98%	12.97%	0.1978%
GENERAL GROWTH PROPERTIES	GGP	27,387.93	0.14%	2.49%	6.73%	9.30%	0.0128%
GILEAD SCIENCES INC	GILD	115,428.97	0.58%	2.13%	1.96%	4.11%	0.0239%
GENERAL MILLS INC	GIS	42,997.45	0.22%	2.62%	8.00%	10.73%	0.0233%
CORNING INC	GLW	22,958.69	0.12%	2.54%	12.34%	15.04%	0.0174%
GENERAL MOTORS CO	GM	47,380.43	0.24%	4.94%	9.44%	14.61%	0.0349%
ALPHABET INC-CL A	GOOGL	499,241.06	2.52%	0.00%	15.66%	15.66%	0.3945%
GENUINE PARTS CO	GPC	15,405.19	0.08%	2.56%	6.33%	8.97%	0.0070%
GLOBAL PAYMENTS INC	GPN	11,814.93	0.06%	0.05%	14.28%	14.33%	0.0085%
GAP INC/THE	GPS	9,256.65	0.05%	3.93%	5.63%	9.67%	0.0045%
GARMIN LTD	GRMN	8,509.31	0.04%	4.56%	5.68%	10.36%	0.0044%
GOLDMAN SACHS GROUP INC	GS	70,184.25	0.35%	1.67%	14.15%	15.93%	0.0564%
GOODYEAR TIRE & RUBBER CO	GT	7,052.84	0.04%	1.07%	7.00%	8.10%	0.0029%
WW GRAINGER INC	GWW	14,184.43	0.07%	2.11%	9.32%	11.53%	0.0082%
HALLIBURTON CO	HAL	39,062.19	0.20%	1.56%	10.43%	12.07%	0.0238%
HARMAN INTERNATIONAL	HAR	5,501.15	0.03%	1.81%	17.50%	19.47%	0.0054%
HASBRO INC	HAS	10,662.03	0.05%	2.39%	10.40%	12.91%	0.0069%
HUNTINGTON BANCSHARES INC	HBAN	7,397.51	0.04%	3.09%	5.32%	8.49%	0.0032%
HANESBRANDS INC	HBI	10,023.09	0.05%	1.65%	12.03%	13.78%	0.0070%
HCA HOLDINGS INC	HCA	30,779.85	0.16%	0.00%	11.00%	11.00%	0.0171%
WELLTOWER INC	HCN	27,310.12	0.14%	4.47%	4.67%	9.24%	0.0127%
HCP INC	HCP	17,483.09	0.09%	6.10%	2.81%	9.00%	0.0079%
HOME DEPOT INC	HD	167,667.30	0.85%	2.04%	13.47%	15.65%	0.1324%
HESS CORP	HES	18,030.83	0.09%	1.75%	-20.09%	-18.51%	-0.0168%
HARTFORD FINANCIAL SVCS GRP	HIG	17,210.59	0.09%	2.02%	9.33%	11.44%	0.0099%
HARLEY-DAVIDSON INC	HOG	8,710.43	0.04%	2.89%	10.35%	13.39%	0.0059%

HOLOGIC INC	HOLX	10,135.46	0.05%	0.00%	9.96%	9.96%	0.0051%
HONEYWELL INTERNATIONAL INC	HON	90,867.03	0.46%	2.06%	9.32%	11.47%	0.0526%
STARWOOD HOTELS & RESORTS	HOT	13,049.31	0.07%	1.95%	7.14%	9.16%	0.0060%
HELMERICH & PAYNE	HP	7,424.45	0.04%	4.02%	2.75%	6.83%	0.0026%
HEWLETT PACKARD ENTERPRIS	HPE	32,852.10	0.17%	1.11%	6.42%	7.57%	0.0125%
HP INC	HPQ	23,691.90	0.12%	3.83%	2.83%	6.71%	0.0080%
H&R BLOCK INC	HRB	5,351.95	0.03%	3.63%	11.00%	14.83%	0.0040%
HORMEL FOODS CORP	HRL	19,218.04	0.10%	1.58%	5.90%	7.53%	0.0073%
HARRIS CORP	HRS	10,635.38	N/A	2.33%	N/A	N/A	N/A
HENRY SCHEIN INC	HSIC	14,819.55	0.07%	0.00%	11.43%	11.43%	0.0085%
HOST HOTELS & RESORTS INC	HST	12,689.42	0.06%	4.91%	5.00%	10.03%	0.0064%
HERSHEY CO/THE	HSY	23,611.84	0.12%	2.15%	9.18%	11.42%	0.0136%
HUMANA INC	HUM	23,680.43	0.12%	0.75%	13.14%	13.94%	0.0167%
INTL BUSINESS MACHINES CORP	IBM	153,382.70	0.77%	3.36%	3.54%	6.96%	0.0539%
INTERCONTINENTAL EXCHANGE INC	ICE	31,314.96	0.16%	1.29%	14.24%	15.62%	0.0247%
INTL FLAVORS & FRAGRANCES	IFF	10,530.20	0.05%	1.75%	11.00%	12.85%	0.0068%
ILLUMINA INC	ILMN	21,890.11	0.11%	0.00%	14.46%	14.46%	0.0160%
INTEL CORP	INTC	165,600.54	0.84%	2.96%	8.52%	11.60%	0.0969%
INTUIT INC	INTU	29,420.08	0.15%	1.05%	17.96%	19.10%	0.0284%
INTERNATIONAL PAPER CO	IP	18,696.10	0.09%	3.91%	5.92%	9.95%	0.0094%
INTERPUBLIC GROUP OF COS INC	IPG	9,573.22	0.05%	2.46%	7.00%	9.55%	0.0046%
INGERSOLL-RAND PLC	IR	17,492.09	0.09%	1.88%	11.28%	13.27%	0.0117%
IRON MOUNTAIN INC	IRM	10,463.72	N/A	4.77%	N/A	N/A	N/A
INTUITIVE SURGICAL INC	ISRG	25,514.91	0.13%	0.00%	14.65%	14.65%	0.0189%
ILLINOIS TOOL WORKS	ITW	39,969.17	0.20%	2.04%	7.75%	9.87%	0.0199%
INVESCO LTD	IVZ	11,441.44	0.06%	4.07%	9.82%	14.09%	0.0081%
HUNT (JB) TRANSPRT SVCS INC	JBHT	9,606.03	0.05%	1.03%	13.70%	14.80%	0.0072%
JOHNSON CONTROLS INC	JCI	28,134.37	0.14%	2.60%	9.20%	11.92%	0.0169%
JACOBS ENGINEERING GROUP INC	JEC	6,425.46	0.03%	0.00%	6.92%	6.92%	0.0022%
JOHNSON & JOHNSON	JNJ	338,329.25	1.71%	2.56%	6.35%	9.00%	0.1536%
JUNIPER NETWORKS INC	JNPR	8,861.45	0.04%	1.83%	9.56%	11.48%	0.0051%
JPMORGAN CHASE & CO	JPM	234,684.37	1.18%	2.93%	4.38%	7.37%	0.0872%
NORDSTROM INC	JWN	7,048.40	0.04%	3.79%	8.23%	12.18%	0.0043%
KELLOGG CO	K	30,100.64	0.15%	2.39%	5.76%	8.22%	0.0125%
KEYCORP	KEY	9,855.76	0.05%	2.88%	4.50%	7.45%	0.0037%
KRAFT HEINZ CO/THE	KHC	108,049.78	0.55%	2.64%	20.35%	23.26%	0.1268%
KIMCO REALTY CORP	KIM	13,130.82	0.07%	3.28%	5.67%	9.05%	0.0060%
KLA-TENCOR CORP	KLAC	11,698.37	0.06%	2.80%	5.55%	8.43%	0.0050%
KIMBERLY-CLARK CORP	KMB	49,038.61	0.25%	2.69%	7.51%	10.30%	0.0255%
KINDER MORGAN INC	KMI	46,929.62	0.24%	2.38%	14.65%	17.21%	0.0407%
CARMAX INC	KMX	10,575.18	0.05%	0.00%	12.92%	12.92%	0.0069%
COCA-COLA CO/THE	KO	197,404.45	1.00%	3.05%	5.70%	8.83%	0.0880%
MICHAEL KORS HOLDINGS LTD	KORS	9,111.81	0.05%	0.00%	5.35%	5.35%	0.0025%
KROGER CO	KR	34,837.51	0.18%	1.21%	9.44%	10.70%	0.0188%
KOHL'S CORP	KSS	7,093.01	0.04%	5.24%	3.25%	8.57%	0.0031%
KANSAS CITY SOUTHERN	KSU	10,191.88	0.05%	1.43%	9.42%	10.92%	0.0056%
LOEWS CORP	L	14,028.49	N/A	0.60%	N/A	N/A	N/A
L BRANDS INC	LB	19,969.92	0.10%	6.36%	10.58%	17.28%	0.0174%
LEGGETT & PLATT INC	LEG	7,104.50	0.04%	2.47%	10.00%	12.59%	0.0045%
LENNAR CORP-A	LEN	10,146.95	0.05%	0.33%	11.68%	12.02%	0.0062%
LABORATORY CRP OF AMER HLDGS	LH	13,945.86	0.07%	0.00%	11.29%	11.29%	0.0079%
LKQ CORP	LKQ	10,144.94	0.05%	0.00%	16.23%	16.23%	0.0083%
L-3 COMMUNICATIONS HOLDINGS	LLL	11,526.75	0.06%	1.90%	9.94%	11.94%	0.0069%
LINEAR TECHNOLOGY CORP	LLTC	11,617.78	0.06%	2.54%	6.91%	9.54%	0.0056%
ELI LILLY & CO	LLY	88,549.80	0.45%	2.54%	12.73%	15.43%	0.0690%
LEGG MASON INC	LM	3,432.91	0.02%	2.69%	15.54%	18.44%	0.0032%
LOCKHEED MARTIN CORP	LMT	78,238.34	0.39%	2.62%	7.86%	10.59%	0.0418%
LINCOLN NATIONAL CORP	LNC	10,203.21	0.05%	2.39%	11.80%	14.33%	0.0074%
ALLIANT ENERGY CORP	LNT	8,951.01	0.05%	2.99%	7.15%	10.25%	0.0046%
LOWE'S COS INC	LOW	72,368.17	0.37%	1.50%	16.39%	18.02%	0.0658%
LAM RESEARCH CORP	LRCX	14,132.37	0.07%	1.34%	10.98%	12.40%	0.0088%
LEUCADIA NATIONAL CORP	LUK	6,460.35	0.03%	1.40%	18.00%	19.53%	0.0064%
SOUTHWEST AIRLINES CO	LUV	27,565.72	0.14%	0.85%	9.23%	10.12%	0.0141%
LEVEL 3 COMMUNICATIONS INC	LVLT	20,280.47	0.10%	0.00%	-4.92%	-4.92%	-0.0050%
LYONDELLBASELL INDU-CL A	LYB	33,246.31	0.17%	4.29%	5.67%	10.08%	0.0169%
MACY'S INC	M	10,695.15	0.05%	4.36%	9.67%	14.24%	0.0077%
MASTERCARD INC-CLASS A	MA	99,904.56	0.50%	0.84%	14.48%	15.38%	0.0775%
MACERICH CO/THE	MAC	13,152.00	0.07%	4.69%	7.12%	11.98%	0.0080%
MARRIOTT INTERNATIONAL -CL A	MAR	17,847.07	0.09%	1.64%	11.94%	13.68%	0.0123%
MASCO CORP	MAS	11,339.99	0.06%	1.12%	14.68%	15.88%	0.0091%
MATTEL INC	MAT	11,221.09	0.06%	4.61%	10.15%	15.00%	0.0085%
MCDONALD'S CORP	MCD	108,511.97	0.55%	2.96%	10.31%	13.43%	0.0735%
MICROCHIP TECHNOLOGY INC	MCHP	11,561.91	0.06%	2.60%	11.22%	13.96%	0.0081%
MCKESSON CORP	MCK	44,493.27	0.22%	0.58%	12.00%	12.62%	0.0283%
MOODY'S CORP	MCO	20,078.96	0.10%	1.43%	11.00%	12.51%	0.0127%
MONDELEZ INTERNATIONAL INC-A	MDLZ	70,448.03	0.36%	1.50%	12.92%	14.52%	0.0516%
MEDTRONIC PLC	MDT	123,131.85	0.62%	1.91%	8.31%	10.30%	0.0640%
METLIFE INC	MET	46,814.19	0.24%	3.75%	5.10%	8.94%	0.0211%
MOHAWK INDUSTRIES INC	MHK	14,815.30	0.07%	0.00%	11.10%	11.10%	0.0083%

MEAD JOHNSON NUTRITION CO	MJN	17,057.35	0.09%	1.91%	9.84%	11.84%	0.0102%
MCCORMICK & CO-NON VTG SHRS	MKC	13,300.05	0.07%	1.63%	9.00%	10.71%	0.0072%
MARTIN MARIETTA MATERIALS	MLM	12,551.06	0.06%	0.81%	22.16%	23.06%	0.0146%
MARSH & MCLENNAN COS	MMC	34,672.43	0.17%	2.00%	11.52%	13.63%	0.0239%
3M CO	MMM	110,021.74	0.56%	2.44%	8.88%	11.43%	0.0634%
MALLINCKRODT PLC	MNK	6,827.38	0.03%	0.00%	9.35%	9.35%	0.0032%
MONSTER BEVERAGE CORP	MNST	32,811.69	0.17%	0.00%	18.96%	18.96%	0.0314%
ALTRIA GROUP INC	MO	135,795.45	0.69%	3.43%	7.65%	11.21%	0.0768%
MONSANTO CO	MON	45,267.19	0.23%	2.09%	7.85%	10.02%	0.0229%
MOSAIC CO/THE	MOS	10,036.23	0.05%	3.81%	0.85%	4.68%	0.0024%
MARATHON PETROLEUM CORP	MPC	19,365.47	0.10%	3.61%	5.15%	8.85%	0.0086%
MERCK & CO. INC.	MRK	165,057.35	0.83%	3.09%	5.23%	8.40%	0.0700%
MARATHON OIL CORP	MRO	12,892.73	0.07%	1.31%	-6.58%	-5.31%	-0.0035%
MORGAN STANLEY	MS	54,256.05	0.27%	2.48%	6.43%	8.99%	0.0246%
MICROSOFT CORP	MSFT	422,107.07	2.13%	2.63%	8.46%	11.20%	0.2386%
MOTOROLA SOLUTIONS INC	MSI	11,768.33	0.06%	2.45%	5.28%	7.79%	0.0046%
M & T BANK CORP	MTB	18,930.42	0.10%	2.39%	4.84%	7.28%	0.0070%
MICRON TECHNOLOGY INC	MU	13,634.07	0.07%	0.00%	4.00%	4.00%	0.0028%
MURPHY OIL CORP	MUR	5,487.86	N/A	4.36%	N/A	N/A	N/A
MYLAN NV	MYL	23,105.31	0.12%	0.00%	9.42%	9.42%	0.0110%
NAVIENT CORP	NAVI	4,580.92	N/A	4.67%	N/A	N/A	N/A
NOBLE ENERGY INC	NBL	15,809.00	0.08%	1.08%	10.00%	11.14%	0.0089%
NASDAQ INC	NDAQ	11,106.38	0.06%	1.82%	7.62%	9.51%	0.0053%
NEXTERA ENERGY INC	NEE	58,871.27	0.30%	2.73%	6.32%	9.14%	0.0271%
NEWMONT MINING CORP	NEM	21,926.84	0.11%	0.25%	4.70%	4.96%	0.0055%
NETFLIX INC	NFLX	42,140.32	0.21%	0.00%	38.67%	38.67%	0.0822%
NEWFIELD EXPLORATION CO	NFX	8,836.57	0.04%	0.00%	30.44%	30.44%	0.0136%
NISOURCE INC	NI	8,392.31	0.04%	2.44%	4.00%	6.49%	0.0027%
NIKE INC -CL B	NKE	97,494.85	0.49%	1.22%	12.97%	14.26%	0.0702%
NIELSEN HOLDINGS PLC	NLSN	19,548.42	0.10%	2.24%	12.33%	14.71%	0.0145%
NORTHROP GRUMMAN CORP	NOC	39,962.82	0.20%	1.55%	7.54%	9.15%	0.0184%
NATIONAL OILWELL VARCO INC	NOV	12,722.04	0.06%	1.81%	-14.31%	-12.63%	-0.0081%
NRG ENERGY INC	NRG	4,871.63	N/A	1.55%	N/A	N/A	N/A
NORFOLK SOUTHERN CORP	NSC	27,057.05	0.14%	2.63%	12.59%	15.39%	0.0210%
NETAPP INC	NTAP	7,077.63	0.04%	3.00%	8.97%	12.11%	0.0043%
NORTHERN TRUST CORP	NTRS	15,291.53	0.08%	2.23%	9.38%	11.71%	0.0090%
NUCOR CORP	NUE	18,017.02	0.09%	2.65%	8.40%	11.16%	0.0101%
NVIDIA CORP	NVDA	28,141.80	0.14%	0.87%	9.67%	10.58%	0.0150%
NEWELL BRANDS INC	NWL	23,271.47	0.12%	1.55%	13.77%	15.42%	0.0181%
NEWS CORP - CLASS A	NWSA	7,233.62	0.04%	1.63%	8.80%	10.50%	0.0038%
REALTY INCOME CORP	O	17,992.95	0.09%	3.43%	5.19%	8.71%	0.0079%
OWENS-ILLINOIS INC	OI	2,925.87	0.01%	0.00%	6.91%	6.91%	0.0010%
ONEOK INC	OKE	10,110.23	0.05%	5.12%	7.30%	12.61%	0.0064%
OMNICOM GROUP	OMC	19,680.94	0.10%	2.59%	5.96%	8.63%	0.0086%
ORACLE CORP	ORCL	172,206.43	0.87%	1.42%	8.25%	9.73%	0.0846%
O'REILLY AUTOMOTIVE INC	ORLY	26,393.22	0.13%	0.00%	15.54%	15.54%	0.0207%
OCCIDENTAL PETROLEUM CORP	OXY	59,052.49	0.30%	3.90%	8.00%	12.06%	0.0359%
PAYCHEX INC	PAYX	21,938.57	0.11%	2.96%	9.20%	12.30%	0.0136%
PEOPLE'S UNITED FINANCIAL	PBCT	4,809.02	N/A	4.38%	N/A	N/A	N/A
PITNEY BOWES INC	PBI	3,555.49	0.02%	3.98%	14.00%	18.26%	0.0033%
PACCAR INC	PCAR	18,858.41	0.10%	3.44%	7.83%	11.41%	0.0109%
P G & E CORP	PCG	32,054.25	0.16%	2.99%	5.36%	8.44%	0.0136%
PRICELINE GROUP INC/THE	PCLN	66,048.67	0.33%	0.00%	18.01%	18.01%	0.0600%
PATTERSON COS INC	PDCO	4,877.64	0.02%	2.04%	6.95%	9.06%	0.0022%
PUBLIC SERVICE ENTERPRISE GP	PEG	23,206.98	0.12%	3.58%	3.11%	6.74%	0.0079%
PEPSICO INC	PEP	157,818.05	0.80%	2.68%	6.59%	9.35%	0.0745%
PFIZER INC	PFE	223,004.51	1.13%	3.26%	6.26%	9.62%	0.1082%
PRINCIPAL FINANCIAL GROUP	PFG	12,828.88	0.06%	3.57%	8.32%	12.04%	0.0078%
PROCTER & GAMBLE CO/THE	PG	228,945.88	1.16%	3.09%	6.05%	9.24%	0.1067%
PROGRESSIVE CORP	PGR	19,297.19	0.10%	1.97%	8.56%	10.61%	0.0103%
PARKER HANNIFIN CORP	PH	15,310.59	0.08%	2.21%	8.21%	10.52%	0.0081%
PULTEGROUP INC	PHM	7,048.68	0.04%	1.77%	14.04%	15.93%	0.0057%
PERKINELMER INC	PKI	6,038.11	0.03%	0.51%	19.78%	20.34%	0.0062%
PROLOGIS INC	PLD	26,952.39	0.14%	3.27%	5.04%	8.39%	0.0114%
PHILIP MORRIS INTERNATIONAL	PM	160,757.52	0.81%	4.02%	8.27%	12.46%	0.1010%
PNC FINANCIAL SERVICES GROUP	PNC	40,974.51	0.21%	2.58%	3.98%	6.61%	0.0137%
PENTAIR PLC	PNR	11,488.14	0.06%	2.12%	8.66%	10.87%	0.0063%
PINNACLE WEST CAPITAL	PNW	8,838.96	0.04%	3.19%	4.64%	7.91%	0.0035%
PPG INDUSTRIES INC	PPG	29,072.75	0.15%	1.42%	8.50%	9.98%	0.0146%
PPL CORP	PPL	25,148.51	0.13%	4.09%	4.78%	8.97%	0.0114%
PERRIGO CO PLC	PRGO	13,563.18	0.07%	0.61%	9.68%	10.32%	0.0071%
PRUDENTIAL FINANCIAL INC	PRU	33,198.62	0.17%	3.74%	7.90%	11.79%	0.0198%
PUBLIC STORAGE	PSA	43,626.39	0.22%	2.82%	5.54%	8.44%	0.0186%
PHILLIPS 66	PSX	39,765.49	0.20%	3.16%	7.76%	11.03%	0.0221%
PVH CORP	PVH	7,965.17	0.04%	0.16%	6.36%	6.52%	0.0026%
QUANTA SERVICES INC	PWR	3,845.37	0.02%	0.00%	8.00%	8.00%	0.0016%
PRAXAIR INC	PX	33,943.67	0.17%	2.54%	7.11%	9.74%	0.0167%
PIONEER NATURAL RESOURCES CO	PXD	26,453.20	0.13%	0.05%	20.00%	20.06%	0.0268%
PAYPAL HOLDINGS INC	PYPL	47,378.12	0.24%	0.00%	15.14%	15.14%	0.0362%

QUALCOMM INC	QCOM	80,423.10	0.41%	3.58%	10.50%	14.27%	0.0579%
QORVO INC	QRVO	7,594.38	0.04%	0.00%	14.70%	14.70%	0.0056%
RYDER SYSTEM INC	R	3,650.22	0.02%	2.48%	9.92%	12.53%	0.0023%
REYNOLDS AMERICAN INC	RAI	75,049.60	0.38%	3.22%	9.44%	12.80%	0.0485%
ROYAL CARIBBEAN CRUISES LTD	RCL	15,150.84	0.08%	2.23%	24.87%	27.37%	0.0209%
REGENERON PHARMACEUTICALS	REGN	39,279.43	0.20%	0.00%	22.57%	22.57%	0.0447%
REGIONS FINANCIAL CORP	RF	11,552.42	0.06%	2.89%	4.96%	7.93%	0.0046%
ROBERT HALF INTL INC	RHI	5,168.70	0.03%	2.24%	10.97%	13.33%	0.0035%
RED HAT INC	RHT	13,189.23	0.07%	0.00%	16.67%	16.67%	0.0111%
TRANSOCEAN LTD	RIG	4,437.20	0.02%	0.00%	-6.20%	-6.20%	-0.0014%
RALPH LAUREN CORP	RL	8,220.23	0.04%	2.08%	7.46%	9.62%	0.0040%
ROCKWELL AUTOMATION INC	ROK	15,522.20	0.08%	2.57%	6.93%	9.58%	0.0075%
ROPER TECHNOLOGIES INC	ROP	17,397.44	0.09%	0.67%	11.43%	12.15%	0.0107%
ROSS STORES INC	ROST	23,247.48	0.12%	0.92%	12.46%	13.44%	0.0158%
RANGE RESOURCES CORP	RRC	7,316.03	0.04%	0.22%	-24.07%	-23.87%	-0.0088%
REPUBLIC SERVICES INC	RSG	18,003.06	0.09%	2.35%	8.11%	10.55%	0.0096%
RAYTHEON COMPANY	RTN	41,182.22	0.21%	2.08%	7.94%	10.10%	0.0210%
STARBUCKS CORP	SBUX	84,099.91	0.42%	1.42%	18.45%	20.00%	0.0849%
SCANA CORP	SCG	10,502.96	0.05%	3.12%	5.55%	8.76%	0.0046%
SCHWAB (CHARLES) CORP	SCHW	35,725.31	0.18%	1.00%	17.41%	18.50%	0.0333%
SPECTRA ENERGY CORP	SE	25,968.70	0.13%	4.40%	8.90%	13.50%	0.0177%
SEALED AIR CORP	SEE	9,675.77	0.05%	1.20%	3.89%	5.11%	0.0025%
SHERWIN-WILLIAMS CO/THE	SHW	28,294.26	0.14%	1.10%	16.13%	17.32%	0.0247%
SIGNET JEWELERS LTD	SIG	7,047.05	0.04%	1.15%	14.40%	15.63%	0.0056%
JM SMUCKER CO/THE	SJM	17,785.29	0.09%	1.89%	8.30%	10.27%	0.0092%
SCHLUMBERGER LTD	SLB	110,393.89	0.56%	2.52%	9.00%	11.64%	0.0648%
SL GREEN REALTY CORP	SLG	11,379.59	0.06%	2.72%	4.77%	7.55%	0.0043%
SNAP-ON INC	SNA	9,443.55	0.05%	1.98%	4.90%	6.92%	0.0033%
SCRIPPS NETWORKS INTER-CL A	SNI	8,525.24	0.04%	1.52%	11.95%	13.57%	0.0058%
SOUTHERN CO/THE	SO	50,334.56	0.25%	4.15%	3.97%	8.19%	0.0208%
SIMON PROPERTY GROUP INC	SPG	68,981.39	0.35%	2.93%	7.91%	10.96%	0.0381%
S&P GLOBAL INC	SPGI	30,621.47	0.15%	1.25%	10.00%	11.32%	0.0175%
STAPLES INC	SPLS	5,816.58	0.03%	5.33%	4.20%	9.65%	0.0028%
STERICYCLE INC	SRCL	8,993.09	0.05%	0.00%	13.62%	13.62%	0.0062%
SEMPRA ENERGY	SRE	28,175.67	0.14%	2.67%	6.88%	9.65%	0.0137%
SUNTRUST BANKS INC	STI	21,799.05	0.11%	2.32%	6.01%	8.40%	0.0092%
ST JUDE MEDICAL INC	STJ	22,881.49	0.12%	1.54%	10.57%	12.19%	0.0141%
STATE STREET CORP	STT	22,532.96	0.11%	2.51%	9.92%	12.55%	0.0143%
SEAGATE TECHNOLOGY	STX	8,626.18	0.04%	8.27%	1.43%	9.76%	0.0042%
CONSTELLATION BRANDS INC-A	STZ	32,720.33	0.17%	0.97%	14.80%	15.84%	0.0262%
STANLEY BLACK & DECKER INC	SWK	17,614.68	0.09%	1.93%	10.50%	12.53%	0.0111%
SKYWORKS SOLUTIONS INC	SWKS	12,820.15	0.06%	1.56%	18.15%	19.85%	0.0128%
SOUTHWESTERN ENERGY CO	SWN	6,588.07	0.03%	0.00%	-19.71%	-19.71%	-0.0066%
SYNCHRONY FINANCIAL	SYF	23,449.84	0.12%	0.91%	6.25%	7.19%	0.0085%
STRYKER CORP	SYK	45,655.61	0.23%	1.26%	8.98%	10.29%	0.0237%
SYMANTEC CORP	SYMC	12,821.40	0.06%	1.43%	8.69%	10.18%	0.0066%
SYSCO CORP	SY	29,314.10	0.15%	2.35%	9.80%	12.26%	0.0181%
AT&T INC	T	264,030.84	1.33%	4.50%	4.40%	8.99%	0.1198%
MOLSON COORS BREWING CO -B	TAP	21,147.97	0.11%	1.70%	22.00%	23.89%	0.0255%
TERADATA CORP	TDC	3,533.40	0.02%	0.00%	9.67%	9.67%	0.0017%
TRANSDIGM GROUP INC	TDG	14,381.27	0.07%	0.00%	13.88%	13.88%	0.0101%
TE CONNECTIVITY LTD	TEL	21,478.43	0.11%	2.27%	12.20%	14.61%	0.0158%
TEGNA INC	TGNA	5,315.67	0.03%	2.29%	8.03%	10.42%	0.0028%
TARGET CORP	TGT	43,040.61	0.22%	3.18%	10.35%	13.69%	0.0297%
TIFFANY & CO	TIF	7,724.88	0.04%	2.69%	8.32%	11.12%	0.0043%
TJX COMPANIES INC	TJX	51,438.91	0.26%	1.32%	11.67%	13.07%	0.0339%
TORCHMARK CORP	TMK	7,546.70	N/A	0.90%	N/A	N/A	N/A
THERMO FISHER SCIENTIFIC INC	TMO	61,797.16	0.31%	0.39%	11.83%	12.23%	0.0381%
TRIPADVISOR INC	TRIP	9,945.90	0.05%	0.00%	14.94%	14.94%	0.0075%
T ROWE PRICE GROUP INC	TROW	18,528.36	0.09%	2.90%	10.39%	13.44%	0.0126%
TRAVELERS COS INC/THE	TRV	34,689.70	0.18%	2.22%	7.13%	9.42%	0.0165%
TRACTOR SUPPLY COMPANY	TSCO	12,273.95	0.06%	0.95%	15.47%	16.49%	0.0102%
TYSON FOODS INC-CL A	TSN	27,998.28	0.14%	0.88%	12.30%	13.24%	0.0187%
TESORO CORP	TSO	9,047.38	0.05%	2.74%	-2.69%	0.01%	0.0000%
TOTAL SYSTEM SERVICES INC	TSS	10,052.76	0.05%	0.73%	11.00%	11.77%	0.0060%
TIME WARNER INC	TWX	61,842.05	0.31%	2.04%	13.90%	16.09%	0.0502%
TEXAS INSTRUMENTS INC	TXN	65,124.12	0.33%	2.37%	10.00%	12.49%	0.0410%
TEXTRON INC	TXT	10,417.23	0.05%	0.21%	7.31%	7.53%	0.0040%
TYCO INTERNATIONAL PLC	TYC	18,406.76	0.09%	1.99%	10.03%	12.12%	0.0113%
UNDER ARMOUR INC-CLASS A	UA	17,150.26	0.09%	0.00%	23.89%	23.89%	0.0207%
UNITED CONTINENTAL HOLDINGS	UAL	15,922.24	0.08%	0.00%	-11.51%	-11.51%	-0.0092%
UDR INC	UDR	9,737.15	0.05%	3.24%	6.73%	10.07%	0.0049%
UNIVERSAL HEALTH SERVICES-B	UHS	13,124.48	0.07%	0.30%	8.88%	9.19%	0.0061%
ULTA SALON COSMETICS & FRAGR	ULTA	15,976.52	0.08%	0.00%	22.17%	22.17%	0.0179%
UNITEDHEALTH GROUP INC	UNH	134,377.15	0.68%	1.68%	13.07%	14.87%	0.1008%
UNUM GROUP	UNM	7,703.38	0.04%	2.40%	7.60%	10.09%	0.0039%
UNION PACIFIC CORP	UNP	79,040.40	0.40%	2.40%	13.08%	15.64%	0.0624%
UNITED PARCEL SERVICE-CL B	UPS	98,002.75	0.49%	2.80%	10.04%	12.99%	0.0642%
URBAN OUTFITTERS INC	URBN	3,416.87	0.02%	0.00%	13.09%	13.09%	0.0023%

UNITED RENTALS INC	URI	6,205.79	0.03%	0.00%	14.13%	14.13%	0.0044%
US BANCORP	USB	72,319.03	0.36%	2.55%	5.56%	8.18%	0.0299%
UNITED TECHNOLOGIES CORP	UTX	88,289.33	0.45%	2.51%	9.56%	12.19%	0.0543%
VISA INC-CLASS A SHARES	V	186,738.21	0.94%	0.72%	16.97%	17.75%	0.1673%
VARIAN MEDICAL SYSTEMS INC	VAR	8,227.49	0.04%	0.00%	12.05%	12.05%	0.0050%
VF CORP	VFC	26,701.68	0.13%	2.36%	11.32%	13.82%	0.0186%
VIACOM INC-CLASS B	VIAB	17,747.73	0.09%	3.64%	3.71%	7.42%	0.0066%
VALERO ENERGY CORP	VLO	23,461.94	0.12%	4.84%	2.30%	7.20%	0.0085%
VULCAN MATERIALS CO	VMC	16,621.88	0.08%	0.64%	23.08%	23.80%	0.0200%
VORNADO REALTY TRUST	VNO	18,933.73	0.10%	2.58%	4.94%	7.58%	0.0072%
VERISK ANALYTICS INC	VRSK	14,334.50	0.07%	0.00%	12.67%	12.67%	0.0092%
VERISIGN INC	VRSN	9,116.28	0.05%	0.00%	9.85%	9.85%	0.0045%
VERTEX PHARMACEUTICALS INC	VRTX	22,313.43	0.11%	0.00%	50.53%	50.53%	0.0569%
VENTAS INC	VTR	25,203.95	0.13%	4.09%	5.72%	9.92%	0.0126%
VERIZON COMMUNICATIONS INC	VZ	227,619.92	1.15%	4.08%	3.79%	7.95%	0.0913%
WATERS CORP	WAT	12,046.52	0.06%	0.00%	8.92%	8.92%	0.0054%
WALGREENS BOOTS ALLIANCE INC	WBA	89,302.02	0.45%	1.76%	12.91%	14.78%	0.0666%
WESTERN DIGITAL CORP	WDC	14,539.05	0.07%	3.66%	1.90%	5.59%	0.0041%
WEC ENERGY GROUP INC	WEC	20,188.80	0.10%	3.10%	5.50%	8.68%	0.0088%
WELLS FARGO & CO	WFC	242,225.94	1.22%	3.21%	11.47%	14.87%	0.1817%
WHOLE FOODS MARKET INC	WFM	10,645.26	0.05%	1.63%	8.55%	10.25%	0.0055%
WHIRLPOOL CORP	WHR	13,332.94	0.07%	2.15%	15.17%	17.48%	0.0118%
WILLIS TOWERS WATSON PLC	WLTW	17,248.34	0.09%	1.54%	21.47%	23.17%	0.0202%
WASTE MANAGEMENT INC	WM	29,965.45	0.15%	2.43%	8.50%	11.03%	0.0167%
WILLIAMS COS INC	WMB	17,593.35	0.09%	11.10%	5.50%	16.91%	0.0150%
WAL-MART STORES INC	WMT	229,603.36	1.16%	2.71%	2.87%	5.62%	0.0652%
WESTROCK CO	WRK	10,738.44	0.05%	3.53%	2.85%	6.43%	0.0035%
WESTERN UNION CO	WU	9,886.58	0.05%	3.17%	6.72%	10.00%	0.0050%
WEYERHAEUSER CO	WY	23,928.77	0.12%	3.87%	5.50%	9.48%	0.0114%
WYNDHAM WORLDWIDE CORP	WYN	8,451.23	0.04%	2.65%	7.65%	10.40%	0.0044%
WYNN RESORTS LTD	WYNN	9,387.16	0.05%	2.22%	10.00%	12.33%	0.0058%
CIMAREX ENERGY CO	XEC	11,325.65	0.06%	0.33%	-3.27%	-2.94%	-0.0017%
XCEL ENERGY INC	XEL	22,222.93	0.11%	3.11%	5.00%	8.19%	0.0092%
XL GROUP PLC	XL	9,183.97	0.05%	2.53%	9.00%	11.64%	0.0054%
XILINX INC	XLNX	12,132.69	0.06%	2.73%	8.23%	11.07%	0.0068%
EXXON MOBIL CORP	XOM	394,425.67	1.99%	3.14%	13.80%	17.16%	0.3415%
DENTSPLY SIRONA INC	XRAY	14,747.18	0.07%	0.47%	9.77%	10.26%	0.0076%
XEROX CORP	XRX	9,775.47	0.05%	3.24%	11.60%	15.03%	0.0074%
XYLEM INC	XYL	8,417.12	0.04%	1.32%	15.00%	16.42%	0.0070%
YAHOO! INC	YHOO	35,830.95	0.18%	0.00%	4.93%	4.93%	0.0089%
YUM! BRANDS INC	YUM	35,646.99	0.18%	2.17%	11.87%	14.17%	0.0255%
ZIMMER BIOMET HOLDINGS INC	ZBH	25,043.71	0.13%	0.74%	10.49%	11.27%	0.0142%
ZIONS BANCORPORATION	ZION	5,322.26	0.03%	1.10%	12.67%	13.83%	0.0037%
ZOETIS INC	ZTS	24,651.33	0.12%	0.77%	13.95%	14.77%	0.0184%
		19,817,856.53					13.03%

[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]				
		Current 30- Year						
		S&P 500 Est. Required Market Return	Treasury (30-day average)	Implied Market Risk Premium				
		13.70%	2.35%	11.35%				
		[4]	[5]	[6]	[7]	[8]	[9]	
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result	
AGILENT TECHNOLOGIES INC	A	15,107.48	0.08%	0.99%	4.50%	5.51%	0.0046%	
ALCOA INC	AA	14,084.79	0.08%	1.12%	11.50%	12.68%	0.0100%	
AMERICAN AIRLINES GROUP INC	AAL	20,175.92	N/A	1.16%	N/A	N/A	N/A	
ADVANCE AUTO PARTS INC	AAP	11,983.01	0.07%	0.15%	11.50%	11.66%	0.0078%	
APPLE INC	AAPL	530,697.10	2.96%	2.41%	11.50%	14.05%	0.4154%	
ABBVIE INC	ABBV	104,756.40	0.58%	3.52%	13.00%	16.75%	0.0978%	
AMERISOURCEBERGEN CORP	ABC	19,024.40	0.11%	1.60%	11.00%	12.69%	0.0134%	
ABBOTT LABORATORIES	ABT	61,660.31	0.34%	2.48%	7.50%	10.07%	0.0346%	
ACCENTURE PLC-CL A	ACN	75,324.04	0.42%	2.00%	6.50%	8.57%	0.0359%	
ADOBE SYSTEMS INC	ADBE	48,569.93	0.27%	0.00%	35.50%	35.50%	0.0961%	
ANALOG DEVICES INC	ADI	18,293.47	0.10%	2.82%	11.00%	13.98%	0.0142%	
ARCHER-DANIELS-MIDLAND CO	ADM	25,299.70	0.14%	2.78%	6.00%	8.86%	0.0125%	
AUTOMATIC DATA PROCESSING	ADP	43,393.36	0.24%	2.39%	9.50%	12.00%	0.0290%	
ALLIANCE DATA SYSTEMS CORP	ADS	12,356.37	0.07%	0.00%	10.50%	10.50%	0.0072%	
AUTODESK INC	ADSK	12,776.19	N/A	0.00%	N/A	N/A	N/A	
AMEREN CORPORATION	AEE	12,828.69	0.07%	3.31%	6.00%	9.41%	0.0067%	
AMERICAN ELECTRIC POWER	AEP	34,391.92	0.19%	3.29%	4.00%	7.36%	0.0141%	
AES CORP	AES	8,323.14	0.05%	3.48%	8.50%	12.13%	0.0056%	
AETNA INC	AET	41,784.50	0.23%	0.84%	9.50%	10.38%	0.0242%	
AFLAC INC	AFL	30,426.07	0.17%	2.32%	4.50%	6.87%	0.0117%	
ALLERGAN PLC	AGN	95,358.63	0.53%	0.00%	13.50%	13.50%	0.0717%	
AMERICAN INTERNATIONAL GROUP	AIG	60,845.01	0.34%	2.38%	5.00%	7.44%	0.0252%	
APARTMENT INVT & MGMT CO -A	AIV	-	N/A	2.86%	N/A	N/A	N/A	
ASSURANT INC	AIZ	5,508.83	0.03%	2.27%	7.00%	9.35%	0.0029%	
ARTHUR J GALLAGHER & CO	AJG	8,637.17	0.05%	3.12%	15.00%	18.35%	0.0088%	
AKAMAI TECHNOLOGIES INC	AKAM	10,010.20	0.06%	0.00%	13.00%	13.00%	0.0073%	
ALBEMARLE CORP	ALB	9,607.01	0.05%	1.43%	10.00%	11.50%	0.0062%	
ALASKA AIR GROUP INC	ALK	7,827.58	0.04%	1.74%	13.50%	15.36%	0.0067%	
ALLSTATE CORP	ALL	25,980.00	0.14%	1.91%	6.50%	8.47%	0.0123%	
ALLEGION PLC	ALLE	6,743.50	0.04%	0.68%	10.50%	11.22%	0.0042%	
ALEXION PHARMACEUTICALS INC	ALXN	27,682.22	0.15%	0.00%	27.50%	27.50%	0.0424%	
APPLIED MATERIALS INC	AMAT	28,219.72	0.16%	1.54%	18.00%	19.68%	0.0309%	
AMETEK INC	AME	10,841.89	0.06%	0.78%	6.00%	6.80%	0.0041%	
AFFILIATED MANAGERS GROUP	AMG	7,974.94	0.04%	0.00%	8.50%	8.50%	0.0038%	
AMGEN INC	AMGN	120,598.70	0.67%	2.62%	8.50%	11.23%	0.0755%	
AMERIPRISE FINANCIAL INC	AMP	15,654.56	0.09%	3.20%	11.00%	14.38%	0.0125%	
AMERICAN TOWER CORP	AMT	49,253.55	0.27%	1.93%	15.50%	17.58%	0.0482%	
AMAZON.COM INC	AMZN	350,521.40	1.95%	0.00%	90.00%	90.00%	1.7577%	
AUTONATION INC	AN	5,222.07	0.03%	0.00%	9.00%	9.00%	0.0026%	
ANTHEM INC	ANTM	35,152.35	0.20%	1.94%	7.50%	9.51%	0.0186%	
AON PLC	AON	29,196.85	0.16%	1.20%	12.00%	13.27%	0.0216%	
APACHE CORP	APA	21,402.20	0.12%	1.77%	5.00%	6.81%	0.0081%	
ANADARKO PETROLEUM CORP	APC	28,633.44	N/A	0.36%	N/A	N/A	N/A	
AIR PRODUCTS & CHEMICALS INC	APD	31,962.70	0.18%	2.33%	12.00%	14.47%	0.0258%	
AMPHENOL CORP-CL A	APH	17,846.60	0.10%	0.97%	8.00%	9.01%	0.0090%	
ACTIVISION BLIZZARD INC	ATVI	31,077.47	0.17%	0.67%	8.00%	8.70%	0.0151%	
AVALONBAY COMMUNITIES INC	AVB	-	N/A	3.00%	N/A	N/A	N/A	
BROADCOM LTD	AVGO	62,147.67	0.35%	1.27%	23.00%	24.42%	0.0845%	
AVERY DENNISON CORP	AVY	6,533.22	0.04%	2.28%	9.50%	11.89%	0.0043%	
AMERICAN WATER WORKS CO INC	AWK	14,574.27	0.08%	1.88%	8.00%	9.96%	0.0081%	
AMERICAN EXPRESS CO	AXP	60,008.10	0.33%	2.03%	3.00%	5.06%	0.0169%	
ACUITY BRANDS INC	AYI	11,364.64	0.06%	0.20%	19.50%	19.72%	0.0125%	
AUTOZONE INC	AZO	23,639.45	0.13%	0.00%	11.50%	11.50%	0.0151%	
BOEING CO/THE	BA	83,246.32	0.46%	3.54%	10.50%	14.23%	0.0660%	
BANK OF AMERICA CORP	BAC	138,602.20	0.77%	1.79%	22.00%	23.99%	0.1852%	
BAXTER INTERNATIONAL INC	BAX	25,808.26	0.14%	1.11%	-4.50%	-3.41%	-0.0049%	
BED BATH & BEYOND INC	BBBY	6,956.97	0.04%	1.11%	3.00%	4.13%	0.0016%	
BB&T CORP	BBT	28,087.41	0.16%	3.34%	7.50%	10.97%	0.0172%	
BEST BUY CO INC	BBY	10,173.60	0.06%	3.57%	8.00%	11.71%	0.0066%	
CR BARD INC	BCR	17,213.84	0.10%	0.44%	9.00%	9.46%	0.0091%	
BECTON DICKINSON AND CO	BDX	37,334.82	0.21%	1.57%	9.50%	11.14%	0.0232%	

FRANKLIN RESOURCES INC	BEN	20,204.04	0.11%	2.26%	4.50%	6.81%	0.0077%
BROWN-FORMAN CORP-CLASS B	BF/B	19,376.74	0.11%	1.41%	8.00%	9.47%	0.0102%
BAKER HUGHES INC	BHI	19,819.99	0.11%	1.50%	30.00%	31.73%	0.0350%
BIOGEN INC	BIIB	55,023.42	0.31%	0.00%	11.50%	11.50%	0.0353%
BANK OF NEW YORK MELLON CORP	BK	42,447.84	0.24%	1.73%	11.00%	12.83%	0.0303%
BLACKROCK INC	BLK	58,482.35	0.33%	2.56%	8.00%	10.66%	0.0347%
BALL CORP	BLL	10,098.97	0.06%	0.73%	11.00%	11.77%	0.0066%
BRISTOL-MYERS SQUIBB CO	BMY	127,199.40	0.71%	1.99%	19.50%	21.68%	0.1537%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	359,751.00	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	32,008.42	0.18%	0.00%	18.00%	18.00%	0.0321%
BORGWARNER INC	BWA	6,783.18	0.04%	1.67%	8.50%	10.24%	0.0039%
BOSTON PROPERTIES INC	BXP	-	N/A	1.98%	N/A	N/A	N/A
CITIGROUP INC	C	127,170.50	0.71%	0.46%	12.00%	12.49%	0.0885%
CA INC	CA	14,163.26	0.08%	2.97%	4.50%	7.54%	0.0059%
CONAGRA FOODS INC	CAG	21,026.47	0.12%	2.08%	5.50%	7.64%	0.0089%
CARDINAL HEALTH INC	CAH	26,823.28	0.15%	2.26%	14.00%	16.42%	0.0245%
CATERPILLAR INC	CAT	46,528.52	0.26%	3.87%	5.00%	8.97%	0.0232%
CHUBB LTD	CB	60,124.78	0.33%	2.13%	8.00%	10.22%	0.0342%
CBRE GROUP INC - A	CBG	9,220.56	0.05%	0.00%	10.00%	10.00%	0.0051%
CBS CORP-CLASS B NON VOTING	CBS	26,109.54	0.15%	1.04%	13.00%	14.11%	0.0205%
CROWN CASTLE INTL CORP	CCI	33,688.49	0.19%	3.73%	21.00%	25.12%	0.0472%
CARNIVAL CORP	CCL	34,754.25	0.19%	3.00%	15.50%	18.73%	0.0363%
CELGENE CORP	CELG	78,833.47	0.44%	0.00%	27.50%	27.50%	0.1208%
CERNER CORP	CERN	20,396.01	0.11%	0.00%	13.50%	13.50%	0.0153%
CF INDUSTRIES HOLDINGS INC	CF	6,274.49	0.03%	5.02%	4.50%	9.63%	0.0034%
CITIZENS FINANCIAL GROUP	CFG	10,874.88	N/A	2.34%	N/A	N/A	N/A
CHURCH & DWIGHT CO INC	CHD	12,814.34	0.07%	1.42%	7.00%	8.47%	0.0060%
CHESAPEAKE ENERGY CORP	CHK	2,971.82	N/A	0.00%	N/A	N/A	N/A
C.H. ROBINSON WORLDWIDE INC	CHRW	10,416.95	0.06%	2.36%	7.50%	9.95%	0.0058%
CIGNA CORP	CI	33,395.43	0.19%	0.03%	12.50%	12.53%	0.0233%
CINCINNATI FINANCIAL CORP	CINF	12,527.28	0.07%	2.52%	6.50%	9.10%	0.0064%
COLGATE-PALMOLIVE CO	CL	66,503.05	0.37%	2.10%	14.00%	16.25%	0.0602%
CLOROX COMPANY	CLX	17,721.45	0.10%	2.36%	8.50%	10.96%	0.0108%
COMERICA INC	CMA	7,479.33	0.04%	2.06%	6.50%	8.63%	0.0036%
COMCAST CORP-CLASS A	CMCSA	162,209.50	0.90%	1.65%	10.00%	11.73%	0.1060%
CME GROUP INC	CME	33,617.36	0.19%	2.41%	9.50%	12.02%	0.0225%
CHIPOTLE MEXICAN GRILL INC	CMG	12,227.26	0.07%	0.00%	13.50%	13.50%	0.0092%
CUMMINS INC	CMI	20,129.35	0.11%	3.47%	5.00%	8.56%	0.0096%
CMS ENERGY CORP	CMS	12,572.38	0.07%	2.84%	6.00%	8.93%	0.0063%
CENTENE CORP	CNC	12,320.05	0.07%	0.00%	19.50%	19.50%	0.0134%
CENTERPOINT ENERGY INC	CNP	10,308.90	0.06%	4.39%	2.00%	6.43%	0.0037%
CAPITAL ONE FINANCIAL CORP	COF	34,953.70	0.19%	2.36%	3.50%	5.90%	0.0115%
CABOT OIL & GAS CORP	COG	11,950.50	0.07%	0.31%	39.00%	39.37%	0.0262%
COACH INC	COH	11,674.58	0.07%	3.21%	4.50%	7.78%	0.0051%
ROCKWELL COLLINS INC	COL	11,111.38	0.06%	1.64%	8.00%	9.71%	0.0060%
CONOCOPHILLIPS	COP	53,089.65	0.30%	2.33%	6.50%	8.91%	0.0263%
COSTCO WHOLESALE CORP	COST	73,111.02	0.41%	1.08%	9.00%	10.13%	0.0413%
CAMPBELL SOUP CO	CPB	20,616.48	0.11%	1.87%	5.50%	7.42%	0.0085%
SALESFORCE.COM INC	CRM	55,101.07	N/A	0.00%	N/A	N/A	N/A
CISCO SYSTEMS INC	CSCO	149,761.50	0.83%	3.50%	6.00%	9.61%	0.0801%
CSRA INC	CSRA	4,078.54	N/A	1.60%	N/A	N/A	N/A
CSX CORP	CSX	26,965.01	0.15%	2.55%	7.00%	9.64%	0.0145%
CINTAS CORP	CTAS	10,437.67	0.06%	1.08%	11.00%	12.14%	0.0071%
CENTURYLINK INC	CTL	16,865.54	0.09%	7.00%	14.50%	22.01%	0.0207%
COGNIZANT TECH SOLUTIONS-A	CTSH	35,456.64	0.20%	0.00%	12.50%	12.50%	0.0247%
CITRIX SYSTEMS INC	CTXS	12,995.86	0.07%	0.00%	11.00%	11.00%	0.0080%
CVS HEALTH CORP	CVS	105,538.00	0.59%	1.74%	11.50%	13.34%	0.0784%
CHEVRON CORP	CVX	201,003.50	1.12%	4.01%	4.50%	8.60%	0.0963%
CONCHO RESOURCES INC	CXO	15,924.63	0.09%	0.00%	16.50%	16.50%	0.0146%
DOMINION RESOURCES INC/VA	D	46,428.69	0.26%	3.74%	8.00%	11.89%	0.0308%
DELTA AIR LINES INC	DAL	30,523.74	0.17%	2.02%	14.50%	16.67%	0.0283%
DU PONT (E.I.) DE NEMOURS	DD	57,723.60	0.32%	2.45%	7.00%	9.54%	0.0307%
DEERE & CO	DE	26,070.93	0.15%	2.89%	-1.50%	1.37%	0.0020%
DISCOVER FINANCIAL SERVICES	DFS	23,490.81	0.13%	1.98%	5.00%	7.03%	0.0092%
DOLLAR GENERAL CORP	DG	26,229.60	0.15%	1.14%	13.50%	14.72%	0.0215%
QUEST DIAGNOSTICS INC	DGX	11,717.10	0.07%	1.93%	10.00%	12.03%	0.0079%
DR HORTON INC	DHI	12,567.78	0.07%	0.94%	13.00%	14.00%	0.0098%
DANAHER CORP	DHR	55,804.14	0.31%	0.79%	13.00%	13.84%	0.0430%
WALT DISNEY CO/THE	DIS	169,796.00	0.95%	1.42%	10.00%	11.49%	0.1087%
DISCOVERY COMMUNICATIONS-A	DISCA	10,341.80	0.06%	0.00%	17.00%	17.00%	0.0098%
DELPHI AUTOMOTIVE PLC	DLPH	18,333.61	0.10%	1.85%	14.50%	16.48%	0.0168%
DIGITAL REALTY TRUST INC	DLR	-	N/A	3.37%	N/A	N/A	N/A
DOLLAR TREE INC	DLTR	22,231.22	0.12%	0.00%	21.00%	21.00%	0.0260%
DUN & BRADSTREET CORP	DNB	4,570.97	0.03%	1.53%	5.00%	6.57%	0.0017%
DIAMOND OFFSHORE DRILLING	DO	3,434.74	0.02%	0.00%	11.50%	11.50%	0.0022%
DOVER CORP	DOV	11,220.38	0.06%	2.32%	3.50%	5.86%	0.0037%
DOW CHEMICAL CO/THE	DOW	57,466.34	0.32%	3.83%	9.50%	13.51%	0.0433%
DR PEPPER SNAPPLE GROUP INC	DPS	18,148.53	0.10%	2.22%	8.50%	10.81%	0.0109%
DARDEN RESTAURANTS INC	DRI	7,943.19	0.04%	3.57%	13.50%	17.31%	0.0077%

DTE ENERGY COMPANY	DTE	17,602.57	0.10%	3.14%	5.00%	8.22%	0.0081%
DUKE ENERGY CORP	DUK	58,599.45	0.33%	4.02%	4.50%	8.61%	0.0281%
DAVITA HEALTHCARE PARTNERS I	DVA	16,096.59	0.09%	0.00%	11.00%	11.00%	0.0099%
DEVON ENERGY CORP	DVN	20,436.00	0.11%	0.62%	1.00%	1.62%	0.0018%
ELECTRONIC ARTS INC	EA	23,332.73	0.13%	0.00%	14.00%	14.00%	0.0182%
EBAY INC	EBAY	28,712.16	0.16%	0.00%	3.50%	3.50%	0.0056%
ECOLAB INC	ECL	35,360.25	0.20%	1.16%	8.50%	9.71%	0.0191%
CONSOLIDATED EDISON INC	ED	23,349.48	0.13%	3.43%	1.50%	4.96%	0.0064%
EQUIFAX INC	EFX	15,876.98	0.09%	0.99%	9.50%	10.54%	0.0093%
EDISON INTERNATIONAL	EIX	25,221.03	0.14%	2.57%	3.50%	6.11%	0.0086%
ESTEE LAUDER COMPANIES-CL A	EL	34,443.75	0.19%	1.29%	8.00%	9.34%	0.0179%
EMC CORP/MA	EMC	53,766.09	0.30%	1.67%	3.50%	5.20%	0.0156%
EASTMAN CHEMICAL CO	EMN	10,454.38	0.06%	2.60%	9.50%	12.22%	0.0071%
EMERSON ELECTRIC CO	EMR	35,527.31	0.20%	3.44%	2.00%	5.47%	0.0108%
ENDO INTERNATIONAL PLC	ENDP	3,869.78	0.02%	0.00%	32.00%	32.00%	0.0069%
EOG RESOURCES INC	EOG	46,128.09	0.26%	0.92%	2.50%	3.43%	0.0088%
EQUINIX INC	EQIX	26,848.50	0.15%	1.81%	19.50%	21.49%	0.0321%
EQUITY RESIDENTIAL	EQR	-	N/A	2.95%	N/A	N/A	N/A
EQT CORP	EQT	12,226.02	0.07%	0.16%	12.00%	12.17%	0.0083%
EVERSOURCE ENERGY	ES	18,496.34	0.10%	3.16%	6.00%	9.25%	0.0095%
EXPRESS SCRIPTS HOLDING CO	ESRX	49,714.50	0.28%	0.00%	15.50%	15.50%	0.0429%
ESSEX PROPERTY TRUST INC	ESS	-	N/A	2.84%	N/A	N/A	N/A
E*TRADE FINANCIAL CORP	ETFC	6,837.21	0.04%	0.00%	17.50%	17.50%	0.0067%
EATON CORP PLC	ETN	29,252.46	0.16%	3.57%	5.00%	8.66%	0.0141%
ENTERGY CORP	ETR	14,435.24	0.08%	4.28%	3.50%	7.85%	0.0063%
EDWARDS LIFESCIENCES CORP	EW	22,565.23	0.13%	0.00%	17.00%	17.00%	0.0214%
EXELON CORP	EXC	33,883.50	0.19%	3.46%	7.00%	10.58%	0.0200%
EXPEDITORS INTL WASH INC	EXPD	9,107.15	0.05%	1.60%	11.00%	12.69%	0.0064%
EXPEDIA INC	EXPE	17,113.75	0.10%	0.84%	23.00%	23.94%	0.0228%
EXTRA SPACE STORAGE INC	EXR	-	N/A	3.31%	N/A	N/A	N/A
FORD MOTOR CO	F	53,553.81	0.30%	4.45%	7.00%	11.61%	0.0346%
FASTENAL CO	FAST	12,508.20	0.07%	2.77%	7.00%	9.87%	0.0069%
FACEBOOK INC-A	FB	333,990.80	1.86%	0.00%	34.00%	34.00%	0.6327%
FORTUNE BRANDS HOME & SECURI	FBHS	9,414.22	0.05%	1.04%	15.00%	16.12%	0.0085%
FREEPORT-MCMORAN INC	FCX	16,225.92	0.09%	0.00%	36.50%	36.50%	0.0330%
FEDEX CORP	FDX	51,013.56	0.28%	1.00%	12.50%	13.56%	0.0385%
FIRSTENERGY CORP	FE	15,476.51	0.09%	3.95%	9.00%	13.13%	0.0113%
F5 NETWORKS INC	FFIV	7,793.91	0.04%	0.00%	9.00%	9.00%	0.0039%
FIDELITY NATIONAL INFO SERV	FIS	25,070.50	0.14%	1.35%	13.50%	14.94%	0.0209%
FISERV INC	FISV	24,657.11	0.14%	0.00%	9.50%	9.50%	0.0131%
FIFTH THIRD BANCORP	FITB	13,822.25	0.08%	3.12%	3.00%	6.17%	0.0047%
FOOT LOCKER INC	FL	7,881.92	0.04%	1.90%	9.00%	10.99%	0.0048%
FLIR SYSTEMS INC	FLIR	4,417.89	0.02%	1.56%	8.00%	9.62%	0.0024%
FLUOR CORP	FLR	7,362.11	0.04%	1.59%	1.50%	3.10%	0.0013%
FLOWERVE CORP	FLS	6,184.74	0.03%	1.59%	2.50%	4.11%	0.0014%
FMC CORP	FMC	6,458.88	0.04%	1.43%	4.00%	5.46%	0.0020%
TWENTY-FIRST CENTURY FOX-A	FOXA	52,887.34	0.29%	1.07%	10.50%	11.63%	0.0343%
FEDERAL REALTY INVS TRUST	FRT	-	N/A	2.41%	N/A	N/A	N/A
FIRST SOLAR INC	FSLR	4,722.52	0.03%	0.00%	8.50%	8.50%	0.0022%
FMC TECHNOLOGIES INC	FTI	6,118.71	0.03%	0.00%	-1.00%	-1.00%	-0.0003%
FRONTIER COMMUNICATIONS CORP	FTR	5,933.65	0.03%	8.30%	13.50%	22.36%	0.0074%
FORTIVE CORP	FTV	N/A	N/A	0.00%	N/A	N/A	N/A
GENERAL DYNAMICS CORP	GD	43,319.35	0.24%	2.15%	7.00%	9.23%	0.0223%
GENERAL ELECTRIC CO	GE	297,571.50	1.66%	2.84%	12.00%	15.01%	0.2489%
GENERAL GROWTH PROPERTIES	GGP	-	N/A	2.57%	N/A	N/A	N/A
GILEAD SCIENCES INC	GILD	115,591.00	0.64%	2.19%	10.00%	12.30%	0.0792%
GENERAL MILLS INC	GIS	42,933.79	0.24%	2.67%	7.00%	9.76%	0.0234%
CORNING INC	GLW	22,972.75	0.13%	2.53%	6.00%	8.61%	0.0110%
GENERAL MOTORS CO	GM	47,164.84	0.26%	4.96%	11.00%	16.23%	0.0427%
ALPHABET INC-CL A	GOOGL	N/A	N/A	0.00%	N/A	N/A	N/A
GENUINE PARTS CO	GPC	15,614.66	0.09%	2.52%	7.00%	9.61%	0.0084%
GLOBAL PAYMENTS INC	GPN	9,782.32	0.05%	0.05%	14.00%	14.05%	0.0077%
GAP INC/THE	GPS	9,265.44	0.05%	4.00%	1.50%	5.53%	0.0029%
GARMIN LTD	GRMN	8,383.14	0.05%	4.65%	-1.00%	3.63%	0.0017%
GOLDMAN SACHS GROUP INC	GS	65,942.98	0.37%	1.65%	7.00%	8.71%	0.0320%
GOODYEAR TIRE & RUBBER CO	GT	7,070.28	0.04%	1.17%	8.50%	9.72%	0.0038%
WW GRAINGER INC	GWW	14,139.01	0.08%	2.12%	6.00%	8.18%	0.0064%
HALLIBURTON CO	HAL	38,790.18	0.22%	1.59%	8.00%	9.65%	0.0209%
HARMAN INTERNATIONAL	HAR	5,486.36	0.03%	1.80%	17.00%	18.95%	0.0058%
HASBRO INC	HAS	10,680.95	0.06%	2.39%	11.00%	13.52%	0.0080%
HUNTINGTON BANCSHARES INC	HBAN	7,233.94	0.04%	3.52%	9.00%	12.68%	0.0051%
HANESBRANDS INC	HBI	10,087.15	0.06%	1.65%	11.50%	13.24%	0.0074%
HCA HOLDINGS INC	HCA	31,314.86	0.17%	0.00%	11.00%	11.00%	0.0192%
WELLTOWER INC	HCN	-	N/A	4.60%	N/A	N/A	N/A
HCP INC	HCP	-	N/A	6.20%	N/A	N/A	N/A
HOME DEPOT INC	HD	166,282.20	0.93%	2.07%	12.50%	14.70%	0.1362%
HESS CORP	HES	18,376.04	0.10%	1.72%	-1.00%	0.71%	0.0007%
HARTFORD FINANCIAL SVCS GRP	HIG	17,181.04	0.10%	1.93%	11.50%	13.54%	0.0130%
HARLEY-DAVIDSON INC	HOG	8,857.11	0.05%	2.86%	9.00%	11.99%	0.0059%

HOLOGIC INC	HOLX	10,015.41	0.06%	0.00%	21.00%	21.00%	0.0117%
HONEYWELL INTERNATIONAL INC	HON	90,729.80	0.51%	2.00%	9.00%	11.09%	0.0561%
STARWOOD HOTELS & RESORTS	HOT	13,042.56	0.07%	1.95%	5.50%	7.50%	0.0055%
HELMERICH & PAYNE	HP	7,424.44	0.04%	4.08%	-6.00%	-2.04%	-0.0008%
HEWLETT PACKARD ENTERPRIS	HPE	33,618.00	N/A	1.13%	N/A	N/A	N/A
HP INC	HPQ	23,628.91	N/A	3.62%	N/A	N/A	N/A
H&R BLOCK INC	HRB	5,307.18	0.03%	3.72%	8.00%	11.87%	0.0035%
HORMEL FOODS CORP	HRL	19,378.41	0.11%	1.70%	14.00%	15.82%	0.0171%
HARRIS CORP	HRS	10,621.96	0.06%	2.44%	7.50%	10.03%	0.0059%
HENRY SCHEIN INC	HSIC	14,861.88	0.08%	0.00%	9.00%	9.00%	0.0075%
HOST HOTELS & RESORTS INC	HST	-	N/A	4.92%	N/A	N/A	N/A
HERSHEY CO/THE	HSY	23,196.60	0.13%	2.15%	5.50%	7.71%	0.0100%
HUMANA INC	HUM	24,039.51	0.13%	0.72%	9.50%	10.25%	0.0137%
INTL BUSINESS MACHINES CORP	IBM	151,693.20	0.85%	3.58%	0.50%	4.09%	0.0346%
INTERCONTINENTAL EXCHANGE INC	ICE	30,890.02	0.17%	1.31%	13.50%	14.90%	0.0256%
INTL FLAVORS & FRAGRANCES	IFF	10,549.84	0.06%	1.69%	4.50%	6.23%	0.0037%
ILLUMINA INC	ILMN	21,470.59	0.12%	0.00%	22.50%	22.50%	0.0269%
INTEL CORP	INTC	165,107.20	0.92%	2.97%	9.50%	12.61%	0.1160%
INTUIT INC	INTU	29,720.50	0.17%	1.04%	13.00%	14.11%	0.0234%
INTERNATIONAL PAPER CO	IP	18,189.85	0.10%	3.98%	15.00%	19.28%	0.0195%
INTERPUBLIC GROUP OF COS INC	IPG	9,722.11	0.05%	2.61%	13.00%	15.78%	0.0085%
INGERSOLL-RAND PLC	IR	17,372.90	0.10%	1.90%	10.00%	12.00%	0.0116%
IRON MOUNTAIN INC	IRM	8,585.90	0.05%	4.79%	13.00%	18.10%	0.0087%
INTUITIVE SURGICAL INC	ISRG	25,635.20	0.14%	0.00%	11.50%	11.50%	0.0164%
ILLINOIS TOOL WORKS	ITW	39,742.73	0.22%	1.99%	10.00%	12.09%	0.0268%
INVESCO LTD	IVZ	13,083.87	0.07%	4.20%	7.00%	11.35%	0.0083%
HUNT (JB) TRANSPRT SVCS INC	JBHT	9,636.42	0.05%	1.03%	11.00%	12.09%	0.0065%
JOHNSON CONTROLS INC	JCI	28,657.95	0.16%	2.62%	9.50%	12.24%	0.0196%
JACOBS ENGINEERING GROUP INC	JEC	6,448.09	0.04%	0.00%	4.00%	4.00%	0.0014%
JOHNSON & JOHNSON	JNJ	338,459.70	1.89%	2.64%	8.50%	11.25%	0.2122%
JUNIPER NETWORKS INC	JNPR	8,904.22	0.05%	1.87%	10.00%	11.96%	0.0059%
JPMORGAN CHASE & CO	JPM	230,954.60	1.29%	3.04%	6.50%	9.64%	0.1240%
NORDSTROM INC	JWN	7,126.74	0.04%	3.65%	4.00%	7.72%	0.0031%
KELLOGG CO	K	29,088.50	0.16%	2.43%	5.00%	7.49%	0.0121%
KEYCORP	KEY	9,736.87	0.05%	2.94%	7.50%	10.55%	0.0057%
KRAFT HEINZ CO/THE	KHC	108,068.30	N/A	2.67%	N/A	N/A	N/A
KIMCO REALTY CORP	KIM	-	N/A	3.42%	N/A	N/A	N/A
KLA-TENCOR CORP	KLAC	11,763.74	0.07%	2.75%	12.50%	15.42%	0.0101%
KIMBERLY-CLARK CORP	KMB	48,876.57	0.27%	2.71%	10.00%	12.85%	0.0350%
KINDER MORGAN INC	KMI	45,052.78	0.25%	2.47%	13.00%	15.63%	0.0392%
CARMAX INC	KMX	10,510.23	0.06%	0.00%	12.50%	12.50%	0.0073%
COCA-COLA CO/THE	KO	198,145.70	1.10%	3.15%	4.00%	7.21%	0.0796%
MICHAEL KORS HOLDINGS LTD	KORS	9,125.53	0.05%	0.00%	9.00%	9.00%	0.0046%
KROGER CO	KR	35,268.68	0.20%	1.28%	10.50%	11.85%	0.0233%
KOHL'S CORP	KSS	7,072.68	0.04%	5.30%	8.00%	13.51%	0.0053%
KANSAS CITY SOUTHERN	KSU	9,990.74	0.06%	1.43%	9.00%	10.49%	0.0058%
LOEWS CORP	L	13,847.22	0.08%	0.61%	12.50%	13.15%	0.0101%
L BRANDS INC	LB	20,194.56	0.11%	3.42%	8.00%	11.56%	0.0130%
LEGGETT & PLATT INC	LEG	7,056.15	0.04%	2.59%	11.00%	13.73%	0.0054%
LENNAR CORP-A	LEN	10,675.09	0.06%	0.33%	12.50%	12.85%	0.0076%
LABORATORY CRP OF AMER HLDGS	LH	13,875.39	0.08%	0.00%	9.50%	9.50%	0.0073%
LKQ CORP	LKQ	10,164.27	0.06%	0.00%	15.00%	15.00%	0.0085%
L-3 COMMUNICATIONS HOLDINGS	LLL	11,545.46	0.06%	1.88%	6.50%	8.44%	0.0054%
LINEAR TECHNOLOGY CORP	LLTC	11,531.35	0.06%	2.66%	5.50%	8.23%	0.0053%
ELI LILLY & CO	LLY	87,600.51	0.49%	2.57%	9.50%	12.19%	0.0595%
LEGG MASON INC	LM	3,389.32	0.02%	2.80%	10.50%	13.45%	0.0025%
LOCKHEED MARTIN CORP	LMT	77,909.52	0.43%	2.70%	8.00%	10.81%	0.0469%
LINCOLN NATIONAL CORP	LNC	9,789.65	0.05%	2.64%	7.00%	9.73%	0.0053%
ALLIANT ENERGY CORP	LNT	9,019.13	0.05%	2.97%	6.50%	9.57%	0.0048%
LOWE'S COS INC	LOW	72,995.09	0.41%	1.72%	14.00%	15.84%	0.0644%
LAM RESEARCH CORP	LRCX	14,118.85	0.08%	1.35%	16.00%	17.46%	0.0137%
LEUCADIA NATIONAL CORP	LUK	N/A	N/A	0.00%	N/A	N/A	N/A
SOUTHWEST AIRLINES CO	LUV	28,352.33	0.16%	0.94%	17.50%	18.52%	0.0293%
LEVEL 3 COMMUNICATIONS INC	LVLT	20,099.38	0.11%	0.00%	38.00%	38.00%	0.0426%
LYONDELLBASELL INDU-CL A	LYB	32,865.41	0.18%	4.43%	6.50%	11.07%	0.0203%
MACY'S INC	M	10,818.50	0.06%	4.30%	3.00%	7.36%	0.0044%
MASTERCARD INC-CLASS A	MA	99,554.68	0.55%	0.84%	11.00%	11.89%	0.0659%
MACERICH CO/THE	MAC	-	N/A	3.16%	N/A	N/A	N/A
MARRIOTT INTERNATIONAL -CL A	MAR	17,826.75	0.10%	1.71%	12.50%	14.32%	0.0142%
MASCO CORP	MAS	11,093.63	0.06%	1.13%	14.50%	15.71%	0.0097%
MATTEL INC	MAT	11,314.89	0.06%	4.57%	6.50%	11.22%	0.0071%
MCDONALD'S CORP	MCD	107,811.40	0.60%	2.93%	6.00%	9.02%	0.0542%
MICROCHIP TECHNOLOGY INC	MCHP	10,836.32	0.06%	2.70%	8.00%	10.81%	0.0065%
MCKESSON CORP	MCK	45,125.36	0.25%	0.57%	12.00%	12.60%	0.0317%
MOODY'S CORP	MCO	19,766.94	0.11%	1.46%	7.50%	9.01%	0.0099%
MONDELEZ INTERNATIONAL INC-A	MDLZ	70,889.30	0.39%	1.67%	11.50%	13.27%	0.0524%
MEDTRONIC PLC	MDT	124,342.60	0.69%	1.94%	7.00%	9.01%	0.0624%
METLIFE INC	MET	44,468.38	0.25%	4.03%	6.50%	10.66%	0.0264%
MOHAWK INDUSTRIES INC	MHK	14,568.97	0.08%	0.00%	10.50%	10.50%	0.0085%

MEAD JOHNSON NUTRITION CO	MJN	16,980.36	0.09%	1.81%	6.50%	8.37%	0.0079%
MCCORMICK & CO-NON VTG SHRS	MKC	13,331.28	0.07%	1.63%	7.50%	9.19%	0.0068%
MARTIN MARIETTA MATERIALS	MLM	12,502.23	0.07%	0.81%	24.50%	25.41%	0.0177%
MARSH & MCLENNAN COS	MMC	34,967.98	0.19%	2.03%	9.00%	11.12%	0.0217%
3M CO	MMM	108,693.50	0.61%	2.48%	8.50%	11.09%	0.0671%
MALLINCKRODT PLC	MNK	6,793.90	N/A	0.00%	N/A	N/A	N/A
MONSTER BEVERAGE CORP	MNST	32,847.97	0.18%	0.00%	14.50%	14.50%	0.0265%
ALTRIA GROUP INC	MO	135,169.50	0.75%	3.30%	9.50%	12.96%	0.0976%
MONSANTO CO	MON	44,167.21	0.25%	2.14%	6.00%	8.20%	0.0202%
MOSAIC CO/THE	MOS	9,587.96	0.05%	4.49%	5.00%	9.60%	0.0051%
MARATHON PETROLEUM CORP	MPC	19,599.40	0.11%	3.52%	6.50%	10.13%	0.0111%
MERCK & CO. INC.	MRK	164,926.90	0.92%	3.09%	6.00%	9.18%	0.0844%
MARATHON OIL CORP	MRO	12,960.54	0.07%	1.31%	9.00%	10.37%	0.0075%
MORGAN STANLEY	MS	52,644.07	0.29%	2.21%	14.50%	16.87%	0.0495%
MICROSOFT CORP	MSFT	421,123.70	2.35%	2.69%	7.00%	9.78%	0.2296%
MOTOROLA SOLUTIONS INC	MSI	11,778.52	0.07%	2.56%	9.00%	11.68%	0.0077%
M & T BANK CORP	MTB	18,770.15	0.10%	2.37%	5.00%	7.43%	0.0078%
MICRON TECHNOLOGY INC	MU	13,821.60	0.08%	0.00%	-1.00%	-1.00%	-0.0008%
MURPHY OIL CORP	MUR	5,493.02	N/A	4.39%	N/A	N/A	N/A
MYLAN NV	MYL	22,258.61	0.12%	0.00%	20.50%	20.50%	0.0254%
NAVIENT CORP	NAVI	4,494.60	N/A	4.70%	N/A	N/A	N/A
NOBLE ENERGY INC	NBL	15,830.48	N/A	1.09%	N/A	N/A	N/A
NASDAQ INC	NDAQ	11,049.67	0.06%	1.91%	10.00%	12.01%	0.0074%
NEXTERA ENERGY INC	NEE	59,086.38	0.33%	2.80%	6.00%	8.88%	0.0292%
NEWMONT MINING CORP	NEM	21,688.11	0.12%	0.25%	6.00%	6.26%	0.0076%
NETFLIX INC	NFLX	41,299.91	0.23%	0.00%	35.00%	35.00%	0.0805%
NEWFIELD EXPLORATION CO	NFX	8,842.90	0.05%	0.00%	11.50%	11.50%	0.0057%
NISOURCE INC	NI	8,374.64	0.05%	2.53%	1.50%	4.05%	0.0019%
NIKE INC -CL B	NKE	97,713.15	0.54%	1.10%	15.00%	16.18%	0.0881%
NIELSEN HOLDINGS PLC	NLSN	19,416.94	0.11%	2.31%	9.00%	11.41%	0.0123%
NORTHROP GRUMMAN CORP	NOC	40,104.25	0.22%	1.62%	7.50%	9.18%	0.0205%
NATIONAL OILWELL VARCO INC	NOV	12,586.46	0.07%	0.60%	-9.00%	-8.43%	-0.0059%
NRG ENERGY INC	NRG	4,997.56	N/A	0.76%	N/A	N/A	N/A
NORFOLK SOUTHERN CORP	NSC	26,844.14	0.15%	2.60%	6.50%	9.18%	0.0137%
NETAPP INC	NTAP	7,423.41	N/A	2.98%	N/A	N/A	N/A
NORTHERN TRUST CORP	NTRS	15,029.16	0.08%	2.19%	7.50%	9.77%	0.0082%
NUCOR CORP	NUE	17,937.55	0.10%	2.66%	24.50%	27.49%	0.0275%
NVIDIA CORP	NVDA	28,184.52	0.16%	0.87%	11.50%	12.42%	0.0195%
NEWELL BRANDS INC	NWL	13,133.75	0.07%	1.55%	14.00%	15.66%	0.0115%
NEWS CORP - CLASS A	NWSA	7,109.78	0.04%	1.63%	27.50%	29.35%	0.0116%
REALTY INCOME CORP	O	-	N/A	3.39%	N/A	N/A	N/A
OWENS-ILLINOIS INC	OI	2,904.83	0.02%	0.00%	6.00%	6.00%	0.0010%
ONEOK INC	OKE	9,946.09	0.06%	5.30%	12.50%	18.13%	0.0100%
OMNICOM GROUP	OMC	20,199.24	0.11%	2.66%	9.00%	11.78%	0.0133%
ORACLE CORP	ORCL	171,271.30	0.95%	1.45%	4.50%	5.98%	0.0571%
O'REILLY AUTOMOTIVE INC	ORLY	26,717.93	0.15%	0.00%	11.00%	11.00%	0.0164%
OCCIDENTAL PETROLEUM CORP	OXY	58,685.83	0.33%	3.98%	4.00%	8.06%	0.0264%
PAYCHEX INC	PAYX	22,006.99	0.12%	3.01%	9.00%	12.15%	0.0149%
PEOPLE'S UNITED FINANCIAL	PBCT	4,725.81	0.03%	4.47%	10.50%	15.20%	0.0040%
PITNEY BOWES INC	PBI	3,575.68	0.02%	4.03%	4.00%	8.11%	0.0016%
PACCAR INC	PCAR	18,886.56	0.11%	4.08%	7.00%	11.22%	0.0118%
P G & E CORP	PCG	31,996.39	0.18%	3.04%	12.00%	15.22%	0.0271%
PRICELINE GROUP INC/THE	PCLN	66,447.91	0.37%	0.00%	15.50%	15.50%	0.0574%
PATTERSON COS INC	PDCO	4,891.03	0.03%	2.01%	9.50%	11.61%	0.0032%
PUBLIC SERVICE ENTERPRISE GP	PEG	23,214.85	0.13%	3.61%	3.00%	6.66%	0.0086%
PEPSICO INC	PEP	158,380.30	0.88%	2.75%	7.00%	9.85%	0.0869%
PFIZER INC	PFE	220,214.70	1.23%	3.31%	12.00%	15.51%	0.1903%
PRINCIPAL FINANCIAL GROUP	PFG	12,530.76	0.07%	3.62%	5.00%	8.71%	0.0061%
PROCTER & GAMBLE CO/THE	PG	228,626.50	1.27%	3.12%	6.50%	9.72%	0.1238%
PROGRESSIVE CORP	PGR	19,396.41	0.11%	2.68%	8.50%	11.29%	0.0122%
PARKER HANNIFIN CORP	PH	15,229.73	0.08%	2.23%	5.50%	7.79%	0.0066%
PULTEGROUP INC	PHM	7,465.67	0.04%	1.81%	11.00%	12.91%	0.0054%
PERKINELMER INC	PKI	6,068.87	0.03%	0.50%	6.50%	7.02%	0.0024%
PROLOGIS INC	PLD	-	N/A	3.32%	N/A	N/A	N/A
PHILIP MORRIS INTERNATIONAL	PM	160,151.90	0.89%	3.95%	5.00%	9.05%	0.0807%
PNC FINANCIAL SERVICES GROUP	PNC	40,967.90	0.23%	2.68%	4.00%	6.73%	0.0154%
PENTAIR PLC	PNR	11,427.47	0.06%	2.15%	13.00%	15.29%	0.0097%
PINNACLE WEST CAPITAL	PNW	8,892.31	0.05%	3.20%	4.00%	7.26%	0.0036%
PPG INDUSTRIES INC	PPG	29,125.92	0.16%	1.46%	9.50%	11.03%	0.0179%
PPL CORP	PPL	25,052.59	0.14%	4.13%	4.00%	8.21%	0.0115%
PERRIGO CO PLC	PRGO	13,979.74	0.08%	0.63%	11.50%	12.17%	0.0095%
PRUDENTIAL FINANCIAL INC	PRU	32,393.97	0.18%	3.83%	2.00%	5.87%	0.0106%
PUBLIC STORAGE	PSA	-	N/A	2.88%	N/A	N/A	N/A
PHILLIPS 66	PSX	40,075.55	0.22%	3.37%	2.50%	5.91%	0.0132%
PVH CORP	PVH	7,983.50	0.04%	0.15%	5.50%	5.65%	0.0025%
QUANTA SERVICES INC	PWR	3,905.13	0.02%	0.00%	8.50%	8.50%	0.0018%
PRAXAIR INC	PX	33,532.90	0.19%	2.64%	6.50%	9.23%	0.0172%
PIONEER NATURAL RESOURCES CO	PXD	25,213.95	0.14%	0.05%	18.50%	18.55%	0.0261%
PAYPAL HOLDINGS INC	PYPL	47,450.24	N/A	0.00%	N/A	N/A	N/A

QUALCOMM INC	QCOM	80,435.61	0.45%	3.87%	4.50%	8.46%	0.0379%
QORVO INC	QRVO	7,766.68	N/A	0.00%	N/A	N/A	N/A
RYDER SYSTEM INC	R	3,630.86	0.02%	2.43%	9.00%	11.54%	0.0023%
REYNOLDS AMERICAN INC	RAI	74,778.39	0.42%	3.21%	14.00%	17.43%	0.0726%
ROYAL CARIBBEAN CRUISES LTD	RCL	15,666.10	0.09%	2.07%	16.50%	18.74%	0.0164%
REGENERON PHARMACEUTICALS	REGN	37,572.66	0.21%	0.00%	23.00%	23.00%	0.0481%
REGIONS FINANCIAL CORP	RF	11,294.84	0.06%	3.05%	7.50%	10.66%	0.0067%
ROBERT HALF INTL INC	RHI	5,113.52	0.03%	2.31%	9.50%	11.92%	0.0034%
RED HAT INC	RHT	13,339.02	0.07%	0.00%	16.50%	16.50%	0.0123%
TRANSOCEAN LTD	RIG	4,548.92	0.03%	0.00%	-19.00%	-19.00%	-0.0048%
RALPH LAUREN CORP	RL	8,168.14	0.05%	2.13%	4.50%	6.68%	0.0030%
ROCKWELL AUTOMATION INC	ROK	15,480.57	0.09%	2.44%	3.00%	5.48%	0.0047%
ROPER TECHNOLOGIES INC	ROP	17,211.26	0.10%	0.71%	7.00%	7.73%	0.0074%
ROSS STORES INC	ROST	23,187.56	0.13%	0.97%	9.00%	10.01%	0.0129%
RANGE RESOURCES CORP	RRC	7,481.94	0.04%	0.18%	12.00%	12.19%	0.0051%
REPUBLIC SERVICES INC	RSG	18,075.91	0.10%	2.40%	8.50%	11.00%	0.0111%
RAYTHEON COMPANY	RTN	41,247.36	0.23%	2.11%	9.00%	11.20%	0.0258%
STARBUCKS CORP	SBUX	82,714.97	0.46%	1.58%	16.50%	18.21%	0.0839%
SCANA CORP	SCG	10,611.59	0.06%	3.14%	4.50%	7.71%	0.0046%
SCHWAB (CHARLES) CORP	SCHW	34,926.21	0.19%	1.06%	12.00%	13.12%	0.0255%
SPECTRA ENERGY CORP	SE	25,150.68	0.14%	4.41%	11.50%	16.16%	0.0227%
SEALED AIR CORP	SEE	9,536.49	0.05%	1.32%	16.00%	17.43%	0.0093%
SHERWIN-WILLIAMS CO/THE	SHW	28,385.79	0.16%	1.15%	11.00%	12.21%	0.0193%
SIGNET JEWELERS LTD	SIG	6,959.57	0.04%	1.17%	15.00%	16.26%	0.0063%
JM SMUCKER CO/THE	SJM	17,757.60	0.10%	1.81%	8.00%	9.88%	0.0098%
SCHLUMBERGER LTD	SLB	98,784.11	0.55%	2.54%	10.00%	12.67%	0.0697%
SL GREEN REALTY CORP	SLG	-	N/A	2.70%	N/A	N/A	N/A
SNAP-ON INC	SNA	9,441.77	0.05%	1.50%	10.00%	11.58%	0.0061%
SCRIPPS NETWORKS INTER-CL A	SNI	8,521.08	0.05%	1.51%	9.00%	10.58%	0.0050%
SOUTHERN CO/THE	SO	48,805.21	0.27%	4.25%	2.50%	6.80%	0.0185%
SIMON PROPERTY GROUP INC	SPG	-	N/A	2.97%	N/A	N/A	N/A
S&P GLOBAL INC	SPGI	30,115.97	0.17%	1.27%	11.00%	12.34%	0.0207%
STAPLES INC	SPLS	5,855.36	N/A	5.30%	N/A	N/A	N/A
STERICYCLE INC	SRCL	8,898.67	0.05%	0.00%	9.00%	9.00%	0.0045%
SEMPRA ENERGY	SRE	28,420.86	0.16%	2.70%	10.00%	12.84%	0.0203%
SUNTRUST BANKS INC	STI	21,602.63	0.12%	2.39%	7.00%	9.47%	0.0114%
ST JUDE MEDICAL INC	STJ	22,837.66	0.13%	1.59%	5.50%	7.13%	0.0091%
STATE STREET CORP	STT	21,680.81	0.12%	2.63%	5.50%	8.20%	0.0099%
SEAGATE TECHNOLOGY	STX	8,903.06	0.05%	8.45%	-2.00%	6.37%	0.0032%
CONSTELLATION BRANDS INC-A	STZ	32,785.92	0.18%	1.00%	14.00%	15.07%	0.0275%
STANLEY BLACK & DECKER INC	SWK	17,599.72	0.10%	1.88%	9.00%	10.96%	0.0108%
SKYWORKS SOLUTIONS INC	SWKS	12,429.57	0.07%	1.59%	17.50%	19.23%	0.0133%
SOUTHWESTERN ENERGY CO	SWN	5,439.40	0.03%	0.00%	-5.00%	-5.00%	-0.0015%
SYNCHRONY FINANCIAL	SYF	23,447.30	N/A	1.85%	N/A	N/A	N/A
STRYKER CORP	SYK	45,818.74	0.26%	1.24%	18.50%	19.85%	0.0507%
SYMANTEC CORP	SYMC	12,913.20	0.07%	1.42%	-1.00%	0.41%	0.0003%
SYSCO CORP	SY	29,394.45	0.16%	2.44%	11.00%	13.57%	0.0222%
AT&T INC	T	262,193.60	1.46%	4.56%	6.50%	11.21%	0.1637%
MOLSON COORS BREWING CO -B	TAP	21,727.64	0.12%	1.62%	8.00%	9.68%	0.0117%
TERADATA CORP	TDC	3,505.45	0.02%	0.00%	3.50%	3.50%	0.0007%
TRANSDIGM GROUP INC	TDG	14,358.83	0.08%	0.00%	20.50%	20.50%	0.0164%
TE CONNECTIVITY LTD	TEL	21,092.56	0.12%	2.51%	9.00%	11.62%	0.0137%
TEGNA INC	TGNA	5,254.73	0.03%	2.32%	1.00%	3.33%	0.0010%
TARGET CORP	TGT	43,432.54	0.24%	3.28%	11.00%	14.46%	0.0350%
TIFFANY & CO	TIF	7,864.92	0.04%	2.88%	7.50%	10.49%	0.0046%
TJX COMPANIES INC	TJX	51,663.63	0.29%	1.33%	10.00%	11.40%	0.0328%
TORCHMARK CORP	TMK	7,477.49	0.04%	0.91%	7.00%	7.94%	0.0033%
THERMO FISHER SCIENTIFIC INC	TMO	60,915.65	0.34%	0.39%	9.00%	9.41%	0.0319%
TRIPADVISOR INC	TRIP	9,992.05	0.06%	0.00%	16.50%	16.50%	0.0092%
T ROWE PRICE GROUP INC	TROW	18,334.33	0.10%	2.96%	7.50%	10.57%	0.0108%
TRAVELERS COS INC/THE	TRV	34,503.20	0.19%	2.27%	1.50%	3.79%	0.0073%
TRACTOR SUPPLY COMPANY	TSCO	12,441.08	0.07%	1.06%	14.00%	15.13%	0.0105%
TYSON FOODS INC-CL A	TSN	25,607.70	0.14%	0.95%	12.50%	13.51%	0.0193%
TESORO CORP	TSO	8,908.18	0.05%	2.69%	5.50%	8.26%	0.0041%
TOTAL SYSTEM SERVICES INC	TSS	10,019.28	0.06%	0.73%	12.00%	12.77%	0.0071%
TIME WARNER INC	TWX	61,581.45	0.34%	2.06%	11.50%	13.68%	0.0469%
TEXAS INSTRUMENTS INC	TXN	64,964.09	0.36%	2.36%	7.50%	9.95%	0.0360%
TEXTRON INC	TXT	10,310.83	0.06%	0.21%	15.50%	15.73%	0.0090%
TYCO INTERNATIONAL PLC	TYC	18,401.77	0.10%	1.89%	9.50%	11.48%	0.0118%
UNDER ARMOUR INC-CLASS A	UA	18,064.41	0.10%	0.00%	24.50%	24.50%	0.0247%
UNITED CONTINENTAL HOLDINGS	UAL	15,560.53	0.09%	0.00%	7.00%	7.00%	0.0061%
UDR INC	UDR	-	N/A	3.14%	N/A	N/A	N/A
UNIVERSAL HEALTH SERVICES-B	UHS	13,257.45	0.07%	0.29%	11.50%	11.81%	0.0087%
ULTA SALON COSMETICS & FRAGR	ULTA	15,664.39	0.09%	0.00%	18.00%	18.00%	0.0157%
UNITEDHEALTH GROUP INC	UNH	134,971.90	0.75%	1.77%	14.00%	15.89%	0.1195%
UNUM GROUP	UNM	7,581.34	0.04%	2.51%	11.00%	13.65%	0.0058%
UNION PACIFIC CORP	UNP	79,166.00	0.44%	2.34%	7.00%	9.42%	0.0416%
UNITED PARCEL SERVICE-CL B	UPS	97,938.35	0.55%	2.85%	9.50%	12.49%	0.0681%
URBAN OUTFITTERS INC	URBN	3,449.10	0.02%	0.00%	13.50%	13.50%	0.0026%

UNITED RENTALS INC	URI	6,188.46	0.03%	0.00%	12.50%	12.50%	0.0043%	
US BANCORP	USB	70,371.40	0.39%	2.61%	4.50%	7.17%	0.0281%	
UNITED TECHNOLOGIES CORP	UTX	87,946.24	0.49%	2.51%	7.00%	9.60%	0.0470%	
VISA INC-CLASS A SHARES	V	168,010.80	0.94%	0.78%	12.00%	12.83%	0.1201%	
VARIAN MEDICAL SYSTEMS INC	VAR	8,254.56	0.05%	0.00%	7.50%	7.50%	0.0034%	
VF CORP	VFC	26,988.56	0.15%	2.29%	11.00%	13.42%	0.0202%	
VIACOM INC-CLASS B	VIAB	17,749.76	0.10%	3.57%	5.00%	8.66%	0.0086%	
VALERO ENERGY CORP	VLO	23,273.40	0.13%	4.85%	5.50%	10.48%	0.0136%	
VULCAN MATERIALS CO	VMC	16,777.85	0.09%	0.64%	33.50%	34.25%	0.0320%	
VORNADO REALTY TRUST	VNO	19,128.17	0.11%	2.56%	22.50%	25.35%	0.0270%	
VERISK ANALYTICS INC	VRSK	14,229.59	0.08%	0.00%	11.00%	11.00%	0.0087%	
VERISIGN INC	VRSN	9,190.48	0.05%	0.00%	11.50%	11.50%	0.0059%	
VERTEX PHARMACEUTICALS INC	VRTX	21,706.85	N/A	0.00%	N/A	N/A	N/A	
VENTAS INC	VTR	-	N/A	4.10%	N/A	N/A	N/A	
VERIZON COMMUNICATIONS INC	VZ	228,272.10	1.27%	4.04%	3.00%	7.10%	0.0903%	
WATERS CORP	WAT	11,969.54	0.07%	0.00%	9.00%	9.00%	0.0060%	
WALGREENS BOOTS ALLIANCE INC	WBA	88,458.95	0.49%	1.76%	13.00%	14.87%	0.0733%	
WESTERN DIGITAL CORP	WDC	12,118.33	0.07%	3.85%	-0.50%	3.34%	0.0023%	
WEC ENERGY GROUP INC	WEC	20,283.47	0.11%	3.16%	6.00%	9.25%	0.0105%	
WELLS FARGO & CO	WFC	245,013.80	1.37%	3.15%	5.00%	8.23%	0.1123%	
WHOLE FOODS MARKET INC	WFM	10,965.25	0.06%	1.69%	7.00%	8.75%	0.0053%	
WHIRLPOOL CORP	WHR	13,208.04	0.07%	2.30%	10.50%	12.92%	0.0095%	
WILLIS TOWERS WATSON PLC	WLTW	N/A	N/A	0.00%	N/A	N/A	N/A	
WASTE MANAGEMENT INC	WM	30,156.73	0.17%	2.45%	7.50%	10.04%	0.0169%	
WILLIAMS COS INC	WMB	16,672.50	0.09%	11.88%	16.50%	29.36%	0.0273%	
WAL-MART STORES INC	WMT	230,062.50	1.28%	2.72%	2.00%	4.75%	0.0609%	
WESTROCK CO	WRK	9,997.56	N/A	3.79%	N/A	N/A	N/A	
WESTERN UNION CO	WU	9,779.91	0.05%	3.22%	8.00%	11.35%	0.0062%	
WEYERHAEUSER CO	WY	24,266.64	0.14%	3.88%	10.50%	14.58%	0.0197%	
WYNDHAM WORLDWIDE CORP	WYN	8,366.17	0.05%	2.68%	5.50%	8.25%	0.0038%	
WYNN RESORTS LTD	WYNN	9,655.94	0.05%	2.11%	6.50%	8.68%	0.0047%	
CIMAREX ENERGY CO	XEC	11,146.45	0.06%	0.27%	11.00%	11.28%	0.0070%	
XCEL ENERGY INC	XEL	22,324.53	0.12%	3.14%	5.50%	8.73%	0.0109%	
XL GROUP PLC	XL	9,779.64	0.05%	2.41%	9.00%	11.52%	0.0063%	
XILINX INC	XLNX	12,080.58	0.07%	2.77%	6.00%	8.85%	0.0060%	
EXXON MOBIL CORP	XOM	393,467.40	2.19%	3.16%	5.00%	8.24%	0.1806%	
DENTSPLY SIRONA INC	XRAY	14,749.92	0.08%	0.49%	8.00%	8.51%	0.0070%	
XEROX CORP	XRX	9,734.95	0.05%	3.33%	4.50%	7.90%	0.0043%	
XYLEM INC	XYL	8,411.88	0.05%	1.32%	9.50%	10.88%	0.0051%	
YAHOO! INC	YHOO	35,692.09	N/A	0.00%	N/A	N/A	N/A	
YUM! BRANDS INC	YUM	34,896.18	0.19%	2.29%	10.00%	12.40%	0.0241%	
ZIMMER BIOMET HOLDINGS INC	ZBH	25,000.99	0.14%	0.78%	13.00%	13.83%	0.0193%	
ZIONS BANCORPORATION	ZION	5,226.10	0.03%	1.25%	11.00%	12.32%	0.0036%	
ZOETIS INC	ZTS	24,418.75	0.14%	0.77%	0.11	11.81%	0.0161%	
		17,947,948						13.70%

[1] Equals sum of Col. [9]

[2] Source: Bloomberg Professional

[3] Equals [1] - [2]

[4] Source: Value Line

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

[6] Source: Value Line

[7] Source: Value Line

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

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

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1]	[2]
		Bloomberg	Value Line
ALLETE, Inc.	ALE	0.620	0.750
Alliant Energy Corporation	LNT	0.610	0.750
Ameren Corporation	AEE	0.623	0.750
American Electric Power Company, Inc.	AEP	0.573	0.700
Avista Corporation	AVA	0.591	0.750
CMS Energy Corporation	CMS	0.544	0.700
DTE Energy Company	DTE	0.605	0.700
IDACORP, Inc.	IDA	0.696	0.800
NorthWestern Corporation	NWE	0.601	0.700
Otter Tail Corporation	OTTR	0.701	0.800
Pinnacle West Capital Corporation	PNW	0.605	0.750
PNM Resources, Inc.	PNM	0.645	0.800
Portland General Electric Company	POR	0.619	0.800
SCANA Corporation	SCG	0.599	0.700
Xcel Energy Inc.	XEL	0.484	0.650
Mean		0.608	0.740

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]	2.35%	0.608	10.68%	11.35%	8.84%	9.25%
Near-Term Projected 30-Year Treasury [8]	3.00%	0.608	10.68%	11.35%	9.49%	9.89%
Mean					9.17%	9.57%
	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]	2.35%	0.740	10.68%	11.35%	10.26%	10.75%
Near-Term Projected 30-Year Treasury [8]	3.00%	0.740	10.68%	11.35%	10.90%	11.40%
Mean					10.58%	11.07%

Notes:

[2] Source: Direct Exhibit RBH-4

[3] Source: Direct Exhibit RBH-3

[4] Source: Direct Exhibit RBH-3

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

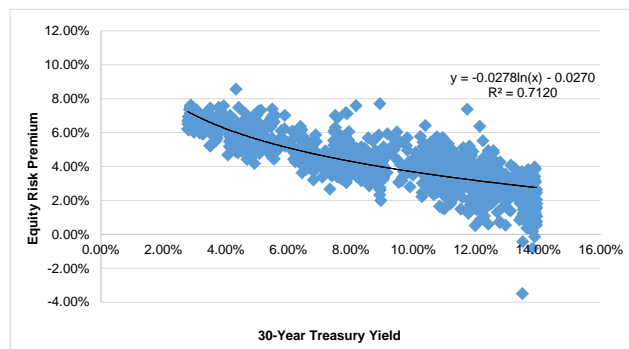
[6] Equals Col. [1] + (Col. [2] x Col. [4])

[7] Source: Bloomberg Professional

[8] Source: Blue Chip Financial Forecasts, Vol. 35, No. 7, July 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
-2.70%	-2.78%			
	Current 30-Year Treasury	2.35%	7.71%	10.06%
	Near-Term Projected 30-Year Treasury	3.00%	7.03%	10.03%
	Long-Term Projected 30-Year Treasury	4.45%	5.94%	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. 7, July 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
1/1/1980	14.50%	9.36%	5.14%
1/7/1980	14.39%	9.39%	5.00%
1/9/1980	15.00%	9.40%	5.60%
1/14/1980	15.17%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980	15.50%	9.47%	6.03%
1/30/1980	13.86%	9.52%	4.34%
1/31/1980	12.61%	9.53%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980	12.80%	9.64%	3.16%
2/14/1980	13.00%	9.65%	3.35%
2/19/1980	13.50%	9.68%	3.82%
2/27/1980	13.75%	9.78%	3.97%
2/29/1980	13.75%	9.81%	3.94%
2/29/1980	14.00%	9.81%	4.19%
2/29/1980	14.77%	9.81%	4.96%
3/7/1980	12.70%	9.90%	2.80%
3/14/1980	13.50%	9.97%	3.53%
3/26/1980	14.16%	10.11%	4.05%
3/27/1980	14.24%	10.12%	4.12%
3/28/1980	14.50%	10.14%	4.36%
4/11/1980	12.75%	10.28%	2.47%
4/14/1980	13.85%	10.29%	3.56%
4/16/1980	15.50%	10.32%	5.18%
4/22/1980	13.90%	10.36%	3.54%
4/22/1980	13.25%	10.36%	2.89%
4/24/1980	16.80%	10.38%	6.42%
4/29/1980	15.50%	10.41%	5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980	15.00%	10.46%	4.54%
5/8/1980	13.75%	10.47%	3.28%
5/9/1980	14.35%	10.47%	3.88%
5/13/1980	13.60%	10.49%	3.11%
5/15/1980	13.25%	10.50%	2.75%
5/19/1980	13.75%	10.52%	3.23%
5/27/1980	14.60%	10.55%	4.05%
5/27/1980	13.62%	10.55%	3.07%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980	13.80%	10.57%	3.23%
6/2/1980	15.63%	10.58%	5.05%
6/9/1980	15.90%	10.61%	5.29%
6/10/1980	13.78%	10.61%	3.17%
6/12/1980	14.25%	10.62%	3.63%
6/19/1980	13.40%	10.63%	2.77%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980	14.75%	10.68%	4.07%
7/10/1980	15.00%	10.69%	4.31%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.72%	3.08%
7/22/1980	14.10%	10.73%	3.37%
7/24/1980	15.00%	10.73%	4.27%
7/25/1980	13.48%	10.74%	2.74%
7/31/1980	14.58%	10.76%	3.82%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980	15.80%	10.88%	4.92%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	13.50%	10.88%	2.62%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.95%	2.80%
9/30/1980	14.20%	10.96%	3.24%
9/30/1980	14.10%	10.96%	3.14%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.99%	4.51%
10/7/1980	12.50%	11.00%	1.50%
10/9/1980	14.50%	11.01%	3.49%
10/9/1980	14.50%	11.01%	3.49%
10/9/1980	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%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	14.00%	11.13%	2.87%

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/5/1980	13.75%	11.13%	2.62%
11/8/1980	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%
12/8/1980	15.10%	11.22%	3.88%
12/8/1980	14.15%	11.22%	2.93%
12/9/1980	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%
1/2/1981	15.25%	11.21%	4.04%
1/7/1981	14.30%	11.21%	3.09%
1/19/1981	15.25%	11.19%	4.06%
1/23/1981	14.40%	11.20%	3.20%
1/23/1981	13.10%	11.20%	1.90%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.20%	3.80%
1/31/1981	13.47%	11.21%	2.26%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.34%	3.91%
3/11/1981	15.40%	11.50%	3.90%
3/12/1981	14.51%	11.51%	3.00%
3/12/1981	16.00%	11.51%	4.49%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.61%	3.69%
4/1/1981	14.53%	11.69%	2.84%
4/3/1981	19.10%	11.72%	7.38%
4/9/1981	15.00%	11.79%	3.21%
4/9/1981	15.30%	11.79%	3.51%
4/9/1981	17.00%	11.79%	5.21%
4/9/1981	16.50%	11.79%	4.71%
4/10/1981	13.75%	11.81%	1.94%
4/13/1981	13.57%	11.83%	1.74%
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4/16/1981	13.50%	11.88%	1.62%
4/17/1981	14.10%	11.88%	2.22%
4/21/1981	16.80%	11.91%	4.89%
4/21/1981	14.00%	11.91%	2.09%
4/24/1981	16.00%	11.96%	4.04%
4/27/1981	13.61%	11.98%	1.63%
4/27/1981	12.50%	11.98%	0.52%
4/29/1981	13.65%	12.01%	1.64%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.06%	4.16%
5/5/1981	14.40%	12.08%	2.32%
5/7/1981	16.25%	12.12%	4.13%
5/7/1981	16.27%	12.12%	4.15%
5/8/1981	13.00%	12.14%	0.86%
5/8/1981	16.00%	12.14%	3.86%
5/12/1981	13.50%	12.17%	1.33%
5/15/1981	15.75%	12.23%	3.52%
5/18/1981	14.88%	12.24%	2.64%
5/20/1981	16.00%	12.27%	3.73%
5/21/1981	14.00%	12.28%	1.72%
5/26/1981	14.90%	12.31%	2.59%
5/27/1981	15.00%	12.32%	2.68%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.38%	2.29%
6/5/1981	13.00%	12.40%	0.60%
6/10/1981	16.75%	12.42%	4.33%
6/17/1981	14.40%	12.46%	1.94%
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.52%	2.23%
6/26/1981	16.00%	12.53%	3.47%
6/30/1981	15.25%	12.55%	2.70%
7/1/1981	15.50%	12.56%	2.94%

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.75%	0.73%
7/31/1981	13.50%	12.79%	0.71%
7/31/1981	16.00%	12.79%	3.21%
7/31/1981	15.00%	12.79%	2.21%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981	16.50%	12.95%	3.55%
8/20/1981	13.50%	12.95%	0.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.06%	1.44%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.34%	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%
11/3/1981	15.17%	13.54%	1.63%
11/5/1981	16.60%	13.56%	3.04%
11/6/1981	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%
12/1/1981	16.50%	13.61%	2.89%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.00%	13.61%	2.39%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.64%	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%
1/4/1982	15.50%	13.68%	1.82%
1/11/1982	14.50%	13.73%	0.77%
1/11/1982	17.00%	13.73%	3.27%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.80%	2.45%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.82%	-0.82%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.83%	2.02%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%

Bond Yield Plus Risk Premium				
[6]	[7]	[8]	[9]	
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium	
3/12/1982	16.25%	13.88%	2.37%	
3/17/1982	17.30%	13.88%	3.42%	
3/22/1982	15.10%	13.89%	1.21%	
3/27/1982	15.40%	13.90%	1.50%	
3/30/1982	15.50%	13.91%	1.59%	
3/31/1982	17.00%	13.91%	3.09%	
4/1/1982	16.50%	13.92%	2.58%	
4/1/1982	14.70%	13.92%	0.78%	
4/2/1982	15.50%	13.92%	1.58%	
4/5/1982	15.50%	13.93%	1.57%	
4/8/1982	16.40%	13.94%	2.46%	
4/13/1982	14.50%	13.94%	0.56%	
4/23/1982	15.75%	13.94%	1.81%	
4/27/1982	15.00%	13.94%	1.06%	
4/28/1982	15.75%	13.94%	1.81%	
4/30/1982	15.50%	13.94%	1.56%	
4/30/1982	14.70%	13.94%	0.76%	
5/3/1982	16.60%	13.94%	2.66%	
5/4/1982	16.00%	13.94%	2.06%	
5/14/1982	15.50%	13.92%	1.58%	
5/18/1982	15.42%	13.92%	1.50%	
5/19/1982	14.69%	13.92%	0.77%	
5/20/1982	15.10%	13.91%	1.19%	
5/20/1982	15.50%	13.91%	1.59%	
5/20/1982	16.30%	13.91%	2.39%	
5/20/1982	15.00%	13.91%	1.09%	
5/21/1982	17.75%	13.91%	3.84%	
5/27/1982	15.00%	13.89%	1.11%	
5/28/1982	15.50%	13.89%	1.61%	
5/28/1982	17.00%	13.89%	3.11%	
6/1/1982	13.75%	13.89%	-0.14%	
6/1/1982	16.60%	13.89%	2.71%	
6/9/1982	17.86%	13.88%	3.98%	
6/14/1982	15.75%	13.88%	1.87%	
6/15/1982	14.85%	13.87%	0.98%	
6/18/1982	15.50%	13.86%	1.64%	
6/21/1982	14.90%	13.86%	1.04%	
6/23/1982	16.00%	13.86%	2.14%	
6/23/1982	16.17%	13.86%	2.31%	
6/24/1982	14.85%	13.86%	0.99%	
6/25/1982	14.70%	13.85%	0.85%	
7/1/1982	16.00%	13.84%	2.16%	
7/2/1982	15.62%	13.83%	1.79%	
7/2/1982	17.00%	13.83%	3.17%	
7/13/1982	14.00%	13.82%	0.18%	
7/13/1982	16.80%	13.82%	2.98%	
7/14/1982	15.76%	13.81%	1.95%	
7/14/1982	16.02%	13.81%	2.21%	
7/19/1982	16.50%	13.79%	2.71%	
7/22/1982	17.00%	13.76%	3.24%	
7/22/1982	14.50%	13.76%	0.74%	
7/27/1982	16.75%	13.74%	3.01%	
7/29/1982	16.50%	13.73%	2.77%	
8/11/1982	17.50%	13.68%	3.82%	
8/18/1982	17.07%	13.62%	3.45%	
8/20/1982	15.73%	13.60%	2.13%	
8/25/1982	16.00%	13.57%	2.43%	
8/26/1982	15.50%	13.56%	1.94%	
8/30/1982	15.00%	13.55%	1.45%	
9/3/1982	16.20%	13.53%	2.67%	
9/8/1982	15.00%	13.52%	1.48%	
9/15/1982	13.08%	13.51%	-0.43%	
9/15/1982	16.25%	13.51%	2.74%	
9/16/1982	16.00%	13.50%	2.50%	
9/17/1982	15.25%	13.50%	1.75%	
9/23/1982	17.17%	13.47%	3.70%	
9/24/1982	14.50%	13.47%	1.03%	
9/27/1982	15.25%	13.46%	1.79%	
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10/15/1982	15.90%	13.32%	2.58%	
10/22/1982	15.75%	13.24%	2.51%	
10/22/1982	17.15%	13.24%	3.91%	
10/29/1982	15.54%	13.16%	2.38%	
11/1/1982	15.50%	13.14%	2.36%	
11/3/1982	17.20%	13.12%	4.08%	
11/4/1982	16.25%	13.10%	3.15%	
11/5/1982	16.20%	13.09%	3.11%	
11/9/1982	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%	
12/1/1982	17.04%	12.78%	4.26%	
12/6/1982	15.00%	12.72%	2.28%	

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/6/1982	16.35%	12.72%	3.63%
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%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	15.50%	12.32%	3.18%
1/12/1983	14.63%	12.32%	2.31%
1/20/1983	17.75%	12.23%	5.52%
1/21/1983	15.00%	12.21%	2.79%
1/24/1983	14.50%	12.20%	2.30%
1/24/1983	15.50%	12.20%	3.30%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.16%	3.98%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.09%	1.91%
2/10/1983	15.00%	12.05%	2.95%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.96%	3.54%
2/23/1983	15.10%	11.95%	3.15%
2/23/1983	16.00%	11.95%	4.05%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.76%	1.24%
3/18/1983	15.25%	11.72%	3.53%
3/23/1983	15.40%	11.68%	3.72%
3/24/1983	15.00%	11.66%	3.34%
3/29/1983	15.50%	11.62%	3.88%
3/30/1983	16.71%	11.60%	5.11%
3/31/1983	15.00%	11.58%	3.42%
4/4/1983	15.20%	11.57%	3.63%
4/8/1983	15.50%	11.49%	4.01%
4/11/1983	14.81%	11.48%	3.33%
4/19/1983	14.50%	11.36%	3.14%
4/20/1983	16.00%	11.35%	4.65%
4/29/1983	16.00%	11.23%	4.77%
5/1/1983	14.50%	11.23%	3.27%
5/9/1983	15.50%	11.14%	4.36%
5/11/1983	16.46%	11.11%	5.35%
5/12/1983	14.14%	11.10%	3.04%
5/18/1983	15.00%	11.04%	3.96%
5/23/1983	14.90%	11.00%	3.90%
5/23/1983	15.50%	11.00%	4.50%
5/25/1983	15.50%	10.97%	4.53%
5/27/1983	15.00%	10.95%	4.05%
5/31/1983	15.50%	10.94%	4.56%
5/31/1983	14.00%	10.94%	3.06%
6/2/1983	14.50%	10.92%	3.58%
6/17/1983	15.03%	10.83%	4.20%
7/1/1983	14.80%	10.77%	4.03%
7/1/1983	14.90%	10.77%	4.13%
7/8/1983	16.25%	10.75%	5.50%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.10%	10.74%	4.36%
7/19/1983	15.00%	10.74%	4.26%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.50%	10.75%	5.75%
8/3/1983	16.34%	10.75%	5.59%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	16.40%	10.80%	5.60%
8/22/1983	15.50%	10.80%	4.70%
8/31/1983	14.75%	10.85%	3.90%
9/7/1983	15.00%	10.87%	4.13%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	16.15%	10.95%	5.20%

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/30/1983	15.25%	10.95%	4.30%
10/4/1983	14.80%	10.96%	3.84%
10/7/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.50%	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%
11/1/1983	16.00%	11.06%	4.94%
11/9/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.16%	3.91%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	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%
1/3/1984	14.75%	11.27%	3.48%
1/10/1984	15.90%	11.30%	4.60%
1/12/1984	15.60%	11.31%	4.29%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984	15.90%	11.33%	4.57%
1/30/1984	16.10%	11.37%	4.73%
1/31/1984	15.25%	11.38%	3.87%
2/1/1984	14.80%	11.39%	3.41%
2/6/1984	14.75%	11.41%	3.34%
2/6/1984	13.75%	11.41%	2.34%
2/9/1984	15.25%	11.43%	3.82%
2/15/1984	15.70%	11.45%	4.25%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984	14.75%	11.48%	3.27%
2/28/1984	14.50%	11.52%	2.98%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.65%	4.35%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
4/2/1984	15.50%	11.72%	3.78%
4/6/1984	14.74%	11.76%	2.98%
4/11/1984	15.72%	11.78%	3.94%
4/17/1984	15.00%	11.81%	3.19%
4/18/1984	16.20%	11.82%	4.38%
4/25/1984	14.64%	11.85%	2.79%
4/30/1984	14.40%	11.88%	2.52%
5/16/1984	14.69%	11.99%	2.70%
5/16/1984	15.00%	11.99%	3.01%
5/22/1984	14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.16%	3.09%
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984	16.00%	12.31%	3.69%
7/12/1984	16.50%	12.33%	4.17%
7/13/1984	16.25%	12.34%	3.91%
7/17/1984	14.14%	12.35%	1.79%
7/18/1984	15.50%	12.36%	3.14%
7/18/1984	15.30%	12.36%	2.94%
7/19/1984	14.30%	12.37%	1.93%
7/24/1984	16.79%	12.40%	4.39%
7/31/1984	16.00%	12.43%	3.57%
8/3/1984	14.25%	12.45%	1.80%
8/17/1984	14.30%	12.49%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984	16.30%	12.51%	3.79%
8/31/1984	15.55%	12.53%	3.02%
9/6/1984	16.00%	12.54%	3.46%
9/10/1984	14.75%	12.55%	2.20%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984	14.50%	12.57%	1.93%

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/28/1984	16.25%	12.57%	3.68%
9/28/1984	15.00%	12.57%	2.43%
10/9/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.59%	3.81%
10/31/1984	16.25%	12.59%	3.66%
11/7/1984	15.60%	12.58%	3.02%
11/9/1984	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%
12/3/1984	15.80%	12.57%	3.23%
12/4/1984	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%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985	15.75%	12.47%	3.28%
1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.35%	2.12%
3/1/1985	13.84%	12.30%	1.54%
3/8/1985	16.85%	12.28%	4.57%
3/14/1985	15.50%	12.25%	3.25%
3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.16%	3.46%
4/3/1985	14.60%	12.13%	2.47%
4/9/1985	15.50%	12.10%	3.40%
4/16/1985	15.70%	12.05%	3.65%
4/22/1985	14.00%	12.01%	1.99%
4/26/1985	15.50%	11.97%	3.53%
4/29/1985	15.00%	11.96%	3.04%
5/2/1985	14.68%	11.93%	2.75%
5/8/1985	15.62%	11.88%	3.74%
5/10/1985	16.50%	11.86%	4.64%
5/29/1985	14.61%	11.73%	2.88%
5/31/1985	16.00%	11.71%	4.29%
6/14/1985	15.50%	11.60%	3.90%
7/9/1985	15.00%	11.44%	3.56%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.32%	3.18%
8/2/1985	14.80%	11.29%	3.51%
8/7/1985	15.00%	11.26%	3.74%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.14%	3.36%
9/9/1985	14.90%	11.11%	3.79%
9/9/1985	14.60%	11.11%	3.49%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.80%	11.04%	4.76%
9/27/1985	15.50%	11.04%	4.46%
10/2/1985	14.75%	11.03%	3.72%
10/2/1985	14.00%	11.03%	2.97%
10/3/1985	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%
11/4/1985	14.50%	10.91%	3.59%
11/7/1985	15.50%	10.89%	4.61%
11/8/1985	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%
1/24/1986	15.40%	10.40%	5.00%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
2/11/1986	12.50%	10.27%	2.23%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.22%	5.78%
2/24/1986	14.50%	10.17%	4.33%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.07%	4.83%
3/11/1986	14.50%	10.01%	4.49%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.85%	4.25%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.82%	4.18%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986	13.40%	9.68%	3.72%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.31%	5.19%
5/16/1986	14.50%	9.31%	5.19%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986	15.10%	9.17%	5.93%
6/2/1986	12.81%	9.16%	3.65%
6/11/1986	14.00%	9.06%	4.94%
6/24/1986	16.63%	8.93%	7.70%
6/26/1986	12.00%	8.90%	3.10%
6/26/1986	14.75%	8.90%	5.85%
6/30/1986	13.00%	8.86%	4.14%
7/10/1986	14.34%	8.74%	5.60%
7/11/1986	12.75%	8.72%	4.03%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.65%	3.75%
7/25/1986	14.25%	8.56%	5.69%
8/6/1986	13.50%	8.43%	5.07%
8/14/1986	13.50%	8.34%	5.16%
9/16/1986	12.75%	8.06%	4.69%
9/19/1986	13.25%	8.02%	5.23%
10/1/1986	14.00%	7.94%	6.06%
10/3/1986	13.40%	7.92%	5.48%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986	13.00%	7.74%	5.26%
12/3/1986	12.90%	7.58%	5.32%
12/4/1986	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%
1/2/1987	13.00%	7.48%	5.52%
1/12/1987	12.40%	7.46%	4.94%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.54%	4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987	13.50%	7.70%	5.80%
6/15/1987	13.20%	7.78%	5.42%
6/29/1987	15.00%	7.84%	7.16%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987	12.90%	7.87%	5.03%
7/15/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%
7/16/1987	13.50%	7.88%	5.62%
7/27/1987	13.00%	7.92%	5.08%
7/27/1987	13.40%	7.92%	5.48%
7/27/1987	13.50%	7.92%	5.58%
7/31/1987	12.98%	7.95%	5.03%
8/26/1987	12.63%	8.06%	4.57%
8/26/1987	12.75%	8.06%	4.69%
8/27/1987	13.25%	8.07%	5.18%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	13.00%	8.31%	4.69%
9/30/1987	12.75%	8.31%	4.44%
10/2/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.44%	4.56%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.69%	3.31%
12/3/1987	14.20%	8.71%	5.49%

Bond Yield Plus Risk Premium				
[6]	[7]	[8]	[9]	
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium	
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%	
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%	
1/20/1988	13.80%	8.94%	4.86%	
1/26/1988	13.90%	8.96%	4.94%	
1/29/1988	13.20%	8.96%	4.24%	
2/4/1988	12.60%	8.96%	3.64%	
3/1/1988	11.56%	8.94%	2.62%	
3/23/1988	12.87%	8.92%	3.95%	
3/24/1988	11.24%	8.92%	2.32%	
3/30/1988	12.72%	8.92%	3.80%	
4/1/1988	12.50%	8.92%	3.58%	
4/7/1988	13.25%	8.93%	4.32%	
4/25/1988	10.96%	8.96%	2.00%	
5/3/1988	12.91%	8.98%	3.93%	
5/11/1988	13.50%	8.99%	4.51%	
5/16/1988	13.00%	8.99%	4.01%	
6/30/1988	12.75%	8.99%	3.76%	
7/1/1988	12.75%	8.99%	3.76%	
7/20/1988	13.40%	8.96%	4.44%	
8/5/1988	12.75%	8.91%	3.84%	
8/23/1988	11.70%	8.93%	2.77%	
8/29/1988	12.75%	8.94%	3.81%	
8/30/1988	13.50%	8.94%	4.56%	
9/8/1988	12.60%	8.95%	3.65%	
10/13/1988	13.10%	8.93%	4.17%	
12/19/1988	13.00%	9.02%	3.98%	
12/20/1988	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%	
1/27/1989	13.00%	9.06%	3.94%	
1/31/1989	13.00%	9.06%	3.94%	
2/17/1989	13.00%	9.05%	3.95%	
2/20/1989	12.40%	9.05%	3.35%	
3/1/1989	12.76%	9.05%	3.71%	
3/8/1989	13.00%	9.05%	3.95%	
3/30/1989	14.00%	9.05%	4.95%	
4/5/1989	14.20%	9.05%	5.15%	
4/18/1989	13.00%	9.05%	3.95%	
5/5/1989	12.40%	9.05%	3.35%	
6/2/1989	13.20%	9.00%	4.20%	
6/8/1989	13.50%	8.98%	4.52%	
6/27/1989	13.25%	8.91%	4.34%	
6/30/1989	13.00%	8.90%	4.10%	
8/14/1989	12.50%	8.77%	3.73%	
9/28/1989	12.25%	8.63%	3.62%	
10/24/1989	12.50%	8.54%	3.96%	
11/9/1989	13.00%	8.48%	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%	
1/10/1990	12.80%	8.24%	4.56%	
1/11/1990	12.90%	8.23%	4.67%	
1/17/1990	12.80%	8.22%	4.58%	
1/26/1990	12.00%	8.19%	3.81%	
2/9/1990	12.10%	8.17%	3.93%	
2/24/1990	12.86%	8.15%	4.71%	
3/30/1990	12.90%	8.16%	4.74%	
4/4/1990	15.76%	8.17%	7.59%	
4/12/1990	12.52%	8.18%	4.34%	
4/19/1990	12.75%	8.20%	4.55%	
5/21/1990	12.10%	8.28%	3.82%	
5/29/1990	12.40%	8.30%	4.10%	
5/31/1990	12.00%	8.30%	3.70%	
6/4/1990	12.90%	8.30%	4.60%	
6/6/1990	12.25%	8.31%	3.94%	
6/15/1990	13.20%	8.32%	4.88%	
6/20/1990	12.92%	8.32%	4.60%	
6/27/1990	12.90%	8.33%	4.57%	
6/29/1990	12.50%	8.34%	4.16%	
7/6/1990	12.35%	8.34%	4.01%	

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/6/1990	12.10%	8.34%	3.76%
8/10/1990	12.55%	8.41%	4.14%
8/16/1990	13.21%	8.43%	4.78%
8/22/1990	13.10%	8.45%	4.65%
8/24/1990	13.00%	8.46%	4.54%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%
10/5/1990	12.84%	8.63%	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%
1/2/1991	13.10%	8.66%	4.44%
1/4/1991	12.50%	8.65%	3.85%
1/15/1991	12.75%	8.65%	4.10%
1/25/1991	11.70%	8.63%	3.07%
2/4/1991	12.50%	8.60%	3.90%
2/7/1991	12.50%	8.59%	3.91%
2/12/1991	13.00%	8.57%	4.43%
2/14/1991	12.72%	8.56%	4.16%
2/22/1991	12.80%	8.55%	4.25%
3/6/1991	13.10%	8.53%	4.57%
3/8/1991	13.00%	8.52%	4.48%
3/8/1991	12.30%	8.52%	3.78%
4/22/1991	13.00%	8.49%	4.51%
5/7/1991	13.50%	8.47%	5.03%
5/13/1991	13.25%	8.47%	4.78%
5/30/1991	12.75%	8.43%	4.32%
6/12/1991	12.00%	8.41%	3.59%
6/25/1991	11.70%	8.38%	3.32%
6/28/1991	12.50%	8.38%	4.12%
7/1/1991	12.00%	8.37%	3.63%
7/3/1991	12.50%	8.36%	4.14%
7/19/1991	12.10%	8.34%	3.76%
8/1/1991	12.90%	8.32%	4.58%
8/16/1991	13.20%	8.29%	4.91%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.25%	8.23%	4.02%
10/17/1991	13.00%	8.20%	4.80%
10/23/1991	12.50%	8.20%	4.30%
10/23/1991	12.55%	8.20%	4.35%
10/31/1991	11.80%	8.19%	3.61%
11/1/1991	12.00%	8.19%	3.81%
11/5/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	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%
1/9/1992	12.80%	8.09%	4.71%
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.06%	4.94%
1/27/1992	12.65%	8.05%	4.60%
1/31/1992	12.00%	8.04%	3.96%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.01%	4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.93%	3.52%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.92%	3.58%
5/5/1992	11.50%	7.89%	3.61%
5/12/1992	12.46%	7.88%	4.58%
5/12/1992	11.87%	7.88%	3.99%
6/1/1992	12.30%	7.86%	4.44%
6/12/1992	10.90%	7.85%	3.05%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	13.50%	7.84%	5.66%

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/13/1992	11.90%	7.84%	4.06%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992	11.40%	7.71%	3.69%
9/30/1992	11.75%	7.71%	4.04%
10/2/1992	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%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992	11.85%	7.68%	4.17%
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992	12.40%	7.66%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.40%	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%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993	11.90%	7.49%	4.41%
2/26/1993	11.80%	7.48%	4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.24%	4.51%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.22%	4.28%
5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.10%	4.28%
7/23/1993	10.46%	7.09%	3.37%
8/24/1993	11.50%	6.95%	4.55%
9/21/1993	10.50%	6.80%	3.70%
9/29/1993	11.47%	6.76%	4.71%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	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%
1/4/1994	10.07%	6.44%	3.63%
1/13/1994	11.00%	6.42%	4.58%
1/21/1994	11.00%	6.40%	4.60%
1/28/1994	11.35%	6.39%	4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.34%	4.66%
4/25/1994	11.00%	6.40%	4.60%
5/10/1994	11.75%	6.44%	5.31%
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.40%	3.45%
11/9/1994	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%
12/8/1994	11.70%	7.55%	4.15%
12/8/1994	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%
1/9/1995	12.28%	7.64%	4.64%
1/31/1995	11.00%	7.69%	3.31%
2/10/1995	12.60%	7.70%	4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.72%	3.78%

Bond Yield Plus Risk Premium				
[6]	[7]	[8]	[9]	
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium	
3/20/1995	12.00%	7.72%	4.28%	
3/23/1995	12.81%	7.72%	5.09%	
3/29/1995	11.60%	7.72%	3.88%	
4/6/1995	11.10%	7.72%	3.38%	
4/7/1995	11.00%	7.71%	3.29%	
4/19/1995	11.00%	7.70%	3.30%	
5/12/1995	11.63%	7.68%	3.95%	
5/25/1995	11.20%	7.65%	3.55%	
6/9/1995	11.25%	7.60%	3.65%	
6/21/1995	12.25%	7.56%	4.69%	
6/30/1995	11.10%	7.51%	3.59%	
9/11/1995	11.30%	7.20%	4.10%	
9/27/1995	11.50%	7.12%	4.38%	
9/27/1995	11.75%	7.12%	4.63%	
9/27/1995	11.30%	7.12%	4.18%	
9/29/1995	11.00%	7.11%	3.89%	
11/9/1995	12.36%	6.89%	5.47%	
11/9/1995	11.38%	6.89%	4.49%	
11/17/1995	11.00%	6.85%	4.15%	
12/4/1995	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%	
2/5/1996	12.25%	6.48%	5.77%	
3/29/1996	10.67%	6.42%	4.25%	
4/8/1996	11.00%	6.42%	4.58%	
4/11/1996	12.59%	6.43%	6.16%	
4/11/1996	12.59%	6.43%	6.16%	
4/24/1996	11.25%	6.43%	4.82%	
4/30/1996	11.00%	6.43%	4.57%	
5/13/1996	11.00%	6.44%	4.56%	
5/23/1996	11.25%	6.43%	4.82%	
6/25/1996	11.25%	6.48%	4.77%	
6/27/1996	11.20%	6.48%	4.72%	
8/12/1996	10.40%	6.57%	3.83%	
9/27/1996	11.00%	6.71%	4.29%	
10/16/1996	12.25%	6.76%	5.49%	
11/5/1996	11.00%	6.81%	4.19%	
11/26/1996	11.30%	6.83%	4.47%	
12/18/1996	11.75%	6.84%	4.91%	
12/31/1996	11.50%	6.83%	4.67%	
1/3/1997	10.70%	6.83%	3.87%	
2/13/1997	11.80%	6.82%	4.98%	
2/20/1997	11.80%	6.82%	4.98%	
3/31/1997	10.02%	6.80%	3.22%	
4/2/1997	11.65%	6.80%	4.85%	
4/28/1997	11.50%	6.81%	4.69%	
4/29/1997	11.70%	6.81%	4.89%	
7/17/1997	12.00%	6.77%	5.23%	
12/12/1997	11.00%	6.60%	4.40%	
12/23/1997	11.12%	6.57%	4.55%	
2/2/1998	12.75%	6.39%	6.36%	
3/2/1998	11.25%	6.28%	4.97%	
3/6/1998	10.75%	6.27%	4.48%	
3/20/1998	10.50%	6.22%	4.28%	
4/30/1998	12.20%	6.12%	6.08%	
7/10/1998	11.40%	5.94%	5.46%	
9/15/1998	11.90%	5.78%	6.12%	
11/30/1998	12.60%	5.58%	7.02%	
12/10/1998	12.20%	5.54%	6.66%	
12/17/1998	12.10%	5.52%	6.58%	
2/5/1999	10.30%	5.38%	4.92%	
3/4/1999	10.50%	5.34%	5.16%	
4/6/1999	10.94%	5.32%	5.62%	
7/29/1999	10.75%	5.52%	5.23%	
9/23/1999	10.75%	5.70%	5.05%	
11/17/1999	11.10%	5.90%	5.20%	
1/7/2000	11.50%	6.05%	5.45%	
1/7/2000	11.50%	6.05%	5.45%	
2/17/2000	10.60%	6.17%	4.43%	
3/28/2000	11.25%	6.20%	5.05%	
5/24/2000	11.00%	6.18%	4.82%	
7/18/2000	12.20%	6.16%	6.04%	
9/29/2000	11.16%	6.03%	5.13%	
11/28/2000	12.90%	5.89%	7.01%	
11/30/2000	12.10%	5.88%	6.22%	
1/23/2001	11.25%	5.79%	5.46%	
2/8/2001	11.50%	5.77%	5.73%	
5/8/2001	10.75%	5.62%	5.13%	
6/26/2001	11.00%	5.62%	5.38%	
7/25/2001	11.02%	5.60%	5.42%	
7/25/2001	11.02%	5.60%	5.42%	
7/31/2001	11.00%	5.59%	5.41%	

Bond Yield Plus Risk Premium				
[6]	[7]	[8]	[9]	
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium	
8/31/2001	10.50%	5.56%	4.94%	
9/7/2001	10.75%	5.55%	5.20%	
9/10/2001	11.00%	5.55%	5.45%	
9/20/2001	10.00%	5.55%	4.45%	
10/24/2001	10.30%	5.54%	4.76%	
11/28/2001	10.60%	5.49%	5.11%	
12/3/2001	12.88%	5.49%	7.39%	
12/20/2001	12.50%	5.50%	7.00%	
1/22/2002	10.00%	5.50%	4.50%	
3/27/2002	10.10%	5.45%	4.65%	
4/22/2002	11.80%	5.45%	6.35%	
5/28/2002	10.17%	5.46%	4.71%	
6/10/2002	12.00%	5.47%	6.53%	
6/18/2002	11.16%	5.48%	5.68%	
6/20/2002	11.00%	5.48%	5.52%	
6/20/2002	12.30%	5.48%	6.82%	
7/15/2002	11.00%	5.48%	5.52%	
9/12/2002	12.30%	5.45%	6.85%	
9/26/2002	10.45%	5.41%	5.04%	
12/4/2002	11.55%	5.29%	6.26%	
12/13/2002	11.75%	5.27%	6.48%	
12/20/2002	11.40%	5.25%	6.15%	
1/8/2003	11.10%	5.19%	5.91%	
1/31/2003	12.45%	5.13%	7.32%	
2/28/2003	12.30%	5.04%	7.26%	
3/6/2003	10.75%	5.02%	5.73%	
3/7/2003	9.96%	5.02%	4.94%	
3/20/2003	12.00%	4.98%	7.02%	
4/3/2003	12.00%	4.95%	7.05%	
4/15/2003	11.15%	4.93%	6.22%	
6/25/2003	10.75%	4.79%	5.96%	
6/26/2003	10.75%	4.79%	5.96%	
7/9/2003	9.75%	4.79%	4.96%	
7/16/2003	9.75%	4.79%	4.96%	
7/25/2003	9.50%	4.79%	4.71%	
8/26/2003	10.50%	4.83%	5.67%	
12/17/2003	9.85%	4.94%	4.91%	
12/17/2003	10.70%	4.94%	5.76%	
12/18/2003	11.50%	4.94%	6.56%	
12/19/2003	12.00%	4.94%	7.06%	
12/19/2003	12.00%	4.94%	7.06%	
12/23/2003	10.50%	4.94%	5.56%	
1/13/2004	12.00%	4.95%	7.05%	
3/2/2004	10.75%	4.99%	5.76%	
3/26/2004	10.25%	5.02%	5.23%	
4/5/2004	11.25%	5.03%	6.22%	
5/18/2004	10.50%	5.07%	5.43%	
5/25/2004	10.25%	5.07%	5.18%	
5/27/2004	10.25%	5.08%	5.17%	
6/2/2004	11.22%	5.08%	6.14%	
6/30/2004	10.50%	5.10%	5.40%	
6/30/2004	10.50%	5.10%	5.40%	
7/16/2004	11.60%	5.11%	6.49%	
8/25/2004	10.25%	5.10%	5.15%	
9/9/2004	10.40%	5.10%	5.30%	
11/9/2004	10.50%	5.07%	5.43%	
11/23/2004	11.00%	5.06%	5.94%	
12/14/2004	10.97%	5.07%	5.90%	
12/21/2004	11.25%	5.07%	6.18%	
12/21/2004	11.50%	5.07%	6.43%	
12/22/2004	10.70%	5.07%	5.63%	
12/22/2004	11.50%	5.07%	6.43%	
12/29/2004	9.85%	5.08%	4.77%	
1/6/2005	10.70%	5.08%	5.62%	
2/18/2005	10.30%	4.98%	5.32%	
2/25/2005	10.50%	4.96%	5.54%	
3/10/2005	11.00%	4.93%	6.07%	
3/24/2005	10.30%	4.89%	5.41%	
4/4/2005	10.00%	4.87%	5.13%	
4/7/2005	10.25%	4.87%	5.38%	
5/18/2005	10.25%	4.78%	5.47%	
5/25/2005	10.75%	4.76%	5.99%	
5/26/2005	9.75%	4.76%	4.99%	
6/1/2005	9.75%	4.75%	5.00%	
7/19/2005	11.50%	4.64%	6.86%	
8/5/2005	11.75%	4.62%	7.13%	
8/15/2005	10.13%	4.61%	5.52%	
9/28/2005	10.00%	4.54%	5.46%	
10/4/2005	10.75%	4.53%	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%	

Bond Yield Plus Risk Premium				
[6]	[7]	[8]	[9]	
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium	
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%	
1/5/2006	11.00%	4.53%	6.47%	
1/27/2006	9.75%	4.52%	5.23%	
3/3/2006	10.39%	4.53%	5.86%	
4/17/2006	10.20%	4.62%	5.58%	
4/26/2006	10.60%	4.64%	5.96%	
5/17/2006	11.60%	4.69%	6.91%	
6/6/2006	10.00%	4.75%	5.25%	
6/27/2006	10.75%	4.80%	5.95%	
7/6/2006	10.20%	4.83%	5.37%	
7/24/2006	9.60%	4.86%	4.74%	
7/26/2006	10.50%	4.86%	5.64%	
7/28/2006	10.05%	4.87%	5.18%	
8/23/2006	9.55%	4.89%	4.66%	
9/1/2006	10.54%	4.90%	5.64%	
9/14/2006	10.00%	4.91%	5.09%	
10/6/2006	9.67%	4.92%	4.75%	
11/21/2006	10.08%	4.95%	5.13%	
11/21/2006	10.08%	4.95%	5.13%	
11/21/2006	10.12%	4.95%	5.17%	
12/1/2006	10.50%	4.96%	5.54%	
12/1/2006	10.25%	4.96%	5.29%	
12/7/2006	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%	
1/5/2007	10.00%	4.95%	5.05%	
1/11/2007	10.10%	4.95%	5.15%	
1/11/2007	10.10%	4.95%	5.15%	
1/11/2007	10.90%	4.95%	5.95%	
1/12/2007	10.10%	4.95%	5.15%	
1/13/2007	10.40%	4.95%	5.45%	
1/19/2007	10.80%	4.94%	5.86%	
3/21/2007	11.35%	4.86%	6.49%	
3/22/2007	9.75%	4.86%	4.89%	
5/15/2007	10.00%	4.81%	5.19%	
5/17/2007	10.25%	4.80%	5.45%	
5/17/2007	10.25%	4.80%	5.45%	
5/22/2007	10.20%	4.80%	5.40%	
5/22/2007	10.50%	4.80%	5.70%	
5/23/2007	10.70%	4.80%	5.90%	
5/25/2007	9.67%	4.80%	4.87%	
6/15/2007	9.90%	4.82%	5.08%	
6/21/2007	10.20%	4.83%	5.37%	
6/22/2007	10.50%	4.83%	5.67%	
6/28/2007	10.75%	4.84%	5.91%	
7/12/2007	9.67%	4.86%	4.81%	
7/19/2007	10.00%	4.87%	5.13%	
7/19/2007	10.00%	4.87%	5.13%	
8/15/2007	10.40%	4.88%	5.52%	
10/9/2007	10.00%	4.91%	5.09%	
10/17/2007	9.10%	4.91%	4.19%	
10/31/2007	9.96%	4.90%	5.06%	
11/29/2007	10.90%	4.87%	6.03%	
12/6/2007	10.75%	4.86%	5.89%	
12/13/2007	9.96%	4.86%	5.10%	
12/14/2007	10.70%	4.86%	5.84%	
12/14/2007	10.80%	4.86%	5.94%	
12/19/2007	10.20%	4.86%	5.34%	
12/20/2007	10.20%	4.86%	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%	
1/8/2008	10.75%	4.83%	5.92%	
1/17/2008	10.75%	4.81%	5.94%	
1/28/2008	9.40%	4.80%	4.60%	
1/30/2008	10.00%	4.79%	5.21%	
1/31/2008	10.71%	4.79%	5.92%	
2/29/2008	10.25%	4.75%	5.50%	
3/12/2008	10.25%	4.73%	5.52%	
3/25/2008	9.10%	4.68%	4.42%	
4/22/2008	10.25%	4.60%	5.65%	
4/24/2008	10.10%	4.60%	5.50%	
5/1/2008	10.70%	4.58%	6.12%	
5/19/2008	11.00%	4.56%	6.44%	
5/27/2008	10.00%	4.55%	5.45%	
6/10/2008	10.70%	4.54%	6.16%	
6/27/2008	11.04%	4.54%	6.50%	
6/27/2008	10.50%	4.54%	5.96%	
7/10/2008	10.43%	4.52%	5.91%	

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/16/2008	9.40%	4.51%	4.89%
7/30/2008	10.80%	4.51%	6.29%
7/31/2008	10.70%	4.51%	6.19%
8/11/2008	10.25%	4.50%	5.75%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008	10.30%	4.50%	5.80%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.47%	5.73%
10/8/2008	10.15%	4.46%	5.69%
11/13/2008	10.55%	4.45%	6.10%
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.39%	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%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.11%	6.39%
1/21/2009	10.50%	4.11%	6.39%
1/21/2009	10.50%	4.11%	6.39%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.07%	6.43%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.78%	6.22%
4/30/2009	11.25%	3.77%	7.48%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.76%	7.04%
7/8/2009	10.63%	3.76%	6.87%
7/17/2009	10.50%	3.77%	6.73%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.02%	6.68%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.10%	6.60%
11/3/2009	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%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	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%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.31%	6.69%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.36%	6.04%
1/27/2010	10.40%	4.36%	6.04%
1/27/2010	10.70%	4.36%	6.34%
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41%	5.77%
3/2/2010	9.63%	4.41%	5.22%
3/4/2010	10.50%	4.41%	6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.20%	4.44%	5.76%
5/28/2010	10.10%	4.44%	5.66%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010	10.50%	4.43%	6.07%

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/28/2010	9.67%	4.43%	5.24%
6/30/2010	9.40%	4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.70%	4.43%	6.27%
7/15/2010	10.53%	4.43%	6.10%
7/30/2010	10.70%	4.41%	6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010	9.90%	4.37%	5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.32%	5.68%
9/16/2010	10.00%	4.32%	5.68%
9/30/2010	9.75%	4.28%	5.47%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010	10.70%	4.19%	6.51%
11/19/2010	10.20%	4.17%	6.03%
11/22/2010	10.00%	4.17%	5.83%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010	10.25%	4.15%	6.10%
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.14%	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%
1/5/2011	10.15%	4.13%	6.02%
1/12/2011	10.30%	4.12%	6.18%
1/13/2011	10.30%	4.12%	6.18%
1/18/2011	10.00%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.11%	5.49%
2/3/2011	10.00%	4.11%	5.89%
2/25/2011	10.00%	4.14%	5.86%
3/25/2011	9.80%	4.18%	5.62%
3/30/2011	10.00%	4.18%	5.82%
4/12/2011	10.00%	4.21%	5.79%
4/25/2011	10.74%	4.23%	6.51%
4/26/2011	9.67%	4.24%	5.43%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.25%	5.75%
5/4/2011	10.00%	4.25%	5.75%
5/24/2011	10.50%	4.27%	6.23%
6/8/2011	10.75%	4.30%	6.45%
6/16/2011	9.20%	4.32%	4.88%
6/17/2011	9.95%	4.32%	5.63%
7/13/2011	10.20%	4.37%	5.83%
8/1/2011	9.20%	4.39%	4.81%
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011	10.35%	4.38%	5.97%
8/19/2011	10.25%	4.36%	5.89%
9/2/2011	12.88%	4.32%	8.56%
9/22/2011	10.00%	4.24%	5.76%
10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%
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%
1/25/2012	10.50%	3.57%	6.93%
1/27/2012	10.50%	3.55%	6.95%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.43%	6.47%
2/27/2012	10.25%	3.42%	6.83%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012	10.37%	3.31%	7.06%
4/4/2012	10.00%	3.29%	6.71%
4/26/2012	10.00%	3.20%	6.80%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.16%	6.64%
5/15/2012	10.00%	3.14%	6.86%

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/29/2012	10.05%	3.11%	6.94%
6/7/2012	10.30%	3.07%	7.23%
6/14/2012	9.40%	3.06%	6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.05%	6.55%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.02%	6.78%
7/20/2012	9.81%	3.01%	6.80%
7/20/2012	9.31%	3.01%	6.30%
9/13/2012	9.80%	2.94%	6.86%
9/19/2012	10.05%	2.94%	7.11%
9/19/2012	9.80%	2.94%	6.86%
9/26/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.88%	2.89%	6.99%
11/29/2012	9.75%	2.89%	6.86%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	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%
1/9/2013	9.70%	2.84%	6.86%
1/9/2013	9.70%	2.84%	6.86%
1/9/2013	9.70%	2.84%	6.86%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
7/12/2013	9.36%	3.08%	6.28%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.25%	3.27%	6.98%
9/11/2013	10.20%	3.27%	6.93%
9/24/2013	10.20%	3.31%	6.89%
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.49%	5.23%
12/9/2013	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%
2/20/2014	9.20%	3.69%	5.51%

Bond Yield Plus Risk Premium			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
2/26/2014	9.75%	3.70%	6.05%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
6/30/2014	9.55%	3.64%	5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%
7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.56%	6.19%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%
9/11/2014	9.60%	3.51%	6.09%
9/15/2014	10.25%	3.51%	6.74%
10/9/2014	9.80%	3.44%	6.36%
11/6/2014	9.56%	3.37%	6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.32%	6.38%
11/26/2014	10.20%	3.32%	6.88%
12/4/2014	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%
1/23/2015	9.50%	3.14%	6.36%
2/24/2015	9.83%	3.04%	6.79%
3/18/2015	9.75%	2.98%	6.77%
3/25/2015	9.50%	2.95%	6.55%
3/26/2015	9.72%	2.95%	6.77%
4/23/2015	10.20%	2.87%	7.33%
4/29/2015	9.53%	2.86%	6.67%
5/1/2015	9.60%	2.85%	6.75%
5/26/2015	9.75%	2.83%	6.92%
6/17/2015	9.00%	2.82%	6.18%
6/17/2015	9.00%	2.82%	6.18%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.30%	2.88%	7.42%
11/19/2015	10.00%	2.88%	7.12%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/15/2015	9.60%	2.91%	6.69%
12/17/2015	9.70%	2.91%	6.79%
12/18/2015	9.50%	2.91%	6.59%
12/30/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.94%	6.56%
2/23/2016	9.75%	2.94%	6.81%
3/16/2016	9.85%	2.91%	6.94%
4/29/2016	9.80%	2.83%	6.97%
6/3/2016	9.75%	2.80%	6.95%
6/8/2016	9.48%	2.80%	6.68%
6/15/2016	9.00%	2.79%	6.21%
6/15/2016	9.00%	2.79%	6.21%
# of Cases:			1,475
Average:			4.51%

Proxy Group Capital Structure

Company	Ticker	% Common Equity								Average
		2016Q1	2015Q4	2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	
ALLETE, Inc.	ALE	58.83%	58.04%	58.01%	58.93%	58.70%	56.98%	56.18%	55.83%	57.69%
Alliant Energy Corporation	LNT	51.65%	51.24%	51.27%	51.18%	50.32%	50.11%	54.23%	52.94%	51.62%
Ameren Corporation	AEE	52.82%	52.22%	53.40%	52.44%	52.88%	52.82%	54.54%	53.83%	53.12%
American Electric Power Company, Inc.	AEP	49.13%	48.82%	49.13%	49.63%	52.23%	52.11%	52.27%	52.31%	50.71%
Avista Corporation	AVA	55.13%	54.30%	54.95%	54.98%	54.81%	51.39%	52.62%	51.19%	53.67%
CMS Energy Corporation	CMS	51.42%	50.63%	51.44%	51.15%	51.35%	50.21%	49.99%	53.44%	51.20%
DTE Energy Company	DTE	50.53%	50.39%	50.32%	49.81%	48.42%	50.39%	49.32%	50.30%	49.93%
IDACORP, Inc.	IDA	50.70%	52.34%	52.25%	51.61%	49.38%	52.94%	52.92%	52.03%	51.77%
NorthWestern Corporation	NWE	47.54%	47.31%	46.01%	46.97%	47.54%	47.06%	47.78%	47.45%	47.21%
Otter Tail Corporation	OTTR	53.10%	52.75%	52.51%	52.32%	51.13%	49.80%	49.32%	47.60%	51.07%
Pinnacle West Capital Corporation	PNW	55.54%	55.50%	57.11%	55.72%	55.86%	57.54%	58.43%	57.32%	56.63%
PNM Resources, Inc.	PNM	45.35%	45.32%	44.76%	45.63%	46.11%	45.86%	47.43%	47.14%	45.95%
Portland General Electric Company	POR	50.89%	50.61%	50.31%	49.57%	44.11%	43.31%	44.86%	46.64%	47.54%
SCANA Corporation	SCG	52.77%	52.57%	52.55%	52.08%	53.72%	53.46%	53.47%	52.85%	52.93%
Xcel Energy Inc.	XEL	54.68%	54.43%	53.02%	53.88%	54.97%	54.62%	54.54%	53.41%	54.19%
Mean		52.00%	51.76%	51.80%	51.73%	51.44%	51.24%	51.86%	51.62%	51.68%

Operating Company Capital Structure

Operating Company	Parent	% Common Equity								Average
		2016Q1	2015Q4	2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	
ALLETE (Minnesota Power)	ALE	56.60%	55.86%	55.62%	57.67%	57.56%	55.24%	53.98%	53.01%	55.69%
Superior Water, Light and Power Company	ALE	61.06%	60.23%	60.40%	60.19%	59.83%	58.72%	58.39%	58.65%	59.68%
Interstate Power and Light Company	LNT	51.52%	50.91%	50.90%	51.72%	50.09%	49.90%	54.01%	52.05%	51.39%
Wisconsin Power and Light Company	LNT	51.78%	51.56%	51.63%	50.65%	50.54%	50.32%	54.45%	53.82%	51.84%
Ameren Illinois Company	AEE	53.67%	53.42%	55.55%	54.67%	54.39%	53.90%	56.91%	56.19%	54.84%
Union Electric Company	AEE	51.97%	51.03%	51.25%	50.21%	51.37%	51.74%	52.17%	51.48%	51.40%
AEP Texas Central Company	AEP	44.18%	43.63%	43.32%	47.46%	45.01%	42.39%	43.93%	43.18%	44.14%
AEP Texas North Company	AEP	42.64%	42.36%	45.03%	48.87%	47.15%	46.96%	47.06%	46.79%	45.86%
Appalachian Power Company	AEP	47.20%	46.77%	46.66%	46.50%	46.52%	45.83%	46.29%	46.00%	46.47%
Indiana Michigan Power Company	AEP	48.26%	52.65%	52.41%	52.08%	51.94%	51.36%	51.45%	51.39%	51.44%
Kentucky Power Company	AEP	43.58%	43.26%	43.72%	43.87%	44.19%	44.74%	46.25%	48.23%	44.73%
Kingsport Power Company	AEP	65.21%	59.70%	59.76%	60.44%	60.77%	61.00%	60.55%	60.91%	61.04%
Ohio Power Company	AEP	50.03%	50.09%	50.36%	50.33%	49.30%	48.96%	46.03%	44.79%	48.74%
Public Service Company of Oklahoma	AEP	46.80%	46.45%	46.30%	45.29%	44.66%	49.69%	49.43%	48.30%	47.11%
Southwestern Electric Power Company	AEP	49.51%	49.59%	49.88%	47.62%	46.25%	50.46%	50.60%	51.26%	49.40%
Wheeling Power Company	AEP	53.90%	53.73%	53.89%	53.82%	86.56%	79.75%	81.14%	82.27%	68.13%
Alaska Electric Light and Power Company	AVA	58.86%	58.18%	58.09%	58.07%	57.83%	NA	NA	NA	NA
Avista Corporation	AVA	51.39%	50.41%	51.80%	51.90%	51.78%	51.39%	52.62%	51.19%	51.56%
Consumers Energy Company	CMS	51.42%	50.63%	51.44%	51.15%	51.35%	50.21%	49.99%	53.44%	51.20%
DTE Electric Company	DTE	50.53%	50.39%	50.32%	49.81%	48.42%	50.39%	49.32%	50.30%	49.93%
Idaho Power Co.	IDA	50.70%	52.34%	52.25%	51.61%	49.38%	52.94%	52.92%	52.03%	51.77%
NorthWestern Corporation	NWE	47.54%	47.31%	46.01%	46.97%	47.54%	47.06%	47.78%	47.45%	47.21%
Otter Tail Power Company	OTTR	53.10%	52.75%	52.51%	52.32%	51.13%	49.80%	49.32%	47.60%	51.07%
Arizona Public Service Company	PNW	55.54%	55.50%	57.11%	55.72%	55.86%	57.54%	58.43%	57.32%	56.63%
Public Service Company of New Mexico	PNM	45.35%	45.32%	44.76%	45.63%	46.11%	45.86%	47.43%	47.14%	45.95%
Texas-New Mexico Power Company	PNM	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portland General Electric Company	POR	50.89%	50.61%	50.31%	49.57%	44.11%	43.31%	44.86%	46.64%	47.54%
South Carolina Electric & Gas Co.	SCG	52.77%	52.57%	52.55%	52.08%	53.72%	53.46%	53.47%	52.85%	52.93%
Northern States Power Company - MN	XEL	53.68%	53.26%	51.95%	53.34%	53.03%	52.89%	52.84%	52.49%	52.94%
Northern States Power Company - WI	XEL	54.43%	54.27%	52.92%	52.53%	56.36%	55.18%	55.01%	52.92%	54.20%
Public Service Company of Colorado	XEL	56.49%	56.34%	56.00%	55.55%	56.94%	56.79%	56.51%	56.12%	56.34%
Southwestern Public Service Company	XEL	54.13%	53.83%	51.20%	54.08%	53.54%	53.62%	53.81%	52.10%	53.29%
Mean		51.76%	51.45%	51.48%	51.67%	52.36%	52.05%	52.56%	52.26%	51.82%

Source: SNL Financial

Proxy Group Capital Structure

Company	Ticker	% Long-Term Debt								Average
		2016Q1	2015Q4	2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	
ALLETE, Inc.	ALE	41.17%	41.96%	41.99%	41.07%	41.30%	43.02%	43.82%	44.17%	42.31%
Alliant Energy Corporation	LNT	48.35%	48.76%	48.73%	48.82%	49.68%	49.89%	45.77%	47.06%	48.38%
Ameren Corporation	AEE	47.18%	47.78%	46.60%	47.56%	47.12%	47.18%	45.46%	46.17%	46.88%
American Electric Power Company, Inc.	AEP	50.87%	51.18%	50.87%	50.37%	47.77%	47.89%	47.73%	47.69%	49.29%
Avista Corporation	AVA	44.87%	45.70%	45.05%	45.02%	45.19%	48.61%	47.38%	48.81%	46.33%
CMS Energy Corporation	CMS	48.58%	49.37%	48.56%	48.85%	48.65%	49.79%	50.01%	46.56%	48.80%
DTE Energy Company	DTE	49.47%	49.61%	49.68%	50.19%	51.58%	49.61%	50.68%	49.70%	50.07%
IDACORP, Inc.	IDA	49.30%	47.66%	47.75%	48.39%	50.62%	47.06%	47.08%	47.97%	48.23%
NorthWestern Corporation	NWE	52.46%	52.69%	53.99%	53.03%	52.46%	52.94%	52.22%	52.55%	52.79%
Otter Tail Corporation	OTTR	46.90%	47.25%	47.49%	47.68%	48.87%	50.20%	50.68%	52.40%	48.93%
Pinnacle West Capital Corporation	PNW	44.46%	44.50%	42.89%	44.28%	44.14%	42.46%	41.57%	42.68%	43.37%
PNM Resources, Inc.	PNM	54.65%	54.68%	55.24%	54.37%	53.89%	54.14%	52.57%	52.86%	54.05%
Portland General Electric Company	POR	49.11%	49.39%	49.69%	50.43%	55.89%	56.69%	55.14%	53.36%	52.46%
SCANA Corporation	SCG	47.23%	47.43%	47.45%	47.92%	46.28%	46.54%	46.53%	47.15%	47.07%
Xcel Energy Inc.	XEL	45.32%	45.57%	46.98%	46.12%	45.03%	45.38%	45.46%	46.59%	45.81%
Mean		48.00%	48.24%	48.20%	48.27%	48.56%	48.76%	48.14%	48.38%	48.32%

Operating Company Capital Structure

Operating Company	Parent	% Long Term Debt								Average
		2016Q1	2015Q4	2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	
ALLETE (Minnesota Power)	ALE	43.40%	44.14%	44.38%	42.33%	42.44%	44.76%	46.02%	46.99%	44.31%
Superior Water, Light and Power Company	ALE	38.94%	39.77%	39.60%	39.81%	40.17%	41.28%	41.61%	41.35%	40.32%
Interstate Power and Light Company	LNT	48.48%	49.09%	49.10%	48.28%	49.91%	50.10%	45.99%	47.95%	48.61%
Wisconsin Power and Light Company	LNT	48.22%	48.44%	48.37%	49.35%	49.46%	49.68%	45.55%	46.18%	48.16%
Ameren Illinois Company	AEE	46.33%	46.68%	44.45%	45.33%	45.61%	46.10%	43.09%	43.81%	45.16%
Union Electric Company	AEE	48.03%	48.97%	48.75%	49.79%	48.63%	48.26%	47.83%	48.52%	48.60%
AEP Texas Central Company	AEP	55.82%	56.37%	56.68%	52.54%	54.99%	57.61%	56.07%	56.82%	55.86%
AEP Texas North Company	AEP	57.36%	57.64%	54.97%	51.13%	52.85%	53.04%	52.94%	53.21%	54.14%
Appalachian Power Company	AEP	52.80%	53.23%	53.34%	53.50%	53.48%	54.17%	53.71%	54.00%	53.53%
Indiana Michigan Power Company	AEP	51.74%	47.35%	47.59%	47.92%	48.06%	48.64%	48.55%	48.61%	48.56%
Kentucky Power Company	AEP	56.42%	56.74%	56.28%	56.13%	55.81%	55.26%	53.75%	51.77%	55.27%
Kingsport Power Company	AEP	34.79%	40.30%	40.24%	39.56%	39.23%	39.00%	39.45%	39.09%	38.96%
Ohio Power Company	AEP	49.97%	49.91%	49.64%	49.67%	50.70%	51.04%	53.97%	55.21%	51.26%
Public Service Company of Oklahoma	AEP	53.20%	53.55%	53.70%	54.71%	55.34%	50.31%	50.57%	51.70%	52.89%
Southwestern Electric Power Company	AEP	50.49%	50.41%	50.12%	52.38%	53.75%	49.54%	49.40%	48.74%	50.60%
Wheeling Power Company	AEP	46.10%	46.27%	46.11%	46.18%	13.44%	20.25%	18.86%	17.73%	31.87%
Alaska Electric Light and Power Company	AVA	41.14%	41.82%	41.91%	41.93%	42.17%	NA	NA	NA	NA
Avista Corporation	AVA	48.61%	49.59%	48.20%	48.10%	48.22%	48.61%	47.38%	48.81%	48.44%
Consumers Energy Company	CMS	48.58%	49.37%	48.56%	48.85%	48.65%	49.79%	50.01%	46.56%	48.80%
DTE Electric Company	DTE	49.47%	49.61%	49.68%	50.19%	51.58%	49.61%	50.68%	49.70%	50.07%
Idaho Power Co.	IDA	49.30%	47.66%	47.75%	48.39%	50.62%	47.06%	47.08%	47.97%	48.23%
NorthWestern Corporation	NWE	52.46%	52.69%	53.99%	53.03%	52.46%	52.94%	52.22%	52.55%	52.79%
Otter Tail Power Company	OTTR	46.90%	47.25%	47.49%	47.68%	48.87%	50.20%	50.68%	52.40%	48.93%
Arizona Public Service Company	PNW	44.46%	44.50%	42.89%	44.28%	44.14%	42.46%	41.57%	42.68%	43.37%
Public Service Company of New Mexico	PNM	54.65%	54.68%	55.24%	54.37%	53.89%	54.14%	52.57%	52.86%	54.05%
Texas-New Mexico Power Company	PNM	NA	NA	NA	NA	NA	NA	NA	NA	NA
Portland General Electric Company	POR	49.11%	49.39%	49.69%	50.43%	55.89%	56.69%	55.14%	53.36%	52.46%
South Carolina Electric & Gas Co.	SCG	47.23%	47.43%	47.45%	47.92%	46.28%	46.54%	46.53%	47.15%	47.07%
Northern States Power Company - MN	XEL	46.32%	46.74%	48.05%	46.66%	46.97%	47.11%	47.16%	47.51%	47.06%
Northern States Power Company - WI	XEL	45.57%	45.73%	47.08%	47.47%	43.64%	44.82%	44.99%	47.08%	45.80%
Public Service Company of Colorado	XEL	43.51%	43.66%	44.00%	44.45%	43.06%	43.21%	43.49%	43.88%	43.66%
Southwestern Public Service Company	XEL	45.87%	46.17%	48.80%	45.92%	46.46%	46.38%	46.19%	47.90%	46.71%
Mean		48.24%	48.55%	48.52%	48.33%	47.64%	47.95%	47.44%	47.74%	48.18%

Flotation Cost Adjustment

Two most recent open market common stock issuances per company, if available

Company	Date	[1] Shares Issued	[2] Offering Price	[3] Underwriting Discount	[4] Offering Expense	[5] Net Proceeds Per Share	[6] Total Flotation Costs	[7] Gross Equity Issue Before Costs	[8] Net Proceeds	[9] Flotation Cost Percentage
OGE Energy Corp.	8/21/2003	5,324,074	\$21.60	\$0.7900	\$325,000	\$20.75	\$4,531,018	\$114,999,998	\$110,468,980	3.940%
ALLETE, Inc.	2/27/2014	3,220,000	\$49.75	\$1.7413	\$450,000	\$47.87	\$6,056,825	\$180,195,000	\$154,138,175	3.781%
ALLETE, Inc.	5/25/2001	7,475,000	\$23.68	\$0.9472	\$350,000	\$22.69	\$7,430,320	\$177,008,000	\$169,577,680	4.198%
Alliant Energy Corporation	7/1/2003	17,250,000	\$19.25	\$0.7700	\$370,000	\$18.46	\$13,652,500	\$332,062,500	\$318,410,000	4.111%
Alliant Energy Corporation	11/8/2001	9,775,000	\$28.00	\$1.0500	\$425,000	\$26.91	\$10,688,750	\$273,700,000	\$263,011,250	3.905%
Ameren Corp.	9/9/2009	21,850,000	\$25.25	\$0.7575	\$450,000	\$24.47	\$17,001,375	\$551,712,500	\$534,711,125	3.082%
Ameren Corp.	6/30/2004	10,925,000	\$42.00	\$1.2600	\$400,000	\$40.70	\$14,165,500	\$458,850,000	\$444,684,500	3.087%
American Electric Power Company, Inc.	4/1/2009	69,000,000	\$24.50	\$0.7350	\$400,000	\$23.76	\$11,115,000	\$1,690,500,000	\$1,639,385,000	3.024%
American Electric Power Company, Inc.	2/27/2003	57,500,000	\$20.95	\$0.6285	\$550,000	\$20.31	\$36,688,750	\$1,204,625,000	\$1,167,936,250	3.046%
Avista Corporation	12/11/2006	3,162,500	\$25.05	\$0.4800	\$300,000	\$24.48	\$1,818,000	\$79,220,625	\$77,402,625	2.295%
CMS Energy Corporation	3/30/2005	23,000,000	\$12.25	\$0.4288	\$325,000	\$11.81	\$10,187,400	\$281,750,000	\$271,562,600	3.616%
CMS Energy Corporation	10/7/2004	32,775,000	\$9.10	\$0.3185	\$325,000	\$8.77	\$10,763,838	\$298,252,500	\$287,488,663	3.609%
DTE Energy Company	6/19/2002	6,325,000	\$43.25	\$1.4056	\$250,000	\$41.80	\$9,140,420	\$273,556,250	\$264,415,830	3.341%
IDACORP, Inc.	12/9/2004	4,025,000	\$30.00	\$1.2000	\$300,000	\$28.73	\$5,130,000	\$120,750,000	\$115,620,000	4.248%
NorthWestern Corporation	9/29/2015	1,100,000	\$51.81	\$1.3300	\$1,000,000	\$49.57	\$2,463,000	\$56,991,000	\$54,528,000	4.322%
NorthWestern Corporation	11/5/2014	7,766,990	\$51.50	\$1.8025	\$1,000,000	\$49.57	\$14,999,999	\$399,999,985	\$384,999,986	3.750%
Otter Tail Corporation	9/18/2008	5,175,000	\$30.00	\$1.0875	\$400,000	\$28.84	\$6,027,813	\$155,250,000	\$149,222,188	3.883%
Otter Tail Corporation	12/7/2004	3,335,000	\$25.45	\$0.9500	\$300,000	\$24.41	\$3,468,250	\$84,875,750	\$81,407,500	4.086%
Pinnacle West Capital Corporation	4/8/2010	6,900,000	\$38.00	\$1.3300	\$190,000	\$36.64	\$9,367,000	\$262,200,000	\$252,833,000	3.572%
Pinnacle West Capital Corporation	4/27/2005	6,095,000	\$42.00	\$1.3650	\$250,000	\$40.59	\$8,569,675	\$255,990,000	\$247,420,325	3.348%
PNM Resources, Inc.	12/6/2006	5,750,000	\$30.79	\$1.0780	\$250,000	\$29.67	\$6,448,500	\$177,042,500	\$170,594,000	3.642%
PNM Resources, Inc.	3/23/2005	3,910,000	\$26.76	\$0.8697	\$200,000	\$25.84	\$3,600,527	\$104,631,600	\$101,031,073	3.441%
Portland General Electric Company	6/11/2013	12,765,000	\$29.50	\$0.9588	\$600,000	\$28.49	\$12,838,444	\$376,567,500	\$363,729,056	3.409%
Portland General Electric Company	3/5/2009	12,477,500	\$14.10	\$0.4935	\$375,000	\$13.58	\$6,532,646	\$175,932,750	\$169,400,104	3.713%
SCANA Corporation	5/11/2010	8,222,500	\$37.00	\$1.2950	\$350,000	\$35.66	\$10,986,138	\$304,232,500	\$293,234,363	3.615%
SCANA Corporation	12/31/2008	2,875,000	\$35.50	\$0.5325	\$350,000	\$34.85	\$1,880,938	\$102,062,500	\$100,181,563	1.843%
Xcel Energy Inc.	8/3/2010	21,850,000	\$21.50	\$0.6450	\$600,000	\$20.83	\$14,693,250	\$469,775,000	\$455,081,750	3.128%
Xcel Energy Inc.	9/9/2008	17,250,000	\$20.25	\$0.1500	\$600,000	\$20.07	\$3,187,500	\$349,312,500	\$346,125,000	0.913%
Mean							\$10,837,335	\$331,858,784		
WEIGHTED AVERAGE FLOTATION COSTS:										3.266%

[10]

Constant Growth Discounted Cash Flow Model Adjusted for Flotation Costs - 30 Day Average Stock Price

Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield		Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	DCF k(e)	Flotation Adjusted DCF k(e)	
					Current	Adjusted for Flot. Costs							
ALLETE, Inc.	ALE	\$2.08	\$62.26	3.34%	3.42%	3.54%	5.50%	5.00%	4.00%	4.83%	8.25%	8.37%	
Alliant Energy Corporation	LNT	\$1.18	\$39.38	2.98%	3.08%	3.18%	6.10%	6.60%	6.00%	6.23%	9.31%	9.41%	
Ameren Corporation	AEE	\$1.70	\$51.80	3.28%	3.38%	3.49%	6.10%	5.20%	6.00%	5.77%	9.14%	9.26%	
American Electric Power Company, Inc.	AEP	\$2.24	\$68.11	3.29%	3.36%	3.47%	4.70%	3.77%	4.00%	4.16%	7.51%	7.63%	
Avista Corporation	AVA	\$1.37	\$43.03	3.18%	3.26%	3.37%	5.00%	5.00%	5.00%	5.00%	8.26%	8.37%	
CMS Energy Corporation	CMS	\$1.24	\$44.28	2.80%	2.89%	2.99%	6.60%	7.24%	6.00%	6.61%	9.51%	9.60%	
DTE Energy Company	DTE	\$3.08	\$95.92	3.21%	3.30%	3.41%	5.80%	5.35%	5.00%	5.38%	8.68%	8.79%	
IDACORP, Inc.	IDA	\$2.04	\$77.51	2.63%	2.68%	2.77%	4.00%	4.00%	3.00%	3.67%	6.35%	6.44%	
NorthWestern Corporation	NWE	\$2.00	\$61.25	3.27%	3.36%	3.47%	5.00%	5.00%	6.50%	5.50%	8.86%	8.97%	
Otter Tail Corporation	OTTR	\$1.25	\$32.42	3.86%	3.97%	4.11%	NA	6.00%	6.00%	6.00%	9.97%	10.11%	
Pinnacle West Capital Corporation	PNW	\$2.50	\$78.53	3.18%	3.25%	3.36%	4.00%	3.73%	4.00%	3.91%	7.16%	7.27%	
PNM Resources, Inc.	PNM	\$0.88	\$34.39	2.56%	2.67%	2.76%	7.60%	8.76%	9.00%	8.45%	11.12%	11.21%	
Portland General Electric Company	POR	\$1.28	\$43.04	2.97%	3.07%	3.17%	6.50%	6.57%	5.50%	6.19%	9.26%	9.36%	
SCANA Corporation	SCG	\$2.30	\$72.88	3.16%	3.24%	3.35%	5.30%	5.40%	4.50%	5.07%	8.30%	8.41%	
Xcel Energy Inc.	XEL	\$1.36	\$43.38	3.14%	3.22%	3.33%	5.20%	5.27%	5.50%	5.32%	8.54%	8.65%	
PROXY GROUP MEAN												8.68%	8.79%

DCF Result Adjusted For Flotation Costs: 8.79%
DCF Result Unadjusted For Flotation Costs: 8.68%
Difference (Flotation Cost Adjustment): 0.11% [22]

Notes:

The proxy group DCF result is adjusted for flotation costs by dividing each company's expected dividend yield by (1 - flotation cost). The flotation cost adjustment is derived as the difference between the unadjusted DCF result and the DCF result adjusted for flotation costs.

- [1] Source: SEC Form 424B

[2] Source: SEC Form 424B

[3] Source: SEC Form 424B

[4] Source: SEC Form 424B

[5] Equals [8] / [1]

[6] Equals [4] + ([1] x [3])

[7] Equals [1] x [2]

[8] Equals [7] - [6]

[9] Equals [6] / [7]

[10] Equals average [6] / average [7]

[11] Source: Bloomberg Professional
- [12] Source: Bloomberg Professional

[13] Equals [11] / [12]

[14] Equals [3] x (1 + 0.5 x [19])

[15] Equals [4] / (1 - 0.0327)

[16] Source: Zacks

[17] Source: Yahoo! Finance

[18] Source: Value Line

[19] Equals Average([16], [17], [18])

[20] Equals [14] + [19]

[21] Equals [15] + [19]

[22] Equals average [21] - average [20]

Summary of Adjustment Clauses & Alternative Regulation/Incentive Plans

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

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, AMI smart metering, and other capital expenditures.

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

[4] Recover's 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 costs, decommissioning, and other costs to comply with state and federal environmental mandates.

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

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

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

Year	Average Revenue/Net Plant	Average Change in Net Plant	Cumulative Change in Net Plant
2003	62.98%	12.10%	12.10%
2004	64.17%	8.32%	21.43%
2005	70.34%	3.32%	25.46%
2006	69.32%	6.72%	33.90%
2007	65.93%	7.01%	43.28%
2008	62.97%	9.87%	57.42%
2009	52.53%	7.43%	69.11%
2010	52.06%	5.84%	78.99%
2011	50.52%	4.73%	87.46%
2012	44.87%	5.40%	97.57%
2013	44.14%	5.97%	109.37%
2014	42.34%	10.51%	131.39%
2015	38.10%	7.87%	149.60%
2016	36.56%	5.60%	163.59%
3-5 Year Projection	36.84%	16.82%	207.91%

Source: Value Line

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

Ticker	Year	Revenue	Net Plant	Revenue/ Net Plant	Change in Net Plant	Change in Revenue/ Net Plant
ALE	2002	NA	NA			
ALE	2003	NA	NA			
ALE	2004	\$ 751.40	\$ 883.10	85.09%		
ALE	2005	737.40	860.40	85.70%	-2.57%	0.73%
ALE	2006	767.10	921.60	83.24%	7.11%	-2.88%
ALE	2007	841.70	1,104.50	76.21%	19.85%	-8.44%
ALE	2008	801.00	1,387.30	57.74%	25.60%	-24.23%
ALE	2009	759.10	1,622.70	46.78%	16.97%	-18.98%
ALE	2010	907.00	1,805.60	50.23%	11.27%	7.38%
ALE	2011	928.20	1,982.70	46.81%	9.81%	-6.80%
ALE	2012	961.20	2,347.60	40.94%	18.40%	-12.54%
ALE	2013	1,018.40	2,576.50	39.53%	9.75%	-3.46%
ALE	2014	1,136.80	3,286.40	34.59%	27.55%	-12.49%
ALE	2015	1,486.40	3,669.10	40.51%	11.64%	17.11%
ALE	2016	1,350.00	3,685.00	36.64%	0.43%	-9.57%
ALE	2019-2021	1,550.00	3,825.00	40.52%	3.80%	10.61%
LNT	2002	\$ 2,608.80	\$ 3,729.20	69.96%		
LNT	2003	3,128.20	4,432.60	70.57%	18.86%	0.88%
LNT	2004	2,958.70	5,284.60	55.99%	19.22%	-20.67%
LNT	2005	3,279.60	4,866.20	67.40%	-7.92%	20.38%
LNT	2006	3,359.40	4,944.90	67.94%	1.62%	0.80%
LNT	2007	3,437.60	4,679.90	73.45%	-5.36%	8.12%
LNT	2008	3,681.70	5,353.50	68.77%	14.39%	-6.38%
LNT	2009	3,432.80	6,203.00	55.34%	15.87%	-19.53%
LNT	2010	3,416.10	6,730.60	50.75%	8.51%	-8.29%
LNT	2011	3,665.30	7,037.10	52.09%	4.55%	2.62%
LNT	2012	3,094.50	7,838.00	39.48%	11.38%	-24.20%
LNT	2013	3,276.80	7,147.30	45.85%	-8.81%	16.12%
LNT	2014	3,350.30	6,442.00	52.01%	-9.87%	13.44%
LNT	2015	3,253.60	7,000.00	46.48%	8.66%	-10.63%
LNT	2016	3,470.00	7,400.00	46.89%	5.71%	0.89%
LNT	2019-2021	4,050.00	8,800.00	46.02%	18.92%	-1.85%
AEE	2002	\$ 3,841.00	\$ 8,914.00	43.09%		
AEE	2003	4,593.00	10,917.00	42.07%	22.47%	-2.36%
AEE	2004	5,160.00	13,297.00	38.81%	21.80%	-7.76%
AEE	2005	6,780.00	13,572.00	49.96%	2.07%	28.73%
AEE	2006	6,880.00	14,286.00	48.16%	5.26%	-3.60%
AEE	2007	7,546.00	15,069.00	50.08%	5.48%	3.98%
AEE	2008	7,839.00	16,567.00	47.32%	9.94%	-5.51%
AEE	2009	7,090.00	17,610.00	40.26%	6.30%	-14.91%
AEE	2010	7,638.00	17,853.00	42.78%	1.38%	6.26%
AEE	2011	7,531.00	18,127.00	41.55%	1.53%	-2.89%
AEE	2012	6,828.00	16,096.00	42.42%	-11.20%	2.11%
AEE	2013	5,838.00	16,205.00	36.03%	0.68%	-15.07%
AEE	2014	6,053.00	17,424.00	34.74%	7.52%	-3.57%
AEE	2015	6,098.00	18,799.00	32.44%	7.89%	-6.63%
AEE	2016	6,200.00	20,000.00	31.00%	6.39%	-4.43%
AEE	2019-2021	7,000.00	24,600.00	28.46%	23.00%	-8.21%
AEP	2002	\$ 14,555.00	\$ 21,684.00	67.12%		
AEP	2003	14,545.00	22,029.00	66.03%	1.59%	-1.63%
AEP	2004	14,057.00	22,801.00	61.65%	3.50%	-6.63%
AEP	2005	12,111.00	24,284.00	49.87%	6.50%	-19.11%
AEP	2006	12,622.00	26,781.00	47.13%	10.28%	-5.50%
AEP	2007	13,380.00	29,870.00	44.79%	11.53%	-4.96%
AEP	2008	14,440.00	32,987.00	43.77%	10.44%	-2.28%
AEP	2009	13,489.00	34,344.00	39.28%	4.11%	-10.28%
AEP	2010	14,427.00	35,674.00	40.44%	3.87%	2.97%
AEP	2011	15,116.00	36,971.00	40.89%	3.64%	1.10%
AEP	2012	14,945.00	38,763.00	38.55%	4.85%	-5.70%
AEP	2013	15,357.00	40,997.00	37.46%	5.76%	-2.84%
AEP	2014	17,020.00	44,117.00	38.58%	7.61%	2.99%
AEP	2015	16,453.00	46,133.00	35.66%	4.57%	-7.56%
AEP	2016	16,900.00	49,025.00	34.47%	6.27%	-3.34%
AEP	2019-2021	19,500.00	58,500.00	33.33%	19.33%	-3.30%
AVA	2002	\$ 980.40	\$ 1,563.70	62.70%		
AVA	2003	1,123.40	1,944.60	57.77%	24.36%	-7.86%
AVA	2004	1,151.60	1,956.10	58.87%	0.59%	1.91%
AVA	2005	1,359.60	2,126.40	63.94%	8.71%	8.61%

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

Ticker	Year	Revenue	Net Plant	Revenue/ Net Plant	Change in Net Plant	Change in Revenue/ Net Plant
AVA	2006	1,506.30	2,215.00	68.00%	4.17%	6.36%
AVA	2007	1,417.80	2,351.30	60.30%	6.15%	-11.33%
AVA	2008	1,676.80	2,492.20	67.28%	5.99%	11.58%
AVA	2009	1,512.60	2,607.00	58.02%	4.61%	-13.76%
AVA	2010	1,558.70	2,714.20	57.43%	4.11%	-1.02%
AVA	2011	1,619.80	2,860.80	56.62%	5.40%	-1.41%
AVA	2012	1,547.00	3,023.70	51.16%	5.69%	-9.64%
AVA	2013	1,618.50	3,202.40	50.54%	5.91%	-1.22%
AVA	2014	1,472.60	3,620.00	40.68%	13.04%	-19.51%
AVA	2015	1,484.80	3,898.60	38.09%	7.70%	-6.38%
AVA	2016	1,500.00	4,125.00	36.36%	5.81%	-4.52%
AVA	2019-2021	1,800.00	5,050.00	35.64%	22.42%	-1.98%
CMS	2002	\$ 8,687.00	\$ 5,234.00	165.97%		
CMS	2003	5,513.00	6,944.00	79.39%	32.67%	-52.17%
CMS	2004	5,472.00	8,636.00	63.36%	24.37%	-20.19%
CMS	2005	6,288.00	7,845.00	80.15%	-9.16%	26.50%
CMS	2006	6,810.00	7,976.00	85.38%	1.67%	6.52%
CMS	2007	6,519.00	8,728.00	74.69%	9.43%	-12.52%
CMS	2008	6,821.00	9,190.00	74.22%	5.29%	-0.63%
CMS	2009	6,205.00	9,682.00	64.09%	5.35%	-13.65%
CMS	2010	6,432.00	10,069.00	63.88%	4.00%	-0.33%
CMS	2011	6,503.00	10,633.00	61.16%	5.60%	-4.26%
CMS	2012	6,312.00	11,551.00	54.64%	8.63%	-10.65%
CMS	2013	6,566.00	12,246.00	53.62%	6.02%	-1.88%
CMS	2014	7,179.00	13,412.00	53.53%	9.52%	-0.17%
CMS	2015	6,456.00	14,705.00	43.90%	9.64%	-17.98%
CMS	2016	6,450.00	15,575.00	41.41%	5.92%	-5.67%
CMS	2019-2021	7,400.00	18,600.00	39.78%	19.42%	-3.93%
DTE	2002	\$ 6,749.00	\$ 9,813.00	68.78%		
DTE	2003	7,041.00	10,324.00	68.20%	5.21%	-0.84%
DTE	2004	7,114.00	10,491.00	67.81%	1.62%	-0.57%
DTE	2005	9,022.00	10,830.00	83.31%	3.23%	22.85%
DTE	2006	9,022.00	11,451.00	78.79%	5.73%	-5.42%
DTE	2007	8,861.00	11,408.00	77.67%	-0.38%	-1.41%
DTE	2008	9,329.00	12,231.00	76.27%	7.21%	-1.80%
DTE	2009	8,014.00	12,431.00	64.47%	1.64%	-15.48%
DTE	2010	8,557.00	12,992.00	65.86%	4.51%	2.17%
DTE	2011	8,897.00	13,746.00	64.72%	5.80%	-1.73%
DTE	2012	8,791.00	14,684.00	59.87%	6.82%	-7.50%
DTE	2013	9,661.00	15,800.00	61.15%	7.60%	2.13%
DTE	2014	12,301.00	16,820.00	73.13%	6.46%	19.61%
DTE	2015	10,337.00	18,600.00	55.58%	10.58%	-24.01%
DTE	2016	10,900.00	20,025.00	54.43%	7.66%	-2.06%
DTE	2019-2021	13,300.00	25,300.00	52.57%	26.34%	-3.42%
IDA	2002	\$ 928.80	\$ 1,906.50	48.72%		
IDA	2003	782.70	2,088.30	37.48%	9.54%	-23.07%
IDA	2004	844.50	2,209.50	38.22%	5.80%	1.98%
IDA	2005	859.50	2,314.30	37.14%	4.74%	-2.83%
IDA	2006	926.30	2,419.10	38.29%	4.53%	3.10%
IDA	2007	879.40	2,616.60	33.61%	8.16%	-12.23%
IDA	2008	960.40	2,758.20	34.82%	5.41%	3.60%
IDA	2009	1,049.80	2,917.00	35.99%	5.76%	3.36%
IDA	2010	1,036.00	3,161.40	32.77%	8.38%	-8.94%
IDA	2011	1,026.80	3,406.60	30.14%	7.76%	-8.02%
IDA	2012	1,080.70	3,536.00	30.56%	3.80%	1.40%
IDA	2013	1,246.20	3,665.00	34.00%	3.65%	11.26%
IDA	2014	1,282.50	3,833.50	33.46%	4.60%	-1.61%
IDA	2015	1,270.30	3,992.40	31.82%	4.15%	-4.89%
IDA	2016	1,280.00	4,155.00	30.81%	4.07%	-3.18%
IDA	2019-2021	1,375.00	4,675.00	29.41%	12.52%	-4.53%
NWE	2002	NA	NA			
NWE	2003	NA	NA			
NWE	2004	\$ 1,039.00	\$ 1,379.10	75.34%		
NWE	2005	1,165.80	1,409.20	82.73%	2.18%	9.81%
NWE	2006	1,132.70	1,491.90	75.92%	5.87%	-8.23%
NWE	2007	1,200.10	1,770.90	67.77%	18.70%	-10.74%
NWE	2008	1,260.80	1,839.70	68.53%	3.89%	1.13%
NWE	2009	1,141.90	1,964.10	58.14%	6.76%	-15.17%

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

Ticker	Year	Revenue	Net Plant	Revenue/ Net Plant	Change in Net Plant	Change in Revenue/ Net Plant
NWE	2010	1,110.70	2,118.00	52.44%	7.84%	-9.80%
NWE	2011	1,117.30	2,213.30	50.48%	4.50%	-3.74%
NWE	2012	1,070.30	2,435.60	43.94%	10.04%	-12.95%
NWE	2013	1,154.50	2,690.10	42.92%	10.45%	-2.34%
NWE	2014	1,204.90	3,758.00	32.06%	39.70%	-25.29%
NWE	2015	1,214.30	4,059.50	29.91%	8.02%	-6.70%
NWE	2016	1,225.00	4,215.00	29.06%	3.83%	-2.84%
NWE	2019-2021	1,485.00	4,650.00	31.94%	10.32%	9.88%
OTTR	2002	\$ 710.10	\$ 587.90	120.79%		
OTTR	2003	753.20	633.30	118.93%	7.72%	-1.53%
OTTR	2004	882.30	682.10	129.35%	7.71%	8.76%
OTTR	2005	1,046.40	697.10	150.11%	2.20%	16.05%
OTTR	2006	1,105.00	718.60	153.77%	3.08%	2.44%
OTTR	2007	1,238.90	854.00	145.07%	18.84%	-5.66%
OTTR	2008	1,311.20	1,037.60	126.37%	21.50%	-12.89%
OTTR	2009	1,039.50	1,098.60	94.62%	5.88%	-25.12%
OTTR	2010	1,119.10	1,108.70	100.94%	0.92%	6.68%
OTTR	2011	1,077.90	1,077.50	100.04%	-2.81%	-0.89%
OTTR	2012	859.20	1,049.50	81.87%	-2.60%	-18.16%
OTTR	2013	893.30	1,167.00	76.55%	11.20%	-6.50%
OTTR	2014	799.30	1,268.50	63.01%	8.70%	-17.68%
OTTR	2015	779.80	1,387.80	56.19%	9.40%	-10.83%
OTTR	2016	810.00	1,500.00	54.00%	8.08%	-3.90%
OTTR	2019-2021	1,150.00	1,900.00	60.53%	26.67%	12.09%
PNW	2002	\$ 2,637.30	\$ 6,479.40	40.70%		
PNW	2003	2,817.90	7,480.10	37.67%	15.44%	-7.45%
PNW	2004	2,899.70	7,535.50	38.48%	0.74%	2.15%
PNW	2005	2,988.00	7,577.10	39.43%	0.55%	2.48%
PNW	2006	3,401.70	7,881.90	43.16%	4.02%	9.44%
PNW	2007	3,523.60	8,436.40	41.77%	7.04%	-3.22%
PNW	2008	3,367.10	8,916.70	37.76%	5.69%	-9.59%
PNW	2009	3,297.10	9,257.80	35.61%	3.83%	-5.69%
PNW	2010	3,263.60	9,578.80	34.07%	3.47%	-4.33%
PNW	2011	3,241.40	9,962.30	32.54%	4.00%	-4.50%
PNW	2012	3,301.80	10,396.00	31.76%	4.35%	-2.39%
PNW	2013	3,454.60	10,889.00	31.73%	4.74%	-0.11%
PNW	2014	3,491.60	11,194.00	31.19%	2.80%	-1.68%
PNW	2015	3,495.40	11,809.00	29.60%	5.49%	-5.10%
PNW	2016	3,650.00	12,475.00	29.26%	5.64%	-1.15%
PNW	2019-2021	4,350.00	14,550.00	29.90%	16.63%	2.18%
PNM	2002	\$ 1,169.00	\$ 1,867.30	62.60%		
PNM	2003	1,455.70	2,194.40	66.34%	17.52%	5.96%
PNM	2004	1,604.80	2,324.60	69.04%	5.93%	4.07%
PNM	2005	2,076.80	2,984.10	69.60%	28.37%	0.81%
PNM	2006	2,471.70	3,761.90	65.70%	26.06%	-5.59%
PNM	2007	1,914.00	2,935.40	65.20%	-21.97%	-0.76%
PNM	2008	1,959.50	3,192.00	61.39%	8.74%	-5.85%
PNM	2009	1,647.70	3,332.40	49.44%	4.40%	-19.45%
PNM	2010	1,673.50	3,444.40	48.59%	3.36%	-1.74%
PNM	2011	1,700.60	3,627.10	46.89%	5.30%	-3.50%
PNM	2012	1,342.40	3,746.50	35.83%	3.29%	-23.58%
PNM	2013	1,387.90	3,933.90	35.28%	5.00%	-1.54%
PNM	2014	1,435.90	4,270.00	33.63%	8.54%	-4.68%
PNM	2015	1,439.10	4,535.40	31.73%	6.22%	-5.64%
PNM	2016	1,500.00	4,655.00	32.22%	2.64%	1.55%
PNM	2019-2021	1,625.00	5,270.00	30.83%	13.21%	-4.31%
POR	2002	NA	NA			
POR	2003	NA	NA			
POR	2004	1,454.00	2,275.00	63.91%		
POR	2005	1,446.00	2,436.00	59.36%	7.08%	-7.12%
POR	2006	1,520.00	2,718.00	55.92%	11.58%	-5.79%
POR	2007	1,743.00	3,066.00	56.85%	12.80%	1.66%
POR	2008	1,745.00	3,301.00	52.86%	7.66%	-7.01%
POR	2009	1,804.00	3,858.00	46.76%	16.87%	-11.54%
POR	2010	1,783.00	4,133.00	43.14%	7.13%	-7.74%
POR	2011	1,813.00	4,285.00	42.31%	3.68%	-1.92%
POR	2012	1,805.00	4,392.00	41.10%	2.50%	-2.87%
POR	2013	1,810.00	4,880.00	37.09%	11.11%	-9.75%

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

Ticker	Year	Revenue	Net Plant	Revenue/ Net Plant	Change in Net Plant	Change in Revenue/ Net Plant
POR	2014	1,900.00	5,679.00	33.46%	16.37%	-9.80%
POR	2015	1,898.00	6,012.00	31.57%	5.86%	-5.64%
POR	2016	1,975.00	6,315.00	31.27%	5.04%	-0.94%
POR	2019-2021	2,250.00	6,100.00	36.89%	-3.40%	17.94%
SCG	2002 \$	2,954.00	\$ 5,474.00	53.96%		
SCG	2003	3,416.00	6,417.00	53.23%	17.23%	-1.35%
SCG	2004	3,885.00	6,762.00	57.45%	5.38%	7.93%
SCG	2005	4,777.00	6,734.00	70.94%	-0.41%	23.47%
SCG	2006	4,563.00	7,007.00	65.12%	4.05%	-8.20%
SCG	2007	4,621.00	7,538.00	61.30%	7.58%	-5.86%
SCG	2008	5,319.00	8,305.00	64.05%	10.18%	4.47%
SCG	2009	4,237.00	9,009.00	47.03%	8.48%	-26.57%
SCG	2010	4,601.00	9,662.00	47.62%	7.25%	1.25%
SCG	2011	4,409.00	10,047.00	43.88%	3.98%	-7.85%
SCG	2012	4,176.00	10,896.00	38.33%	8.45%	-12.66%
SCG	2013	4,495.00	11,643.00	38.61%	6.86%	0.73%
SCG	2014	4,951.00	12,232.00	40.48%	5.06%	4.84%
SCG	2015	4,380.00	13,425.00	32.63%	9.75%	-19.39%
SCG	2016	4,050.00	14,950.00	27.09%	11.36%	-16.97%
SCG	2019-2021	4,800.00	18,850.00	25.46%	26.09%	-6.00%
XEL	2002 \$	9,524.40	\$ 18,816.00	50.62%		
XEL	2003	7,937.50	13,667.00	58.08%	-27.37%	14.74%
XEL	2004	8,345.30	14,096.00	59.20%	3.14%	1.94%
XEL	2005	9,625.50	14,696.00	65.50%	4.26%	10.63%
XEL	2006	9,840.30	15,549.00	63.29%	5.80%	-3.38%
XEL	2007	10,034.00	16,676.00	60.17%	7.25%	-4.92%
XEL	2008	11,203.00	17,689.00	63.33%	6.07%	5.26%
XEL	2009	9,644.30	18,508.00	52.11%	4.63%	-17.72%
XEL	2010	10,311.00	20,663.00	49.90%	11.64%	-4.24%
XEL	2011	10,655.00	22,353.00	47.67%	8.18%	-4.48%
XEL	2012	10,128.00	23,809.00	42.54%	6.51%	-10.76%
XEL	2013	10,915.00	26,122.00	41.78%	9.71%	-1.77%
XEL	2014	11,686.00	28,757.00	40.64%	10.09%	-2.75%
XEL	2015	11,024.00	31,206.00	35.33%	8.52%	-13.07%
XEL	2016	11,000.00	32,825.00	33.51%	5.19%	-5.14%
XEL	2019-2021	12,000.00	38,400.00	31.25%	16.98%	-6.75%

Source: Value Line

Change in Net Plant and Asset Turnover
Regression Analysis

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.430152
R Square	0.18503
Adjusted R Square	0.181275
Standard Error	0.07206
Observations	219

<i>ANOVA</i>					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.255829	0.255829	49.26760845	2.81898E-11
Residual	217	1.126802	0.005193		
Total	218	1.38263			

	<i>Coefficients</i>	<i>standard Err</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.065382	0.005176	12.63279	8.73845E-28	0.055181573	0.075583
X Variable 1	-0.33807	0.048165	-7.01909	2.81898E-11	-0.433004331	-0.24314

Vertically Integrated Electric Utility Authorized ROEs in Nearby Jurisdictions

State	Company	Case Identification	Date	Authorized ROE	RRA Rank
Oklahoma	Public Service Co. of OK	Ca-PUD201000050	1/5/2011	10.15	Average / 2
Missouri	Kansas City Power & Light	C-ER-2010-0355	4/12/2011	10.00	Average / 2
Missouri	KCP&L Greater Missouri Op Co	C-ER-2010-0356 (MPS)	5/4/2011	10.00	Average / 2
Missouri	KCP&L Greater Missouri Op Co	C-ER-2010-0356 (L&P)	5/4/2011	10.00	Average / 2
Arkansas	Oklahoma Gas and Electric Co.	D-10-067-U	6/17/2011	9.95	Average / 2
Missouri	Union Electric Co.	C-ER-2011-0028	7/13/2011	10.20	Average / 2
South Carolina	Duke Energy Carolinas LLC	D-2011-271-E	1/25/2012	10.50	Average / 1
North Carolina	Duke Energy Carolinas LLC	D-E-7, Sub 989	1/27/2012	10.50	Average / 1
Florida	Gulf Power Co.	D-110138-EI	2/27/2012	10.25	Above Average / 3
Oklahoma	Oklahoma Gas and Electric Co.	Ca-PUD201100087	7/9/2012	10.20	Average / 2
Texas	Entergy Texas Inc.	D-39896	9/13/2012	9.80	Below Average / 1
Missouri	Union Electric Co.	C-ER-2012-0166	12/12/2012	9.80	Average / 2
Florida	Florida Power & Light Co.	D-120015-EI	12/13/2012	10.50	Above Average / 3
Kansas	Kansas City Power & Light	D-12-KCPE-764-RTS	12/13/2012	9.50	Average / 2
South Carolina	South Carolina Electric & Gas	D-2012-218-E	12/19/2012	10.25	Average / 1
Kentucky	Kentucky Utilities Co.	C-2012-00221	12/20/2012	10.25	Average / 1
Kentucky	Louisville Gas & Electric Co.	C-2012-00222 (elec.)	12/20/2012	10.25	Average / 1
North Carolina	Virginia Electric & Power Co.	D-E-22, Sub 479	12/21/2012	10.20	Average / 1
Missouri	Kansas City Power & Light	C-ER-2012-0174	1/9/2013	9.70	Average / 2
Missouri	KCP&L Greater Missouri Op Co	C-ER-2012-0175 (MPS)	1/9/2013	9.70	Average / 2
Missouri	KCP&L Greater Missouri Op Co	C-ER-2012-0175 (L&P)	1/9/2013	9.70	Average / 2
Louisiana	Southwestern Electric Power Co	D-U-32220	2/27/2013	10.00	Average / 1
North Carolina	Duke Energy Progress LLC	D-E-2, Sub 1023	5/30/2013	10.20	Average / 1
Florida	Tampa Electric Co.	D-130040-EI	9/11/2013	10.25	Above Average / 3
South Carolina	Duke Energy Carolinas LLC	D-2013-59-E	9/11/2013	10.20	Average / 1
North Carolina	Duke Energy Carolinas LLC	D-E-7, Sub 1026	9/24/2013	10.20	Average / 1
Texas	Southwestern Electric Power Co	D-40443	10/3/2013	9.65	Below Average / 1
Kansas	Westar Energy Inc.	D-13-WSEE-629-RTS	11/21/2013	10.00	Average / 2
Florida	Gulf Power Co.	D-130140-EI	12/3/2013	10.25	Above Average / 3
Louisiana	Entergy Gulf States LA LLC	D-U-32707	12/16/2013	9.95	Average / 1
Louisiana	Entergy Louisiana LLC	D-U-32708	12/16/2013	9.95	Average / 1
Georgia	Georgia Power Co.	D-36989	12/17/2013	10.95	Above Average / 3
Arkansas	Entergy Arkansas Inc.	D-13-028-U	12/30/2013	9.50	Average / 2
Texas	Entergy Texas Inc.	D-41791	5/16/2014	9.80	Below Average / 1
Louisiana	Entergy Louisiana LLC	D-UD-13-01	7/10/2014	9.95	Average / 1
Florida	Florida Public Utilities Co.	D-140025-EI	9/15/2014	10.25	Above Average / 3
Mississippi	Entergy Mississippi Inc.	D-2014-UN-0132	12/11/2014	10.07	Above Average / 3
Missouri	Union Electric Co.	C-ER-2014-0258	4/29/2015	9.53	Average / 2
Missouri	Kansas City Power & Light	C-ER-2014-0370	9/2/2015	9.50	Average / 2
Kansas	Kansas City Power & Light	D-15-KCPE-116-RTS	9/10/2015	9.30	Average / 2
Texas	Southwestern Public Service Co	D-43695	12/17/2015	9.70	Below Average / 1
Arkansas	Entergy Arkansas Inc.	D-15-015-U	2/23/2016	9.75	Average / 2
Mean by RRA Rank : Above Average				10.36	
Average				9.96	
Below Average				9.74	

Source: Regulatory Research Associates