APPENDIX A

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BEFORE THE PUBLIC SERVICE COMMISSION

OF SOUTH CAROLINA

DIRECT TESTIMONY OF

ROBERT B. HEVERT

ON BEHALF OF

SOUTH CAROLINA ELECTRIC & GAS COMPANY

DOCKET NO. 2017-370-E

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I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME, AFFILIATION, AND BUSINESS ADDRESS.

A. My name is Robert B. Hevert. I am Partner of ScottMadden, Inc. ("ScottMadden"). My business address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts, 01581.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am submitting this testimony ("Direct Testimony") to the Public Service Commission of South Carolina ("Commission") on behalf of South Carolina Electric & Gas Company, referred to throughout my Direct Testimony as "SCE&G," or the "Company."

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

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

Q. PLEASE DESCRIBE YOUR EXPERIENCE IN THE ENERGY AND UTILITY INDUSTRIES.

A. I have worked in regulated industries for more than thirty years, having served as an executive and manager with consulting firms, a financial officer of a publicly traded natural gas utility (at the time, Bay State Gas Company), and an analyst at a telecommunications utility. In my role as a consultant, I have advised numerous energy and utility clients on a wide range of financial and economic issues, including corporate and asset-based transactions, asset and enterprise valuation, transaction due diligence, and strategic matters. As an expert witness, I have provided testimony regarding various

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financial and regulatory matters in more than 250 proceedings before numerous utility regulatory agencies, including the Federal Energy Regulatory Commission and the Alberta Utilities Commission. A summary of my professional and educational background, including a list of my testimony in prior proceedings, is included as Attachment A to my Direct Testimony.

II. PURPOSE AND OVERVIEW OF DIRECT TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my Direct Testimony is to provide an estimate of the Company's current market-required Return on Equity ("ROE" or "Cost of Equity"). I then compare that market-required return with the *pro forma* Return on Equity under four different scenarios: (1) the "Customer Benefits Plan"; (2) the "No Merger Benefits Plan"; (3) the "Base Request"; and (4) the "Experimental Rates" that would result under Act 258 enacted by the South Carolina General Assembly on June 28, 2018 (the "Act") if such rates are made permanent. My analyses and conclusions are supported by the data presented in Exhibit No.___(RBH-1) through Exhibit No.___(RBH-6), which have been prepared by me or under my direction.

Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE MARKET-REQUIRED RETURN ON EQUITY FOR A COMPANY SUCH AS SCE&G?

A. My analyses indicate that Company's Cost of Equity currently is in the range of 10.25 percent to 11.00 percent. Based on the quantitative and qualitative analyses discussed throughout my Direct Testimony, I conclude that an ROE of 10.75 percent is most reasonable and appropriate. The *pro forma* effect of the Experimental Rate, if made permanent, however, would reduce the Company's ROE to a level far below the lowest

return authorized for any vertically integrated electric utility since at least 1980.[1] Such a return clearly fails to meet the Comparable Risk, Capital Attraction, and Financial Integrity standards established by *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*") and *Bluefield Water Works and Improvement Co. v. Public Service Comm'n*. 262 U.S. 679, 692 (1923) ("*Bluefield*"). By my plain reading of those standards, the *pro forma* return that would result under the Experimental Rate, if made permanent, is neither just nor reasonable, and, in my opinion, is confiscatory on its face.

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE ANALYSES THAT LED TO YOUR ROE RECOMMENDATION.

A. As discussed in more detail in Section VII, in light of recent market conditions, and given the fact that equity analysts and investors tend to use multiple methodologies in developing their return requirements, it is important to consider the results of several analytical approaches in determining the Company's ROE. To develop my ROE estimate, I therefore considered the Constant Growth and Multi-Stage forms of the DCF model, the Capital Asset Pricing Model (both the traditional and empirical forms), and the Bond Yield Plus Risk Premium approach.

Q. HOW IS THE REMAINDER OF YOUR DIRECT TESTIMONY ORGANIZED?

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

Section III – Provides a summary of my conclusions and recommendations;

Section IV – Discusses the regulatory guidelines and financial considerations pertinent to the development of the cost of capital;

[1] Source: Regulatory Research Associates.

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Section V – Explains my selection of the proxy group of electric utilities used to develop my analytical results;

Section VI – Explains my analyses and the analytical bases for my ROE recommendation;

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

Section VIII – Discusses the *pro forma* effect of the Customer Benefits Plan, the No Merger Benefits Plan, the Base Request, and the Experimental Rates, if made permanent, on the Company's earned ROE.

III. SUMMARY OF CONCLUSIONS

Q. WHAT ARE THE KEY FACTORS CONSIDERED IN YOUR ANALYSES AND UPON WHICH YOU BASE YOUR RECOMMENDED ROE?

A. My analyses and recommendations considered the following:

- The *Hope* and *Bluefield* decisions that established the standards for determining a fair and reasonable allowed return on equity including: consistency of the allowed return with other businesses having similar risk; adequacy of the return to provide access to capital and support credit quality; and that the end result must lead to just and reasonable rates;
- The effect of the current capital market conditions on investors' return requirements, and in particular, the Company's need to access the capital markets; and
- The effect of the Tax Cuts and Jobs Act of 2017 ("TCJA") enacted on December 22, 2017.

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Q. WHAT ARE THE RESULTS OF YOUR ANALYSES?

A. The results of my analyses are summarized in Tables 1a and 1b below.[2]

Table 1a: Summary of DCF Results

Discounted Cash Flow	*Mean Low*	*Mean*	*Mean High*
Constant Growth DCF			
30-Day Constant Growth DCF	8.45%	9.24%	10.12%
90-Day Constant Growth DCF	8.49%	9.29%	10.16%
180-Day Constant Growth DCF	8.37%	9.16%	10.03%
Multi-Stage DCF (Gordon Method)			
30-Day Multi-Stage DCF	9.05%	9.23%	9.45%
90-Day Multi-Stage DCF	9.09%	9.28%	9.50%
180-Day Multi-Stage DCF	8.96%	9.14%	9.36%
Multi-Stage DCF (Terminal P/E)			
30-Day Multi-Stage DCF	9.40%	9.89%	10.42%
90-Day Multi-Stage DCF	9.53%	10.02%	10.55%
180-Day Multi-Stage DCF	9.19%	9.67%	10.21%

[2] *See* Exhibit No.___(RBH-1) through Exhibit No.___(RBH-6).

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Table 1b: Summary of Risk Premium Results

Risk Premium			
CAPM Results		***Bloomberg Derived Market Risk Premium***	***Value Line Derived Market Risk Premium***
Average Bloomberg Beta Coefficient			
Current 30-Year Treasury (3.11%)		10.13%	10.34%
Near Term Projected 30-Year Treasury (3.48%)		10.50%	10.71%
Average Value Line Beta Coefficient			
Current 30-Year Treasury (3.11%)		11.66%	11.91%
Near Term Projected 30-Year Treasury (3.48%)		12.03%	12.28%
ECAPM Results		***Bloomberg Derived Market Risk Premium***	***Value Line Derived Market Risk Premium***
Average Bloomberg Beta Coefficient			
Current 30-Year Treasury (3.11%)		11.53%	11.78%
Near Term Projected 30-Year Treasury (3.48%)		11.90%	12.15%
Average Value Line Beta Coefficient			
Current 30-Year Treasury (3.11%)		12.68%	12.95%
Near Term Projected 30-Year Treasury (3.48%)		13.05%	13.33%
	Low	***Mid***	***High***
Bond Yield Risk Premium	9.96%	10.03%	10.28%

Based on these analytical results, and in light of the considerations discussed throughout the balance of my Direct Testimony regarding the current capital market environment and the effect of the TCJA, it is my view that the reasonable range of estimates is from 10.25 percent to 11.00 percent, and within that range, 10.75 percent is the most reasonable estimate of the Company's current Cost of Equity.

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

Q. BEFORE ADDRESSING THE SPECIFIC ASPECTS OF THIS PROCEEDING, PLEASE PROVIDE AN OVERVIEW OF THE ISSUES SURROUNDING THE COST OF EQUITY IN REGULATORY PROCEEDINGS, GENERALLY.

A. In very general terms, the Cost of Equity is the return that investors require to make an equity investment in a firm. That is, investors will provide funds to a firm only if the return they *expect* is equal to, or greater than, the return they *require* to accept the risk of providing funds to the firm. From the firm's perspective, that required return, whether it is provided to debt or equity investors, has a cost. Individually, we speak of the "Cost of Debt" and the "Cost of Equity" as measures of those costs; together, they are referred to as the "Cost of Capital."

The Cost of Capital (including the costs of both debt and equity) is based on the economic principle of "opportunity costs." Investing in any asset, whether debt or equity securities, implies a forgone opportunity to invest in alternative assets. For any investment to be sensible, its expected return must be at least equal to the return expected on alternative, comparable risk investment opportunities. Because investments with like risks should offer similar returns, the opportunity cost of an investment should equal the return available on an investment of comparable risk. In that important respect, the returns required by debt and equity investors represent a cost to the Company.

Although both debt and equity have required costs, they differ in certain fundamental respects. Most noticeably, the Cost of Debt is contractually defined – debt holders are promised a series of specified interest payments and have a contractual right to receive the bond's par value upon maturity. Equity investors have no such assurances -

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they hold a security that never matures, receive no repayment of principal from the issuing firm, and receive dividend payments whose timing and amounts are at the issuing firm's discretion. Moreover, equity investors have a claim on cash flows only after debt holders and other creditors are paid. Because equity investors bear the "residual risk" of ownership in perpetuity, they take greater risks and require higher returns than debt holders.

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

Q. PLEASE PROVIDE A BRIEF SUMMARY OF THE PRINCIPLES ESTABLISHED BY THE UNITED STATES SUPREME COURT (THE "COURT") FOR DETERMINING THE RETURN ON EQUITY.

A. Over 90 years ago, the Court established the guiding principles for establishing a fair return for capital in two cases: (1) *Bluefield Water Works and Improvement Co. v. Public Service Comm'n*. ("*Bluefield*"); and (2) *Federal Power Comm'n v. Hope Natural Gas Co.* ("*Hope*"). In *Bluefield*, the Court stated:

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> A public utility is entitled to such rates as will permit it to earn a return upon the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit, and enable it to raise the money necessary for the proper discharge of its public duties.[3]

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

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

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock.... By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.[4]

In summary, the Court clearly has recognized that the fair rate of return on equity should be: (1) comparable to returns investors expect to earn on other investments of

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[3] *Bluefield*, 262 U.S. at 692.

[4] *Hope*, 320 U.S. at 603.

similar risk; (2) sufficient to assure confidence in the company's financial integrity; and (3) adequate to maintain and support the company's credit and to attract capital.

Q. HAS SOUTH CAROLINA APPLIED THE *HOPE* AND *BLUEFIELD* STANDARDS?

A. Yes. The Commission and the South Carolina courts uphold the precedents of the *Hope* and *Bluefield* cases. Specifically, and by way of example, the standards established in the *Hope* and *Bluefield* decisions were acknowledged by the Commission in an Order issued in 2010.[5] That Order set forth four principles regarding the determination of the rate of return:

> (1) The rate of return should be sufficient to allow SCE&G the opportunity to earn a return equal to firms facing similar risks;
> (2) The rate of return should be adequate to assure investors of the financial soundness of the utility and to support the utility's credit and ability to raise capital needed for on-going utility operations at reasonable cost;
> (3) The rate of return should be determined with due regard for the present business and capital market conditions facing the utility;
> (4) The rate of return is not formula-based, but requires an informed expert judgment by the Commission balancing the interests of shareholders and customers.[6]

The *Hope* and *Bluefield* standards also were recognized and followed by the Supreme Court of South Carolina in *Southern Bell Tel. & Tel. Co. v. Public Service Comm'n of South Carolina*.[7]

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5 Public Service Comm'n of South Carolina, Docket No. 2009-489-E, Order No. 2010-471 dated July 15, 2010, pp. 28-30.

6 *Ibid.*, at 30 *citing* Docket No. 2004-178-E, Order No. 2005-2 dated January 6, 2005, p. 85. *See also* Public Service Comm'n of South Carolina, Docket No. 2012-218-E, Order No. 2012-951 dated December 20, 2012, pp. 41-42.

7 *Southern Bell Tel. & Tel. Co. v. Public Service Comm'n of South Carolina*, 244 S.E.2d 278 (1978).

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Q. ASIDE FROM THE STANDARDS ESTABLISHED BY THE COMMISSION AND THE COURTS, WHY IS IT IMPORTANT FOR A PUBLIC UTILITY TO BE ALLOWED THE OPPORTUNITY TO EARN A RETURN THAT IS ADEQUATE TO ATTRACT EQUITY CAPITAL AT REASONABLE TERMS?

A. A return that is adequate to attract capital at reasonable terms enables the utility to provide safe and reliable service while maintaining its financial integrity. As discussed above, and in keeping with the *Hope* and *Bluefield* standards, that return should be commensurate with the returns expected elsewhere in the market for investments of comparable risk. That is, a reasonable Return on Equity provides the Company the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms; (2) sufficient to ensure its financial integrity so as to maintain and support its credit; and (3) commensurate with returns on investments in enterprises having corresponding risks.

V. PROXY GROUP SELECTION

Q. AS A PRELIMINARY MATTER, WHY IS IT NECESSARY TO SELECT A GROUP OF PROXY COMPANIES TO DETERMINE THE COST OF EQUITY FOR SCE&G?

A. First, it is important to bear in mind that the Cost of Equity for a given enterprise depends on the risks attendant to the business in which the company is engaged. According to financial theory, the value of a given company is equal to the aggregate market value of its constituent business units. The value of the individual business units reflects the risks and opportunities inherent in the business sectors in which those units operate. In this proceeding, we are focused on estimating the Cost of Equity for SCE&G, which is an operating subsidiary of SCANA Corporation ("SCANA"). Because the ROE is a market-

based concept and SCE&G is not a publicly traded entity, it is necessary to establish a group of companies that are both publicly traded and reasonably comparable to the Company in certain fundamental respects to serve as its "proxy" in the ROE estimation process.

Even if SCE&G were a publicly traded entity, it is possible that short-term events could bias its market value in one way or another during a given period. A significant benefit of using a proxy group, therefore, is that it serves to moderate the effects of anomalous, temporary events that may be associated with any one company.

Q. DOES THE SELECTION OF A PROXY GROUP SUGGEST THAT ANALYTICAL RESULTS WILL BE TIGHTLY CLUSTERED AROUND AVERAGE (*I.E.*, MEAN) RESULTS?

A. Not necessarily. The DCF approach is based on the theory that a stock's current price represents the present value of its future expected cash flows. The Constant Growth form of the DCF model is defined as the sum of the expected dividend yield and projected long-term growth. Notwithstanding the care taken to ensure risk comparability, market expectations with respect to future risks and growth opportunities will vary from company to company. Therefore, even within a group of similarly situated companies, it is common for analytical results to reflect a seemingly wide range. At issue, then, is how to estimate a company's ROE from within that range. Such a determination necessarily must consider a wide range of both quantitative and qualitative information.

Q. PLEASE PROVIDE A SUMMARY PROFILE OF SCE&G.

A. SCE&G provides electric generation, transmission, and distribution services in central, southern, and southwestern portions of South Carolina to approximately 719,000

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retail customers.[8] As discussed in further detail by SCE&G Witness Ellen Lapson, SCANA's current long-term issuer credit rating from Standard & Poor's ("S&P") is BBB (Watch: Negative), Ba1 (Outlook Negative) from Moody's Investors Service ("Moody's"), and BB+ (Evolving Watch) from FitchRatings ("Fitch"). SCE&G currently is rated BBB (Watch: Negative) by S&P, Baa3 (Outlook Negative) by Moody's, and BBB- (Evolving Watch) by Fitch. Those ratings reflect recent downgrades by each of the three rating agencies. In the cases Moody's and Fitch, SCE&G's credit ratings now fall at the lowest investment grade level; SCANA's ratings from Moody's and Fitch are below investment grade.

Q. HOW DID YOU SELECT THE COMPANIES INCLUDED IN YOUR PROXY GROUP?

A. A proxy group should consist of companies with risk profiles comparable to the subject company. In selecting a proxy group, my objective was to balance the competing interests of selecting companies that are highly representative of the risks and prospects faced by SCE&G, while at the same time ensuring that there is a sufficient number of companies in the proxy group. Based on those two considerations, I began with the universe of companies that Value Line classifies as Electric Utilities, and applied the following screening criteria:

- I excluded one company because it does not consistently pay quarterly cash dividends;
- I excluded companies that are not covered by at least two utility industry equity analysts;

[8] SCANA Corp., 2017 SEC Form 10-K, at 5.

- I excluded companies that are not vertically-integrated;
- I excluded companies whose regulated operating income over the three most recently reported fiscal years composed less than 60.00 percent of the respective totals for that company;
- 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;[9] and
- I eliminated companies that are currently known to be party to a merger or other significant transaction.

Q. DID YOU INCLUDE SCANA IN YOUR ANALYSIS?

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

Q. WHAT COMPANIES MET THOSE SCREENING CRITERIA?

A. The criteria discussed above resulted in an initial proxy group of the following 22 companies:

[9] In prior cases before the Commission, I excluded companies whose regulated electric operating income over the three most recently reported fiscal years represented less than 90.00 percent of total regulated operating income. However, due to recent consolidation in the industry, that threshold would produce a relatively small group of proxy companies. As such, I have lowered the threshold to 60.00 percent.

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Table 2: Proxy Group Screening Results

Company	Ticker
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Avangrid, Inc.	AGR
Black Hills Corporation	BKH
CMS Energy Corporation	CMS
DTE Energy Company	DTE
Duke Energy Corporation	DUK
El Paso Electric	EE
Hawaiian Electric Industries, Inc.	HE
IDACORP, Inc.	IDA
NextEra Energy, Inc.	NEE
NorthWestern Corporation	NWE
OGE Energy Corp.	OGE
Otter Tail Corporation	OTTR
Pinnacle West Capital Corporation	PNW
PNM Resources, Inc.	PNM
Portland General Electric Company	POR
Southern Company	SO
WEC Energy Group, Inc.	WEC
Xcel Energy Inc.	XEL

Q. ARE THE COMPANIES LISTED IN TABLE 2 THE SAME AS THOSE INCLUDED IN THE PROXY GROUP IN YOUR SWORN STATEMENT FILED ON DECEMBER 7, 2017 IN DOCKET NO. 2017-305-E ("SWORN STATEMENT")?

A. No. Subsequent to the filing of my Sworn Statement, Dominion Energy, Inc. ("Dominion Energy") announced its plan to acquire SCANA.[10] As such, the screening

[10] *See* Dominion Energy Inc. SEC Form 8-K, January 3, 2018. The transaction was approved by SCANA's shareholders on July 31, 2018. *See*, Dominion Energy Inc. SEC Form 8-K, July 31, 2018

criterion excluding companies involved in a merger or significant transaction now applies to Dominion Energy. Therefore, I have removed Dominion Energy from the proxy group. I also have eliminated the screening criterion that excluded companies whose coal-fired generation constituted less than 10.00 percent of net generation. The removal of that screening criterion added four companies to the proxy group: Avangrid, Inc.; El Paso Electric Company; Hawaiian Electric Industries, Inc.; and NextEra Energy, Inc.

Q. OTHER THAN REMOVING DOMINION ENERGY, DOES THE PROPOSED COMBINATION OF SCANA AND DOMINION ENERGY AFFECT YOUR PROXY GROUP?

A. No, it does not. The proxy group is intended to reflect the risks and prospects associated with vertically integrated electric utilities comparable to SCE&G, without respect to the scenarios discussed in Section VIII. In my view, the proposed combination of SCANA and Dominion Energy does not affect the criteria by which the proxy group should be selected. It therefore does not alter the proxy group's composition, or change any conclusions derived from it.

VI. COST OF EQUITY ESTIMATION

Q. PLEASE BRIEFLY DISCUSS THE ROE IN THE CONTEXT OF THE REGULATED RATE OF RETURN.

A. Regulated utilities principally use common stock and long-term debt to finance their permanent property, plant, and equipment. The overall rate of return ("ROR") for a regulated utility is based on its weighted average cost of capital, in which the cost rates of the individual sources of capital are weighted by their respective book values. Whereas

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the cost of debt and cost of preferred stock can be directly observed, the Cost of Equity is market-based and, therefore, must be estimated based on observable market information.

Q. HOW IS THE REQUIRED ROE DETERMINED?

A. The ROE is estimated by applying various financial models to market-based data. By their nature, those models produce a range of results, from which the market-required ROE must be determined. As discussed throughout my Direct Testimony, that determination must be based on a comprehensive review of relevant data and information and does not necessarily lend itself to a strict mathematical solution. The key consideration in determining the ROE is to ensure the overall analysis reasonably reflects investors' view of the financial markets in general, and the subject company (in the context of the proxy companies) in particular.

Because the Cost of Equity is not directly observable, it must be estimated based on both quantitative and qualitative information. As a result, a number of models have been developed to estimate the Cost of Equity. As a practical matter, however, all of the models available for estimating the Cost of Equity are subject to limiting assumptions or other methodological constraints. Consequently, many finance texts recommend using multiple approaches when estimating the Cost of Equity.[11] When faced with the task of estimating the Cost of Equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed and, therefore, are inclined to rely on multiple analytical approaches.

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

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Practitioners and academics recognize that financial models simply are tools to be used in the ROE estimation process, and that strict adherence to any single approach, or to the specific results of any single approach, can lead to flawed or misleading conclusions. That position is consistent with the *Hope* and *Bluefield* principle that it is the analytical result, as opposed to the methodology employed, that is controlling in arriving at ROE determinations. A reasonable ROE estimate therefore appropriately considers alternate methodologies, and the reasonableness of their individual and collective results.

Consequently, I believe it is both prudent and appropriate to use multiple methods to mitigate the effects of assumptions and inputs associated with any individual approach. Such use, however, must be tempered with due caution as to the results generated by each individual approach. I therefore considered the Constant Growth and Multi-Stage forms of the DCF model, the Capital Asset Pricing Model (both the traditional and empirical forms), and the Bond Yield Plus Risk Premium approach.

Constant Growth DCF Model

Q. ARE DCF MODELS WIDELY USED IN REGULATORY PROCEEDINGS?

A. Yes, in my experience the Constant Growth DCF model is recognized in regulatory proceedings, as well as in financial literature. Nonetheless, neither the DCF nor any other model should be applied without considerable judgment in the selection of data and the interpretation of results.

Q. PLEASE DESCRIBE THE DCF APPROACH.

A. The 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 DCF model

expresses the Cost of Equity as the sum of the expected dividend yield and long-term growth rate, and is expressed as follows:

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

where P represents the current stock price, $D_1 \ldots D_\infty$ 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:

$$k = \frac{D_0\ (1+g)}{P} + g \quad [2]$$

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

Q. WHAT ASSUMPTIONS ARE REQUIRED FOR THE CONSTANT GROWTH DCF MODEL?

A. The Constant Growth DCF model requires the following assumptions: (1) a constant average annual growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings multiple; and (4) a discount rate greater than the expected growth rate. Under those assumptions, dividends, earnings, book value, and the stock price all grow at the same, constant rate. The model further assumes the current Cost of Equity (that is, its result) will remain unchanged in perpetuity

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Q. WHAT MARKET DATA DID YOU USE TO CALCULATE THE DIVIDEND YIELD COMPONENT OF 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 June 15, 2018.

Q. WHY DID YOU USE THREE AVERAGING PERIODS TO CALCULATE AN AVERAGE STOCK PRICE?

A. I did so to ensure 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, 30-, 90-, and 180-day averaging periods reasonably balance those concerns. As discussed later in my Direct Testimony, however, to the extent the averaging conventions include periods during which utility stocks were valued at unusual levels, Discounted Cash Flow-based methods may provide unreliable results.

Q. DID YOU MAKE ANY ADJUSTMENTS TO THE DIVIDEND YIELD TO ACCOUNT FOR PERIODIC GROWTH IN DIVIDENDS?

A. Yes, I did. Because utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is appropriate to calculate the expected dividend yield by applying one-half of the long-term growth rate to the current dividend yield.[12] That adjustment ensures that the expected dividend yield is,

[12] *See* Exhibit No.___(RBH-1).

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

Q. IS IT IMPORTANT TO SELECT APPROPRIATE MEASURES OF LONG-TERM GROWTH IN APPLYING THE DCF MODEL?

A. Yes. In its Constant Growth form, the DCF model (*i.e.*, as presented in Equation [2] above) assumes a single growth estimate in perpetuity. Accordingly, to reduce the long-term growth rate to a single measure, one must assume a fixed payout ratio, and the same constant growth rate for earnings per share ("EPS"), dividends per share, and book value per share. Because dividends are sustained by earnings growth, the model should incorporate a variety of measures of long-term earnings growth. That can be accomplished by considering those measures of long-term growth that tend to be least influenced by capital allocation decisions that companies may make in response to near-term changes in the business environment. Therefore, for the purposes of the Constant Growth DCF model, growth in EPS represents the appropriate measure of long-term growth.

Q. PLEASE SUMMARIZE THE FINDINGS OF ACADEMIC RESEARCH ON THE APPROPRIATE MEASURE FOR ESTIMATING EQUITY RETURNS USING THE DCF MODEL.

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

> For many years, it was thought that investors bought utility stocks largely on the basis of dividends. More recently, however, studies indicate that the

[13] *See*, for example, Harris, Robert, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management, Spring 1986.

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> market is valuing utility stocks with reference to total per share earnings, so that the earnings-price ratio has assumed increased emphasis in rate cases.[14] Philips' conclusion continues to hold true.

Subsequent academic research has clearly and consistently indicated that measures of earnings and cash flow are strongly related to returns, and that analysts' forecasts of growth are superior to other measures of growth in predicting stock prices.[15] For example, Vander Weide and Carleton state that, "[our] results…are consistent with the hypothesis that investors use analysts' forecasts, rather than historically oriented growth calculations, in making stock buy-and-sell decisions."[16] Other research specifically notes the importance of analysts' growth estimates in determining the Cost of Equity, and in the valuation of equity securities. Dr. Robert Harris noted that "a growing body of knowledge shows that analysts' earnings forecast are indeed reflected in stock prices." Citing Cragg and Malkiel, Dr. Harris notes that those authors "found that the evaluations of companies that analysts make are the sorts of ones on which market valuation is based."[17] Similarly, Brigham, Shome and Vinson noted that "evidence in the current literature indicates that (i) analysts' forecasts are superior to forecasts based solely on time series data; and (ii) investors do rely on analysts' forecasts."[18]

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14 Charles F. Phillips, Jr., The Economics of Regulation, Revised Edition, 1969, Richard D. Irwin, Inc., at 285.

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

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

17 Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management, Spring 1986.

18 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.

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

Q. PLEASE SUMMARIZE YOUR INPUTS TO THE CONSTANT GROWTH DCF MODEL.

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

1. The average daily closing prices for the 30-trading days, 90-trading days, and 180-trading days ended June 15, 2018, for the term P_0; and
2. The annualized dividend per share as of June 15, 2018, for the term D_0.

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

1. The Zack's consensus long-term earnings growth estimates;
2. The First Call consensus long-term earnings growth estimates; and
3. The Value Line long-term earnings growth estimates.

Q. HOW DID YOU CALCULATE THE HIGH AND LOW DCF RESULTS?

A. I calculated the proxy group mean and median high DCF results using the maximum EPS growth rate as reported by Value Line, Zack's, and First Call for each proxy group company in combination with the dividend yield for each of the proxy group companies. The proxy group mean and median high results then reflect the average maximum DCF result for the proxy group as a whole. I used a similar approach to calculate

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the proxy group mean and median low results using instead the minimum growth rate as reported by Value Line, Zack's, and First Call for each proxy group company.

As noted earlier, the Constant Growth DCF model is subject to several assumptions that likely are not consistent with current market conditions. For example, the model assumes the current payout ratio will remain constant in perpetuity. The model further assumes the return estimated today will be the same return required in perpetuity, even though the Federal Reserve recently has begun its move toward monetary policy normalization. That process of normalization, together with the uncertainty surrounding the "unwinding" of the assets put on the Federal Reserve's balance sheet during its "Quantitative Easing" initiatives, introduce a degree of risk, and a likelihood of increasing interest rates not present in the current market. As also discussed later in my Direct Testimony, other methods more directly reflect the risk premium required by investors in response to such risks. On balance, it is my view that the Constant Growth DCF method should be given less weight than other methods in establishing the Company's ROE

Q. WHAT ARE THE RESULTS OF YOUR DCF ANALYSIS?

A. My Constant Growth DCF results are summarized Table 3, below (*see* Exhibit No.___(RBH-1).

Table 3: Constant Growth DCF Results

	Mean Low	***Mean***	***Mean High***
30-Day Average	8.45%	9.24%	10.12%
90-Day Average	8.49%	9.29%	10.16%
180-Day Average	8.37%	9.16%	10.03%

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Q. HOW DID YOU REFLECT THE CONSTANT GROWTH DCF RESULTS IN YOUR ROE RANGE AND RECOMMENDATION?

A. I first recognized that the model's mean, and mean low results are well below a reasonable estimate of the Company's Cost of Equity. For example, of the 1,395 vertically-integrated electric utility rate cases provided by Regulatory Research Associates that disclosed the awarded ROE since 1980, only one authorized ROE has been as low as 9.00 percent.[19] On that basis alone, the Constant Growth DCF mean and mean low results are not reliable measures of electric utilities' Cost of Equity.

I then considered why the Constant Growth model is producing such low estimates of the Company's Cost of Equity. In one sense, relatively low dividend yields should be associated with relatively high growth rates. That is, low dividend yields are the result of relatively high stock prices which, in turn, should be associated with relatively high growth rates. If those relationships do not hold, the model's results should be viewed with caution. My recommendation therefore considers the full range of DCF results, along with the range of results from the methods discussed in the following sections of my Direct Testimony.

Multi-Stage DCF Model

Q. IS IT REASONABLE TO CONSIDER ANALYTICAL MODELS IN ADDITION TO THE CONSTANT GROWTH DCF MODEL?

A. Yes. As noted earlier, it is both prudent and appropriate to use multiple methods to mitigate the effects of assumptions and inputs associated with any single approach. Second, the Constant Growth DCF model assumes earnings, dividends and book value will grow at the same, constant rate in perpetuity; the payout ratio will remain constant in

[19] Source: Regulatory Research Associates.

perpetuity; the Price/Earnings ("P/E") ratio will remain constant; and the return required today will be the same return required every year in the future. However, those assumptions are not likely to hold. For example, to the extent long-term interest rates increase over the next few years in response to Federal monetary policy "normalization," it is likely that the Cost of Equity also will increase. It therefore is appropriate to consider more than one analytical model in estimating the ROE.

Q. WHAT OTHER FORM OF THE DCF MODEL HAVE YOU USED?

A. To address the considerations underlying the Constant Growth form of the DCF model, discussed above, I also considered the Multi-Stage (three-stage) Discounted Cash Flow 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 (*i.e.*, time periods). 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. As such, the Multi-Stage DCF model enables analysts to address the limiting, and likely unrealistic assumptions underlying the Constant Growth form of the model.

Q. PLEASE DESCRIBE THE STRUCTURE OF YOUR MULTI-STAGE MODEL.

A. As noted above, the 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 (*i.e.*, the "terminal price"). I calculated the terminal price based on the Gordon model,

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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 stage, 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 4 (below).

Table 4: Multi-Stage DCF Model 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 YOUR THREE-STAGE MODEL?

A. The primary benefits relate to the flexibility provided by the model's formulation. Because 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 grow at the same, constant rate in perpetuity. In addition, by calculating the dividend as the product of earnings and the payout ratio, the model enables analysts to reflect

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assumptions regarding the timing and extent of changes in the payout ratio to reflect, for example, increases or decreases in expected capital spending, or transition from current payout levels to long-term expected levels. In that regard, because the model relies on multiple sources of earnings growth rate assumptions, it is not limited to a single source, such as Value Line, for all inputs, and mitigates the potential bias associated with relying on a single source of growth estimates.[20]

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

Q. PLEASE SUMMARIZE YOUR INPUTS TO THE MULTI-STAGE DCF MODEL.

A. I applied the Multi-Stage model to the proxy group described earlier in my Direct Testimony. My assumptions with respect to the various model inputs are described in Table 5 (below).

[20] *See*, for example, Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, 21 (Summer 1992).

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Table 5: Multi-Stage DCF Model Assumptions

	Stage			
	Initial	**First**	**Transition**	**Terminal**
Stock Price	30-, 90-, and 180-day average stock price as of June 15 2018.			
Earnings Growth	2017 actual EPS escalated by Period 1 growth rate	EPS growth as average of (1) Value Line; (2) Zacks; (3) First Call growth rates	Transition to Long-term GDP growth	Long-term GDP growth
Payout Ratio		Value Line company-specific	Transition to long-term industry payout ratio	Long-term industry average payout ratio
Terminal Value				Expected dividend in final year divided by solved Cost of Equity less long-term growth rate

Q. HOW DID YOU CALCULATE THE LONG-TERM GDP GROWTH RATE?

A. The long-term growth rate of 5.45 percent is based on the real GDP growth rate of 3.21 percent from 1929 through 2017, and an inflation rate of 2.16 percent. The GDP growth rate is calculated as the compound growth rate in the chain-weighted GDP for the period from 1929 through 2017.[21] The rate of inflation of 2.16 percent is an average of two components: (1) the compound annual forward rate starting in ten years (*i.e.*, 2028, which is the beginning of the terminal period) based on the 30-day average spread between yields on long-term nominal Treasury Securities and long-term Treasury Inflation

[21] *See* Bureau of Economic Analysis, "Current-Dollar and 'Real' Gross Domestic Product," May 30, 2018 update.

Protected Securities, known as the "TIPS spread" of 2.13 percent;[22] and (2) the projected Blue Chip Financial Forecast of CPI for 2025 – 2029 of 2.20 percent.[23]

I averaged these two measures of inflation because nominal Treasury yields are related to inflation, which includes the effect of commodities such as oil, which may cause the current TIPS spread to somewhat understate long-term expected inflation. I also performed a series of analyses in which the terminal value is based on the current 30-day average P/E ratio for the proxy group.

Q. WHAT WERE YOUR SPECIFIC ASSUMPTIONS WITH RESPECT TO THE PAYOUT RATIO?

A. As noted in Table 5, for the first two periods I relied on the first year and long-term projected payout ratios reported by Value Line for each of the proxy companies.[24] I then assumed that by the end of the second period (*i.e.*, the end of year ten), the payout ratio will converge to the long-term industry average of 65.57 percent.[25]

Q. PLEASE SUMMARIZE THE RESULTS OF YOUR MULTI-STAGE DCF ANALYSES.

A. Tables 6a and 6b (below) present the results of the Multi-Stage DCF analyses (*see* also Exhibit No.___(RBH-2)).

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22 *See* Board of Governors of the Federal Reserve System, "Table H.15 Selected Interest Rates."

23 *Blue Chip Financial Forecasts*, June 1, 2018, at 14.

24 As reported in the Value Line Investment Survey as "All Div'ds to Net Prof." Please note that Value Line is a source frequently relied upon in rate proceedings, and is the only source that consistently provides intermediate-term payout ratio projections.

25 Source: Bloomberg Professional.

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Table 6a: Multi-Stage Discounted Cash Flow Model Results

	Low	*Mean*	*High*
30-Day Average	9.05%	9.23%	9.45%
90-Day Average	9.09%	9.28%	9.50%
180-Day Average	8.96%	9.14%	9.36%

Table 6b: Multi-Stage Discounted Cash Flow Model Results Current P/E Ratio

	Low	*Mean*	*High*
30-Day Average	9.40%	9.89%	10.42%
90-Day Average	9.53%	10.02%	10.55%
180-Day Average	9.19%	9.67%	10.21%

Q. DID YOU UNDERTAKE ANY ADDITIONAL ANALYSES TO SUPPORT YOUR RECOMMENDATION?

A. Yes. As noted earlier, I also applied the CAPM and Risk Premium analyses in estimating the Company's Cost of Equity.

CAPM Analysis

Q. PLEASE BRIEFLY DESCRIBE THE GENERAL FORM OF THE CAPM ANALYSIS.

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

$$k = r_f + \beta\left(r_m - r_f\right) \quad [3]$$

Where:

k = the investor-required ROE;

r_f = the risk-free rate of return;

β = Beta coefficient of an individual security; and

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

Equation [3] describes the Security Market Line ("SML"), or the CAPM risk-return relationship, which is graphically depicted in Chart 1 below. The intercept is the risk-free rate (r_f), which has a Beta coefficient of zero, the slope is the expected Market Risk Premium ($r_m - r_f$). By definition, r_m, the return on the market has a Beta coefficient of 1.00. Under the CAPM, the expected Equity Risk Premium for a given security is proportional to its Beta coefficient.

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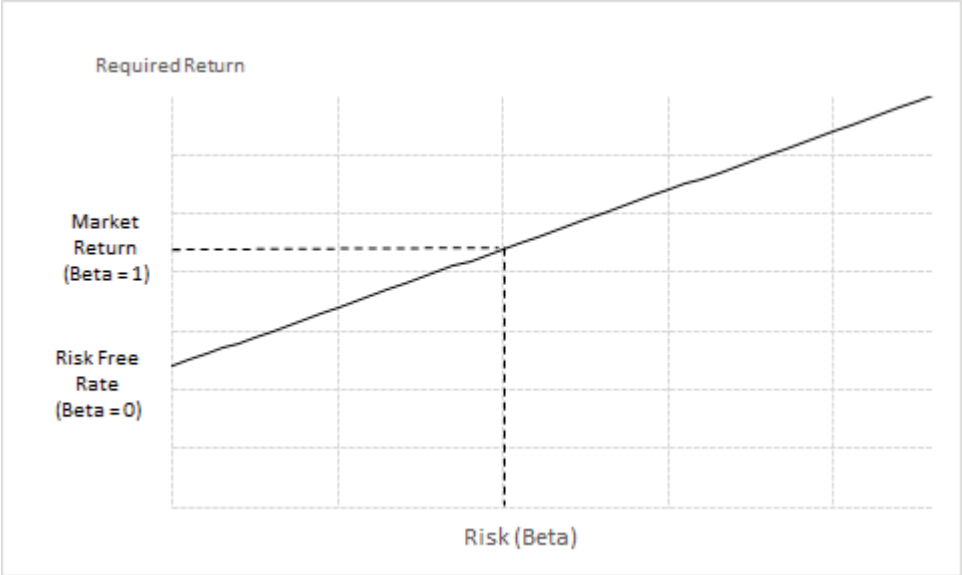
Chart 1: Security Market Line



In Equation [3], the term ($r_m - r_f$) represents the Market Risk Premium.[26] According to the theory underlying the CAPM, because unsystematic risk can be diversified away by adding securities to investment portfolios, the market will not compensate investors for bearing that risk. Therefore, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

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

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 in 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 market.

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

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Intuitively, companies with higher Beta coefficients have had more volatile returns and have moved more closely with the overall market than companies with lower Beta coefficients. The implication is that a company with a Beta coefficient of 1.00 is as risky as the overall market; companies with Beta coefficients less than 1.00 are less risky, and those whose Beta coefficients are greater than 1.00 have greater risk than the overall market.

Q. WHAT ASSUMPTIONS DID YOU INCLUDE IN YOUR CAPM ANALYSIS?

A. I used two different measures of the risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds (3.11 percent); and (2) the projected 30-year Treasury yield (3.48 percent).

Q. WHY HAVE YOU RELIED ON THE 30-YEAR TREASURY YIELD FOR THE RISK-FREE RATE?

A. The risk-free rate of return is measured by yields on U.S. Treasury securities, which generally are considered to have little risk of default. The principal analytical issue surrounding the selection of the risk-free rate is the maturity of the Treasury security to be used for that purpose. As Morningstar discusses, that maturity should approximate the horizon of the underlying investment.[27] As noted earlier, equity securities represent expected residual cash flows in perpetuity. It is the perpetual nature of equity that describes the investment horizon noted by Morningstar, and that informs the appropriate maturity of the risk-free rate in the CAPM. Simply, the 30-year Treasury bond is the longest-maturity security available to match the perpetual nature of utility equity investments.

[27] Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 44.

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Q. PLEASE DESCRIBE YOUR *EX-ANTE* (*I.E.*, FORWARD-LOOKING) APPROACH TO ESTIMATING THE MARKET RISK PREMIUM.

A. The approach is based on the market required return, less the current 30-year Treasury yield. To estimate the market required return, I calculated the market capitalization weighted average ROE based on the Constant Growth DCF model. To do so, I relied on data from Bloomberg and Value Line, respectively. For the Bloomberg-derived growth estimates, I calculated the expected dividend yield (using the same one-half growth rate assumption described earlier) and combined that amount with the projected earnings growth rate to arrive at the market capitalization weighted average DCF result. I performed that calculation for each of the S&P 500 companies for which Bloomberg provided consensus growth rates. I then subtracted the current 30-year Treasury yield from that amount to arrive at the market DCF-derived *ex-ante* market risk premium estimate. In the case of Value Line, I performed the same calculation, again using all companies for which five-year earnings growth rates were available. The results of those calculations are provided in Exhibit No.___(RBH-3).

Q. HOW DID YOU APPLY YOUR EXPECTED MARKET RISK PREMIUM AND RISK-FREE RATE ESTIMATES?

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

Q. WHAT BETA COEFFICIENT DID YOU USE IN YOUR CAPM MODEL?

A. As shown in Exhibit No.___(RBH-4), I considered Beta coefficients reported by Bloomberg and Value Line. Although both services adjust their calculated (or "raw") Beta coefficients to reflect the tendency to regress to the market mean of 1.00, Value Line

calculates the Beta coefficient over a five-year period, whereas Bloomberg's calculation is based on two years of data.

Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A. As shown in Table 7 (below) the CAPM analyses suggest an ROE range of 10.13 percent to 12.28 percent (*see* also Exhibit No.___(RBH-5)).

Table 7: Summary of CAPM Results[28]

	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
Average Bloomberg Beta Coefficient		
Current 30-Year Treasury (3.11%)	10.13%	10.34%
Near Term Projected 30-Year Treasury (3.48%)	10.50%	10.71%
Average Value Line Beta Coefficient		
Current 30-Year Treasury (3.11%)	11.66%	11.91%
Near Term Projected 30-Year Treasury (3.48%)	12.03%	12.28%

Q. DID YOU CONSIDER ANOTHER FORM OF THE CAPM IN YOUR ANALYSIS?

A. Yes. I also included the Empirical CAPM ("ECAPM"). The ECAPM reflects the finding that the actual Security Market Line (see Chart 1, above) is not as steeply sloped as predicted by the CAPM.[29] As a consequence, the CAPM likely under-estimates the Cost of Equity for relatively low-Beta coefficient firms, such as regulated utilities like SCE&G, and over-estimates the return for relatively high-Beta firms. To that point, Fama and French state that "[t]he returns on the low beta portfolios are too high, and the returns on the high beta portfolios are too low."[30] Similarly, Dr. Roger Morin observes that "[w]ith

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28 *See* Exhibit No.___(RBH-5).

29 Roger A. Morin, New Regulatory Finance (Public Utility Reports, Inc., 2006), at 175-176.

30 Eugene F. Fama and Kenneth R. French, *The Capital Asset Pricing Model: Theory and Evidence*, Journal of Economic Perspectives, Vol. 18, No. 3, Summer 2004, at 33.

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few exceptions, the empirical studies agree that … low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted."[31] In that regard, the Empirical CAPM is not redundant to the use of adjusted Beta coefficients.

Dr. Morin explains that the ECAPM "makes use" of those findings, and estimates the Cost of Equity based on the following equation:[32]

$$k_e = R_f + \alpha + \beta(MRP - \alpha) \qquad [5]$$

where α, or "alpha", is an adjustment to the risk/return line, and "MRP" is the Market Risk Premium (defined above). Summarizing empirical evidence regarding the range of estimates for alpha, Dr. Morin explains that the evidence "reduces to the following more pragmatic form."[33]

$$k_e = R_f + 0.25(R_m - R_f) + 0.75\beta(R_m - R_f) \qquad [6]$$

where:

k_e = the investor-required ROE;

r_f = the risk-free rate of return;

β = Adjusted Beta coefficient of an individual security; and

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

Equations [5] and [6] tend to produce similar results when "alpha" is in the range of 1.00 percent to 2.00 percent.[34]

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31 Roger A. Morin, New Regulatory Finance (Public Utility Reports, Inc., 2006), at 175.

32 *Ibid*, at 189.

33 *Ibid*, at 190.

34 *Ibid*.

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As with the CAPM, the Empirical CAPM uses the Market DCF-derived *ex-ante* Market Risk Premium estimate, the current yield on 30-year Treasury securities as the risk-free rate and two estimates of the Beta coefficient. The results of my Empirical CAPM analyses are provided in Table 8 (below), (*see* also Exhibit No.___(RBH-5)).

Table 8: Summary of Empirical CAPM Results

	Bloomberg Derived Market Risk Premium	***Value Line Derived Market Risk Premium***
Average Bloomberg Beta Coefficient		
Current 30-Year Treasury (3.11%)	11.53%	11.78%
Near Term Projected 30-Year Treasury (3.48%)	11.90%	12.15%
Average Value Line Beta Coefficient		
Current 30-Year Treasury (3.11%)	12.68%	12.95%
Near Term Projected 30-Year Treasury (3.48%)	13.05%	13.33%

Bond Yield Plus Risk Premium Approach

Q. PLEASE GENERALLY DESCRIBE THE BOND YIELD PLUS RISK PREMIUM APPROACH.

A. This approach is based on the basic financial principle that because equity investors bear the residual risk associated with ownership, they require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders are more risky than returns to bondholders, equity investors must be compensated for bearing that additional risk. Risk premium approaches, therefore, estimate the Cost of Equity as the sum of the equity risk premium and the yield on a particular class of bonds. As noted in my discussion of the CAPM, because the equity risk premium is not directly observable, it typically is estimated using a variety of approaches, some of which incorporate *ex-ante*, or forward-looking estimates of the Cost of Equity, and others that consider historical, or *ex-*

post, estimates. An alternative approach is to use actual authorized returns for electric utilities to estimate the Equity Risk Premium.

Q. PLEASE EXPLAIN HOW YOU PERFORMED YOUR BOND YIELD PLUS RISK PREMIUM ANALYSIS.

A. As suggested above, I first defined the Risk Premium as the difference between the authorized ROE and the then-prevailing level of the long-term (*i.e.*, 30-year) Treasury yield. I then gathered data for 1,556 electric utility rate proceedings between January 1980 and June 15, 2018. In addition to the authorized ROE, I also calculated the average period between the filing of the case and the date of the final order (the "lag period"). To reflect the prevailing level of interest rates during the pendency of the proceedings, I calculated the average 30-year Treasury yield over the average lag period (approximately 200 days).

Because the data covers a number of economic cycles,[35] the analysis also may be used to assess the stability of the Equity Risk Premium. Prior research, for example, has shown that the Equity Risk Premium is inversely related to the level of interest rates.[36] That is, as interest rates fall, the Equity Risk Premium increases. That finding is particularly relevant given the low level of current Treasury yields relative to other measures of equity risk discussed later in my Direct Testimony.

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35 *See* National Bureau of Economic Research, U.S. Business Cycle Expansion and Contractions.

36 *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.

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Q. HOW DID YOU MODEL THE RELATIONSHIP BETWEEN INTEREST RATES AND THE EQUITY RISK PREMIUM?

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

$$RP = \alpha + \beta(LN(T_{30})) \quad [7]$$

As shown on Chart 2 (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).

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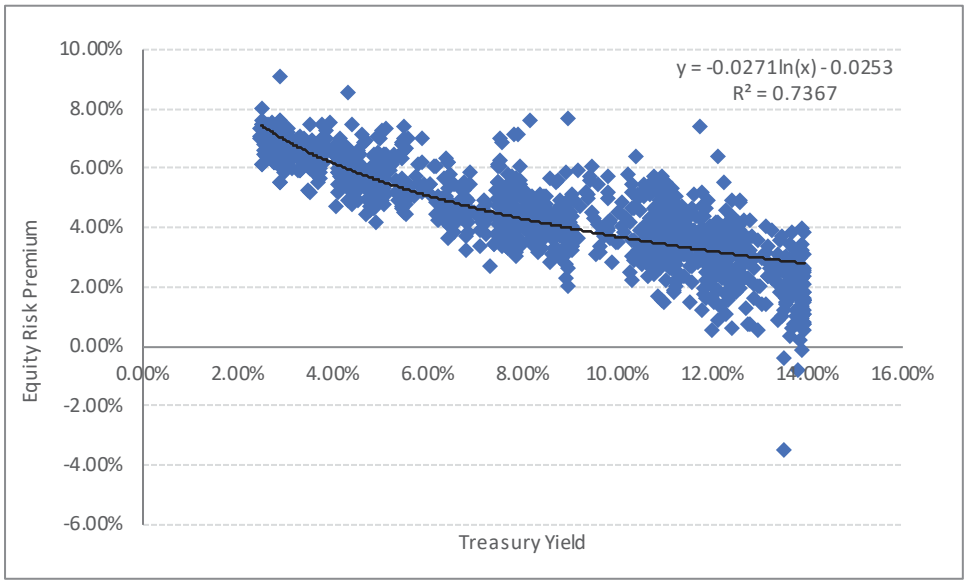
Chart 2: Equity Risk Premium



As Chart 2 illustrates, the Equity Risk Premium increases as interest rates fall. The finding – that there an inverse relationship between interest rates and the Equity Risk Premium – is supported by published research. For example, Dr. Roger Morin notes that: "… [p]ublished studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and Lakonishok (1983), Morin (2005), and McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates - rising when rates fell and declining when interest rates rose."[37] Consequently, simply applying the long-term average Equity Risk Premium of 4.63 percent would significantly understate the Cost of Equity and produce results well below any reasonable estimate. Based on the regression coefficients in Chart 2, however, the implied ROE is between 9.96 percent and 10.28 percent (*see* Table 9 below and Exhibit No.___(RBH-6)).

[37] Roger A: Morin, New Regulatory Finance, Public Utilities Reports, Inc. 2006, at 128 [clarification added]

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Table 9: Summary of Bond Yield Plus Risk Premium Results

	Return on Equity
Current 30-Year Treasury (3.11%)	9.96%
Near-Term Projected 30-Year Treasury (3.48%)	10.03%
Long-Term Projected 30-Year Treasury (4.30%)	10.28%

VII. CAPITAL MARKET ENVIRONMENT

Q. DO ECONOMIC CONDITIONS INFLUENCE THE REQUIRED COST OF CAPITAL AND REQUIRED RETURN ON COMMON EQUITY?

A. Yes. As discussed in Section VI, the models used to estimate the Cost of Equity are meant to reflect, and therefore are influenced by, current and expected capital market conditions. As such, it is important to assess the reasonableness of any financial model's results in the context of observable market data. To the extent certain ROE estimates are incompatible with such data or inconsistent with basic financial principles, it is appropriate to consider whether alternative estimation techniques are likely to provide more meaningful and reliable results.

Q. DO YOU HAVE ANY GENERAL OBSERVATIONS REGARDING THE RELATIONSHIP BETWEEN FEDERAL RESERVE MONETARY POLICY, CAPITAL MARKET CONDITIONS, AND THE COMPANY'S COST OF EQUITY?

A. Yes, I do. Much has been reported about the Federal Reserve's Quantitative Easing policy and its effect on interest rates. Although the Federal Reserve completed its Quantitative Easing initiative in October 2014, it was not until December 2015 that it raised

the Federal Funds rate and began the process of rate normalization.[38] Therefore, a significant issue is how investors will react as that process continues, and eventually is completed. A viable outcome is that investors will perceive greater prospects of macroeconomic growth, which will increase the growth rates included in the Constant Growth DCF model. At the same time, higher growth and the absence of Federal market intervention could provide the opportunity for interest rates to increase, thereby increasing the dividend yield portion of the DCF model. In that case, both terms of the Constant Growth DCF model would increase, producing increased ROE estimates.

More recently, interest rates have risen and become increasingly volatile. In the equity markets, sectors that historically have included dividend-paying companies lost value, as increasing interest rates provided investors with other sources of current income. Because those dynamics affect different models in different ways, it would be inappropriate to rely on a single method to estimate the Company's Cost of Equity. A more reasoned approach is to understand the relationships among Federal monetary policy, interest rates, and measures of market risk, and to consider how those factors may affect different models and their results. As discussed throughout my Direct Testimony and in my Sworn Statement, it remains important to consider a broad range of data and models when determining the Company's Cost of Equity.

[38] *See* Federal Reserve Press Release (December 16, 2015).

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Q. PLEASE SUMMARIZE THE EFFECT OF RECENT FEDERAL RESERVE POLICIES ON INTEREST RATES AND THE COST OF CAPITAL.

A. Beginning in 2008, the Federal Reserve proceeded on a steady path of initiatives intended to lower long-term Treasury yields.[39] The Federal Reserve's policy actions "were designed to put downward pressure on longer-term interest rates by having the Federal Reserve take onto its balance sheet some of the duration and prepayment risks that would otherwise have been borne by private investors."[40] Under that policy, "Securities held outright" on the Federal Reserve's balance sheet increased from approximately $489 billion at the beginning of October 2008 to $4.25 trillion by the end of October 2017, decreasing to about $4.12 trillion by June 2018.[41] To put that increase in context, the securities held by the Federal Reserve represented approximately 3.29 percent of Gross Domestic Product ("GDP") at the end of September 2008, and had risen to approximately 20.63 percent of GDP in June 2018.[42] As such, the Federal Reserve provided a significant source of liquidity, and had a substantial effect on capital markets.

Q. DOES YOUR RECOMMENDATION CONSIDER THE INTEREST RATE ENVIRONMENT?

A. Yes, it does. From an analytical perspective, it is important that the inputs and assumptions used to arrive at an ROE recommendation, including assessments of capital market conditions, are consistent with the recommendation made. Although all analyses

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39 *See* Federal Reserve Press Release, dated June 19, 2013.

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

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

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

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require an element of judgment, the application of that judgment must be consistent with the context of the quantitative and qualitative information available to the analyst, and the capital market environment in which the analyses were undertaken. Because the Cost of Equity is forward-looking, the salient issue is whether investors see the likelihood of increased interest rates during the period in which the rates set in this proceeding will be in effect.

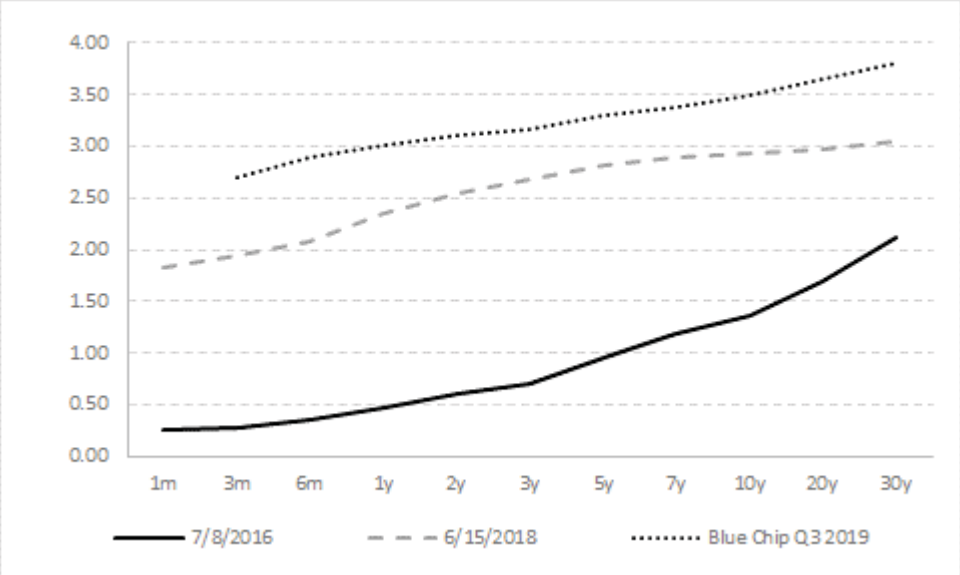
The low interest rate environment associated with central bank intervention may lead some analysts to conclude that current capital costs, including the Cost of Equity, are relatively low and will remain at that level. However, that conclusion only holds true under the hypothesis of Perfectly Competitive Capital Markets ("PCCM") and the classical valuation framework which, under normal economic and capital market conditions, underpin the traditional Cost of Equity models. Perfectly Competitive Capital Markets are those in which no single trader, or "market-mover," would have the power to change the prices of goods or services, including bond and common stock securities. In other words, under the PCCM hypothesis, no single trader would have a significant effect on market prices.

Classic valuation theory assumes investors trade securities rationally, with prices reflecting their perceptions of value. Although central banks may set benchmark interest rates, they have maintained below-normal rates to stimulate economic expansion and capital market recovery. It therefore is reasonable to conclude that the Federal Reserve and other central banks have been acting as market-movers, thereby having a significant effect on the market prices of both bonds and stocks. The presence of market-movers, such as the Federal Reserve, runs counter to the PCCM hypothesis, which underlies traditional

Cost of Equity models. Consequently, the results of those models should be considered in the context of both quantitative and qualitative information.

Although the Federal Reserve's market intervention policies have kept interest rates historically low over the past several years, rates have risen since July 8, 2016 (when the 30-year Treasury yield fell to its secular low of 2.11 percent). As the Federal Reserve increased the Federal Funds target rate by 150 basis points from December 2015 and June 2018 (from a target of 0.00 percent – 0.25 percent to 1.75 percent – 2.00 percent), short-term and long-term interest rates increased by a corresponding amount (*see* Chart 3 below).[43]

Chart 3: Treasury Yield Curve: 7/8/2016, 6/15/18 and Projected Q3 2019[44]



43 Federal Reserve Board Schedule H.15. Six-month and one-year Treasury yields increased by 171 basis points and 187 basis points, respectively, July 8, 2016 to June 15, 2018. The ten-year and 30-year Treasury yields increased by 156 basis points and 94 basis points, respectively, by June 15, 2018.

44 Federal Reserve Board Schedule H.15; *Blue Chip Financial Forecasts*, Vol. 37, No. 6, June 1, 2018, at 2. Three-year, seven-year and 20-year projected Treasury yields interpolated.

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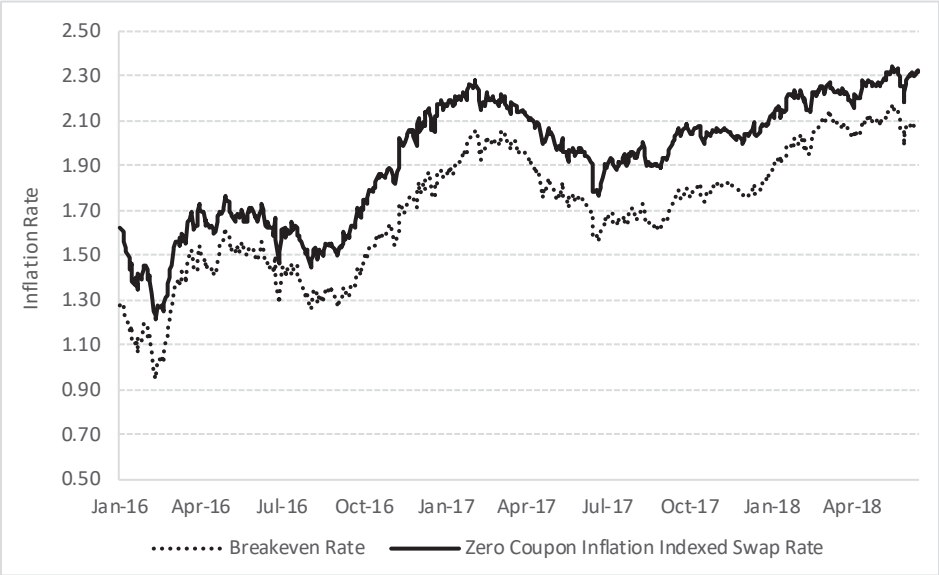
The significant increase in the ten- and 30-year yields from July 2016 to June 2018 is highly related to increasing inflation. To that point, leading up to and following the November 2016 Presidential election, expected inflation, as measured by the breakeven forward inflation rate and the zero-coupon inflation index swaps also increased. Although those measures of forward inflation fell somewhat between February and June 2017, they have increased since that period, such that they are similar to, yet somewhat above, the Federal Reserve's 2.00 percent inflation target (*see* Chart 4 below).

Chart 4: Five-Year Forward Inflation[45]



Lastly, on September 20, 2017, the Federal Reserve announced that it will "initiate the balance sheet normalization program described in the June 2017 Addendum to the Committee's Policy Normalization Principles and Plans."[46] Those "Principles and Plans" call for reducing the reinvestment of principal payments received from its holdings of Treasury securities by up to $30 billion per month, and mortgage-backed securities by up

45 Source: Bloomberg Professional Services.

46 Federal Reserve Press Release, September 20, 2017.

to $20 billion per month.[47] At the same time, the Federal Reserve will continue considering increases to the Federal Funds target rate; as noted below, current market data indicate an approximately 94.30 percent likelihood of further rate increases by January 2019.

Q. DOES MARKET-BASED DATA INDICATE THAT INVESTORS SEE A PROBABILITY OF INCREASING INTEREST RATES?

A. Yes. Forward Treasury yields implied by the slope of the yield curve and published projections by sources such as *Blue Chip Financial Forecasts* (which provides consensus estimates from approximately 50 professional economists) indicate investors expect long-term interest rates to increase. Looking to short-term interest rates, data compiled by CME Groups indicates that investors see a high likelihood of further Federal Funds rate increases, even after the six increases between December 14, 2016 and June 13, 2018. As shown in Table 10, (below) the market is now anticipating at least one additional rate hike (94.30 percent probability) and possibly two or more (55.70 percent) by January 2019.

Table 10: Probability of Federal Funds Rate Increases[48]

Target Rate (bps)	Federal Reserve Meeting Date				
	8/1/18	9/26/18	11/8/18	12/19/18	1/30/19
175-200	98.0%	15.7%	15.3%	6.3%	5.7%
200-225	2.0%	82.6%	80.9%	42.5%	38.6%
225-250	0.0%	1.7%	3.8%	48.9%	48.2%
250-275		0.0%	0.0%	2.2%	7.2%
275-300		0.0%	0.0%	0.0%	0.3%

47 Federal Reserve, *Addendum to the Policy Normalization Principles and Plans As adopted effective* June 13, 2017.

48 Source: http://www.cmegroup.com/trading/interest-rates/countdown-to-fomc.html, accessed June 15, 2018.

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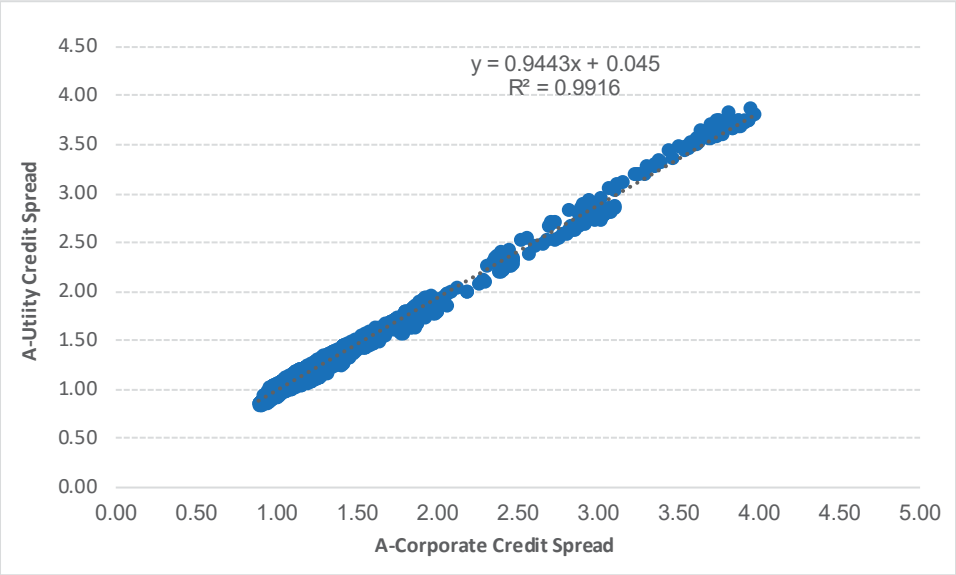
Q. HAVE YOU ALSO REVIEWED THE RELATIONSHIP BETWEEN CREDIT SPREADS FOR A-RATED UTILITY DEBT RELATIVE TO A-RATED CORPORATE DEBT?

A. Yes, I have. Given the historical volatility in the spread between corporate and utility A-rated debt, there is no reason to conclude that utility yields are different than those of their corporate counterparts. That conclusion is consistent with the finding that over time, there has been a nearly one-to-one relationship between credit spreads on A-rated corporate and utility bonds. In fact, a regression analysis in which corporate credit spreads are the explanatory variable and utility credit spreads are the dependent variable shows that slope is approximately 1.00 and highly significant (*see* Chart 5, below). Because the intercept term is nearly zero, we can conclude that there has been no material difference between the two, and there certainly is no meaningful difference in the current market.

Chart 5: Corporate and Utility Credit Spreads (A-Rated)[49]



49 Source: Federal Reserve Schedule H.15.

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Q: HAVE THERE BEEN RECENT PERIODS WHEN UTILITY VALUATION LEVELS WERE HIGH RELATIVE TO BOTH THEIR LONG-TERM AVERAGE AND THE MARKET?

A: Yes. For example, between July and December 2016, the S&P Electric Utility Index lost approximately 9.00 percent of its value. At the same time, the S&P 500 increased by approximately 7.00 percent, indicating that the utility sector under-performed the market by about 16.00 percent. Also during that time, the 30-year Treasury yield increased by approximately 95.00 basis points (an increase of nearly 45.00 percent). The point simply is that as interest rates increased, utility valuations fell. Because (as noted above) investors see the strong likelihood of further interest rate increases, there is a continuing risk of losses in the utility sector.

Q. WHAT CONCLUSIONS DO YOU DRAW FROM YOUR ANALYSES OF THE CURRENT CAPITAL MARKET ENVIRONMENT, AND HOW DO THOSE CONCLUSIONS AFFECT YOUR ROE RECOMMENDATION?

A. In my view, we cannot conclude that the recent levels of utility valuations are due to a fundamental change in the risk perceptions of utility investors. There is no measurable difference between credit spreads of A-rated utility debt, and A-rated corporate debt. That is, based on analyses of credit spreads, there is no reason to conclude that investors see utilities as less risky relative to either historical levels or to their corporate counterparts.

From an analytical perspective, it is important that the inputs and assumptions used to arrive at an ROE determination, including assessments of capital market conditions, are consistent with the conclusion itself. Although all analyses require an element of judgment, the application of that judgment must be made in the context of the quantitative and

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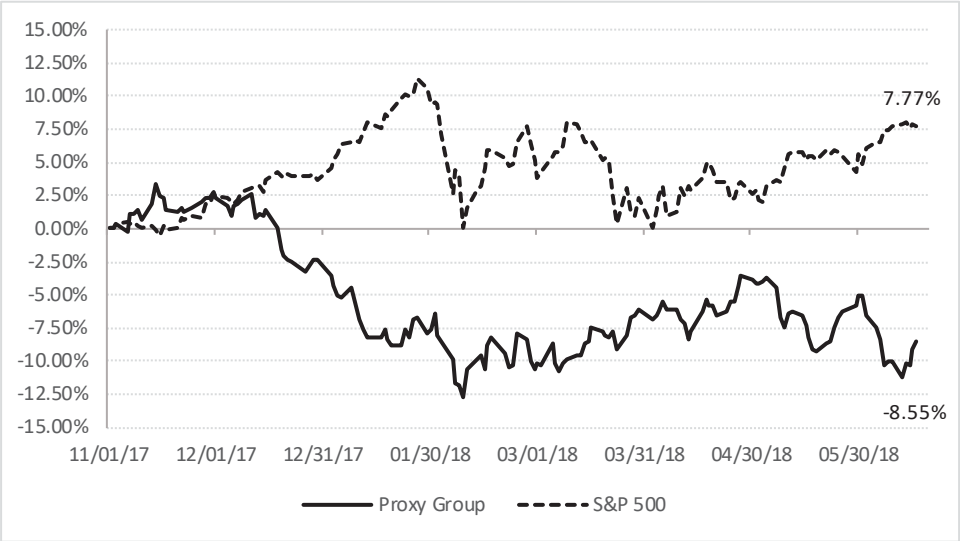
qualitative information available to the analyst and the capital market environment in which the analyses were undertaken. Because the application of financial models and interpretation of their results often is the subject of differences among analysts in regulatory proceedings, it is important to review and consider a variety of data points; doing so enables us to put in context both quantitative analyses and the associated recommendations.

Because not all models used to estimate the Cost of Equity adequately reflect those changing market dynamics, it is important to give appropriate weight to the methods and to their results. Moreover, because those models produce a range of results, it is important to consider the type of data discussed above in determining where the Companies' ROE falls within that range. As described in Section VI, on balance, the DCF-based results should be viewed very carefully, and that somewhat more weight should be afforded the Risk Premium-based methods. Doing so results in a recommended range of 10.25 percent to 11.00 percent, with my ROE estimate of 10.75 percent falling at the mid-point of that range.

Q. ARE THERE OTHER RECENT MARKET DEVELOPMENTS THAT ALSO SHOULD BE CONSIDERED IN SETTING THE COMPANY'S ROE IN THIS PROCEEDING?

A. Yes. On December 22, 2017, the President of the United States signed into law the TCJA. Since shortly before the TCJA was signed, electric utilities (as measured by my updated proxy group) have significantly underperformed the overall market. As Chart 6 (below) demonstrates, from November 1, 2017 through June 15, 2018 the S&P 500 gained about 7.77 percent in value whereas the Proxy Group lost about 8.55 percent, underperforming the overall market by more than 16.00 percentage points.

Chart 6: Relative Performance Since November 2017



A reasonable inference to be drawn from that data is that investors have been re-evaluating electric utilities relative to other market sectors. To the extent investors now view utilities as less attractive relative to alternative investments, the proxy companies' prices will fall, and the dividend yields will increase. As explained below, because rating agencies have begun to discuss the consequences of the TCJA for utilities' cash flow, a reasonable conclusion is that equity investors also have begun to recognize those consequences, and to allocate their capital to other market sectors.

Q. HAVE THE PROXY COMPANIES' DIVIDEND YIELDS INCREASED COINCIDENT WITH THE TCJA?

A. Yes, since the beginning of December 2017 the dividend yield for my revised proxy group increased by about 52 basis points, while the 30-year Treasury yield increased by about 29 basis points (*see* Chart 7, below). Again, that data suggests the fall in price among utility stocks may be a matter of relative value stemming from concerns regarding the TCJA's effect on utilities' cash flow. As discussed below, Moody's, S&P, and Fitch all

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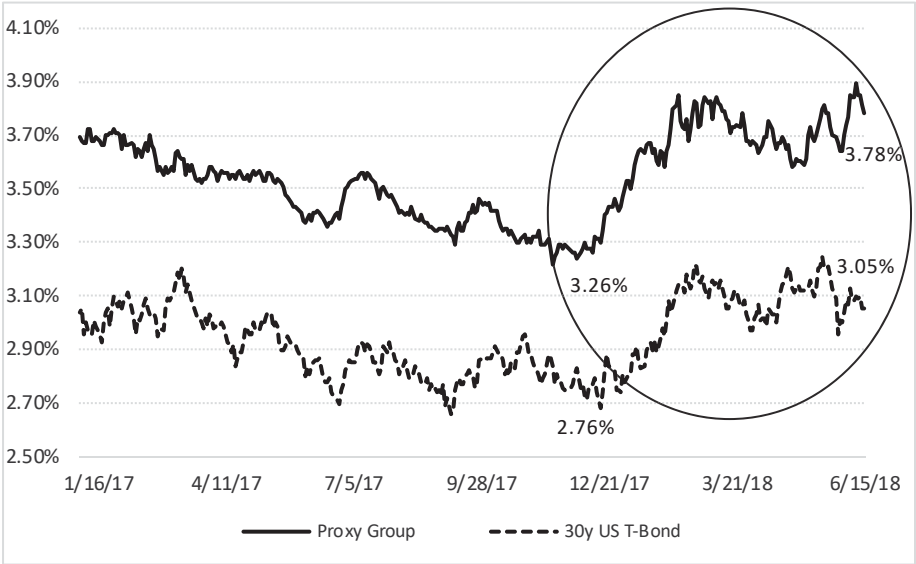
recently have evaluated the utility sector in the context of the TCJA, with Moody's noting negative ratings implications for many of the utilities it covers.

Chart 7: Proxy Group Dividend Yield vs. 30-Year Treasury Yield[50]



Q. WHAT CONCERNS HAVE RATING AGENCIES RAISED AS THEY CONSIDER THE IMPLICATIONS OF THE TCJA FOR UTILITIES' CASH FLOW?

A. Rating agencies have observed that a reduction in utilities' revenue associated with lower income taxes and the potential return of excess accumulated deferred income taxes also may reduce utilities' cash flow.[51] As FitchRatings pointed out "[a]bsent mitigating strategies on the regulatory front, this is expected to lead to weaker credit metrics and negative rating actions for issuers with limited headroom to absorb the leverage creep."[52] In a similar vein, Standard & Poor's observed that the TCJA is "…negative for credit quality because the combination of a lower tax rate and the loss of stimulus provisions

50 Source: S&P Global Market Intelligence.

51 *See* S&P Global Market Intelligence, *Rating agencies warn tax reform could draft US utility sector credit quality*, January 25, 2018.

52 FitchRatings Special Report, *Tax Reform Impact on the U.S. Utilities, Power & Gas Sector*, January 24, 2018.

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related to bonus depreciation or full expensing of capital spending will create headwinds in operating cash-flow generation capabilities as customer rates are lowered in response to the new tax code."[53] Moody's stated the following:

> Tax reform is credit negative for US regulated utilities because the lower 21% statutory tax rate reduces cash collected from customers, while the loss of bonus depreciation reduces tax deferrals, all else being equal. Moody's calculates that the recent changes in tax laws will dilute a utility's ratio of cash flow before changes in working capital to debt by approximately 150 - 250 basis points on average, depending to some degree on the size of the company's capital expenditure programs. From a leverage perspective, Moody's estimates that debt to total capitalization ratios will increase, based on the lower value of deferred tax liabilities.[54]

All three major rating agencies, therefore, have observed the negative effects of the TCJA on utilities' cash flow, and the potential consequences for utilities' credit profiles.

Q. HAS MOODY'S RECENTLY UPDATED ITS REVIEW OF THE UTILITY SECTOR?

A. Yes. On June 18, 2018 Moody's changed its outlook on the U.S. regulated utility sector to "negative" from "stable." Moody's explained that its change in outlook "…primarily reflects a degradation in key financial credit ratios, specifically the ratio of cash flow from operations to debt, funds from operations (FFO) to debt and retained cash flow to debt, as well as certain book leverage ratios."[55] The sector's outlook could remain "negative" if cash flow-based metrics continue to decline, or if there emerge signs of a more "contentious" regulatory environment (which, Moody's notes, is not fully reflected

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53 S&P Global Ratings, *U.S. Tax Reform: For Utilities' Credit Quality, Challenges Abound*, January 24, 2018.

54 Moody's Investors' Service, Rating Action: *Moody's changes outlooks on 25 US regulated utilities primarily impacted by tax reform*, January 19, 2018.

55 *See* Moody's Investors Service, Announcement: *Moody's changes the US regulated utility sector outlook to negative from stable*, June 18, 2018.

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in lower authorized returns).

Q. IS THERE A COMMON APPROACH TO RESOLVING RATEMAKING ISSUES ASSOCIATED WITH THE TCJA ACROSS REGULATORY JURISDICTIONS?

A. Although nearly all jurisdictions have begun to address the implications of tax reform in some fashion, there does not yet appear to be a common approach.[56] In certain instances, regulatory commissions have required utilities to calculate a regulatory liability associated with the lower tax rate, with the liability's disposition to be determined in future rate proceedings. In other instances, utilities have proposed combinations of lower costs of service (owing to the lower tax rate), offset to some extent by higher depreciation rates as a means of mitigating future rate increases due to potentially lower deferred tax balances, or other company-specific considerations, including protecting their pre-TCJA credit quality.[57] Consequently, the eventual effect of the TCJA on the Company's financial profile and credit quality remains unclear. Such uncertainty remains a concern for both debt and equity investors.

Broader trends are beginning to materialize across the industry. As noted by RRA:

> A marginal increase in authorized ROEs has become discernible [in the first four months of 2018], and may accelerate in order to recognize increased risk due to constrained cash flows expected to develop as a result of the federal tax reform.[58]

RRA further writes:

> It is clear, however, that utility cash flows are likely to be reduced due to the return of excess deferred taxes, the refunding of over-collections

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56 *See*, for example, S&P Global Market Intelligence, RRA Financial Focus, *Utility Impact of the Tax Cuts and Jobs Act*, March 19, 2018, at 6.

57 *See*, *e.g.* , North Carolina Utilities Commission, Docket No. M-100, Sub 148, Comments of Duke Energy Carolinas, and Duke Energy Progress, dated February 1, 2018.

58 *See* Regulatory Research Associates, *Themes in US energy utility markets and regulation*, April 30, 2018, at 1.

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> that occur until new rates are in put into effect, and reductions in revenue requirements on an ongoing basis.[59]

The maintenance of credit quality and financial integrity in response to the TCJA therefore is an important consideration to utilities, and to rating agencies.

Q. HAVE THE MAJOR RATING AGENCIES ALSO DISCUSSED POSSIBLE REGULATORY REACTIONS TO THE CASH FLOW IMPLICATIONS OF THE TCJA?

A. Yes. In its January 2018 report, Moody's identified approaches to help preserve credit profiles, including "…accelerated cost recovery of certain regulatory assets or future investment; changes to the equity layer or allowed ROEs in rates, and other actions." Moody's also suggested that "[c]hanges to corporate financial policies could include changes to capitalization, the financing of future investments, dividend growth, or others."[60] In the more recent (June 2018) announcement of its downgrade in the utility sector outlook, Moody's noted that "[m]anagement teams' defensive efforts and a few initial signs of supportive regulatory responses to tax reform are important first steps in addressing the sector's increased financial risk." Moody's further explained that in its view, "it will take longer than 12 - 18 months for the sector to exhibit a material financial improvement from these actions."[61] In January 2018, Fitch Ratings observed the following:

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59 *Ibid*, at 3.

60 *See* Moody's Investors' Service, *Rating Action: Moody's changes outlooks on 25 US regulated utilities primarily impacted by tax reform*, January 19, 2018.

61 *See* Moody's Investors Service, *Announcement: Moody's changes the US regulated utility sector outlook to negative from stable*, June 18, 2018.

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> A majority of states have opened dockets or requested all utilities in the state to submit an analysis on the implications of the tax reform. While regulators will be keen to provide some sort of rate relief for customers, such actions could take many forms and vary in time frame. Some jurisdictions may be open to a negotiated outcome that focuses more on benefits of rate stability and creditworthy utilities rather than immediate rate reductions. In the former, many tools could be employed, including the following:
>
> • Deferral of lower tax expense to use as an offset to expected future rate increases either from the recovery of regulatory deferrals or rate base growth
> • Return of excess unprotected ADIT over a longer-term horizon
> • Increase in authorized equity ratio and/or return on equity
> • Accelerated depreciation on some assets
> • Lower capex[62]

As Moody's and S&P both have noted, regulatory responses may vary by company and jurisdiction, but may include a variety of potential approaches.

Q. WHAT CONCLUSIONS DO YOU DRAW FROM THE DATA AND INFORMATION DISCUSSED ABOVE?

A. There is little question the TCJA has increased cash flow-related risks for utilities. Those risks are manifested in the sector's significant underperformance relative to the broad market, and in the comments of financial participants such as Moody's, S&P, and Fitch. Based on the data and information discussed above, it is my view that the TCJA, and its implications for utilities' cash flows and credit profiles, further support looking to the upper end of the range of results when setting the Company's ROE.

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62 FitchRatings Special Report, *Tax Reform Impact on the U.S. Utilities, Power & Gas Sector*, January 24, 2018.

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Q. PLEASE NOW SUMMARIZE YOUR POSITION REGARDING THE DCF AND RISK PREMIUM-BASED MODELS, AND HOW THE RESULTS SHOULD BE CONSIDERED IN DETERMINING THE COMPANY'S ROE.

A. Based on the full range of DCF and Risk Premium-based estimates and considering other model results and data available to investors, the recent performance of electric utility stocks relative to the broad market, the recent actions by Moody's, and the potential effect of the TCJA, I continue to believe the Company's Cost of Equity falls in the range of 10.25 percent to 11.00 percent, with 10.75 percent as a reasonable point estimate.

VIII. *PRO FORMA* ANALYSES OF THE COMPANY'S EARNED RETURN ON COMMON EQUITY

Q. AS A PRELIMINARY MATTER, WHAT IS THE RELATIONSHIP BETWEEN THE MARKET-REQUIRED RETURN ON EQUITY DISCUSSED EARLIER IN YOUR SWORN STATEMENT, AND THE EARNED RETURN ON EQUITY CALCULATED IN YOUR *PRO FORMA* ANALYSES?

A. The market-required return measures the return investors require if they are to invest in the equity of a company comparable to SCE&G. As a matter of ratemaking, that return is applied to the book value of common equity to develop the return portion of the overall revenue requirement. For the purpose of this analysis, I therefore assumed that the market-required ROE is the same as earned Return on Common Equity.

Q. BASED ON THE COMPANY'S DECEMBER 2017 FINANCIAL STATEMENTS, WHAT WAS ITS EARNED RETURN ON COMMON EQUITY?

A. The South Carolina retail jurisdictional earned return on equity was 8.30 percent. That return assumes a capital structure of 47.11 percent long-term debt, a 5.86 percent cost

of debt, and an equity ratio of 52.89 percent.[63] As a point of reference, the Company's jurisdictional earned ROE was 245 basis points below the 10.75 percent estimated ROE, and 244 basis points above its 5.86 percent embedded cost of debt.

Q. HOW DOES THE COMPANY'S EARNED RETURN COMPARE TO THOSE OF THE UTILITY OPERATING COMPANIES HELD WITHIN YOUR PROXY GROUP?

A. As Chart 8 (below) demonstrates, since 2012 the annual median earned Return on Average Common Equity among the operating companies within the proxy group was in the range of 9.17 percent to 9.79 percent; the median return over the entire period was 9.54 percent. The Company's December 2017 earned Return on Equity (8.30 percent) falls below the median earned return by 124 basis points. From a somewhat different perspective, the Company's earned Return on Equity fell within the bottom 27th percentile of earned returns since 2012.

63 *See*, Quarterly Report for South Carolina Electric & Gas Company, filed March 16, 2018.

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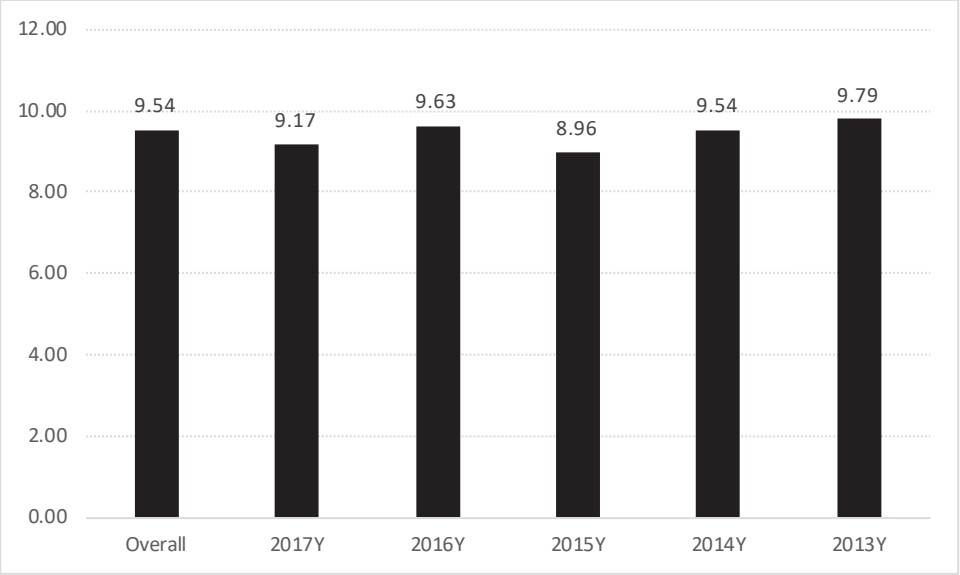
Chart 8: Operating Utility Median

Earned Return on Average Common Equity (%)[64]



Q. PLEASE NOW SUMMARIZE THE OTHER SCENARIOS YOU CONSIDERED.

A. I considered the following four separate scenarios:

1. The Customer Benefits Plan;
2. The No Merger Benefits Plan;
3. The Base Request; and
4. Experimental rates under the Act, if made permanent.

I discuss each of those scenarios in turn, below.

64 Source: S&P Global Market Intelligence.

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Q. BEFORE TURNING TO THE INDIVIDUAL SCENARIOS, PLEASE SUMMARIZE YOUR ANALYTICAL APPROACH TO ESTIMATING THE *PRO FORMA* EFFECT OF THE SCENARIOS NOTED ABOVE.

A. I first replicated the Company's calculated Adjusted Retail Electric Rate of Return (7.15 percent) and Return on Equity (8.30 percent) for the twelve months ended December 31, 2017.[65] Having done so, I then considered the incremental effect on the Company's December 2017 Return on Equity of the four scenarios listed above. In each case, my analyses were based on information provided by the Company. I understand that in each case, the Company excluded the incremental effects of the TCJA which are being passed through to customers through proposed rate riders.

As Ms. Griffin testifies, each scenario is based on SCE&G's debt to equity ratios and capital structure prior to impairments. SCE&G also has computed the returns under each of the regulatory plans or proposals that reflect earnings on an impaired capital investment under those plans or proposals, but does not adjust the capital structure to reflect the amounts written off for accounting purposes through impairments. The resulting new nuclear development project ("NND Project") capital cost impairments and ROEs are shown in Charts 9 and 10, below.

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65 *See*, Quarterly Report for South Carolina Electric & Gas Company, filed March 16, 2018.

Chart 9: Summary of *Pro Forma* Capital Cost Impairment Charges ($ millions)[66]

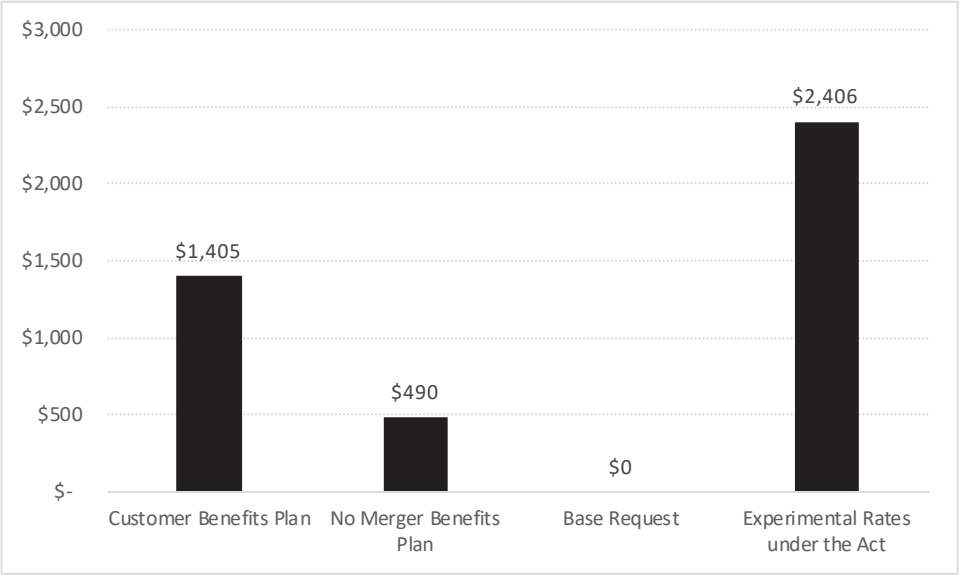
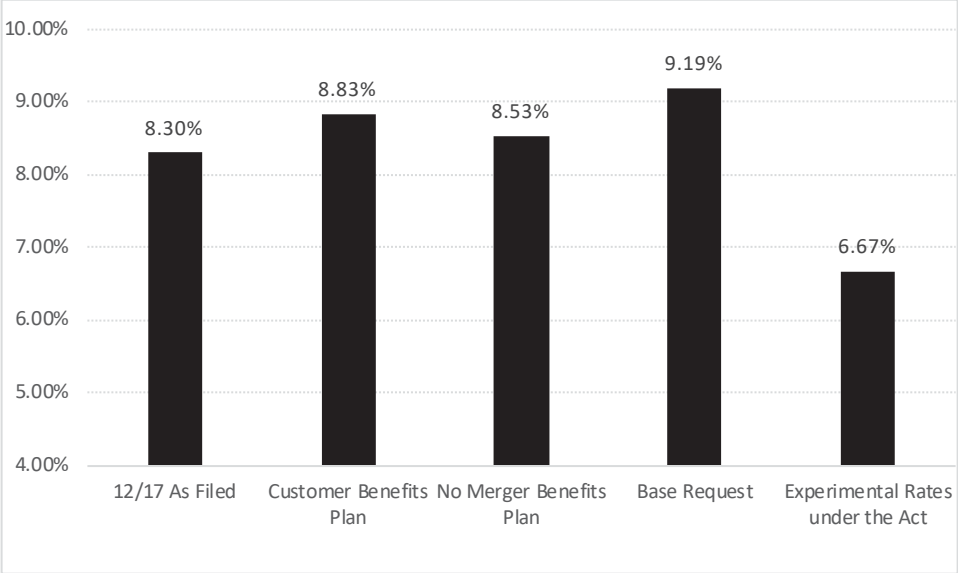


Chart 10: Summary of *Pro Forma* Scenarios (ROE)[67]



It is important to note we should not assume an impairment charge far greater than the next-highest scenario is of little consequence, simply because the *pro forma* Return on Common Equity is not correspondingly diluted. As Ms. Griffin and Ms. Lapson each

66 Source: Company-provided data. Direct Testimony of Iris N. Griffin, pp. 39-44.

67 Source: Company-provided data. Direct Testimony of Iris N. Griffin, pp. 39-44.

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explain, the financial community – including credit rating agencies – look far beyond *pro forma* metrics in assessing the Company's financial integrity. The consequences of a severely diminished financial profile are significant; Ms. Griffin and Ms. Lapson also discuss the effect on SCE&G's ability to access the short and long-term capital markets needed to fund its day-to-day operations, and to fund its continuing investments in the assets required to provide safe and reliable utility service. And equally as important, an impairment means that equity investors are given no return on the corresponding portion of their investment in the assets of the Company.

Q. TURNING NOW TO THE INDIVIDUAL SCENARIOS, PLEASE SUMMARIZE THE CUSTOMER BENEFITS PLAN AND ITS *PRO FORMA* EFFECT ON THE COMPANY'S RETURN ON COMMON EQUITY.

A. On January 12, 2018, SCE&G and Dominion Energy filed a Joint Application, seeking review and approval of a proposed transaction through which SCANA would become a wholly owned subsidiary of Dominion Energy. I further understand this business combination is contingent upon the Commission's approval of a customer benefit and cost recovery plan (the "Customer Benefits Plan"). Company Witnesses Addison, Griffin, and Kochems discuss the Customer Benefits Plan in more detail. However, I understand this plan provides, among other things, that all current SCE&G electric customers would receive one-time rate credits totaling $1.30 billion. SCE&G also would forego recovery of its investment associated with the BLRA by a cumulative amount of approximately $1.40 billion, which includes both the prior impairments taken by SCE&G, as well as the write-off of approximately $360 million in regulatory assets related to the NND Project. In addition, Dominion Energy will provide SCE&G's customers with an immediate bill

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reduction of approximately 3.50 percent as compared to its annualized May 2017 retail electric rates and subject to fuel clause adjustments and other non-NND adjustments, including rate case adjustments. Coupled with bill credits for tax benefits associated with the TCJA, the total reduction will be approximately 7.00 percent and SCE&G will write off the $180 million purchase of a 540-MW combined-cycle natural gas-fired power plant.[68]

As discussed by Ms. Griffin, the Customer Benefits Plan would result in a *pro forma* ROE of 8.83 percent. However, this 8.83% return is achieved only after SCE&G writes off approximately $2.8 billion in assets, which includes the cumulative capital cost impairment of $1.4 billion as noted in Chart 9 above. This means that in addition to the 8.83% return on remaining assets, SCE&G's investors will not earn a return on or receive recovery of this $2.8 billion in assets going forward.

Q. PLEASE NOW SUMMARIZE THE NO MERGER BENEFITS PLAN AND ITS PRO FORMA EFFECT ON THE COMPANY'S ROE.

A. Company Witnesses Addison, Griffin, and Kochems discuss in more detail the provisions of the "No Merger Benefits Plan. Generally, however, the "No Merger Benefits Plan" would provide retail electric customers a bill reduction of 3.50 percent as compared to annualized May 2017 retail electric rates and subject to fuel clause adjustments and other non-NND adjustments, including rate case adjustments. SCE&G also would apply the Toshiba Corporate Guarantee Settlement Payments, net of amounts used to satisfy Project liens, in an amount of approximately $1.10 billion to reduce the outstanding balance of the NND Project investment. As with the Customer Benefits Plan, the Company would not

[68] *See* Direct Testimony of Jimmy E. Addison, pp. 17-19.

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seek rate recovery of the approximately $180 million initial capital investment in a 540-MW combined-cycle natural gas-fired power plant as well as approximately $360 million in regulatory assets related to the NND Project. The No Merger Benefits Plan provides that all capital costs of the NND Project, less a $490 million write-off, would be amortized and recovered on a straight-line basis over a fixed 50-year period, at approximately $62 million per year.[69]

As discussed by Ms. Griffin, the No Merger Benefits Plan plan would result in a *pro forma* ROE of 8.53 percent. But this 8.53% return is achieved only after SCE&G writes off approximately $1.1 billion in assets, which includes the cumulative capital cost impairment of $490 million as noted in Chart 9 above. This means that, in addition to the 8.53% return on remaining assets, SCE&G's investors will not earn a return on or receive recovery of this $1.1 billion in assets going forward.

Q. PLEASE NOW SUMMARIZE THE COMPANY'S BASE REQUEST AND ITS PRO FORMA EFFECT ON THE COMPANY'S ROE.

A. Company Witnesses Addison, Griffin, and Kochems discuss the provisions of the Base Request in more detail. However, I understand the Base Request would only become the Company's request if the Customer Benefits Plan is not approved, or if the merger between SCANA and Dominion Energy does not close and the Commission rejects the No Merger Benefits Plan. Under those conditions, the Base Request would contain no rate mitigation terms beyond the Company's decision not to seek rate relief in the current

[69] *See* Direct Testimony of Jimmy E. Addison, pp. 44-46.

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docket.[70] Under the Base Request, there is no impairment charge (*see* Chart 9, above), and the *pro forma* ROE is 9.19 percent (*see* Chart 10, above).

Q. PLEASE SUMMARIZE THE EXPERIMENTAL RATES UNDER THE ACT SCENARIO AND ITS PRO FORMA EFFECT ON THE COMPANY'S ROE.

A. As explained by Ms. Griffin, if the rate reduction provisions of the Act were made permanent, resulting in a reduction to SCE&G's annual retail electric revenue of $367 million, SCE&G's earned return on equity would be 5.16 percent. For financial accounting purposes, if the rates contemplated by the Act were permanent rates, SCE&G would be required to record a total impairment of approximately $2.90 billion, which includes the cumulative capital cost impairment of $2.4 billion as noted in Chart 9 above. After impairing rate base, the ROE would increase to 6.67 percent, but there would be no additional earnings to provide a return to investors. The increase is caused entirely by the reduction in rate base recognized for accounting or regulatory purposes.

Q. TO PUT THOSE RESULTS IN CONTEXT, HAVE YOU REVIEWED EQUITY RETURNS THAT HAVE BEEN AUTHORIZED FOR VERTICALLY INTEGRATED ELECTRIC UTILITIES?

A. Yes, I have. From January 2014 through June 2018, the mean and median authorized equity return for vertically integrated electric utilities were 9.80 percent and 9.75 percent, respectively.[71] Therefore, under the Experimental Rates, if made permanent, SCE&G's *pro forma* ROE would be over 300 basis points below the returns available to other vertically integrated electric utilities.

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70 *See* Direct Testimony of Jimmy E. Addison, pp. 46-47.

71 Source: S&P Global Market Intelligence.

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Q. ARE AUTHORIZED RETURNS, AND THE REGULATORY ENVIRONMENT IN WHICH THEY ARE DETERMINED, IMPORTANT TO INVESTORS AND THE FINANCIAL COMMUNITY?

A. Yes, they are. Any operating utility's credit rating and outlook depend substantially on the extent to which rating agencies view the regulatory environment credit supportive, or not. Moody's, for example, finds the regulatory environment to be so important that 50.00 percent of the factors that weigh in its ratings determination are determined by the nature of regulation.[72] Given the capital-intensive nature of utility operations, the corresponding need to access external capital, and the weight rating agencies place on the nature of the regulatory environment, it is important to consider the extent to which the jurisdictions that recently have authorized ROEs for electric utilities are viewed as having constructive regulatory environments.

Q. HAS SOUTH CAROLINA GENERALLY BEEN VIEWED AS HAVING A CONSTRUCTIVE REGULATORY ENVIRONMENT?

A. Prior to the events leading up to this proceeding, yes, it has. Regulatory Research Associates ("RRA"), which is a widely referenced source of rate case data, provides an assessment of the extent to which regulatory jurisdictions are constructive from investors' perspectives, or not. As RRA explains, less constructive environments are associated with higher levels of risk:

> RRA maintains three principal rating categories for regulatory climates: Above Average, Average, and Below Average. Within the principal rating categories, the numbers 1, 2, and 3 indicate relative position. The designation 1 indicates a stronger rating; 2, a mid-range rating; and, 3, a weaker rating. The evaluations are assigned from an investor perspective

[72] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, December 23, 2017, at 6.

> and indicate the relative regulatory risk associated with the ownership of securities issued by the jurisdiction's utilities. The evaluation reflects our assessment of the probable level and quality of the earnings to be realized by the state's utilities as a result of regulatory, legislative, and court actions.[73]

Until recently, RRA ranked South Carolina as "Average/1," which falls in the top one-third of the 53 regulatory commissions ranked by it. In early October 2017, RRA reduced South Carolina's ranking to "Average/2" due to the "heightened risk surrounding the recovery of the nuclear costs."[74]

Q. DID YOU CONSIDER THOSE DISTINCTIONS IN YOUR REVIEW OF AUTHORIZED RETURNS RELATIVE TO THE *PRO FORMA* ROE?

A. Yes, I did. As Table 11 (below) indicates, authorized ROEs for vertically integrated electric utilities in jurisdictions rated Average/2 range from 9.10 percent to 10.10 percent; among those ranked Average/1 and higher (that is, South Carolina's ranking until October 2017).

Table 11: Average Authorized ROE by RRA Ranking[75]

	Authorized ROE (%) Vertically Integrated Electric Utilities		
RRA Ranking	Greater than Average/2	Average/2	Less than Average/2
Average	10.00	9.58	9.66
Median	10.00	9.56	9.50
Maximum	10.55	10.10	11.95
Minimum	9.50	9.10	9.30

[73] Source: Regulatory Research Associates, accessed July 27, 2018.

[74] *Ibid*.

[75] January 2014 through June 2018. Source: Regulatory Research Associates.

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Q. YOU STATED EARLIER THAT, FOR THE PURPOSE OF YOUR ANALYSIS, YOU ASSUMED THE MARKET-BASED COST OF EQUITY EQUALS THE ACCOUNTING-BASED RETURN ON EQUITY. IF THE SCENARIOS DISCUSSED ARE APPROVED, WOULD THAT ASSUMPTION HOLD?

A. No, it would not. Rather, the market-required Cost of Equity is likely to increase. Recall that (as discussed in Section V), the Cost of Equity is estimated by reference to a group of proxy companies. None of those companies is expected to earn an equity return as low as 6.67 percent. As noted above, we do know that the regulatory environment is important to both debt and equity investors. We also know that as the risk of financial distress increases (arising, for example, from an equity return well below the cost of debt), the market-required Return on Equity also increases. As Ms. Griffin and Ms. Lapson discuss, financial distress is a real and quite meaningful risk to investors in SCE&G.

Although I have not attempted to precisely quantify how investors would react to a decision that makes the Experimental Rates permanent and effectively authorizes an ROE of 6.67 percent, based on a significantly impaired equity base, from my experience and research I do know that such a low return has never been authorized in the United States for an electric utility comparable to SCE&G.[76] What is clear and indisputable, however, is that when the Company's financial integrity is compromised, as it would be under various scenarios discussed above, its market-required Cost of Equity would be dramatically greater than my 10.75 percent estimated Return on Equity, and these much greater returns would be paid by customers for years in order to induce investors to recapitalize the firm.

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[76] Source: Regulatory Research Associates.

Q. IS THERE A WAY TO GENERALLY CONSIDER THE IMPLICATIONS OF A SEVERELY COMPROMISED FINANCIAL PROFILE FOR THE COMPANY'S COST OF EQUITY.

A. To help put those implications in some context, I looked at the incremental return required on below investment grade utility debt relative to investment grade debt. Based on data from Bloomberg Professional, since June 2017 the difference in yields on 30-year utility bonds rated within the BBB ratings categories, and utility bonds rated below investment grade (in the BB ratings category) has been about 220 basis points.[77] Although I believe equity return requirements would be much higher than spreads in the bond market, if we simply use this measure, the corresponding Cost of Equity would be approximately 12.95 percent (10.75 percent plus 2.20 percent).

As noted earlier, however, equity investors bear the residual risk of ownership in perpetuity. And although below investment grade debt has risks greater than its investment grade counterparts, it still has protections not available to equity investors, and a priority claim on cash flows relative to equity investors. Consequently, in my opinion the Cost of Equity would increase much more than the cost of debt.

[77] BBB = 4.2357 percent. BB = 6.4264 percent. Difference (6.4264 percent – 4.2357 percent) = 2.19 percent, or 219 basis points. Source: Bloomberg Professional.

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Q. GIVEN THE FUNDAMENTAL DIFFERENCES BETWEEN DEBT AND EQUITY, HAVE YOU CONSIDERED OTHER MEASURES OF THE INCREMENTAL RETURN THAT WOULD BE REQUIRED IF THE EXPERIMENTAL RATES WERE MADE PERMANENT?

A. Yes, I have. An alternate means of assessing the implications of the financial risk associated with the Experimental Rates, if made permanent, is by reference to Beta coefficients. As discussed in Section VI, Beta coefficients are measures of the subject company's risk relative to the overall market. Under that construct, as relative (undiversifiable) risk increases, so does the return required for taking on that risk. Therefore, differences in Beta coefficients may be seen as broad measures of incremental risk.

To make that assessment, it is important to identify a group of companies that likely have risks comparable to those that would be faced by investors in SCE&G if the Experimental Rates were to be made permanent. The difference between the average Beta coefficient for that group, and the average Beta coefficient provided in Exhibit No.___(RBH-4) would represent a measure of the incremental systematic risk associated with the Experimental Rates, if made permanent. Multiplying that difference by the expected Market Risk Premium would provide a measure of the required incremental return.

Because no two companies are identical, it is unlikely a single comparison of the Company's financial risk and profile would be fully comparable to the *pro forma* effect of the Experimental Rates, if made permanent. I therefore developed a comparison group of companies that (1) are classified by Value Line as operating in the Electric Utility, Power,

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or Diversified Natural Gas industries, and (2) have Financial Strength Ratings (also by Value Line) of "B" or lower.

Q. WHY DID YOU APPLY THOSE SPECIFIC CRITERIA?

A. First, Value Line is a widely-recognized source of financial information, covering industry sectors that are relevant to this analysis. Second, Value Line's "Financial Strength Rating" considers several factors including "[b]alance sheet leverage, business risk, the level and direction of profits, cash flow, earned returns, cash, corporate size, and stock price"[78], each of which is an important consideration to equity investors. By selecting companies operating in the electric utility and energy industries, with Financial Strength Ratings similar to SCANA's, we are able to develop a group whose Beta coefficients reasonably reflect the potential distress associated with the Experimental Rates, if made permanent and, therefore, the incremental return required of it.

Q. WHY DID YOU SELECT COMPANIES WITH FINANCIAL STRENGTH RATINGS OF "B" OR LOWER?

A. I did so because Value Line recently (May 18, 2018) reduced SCANA's rating from "B+" to "B." PG&E Corporation is the only other electric utility with a Financial Strength Rating that low; its Financial Strength Rating was dropped from "B++" to "B" in January 2018. Because Value Line's Beta coefficients are calculated over five years, the effect of their recently decreased ratings would not be reflected to any meaningful degree in either SCANA's or PG&E Corporation's Beta coefficient. Consequently, I looked to the "Power" and "Diversified Natural Gas" sectors for companies with Financial Strength Ratings of "B" or lower.

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78 Value Line, Inc., Educational Articles, *Financial Strength*, January 12, 2012.

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Q. WHAT DID THAT ANALYSIS REVEAL?

A. As shown in Table 12 below, the average Beta coefficient for all companies (within the sectors noted above) with Financial Strength Ratings of "B" or lower is 1.16; the average for companies with "B" ratings is 1.22. In both cases, the average was below the median and the skew was negative, indicating a relatively large number of observations toward the lower end of the respective ranges.

Table 12: Average Beta Coefficients[79]

OVERALL	AVERAGE	1.16
	Median	1.25
	Std. Dev.	0.77
	Skew	-0.11
	# Companies	82
FINANCIAL STRENGTH RATING = B	Average	1.22
	Median	1.38
	Std. Dev.	0.62
	Skew	-0.89
	# Companies	20

I considered 1.15 (that is, approximately equal to the 1.16 average coefficient for the Overall Group) to be a reasonable measure of the Value Line Beta coefficient associated with the Experimental Rates, if made permanent. As shown in Exhibit No.__(RBH-4), the average Value Line Beta coefficient for the utility proxy group is 0.677; the difference between 1.15 and 0.677 (i.e., 0.473) would reflect the incremental systematic risk. Using an expected Market Risk Premium of 12.80[80] (see, Exhibit RBH-5), the incremental Cost of Equity would be about 605 basis points (6.05 percent; 0.473 x 12.80 percent). Adding the incremental 6.05 percent to my estimated ROE of 10.75 percent, implies a Cost of

79 Source: Value Line.

80 Average of the Value Line and Bloomberg-based Market Risk Premia.

Equity of 16.80 percent. Applying the ECAPM, the increased Beta coefficient indicates a Cost of Equity somewhat more than 17.00 percent.[81]

Q. IS IT YOUR POSITION THAT UNDER THE EXPERIMENTAL RATES, IF MADE PERMANENT, THE COST OF EQUITY WOULD INCREASE TO 16.80 PERCENT?

A. The Company's Cost of Equity will depend on the impairment and the equity market's determination of the return required to assure confidence in the financial soundness of SCE&G, and adequate to maintain and support the Company's credit. Thus, estimating the Company's Cost of Equity, after taking an impairment of approximately $2.90 billion, is more challenging because there is no readily available utility proxy group to use as the basis of that estimate. Nevertheless, estimating the Cost of Equity requires the application of judgment under any circumstance, and it certainly requires such judgment under the conditions described above. In my view, establishing a potential range of incremental return requirements is a reasonable approach. Based on the two methods noted above, it is my view that the incremental returns required by equity investors in SCE&G, assuming the Experimental Rates were made permanent, would be in the range of 220 to 625 basis points or in the range of 12.95 percent to 17.00 percent, and I believe that the true cost of capital under the Experimental Rates, if made permanent, would be at the higher end of the range.

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[81] Based on Equation [6]: 3.11% + (0.25 x 12.80%) + (0.75 x 1.15 x 12.80%) = 17.35%.

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Q. YOU NOTED EARLIER THAT INVESTORS WOULD REQUIRE HIGHER RETURNS JUST AS THE COMPANY REQUIRES ADDITIONAL EQUITY. DO YOU CONTINUE TO BELIEVE THAT IS THE CASE UNDER THE EXPERIMENTAL RATES, IF MADE PERMANENT?

A. Yes, I do. As explained earlier, the 6.67 percent *pro forma* ROE under the Experimental Rates scenario, if made permanent, includes a roughly $2.90 billion impairment charge. As Ms. Griffin explains, under generally accepted accounting principles, impairments artificially inflate the Company's actual return because that capital is excluded from the return calculation. Because the impairment charge would reduce the equity balance, the 6.67 percent *pro forma* return under the Experimental Rates scenario, if made permanent, is higher than it would be if additional equity was issued, and the proceeds were used to recapitalize the Company's balance sheet. The concern, then, is that the Company would be in the difficult position of raising equity to help restore its financial profile at the same time investors would require a considerable premium in connection with the risks associated with the impairment charge.

Q. IN YOUR VIEW, IS IT LIKELY THAT THE COMPANY'S PROPOSED SCENARIOS WOULD HAVE A SIMILAR EFFECT, ALSO SIGNIFICANTLY INCREASING ITS COST OF EQUITY?

A. No, I do not believe so. As explained earlier, the Company's proposals include specific elements that reduce customer rates through multiple mechanisms. Those proposals are certain; in each case, the amounts and timing are clear. Although the *pro forma* ROE falls to 8.53 percent under the No Merger Benefits Plan, there is no uncertainty surrounding the plan, its implications for the Company's financial performance, and the

benefits provided to ratepayers. By comparison, because utility investors tend to be conservative and risk-averse, the Experimental Rates, if made permanent, would reduce the capital accessible to the Company, just as it is needed. That limited supply would increase the cost of capital, to the detriment of ratepayers. In my view, because the Company's proposals mitigate regulatory uncertainty, their effect on SCE&G's Cost of Equity would be considerably less than the effect brought about by permanent Experimental Rates.

Q. LASTLY, YOU NOTED THAT THE *PRO FORMA* RETURN UNDER THE EXPERIMENTAL RATES, IF MADE PERMANENT, IS 6.67 PERCENT. IN YOUR VIEW IS THAT RETURN, WHICH FALLS BELOW THOSE AVAILABLE TO, AND EARNED BY, OTHER UTILITIES, CONSISTENT WITH THE *HOPE* AND *BLUEFIELD* STANDARDS?

A. No, I do not believe it would meet those standards. In my opinion, and as discussed by Ms. Griffin and Ms. Lapson, such a return would be insufficient to assure confidence in the financial soundness of the utility, inadequate to maintain and support credit, and inadequate to enable the Company to raise the capital needed for the proper discharge of its utility obligations. In sum, the return is so inadequate and unreasonably low as to be confiscatory.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

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Attachment A
Resume of:
Robert B. Hevert
Partner

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Summary

Bob Hevert is a financial and economic consultant with more than 30 years of broad experience in the energy and utility industries. He has an extensive background in the areas of corporate finance, mergers and acquisitions, project finance, asset and business unit valuation, rate and regulatory matters, energy market assessment, and corporate strategic planning. He has provided expert testimony on a wide range of financial, strategic, and economic matters on more than 250 occasions at the state, provincial, and federal levels.

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

Areas of Specialization

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

Recent Expert Testimony Submission/Appearance

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

Recent Assignments

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

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Regulatory Commission of Alaska				
Cook Inlet Natural Gas Storage Alaska, LLC	06/18	Cook Inlet Natural Gas Storage Alaska, LLC	Docket No. U-18-043	Return on Equity
ENSTAR Natural Gas Company	06/16	ENSTAR Natural Gas Company	Matter No. TA 285-4	Return on Equity
ENSTAR Natural Gas Company	08/14	ENSTAR Natural Gas Company	Matter No. TA 262-4	Return on Equity
Alberta Utilities Commission				
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc., and FortisAlberta Inc.	10/17	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc., and FortisAlberta Inc.	2018 General Cost of Capital, Proceeding ID. 22570	Rate of Return
EPCOR Energy Alberta G.P. Inc.	01/17	EPCOR Energy Alberta G.P. Inc.	Proceeding 22357	Energy Price Setting Plan
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	02/16	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	2016 General Cost of Capital, Proceeding ID. 20622	Rate of Return
Arizona Corporation Commission				
Southwest Gas Corporation	05/16	Southwest Gas Corporation	Docket No. G-01551A-16-0107	Return on Equity
Southwest Gas Corporation	11/10	Southwest Gas Corporation	Docket No. G-01551A-10-0458	Return on Equity
Arkansas Public Service Commission				
Oklahoma Gas and Electric Company	09/16	Oklahoma Gas and Electric Company	Docket No. 16-052-U	Return on Equity
SourceGas Arkansas, Inc.	12/15	SourceGas Arkansas, Inc.	Docket No. 15-078-U	Response to Direct Testimony by Arkansas Attorney General related to Compliance Issues
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	11/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 15-098-U	Return on Equity
SourceGas Arkansas, Inc.	04/15	SourceGas Arkansas, Inc.	Docket No. 15-011-U	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	01/07	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 06-161-U	Return on Equity
California Public Utilities Commission				
Southwest Gas Corporation	12/12	Southwest Gas Corporation	Docket No. A-12-12-024	Return on Equity
Colorado Public Utilities Commission				
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Return on Equity
Xcel Energy, Inc.	03/15	Public Service Company of Colorado	Docket No. 15AL-0135G	Return on Equity (gas)
Xcel Energy, Inc.	06/14	Public Service Company of Colorado	Docket No. 14AL-0660E	Return on Equity (electric)

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Xcel Energy, Inc.	12/12	Public Service Company of Colorado	Docket No. 12AL-1268G	Return on Equity (gas)
Xcel Energy, Inc.	11/11	Public Service Company of Colorado	Docket No. 11AL-947E	Return on Equity (electric)
Xcel Energy, Inc.	12/10	Public Service Company of Colorado	Docket No. 10AL-963G	Return on Equity (electric)
Atmos Energy Corporation	07/09	Atmos Energy Colorado-Kansas Division	Docket No. 09AL-507G	Return on Equity (gas)
Xcel Energy, Inc.	12/06	Public Service Company of Colorado	Docket No. 06S-656G	Return on Equity (gas)
Xcel Energy, Inc.	04/06	Public Service Company of Colorado	Docket No. 06S-234EG	Return on Equity (electric)
Xcel Energy, Inc.	08/05	Public Service Company of Colorado	Docket No. 05S-369ST	Return on Equity (steam)
Xcel Energy, Inc.	05/05	Public Service Company of Colorado	Docket No. 05S-246G	Return on Equity (gas)
Connecticut Public Utilities Regulatory Authority				
Connecticut Light and Power Company	11/17	Connecticut Light and Power Company	Docket No. 17-10-46	Return on Equity
Connecticut Light and Power Company	06/14	Connecticut Light and Power Company	Docket No. 14-05-06	Return on Equity
Southern Connecticut Gas Company	09/08	Southern Connecticut Gas Company	Docket No. 08-08-17	Return on Equity
Southern Connecticut Gas Company	12/07	Southern Connecticut Gas Company	Docket No. 05-03-17PH02	Return on Equity
Connecticut Natural Gas Corporation	12/07	Connecticut Natural Gas Corporation	Docket No. 06-03-04PH02	Return on Equity
Delaware Public Service Commission				
Delmarva Power & Light Company	08/17	Delmarva Power & Light Company	Docket No. 17-0977 (Electric)	Return on Equity
Delmarva Power & Light Company	08/17	Delmarva Power & Light Company	Docket No. 17-0978 (Gas)	Return on Equity
Delmarva Power & Light Company	05/16	Delmarva Power & Light Company	Case No. 16-649 (Electric)	Return on Equity
Delmarva Power & Light Company	05/16	Delmarva Power & Light Company	Case No. 16-650 (Gas)	Return on Equity
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 13-115	Return on Equity
Delmarva Power & Light Company	12/12	Delmarva Power & Light Company	Case No. 12-546	Return on Equity
Delmarva Power & Light Company	03/12	Delmarva Power & Light Company	Case No. 11-528	Return on Equity
District of Columbia Public Service Commission				
Potomac Electric Power Company	12/17	Potomac Electric Power Company	Formal Case No. 1150	Return on Equity
Potomac Electric Power Company	06/16	Potomac Electric Power Company	Formal Case No. 1139	Return on Equity
Washington Gas Light Company	02/16	Washington Gas Light Company	Formal Case No. 1137	Return on Equity
Potomac Electric Power Company	03/13	Potomac Electric Power Company	Formal Case No. 1103-2013-E	Return on Equity
Potomac Electric Power Company	07/11	Potomac Electric Power Company	Formal Case No. 1087	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Federal Energy Regulatory Commission				
Sabine Pipeline, LLC	09/15	Sabine Pipeline, LLC	Docket No. RP15-1322-000	Return on Equity
NextEra Energy Transmission West, LLC	07/15	NextEra Energy Transmission West, LLC	Docket No. ER15-2239-000	Return on Equity
Maritimes & Northeast Pipeline, LLC	05/15	Maritimes & Northeast Pipeline, LLC	Docket No. RP15-1026-000	Return on Equity
Public Service Company of New Mexico	12/12	Public Service Company of New Mexico	Docket No. ER13-685-000	Return on Equity
Public Service Company of New Mexico	10/10	Public Service Company of New Mexico	Docket No. ER11-1915-000	Return on Equity
Portland Natural Gas Transmission System	05/10	Portland Natural Gas Transmission System	Docket No. RP10-729-000	Return on Equity
Florida Gas Transmission Company, LLC	10/09	Florida Gas Transmission Company, LLC	Docket No. RP10-21-000	Return on Equity
Maritimes and Northeast Pipeline, LLC	07/09	Maritimes and Northeast Pipeline, LLC	Docket No. RP09-809-000	Return on Equity
Spectra Energy	02/08	Saltville Gas Storage	Docket No. RP08-257-000	Return on Equity
Panhandle Energy Pipelines	08/07	Panhandle Energy Pipelines	Docket No. PL07-2-000	Response to draft policy statement regarding inclusion of MLPs in proxy groups for determination of gas pipeline ROEs
Southwest Gas Storage Company	08/07	Southwest Gas Storage Company	Docket No. RP07-541-000	Return on Equity
Southwest Gas Storage Company	06/07	Southwest Gas Storage Company	Docket No. RP07-34-000	Return on Equity
Sea Robin Pipeline LLC	06/07	Sea Robin Pipeline LLC	Docket No. RP07-513-000	Return on Equity
Transwestern Pipeline Company	09/06	Transwestern Pipeline Company	Docket No. RP06-614-000	Return on Equity
GPU International and Aquila	11/00	GPU International	Docket No. EC01-24-000	Market Power Study
Florida Public Service Commission				
Florida Power & Light Company	03/16	Florida Power & Light Company	Docket No. 160021-EI	Return on Equity
Tampa Electric Company	04/13	Tampa Electric Company	Docket No. 130040-EI	Return on Equity
Georgia Public Service Commission				
Atlanta Gas Light Company	05/10	Atlanta Gas Light Company	Docket No. 31647-U	Return on Equity
Hawaii Public Utilities Commission				
Maui Electric Company, Limited	10/17	Maui Electric Company, Limited	Docket No. 2017-0150	Return on Equity
Hawaiian Electric Company, Inc.	12/16	Hawaiian Electric Company, Inc.	Docket No. 2016-0328	Return on Equity
Hawai'i Electric Light Company, Inc.	09/16	Hawai'i Electric Light Company, Inc.	Docket No. 2015-0170	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Maui Electric Company, Limited	12/14	Maui Electric Company, Limited	Docket No. 2014-0318 RP15-1322-000	Return on Equity
Hawaiian Electric Company, Inc.	06/14	Hawaiian Electric Company, Inc.	Docket No. 2013-0373	Return on Equity
Hawai'i Electric Light Company, Inc.	08/12	Hawai'i Electric Light Company, Inc.	Docket No. 2012-0099	Return on Equity
Illinois Commerce Commission				
Ameren Illinois Company d/b/a Ameren Illinois	01/18	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 18-0463	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	01/15	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 15-0142	Return on Equity
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	04/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Docket No. 14-0371	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	01/13	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 13-0192	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0279	Return on Equity (electric)
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0282	Return on Equity (gas)
Indiana Utility Regulatory Commission				
Indiana Michigan Power Company	7/17	Indiana Michigan Power Company	Cause No. 44967	Return on Equity
Duke Energy Indiana, Inc.	12/15	Duke Energy Indiana, Inc.	Cause No. 44720	Return on Equity
Duke Energy Indiana, Inc.	12/14	Duke Energy Indiana, Inc.	Cause No. 44526	Return on Equity
Northern Indiana Public Service Company	05/09	Northern Indiana Public Service Company	Cause No. 43894	Assessment of Valuation Approaches
Kansas Corporation Commission				
Kansas City Power & Light Company	05/18	Kansas City Power & Light Company	Docket No. 18-KCPE-480-RTS	Return on Equity
Westar Energy	02/18	Westar Energy	Docket No. 18-WSEE-328-RTS	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Great Plains Energy, Inc. and Kansas City Power & Light Company	01/17	Great Plains Energy, Inc. and Kansas City Power & Light Company	Docket No. 16-KCPE-593-ACQ	Response to Direct Testimony by Commission Staff related to the ratemaking capital structure processes
Kansas City Power & Light Company	01/15	Kansas City Power & Light Company	Docket No. 15-KCPE-116-RTS	Return on Equity
Maine Public Utilities Commission				
Northern Utilities, Inc.	05/17	Northern Utilities, Inc.	Docket No. 2017-00065	Return on Equity
Central Maine Power Company	06/11	Central Maine Power Company	Docket No. 2010-327	Response to Bench Analysis provided by Commission Staff relating to the Company's credit and collections processes
Maryland Public Service Commission				
Washington Gas Light Company	05/18	Washington Gas Light Company	Case No. 9481	Return on Equity
Potomac Electric Power Company	01/18	Potomac Electric Power Company	Case No. 9472	Return on Equity
Delmarva Power & Light Company	07/17	Delmarva Power & Light Company	Case No. 9455	Return on Equity
Potomac Electric Power Company	03/17	Potomac Electric Power Company	Case No. 9443	Return on Equity
Delmarva Power & Light Company	06/16	Delmarva Power & Light Company	Case No. 9424	Return on Equity
Potomac Electric Power Company	06/16	Potomac Electric Power Company	Case No. 9418	Return on Equity
Potomac Electric Power Company	12/13	Potomac Electric Power Company	Case No. 9336	Return on Equity
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 9317	Return on Equity
Potomac Electric Power Company	11/12	Potomac Electric Power Company	Case No. 9311	Return on Equity
Potomac Electric Power Company	12/11	Potomac Electric Power Company	Case No. 9286	Return on Equity
Delmarva Power & Light Company	12/11	Delmarva Power & Light Company	Case No. 9285	Return on Equity
Delmarva Power & Light Company	12/10	Delmarva Power & Light Company	Case No. 9249	Return on Equity
Massachusetts Department of Public Utilities				
Boston Gas Company, Colonial Gas Company each d/b/a National Grid	11/17	Boston Gas Company, Colonial Gas Company each d/b/a National Grid	DPU 17-170	Return on Equity
NSTAR Electric Company Western and Massachusetts Electric Company each d/b/a Eversource Energy	01/17	NSTAR Electric Company Western Massachusetts Electric Company each d/b/a Eversource Energy	DPU 17-05	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
National Grid	11/15	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 15-155	Return on Equity
Fitchburg Gas and Electric Light Company d/b/a Unitil	06/15	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 15-80	Return on Equity
NSTAR Gas Company	12/14	NSTAR Gas Company	DPU 14-150	Return on Equity
Fitchburg Gas and Electric Light Company d/b/a Unitil	07/13	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 13-90	Return on Equity
Bay State Gas Company d/b/a Columbia Gas of Massachusetts	04/12	Bay State Gas Company d/b/a Columbia Gas of Massachusetts	DPU 12-25	Capital Cost Recovery
National Grid	08/09	Massachusetts Electric Company d/b/a National Grid	DPU 09-39	Revenue Decoupling and Return on Equity
National Grid	08/09	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 09-38	Return on Equity – Solar Generation
Bay State Gas Company	04/09	Bay State Gas Company	DPU 09-30	Return on Equity
NSTAR Electric	09/04	NSTAR Electric	DTE 04-85	Divestiture of Power Purchase Agreement
NSTAR Electric	08/04	NSTAR Electric	DTE 04-78	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-68	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-61	Divestiture of Power Purchase Agreement
NSTAR Electric	06/04	NSTAR Electric	DTE 04-60	Divestiture of Power Purchase Agreement
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Bay State Gas Company	01/93	Bay State Gas Company	DPU 93-14	Divestiture of Shelf Registration
Bay State Gas Company	01/91	Bay State Gas Company	DPU 91-25	Divestiture of Shelf Registration

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Michigan Public Service Commission				
Indiana Michigan Power Company	05/17	Indiana Michigan Power Company	Case No. U-18370	Return on Equity
Minnesota Public Utilities Commission				
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/17	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-17-285	Return on Equity
ALLETE, Inc., d/b/a Minnesota Power Inc.	11/16	ALLETE, Inc., d/b/a Minnesota Power Inc.	Docket No. E015/GR-16-664	Return on Equity
Otter Tail Power Corporation	02/16	Otter Tail Power Company	Docket No. E017/GR-15-1033	Return on Equity
Minnesota Energy Resources Corporation	09/15	Minnesota Energy Resources Corporation	Docket No. G-011/GR-15-736	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-15-424	Return on Equity
Xcel Energy, Inc.	11/13	Northern States Power Company	Docket No. E002/GR-13-868	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/13	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-13-316	Return on Equity
Xcel Energy, Inc.	11/12	Northern States Power Company	Docket No. E002/GR-12-961	Return on Equity
Otter Tail Power Corporation	04/10	Otter Tail Power Company	Docket No. E-017/GR-10-239	Return on Equity
Minnesota Power a division of ALLETE, Inc.	11/09	Minnesota Power	Docket No. E-015/GR-09-1151	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	11/08	CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-08-1075	Return on Equity
Otter Tail Power Corporation	10/07	Otter Tail Power Company	Docket No. E-017/GR-07-1178	Return on Equity
Xcel Energy, Inc.	11/05	Northern States Power Company -Minnesota	Docket No. E-002/GR-05-1428	Return on Equity (electric)
Xcel Energy, Inc.	09/04	Northern States Power Company - Minnesota	Docket No. G-002/GR-04-1511	Return on Equity (gas)
Mississippi Public Service Commission				
CenterPoint Energy Resources, Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Mississippi Gas	07/09	CenterPoint Energy Mississippi Gas	Docket No. 09-UN-334	Return on Equity
Missouri Public Service Commission				
KCP&L Greater Missouri Operations Company	01/18	KCP&L Greater Missouri Operations Company	Case No. ER-2018-0146	Return on Equity
Kansas City Power & Light Company	01/18	Kansas City Power & Light Company	Case No. ER-2018-0145	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Laclede Gas Company and Missouri Gas Energy	11/17	Laclede Gas Company and Missouri Gas Energy	Case No. GR-2017-0215 Case No. GR-2017-0216	Goodwill Adjustment on Capital Structure
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a/ Liberty Utilities	09/17	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a/ Liberty Utilities	Case No. GR-2018-0013	New Ratemaking Mechanisms
Union Electric Company d/b/a Ameren Missouri	07/16	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2016-0179	Return on Equity (electric)
Kansas City Power & Light Company	07/16	Kansas City Power & Light Company	Case No. ER-2016-0285	Return on Equity (electric)
Kansas City Power & Light Company	02/16	Kansas City Power & Light Company	Case No. ER-2016-0156	Return on Equity (electric)
Kansas City Power & Light Company	10/14	Kansas City Power & Light Company	Case No. ER-2014-0370	Return on Equity (electric)
Union Electric Company d/b/a Ameren Missouri	07/14	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2014-0258	Return on Equity (electric)
Union Electric Company d/b/a Ameren Missouri	06/14	Union Electric Company d/b/a Ameren Missouri	Case No. EC-2014-0223	Return on Equity (electric)
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	02/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Case No. GR-2014-0152	Return on Equity
Laclede Gas Company	12/12	Laclede Gas Company	Case No. GR-2013-0171	Return on Equity
Union Electric Company d/b/a Ameren Missouri	02/12	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2012-0166	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	09/10	Union Electric Company d/b/a AmerenUE	Case No. ER-2011-0028	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	06/10	Union Electric Company d/b/a AmerenUE	Case No. GR-2010-0363	Return on Equity (gas)
Montana Public Service Commission				
Northwestern Corporation	09/12	Northwestern Corporation d/b/a Northwestern Energy	Docket No. D2012.9.94	Return on Equity (gas)
Nevada Public Utilities Commission				
Southwest Gas Corporation	05/18	Southwest Gas Corporation	Docket No. 18-05031	Return on Equity (gas)
Southwest Gas Corporation	04/12	Southwest Gas Corporation	Docket No. 12-04005	Return on Equity (gas)
Nevada Power Company	06/11	Nevada Power Company	Docket No. 11-06006	Return on Equity (electric)
New Hampshire Public Utilities Commission				
Northern Utilities, Inc.	06/17	Northern Utilities, Inc.	Docket No. DG 17-070	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Liberty Utilities d/b/a EnergyNorth Natural Gas	04/17	Liberty Utilities d/b/a EnergyNorth Natural Gas	Docket No. DG 17-048	Return on Equity
Unitil Energy Systems, Inc.	04/16	Unitil Energy Systems, Inc.	Docket No. DE 16-384	Return on Equity
Liberty Utilities d/b/a Granite State Electric Company	04/16	Liberty Utilities d/b/a Granite State Electric Company	Docket No. DE 16-383	Return on Equity
Liberty Utilities d/b/a EnergyNorth Natural Gas	08/14	Liberty Utilities d/b/a EnergyNorth Natural Gas	Docket No. DG 14-180	Return on Equity
Liberty Utilities d/b/a Granite State Electric Company	03/13	Liberty Utilities d/b/a Granite State Electric Company	Docket No. DE 13-063	Return on Equity
EnergyNorth Natural Gas d/b/a National Grid NH	02/10	EnergyNorth Natural Gas d/b/a National Grid NH	Docket No. DG 10-017	Return on Equity
Unitil Energy Systems, Inc., EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	08/08	Unitil Energy Systems, Inc., EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	Docket No. DG 07-072	Carrying Charge Rate on Cash Working Capital
New Jersey Board of Public Utilities				
Atlantic City Electric Company	06/18	Atlantic City Electric Company	Docket No. ER18060638	Return on Equity
Atlantic City Electric Company	03/17	Atlantic City Electric Company	Docket No. ER17030308	Return on Equity
Pivotal Utility Holdings, Inc.	08/16	Elizabethtown Gas	Docket No. GR16090826	Return on Equity
The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	04/16	The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	BPU Docket No. GM15101196	Merger Approval
Atlantic City Electric Company	03/16	Atlantic City Electric Company	Docket No. ER16030252	Return on Equity
Pepco Holdings, Inc.	03/14	Atlantic City Electric Company	Docket No. ER14030245	Return on Equity
Orange and Rockland Utilities	11/13	Rockland Electric Company	Docket No. ER13111135	Return on Equity
Atlantic City Electric Company	12/12	Atlantic City Electric Company	Docket No. ER12121071	Return on Equity
Atlantic City Electric Company	08/11	Atlantic City Electric Company	Docket No. ER11080469	Return on Equity
Pepco Holdings, Inc.	09/06	Atlantic City Electric Company	Docket No. EM06090638	Divestiture and Valuation of Electric Generating Assets

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Pepco Holdings, Inc.	12/05	Atlantic City Electric Company	Docket No. EM05121058	Market Value of Electric Generation Assets; Auction
Conectiv	06/03	Atlantic City Electric Company	Docket No. EO03020091	Market Value of Electric Generation Assets; Auction Process
New Mexico Public Regulation Commission				
Public Service Company of New Mexico	12/16	Public Service Company of New Mexico	Case No. 16-00276-UT	Return on Equity (electric)
Public Service Company of New Mexico	08/15	Public Service Company of New Mexico	Case No. 15-00261-UT	Return on Equity (electric)
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 14-00332-UT	Return on Equity (electric)
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 13-00390-UT	Cost of Capital and Financial Integrity
Southwestern Public Service Company	02/11	Southwestern Public Service Company	Case No. 10-00395-UT	Return on Equity (electric)
Public Service Company of New Mexico	06/10	Public Service Company of New Mexico	Case No. 10-00086-UT	Return on Equity (electric)
Public Service Company of New Mexico	09/08	Public Service Company of New Mexico	Case No. 08-00273-UT	Return on Equity (electric)
Xcel Energy, Inc.	07/07	Southwestern Public Service Company	Case No. 07-00319-UT	Return on Equity (electric)
New York State Public Service Commission				
Consolidated Edison Company of New York, Inc.	01/15	Consolidated Edison Company of New York, Inc.	Case No. 15-E-0050	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	11/14	Orange and Rockland Utilities, Inc.	Case Nos. 14-E-0493 and 14-G-0494	Return on Equity (electric and gas)
Consolidated Edison Company of New York, Inc.	01/13	Consolidated Edison Company of New York, Inc.	Case No. 13-E-0030	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Electric Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Electric Service	Case No. 12-E-0201	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Gas Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Gas Service	Case No. 12-G-0202	Return on Equity (gas)
Orange and Rockland Utilities, Inc.	07/11	Orange and Rockland Utilities, Inc.	Case No. 11-E-0408	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	07/10	Orange and Rockland Utilities, Inc.	Case No. 10-E-0362	Return on Equity (electric)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-G-0795	Return on Equity (gas)

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-S-0794	Return on Equity (steam)
Niagara Mohawk Power Corporation	07/01	Niagara Mohawk Power Corporation	Case No. 01-E-1046	Power Purchase and Sale Agreement; Standard Offer Service Agreement
North Carolina Utilities Commission				
Duke Energy Carolinas, LLC	08/17	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1146	Return on Equity
Duke Energy Progress, LLC	06/17	Duke Energy Progress, LLC	Docket No. E-2, Sub 1142	Return on Equity
Public Service Company of North Carolina, Inc.	03/16	Public Service Company of North Carolina, Inc.	Docket No. G-5, Sub 565	Return on Equity
Dominion North Carolina Power	03/16	Dominion North Carolina Power	Docket No. E-22, Sub 532	Return on Equity
Duke Energy Carolinas, LLC	02/13	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1026	Return on Equity
Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	10/12	Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	Docket No. E-2, Sub 1023	Return on Equity
Virginia Electric and Power Company d/b/a Dominion North Carolina Power	03/12	Virginia Electric and Power Company d/b/a Dominion North Carolina Power	Docket No. E-22, Sub 479	Return on Equity (electric)
Duke Energy Carolinas, LLC	07/11	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 989	Return on Equity (electric)
North Dakota Public Service Commission				
Otter Tail Power Company	11/17	Otter Tail Power Company	Docket No. 17-398	Return on Equity (electric)
Otter Tail Power Company	11/08	Otter Tail Power Company	Docket No. 08-862	Return on Equity (electric)
Oklahoma Corporation Commission				
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/16	CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	Cause No. PUD201600094	Return on Equity
Oklahoma Gas & Electric Company	12/15	Oklahoma Gas & Electric Company	Cause No. PUD201500273	Return on Equity
Public Service Company of Oklahoma	07/15	Public Service Company of Oklahoma	Cause No. PUD201500208	Return on Equity
Oklahoma Gas & Electric Company	07/11	Oklahoma Gas & Electric Company	Cause No. PUD201100087	Return on Equity
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/09	CenterPoint Energy Oklahoma Gas	Cause No. PUD200900055	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Pennsylvania Public Utility Commission				
Pike County Light & Power Company	01/14	Pike County Light & Power Company	Docket No. R-2013-2397237	Return on Equity (electric & gas)
Veolia Energy Philadelphia, Inc.	12/13	Veolia Energy Philadelphia, Inc.	Docket No. R-2013-2386293	Return on Equity (steam)
Rhode Island Public Utilities Commission				
The Narragansett Electric Company d/b/a National Grid	11/17	The Narragansett Electric Company d/b/a National Grid	Docket No. 4770	Return on Equity (electric & gas)
The Narragansett Electric Company d/b/a National Grid	04/12	The Narragansett Electric Company d/b/a National Grid	Docket No. 4323	Return on Equity (electric & gas)
National Grid RI – Gas	08/08	National Grid RI – Gas	Docket No. 3943	Revenue Decoupling and Return on Equity
South Carolina Public Service Commission				
South Carolina Electric & Gas	12/17	South Carolina Electric & Gas	Docket No. 2017-305-E	Return on Equity
Duke Energy Progress, LLC	07/16	Duke Energy Progress, LLC	Docket No. 2016-227-E	Return on Equity
Duke Energy Carolinas, LLC	03/13	Duke Energy Carolinas, LLC	Docket No. 2013-59-E	Return on Equity
South Carolina Electric & Gas	06/12	South Carolina Electric & Gas	Docket No. 2012-218-E	Return on Equity
Duke Energy Carolinas, LLC	08/11	Duke Energy Carolinas, LLC	Docket No. 2011-271-E	Return on Equity
South Carolina Electric & Gas	03/10	South Carolina Electric & Gas	Docket No. 2009-489-E	Return on Equity
South Dakota Public Utilities Commission				
Otter Tail Power Company	04/18	Otter Tail Power Company	Docket No. EL18-021	Return on Equity (electric)
Otter Tail Power Company	08/10	Otter Tail Power Company	Docket No. EL10-011	Return on Equity (electric)
Northern States Power Company	06/09	South Dakota Division of Northern States Power	Docket No. EL09-009	Return on Equity (electric)
Otter Tail Power Company	10/08	Otter Tail Power Company	Docket No. EL08-030	Return on Equity (electric)
Texas Public Utility Commission				
Texas-New Mexico Power Company	05/18	Texas-New Mexico Power Company	Docket No. 48401	Return on Equity
Entergy Texas, Inc.	05/18	Entergy Texas, Inc.	Docket No. 48371	Return on Equity
Southwestern Public Service Company	08/17	Southwestern Public Service Company	Docket No. 47527	Return on Equity
Oncor Electric Delivery Company, LLC	03/17	Oncor Electric Delivery Company, LLC	Docket No. 46957	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
El Paso Electric Company	02/17	El Paso Electric Company	Docket No. 46831	Return on Equity
Southwestern Electric Power Company	12/16	Southwestern Electric Power Company	Docket No. 46449	Return on Equity (electric)
Sharyland Utilities, L.P.	04/16	Sharyland Utilities, L.P.	Docket No. 45414	Return on Equity
Southwestern Public Service Company	02/16	Southwestern Public Service Company	Docket No. 44524	Return on Equity (electric)
Wind Energy Transmission Texas, LLC	05/15	Wind Energy Transmission Texas, LLC	Docket No. 44746	Return on Equity
Cross Texas Transmission	12/14	Cross Texas Transmission	Docket No. 43950	Return on Equity
Southwestern Public Service Company	12/14	Southwestern Public Service Company	Docket No. 43695	Return on Equity (electric)
Sharyland Utilities, L.P.	05/13	Sharyland Utilities, L.P.	Docket No. 41474	Return on Equity
Wind Energy Texas Transmission, LLC	08/12	Wind Energy Texas Transmission, LLC	Docket No. 40606	Return on Equity
Southwestern Electric Power Company	07/12	Southwestern Electric Power Company	Docket No. 40443	Return on Equity
Oncor Electric Delivery Company, LLC	01/11	Oncor Electric Delivery Company, LLC	Docket No. 38929	Return on Equity
Texas-New Mexico Power Company	08/10	Texas-New Mexico Power Company	Docket No. 38480	Return on Equity (electric)
CenterPoint Energy Houston Electric LLC	06/10	CenterPoint Energy Houston Electric LLC	Docket No. 38339	Return on Equity
Xcel Energy, Inc.	05/10	Southwestern Public Service Company	Docket No. 38147	Return on Equity (electric)
Texas-New Mexico Power Company	08/08	Texas-New Mexico Power Company	Docket No. 36025	Return on Equity (electric)
Xcel Energy, Inc.	05/06	Southwestern Public Service Company	Docket No. 32766	Return on Equity (electric)
Texas Railroad Commission				
Atmos Energy Corporation – West Texas Division	06/18	Atmos Energy Corporation – West Texas Division	GUD 10743	Return on Equity
Atmos Energy Corporation – Mid-Texas Division	06/18	Atmos Energy Corporation – Mid-Texas Division	GUD 10742	Return on Equity
CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	11/17	CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	GUD 10669	Return on Equity
Atmos Pipeline - Texas	01/17	Atmos Pipeline - Texas	GUD 10580	Return on Equity
CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	12/16	CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	GUD 10567	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	03/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10432	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/12	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10182	Return on Equity
Atmos Energy Corporation – West Texas Division	06/12	Atmos Energy Corporation – West Texas Division	GUD 10174	Return on Equity
Atmos Energy Corporation – Mid-Texas Division	06/12	Atmos Energy Corporation – Mid-Texas Division	GUD 10170	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	12/10	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10038	Return on Equity
Atmos Pipeline – Texas	09/10	Atmos Pipeline - Texas	GUD 10000	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/09	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 9902	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	03/08	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	GUD 9791	Return on Equity
Utah Public Service Commission				
Questar Gas Company	12/07	Questar Gas Company	Docket No. 07-057-13	Return on Equity
Vermont Public Service Board				
Central Vermont Public Service Corporation; Green Mountain Power	02/12	Central Vermont Public Service Corporation; Green Mountain Power	Docket No. 7770	Merger Policy
Central Vermont Public Service Corporation	12/10	Central Vermont Public Service Corporation	Docket No. 7627	Return on Equity (electric)
Green Mountain Power	04/06	Green Mountain Power	Docket Nos. 7175 and 7176	Return on Equity (electric)
Vermont Gas Systems, Inc.	12/05	Vermont Gas Systems	Docket Nos. 7109 and 7160	Return on Equity (gas)
Virginia State Corporation Commission				
Virginia Electric and Power Company	03/17	Virginia Electric and Power Company	Case No. PUR-2017-00038	Return on Equity
Virginia Natural Gas, Inc.	03/17	Virginia Natural Gas, Inc.	Case No. PUE-2016-00143	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Virginia Electric and Power Company	10/16	Virginia Electric and Power Company	Case No. PUE-2016-00112; PUE-2016-00113; PUE-2016-00136	Return on Equity
Washington Gas Light Company	06/16	Washington Gas Light Company	Case No. PUE-2016-00001	Return on Equity
Virginia Electric and Power Company	06/16	Virginia Electric and Power Company	Case Nos. PUE-2016-00063; PUE-2016-00062; PUE-2016-00061; PUE-2016-00060; PUE-2016-00059	Return on Equity
Virginia Electric and Power Company	12/15	Virginia Electric and Power Company	Case Nos. PUE-2015-0058; PUE-2015-0059; PUE-2015-0060; PUE-2015-0061; PUE-2015-0075; PUE-2015-0089; PUE-2015-0102; PUE-2015-0104	Return on Equity
Virginia Electric and Power Company	03/15	Virginia Electric and Power Company	Case No. PUE-2015-00027	Return on Equity
Virginia Electric and Power Company	03/13	Virginia Electric and Power Company	Case No. PUE-2013-00020	Return on Equity
Virginia Natural Gas, Inc.	02/11	Virginia Natural Gas, Inc.	Case No. PUE-2010-00142	Capital Structure
Columbia Gas of Virginia, Inc.	06/06	Columbia Gas of Virginia, Inc.	Case No. PUE-2005-00098	Merger Synergies
Dominion Resources	10/01	Virginia Electric and Power Company	Case No. PUE000584	Corporate Structure and Electric Generation Strategy

Expert Reports

United States District Court, District of South Carolina, Columbia Division				
South Carolina Electric & Gas Company	07/18	South Carolina Electric & Gas Company	Case No. 3:18-CV-01795-JMC	Return on Equity
United States District Court, Western District of Texas, Austin Division				
Southwestern Public Service Company	02/12	Southwestern Public Service Company	C.A. No. A-09-CA-917-SS	PURPA and FERC regulations
American Arbitration Association				
Confidential Client	11/14	Confidential Client	Confidential	Economic harm related to failure to perform

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Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment
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	$2.24	$75.23	2.98%	3.06%	6.00%	6.00%	5.00%	5.67%	8.05%	8.73%	9.07%
Alliant Energy Corporation	LNT	$1.34	$40.60	3.30%	3.40%	5.60%	5.85%	6.50%	5.98%	8.99%	9.38%	9.91%
Ameren Corporation	AEE	$1.83	$57.18	3.20%	3.31%	6.50%	6.30%	7.50%	6.77%	9.60%	10.08%	10.82%
American Electric Power Company, Inc.	AEP	$2.48	$66.01	3.76%	3.86%	5.70%	5.79%	4.50%	5.33%	8.34%	9.19%	9.66%
Avangrid, Inc.	AGR	$1.73	$51.90	3.33%	3.51%	9.10%	10.40%	13.00%	10.83%	12.58%	14.34%	16.55%
Black Hills Corporation	BKH	$1.90	$57.15	3.32%	3.40%	4.10%	3.86%	5.00%	4.32%	7.25%	7.72%	8.41%
CMS Energy Corporation	CMS	$1.43	$44.60	3.21%	3.32%	6.40%	7.05%	7.00%	6.82%	9.71%	10.13%	10.37%
DTE Energy Company	DTE	$3.53	$100.10	3.53%	3.63%	5.30%	5.59%	7.00%	5.96%	8.92%	9.60%	10.65%
Duke Energy Corporation	DUK	$3.56	$75.51	4.71%	4.83%	4.70%	4.22%	5.50%	4.81%	9.03%	9.63%	10.34%
El Paso Electric	EE	$1.44	$56.46	2.55%	2.61%	5.10%	5.20%	4.50%	4.93%	7.11%	7.55%	7.82%
Hawaiian Electric Industries, Inc.	HE	$1.24	$33.60	3.69%	3.81%	7.10%	9.10%	3.50%	6.57%	7.26%	10.38%	12.96%
IDACORP, Inc.	IDA	$2.36	$89.53	2.64%	2.68%	3.90%	3.10%	3.50%	3.50%	5.78%	6.18%	6.59%
NextEra Energy, Inc.	NEE	$4.44	$159.84	2.78%	2.90%	8.60%	9.79%	8.50%	8.96%	11.40%	11.87%	12.70%
NorthWestern Corporation	NWE	$2.20	$53.53	4.11%	4.18%	3.00%	3.16%	3.50%	3.22%	7.17%	7.40%	7.68%
OGE Energy Corp.	OGE	$1.33	$34.04	3.91%	4.01%	6.00%	4.30%	6.00%	5.43%	8.29%	9.45%	10.02%
Otter Tail Corporation	OTTR	$1.34	$45.22	2.96%	3.09%	NA	9.00%	7.50%	8.25%	10.57%	11.34%	12.10%
Pinnacle West Capital Corporation	PNW	$2.78	$76.97	3.61%	3.69%	4.50%	3.78%	5.00%	4.43%	7.46%	8.12%	8.70%
PNM Resources, Inc.	PNM	$1.06	$38.00	2.79%	2.87%	5.10%	4.30%	7.50%	5.63%	7.15%	8.50%	10.39%
Portland General Electric Company	POR	$1.45	$41.01	3.54%	3.59%	2.80%	2.65%	4.00%	3.15%	6.23%	6.74%	7.61%
Southern Company	SO	$2.40	$44.06	5.45%	5.54%	4.50%	2.72%	3.00%	3.41%	8.24%	8.95%	10.07%
WEC Energy Group, Inc.	WEC	$2.21	$61.25	3.61%	3.70%	4.10%	4.43%	7.00%	5.18%	7.78%	8.88%	10.73%
Xcel Energy Inc.	XEL	$1.52	$44.19	3.44%	3.54%	5.70%	5.89%	5.50%	5.70%	9.03%	9.23%	9.43%
Proxy Group Mean				3.47%	3.57%	5.42%	5.57%	5.91%	5.67%	8.45%	9.24%	10.12%
Proxy Group Median				3.38%	3.52%	5.30%	5.40%	5.50%	5.53%	8.27%	9.21%	10.05%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of June 15, 2018
[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])

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Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment
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	$2.24	$72.50	3.09%	3.18%	6.00%	6.00%	5.00%	5.67%	8.17%	8.84%	9.18%
Alliant Energy Corporation	LNT	$1.34	$40.29	3.33%	3.43%	5.60%	5.85%	6.50%	5.98%	9.02%	9.41%	9.93%
Ameren Corporation	AEE	$1.83	$56.21	3.26%	3.37%	6.50%	6.30%	7.50%	6.77%	9.66%	10.13%	10.88%
American Electric Power Company, Inc.	AEP	$2.48	$66.84	3.71%	3.81%	5.70%	5.79%	4.50%	5.33%	8.29%	9.14%	9.61%
Avangrid, Inc.	AGR	$1.73	$50.61	3.41%	3.60%	9.10%	10.40%	13.00%	10.83%	12.67%	14.43%	16.64%
Black Hills Corporation	BKH	$1.90	$54.56	3.48%	3.56%	4.10%	3.86%	5.00%	4.32%	7.41%	7.88%	8.57%
CMS Energy Corporation	CMS	$1.43	$44.34	3.23%	3.33%	6.40%	7.05%	7.00%	6.82%	9.73%	10.15%	10.39%
DTE Energy Company	DTE	$3.53	$101.87	3.47%	3.57%	5.30%	5.59%	7.00%	5.96%	8.86%	9.53%	10.59%
Duke Energy Corporation	DUK	$3.56	$76.57	4.65%	4.76%	4.70%	4.22%	5.50%	4.81%	8.97%	9.57%	10.28%
El Paso Electric	EE	$1.44	$52.05	2.77%	2.83%	5.10%	5.20%	4.50%	4.93%	7.33%	7.77%	8.04%
Hawaiian Electric Industries, Inc.	HE	$1.24	$33.76	3.67%	3.79%	7.10%	9.10%	3.50%	6.57%	7.24%	10.36%	12.94%
IDACORP, Inc.	IDA	$2.36	$87.21	2.71%	2.75%	3.90%	3.10%	3.50%	3.50%	5.85%	6.25%	6.66%
NextEra Energy, Inc.	NEE	$4.44	$158.65	2.80%	2.92%	8.60%	9.79%	8.50%	8.96%	11.42%	11.89%	12.73%
NorthWestern Corporation	NWE	$2.20	$52.95	4.16%	4.22%	3.00%	3.16%	3.50%	3.22%	7.22%	7.44%	7.73%
OGE Energy Corp.	OGE	$1.33	$32.61	4.08%	4.19%	6.00%	4.30%	6.00%	5.43%	8.47%	9.62%	10.20%
Otter Tail Corporation	OTTR	$1.34	$43.41	3.09%	3.21%	NA	9.00%	7.50%	8.25%	10.70%	11.46%	12.23%
Pinnacle West Capital Corporation	PNW	$2.78	$77.79	3.57%	3.65%	4.50%	3.78%	5.00%	4.43%	7.42%	8.08%	8.66%
PNM Resources, Inc.	PNM	$1.06	$37.36	2.84%	2.92%	5.10%	4.30%	7.50%	5.63%	7.20%	8.55%	10.44%
Portland General Electric Company	POR	$1.45	$40.54	3.58%	3.63%	2.80%	2.65%	4.00%	3.15%	6.27%	6.78%	7.65%
Southern Company	SO	$2.40	$44.31	5.42%	5.51%	4.50%	2.72%	3.00%	3.41%	8.21%	8.92%	10.04%
WEC Energy Group, Inc.	WEC	$2.21	$61.59	3.59%	3.68%	4.10%	4.43%	7.00%	5.18%	7.76%	8.86%	10.71%
Xcel Energy Inc.	XEL	$1.52	$44.41	3.42%	3.52%	5.70%	5.89%	5.50%	5.70%	9.02%	9.22%	9.41%
Proxy Group Mean				3.51%	3.61%	5.42%	5.57%	5.91%	5.67%	8.49%	9.29%	10.16%
Proxy Group Median				3.44%	3.56%	5.30%	5.40%	5.50%	5.53%	8.25%	9.18%	10.12%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of June 15, 2018
[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 with Half Year Growth Adjustment
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	$2.24	$74.39	3.01%	3.10%	6.00%	6.00%	5.00%	5.67%	8.09%	8.76%	9.10%
Alliant Energy Corporation	LNT	$1.34	$41.41	3.24%	3.33%	5.60%	5.85%	6.50%	5.98%	8.93%	9.32%	9.84%
Ameren Corporation	AEE	$1.83	$58.05	3.15%	3.26%	6.50%	6.30%	7.50%	6.77%	9.55%	10.03%	10.77%
American Electric Power Company, Inc.	AEP	$2.48	$69.91	3.55%	3.64%	5.70%	5.79%	4.50%	5.33%	8.13%	8.97%	9.44%
Avangrid, Inc.	AGR	$1.73	$50.25	3.44%	3.63%	9.10%	10.40%	13.00%	10.83%	12.70%	14.46%	16.66%
Black Hills Corporation	BKH	$1.90	$57.41	3.31%	3.38%	4.10%	3.86%	5.00%	4.32%	7.23%	7.70%	8.39%
CMS Energy Corporation	CMS	$1.43	$45.84	3.12%	3.23%	6.40%	7.05%	7.00%	6.82%	9.62%	10.04%	10.28%
DTE Energy Company	DTE	$3.53	$105.75	3.34%	3.44%	5.30%	5.59%	7.00%	5.96%	8.73%	9.40%	10.46%
Duke Energy Corporation	DUK	$3.56	$80.74	4.41%	4.52%	4.70%	4.22%	5.50%	4.81%	8.72%	9.32%	10.03%
El Paso Electric	EE	$1.44	$54.16	2.66%	2.72%	5.10%	5.20%	4.50%	4.93%	7.22%	7.66%	7.93%
Hawaiian Electric Industries, Inc.	HE	$1.24	$34.70	3.57%	3.69%	7.10%	9.10%	3.50%	6.57%	7.14%	10.26%	12.84%
IDACORP, Inc.	IDA	$2.36	$89.13	2.65%	2.69%	3.90%	3.10%	3.50%	3.50%	5.79%	6.19%	6.60%
NextEra Energy, Inc.	NEE	$4.44	$156.22	2.84%	2.97%	8.60%	9.79%	8.50%	8.96%	11.46%	11.93%	12.77%
NorthWestern Corporation	NWE	$2.20	$55.80	3.94%	4.01%	3.00%	3.16%	3.50%	3.22%	7.00%	7.23%	7.51%
OGE Energy Corp.	OGE	$1.33	$33.47	3.97%	4.08%	6.00%	4.30%	6.00%	5.43%	8.36%	9.51%	10.09%
Otter Tail Corporation	OTTR	$1.34	$44.07	3.04%	3.17%	NA	9.00%	7.50%	8.25%	10.65%	11.42%	12.18%
Pinnacle West Capital Corporation	PNW	$2.78	$81.85	3.40%	3.47%	4.50%	3.78%	5.00%	4.43%	7.24%	7.90%	8.48%
PNM Resources, Inc.	PNM	$1.06	$39.36	2.69%	2.77%	5.10%	4.30%	7.50%	5.63%	7.05%	8.40%	10.29%
Portland General Electric Company	POR	$1.45	$43.26	3.35%	3.40%	2.80%	2.65%	4.00%	3.15%	6.05%	6.55%	7.42%
Southern Company	SO	$2.40	$46.80	5.13%	5.22%	4.50%	2.72%	3.00%	3.41%	7.92%	8.62%	9.74%
WEC Energy Group, Inc.	WEC	$2.21	$63.81	3.46%	3.55%	4.10%	4.43%	7.00%	5.18%	7.63%	8.73%	10.58%
Xcel Energy Inc.	XEL	$1.52	$46.44	3.27%	3.37%	5.70%	5.89%	5.50%	5.70%	8.86%	9.06%	9.26%
Proxy Group Mean				3.39%	3.48%	5.42%	5.57%	5.91%	5.67%	8.37%	9.16%	10.03%
Proxy Group Median				3.32%	3.39%	5.30%	5.40%	5.50%	5.53%	8.11%	9.02%	9.94%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of June 15, 2018
[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])

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.23	6.00%	6.00%	5.00%	5.67%	5.45%	65.00%	64.00%	65.57%	$0.00	8.55%	22.31	4.10
Alliant Energy Corporation	LNT	$40.60	5.60%	5.85%	6.50%	5.98%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.17%	18.54	3.41
Ameren Corporation	AEE	$57.18	6.50%	6.30%	7.50%	6.77%	5.45%	60.00%	59.00%	65.57%	$0.00	9.26%	18.12	3.33
American Electric Power Company, Inc.	AEP	$66.01	5.70%	5.79%	4.50%	5.33%	5.45%	67.00%	63.00%	65.57%	($0.00)	9.46%	17.25	3.17
Avangrid, Inc.	AGR	$51.90	9.10%	10.40%	13.00%	10.83%	5.45%	76.00%	66.00%	65.57%	($0.00)	8.83%	20.46	3.76
Black Hills Corporation	BKH	$57.15	4.10%	3.86%	5.00%	4.32%	5.45%	55.00%	60.00%	65.57%	$0.00	9.41%	17.45	3.20
CMS Energy Corporation	CMS	$44.60	6.40%	7.05%	7.00%	6.82%	5.45%	61.00%	61.00%	65.57%	$0.00	9.31%	17.89	3.28
DTE Energy Company	DTE	$100.10	5.30%	5.59%	7.00%	5.96%	5.45%	61.00%	60.00%	65.57%	$0.00	9.74%	16.10	2.96
Duke Energy Corporation	DUK	$75.51	4.70%	4.22%	5.50%	4.81%	5.45%	76.00%	80.00%	65.57%	($0.00)	9.61%	16.62	3.05
El Paso Electric	EE	$56.46	5.10%	5.20%	4.50%	4.93%	5.45%	57.00%	61.00%	65.57%	$0.00	8.45%	23.03	4.23
Hawaiian Electric Industries, Inc.	HE	$33.60	7.10%	9.10%	3.50%	6.57%	5.45%	66.00%	59.00%	65.57%	($0.00)	9.27%	18.09	3.32
IDACORP, Inc.	IDA	$89.53	3.90%	3.10%	3.50%	3.50%	5.45%	57.00%	63.00%	65.57%	($0.00)	8.45%	23.00	4.22
NextEra Energy, Inc.	NEE	$159.84	8.60%	9.79%	8.50%	8.96%	5.45%	55.00%	63.00%	65.57%	($0.00)	9.14%	18.69	3.43
NorthWestern Corporation	NWE	$53.53	3.00%	3.16%	3.50%	3.22%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.42%	17.38	3.19
OGE Energy Corp.	OGE	$34.04	6.00%	4.30%	6.00%	5.43%	5.45%	69.00%	71.00%	65.57%	$0.00	9.69%	16.29	2.99
Otter Tail Corporation	OTTR	$45.22	NA	9.00%	7.50%	8.25%	5.45%	66.00%	60.00%	65.57%	$0.00	9.04%	19.24	3.53
Pinnacle West Capital Corporation	PNW	$76.97	4.50%	3.78%	5.00%	4.43%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.40%	17.50	3.21
PNM Resources, Inc.	PNM	$38.00	5.10%	4.30%	7.50%	5.63%	5.45%	53.00%	50.00%	65.57%	$0.00	9.05%	19.19	3.52
Portland General Electric Company	POR	$41.01	2.80%	2.65%	4.00%	3.15%	5.45%	64.00%	63.00%	65.57%	($0.00)	8.97%	19.61	3.60
Southern Company	SO	$44.06	4.50%	2.72%	3.00%	3.41%	5.45%	80.00%	74.00%	65.57%	$0.00	10.43%	13.86	2.55
WEC Energy Group, Inc.	WEC	$61.25	4.10%	4.43%	7.00%	5.18%	5.45%	66.00%	64.00%	65.57%	$0.00	9.16%	18.63	3.42
Xcel Energy Inc.	XEL	$44.19	5.70%	5.89%	5.50%	5.70%	5.45%	62.00%	63.00%	65.57%	($0.00)	9.32%	17.86	3.28
											Mean	9.23%	18.51	
											Max	10.43%		
											Min	8.45%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.31	$3.49	$3.69	$3.90	$4.12	$4.36	$4.60	$4.85	$5.12	$5.40	$5.70	$6.01	$6.34	$6.68	$7.04
Alliant Energy Corporation	LNT	$1.99	$2.11	$2.24	$2.37	$2.51	$2.66	$2.82	$2.98	$3.15	$3.33	$3.51	$3.70	$3.91	$4.12	$4.34	$4.58
Ameren Corporation	AEE	$2.77	$2.96	$3.16	$3.37	$3.60	$3.84	$4.09	$4.35	$4.62	$4.89	$5.17	$5.45	$5.75	$6.06	$6.39	$6.74
American Electric Power Company, Inc.	AEP	$3.62	$3.81	$4.02	$4.23	$4.46	$4.69	$4.94	$5.21	$5.49	$5.79	$6.10	$6.43	$6.78	$7.15	$7.54	$7.95
Avangrid, Inc.	AGR	$1.67	$1.85	$2.05	$2.27	$2.52	$2.79	$3.07	$3.35	$3.62	$3.88	$4.13	$4.35	$4.59	$4.84	$5.10	$5.38
Black Hills Corporation	BKH	$3.38	$3.53	$3.68	$3.84	$4.00	$4.18	$4.36	$4.57	$4.79	$5.04	$5.30	$5.59	$5.89	$6.21	$6.55	$6.91
CMS Energy Corporation	CMS	$2.17	$2.32	$2.48	$2.64	$2.82	$3.02	$3.22	$3.42	$3.63	$3.84	$4.06	$4.28	$4.52	$4.76	$5.02	$5.30
DTE Energy Company	DTE	$5.73	$6.07	$6.43	$6.82	$7.22	$7.65	$8.10	$8.57	$9.06	$9.57	$10.10	$10.65	$11.23	$11.84	$12.49	$13.17
Duke Energy Corporation	DUK	$4.22	$4.42	$4.64	$4.86	$5.09	$5.34	$5.60	$5.88	$6.18	$6.50	$6.85	$7.23	$7.62	$8.03	$8.47	$8.93
El Paso Electric	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.57	$3.76	$3.97	$4.18	$4.41	$4.65	$4.90	$5.17
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.75	$1.86	$1.98	$2.12	$2.25	$2.40	$2.55	$2.70	$2.86	$3.02	$3.18	$3.35	$3.54	$3.73	$3.93
IDACORP, Inc.	IDA	$4.21	$4.36	$4.51	$4.67	$4.83	$5.00	$5.19	$5.41	$5.65	$5.92	$6.22	$6.56	$6.92	$7.30	$7.69	$8.11
NextEra Energy, Inc.	NEE	$6.50	$7.08	$7.72	$8.41	$9.16	$9.98	$10.82	$11.66	$12.50	$13.33	$14.14	$14.91	$15.72	$16.57	$17.48	$18.43
NorthWestern Corporation	NWE	$3.34	$3.45	$3.56	$3.67	$3.79	$3.91	$4.05	$4.21	$4.40	$4.60	$4.84	$5.10	$5.38	$5.67	$5.98	$6.31
OGE Energy Corp.	OGE	$1.92	$2.02	$2.13	$2.25	$2.37	$2.50	$2.64	$2.78	$2.93	$3.09	$3.26	$3.44	$3.62	$3.82	$4.03	$4.25
Otter Tail Corporation	OTTR	$1.86	$2.01	$2.18	$2.36	$2.55	$2.76	$2.98	$3.20	$3.42	$3.63	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02
Pinnacle West Capital Corporation	PNW	$4.43	$4.63	$4.83	$5.04	$5.27	$5.50	$5.75	$6.03	$6.33	$6.65	$7.00	$7.38	$7.78	$8.21	$8.65	$9.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.13	$3.31	$3.49	$3.68	$3.88	$4.09	$4.31
Portland General Electric Company	POR	$2.29	$2.36	$2.44	$2.51	$2.59	$2.67	$2.77	$2.88	$3.00	$3.14	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30
Southern Company	SO	$3.21	$3.32	$3.43	$3.55	$3.67	$3.80	$3.94	$4.10	$4.28	$4.48	$4.71	$4.97	$5.24	$5.53	$5.83	$6.14
WEC Energy Group, Inc.	WEC	$3.14	$3.30	$3.47	$3.65	$3.84	$4.04	$4.25	$4.48	$4.71	$4.97	$5.23	$5.52	$5.82	$6.14	$6.47	$6.82
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.57	$2.72	$2.87	$3.03	$3.21	$3.39	$3.57	$3.77	$3.98	$4.20	$4.42	$4.67	$4.92	$5.19

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Projected Annual Dividend Payout Ratio		[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.250%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.250%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.500%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.750%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.250%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.000%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.750%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.500%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.500%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.500%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.750%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.250%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.500%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.500%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.750%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	$2.15	$2.26	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$4.62	$157.16
Alliant Energy Corporation	LNT	$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$3.00	$84.94
Ameren Corporation	AEE	$1.77	$1.89	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$4.42	$122.09
American Electric Power Company, Inc.	AEP	$2.55	$2.65	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$5.22	$137.18
Avangrid, Inc.	AGR	$1.41	$1.51	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$3.53	$110.14
Black Hills Corporation	BKH	$1.94	$2.07	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$4.53	$120.53
CMS Energy Corporation	CMS	$1.41	$1.51	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$3.47	$94.74
DTE Energy Company	DTE	$3.70	$3.91	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$8.64	$211.98
Duke Energy Corporation	DUK	$3.36	$3.57	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$5.86	$148.47
El Paso Electric	EE	$1.45	$1.55	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$3.39	$119.03
Hawaiian Electric Industries, Inc.	HE	$1.15	$1.20	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$2.58	$71.17
IDACORP, Inc.	IDA	$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$5.32	$186.56
NextEra Energy, Inc.	NEE	$3.90	$4.40	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$12.08	$344.47
NorthWestern Corporation	NWE	$2.21	$2.28	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$4.14	$109.61
OGE Energy Corp.	OGE	$1.40	$1.48	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$2.79	$69.23
Otter Tail Corporation	OTTR	$1.33	$1.41	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$3.29	$96.56
Pinnacle West Capital Corporation	PNW	$2.91	$3.04	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$5.98	$159.69
PNM Resources, Inc.	PNM	$1.07	$1.12	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$2.83	$82.74
Portland General Electric Company	POR	$1.51	$1.55	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$2.82	$84.37
Southern Company	SO	$2.66	$2.69	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$4.03	$85.17
WEC Energy Group, Inc.	WEC	$2.18	$2.28	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$4.47	$127.15
Xcel Energy Inc.	XEL	$1.51	$1.60	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$3.40	$92.65

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($75.23)	$0.00	$1.17	$2.21	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$161.77
Alliant Energy Corporation	LNT	($40.60)	$0.00	$0.74	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$87.94
Ameren Corporation	AEE	($57.18)	$0.00	$0.97	$1.83	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$126.51
American Electric Power Company, Inc.	AEP	($66.01)	$0.00	$1.39	$2.62	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$142.39
Avangrid, Inc.	AGR	($51.90)	$0.00	$0.77	$1.48	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$113.67
Black Hills Corporation	BKH	($57.15)	$0.00	$1.06	$1.98	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$125.06
CMS Energy Corporation	CMS	($44.59)	$0.00	$0.77	$1.46	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$98.21
DTE Energy Company	DTE	($100.10)	$0.00	$2.02	$3.81	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$220.61
Duke Energy Corporation	DUK	($75.51)	$0.00	$1.83	$3.44	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$154.33
El Paso Electric	EE	($56.45)	$0.00	$0.79	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$122.41
Hawaiian Electric Industries, Inc.	HE	($33.60)	$0.00	$0.63	$1.19	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$73.75
IDACORP, Inc.	IDA	($89.53)	$0.00	$1.35	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$191.88
NextEra Energy, Inc.	NEE	($159.84)	$0.00	$2.12	$4.07	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$356.55
NorthWestern Corporation	NWE	($53.53)	$0.00	$1.20	$2.24	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$113.75
OGE Energy Corp.	OGE	($34.04)	$0.00	$0.76	$1.43	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$72.02
Otter Tail Corporation	OTTR	($45.22)	$0.00	$0.72	$1.38	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$99.85
Pinnacle West Capital Corporation	PNW	($76.97)	$0.00	$1.59	$2.98	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$165.67
PNM Resources, Inc.	PNM	($37.99)	$0.00	$0.59	$1.11	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$85.56
Portland General Electric Company	POR	($41.01)	$0.00	$0.82	$1.54	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$87.19
Southern Company	SO	($44.06)	$0.00	$1.45	$2.70	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$89.19
WEC Energy Group, Inc.	WEC	($61.25)	$0.00	$1.19	$2.24	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$131.63
Xcel Energy Inc.	XEL	($44.19)	$0.00	$0.82	$1.55	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$96.05

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	Value Line	High Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.23	6.00%	6.00%	5.00%	6.00%	5.45%	65.00%	64.00%	65.57%	$0.00	8.61%	21.83	4.01
Alliant Energy Corporation	LNT	$40.60	5.60%	5.85%	6.50%	6.50%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.30%	17.94	3.29
Ameren Corporation	AEE	$57.18	6.50%	6.30%	7.50%	7.50%	5.45%	60.00%	59.00%	65.57%	$0.00	9.44%	17.30	3.18
American Electric Power Company, Inc.	AEP	$66.01	5.70%	5.79%	4.50%	5.79%	5.45%	67.00%	63.00%	65.57%	($0.00)	9.58%	16.74	3.07
Avangrid, Inc.	AGR	$51.90	9.10%	10.40%	13.00%	13.00%	5.45%	76.00%	66.00%	65.57%	($0.00)	9.30%	17.92	3.29
Black Hills Corporation	BKH	$57.15	4.10%	3.86%	5.00%	5.00%	5.45%	55.00%	60.00%	65.57%	$0.00	9.59%	16.70	3.07
CMS Energy Corporation	CMS	$44.60	6.40%	7.05%	7.00%	7.05%	5.45%	61.00%	61.00%	65.57%	$0.00	9.37%	17.62	3.24
DTE Energy Company	DTE	$100.10	5.30%	5.59%	7.00%	7.00%	5.45%	61.00%	60.00%	65.57%	$0.00	10.03%	15.08	2.77
Duke Energy Corporation	DUK	$75.51	4.70%	4.22%	5.50%	5.50%	5.45%	76.00%	80.00%	65.57%	($0.00)	9.80%	15.88	2.92
El Paso Electric	EE	$56.46	5.10%	5.20%	4.50%	5.20%	5.45%	57.00%	61.00%	65.57%	$0.00	8.50%	22.63	4.15
Hawaiian Electric Industries, Inc.	HE	$33.60	7.10%	9.10%	3.50%	9.10%	5.45%	66.00%	59.00%	65.57%	($0.00)	9.92%	15.45	2.84
IDACORP, Inc.	IDA	$89.53	3.90%	3.10%	3.50%	3.90%	5.45%	57.00%	63.00%	65.57%	($0.00)	8.53%	22.39	4.11
NextEra Energy, Inc.	NEE	$159.84	8.60%	9.79%	8.50%	9.79%	5.45%	55.00%	63.00%	65.57%	($0.00)	9.34%	17.76	3.26
NorthWestern Corporation	NWE	$53.53	3.00%	3.16%	3.50%	3.50%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.50%	17.06	3.13
OGE Energy Corp.	OGE	$34.04	6.00%	4.30%	6.00%	6.00%	5.45%	69.00%	71.00%	65.57%	$0.00	9.85%	15.70	2.88
Otter Tail Corporation	OTTR	$45.22	NA	9.00%	7.50%	9.00%	5.45%	66.00%	60.00%	65.57%	$0.00	9.21%	18.36	3.37
Pinnacle West Capital Corporation	PNW	$76.97	4.50%	3.78%	5.00%	5.00%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.55%	16.86	3.10
PNM Resources, Inc.	PNM	$38.00	5.10%	4.30%	7.50%	7.50%	5.45%	53.00%	50.00%	65.57%	($0.00)	9.50%	17.08	3.14
Portland General Electric Company	POR	$41.01	2.80%	2.65%	4.00%	4.00%	5.45%	64.00%	63.00%	65.57%	($0.00)	9.18%	18.53	3.40
Southern Company	SO	$44.06	4.50%	2.72%	3.00%	4.50%	5.45%	80.00%	74.00%	65.57%	$0.00	10.80%	12.90	2.37
WEC Energy Group, Inc.	WEC	$61.25	4.10%	4.43%	7.00%	7.00%	5.45%	66.00%	64.00%	65.57%	$0.00	9.62%	16.57	3.04
Xcel Energy Inc.	XEL	$44.19	5.70%	5.89%	5.50%	5.89%	5.45%	62.00%	63.00%	65.57%	($0.00)	9.37%	17.64	3.24
											Mean	9.45%	17.54	
											Max	10.80%		
											Min	8.50%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.32	$3.52	$3.73	$3.95	$4.19	$4.44	$4.69	$4.96	$5.24	$5.53	$5.83	$6.15	$6.49	$6.84	$7.21
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.64	$3.84	$4.05	$4.27	$4.51	$4.75
Ameren Corporation	AEE	$2.77	$2.98	$3.20	$3.44	$3.70	$3.98	$4.26	$4.55	$4.85	$5.14	$5.44	$5.74	$6.05	$6.38	$6.73	$7.09
American Electric Power Company, Inc.	AEP	$3.62	$3.83	$4.05	$4.29	$4.53	$4.80	$5.07	$5.36	$5.66	$5.98	$6.30	$6.65	$7.01	$7.39	$7.79	$8.22
Avangrid, Inc.	AGR	$1.67	$1.89	$2.13	$2.41	$2.72	$3.08	$3.44	$3.80	$4.15	$4.48	$4.78	$5.04	$5.31	$5.60	$5.91	$6.23
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.56	$5.87	$6.19	$6.52	$6.88	$7.25
CMS Energy Corporation	CMS	$2.17	$2.32	$2.49	$2.66	$2.85	$3.05	$3.26	$3.47	$3.69	$3.91	$4.13	$4.36	$4.59	$4.84	$5.11	$5.38
DTE Energy Company	DTE	$5.73	$6.13	$6.56	$7.02	$7.51	$8.04	$8.58	$9.13	$9.70	$10.28	$10.87	$11.46	$12.08	$12.74	$13.44	$14.17
Duke Energy Corporation	DUK	$4.22	$4.45	$4.70	$4.96	$5.23	$5.52	$5.82	$6.14	$6.47	$6.83	$7.20	$7.59	$8.00	$8.44	$8.90	$9.39
El Paso Electric	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.45	$3.64	$3.83	$4.04	$4.26	$4.49	$4.74	$5.00	$5.27
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.79	$1.95	$2.13	$2.32	$2.53	$2.75	$2.97	$3.18	$3.39	$3.60	$3.80	$4.00	$4.22	$4.45	$4.69
IDACORP, Inc.	IDA	$4.21	$4.37	$4.54	$4.72	$4.91	$5.10	$5.31	$5.54	$5.80	$6.09	$6.41	$6.75	$7.12	$7.51	$7.92	$8.35
NextEra Energy, Inc.	NEE	$6.50	$7.14	$7.83	$8.60	$9.44	$10.37	$11.31	$12.25	$13.19	$14.09	$14.96	$15.78	$16.64	$17.54	$18.50	$19.51
NorthWestern Corporation	NWE	$3.34	$3.46	$3.58	$3.70	$3.83	$3.97	$4.12	$4.29	$4.48	$4.70	$4.94	$5.21	$5.49	$5.79	$6.10	$6.44
OGE Energy Corp.	OGE	$1.92	$2.04	$2.16	$2.29	$2.42	$2.57	$2.72	$2.88	$3.04	$3.22	$3.39	$3.58	$3.77	$3.98	$4.20	$4.42
Otter Tail Corporation	OTTR	$1.86	$2.03	$2.21	$2.41	$2.63	$2.86	$3.10	$3.34	$3.59	$3.82	$4.06	$4.28	$4.51	$4.75	$5.01	$5.29
Pinnacle West Capital Corporation	PNW	$4.43	$4.65	$4.88	$5.13	$5.38	$5.65	$5.94	$6.25	$6.57	$6.92	$7.29	$7.69	$8.11	$8.55	$9.02	$9.51
PNM Resources, Inc.	PNM	$1.92	$2.06	$2.22	$2.39	$2.56	$2.76	$2.95	$3.16	$3.36	$3.57	$3.77	$3.98	$4.19	$4.42	$4.66	$4.92
Portland General Electric Company	POR	$2.29	$2.38	$2.48	$2.58	$2.68	$2.79	$2.90	$3.03	$3.18	$3.34	$3.51	$3.70	$3.90	$4.11	$4.34	$4.57
Southern Company	SO	$3.21	$3.35	$3.51	$3.66	$3.83	$4.00	$4.19	$4.39	$4.61	$4.84	$5.10	$5.38	$5.67	$5.98	$6.30	$6.65
WEC Energy Group, Inc.	WEC	$3.14	$3.36	$3.59	$3.85	$4.12	$4.40	$4.70	$5.01	$5.32	$5.63	$5.96	$6.28	$6.62	$6.98	$7.36	$7.76
Xcel Energy Inc.	XEL	$2.30	$2.44	$2.58	$2.73	$2.89	$3.06	$3.24	$3.43	$3.62	$3.82	$4.03	$4.25	$4.49	$4.73	$4.99	$5.26

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Projected Annual
Dividend Payout Ratio

Company	Ticker	[30] 2018	[31] 2019	[32] 2020	[33] 2021	[34] 2022	[35] 2023	[36] 2024	[37] 2025	[38] 2026	[39] 2027	[40] 2028	[41] 2029	[42] 2030	[43] 2031	[44] 2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.250%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.250%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.500%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.750%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.250%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.000%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.750%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.500%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.500%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.500%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.750%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.250%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.500%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.500%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.750%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual
Cash Flows

Company	Ticker	[45] 2018	[46] 2019	[47] 2020	[48] 2021	[49] 2022	[50] 2023	[51] 2024	[52] 2025	[53] 2026	[54] 2027	[55] 2028	[56] 2029	[57] 2030	[58] 2031	[59] 2032	[60] Terminal Value
ALLETE, Inc.	ALE	$2.16	$2.28	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$4.73	$157.43
Alliant Energy Corporation	LNT	$1.36	$1.44	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$3.11	$85.22
Ameren Corporation	AEE	$1.79	$1.91	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$4.65	$122.73
American Electric Power Company, Inc.	AEP	$2.57	$2.67	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$5.39	$137.60
Avangrid, Inc.	AGR	$1.43	$1.57	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$4.09	$111.66
Black Hills Corporation	BKH	$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$121.12
CMS Energy Corporation	CMS	$1.42	$1.52	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$3.53	$94.89
DTE Energy Company	DTE	$3.74	$3.99	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$9.29	$213.70
Duke Energy Corporation	DUK	$3.38	$3.62	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$6.15	$149.01
El Paso Electric	EE	$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$3.45	$119.20
Hawaiian Electric Industries, Inc.	HE	$1.18	$1.25	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$3.08	$72.53
IDACORP, Inc.	IDA	$2.49	$2.66	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$5.47	$186.94
NextEra Energy, Inc.	NEE	$3.92	$4.47	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$12.79	$346.44
NorthWestern Corporation	NWE	$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$4.22	$109.81
OGE Energy Corp.	OGE	$1.40	$1.50	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$2.90	$69.48
Otter Tail Corporation	OTTR	$1.34	$1.43	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$3.47	$97.04
Pinnacle West Capital Corporation	PNW	$2.93	$3.08	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$6.23	$160.30
PNM Resources, Inc.	PNM	$1.09	$1.16	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$3.22	$83.96
Portland General Electric Company	POR	$1.52	$1.58	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$3.00	$84.79
Southern Company	SO	$2.68	$2.75	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$4.36	$85.78
WEC Energy Group, Inc.	WEC	$2.22	$2.35	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$5.09	$128.68
Xcel Energy Inc.	XEL	$1.51	$1.61	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$3.45	$92.77

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($75.23)	$0.00	$1.18	$2.22	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$162.16
Alliant Energy Corporation	LNT	($40.60)	$0.00	$0.74	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$88.33
Ameren Corporation	AEE	($57.18)	$0.00	$0.97	$1.85	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$127.38
American Electric Power Company, Inc.	AEP	($66.01)	$0.00	$1.40	$2.64	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$142.99
Avangrid, Inc.	AGR	($51.90)	$0.00	$0.78	$1.53	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$115.75
Black Hills Corporation	BKH	($57.15)	$0.00	$1.06	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$125.87
CMS Energy Corporation	CMS	($44.59)	$0.00	$0.77	$1.47	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$98.42
DTE Energy Company	DTE	($100.10)	$0.00	$2.04	$3.87	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$222.99
Duke Energy Corporation	DUK	($75.51)	$0.00	$1.84	$3.48	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$155.16
El Paso Electric	EE	($56.45)	$0.00	$0.79	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$122.65
Hawaiian Electric Industries, Inc.	HE	($33.60)	$0.00	$0.64	$1.23	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$75.61
IDACORP, Inc.	IDA	($89.53)	$0.00	$1.36	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$192.42
NextEra Energy, Inc.	NEE	($159.84)	$0.00	$2.14	$4.12	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$359.24
NorthWestern Corporation	NWE	($53.53)	$0.00	$1.21	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$114.03
OGE Energy Corp.	OGE	($34.04)	$0.00	$0.77	$1.45	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$72.38
Otter Tail Corporation	OTTR	($45.22)	$0.00	$0.73	$1.40	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$100.51
Pinnacle West Capital Corporation	PNW	($76.97)	$0.00	$1.60	$3.00	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$166.53
PNM Resources, Inc.	PNM	($38.00)	$0.00	$0.60	$1.13	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$87.18
Portland General Electric Company	POR	($41.01)	$0.00	$0.83	$1.55	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$87.79
Southern Company	SO	($44.06)	$0.00	$1.46	$2.74	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$90.14
WEC Energy Group, Inc.	WEC	($61.25)	$0.00	$1.21	$2.30	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$133.77
Xcel Energy Inc.	XEL	($44.19)	$0.00	$0.82	$1.55	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$96.22

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.23	6.00%	6.00%	5.00%	5.00%	5.45%	65.00%	64.00%	65.57%	$0.00	8.41%	23.32	4.28
Alliant Energy Corporation	LNT	$40.60	5.60%	5.85%	6.50%	5.60%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.08%	19.01	3.49
Ameren Corporation	AEE	$57.18	6.50%	6.30%	7.50%	6.30%	5.45%	60.00%	59.00%	65.57%	$0.00	9.15%	18.67	3.43
American Electric Power Company, Inc.	AEP	$66.01	5.70%	5.79%	4.50%	4.50%	5.45%	67.00%	63.00%	65.57%	($0.00)	9.24%	18.20	3.34
Avangrid, Inc.	AGR	$51.90	9.10%	10.40%	13.00%	9.10%	5.45%	76.00%	66.00%	65.57%	($0.00)	8.48%	22.83	4.19
Black Hills Corporation	BKH	$57.15	4.10%	3.86%	5.00%	3.86%	5.45%	55.00%	60.00%	65.57%	$0.00	9.29%	17.98	3.30
CMS Energy Corporation	CMS	$44.60	6.40%	7.05%	7.00%	6.40%	5.45%	61.00%	61.00%	65.57%	($0.00)	9.21%	18.37	3.37
DTE Energy Company	DTE	$100.10	5.30%	5.59%	7.00%	5.30%	5.45%	61.00%	60.00%	65.57%	$0.00	9.56%	16.79	3.08
Duke Energy Corporation	DUK	$75.51	4.70%	4.22%	5.50%	4.22%	5.45%	76.00%	80.00%	65.57%	($0.00)	9.45%	17.29	3.17
El Paso Electric	EE	$56.46	5.10%	5.20%	4.50%	4.50%	5.45%	57.00%	61.00%	65.57%	$0.00	8.36%	23.70	4.35
Hawaiian Electric Industries, Inc.	HE	$33.60	7.10%	9.10%	3.50%	3.50%	5.45%	66.00%	59.00%	65.57%	($0.00)	8.57%	22.10	4.06
IDACORP, Inc.	IDA	$89.53	3.90%	3.10%	3.50%	3.10%	5.45%	57.00%	63.00%	65.57%	($0.00)	8.37%	23.63	4.34
NextEra Energy, Inc.	NEE	$159.84	8.60%	9.79%	8.50%	8.50%	5.45%	55.00%	63.00%	65.57%	($0.00)	9.04%	19.24	3.53
NorthWestern Corporation	NWE	$53.53	3.00%	3.16%	3.50%	3.00%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.37%	17.64	3.24
OGE Energy Corp.	OGE	$34.04	6.00%	4.30%	6.00%	4.30%	5.45%	69.00%	71.00%	65.57%	$0.00	9.39%	17.55	3.22
Otter Tail Corporation	OTTR	$45.22	NA	9.00%	7.50%	7.50%	5.45%	66.00%	60.00%	65.57%	$0.00	8.87%	20.17	3.70
Pinnacle West Capital Corporation	PNW	$76.97	4.50%	3.78%	5.00%	3.78%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.23%	18.26	3.35
PNM Resources, Inc.	PNM	$38.00	5.10%	4.30%	7.50%	4.30%	5.45%	53.00%	50.00%	65.57%	($0.00)	8.75%	20.91	3.84
Portland General Electric Company	POR	$41.01	2.80%	2.65%	4.00%	2.65%	5.45%	64.00%	63.00%	65.57%	($0.00)	8.86%	20.28	3.72
Southern Company	SO	$44.06	4.50%	2.72%	3.00%	2.72%	5.45%	80.00%	74.00%	65.57%	($0.00)	10.21%	14.51	2.66
WEC Energy Group, Inc.	WEC	$61.25	4.10%	4.43%	7.00%	4.10%	5.45%	66.00%	64.00%	65.57%	$0.00	8.90%	20.00	3.67
Xcel Energy Inc.	XEL	$44.19	5.70%	5.89%	5.50%	5.50%	5.45%	62.00%	63.00%	65.57%	($0.00)	9.27%	18.09	3.32
											Mean	9.05%	19.48	
											Max	10.21%		
											Min	8.36%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.29	$3.45	$3.62	$3.80	$3.99	$4.20	$4.41	$4.64	$4.89	$5.15	$5.43	$5.73	$6.04	$6.37	$6.72
Alliant Energy Corporation	LNT	$1.99	$2.10	$2.22	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.24	$3.42	$3.61	$3.80	$4.01	$4.23	$4.46
Ameren Corporation	AEE	$2.77	$2.94	$3.13	$3.33	$3.54	$3.76	$3.99	$4.23	$4.48	$4.74	$5.00	$5.27	$5.56	$5.86	$6.18	$6.52
American Electric Power Company, Inc.	AEP	$3.62	$3.78	$3.95	$4.13	$4.32	$4.51	$4.72	$4.95	$5.19	$5.46	$5.75	$6.06	$6.39	$6.74	$7.11	$7.50
Avangrid, Inc.	AGR	$1.67	$1.82	$1.99	$2.17	$2.37	$2.58	$2.80	$3.02	$3.24	$3.46	$3.67	$3.87	$4.08	$4.30	$4.53	$4.78
Black Hills Corporation	BKH	$3.38	$3.51	$3.65	$3.79	$3.93	$4.08	$4.25	$4.44	$4.65	$4.87	$5.13	$5.41	$5.70	$6.01	$6.34	$6.68
CMS Energy Corporation	CMS	$2.17	$2.31	$2.46	$2.61	$2.78	$2.96	$3.14	$3.34	$3.53	$3.74	$3.95	$4.16	$4.39	$4.63	$4.88	$5.14
DTE Energy Company	DTE	$5.73	$6.03	$6.35	$6.69	$7.04	$7.42	$7.81	$8.23	$8.67	$9.14	$9.64	$10.16	$10.72	$11.30	$11.91	$12.56
Duke Energy Corporation	DUK	$4.22	$4.40	$4.58	$4.78	$4.98	$5.19	$5.42	$5.67	$5.94	$6.24	$6.57	$6.93	$7.30	$7.70	$8.12	$8.56
El Paso Electric	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.84	$4.05	$4.27	$4.51	$4.75	$5.01
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.70	$1.76	$1.82	$1.88	$1.95	$2.02	$2.11	$2.20	$2.31	$2.42	$2.56	$2.70	$2.84	$3.00	$3.16
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.75	$6.05	$6.37	$6.72	$7.09	$7.47	$7.88
NextEra Energy, Inc.	NEE	$6.50	$7.05	$7.65	$8.30	$9.01	$9.77	$10.55	$11.34	$12.14	$12.92	$13.69	$14.43	$15.22	$16.05	$16.92	$17.85
NorthWestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.87	$4.00	$4.16	$4.33	$4.53	$4.76	$5.02	$5.29	$5.58	$5.89	$6.21
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Otter Tail Corporation	OTTR	$1.86	$2.00	$2.15	$2.31	$2.48	$2.67	$2.86	$3.06	$3.25	$3.45	$3.65	$3.85	$4.06	$4.28	$4.52	$4.76
Pinnacle West Capital Corporation	PNW	$4.43	$4.60	$4.77	$4.95	$5.14	$5.33	$5.55	$5.79	$6.06	$6.35	$6.68	$7.05	$7.43	$7.83	$8.26	$8.71
PNM Resources, Inc.	PNM	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Portland General Electric Company	POR	$2.29	$2.35	$2.41	$2.48	$2.54	$2.61	$2.69	$2.79	$2.90	$3.03	$3.18	$3.36	$3.54	$3.73	$3.93	$4.15
Southern Company	SO	$3.21	$3.30	$3.39	$3.48	$3.57	$3.67	$3.79	$3.92	$4.09	$4.27	$4.48	$4.73	$4.99	$5.26	$5.54	$5.85
WEC Energy Group, Inc.	WEC	$3.14	$3.27	$3.40	$3.54	$3.69	$3.84	$4.00	$4.19	$4.39	$4.61	$4.85	$5.11	$5.39	$5.68	$5.99	$6.32
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$3.34	$3.53	$3.72	$3.92	$4.14	$4.36	$4.60	$4.85	$5.12

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Projected Annual Dividend Payout Ratio		[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.250%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.250%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.500%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.750%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.250%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.000%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.750%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.500%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.500%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.500%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.750%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.250%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.500%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.500%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.750%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	$2.14	$2.23	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$4.40	$156.62
Alliant Energy Corporation	LNT	$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$2.92	$84.74
Ameren Corporation	AEE	$1.77	$1.87	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$4.27	$121.70
American Electric Power Company, Inc.	AEP	$2.53	$2.61	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$4.92	$136.45
Avangrid, Inc.	AGR	$1.38	$1.46	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$3.13	$109.09
Black Hills Corporation	BKH	$1.93	$2.05	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$4.38	$120.16
CMS Energy Corporation	CMS	$1.41	$1.50	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$3.37	$94.47
DTE Energy Company	DTE	$3.68	$3.86	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$8.24	$210.95
Duke Energy Corporation	DUK	$3.34	$3.53	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$5.62	$148.05
El Paso Electric	EE	$1.44	$1.53	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$3.29	$118.75
Hawaiian Electric Industries, Inc.	HE	$1.12	$1.13	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$2.07	$69.85
IDACORP, Inc.	IDA	$2.47	$2.62	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$5.17	$186.19
NextEra Energy, Inc.	NEE	$3.88	$4.36	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$11.70	$343.41
NorthWestern Corporation	NWE	$2.20	$2.27	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$4.07	$109.46
OGE Energy Corp.	OGE	$1.38	$1.45	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$2.57	$68.77
Otter Tail Corporation	OTTR	$1.32	$1.39	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$3.12	$96.09
Pinnacle West Capital Corporation	PNW	$2.90	$3.01	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$5.71	$159.04
PNM Resources, Inc.	PNM	$1.06	$1.09	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$2.57	$81.96
Portland General Electric Company	POR	$1.50	$1.54	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$2.72	$84.13
Southern Company	SO	$2.64	$2.66	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$3.83	$84.82
WEC Energy Group, Inc.	WEC	$2.16	$2.23	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$4.14	$126.36
Xcel Energy Inc.	XEL	$1.50	$1.59	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$3.35	$92.54

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($75.23)	$0.00	$1.16	$2.19	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$161.03
Alliant Energy Corporation	LNT	($40.60)	$0.00	$0.73	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$87.66
Ameren Corporation	AEE	($57.18)	$0.00	$0.96	$1.82	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$125.98
American Electric Power Company, Inc.	AEP	($66.01)	$0.00	$1.38	$2.59	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$141.37
Avangrid, Inc.	AGR	($51.90)	$0.00	$0.75	$1.45	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$112.23
Black Hills Corporation	BKH	($57.15)	$0.00	$1.05	$1.97	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$124.54
CMS Energy Corporation	CMS	($44.60)	$0.00	$0.77	$1.45	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$97.85
DTE Energy Company	DTE	($100.10)	$0.00	$2.01	$3.78	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$219.19
Duke Energy Corporation	DUK	($75.51)	$0.00	$1.82	$3.41	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$153.67
El Paso Electric	EE	($56.45)	$0.00	$0.79	$1.47	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$122.04
Hawaiian Electric Industries, Inc.	HE	($33.60)	$0.00	$0.61	$1.14	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$71.92
IDACORP, Inc.	IDA	($89.53)	$0.00	$1.35	$2.51	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$191.36
NextEra Energy, Inc.	NEE	($159.84)	$0.00	$2.11	$4.04	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$355.12
NorthWestern Corporation	NWE	($53.53)	$0.00	$1.20	$2.23	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$113.53
OGE Energy Corp.	OGE	($34.04)	$0.00	$0.75	$1.41	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$71.34
Otter Tail Corporation	OTTR	($45.22)	$0.00	$0.72	$1.37	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$99.22
Pinnacle West Capital Corporation	PNW	($76.97)	$0.00	$1.58	$2.95	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$164.75
PNM Resources, Inc.	PNM	($38.00)	$0.00	$0.58	$1.08	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$84.53
Portland General Electric Company	POR	($41.01)	$0.00	$0.82	$1.52	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$86.85
Southern Company	SO	($44.06)	$0.00	$1.44	$2.67	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$88.65
WEC Energy Group, Inc.	WEC	($61.25)	$0.00	$1.18	$2.20	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$130.50
Xcel Energy Inc.	XEL	($44.19)	$0.00	$0.82	$1.55	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$95.89

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
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.50	6.00%	6.00%	5.00%	5.67%	5.45%	65.00%	64.00%	65.57%	$0.00	8.66%	21.49	3.95
Alliant Energy Corporation	LNT	$40.29	5.60%	5.85%	6.50%	5.98%	5.45%	64.00%	64.00%	65.57%	$0.00	9.20%	18.40	3.38
Ameren Corporation	AEE	$56.21	6.50%	6.30%	7.50%	6.77%	5.45%	60.00%	59.00%	65.57%	$0.00	9.33%	17.82	3.27
American Electric Power Company, Inc.	AEP	$66.84	5.70%	5.79%	4.50%	5.33%	5.45%	67.00%	63.00%	65.57%	($0.00)	9.41%	17.46	3.21
Avangrid, Inc.	AGR	$50.61	9.10%	10.40%	13.00%	10.83%	5.45%	76.00%	66.00%	65.57%	$0.00	8.91%	19.96	3.66
Black Hills Corporation	BKH	$54.56	4.10%	3.86%	5.00%	4.32%	5.45%	55.00%	60.00%	65.57%	$0.00	9.60%	16.65	3.06
CMS Energy Corporation	CMS	$44.34	6.40%	7.05%	7.00%	6.82%	5.45%	61.00%	61.00%	65.57%	$0.00	9.33%	17.78	3.27
DTE Energy Company	DTE	$101.87	5.30%	5.59%	7.00%	5.96%	5.45%	61.00%	60.00%	65.57%	$0.00	9.67%	16.38	3.01
Duke Energy Corporation	DUK	$76.57	4.70%	4.22%	5.50%	4.81%	5.45%	76.00%	80.00%	65.57%	($0.00)	9.54%	16.87	3.10
El Paso Electric	EE	$52.05	5.10%	5.20%	4.50%	4.93%	5.45%	57.00%	61.00%	65.57%	$0.00	8.70%	21.23	3.90
Hawaiian Electric Industries, Inc.	HE	$33.76	7.10%	9.10%	3.50%	6.57%	5.45%	66.00%	59.00%	65.57%	($0.00)	9.25%	18.18	3.34
IDACORP, Inc.	IDA	$87.21	3.90%	3.10%	3.50%	3.50%	5.45%	57.00%	63.00%	65.57%	$0.00	8.53%	22.40	4.11
NextEra Energy, Inc.	NEE	$158.65	8.60%	9.79%	8.50%	8.96%	5.45%	55.00%	63.00%	65.57%	$0.00	9.17%	18.56	3.41
NorthWestern Corporation	NWE	$52.95	3.00%	3.16%	3.50%	3.22%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.47%	17.19	3.16
OGE Energy Corp.	OGE	$32.61	6.00%	4.30%	6.00%	5.43%	5.45%	69.00%	71.00%	65.57%	$0.00	9.88%	15.58	2.86
Otter Tail Corporation	OTTR	$43.41	NA	9.00%	7.50%	8.25%	5.45%	66.00%	60.00%	65.57%	$0.00	9.19%	18.48	3.39
Pinnacle West Capital Corporation	PNW	$77.79	4.50%	3.78%	5.00%	4.43%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.35%	17.69	3.25
PNM Resources, Inc.	PNM	$37.36	5.10%	4.30%	7.50%	5.63%	5.45%	53.00%	50.00%	65.57%	($0.00)	9.11%	18.88	3.47
Portland General Electric Company	POR	$40.54	2.80%	2.65%	4.00%	3.15%	5.45%	64.00%	63.00%	65.57%	($0.00)	9.01%	19.38	3.56
Southern Company	SO	$44.31	4.50%	2.72%	3.00%	3.41%	5.45%	80.00%	74.00%	65.57%	($0.00)	10.40%	13.95	2.56
WEC Energy Group, Inc.	WEC	$61.59	4.10%	4.43%	7.00%	5.18%	5.45%	66.00%	64.00%	65.57%	$0.00	9.21%	18.35	3.37
Xcel Energy Inc.	XEL	$44.41	5.70%	5.89%	5.50%	5.70%	5.45%	62.00%	63.00%	65.57%	($0.00)	9.30%	17.95	3.30
											Mean	9.28%	18.21	
											Max	10.40%		
											Min	8.53%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.31	$3.49	$3.69	$3.90	$4.12	$4.36	$4.60	$4.85	$5.12	$5.40	$5.70	$6.01	$6.34	$6.68	$7.04
Alliant Energy Corporation	LNT	$1.99	$2.11	$2.24	$2.37	$2.51	$2.66	$2.82	$2.98	$3.15	$3.33	$3.51	$3.70	$3.91	$4.12	$4.34	$4.58
Ameren Corporation	AEE	$2.77	$2.96	$3.16	$3.37	$3.60	$3.84	$4.09	$4.35	$4.62	$4.89	$5.17	$5.45	$5.75	$6.06	$6.39	$6.74
American Electric Power Company, Inc.	AEP	$3.62	$3.81	$4.02	$4.23	$4.46	$4.69	$4.94	$5.21	$5.49	$5.79	$6.10	$6.43	$6.78	$7.15	$7.54	$7.95
Avangrid, Inc.	AGR	$1.67	$1.85	$2.05	$2.27	$2.52	$2.79	$3.07	$3.35	$3.62	$3.88	$4.13	$4.35	$4.59	$4.84	$5.10	$5.38
Black Hills Corporation	BKH	$3.38	$3.53	$3.68	$3.84	$4.00	$4.18	$4.36	$4.57	$4.79	$5.04	$5.30	$5.59	$5.89	$6.21	$6.55	$6.91
CMS Energy Corporation	CMS	$2.17	$2.32	$2.48	$2.64	$2.82	$3.02	$3.22	$3.42	$3.63	$3.84	$4.06	$4.28	$4.52	$4.76	$5.02	$5.30
DTE Energy Company	DTE	$5.73	$6.07	$6.43	$6.82	$7.22	$7.65	$8.10	$8.57	$9.06	$9.57	$10.10	$10.65	$11.23	$11.84	$12.49	$13.17
Duke Energy Corporation	DUK	$4.22	$4.42	$4.64	$4.86	$5.09	$5.34	$5.60	$5.88	$6.18	$6.50	$6.85	$7.23	$7.62	$8.03	$8.47	$8.93
El Paso Electric	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.57	$3.76	$3.97	$4.18	$4.41	$4.65	$4.90	$5.17
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.75	$1.86	$1.98	$2.12	$2.25	$2.40	$2.55	$2.70	$2.86	$3.02	$3.18	$3.35	$3.54	$3.73	$3.93
IDACORP, Inc.	IDA	$4.21	$4.36	$4.51	$4.67	$4.83	$5.00	$5.19	$5.41	$5.65	$5.92	$6.22	$6.56	$6.92	$7.30	$7.69	$8.11
NextEra Energy, Inc.	NEE	$6.50	$7.08	$7.72	$8.41	$9.16	$9.98	$10.82	$11.66	$12.50	$13.33	$14.14	$14.91	$15.72	$16.57	$17.48	$18.43
NorthWestern Corporation	NWE	$3.34	$3.45	$3.56	$3.67	$3.79	$3.91	$4.05	$4.21	$4.40	$4.60	$4.84	$5.10	$5.38	$5.67	$5.98	$6.31
OGE Energy Corp.	OGE	$1.92	$2.02	$2.13	$2.25	$2.37	$2.50	$2.64	$2.78	$2.93	$3.09	$3.26	$3.44	$3.62	$3.82	$4.03	$4.25
Otter Tail Corporation	OTTR	$1.86	$2.01	$2.18	$2.36	$2.55	$2.76	$2.98	$3.20	$3.42	$3.63	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02
Pinnacle West Capital Corporation	PNW	$4.43	$4.63	$4.83	$5.04	$5.27	$5.50	$5.75	$6.03	$6.33	$6.65	$7.00	$7.38	$7.78	$8.21	$8.65	$9.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.13	$3.31	$3.49	$3.68	$3.88	$4.09	$4.31
Portland General Electric Company	POR	$2.29	$2.36	$2.44	$2.51	$2.59	$2.67	$2.77	$2.88	$3.00	$3.14	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30
Southern Company	SO	$3.21	$3.32	$3.43	$3.55	$3.67	$3.80	$3.94	$4.10	$4.28	$4.48	$4.71	$4.97	$5.24	$5.53	$5.83	$6.14
WEC Energy Group, Inc.	WEC	$3.14	$3.30	$3.47	$3.65	$3.84	$4.04	$4.25	$4.48	$4.71	$4.97	$5.23	$5.52	$5.82	$6.14	$6.47	$6.82
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.57	$2.72	$2.87	$3.03	$3.21	$3.39	$3.57	$3.77	$3.98	$4.20	$4.42	$4.67	$4.92	$5.19

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Projected Annual
Dividend Payout Ratio

Company	Ticker	[30] 2018	[31] 2019	[32] 2020	[33] 2021	[34] 2022	[35] 2023	[36] 2024	[37] 2025	[38] 2026	[39] 2027	[40] 2028	[41] 2029	[42] 2030	[43] 2031	[44] 2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.250%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.250%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.500%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.750%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.250%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.000%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.750%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.500%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.500%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.500%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.750%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.250%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.500%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.500%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.750%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual
Cash Flows

Company	Ticker	[45] 2018	[46] 2019	[47] 2020	[48] 2021	[49] 2022	[50] 2023	[51] 2024	[52] 2025	[53] 2026	[54] 2027	[55] 2028	[56] 2029	[57] 2030	[58] 2031	[59] 2032	[60] Terminal Value
ALLETE, Inc.	ALE	$2.15	$2.26	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$4.62	$151.40
Alliant Energy Corporation	LNT	$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$3.00	$84.28
Ameren Corporation	AEE	$1.77	$1.89	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$4.42	$120.03
American Electric Power Company, Inc.	AEP	$2.55	$2.65	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$5.22	$138.91
Avangrid, Inc.	AGR	$1.41	$1.51	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$3.53	$107.42
Black Hills Corporation	BKH	$1.94	$2.07	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$4.53	$115.07
CMS Energy Corporation	CMS	$1.41	$1.51	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$3.47	$94.20
DTE Energy Company	DTE	$3.70	$3.91	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$8.64	$215.73
Duke Energy Corporation	DUK	$3.36	$3.57	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$5.86	$150.70
El Paso Electric	EE	$1.45	$1.55	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$3.39	$109.73
Hawaiian Electric Industries, Inc.	HE	$1.15	$1.20	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$2.58	$71.50
IDACORP, Inc.	IDA	$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$5.32	$181.67
NextEra Energy, Inc.	NEE	$3.90	$4.40	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$12.08	$341.96
NorthWestern Corporation	NWE	$2.21	$2.28	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$4.14	$108.38
OGE Energy Corp.	OGE	$1.40	$1.48	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$2.79	$66.22
Otter Tail Corporation	OTTR	$1.33	$1.41	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$3.29	$92.73
Pinnacle West Capital Corporation	PNW	$2.91	$3.04	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$5.98	$161.42
PNM Resources, Inc.	PNM	$1.07	$1.12	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$2.83	$81.40
Portland General Electric Company	POR	$1.51	$1.55	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$2.82	$83.39
Southern Company	SO	$2.66	$2.69	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$4.03	$85.69
WEC Energy Group, Inc.	WEC	$2.18	$2.28	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$4.47	$125.23
Xcel Energy Inc.	XEL	$1.51	$1.60	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$3.40	$93.13

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($72.50)	$0.00	$1.17	$2.21	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$156.02
Alliant Energy Corporation	LNT	($40.29)	$0.00	$0.74	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$87.29
Ameren Corporation	AEE	($56.21)	$0.00	$0.97	$1.83	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$124.45
American Electric Power Company, Inc.	AEP	($66.84)	$0.00	$1.39	$2.62	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$144.13
Avangrid, Inc.	AGR	($50.61)	$0.00	$0.77	$1.48	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$110.95
Black Hills Corporation	BKH	($54.56)	$0.00	$1.06	$1.98	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$119.60
CMS Energy Corporation	CMS	($44.34)	$0.00	$0.77	$1.46	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$97.67
DTE Energy Company	DTE	($101.87)	$0.00	$2.02	$3.81	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$224.36
Duke Energy Corporation	DUK	($76.57)	$0.00	$1.83	$3.44	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$156.56
El Paso Electric	EE	($52.05)	$0.00	$0.79	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$113.12
Hawaiian Electric Industries, Inc.	HE	($33.76)	$0.00	$0.63	$1.19	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$74.08
IDACORP, Inc.	IDA	($87.21)	$0.00	$1.35	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$186.99
NextEra Energy, Inc.	NEE	($158.65)	$0.00	$2.12	$4.07	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$354.04
NorthWestern Corporation	NWE	($52.95)	$0.00	$1.20	$2.24	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$112.52
OGE Energy Corp.	OGE	($32.61)	$0.00	$0.76	$1.43	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$69.01
Otter Tail Corporation	OTTR	($43.41)	$0.00	$0.72	$1.38	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$96.02
Pinnacle West Capital Corporation	PNW	($77.79)	$0.00	$1.59	$2.98	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$167.40
PNM Resources, Inc.	PNM	($37.36)	$0.00	$0.59	$1.11	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$84.23
Portland General Electric Company	POR	($40.54)	$0.00	$0.82	$1.54	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$86.21
Southern Company	SO	($44.31)	$0.00	$1.45	$2.70	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$89.71
WEC Energy Group, Inc.	WEC	($61.59)	$0.00	$1.19	$2.24	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$129.70
Xcel Energy Inc.	XEL	($44.41)	$0.00	$0.82	$1.55	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$96.53

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	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.50	6.00%	6.00%	5.00%	6.00%	5.45%	65.00%	64.00%	65.57%	$0.00	8.73%	21.03	3.86
Alliant Energy Corporation	LNT	$40.29	5.60%	5.85%	6.50%	6.50%	5.45%	64.00%	64.00%	65.57%	$0.00	9.33%	17.80	3.27
Ameren Corporation	AEE	$56.21	6.50%	6.30%	7.50%	7.50%	5.45%	60.00%	59.00%	65.57%	$0.00	9.51%	17.01	3.12
American Electric Power Company, Inc.	AEP	$66.84	5.70%	5.79%	4.50%	5.79%	5.45%	67.00%	63.00%	65.57%	($0.00)	9.52%	16.95	3.11
Avangrid, Inc.	AGR	$50.61	9.10%	10.40%	13.00%	13.00%	5.45%	76.00%	66.00%	65.57%	$0.00	9.40%	17.48	3.21
Black Hills Corporation	BKH	$54.56	4.10%	3.86%	5.00%	5.00%	5.45%	55.00%	60.00%	65.57%	$0.00	9.78%	15.94	2.93
CMS Energy Corporation	CMS	$44.34	6.40%	7.05%	7.00%	7.05%	5.45%	61.00%	61.00%	65.57%	$0.00	9.39%	17.52	3.22
DTE Energy Company	DTE	$101.87	5.30%	5.59%	7.00%	7.00%	5.45%	61.00%	60.00%	65.57%	$0.00	9.95%	15.35	2.82
Duke Energy Corporation	DUK	$76.57	4.70%	4.22%	5.50%	5.50%	5.45%	76.00%	80.00%	65.57%	($0.00)	9.74%	16.11	2.96
El Paso Electric	EE	$52.05	5.10%	5.20%	4.50%	5.20%	5.45%	57.00%	61.00%	65.57%	$0.00	8.76%	20.86	3.83
Hawaiian Electric Industries, Inc.	HE	$33.76	7.10%	9.10%	3.50%	9.10%	5.45%	66.00%	59.00%	65.57%	($0.00)	9.90%	15.52	2.85
IDACORP, Inc.	IDA	$87.21	3.90%	3.10%	3.50%	3.90%	5.45%	57.00%	63.00%	65.57%	$0.00	8.62%	21.80	4.00
NextEra Energy, Inc.	NEE	$158.65	8.60%	9.79%	8.50%	9.79%	5.45%	55.00%	63.00%	65.57%	$0.00	9.37%	17.63	3.24
NorthWestern Corporation	NWE	$52.95	3.00%	3.16%	3.50%	3.50%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.54%	16.87	3.10
OGE Energy Corp.	OGE	$32.61	6.00%	4.30%	6.00%	6.00%	5.45%	69.00%	71.00%	65.57%	$0.00	10.05%	15.02	2.76
Otter Tail Corporation	OTTR	$43.41	NA	9.00%	7.50%	9.00%	5.45%	66.00%	60.00%	65.57%	$0.00	9.37%	17.63	3.24
Pinnacle West Capital Corporation	PNW	$77.79	4.50%	3.78%	5.00%	5.00%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.50%	17.04	3.13
PNM Resources, Inc.	PNM	$37.36	5.10%	4.30%	7.50%	7.50%	5.45%	53.00%	50.00%	65.57%	($0.00)	9.56%	16.80	3.09
Portland General Electric Company	POR	$40.54	2.80%	2.65%	4.00%	4.00%	5.45%	64.00%	63.00%	65.57%	($0.00)	9.22%	18.32	3.36
Southern Company	SO	$44.31	4.50%	2.72%	3.00%	4.50%	5.45%	80.00%	74.00%	65.57%	($0.00)	10.77%	12.98	2.38
WEC Energy Group, Inc.	WEC	$61.59	4.10%	4.43%	7.00%	7.00%	5.45%	66.00%	64.00%	65.57%	$0.00	9.60%	16.66	3.06
Xcel Energy Inc.	XEL	$44.41	5.70%	5.89%	5.50%	5.89%	5.45%	62.00%	63.00%	65.57%	($0.00)	9.35%	17.73	3.26
											Mean	9.50%	17.28	
											Max	10.77%		
											Min	8.62%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.32	$3.52	$3.73	$3.95	$4.19	$4.44	$4.69	$4.96	$5.24	$5.53	$5.83	$6.15	$6.49	$6.84	$7.21
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.64	$3.84	$4.05	$4.27	$4.51	$4.75
Ameren Corporation	AEE	$2.77	$2.98	$3.20	$3.44	$3.70	$3.98	$4.26	$4.55	$4.85	$5.14	$5.44	$5.74	$6.05	$6.38	$6.73	$7.09
American Electric Power Company, Inc.	AEP	$3.62	$3.83	$4.05	$4.29	$4.53	$4.80	$5.07	$5.36	$5.66	$5.98	$6.30	$6.65	$7.01	$7.39	$7.79	$8.22
Avangrid, Inc.	AGR	$1.67	$1.89	$2.13	$2.41	$2.72	$3.08	$3.44	$3.80	$4.15	$4.48	$4.78	$5.04	$5.31	$5.60	$5.91	$6.23
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.56	$5.87	$6.19	$6.52	$6.88	$7.25
CMS Energy Corporation	CMS	$2.17	$2.32	$2.49	$2.66	$2.85	$3.05	$3.26	$3.47	$3.69	$3.91	$4.13	$4.36	$4.59	$4.84	$5.11	$5.38
DTE Energy Company	DTE	$5.73	$6.13	$6.56	$7.02	$7.51	$8.04	$8.58	$9.13	$9.70	$10.28	$10.87	$11.46	$12.08	$12.74	$13.44	$14.17
Duke Energy Corporation	DUK	$4.22	$4.45	$4.70	$4.96	$5.23	$5.52	$5.82	$6.14	$6.47	$6.83	$7.20	$7.59	$8.00	$8.44	$8.90	$9.39
El Paso Electric	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.45	$3.64	$3.83	$4.04	$4.26	$4.49	$4.74	$5.00	$5.27
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.79	$1.95	$2.13	$2.32	$2.53	$2.75	$2.97	$3.18	$3.39	$3.60	$3.80	$4.00	$4.22	$4.45	$4.69
IDACORP, Inc.	IDA	$4.21	$4.37	$4.54	$4.72	$4.91	$5.10	$5.31	$5.54	$5.80	$6.09	$6.41	$6.75	$7.12	$7.51	$7.92	$8.35
NextEra Energy, Inc.	NEE	$6.50	$7.14	$7.83	$8.60	$9.44	$10.37	$11.31	$12.25	$13.19	$14.09	$14.96	$15.78	$16.64	$17.54	$18.50	$19.51
NorthWestern Corporation	NWE	$3.34	$3.46	$3.58	$3.70	$3.83	$3.97	$4.12	$4.29	$4.48	$4.70	$4.94	$5.21	$5.49	$5.79	$6.10	$6.44
OGE Energy Corp.	OGE	$1.92	$2.04	$2.16	$2.29	$2.42	$2.57	$2.72	$2.88	$3.04	$3.22	$3.39	$3.58	$3.77	$3.98	$4.20	$4.42
Otter Tail Corporation	OTTR	$1.86	$2.03	$2.21	$2.41	$2.63	$2.86	$3.10	$3.34	$3.59	$3.82	$4.06	$4.28	$4.51	$4.75	$5.01	$5.29
Pinnacle West Capital Corporation	PNW	$4.43	$4.65	$4.88	$5.13	$5.38	$5.65	$5.94	$6.25	$6.57	$6.92	$7.29	$7.69	$8.11	$8.55	$9.02	$9.51
PNM Resources, Inc.	PNM	$1.92	$2.06	$2.22	$2.39	$2.56	$2.76	$2.95	$3.16	$3.36	$3.57	$3.77	$3.98	$4.19	$4.42	$4.66	$4.92
Portland General Electric Company	POR	$2.29	$2.38	$2.48	$2.58	$2.68	$2.79	$2.90	$3.03	$3.18	$3.34	$3.51	$3.70	$3.90	$4.11	$4.34	$4.57
Southern Company	SO	$3.21	$3.35	$3.51	$3.66	$3.83	$4.00	$4.19	$4.39	$4.61	$4.84	$5.10	$5.38	$5.67	$5.98	$6.30	$6.65
WEC Energy Group, Inc.	WEC	$3.14	$3.36	$3.59	$3.85	$4.12	$4.40	$4.70	$5.01	$5.32	$5.63	$5.96	$6.28	$6.62	$6.98	$7.36	$7.76
Xcel Energy Inc.	XEL	$2.30	$2.44	$2.58	$2.73	$2.89	$3.06	$3.24	$3.43	$3.62	$3.82	$4.03	$4.25	$4.49	$4.73	$4.99	$5.26

Projected Annual
Dividend Payout Ratio

Company	Ticker	[30] 2018	[31] 2019	[32] 2020	[33] 2021	[34] 2022	[35] 2023	[36] 2024	[37] 2025	[38] 2026	[39] 2027	[40] 2028	[41] 2029	[42] 2030	[43] 2031	[44] 2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	######	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	######	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	######	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	######	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	######	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	######	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	######	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	######	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	######	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	######	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	######	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	######	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	######	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	######	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	######	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	######	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	######	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	######	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	######	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	######	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	######	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	######	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual
Cash Flows

Company	Ticker	[45] 2018	[46] 2019	[47] 2020	[48] 2021	[49] 2022	[50] 2023	[51] 2024	[52] 2025	[53] 2026	[54] 2027	[55] 2028	[56] 2029	[57] 2030	[58] 2031	[59] 2032	[60] Terminal Value
ALLETE, Inc.	ALE	$2.16	$2.28	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$4.73	$151.68
Alliant Energy Corporation	LNT	$1.36	$1.44	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$3.11	$84.56
Ameren Corporation	AEE	$1.79	$1.91	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$4.65	$120.67
American Electric Power Company, Inc.	AEP	$2.57	$2.67	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$5.39	$139.34
Avangrid, Inc.	AGR	$1.43	$1.57	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$4.09	$108.94
Black Hills Corporation	BKH	$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$115.65
CMS Energy Corporation	CMS	$1.42	$1.52	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$3.53	$94.35
DTE Energy Company	DTE	$3.74	$3.99	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$9.29	$217.45
Duke Energy Corporation	DUK	$3.38	$3.62	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$6.15	$151.23
El Paso Electric	EE	$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$3.45	$109.90
Hawaiian Electric Industries, Inc.	HE	$1.18	$1.25	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$3.08	$72.86
IDACORP, Inc.	IDA	$2.49	$2.66	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$5.47	$182.06
NextEra Energy, Inc.	NEE	$3.92	$4.47	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$12.79	$343.93
NorthWestern Corporation	NWE	$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$4.22	$108.58
OGE Energy Corp.	OGE	$1.40	$1.50	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$2.90	$66.47
Otter Tail Corporation	OTTR	$1.34	$1.43	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$3.47	$93.22
Pinnacle West Capital Corporation	PNW	$2.93	$3.08	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$6.23	$162.02
PNM Resources, Inc.	PNM	$1.09	$1.16	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$3.22	$82.62
Portland General Electric Company	POR	$1.52	$1.58	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$3.00	$83.81
Southern Company	SO	$2.68	$2.75	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$4.36	$86.30
WEC Energy Group, Inc.	WEC	$2.22	$2.35	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$5.09	$129.38
Xcel Energy Inc.	XEL	$1.51	$1.61	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$3.45	$93.25

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($72.50)	$0.00	$1.18	$2.22	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$156.41
Alliant Energy Corporation	LNT	($40.29)	$0.00	$0.74	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$87.68
Ameren Corporation	AEE	($56.21)	$0.00	$0.97	$1.85	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$125.32
American Electric Power Company, Inc.	AEP	($66.84)	$0.00	$1.40	$2.64	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$144.72
Avangrid, Inc.	AGR	($50.61)	$0.00	$0.78	$1.53	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$113.02
Black Hills Corporation	BKH	($54.56)	$0.00	$1.06	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$120.41
CMS Energy Corporation	CMS	($44.34)	$0.00	$0.77	$1.47	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$97.88
DTE Energy Company	DTE	($101.87)	$0.00	$2.04	$3.87	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$226.74
Duke Energy Corporation	DUK	($76.57)	$0.00	$1.84	$3.48	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$157.39
El Paso Electric	EE	($52.05)	$0.00	$0.79	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$113.36
Hawaiian Electric Industries, Inc.	HE	($33.76)	$0.00	$0.64	$1.23	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$75.94
IDACORP, Inc.	IDA	($87.21)	$0.00	$1.36	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$187.53
NextEra Energy, Inc.	NEE	($158.65)	$0.00	$2.14	$4.12	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$356.72
NorthWestern Corporation	NWE	($52.95)	$0.00	$1.21	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$112.80
OGE Energy Corp.	OGE	($32.61)	$0.00	$0.77	$1.45	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$69.37
Otter Tail Corporation	OTTR	($43.41)	$0.00	$0.73	$1.40	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$96.69
Pinnacle West Capital Corporation	PNW	($77.79)	$0.00	$1.60	$3.00	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$168.26
PNM Resources, Inc.	PNM	($37.36)	$0.00	$0.60	$1.13	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$85.84
Portland General Electric Company	POR	($40.54)	$0.00	$0.83	$1.55	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$86.81
Southern Company	SO	($44.31)	$0.00	$1.46	$2.74	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$90.66
WEC Energy Group, Inc.	WEC	($61.59)	$0.00	$1.21	$2.30	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$134.48
Xcel Energy Inc.	XEL	($44.41)	$0.00	$0.82	$1.55	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$96.70

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
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.50	6.00%	6.00%	5.00%	5.00%	5.45%	65.00%	64.00%	65.57%	$0.00	8.52%	22.46	4.12
Alliant Energy Corporation	LNT	$40.29	5.60%	5.85%	6.50%	5.60%	5.45%	64.00%	64.00%	65.57%	$0.00	9.11%	18.86	3.46
Ameren Corporation	AEE	$56.21	6.50%	6.30%	7.50%	6.30%	5.45%	60.00%	59.00%	65.57%	$0.00	9.21%	18.35	3.37
American Electric Power Company, Inc.	AEP	$66.84	5.70%	5.79%	4.50%	4.50%	5.45%	67.00%	63.00%	65.57%	($0.00)	9.20%	18.43	3.38
Avangrid, Inc.	AGR	$50.61	9.10%	10.40%	13.00%	9.10%	5.45%	76.00%	66.00%	65.57%	$0.00	8.55%	22.26	4.09
Black Hills Corporation	BKH	$54.56	4.10%	3.86%	5.00%	3.86%	5.45%	55.00%	60.00%	65.57%	$0.00	9.48%	17.16	3.15
CMS Energy Corporation	CMS	$44.34	6.40%	7.05%	7.00%	6.40%	5.45%	61.00%	61.00%	65.57%	$0.00	9.23%	18.26	3.35
DTE Energy Company	DTE	$101.87	5.30%	5.59%	7.00%	5.30%	5.45%	61.00%	60.00%	65.57%	$0.00	9.49%	17.09	3.14
Duke Energy Corporation	DUK	$76.57	4.70%	4.22%	5.50%	4.22%	5.45%	76.00%	80.00%	65.57%	($0.00)	9.39%	17.55	3.22
El Paso Electric	EE	$52.05	5.10%	5.20%	4.50%	4.50%	5.45%	57.00%	61.00%	65.57%	$0.00	8.61%	21.84	4.01
Hawaiian Electric Industries, Inc.	HE	$33.76	7.10%	9.10%	3.50%	3.50%	5.45%	66.00%	59.00%	65.57%	($0.00)	8.56%	22.21	4.08
IDACORP, Inc.	IDA	$87.21	3.90%	3.10%	3.50%	3.10%	5.45%	57.00%	63.00%	65.57%	$0.00	8.45%	23.01	4.22
NextEra Energy, Inc.	NEE	$158.65	8.60%	9.79%	8.50%	8.50%	5.45%	55.00%	63.00%	65.57%	$0.00	9.07%	19.10	3.51
NorthWestern Corporation	NWE	$52.95	3.00%	3.16%	3.50%	3.00%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.41%	17.44	3.20
OGE Energy Corp.	OGE	$32.61	6.00%	4.30%	6.00%	4.30%	5.45%	69.00%	71.00%	65.57%	$0.00	9.57%	16.78	3.08
Otter Tail Corporation	OTTR	$43.41	NA	9.00%	7.50%	7.50%	5.45%	66.00%	60.00%	65.57%	$0.00	9.02%	19.37	3.56
Pinnacle West Capital Corporation	PNW	$77.79	4.50%	3.78%	5.00%	3.78%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.19%	18.46	3.39
PNM Resources, Inc.	PNM	$37.36	5.10%	4.30%	7.50%	4.30%	5.45%	53.00%	50.00%	65.57%	($0.00)	8.81%	20.57	3.78
Portland General Electric Company	POR	$40.54	2.80%	2.65%	4.00%	2.65%	5.45%	64.00%	63.00%	65.57%	($0.00)	8.90%	20.04	3.68
Southern Company	SO	$44.31	4.50%	2.72%	3.00%	2.72%	5.45%	80.00%	74.00%	65.57%	($0.00)	10.18%	14.60	2.68
WEC Energy Group, Inc.	WEC	$61.59	4.10%	4.43%	7.00%	4.10%	5.45%	66.00%	64.00%	65.57%	$0.00	8.88%	20.11	3.69
Xcel Energy Inc.	XEL	$44.41	5.70%	5.89%	5.50%	5.50%	5.45%	62.00%	63.00%	65.57%	($0.00)	9.25%	18.18	3.34
											Mean	9.09%	19.19	
											Max	10.18%		
											Min	8.45%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.29	$3.45	$3.62	$3.80	$3.99	$4.20	$4.41	$4.64	$4.89	$5.15	$5.43	$5.73	$6.04	$6.37	$6.72
Alliant Energy Corporation	LNT	$1.99	$2.10	$2.22	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.24	$3.42	$3.61	$3.80	$4.01	$4.23	$4.46
Ameren Corporation	AEE	$2.77	$2.94	$3.13	$3.33	$3.54	$3.76	$3.99	$4.23	$4.48	$4.74	$5.00	$5.27	$5.56	$5.86	$6.18	$6.52
American Electric Power Company, Inc.	AEP	$3.62	$3.78	$3.95	$4.13	$4.32	$4.51	$4.72	$4.95	$5.19	$5.46	$5.75	$6.06	$6.39	$6.74	$7.11	$7.50
Avangrid, Inc.	AGR	$1.67	$1.82	$1.99	$2.17	$2.37	$2.58	$2.80	$3.02	$3.24	$3.46	$3.67	$3.87	$4.08	$4.30	$4.53	$4.78
Black Hills Corporation	BKH	$3.38	$3.51	$3.65	$3.79	$3.93	$4.08	$4.25	$4.44	$4.65	$4.87	$5.13	$5.41	$5.70	$6.01	$6.34	$6.68
CMS Energy Corporation	CMS	$2.17	$2.31	$2.46	$2.61	$2.78	$2.96	$3.14	$3.34	$3.53	$3.74	$3.95	$4.16	$4.39	$4.63	$4.88	$5.14
DTE Energy Company	DTE	$5.73	$6.03	$6.35	$6.69	$7.04	$7.42	$7.81	$8.23	$8.67	$9.14	$9.64	$10.16	$10.72	$11.30	$11.91	$12.56
Duke Energy Corporation	DUK	$4.22	$4.40	$4.58	$4.78	$4.98	$5.19	$5.42	$5.67	$5.94	$6.24	$6.57	$6.93	$7.30	$7.70	$8.12	$8.56
El Paso Electric	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.84	$4.05	$4.27	$4.51	$4.75	$5.01
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.70	$1.76	$1.82	$1.88	$1.95	$2.02	$2.11	$2.20	$2.31	$2.42	$2.56	$2.70	$2.84	$3.00	$3.16
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.75	$6.05	$6.37	$6.72	$7.09	$7.47	$7.88
NextEra Energy, Inc.	NEE	$6.50	$7.05	$7.65	$8.30	$9.01	$9.77	$10.55	$11.34	$12.14	$12.92	$13.69	$14.43	$15.22	$16.05	$16.92	$17.85
NorthWestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.87	$4.00	$4.16	$4.33	$4.53	$4.76	$5.02	$5.29	$5.58	$5.89	$6.21
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Otter Tail Corporation	OTTR	$1.86	$2.00	$2.15	$2.31	$2.48	$2.67	$2.86	$3.06	$3.25	$3.45	$3.65	$3.85	$4.06	$4.28	$4.52	$4.76
Pinnacle West Capital Corporation	PNW	$4.43	$4.60	$4.77	$4.95	$5.14	$5.33	$5.55	$5.79	$6.06	$6.35	$6.68	$7.05	$7.43	$7.83	$8.26	$8.71
PNM Resources, Inc.	PNM	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Portland General Electric Company	POR	$2.29	$2.35	$2.41	$2.48	$2.54	$2.61	$2.69	$2.79	$2.90	$3.03	$3.18	$3.36	$3.54	$3.73	$3.93	$4.15
Southern Company	SO	$3.21	$3.30	$3.39	$3.48	$3.57	$3.67	$3.79	$3.92	$4.09	$4.27	$4.48	$4.73	$4.99	$5.26	$5.54	$5.85
WEC Energy Group, Inc.	WEC	$3.14	$3.27	$3.40	$3.54	$3.69	$3.84	$4.00	$4.19	$4.39	$4.61	$4.85	$5.11	$5.39	$5.68	$5.99	$6.32
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$3.34	$3.53	$3.72	$3.92	$4.14	$4.36	$4.60	$4.85	$5.12

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Projected Annual Dividend Payout Ratio		[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.250%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.250%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.500%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.750%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.250%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.000%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.750%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.500%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.500%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.500%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.750%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.250%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.500%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.500%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.750%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	$2.14	$2.23	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$4.40	$150.87
Alliant Energy Corporation	LNT	$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$2.92	$84.09
Ameren Corporation	AEE	$1.77	$1.87	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$4.27	$119.65
American Electric Power Company, Inc.	AEP	$2.53	$2.61	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$4.92	$138.18
Avangrid, Inc.	AGR	$1.38	$1.46	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$3.13	$106.37
Black Hills Corporation	BKH	$1.93	$2.05	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$4.38	$114.69
CMS Energy Corporation	CMS	$1.41	$1.50	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$3.37	$93.93
DTE Energy Company	DTE	$3.68	$3.86	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$8.24	$214.69
Duke Energy Corporation	DUK	$3.34	$3.53	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$5.62	$150.28
El Paso Electric	EE	$1.44	$1.53	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$3.29	$109.47
Hawaiian Electric Industries, Inc.	HE	$1.12	$1.13	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$2.07	$70.18
IDACORP, Inc.	IDA	$2.47	$2.62	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$5.17	$181.30
NextEra Energy, Inc.	NEE	$3.88	$4.36	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$11.70	$340.91
NorthWestern Corporation	NWE	$2.20	$2.27	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$4.07	$108.24
OGE Energy Corp.	OGE	$1.38	$1.45	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$2.57	$65.76
Otter Tail Corporation	OTTR	$1.32	$1.39	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$3.12	$92.27
Pinnacle West Capital Corporation	PNW	$2.90	$3.01	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$5.71	$160.76
PNM Resources, Inc.	PNM	$1.06	$1.09	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$2.57	$80.62
Portland General Electric Company	POR	$1.50	$1.54	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$2.72	$83.16
Southern Company	SO	$2.64	$2.66	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$3.83	$85.34
WEC Energy Group, Inc.	WEC	$2.16	$2.23	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$4.14	$127.07
Xcel Energy Inc.	XEL	$1.50	$1.59	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$3.35	$93.01

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($72.50)	$0.00	$1.16	$2.19	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$155.28
Alliant Energy Corporation	LNT	($40.29)	$0.00	$0.73	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$87.01
Ameren Corporation	AEE	($56.21)	$0.00	$0.96	$1.82	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$123.92
American Electric Power Company, Inc.	AEP	($66.84)	$0.00	$1.38	$2.59	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$143.10
Avangrid, Inc.	AGR	($50.61)	$0.00	$0.75	$1.45	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$109.51
Black Hills Corporation	BKH	($54.56)	$0.00	$1.05	$1.97	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$119.08
CMS Energy Corporation	CMS	($44.34)	$0.00	$0.77	$1.45	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$97.31
DTE Energy Company	DTE	($101.87)	$0.00	$2.01	$3.78	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$222.93
Duke Energy Corporation	DUK	($76.57)	$0.00	$1.82	$3.41	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$155.89
El Paso Electric	EE	($52.05)	$0.00	$0.79	$1.47	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$112.75
Hawaiian Electric Industries, Inc.	HE	($33.76)	$0.00	$0.61	$1.14	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$72.25
IDACORP, Inc.	IDA	($87.21)	$0.00	$1.35	$2.51	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$186.47
NextEra Energy, Inc.	NEE	($158.65)	$0.00	$2.11	$4.04	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$352.61
NorthWestern Corporation	NWE	($52.95)	$0.00	$1.20	$2.23	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$112.31
OGE Energy Corp.	OGE	($32.61)	$0.00	$0.75	$1.41	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$68.33
Otter Tail Corporation	OTTR	($43.41)	$0.00	$0.72	$1.37	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$95.40
Pinnacle West Capital Corporation	PNW	($77.79)	$0.00	$1.58	$2.95	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$166.47
PNM Resources, Inc.	PNM	($37.36)	$0.00	$0.58	$1.08	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$83.19
Portland General Electric Company	POR	($40.54)	$0.00	$0.82	$1.52	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$85.88
Southern Company	SO	($44.31)	$0.00	$1.44	$2.67	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$89.17
WEC Energy Group, Inc.	WEC	($61.59)	$0.00	$1.18	$2.20	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$131.21
Xcel Energy Inc.	XEL	($44.41)	$0.00	$0.82	$1.55	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$96.37

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	Value Line	Average	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.39	6.00%	6.00%	5.00%	5.67%	5.45%	65.00%	64.00%	65.57%	$0.00	8.58%	22.06	4.05
Alliant Energy Corporation	LNT	$41.41	5.60%	5.85%	6.50%	5.98%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.10%	18.92	3.47
Ameren Corporation	AEE	$58.05	6.50%	6.30%	7.50%	6.77%	5.45%	60.00%	59.00%	65.57%	$0.00	9.20%	18.39	3.38
American Electric Power Company, Inc.	AEP	$69.91	5.70%	5.79%	4.50%	5.33%	5.45%	67.00%	63.00%	65.57%	($0.00)	9.23%	18.28	3.36
Avangrid, Inc.	AGR	$50.25	9.10%	10.40%	13.00%	10.83%	5.45%	76.00%	66.00%	65.57%	$0.00	8.94%	19.82	3.64
Black Hills Corporation	BKH	$57.41	4.10%	3.86%	5.00%	4.32%	5.45%	55.00%	60.00%	65.57%	($0.00)	9.39%	17.53	3.22
CMS Energy Corporation	CMS	$45.84	6.40%	7.05%	7.00%	6.82%	5.45%	61.00%	61.00%	65.57%	$0.00	9.21%	18.38	3.38
DTE Energy Company	DTE	$105.75	5.30%	5.59%	7.00%	5.96%	5.45%	61.00%	60.00%	65.57%	$0.00	9.51%	17.00	3.12
Duke Energy Corporation	DUK	$80.74	4.70%	4.22%	5.50%	4.81%	5.45%	76.00%	80.00%	65.57%	($0.00)	9.32%	17.85	3.28
El Paso Electric	EE	$54.16	5.10%	5.20%	4.50%	4.93%	5.45%	57.00%	61.00%	65.57%	$0.00	8.58%	22.09	4.06
Hawaiian Electric Industries, Inc.	HE	$34.70	7.10%	9.10%	3.50%	6.57%	5.45%	66.00%	59.00%	65.57%	$0.00	9.15%	18.68	3.43
IDACORP, Inc.	IDA	$89.13	3.90%	3.10%	3.50%	3.50%	5.45%	57.00%	63.00%	65.57%	($0.00)	8.47%	22.89	4.20
NextEra Energy, Inc.	NEE	$156.22	8.60%	9.79%	8.50%	8.96%	5.45%	55.00%	63.00%	65.57%	$0.00	9.23%	18.28	3.36
NorthWestern Corporation	NWE	$55.80	3.00%	3.16%	3.50%	3.22%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.26%	18.14	3.33
OGE Energy Corp.	OGE	$33.47	6.00%	4.30%	6.00%	5.43%	5.45%	69.00%	71.00%	65.57%	$0.00	9.76%	16.01	2.94
Otter Tail Corporation	OTTR	$44.07	NA	9.00%	7.50%	8.25%	5.45%	66.00%	60.00%	65.57%	$0.00	9.13%	18.75	3.44
Pinnacle West Capital Corporation	PNW	$81.85	4.50%	3.78%	5.00%	4.43%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.16%	18.63	3.42
PNM Resources, Inc.	PNM	$39.36	5.10%	4.30%	7.50%	5.63%	5.45%	53.00%	50.00%	65.57%	($0.00)	8.93%	19.86	3.65
Portland General Electric Company	POR	$43.26	2.80%	2.65%	4.00%	3.15%	5.45%	64.00%	63.00%	65.57%	($0.00)	8.78%	20.71	3.80
Southern Company	SO	$46.80	4.50%	2.72%	3.00%	3.41%	5.45%	80.00%	74.00%	65.57%	($0.00)	10.12%	14.79	2.72
WEC Energy Group, Inc.	WEC	$63.81	4.10%	4.43%	7.00%	5.18%	5.45%	66.00%	64.00%	65.57%	$0.00	9.01%	19.42	3.57
Xcel Energy Inc.	XEL	$46.44	5.70%	5.89%	5.50%	5.70%	5.45%	62.00%	63.00%	65.57%	($0.00)	9.13%	18.78	3.45
											Mean	9.14%	18.88	
											Max	10.12%		
											Min	8.47%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.31	$3.49	$3.69	$3.90	$4.12	$4.36	$4.60	$4.85	$5.12	$5.40	$5.70	$6.01	$6.34	$6.68	$7.04
Alliant Energy Corporation	LNT	$1.99	$2.11	$2.24	$2.37	$2.51	$2.66	$2.82	$2.98	$3.15	$3.33	$3.51	$3.70	$3.91	$4.12	$4.34	$4.58
Ameren Corporation	AEE	$2.77	$2.96	$3.16	$3.37	$3.60	$3.84	$4.09	$4.35	$4.62	$4.89	$5.17	$5.45	$5.75	$6.06	$6.39	$6.74
American Electric Power Company, Inc.	AEP	$3.62	$3.81	$4.02	$4.23	$4.46	$4.69	$4.94	$5.21	$5.49	$5.79	$6.10	$6.43	$6.78	$7.15	$7.54	$7.95
Avangrid, Inc.	AGR	$1.67	$1.85	$2.05	$2.27	$2.52	$2.79	$3.07	$3.35	$3.62	$3.88	$4.13	$4.35	$4.59	$4.84	$5.10	$5.38
Black Hills Corporation	BKH	$3.38	$3.53	$3.68	$3.84	$4.00	$4.18	$4.36	$4.57	$4.79	$5.04	$5.30	$5.59	$5.89	$6.21	$6.55	$6.91
CMS Energy Corporation	CMS	$2.17	$2.32	$2.48	$2.64	$2.82	$3.02	$3.22	$3.42	$3.63	$3.84	$4.06	$4.28	$4.52	$4.76	$5.02	$5.30
DTE Energy Company	DTE	$5.73	$6.07	$6.43	$6.82	$7.22	$7.65	$8.10	$8.57	$9.06	$9.57	$10.10	$10.65	$11.23	$11.84	$12.49	$13.17
Duke Energy Corporation	DUK	$4.22	$4.42	$4.64	$4.86	$5.09	$5.34	$5.60	$5.88	$6.18	$6.50	$6.85	$7.23	$7.62	$8.03	$8.47	$8.93
El Paso Electric	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.57	$3.76	$3.97	$4.18	$4.41	$4.65	$4.90	$5.17
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.75	$1.86	$1.98	$2.12	$2.25	$2.40	$2.55	$2.70	$2.86	$3.02	$3.18	$3.35	$3.54	$3.73	$3.93
IDACORP, Inc.	IDA	$4.21	$4.36	$4.51	$4.67	$4.83	$5.00	$5.19	$5.41	$5.65	$5.92	$6.22	$6.56	$6.92	$7.30	$7.69	$8.11
NextEra Energy, Inc.	NEE	$6.50	$7.08	$7.72	$8.41	$9.16	$9.98	$10.82	$11.66	$12.50	$13.33	$14.14	$14.91	$15.72	$16.57	$17.48	$18.43
NorthWestern Corporation	NWE	$3.34	$3.45	$3.56	$3.67	$3.79	$3.91	$4.05	$4.21	$4.40	$4.60	$4.84	$5.10	$5.38	$5.67	$5.98	$6.31
OGE Energy Corp.	OGE	$1.92	$2.02	$2.13	$2.25	$2.37	$2.50	$2.64	$2.78	$2.93	$3.09	$3.26	$3.44	$3.62	$3.82	$4.03	$4.25
Otter Tail Corporation	OTTR	$1.86	$2.01	$2.18	$2.36	$2.55	$2.76	$2.98	$3.20	$3.42	$3.63	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02
Pinnacle West Capital Corporation	PNW	$4.43	$4.63	$4.83	$5.04	$5.27	$5.50	$5.75	$6.03	$6.33	$6.65	$7.00	$7.38	$7.78	$8.21	$8.65	$9.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.13	$3.31	$3.49	$3.68	$3.88	$4.09	$4.31
Portland General Electric Company	POR	$2.29	$2.36	$2.44	$2.51	$2.59	$2.67	$2.77	$2.88	$3.00	$3.14	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30
Southern Company	SO	$3.21	$3.32	$3.43	$3.55	$3.67	$3.80	$3.94	$4.10	$4.28	$4.48	$4.71	$4.97	$5.24	$5.53	$5.83	$6.14
WEC Energy Group, Inc.	WEC	$3.14	$3.30	$3.47	$3.65	$3.84	$4.04	$4.25	$4.48	$4.71	$4.97	$5.23	$5.52	$5.82	$6.14	$6.47	$6.82
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.57	$2.72	$2.87	$3.03	$3.21	$3.39	$3.57	$3.77	$3.98	$4.20	$4.42	$4.67	$4.92	$5.19

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Projected Annual Dividend Payout Ratio		[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.250%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.250%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.500%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.750%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.250%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.000%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.750%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.500%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.500%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.500%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.750%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.250%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.500%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.500%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.750%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	$2.15	$2.26	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$4.62	$155.38
Alliant Energy Corporation	LNT	$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$3.00	$86.66
Ameren Corporation	AEE	$1.77	$1.89	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$4.42	$123.93
American Electric Power Company, Inc.	AEP	$2.55	$2.65	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$5.22	$145.39
Avangrid, Inc.	AGR	$1.41	$1.51	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$3.53	$106.66
Black Hills Corporation	BKH	$1.94	$2.07	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$4.53	$121.10
CMS Energy Corporation	CMS	$1.41	$1.51	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$3.47	$97.36
DTE Energy Company	DTE	$3.70	$3.91	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$8.64	$223.91
Duke Energy Corporation	DUK	$3.36	$3.57	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$5.86	$159.41
El Paso Electric	EE	$1.45	$1.55	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$3.39	$114.19
Hawaiian Electric Industries, Inc.	HE	$1.15	$1.20	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$2.58	$73.49
IDACORP, Inc.	IDA	$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$5.32	$185.72
NextEra Energy, Inc.	NEE	$3.90	$4.40	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$12.08	$336.82
NorthWestern Corporation	NWE	$2.21	$2.28	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$4.14	$114.39
OGE Energy Corp.	OGE	$1.40	$1.48	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$2.79	$68.05
Otter Tail Corporation	OTTR	$1.33	$1.41	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$3.29	$94.12
Pinnacle West Capital Corporation	PNW	$2.91	$3.04	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$5.98	$169.98
PNM Resources, Inc.	PNM	$1.07	$1.12	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$2.83	$85.63
Portland General Electric Company	POR	$1.51	$1.55	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$2.82	$89.12
Southern Company	SO	$2.66	$2.69	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$4.03	$90.89
WEC Energy Group, Inc.	WEC	$2.18	$2.28	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$4.47	$132.55
Xcel Energy Inc.	XEL	$1.51	$1.60	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$3.40	$97.41

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($74.39)	$0.00	$1.17	$2.21	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$160.00
Alliant Energy Corporation	LNT	($41.42)	$0.00	$0.74	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$89.66
Ameren Corporation	AEE	($58.05)	$0.00	$0.97	$1.83	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$128.35
American Electric Power Company, Inc.	AEP	($69.91)	$0.00	$1.39	$2.62	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$150.61
Avangrid, Inc.	AGR	($50.25)	$0.00	$0.77	$1.48	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$110.19
Black Hills Corporation	BKH	($57.41)	$0.00	$1.06	$1.98	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$125.63
CMS Energy Corporation	CMS	($45.84)	$0.00	$0.77	$1.46	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$100.84
DTE Energy Company	DTE	($105.75)	$0.00	$2.02	$3.81	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$232.55
Duke Energy Corporation	DUK	($80.74)	$0.00	$1.83	$3.44	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$165.27
El Paso Electric	EE	($54.16)	$0.00	$0.79	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$117.58
Hawaiian Electric Industries, Inc.	HE	($34.70)	$0.00	$0.63	$1.19	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$76.06
IDACORP, Inc.	IDA	($89.13)	$0.00	$1.35	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$191.04
NextEra Energy, Inc.	NEE	($156.22)	$0.00	$2.12	$4.07	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$348.91
NorthWestern Corporation	NWE	($55.80)	$0.00	$1.20	$2.24	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$118.53
OGE Energy Corp.	OGE	($33.47)	$0.00	$0.76	$1.43	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$70.83
Otter Tail Corporation	OTTR	($44.07)	$0.00	$0.72	$1.38	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$97.41
Pinnacle West Capital Corporation	PNW	($81.85)	$0.00	$1.59	$2.98	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$175.96
PNM Resources, Inc.	PNM	($39.36)	$0.00	$0.59	$1.11	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$88.45
Portland General Electric Company	POR	($43.26)	$0.00	$0.82	$1.54	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$91.94
Southern Company	SO	($46.80)	$0.00	$1.45	$2.70	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$94.92
WEC Energy Group, Inc.	WEC	($63.81)	$0.00	$1.19	$2.24	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$137.03
Xcel Energy Inc.	XEL	($46.44)	$0.00	$0.82	$1.55	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$100.81

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
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.39	6.00%	6.00%	5.00%	6.00%	5.45%	65.00%	64.00%	65.57%	$0.00	8.65%	21.58	3.96
Alliant Energy Corporation	LNT	$41.41	5.60%	5.85%	6.50%	6.50%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.22%	18.30	3.36
Ameren Corporation	AEE	$58.05	6.50%	6.30%	7.50%	7.50%	5.45%	60.00%	59.00%	65.57%	$0.00	9.38%	17.56	3.22
American Electric Power Company, Inc.	AEP	$69.91	5.70%	5.79%	4.50%	5.79%	5.45%	67.00%	63.00%	65.57%	($0.00)	9.34%	17.74	3.26
Avangrid, Inc.	AGR	$50.25	9.10%	10.40%	13.00%	13.00%	5.45%	76.00%	66.00%	65.57%	$0.00	9.43%	17.36	3.19
Black Hills Corporation	BKH	$57.41	4.10%	3.86%	5.00%	5.00%	5.45%	55.00%	60.00%	65.57%	($0.00)	9.57%	16.77	3.08
CMS Energy Corporation	CMS	$45.84	6.40%	7.05%	7.00%	7.05%	5.45%	61.00%	61.00%	65.57%	$0.00	9.26%	18.11	3.33
DTE Energy Company	DTE	$105.75	5.30%	5.59%	7.00%	7.00%	5.45%	61.00%	60.00%	65.57%	$0.00	9.79%	15.93	2.92
Duke Energy Corporation	DUK	$80.74	4.70%	4.22%	5.50%	5.50%	5.45%	76.00%	80.00%	65.57%	($0.00)	9.50%	17.04	3.13
El Paso Electric	EE	$54.16	5.10%	5.20%	4.50%	5.20%	5.45%	57.00%	61.00%	65.57%	$0.00	8.63%	21.71	3.99
Hawaiian Electric Industries, Inc.	HE	$34.70	7.10%	9.10%	3.50%	9.10%	5.45%	66.00%	59.00%	65.57%	$0.00	9.78%	15.95	2.93
IDACORP, Inc.	IDA	$89.13	3.90%	3.10%	3.50%	3.90%	5.45%	57.00%	63.00%	65.57%	($0.00)	8.55%	22.29	4.09
NextEra Energy, Inc.	NEE	$156.22	8.60%	9.79%	8.50%	9.79%	5.45%	55.00%	63.00%	65.57%	$0.00	9.43%	17.37	3.19
NorthWestern Corporation	NWE	$55.80	3.00%	3.16%	3.50%	3.50%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.33%	17.80	3.27
OGE Energy Corp.	OGE	$33.47	6.00%	4.30%	6.00%	6.00%	5.45%	69.00%	71.00%	65.57%	$0.00	9.93%	15.44	2.83
Otter Tail Corporation	OTTR	$44.07	NA	9.00%	7.50%	9.00%	5.45%	66.00%	60.00%	65.57%	$0.00	9.31%	17.90	3.29
Pinnacle West Capital Corporation	PNW	$81.85	4.50%	3.78%	5.00%	5.00%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.30%	17.94	3.29
PNM Resources, Inc.	PNM	$39.36	5.10%	4.30%	7.50%	7.50%	5.45%	53.00%	50.00%	65.57%	($0.00)	9.36%	17.67	3.24
Portland General Electric Company	POR	$43.26	2.80%	2.65%	4.00%	4.00%	5.45%	64.00%	63.00%	65.57%	($0.00)	8.98%	19.57	3.59
Southern Company	SO	$46.80	4.50%	2.72%	3.00%	4.50%	5.45%	80.00%	74.00%	65.57%	($0.00)	10.47%	13.77	2.53
WEC Energy Group, Inc.	WEC	$63.81	4.10%	4.43%	7.00%	7.00%	5.45%	66.00%	64.00%	65.57%	$0.00	9.45%	17.27	3.17
Xcel Energy Inc.	XEL	$46.44	5.70%	5.89%	5.50%	5.89%	5.45%	62.00%	63.00%	65.57%	($0.00)	9.17%	18.55	3.41
											Mean	9.36%	17.89	
											Max	10.47%		
											Min	8.55%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.32	$3.52	$3.73	$3.95	$4.19	$4.44	$4.69	$4.96	$5.24	$5.53	$5.83	$6.15	$6.49	$6.84	$7.21
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.64	$3.84	$4.05	$4.27	$4.51	$4.75
Ameren Corporation	AEE	$2.77	$2.98	$3.20	$3.44	$3.70	$3.98	$4.26	$4.55	$4.85	$5.14	$5.44	$5.74	$6.05	$6.38	$6.73	$7.09
American Electric Power Company, Inc.	AEP	$3.62	$3.83	$4.05	$4.29	$4.53	$4.80	$5.07	$5.36	$5.66	$5.98	$6.30	$6.65	$7.01	$7.39	$7.79	$8.22
Avangrid, Inc.	AGR	$1.67	$1.89	$2.13	$2.41	$2.72	$3.08	$3.44	$3.80	$4.15	$4.48	$4.78	$5.04	$5.31	$5.60	$5.91	$6.23
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.56	$5.87	$6.19	$6.52	$6.88	$7.25
CMS Energy Corporation	CMS	$2.17	$2.32	$2.49	$2.66	$2.85	$3.05	$3.26	$3.47	$3.69	$3.91	$4.13	$4.36	$4.59	$4.84	$5.11	$5.38
DTE Energy Company	DTE	$5.73	$6.13	$6.56	$7.02	$7.51	$8.04	$8.58	$9.13	$9.70	$10.28	$10.87	$11.46	$12.08	$12.74	$13.44	$14.17
Duke Energy Corporation	DUK	$4.22	$4.45	$4.70	$4.96	$5.23	$5.52	$5.82	$6.14	$6.47	$6.83	$7.20	$7.59	$8.00	$8.44	$8.90	$9.39
El Paso Electric	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.45	$3.64	$3.83	$4.04	$4.26	$4.49	$4.74	$5.00	$5.27
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.79	$1.95	$2.13	$2.32	$2.53	$2.75	$2.97	$3.18	$3.39	$3.60	$3.80	$4.00	$4.22	$4.45	$4.69
IDACORP, Inc.	IDA	$4.21	$4.37	$4.54	$4.72	$4.91	$5.10	$5.31	$5.54	$5.80	$6.09	$6.41	$6.75	$7.12	$7.51	$7.92	$8.35
NextEra Energy, Inc.	NEE	$6.50	$7.14	$7.83	$8.60	$9.44	$10.37	$11.31	$12.25	$13.19	$14.09	$14.96	$15.78	$16.64	$17.54	$18.50	$19.51
NorthWestern Corporation	NWE	$3.34	$3.46	$3.58	$3.70	$3.83	$3.97	$4.12	$4.29	$4.48	$4.70	$4.94	$5.21	$5.49	$5.79	$6.10	$6.44
OGE Energy Corp.	OGE	$1.92	$2.04	$2.16	$2.29	$2.42	$2.57	$2.72	$2.88	$3.04	$3.22	$3.39	$3.58	$3.77	$3.98	$4.20	$4.42
Otter Tail Corporation	OTTR	$1.86	$2.03	$2.21	$2.41	$2.63	$2.86	$3.10	$3.34	$3.59	$3.82	$4.06	$4.28	$4.51	$4.75	$5.01	$5.29
Pinnacle West Capital Corporation	PNW	$4.43	$4.65	$4.88	$5.13	$5.38	$5.65	$5.94	$6.25	$6.57	$6.92	$7.29	$7.69	$8.11	$8.55	$9.02	$9.51
PNM Resources, Inc.	PNM	$1.92	$2.06	$2.22	$2.39	$2.56	$2.76	$2.95	$3.16	$3.36	$3.57	$3.77	$3.98	$4.19	$4.42	$4.66	$4.92
Portland General Electric Company	POR	$2.29	$2.38	$2.48	$2.58	$2.68	$2.79	$2.90	$3.03	$3.18	$3.34	$3.51	$3.70	$3.90	$4.11	$4.34	$4.57
Southern Company	SO	$3.21	$3.35	$3.51	$3.66	$3.83	$4.00	$4.19	$4.39	$4.61	$4.84	$5.10	$5.38	$5.67	$5.98	$6.30	$6.65
WEC Energy Group, Inc.	WEC	$3.14	$3.36	$3.59	$3.85	$4.12	$4.40	$4.70	$5.01	$5.32	$5.63	$5.96	$6.28	$6.62	$6.98	$7.36	$7.76
Xcel Energy Inc.	XEL	$2.30	$2.44	$2.58	$2.73	$2.89	$3.06	$3.24	$3.43	$3.62	$3.82	$4.03	$4.25	$4.49	$4.73	$4.99	$5.26

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Projected Annual Dividend Payout Ratio		[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.250%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.250%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.500%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.750%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.250%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.000%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.750%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.500%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.500%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.500%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.750%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.250%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.500%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.500%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.750%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	$2.16	$2.28	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$4.73	$155.66
Alliant Energy Corporation	LNT	$1.36	$1.44	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$3.11	$86.94
Ameren Corporation	AEE	$1.79	$1.91	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$4.65	$124.58
American Electric Power Company, Inc.	AEP	$2.57	$2.67	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$5.39	$145.82
Avangrid, Inc.	AGR	$1.43	$1.57	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$4.09	$108.18
Black Hills Corporation	BKH	$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$121.68
CMS Energy Corporation	CMS	$1.42	$1.52	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$3.53	$97.52
DTE Energy Company	DTE	$3.74	$3.99	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$9.29	$225.64
Duke Energy Corporation	DUK	$3.38	$3.62	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$6.15	$159.95
El Paso Electric	EE	$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$3.45	$114.36
Hawaiian Electric Industries, Inc.	HE	$1.18	$1.25	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$3.08	$74.85
IDACORP, Inc.	IDA	$2.49	$2.66	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$5.47	$186.10
NextEra Energy, Inc.	NEE	$3.92	$4.47	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$12.79	$338.79
NorthWestern Corporation	NWE	$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$4.22	$114.59
OGE Energy Corp.	OGE	$1.40	$1.50	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$2.90	$68.29
Otter Tail Corporation	OTTR	$1.34	$1.43	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$3.47	$94.61
Pinnacle West Capital Corporation	PNW	$2.93	$3.08	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$6.23	$170.59
PNM Resources, Inc.	PNM	$1.09	$1.16	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$3.22	$86.85
Portland General Electric Company	POR	$1.52	$1.58	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$3.00	$89.54
Southern Company	SO	$2.68	$2.75	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$4.36	$91.50
WEC Energy Group, Inc.	WEC	$2.22	$2.35	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$5.09	$134.08
Xcel Energy Inc.	XEL	$1.51	$1.61	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$3.45	$97.52

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($74.39)	$0.00	$1.18	$2.22	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$160.39
Alliant Energy Corporation	LNT	($41.42)	$0.00	$0.74	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$90.05
Ameren Corporation	AEE	($58.05)	$0.00	$0.97	$1.85	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$129.23
American Electric Power Company, Inc.	AEP	($69.91)	$0.00	$1.40	$2.64	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$151.21
Avangrid, Inc.	AGR	($50.25)	$0.00	$0.78	$1.53	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$112.27
Black Hills Corporation	BKH	($57.41)	$0.00	$1.06	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$126.44
CMS Energy Corporation	CMS	($45.84)	$0.00	$0.77	$1.47	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$101.05
DTE Energy Company	DTE	($105.75)	$0.00	$2.04	$3.87	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$234.93
Duke Energy Corporation	DUK	($80.74)	$0.00	$1.84	$3.48	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$166.10
El Paso Electric	EE	($54.16)	$0.00	$0.79	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$117.81
Hawaiian Electric Industries, Inc.	HE	($34.70)	$0.00	$0.64	$1.23	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$77.93
IDACORP, Inc.	IDA	($89.13)	$0.00	$1.36	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$191.58
NextEra Energy, Inc.	NEE	($156.22)	$0.00	$2.14	$4.12	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$351.58
NorthWestern Corporation	NWE	($55.80)	$0.00	$1.21	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$118.81
OGE Energy Corp.	OGE	($33.47)	$0.00	$0.77	$1.45	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$71.19
Otter Tail Corporation	OTTR	($44.07)	$0.00	$0.73	$1.40	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$98.07
Pinnacle West Capital Corporation	PNW	($81.85)	$0.00	$1.60	$3.00	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$176.82
PNM Resources, Inc.	PNM	($39.36)	$0.00	$0.60	$1.13	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$90.08
Portland General Electric Company	POR	($43.26)	$0.00	$0.83	$1.55	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$92.54
Southern Company	SO	($46.80)	$0.00	$1.46	$2.74	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$95.86
WEC Energy Group, Inc.	WEC	($63.81)	$0.00	$1.21	$2.30	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$139.17
Xcel Energy Inc.	XEL	($46.44)	$0.00	$0.82	$1.55	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$100.97

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	Value Line	Low Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.39	6.00%	6.00%	5.00%	5.00%	5.45%	65.00%	64.00%	65.57%	$0.00	8.45%	23.05	4.23
Alliant Energy Corporation	LNT	$41.41	5.60%	5.85%	6.50%	5.60%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.01%	19.40	3.56
Ameren Corporation	AEE	$58.05	6.50%	6.30%	7.50%	6.30%	5.45%	60.00%	59.00%	65.57%	$0.00	9.09%	18.95	3.48
American Electric Power Company, Inc.	AEP	$69.91	5.70%	5.79%	4.50%	4.50%	5.45%	67.00%	63.00%	65.57%	($0.00)	9.03%	19.30	3.54
Avangrid, Inc.	AGR	$50.25	9.10%	10.40%	13.00%	9.10%	5.45%	76.00%	66.00%	65.57%	$0.00	8.57%	22.10	4.06
Black Hills Corporation	BKH	$57.41	4.10%	3.86%	5.00%	3.86%	5.45%	55.00%	60.00%	65.57%	($0.00)	9.27%	18.06	3.32
CMS Energy Corporation	CMS	$45.84	6.40%	7.05%	7.00%	6.40%	5.45%	61.00%	61.00%	65.57%	($0.00)	9.11%	18.88	3.47
DTE Energy Company	DTE	$105.75	5.30%	5.59%	7.00%	5.30%	5.45%	61.00%	60.00%	65.57%	$0.00	9.34%	17.74	3.26
Duke Energy Corporation	DUK	$80.74	4.70%	4.22%	5.50%	4.22%	5.45%	76.00%	80.00%	65.57%	($0.00)	9.17%	18.56	3.41
El Paso Electric	EE	$54.16	5.10%	5.20%	4.50%	4.50%	5.45%	57.00%	61.00%	65.57%	$0.00	8.49%	22.73	4.17
Hawaiian Electric Industries, Inc.	HE	$34.70	7.10%	9.10%	3.50%	3.50%	5.45%	66.00%	59.00%	65.57%	$0.00	8.47%	22.83	4.19
IDACORP, Inc.	IDA	$89.13	3.90%	3.10%	3.50%	3.10%	5.45%	57.00%	63.00%	65.57%	($0.00)	8.39%	23.52	4.32
NextEra Energy, Inc.	NEE	$156.22	8.60%	9.79%	8.50%	8.50%	5.45%	55.00%	63.00%	65.57%	$0.00	9.12%	18.82	3.45
NorthWestern Corporation	NWE	$55.80	3.00%	3.16%	3.50%	3.00%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.20%	18.41	3.38
OGE Energy Corp.	OGE	$33.47	6.00%	4.30%	6.00%	4.30%	5.45%	69.00%	71.00%	65.57%	$0.00	9.46%	17.25	3.17
Otter Tail Corporation	OTTR	$44.07	NA	9.00%	7.50%	7.50%	5.45%	66.00%	60.00%	65.57%	$0.00	8.96%	19.66	3.61
Pinnacle West Capital Corporation	PNW	$81.85	4.50%	3.78%	5.00%	3.78%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.00%	19.44	3.57
PNM Resources, Inc.	PNM	$39.36	5.10%	4.30%	7.50%	4.30%	5.45%	53.00%	50.00%	65.57%	($0.00)	8.64%	21.65	3.98
Portland General Electric Company	POR	$43.26	2.80%	2.65%	4.00%	2.65%	5.45%	64.00%	63.00%	65.57%	($0.00)	8.67%	21.42	3.93
Southern Company	SO	$46.80	4.50%	2.72%	3.00%	2.72%	5.45%	80.00%	74.00%	65.57%	($0.00)	9.91%	15.49	2.84
WEC Energy Group, Inc.	WEC	$63.81	4.10%	4.43%	7.00%	4.10%	5.45%	66.00%	64.00%	65.57%	$0.00	8.76%	20.85	3.83
Xcel Energy Inc.	XEL	$46.44	5.70%	5.89%	5.50%	5.50%	5.45%	62.00%	63.00%	65.57%	($0.00)	9.08%	19.02	3.49
											Mean	8.96%	19.87	
											Max	9.91%		
											Min	8.39%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.29	$3.45	$3.62	$3.80	$3.99	$4.20	$4.41	$4.64	$4.89	$5.15	$5.43	$5.73	$6.04	$6.37	$6.72
Alliant Energy Corporation	LNT	$1.99	$2.10	$2.22	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.24	$3.42	$3.61	$3.80	$4.01	$4.23	$4.46
Ameren Corporation	AEE	$2.77	$2.94	$3.13	$3.33	$3.54	$3.76	$3.99	$4.23	$4.48	$4.74	$5.00	$5.27	$5.56	$5.86	$6.18	$6.52
American Electric Power Company, Inc.	AEP	$3.62	$3.78	$3.95	$4.13	$4.32	$4.51	$4.72	$4.95	$5.19	$5.46	$5.75	$6.06	$6.39	$6.74	$7.11	$7.50
Avangrid, Inc.	AGR	$1.67	$1.82	$1.99	$2.17	$2.37	$2.58	$2.80	$3.02	$3.24	$3.46	$3.67	$3.87	$4.08	$4.30	$4.53	$4.78
Black Hills Corporation	BKH	$3.38	$3.51	$3.65	$3.79	$3.93	$4.08	$4.25	$4.44	$4.65	$4.87	$5.13	$5.41	$5.70	$6.01	$6.34	$6.68
CMS Energy Corporation	CMS	$2.17	$2.31	$2.46	$2.61	$2.78	$2.96	$3.14	$3.34	$3.53	$3.74	$3.95	$4.16	$4.39	$4.63	$4.88	$5.14
DTE Energy Company	DTE	$5.73	$6.03	$6.35	$6.69	$7.04	$7.42	$7.81	$8.23	$8.67	$9.14	$9.64	$10.16	$10.72	$11.30	$11.91	$12.56
Duke Energy Corporation	DUK	$4.22	$4.40	$4.58	$4.78	$4.98	$5.19	$5.42	$5.67	$5.94	$6.24	$6.57	$6.93	$7.30	$7.70	$8.12	$8.56
El Paso Electric	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.84	$4.05	$4.27	$4.51	$4.75	$5.01
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.70	$1.76	$1.82	$1.88	$1.95	$2.02	$2.11	$2.20	$2.31	$2.42	$2.56	$2.70	$2.84	$3.00	$3.16
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.75	$6.05	$6.37	$6.72	$7.09	$7.47	$7.88
NextEra Energy, Inc.	NEE	$6.50	$7.05	$7.65	$8.30	$9.01	$9.77	$10.55	$11.34	$12.14	$12.92	$13.69	$14.43	$15.22	$16.05	$16.92	$17.85
NorthWestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.87	$4.00	$4.16	$4.33	$4.53	$4.76	$5.02	$5.29	$5.58	$5.89	$6.21
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Otter Tail Corporation	OTTR	$1.86	$2.00	$2.15	$2.31	$2.48	$2.67	$2.86	$3.06	$3.25	$3.45	$3.65	$3.85	$4.06	$4.28	$4.52	$4.76
Pinnacle West Capital Corporation	PNW	$4.43	$4.60	$4.77	$4.95	$5.14	$5.33	$5.55	$5.79	$6.06	$6.35	$6.68	$7.05	$7.43	$7.83	$8.26	$8.71
PNM Resources, Inc.	PNM	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Portland General Electric Company	POR	$2.29	$2.35	$2.41	$2.48	$2.54	$2.61	$2.69	$2.79	$2.90	$3.03	$3.18	$3.36	$3.54	$3.73	$3.93	$4.15
Southern Company	SO	$3.21	$3.30	$3.39	$3.48	$3.57	$3.67	$3.79	$3.92	$4.09	$4.27	$4.48	$4.73	$4.99	$5.26	$5.54	$5.85
WEC Energy Group, Inc.	WEC	$3.14	$3.27	$3.40	$3.54	$3.69	$3.84	$4.00	$4.19	$4.39	$4.61	$4.85	$5.11	$5.39	$5.68	$5.99	$6.32
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$3.34	$3.53	$3.72	$3.92	$4.14	$4.36	$4.60	$4.85	$5.12

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Projected Annual Dividend Payout Ratio		[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.250%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.250%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.500%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.750%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.250%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.000%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.000%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.750%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.500%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.000%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.500%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.500%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.000%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.750%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.250%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.500%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.500%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.750%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	$2.14	$2.23	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$4.40	$154.85
Alliant Energy Corporation	LNT	$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$2.92	$86.46
Ameren Corporation	AEE	$1.77	$1.87	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$4.27	$123.54
American Electric Power Company, Inc.	AEP	$2.53	$2.61	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$4.92	$144.66
Avangrid, Inc.	AGR	$1.38	$1.46	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$3.13	$105.62
Black Hills Corporation	BKH	$1.93	$2.05	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$4.38	$120.72
CMS Energy Corporation	CMS	$1.41	$1.50	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$3.37	$97.10
DTE Energy Company	DTE	$3.68	$3.86	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$8.24	$222.87
Duke Energy Corporation	DUK	$3.34	$3.53	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$5.62	$158.99
El Paso Electric	EE	$1.44	$1.53	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$3.29	$113.92
Hawaiian Electric Industries, Inc.	HE	$1.12	$1.13	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$2.07	$72.16
IDACORP, Inc.	IDA	$2.47	$2.62	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$5.17	$185.35
NextEra Energy, Inc.	NEE	$3.88	$4.36	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$11.70	$335.77
NorthWestern Corporation	NWE	$2.20	$2.27	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$4.07	$114.24
OGE Energy Corp.	OGE	$1.38	$1.45	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$2.57	$67.59
Otter Tail Corporation	OTTR	$1.32	$1.39	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$3.12	$93.66
Pinnacle West Capital Corporation	PNW	$2.90	$3.01	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$5.71	$169.32
PNM Resources, Inc.	PNM	$1.06	$1.09	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$2.57	$84.84
Portland General Electric Company	POR	$1.50	$1.54	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$2.72	$88.88
Southern Company	SO	$2.64	$2.66	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$3.83	$90.54
WEC Energy Group, Inc.	WEC	$2.16	$2.23	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$4.14	$131.75
Xcel Energy Inc.	XEL	$1.50	$1.59	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$3.35	$97.29

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($74.39)	$0.00	$1.16	$2.19	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$159.25
Alliant Energy Corporation	LNT	($41.42)	$0.00	$0.73	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$89.38
Ameren Corporation	AEE	($58.05)	$0.00	$0.96	$1.82	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$127.82
American Electric Power Company, Inc.	AEP	($69.91)	$0.00	$1.38	$2.59	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$149.58
Avangrid, Inc.	AGR	($50.25)	$0.00	$0.75	$1.45	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$108.75
Black Hills Corporation	BKH	($57.41)	$0.00	$1.05	$1.97	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$125.10
CMS Energy Corporation	CMS	($45.84)	$0.00	$0.77	$1.45	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$100.47
DTE Energy Company	DTE	($105.75)	$0.00	$2.01	$3.78	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$231.11
Duke Energy Corporation	DUK	($80.74)	$0.00	$1.82	$3.41	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$164.61
El Paso Electric	EE	($54.16)	$0.00	$0.79	$1.47	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$117.20
Hawaiian Electric Industries, Inc.	HE	($34.70)	$0.00	$0.61	$1.14	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$74.23
IDACORP, Inc.	IDA	($89.13)	$0.00	$1.35	$2.51	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$190.51
NextEra Energy, Inc.	NEE	($156.22)	$0.00	$2.11	$4.04	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$347.47
NorthWestern Corporation	NWE	($55.80)	$0.00	$1.20	$2.23	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$118.31
OGE Energy Corp.	OGE	($33.47)	$0.00	$0.75	$1.41	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$70.16
Otter Tail Corporation	OTTR	($44.07)	$0.00	$0.72	$1.37	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$96.78
Pinnacle West Capital Corporation	PNW	($81.85)	$0.00	$1.58	$2.95	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$175.03
PNM Resources, Inc.	PNM	($39.36)	$0.00	$0.58	$1.08	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$87.41
Portland General Electric Company	POR	($43.26)	$0.00	$0.82	$1.52	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$91.60
Southern Company	SO	($46.80)	$0.00	$1.44	$2.67	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$94.37
WEC Energy Group, Inc.	WEC	($63.81)	$0.00	$1.18	$2.20	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$135.90
Xcel Energy Inc.	XEL	($46.44)	$0.00	$0.82	$1.55	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$100.64

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
30 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.23	6.00%	6.00%	5.00%	5.67%	5.45%	65.00%	64.00%	65.57%	$0.00	8.04%	20.54	3.77
Alliant Energy Corporation	LNT	$40.60	5.60%	5.85%	6.50%	5.98%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.79%	20.54	3.77
Ameren Corporation	AEE	$57.18	6.50%	6.30%	7.50%	6.77%	5.45%	60.00%	59.00%	65.57%	$0.00	10.02%	20.54	3.77
American Electric Power Company, Inc.	AEP	$66.01	5.70%	5.79%	4.50%	5.33%	5.45%	67.00%	63.00%	65.57%	$0.00	10.50%	20.54	3.77
Avangrid, Inc.	AGR	$51.90	9.10%	10.40%	13.00%	10.83%	5.45%	76.00%	66.00%	65.57%	($0.00)	8.85%	20.54	3.77
Black Hills Corporation	BKH	$57.15	4.10%	3.86%	5.00%	4.32%	5.45%	55.00%	60.00%	65.57%	$0.00	10.39%	20.54	3.77
CMS Energy Corporation	CMS	$44.60	6.40%	7.05%	7.00%	6.82%	5.45%	61.00%	61.00%	65.57%	($0.00)	10.14%	20.54	3.77
DTE Energy Company	DTE	$100.10	5.30%	5.59%	7.00%	5.96%	5.45%	61.00%	60.00%	65.57%	$0.00	11.19%	20.54	3.77
Duke Energy Corporation	DUK	$75.51	4.70%	4.22%	5.50%	4.81%	5.45%	76.00%	80.00%	65.57%	($0.00)	10.84%	20.54	3.77
El Paso Electric	EE	$56.46	5.10%	5.20%	4.50%	4.93%	5.45%	57.00%	61.00%	65.57%	$0.00	7.75%	20.54	3.77
Hawaiian Electric Industries, Inc.	HE	$33.60	7.10%	9.10%	3.50%	6.57%	5.45%	66.00%	59.00%	65.57%	($0.00)	10.03%	20.54	3.77
IDACORP, Inc.	IDA	$89.53	3.90%	3.10%	3.50%	3.50%	5.45%	57.00%	63.00%	65.57%	($0.00)	7.76%	20.54	3.77
NextEra Energy, Inc.	NEE	$159.84	8.60%	9.79%	8.50%	8.96%	5.45%	55.00%	63.00%	65.57%	$0.00	9.72%	20.54	3.77
NorthWestern Corporation	NWE	$53.53	3.00%	3.16%	3.50%	3.22%	5.45%	64.00%	64.00%	65.57%	($0.00)	10.42%	20.54	3.77
OGE Energy Corp.	OGE	$34.04	6.00%	4.30%	6.00%	5.43%	5.45%	69.00%	71.00%	65.57%	$0.00	11.05%	20.54	3.77
Otter Tail Corporation	OTTR	$45.22	NA	9.00%	7.50%	8.25%	5.45%	66.00%	60.00%	65.57%	($0.00)	9.44%	20.54	3.77
Pinnacle West Capital Corporation	PNW	$76.97	4.50%	3.78%	5.00%	4.43%	5.45%	63.00%	63.00%	65.57%	($0.00)	10.35%	20.54	3.77
PNM Resources, Inc.	PNM	$38.00	5.10%	4.30%	7.50%	5.63%	5.45%	53.00%	50.00%	65.57%	($0.00)	9.46%	20.54	3.77
Portland General Electric Company	POR	$41.01	2.80%	2.65%	4.00%	3.15%	5.45%	64.00%	63.00%	65.57%	$0.00	9.25%	20.54	3.77
Southern Company	SO	$44.06	4.50%	2.72%	3.00%	3.41%	5.45%	80.00%	74.00%	65.57%	($0.00)	12.65%	20.54	3.77
WEC Energy Group, Inc.	WEC	$61.25	4.10%	4.43%	7.00%	5.18%	5.45%	66.00%	64.00%	65.57%	$0.00	9.74%	20.54	3.77
Xcel Energy Inc.	XEL	$44.19	5.70%	5.89%	5.50%	5.70%	5.45%	62.00%	63.00%	65.57%	($0.00)	10.15%	20.54	3.77
											Mean	9.89%	20.54	
											Max	12.65%		
											Min	7.75%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.31	$3.49	$3.69	$3.90	$4.12	$4.36	$4.60	$4.85	$5.12	$5.40	$5.70	$6.01	$6.34	$6.68	$7.04
Alliant Energy Corporation	LNT	$1.99	$2.11	$2.24	$2.37	$2.51	$2.66	$2.82	$2.98	$3.15	$3.33	$3.51	$3.70	$3.91	$4.12	$4.34	$4.58
Ameren Corporation	AEE	$2.77	$2.96	$3.16	$3.37	$3.60	$3.84	$4.09	$4.35	$4.62	$4.89	$5.17	$5.45	$5.75	$6.06	$6.39	$6.74
American Electric Power Company, Inc.	AEP	$3.62	$3.81	$4.02	$4.23	$4.46	$4.69	$4.94	$5.21	$5.49	$5.79	$6.10	$6.43	$6.78	$7.15	$7.54	$7.95
Avangrid, Inc.	AGR	$1.67	$1.85	$2.05	$2.27	$2.52	$2.79	$3.07	$3.35	$3.62	$3.88	$4.13	$4.35	$4.59	$4.84	$5.10	$5.38
Black Hills Corporation	BKH	$3.38	$3.53	$3.68	$3.84	$4.00	$4.18	$4.36	$4.57	$4.79	$5.04	$5.30	$5.59	$5.89	$6.21	$6.55	$6.91
CMS Energy Corporation	CMS	$2.17	$2.32	$2.48	$2.64	$2.82	$3.02	$3.22	$3.42	$3.63	$3.84	$4.06	$4.28	$4.52	$4.76	$5.02	$5.30
DTE Energy Company	DTE	$5.73	$6.07	$6.43	$6.82	$7.22	$7.65	$8.10	$8.57	$9.06	$9.57	$10.10	$10.65	$11.23	$11.84	$12.49	$13.17
Duke Energy Corporation	DUK	$4.22	$4.42	$4.64	$4.86	$5.09	$5.34	$5.60	$5.88	$6.18	$6.50	$6.85	$7.23	$7.62	$8.03	$8.47	$8.93
El Paso Electric	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.57	$3.76	$3.97	$4.18	$4.41	$4.65	$4.90	$5.17
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.75	$1.86	$1.98	$2.12	$2.25	$2.40	$2.55	$2.70	$2.86	$3.02	$3.18	$3.35	$3.54	$3.73	$3.93
IDACORP, Inc.	IDA	$4.21	$4.36	$4.51	$4.67	$4.83	$5.00	$5.19	$5.41	$5.65	$5.92	$6.22	$6.56	$6.92	$7.30	$7.69	$8.11
NextEra Energy, Inc.	NEE	$6.50	$7.08	$7.72	$8.41	$9.16	$9.98	$10.82	$11.66	$12.50	$13.33	$14.14	$14.91	$15.72	$16.57	$17.48	$18.43
NorthWestern Corporation	NWE	$3.34	$3.45	$3.56	$3.67	$3.79	$3.91	$4.05	$4.21	$4.40	$4.60	$4.84	$5.10	$5.38	$5.67	$5.98	$6.31
OGE Energy Corp.	OGE	$1.92	$2.02	$2.13	$2.25	$2.37	$2.50	$2.64	$2.78	$2.93	$3.09	$3.26	$3.44	$3.62	$3.82	$4.03	$4.25
Otter Tail Corporation	OTTR	$1.86	$2.01	$2.18	$2.36	$2.55	$2.76	$2.98	$3.20	$3.42	$3.63	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02
Pinnacle West Capital Corporation	PNW	$4.43	$4.63	$4.83	$5.04	$5.27	$5.50	$5.75	$6.03	$6.33	$6.65	$7.00	$7.38	$7.78	$8.21	$8.65	$9.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.13	$3.31	$3.49	$3.68	$3.88	$4.09	$4.31
Portland General Electric Company	POR	$2.29	$2.36	$2.44	$2.51	$2.59	$2.67	$2.77	$2.88	$3.00	$3.14	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30
Southern Company	SO	$3.21	$3.32	$3.43	$3.55	$3.67	$3.80	$3.94	$4.10	$4.28	$4.48	$4.71	$4.97	$5.24	$5.53	$5.83	$6.14
WEC Energy Group, Inc.	WEC	$3.14	$3.30	$3.47	$3.65	$3.84	$4.04	$4.25	$4.48	$4.71	$4.97	$5.23	$5.52	$5.82	$6.14	$6.47	$6.82
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.57	$2.72	$2.87	$3.03	$3.21	$3.39	$3.57	$3.77	$3.98	$4.20	$4.42	$4.67	$4.92	$5.19

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Projected Annual
Dividend Payout Ratio

Company	Ticker	[30] 2018	[31] 2019	[32] 2020	[33] 2021	[34] 2022	[35] 2023	[36] 2024	[37] 2025	[38] 2026	[39] 2027	[40] 2028	[41] 2029	[42] 2030	[43] 2031	[44] 2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.25%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.25%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.50%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.75%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.25%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.00%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.75%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.50%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.50%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.50%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.75%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.25%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.50%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual
Cash Flows

Company	Ticker	[45] 2018	[46] 2019	[47] 2020	[48] 2021	[49] 2022	[50] 2023	[51] 2024	[52] 2025	[53] 2026	[54] 2027	[55] 2028	[56] 2029	[57] 2030	[58] 2031	[59] 2032	[60] Terminal Value
ALLETE, Inc.	ALE	$2.15	$2.26	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$4.62	$144.70
Alliant Energy Corporation	LNT	$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$3.00	$94.09
Ameren Corporation	AEE	$1.77	$1.89	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$4.42	$138.41
American Electric Power Company, Inc.	AEP	$2.55	$2.65	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$5.22	$163.40
Avangrid, Inc.	AGR	$1.41	$1.51	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$3.53	$110.58
Black Hills Corporation	BKH	$1.94	$2.07	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$4.53	$141.94
CMS Energy Corporation	CMS	$1.41	$1.51	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$3.47	$108.81
DTE Energy Company	DTE	$3.70	$3.91	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$8.64	$270.54
Duke Energy Corporation	DUK	$3.36	$3.57	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$5.86	$183.50
El Paso Electric	EE	$1.45	$1.55	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$3.39	$106.19
Hawaiian Electric Industries, Inc.	HE	$1.15	$1.20	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$2.58	$80.80
IDACORP, Inc.	IDA	$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$5.32	$166.65
NextEra Energy, Inc.	NEE	$3.90	$4.40	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$12.08	$378.57
NorthWestern Corporation	NWE	$2.21	$2.28	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$4.14	$129.56
OGE Energy Corp.	OGE	$1.40	$1.48	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$2.79	$87.30
Otter Tail Corporation	OTTR	$1.33	$1.41	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$3.29	$103.10
Pinnacle West Capital Corporation	PNW	$2.91	$3.04	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$5.98	$187.46
PNM Resources, Inc.	PNM	$1.07	$1.12	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$2.83	$88.55
Portland General Electric Company	POR	$1.51	$1.55	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$2.82	$88.38
Southern Company	SO	$2.66	$2.69	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$4.03	$126.21
WEC Energy Group, Inc.	WEC	$2.18	$2.28	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$4.47	$140.19
Xcel Energy Inc.	XEL	$1.51	$1.60	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$3.40	$106.56

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($75.23)	$0.00	$1.17	$2.21	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$149.32
Alliant Energy Corporation	LNT	($40.60)	$0.00	$0.74	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$97.09
Ameren Corporation	AEE	($57.18)	$0.00	$0.97	$1.83	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$142.83
American Electric Power Company, Inc.	AEP	($66.01)	$0.00	$1.39	$2.62	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$168.61
Avangrid, Inc.	AGR	($51.90)	$0.00	$0.77	$1.48	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$114.11
Black Hills Corporation	BKH	($57.15)	$0.00	$1.06	$1.98	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$146.47
CMS Energy Corporation	CMS	($44.60)	$0.00	$0.77	$1.46	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$112.29
DTE Energy Company	DTE	($100.10)	$0.00	$2.02	$3.81	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$279.17
Duke Energy Corporation	DUK	($75.51)	$0.00	$1.83	$3.44	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$189.36
El Paso Electric	EE	($56.45)	$0.00	$0.79	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$109.58
Hawaiian Electric Industries, Inc.	HE	($33.60)	$0.00	$0.63	$1.19	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$83.38
IDACORP, Inc.	IDA	($89.53)	$0.00	$1.35	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$171.97
NextEra Energy, Inc.	NEE	($159.84)	$0.00	$2.12	$4.07	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$390.65
NorthWestern Corporation	NWE	($53.53)	$0.00	$1.20	$2.24	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$133.70
OGE Energy Corp.	OGE	($34.04)	$0.00	$0.76	$1.43	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$90.09
Otter Tail Corporation	OTTR	($45.22)	$0.00	$0.72	$1.38	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$106.39
Pinnacle West Capital Corporation	PNW	($76.97)	$0.00	$1.59	$2.98	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$193.44
PNM Resources, Inc.	PNM	($38.00)	$0.00	$0.59	$1.11	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$91.38
Portland General Electric Company	POR	($41.01)	$0.00	$0.82	$1.54	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$91.20
Southern Company	SO	($44.06)	$0.00	$1.45	$2.70	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$130.24
WEC Energy Group, Inc.	WEC	($61.25)	$0.00	$1.19	$2.24	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$144.67
Xcel Energy Inc.	XEL	($44.19)	$0.00	$0.82	$1.55	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$109.96

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
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	Value Line	High Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.23	6.00%	6.00%	5.00%	6.00%	5.45%	65.00%	64.00%	65.57%	$0.00	8.24%	20.54	3.77
Alliant Energy Corporation	LNT	$40.60	5.60%	5.85%	6.50%	6.50%	5.45%	64.00%	64.00%	65.57%	($0.00)	10.11%	20.54	3.77
Ameren Corporation	AEE	$57.18	6.50%	6.30%	7.50%	7.50%	5.45%	60.00%	59.00%	65.57%	$0.00	10.47%	20.54	3.77
American Electric Power Company, Inc.	AEP	$66.01	5.70%	5.79%	4.50%	5.79%	5.45%	67.00%	63.00%	65.57%	$0.00	10.79%	20.54	3.77
Avangrid, Inc.	AGR	$51.90	9.10%	10.40%	13.00%	13.00%	5.45%	76.00%	66.00%	65.57%	($0.00)	10.13%	20.54	3.77
Black Hills Corporation	BKH	$57.15	4.10%	3.86%	5.00%	5.00%	5.45%	55.00%	60.00%	65.57%	$0.00	10.82%	20.54	3.77
CMS Energy Corporation	CMS	$44.60	6.40%	7.05%	7.00%	7.05%	5.45%	61.00%	61.00%	65.57%	$0.00	10.29%	20.54	3.77
DTE Energy Company	DTE	$100.10	5.30%	5.59%	7.00%	7.00%	5.45%	61.00%	60.00%	65.57%	$0.00	11.85%	20.54	3.77
Duke Energy Corporation	DUK	$75.51	4.70%	4.22%	5.50%	5.50%	5.45%	76.00%	80.00%	65.57%	($0.00)	11.29%	20.54	3.77
El Paso Electric	EE	$56.46	5.10%	5.20%	4.50%	5.20%	5.45%	57.00%	61.00%	65.57%	$0.00	7.91%	20.54	3.77
Hawaiian Electric Industries, Inc.	HE	$33.60	7.10%	9.10%	3.50%	9.10%	5.45%	66.00%	59.00%	65.57%	($0.00)	11.60%	20.54	3.77
IDACORP, Inc.	IDA	$89.53	3.90%	3.10%	3.50%	3.90%	5.45%	57.00%	63.00%	65.57%	($0.00)	8.01%	20.54	3.77
NextEra Energy, Inc.	NEE	$159.84	8.60%	9.79%	8.50%	9.79%	5.45%	55.00%	63.00%	65.57%	$0.00	10.22%	20.54	3.77
NorthWestern Corporation	NWE	$53.53	3.00%	3.16%	3.50%	3.50%	5.45%	64.00%	64.00%	65.57%	($0.00)	10.60%	20.54	3.77
OGE Energy Corp.	OGE	$34.04	6.00%	4.30%	6.00%	6.00%	5.45%	69.00%	71.00%	65.57%	$0.00	11.41%	20.54	3.77
Otter Tail Corporation	OTTR	$45.22	NA	9.00%	7.50%	9.00%	5.45%	66.00%	60.00%	65.57%	($0.00)	9.89%	20.54	3.77
Pinnacle West Capital Corporation	PNW	$76.97	4.50%	3.78%	5.00%	5.00%	5.45%	63.00%	63.00%	65.57%	($0.00)	10.72%	20.54	3.77
PNM Resources, Inc.	PNM	$38.00	5.10%	4.30%	7.50%	7.50%	5.45%	53.00%	50.00%	65.57%	($0.00)	10.61%	20.54	3.77
Portland General Electric Company	POR	$41.01	2.80%	2.65%	4.00%	4.00%	5.45%	64.00%	63.00%	65.57%	$0.00	9.79%	20.54	3.77
Southern Company	SO	$44.06	4.50%	2.72%	3.00%	4.50%	5.45%	80.00%	74.00%	65.57%	($0.00)	13.40%	20.54	3.77
WEC Energy Group, Inc.	WEC	$61.25	4.10%	4.43%	7.00%	7.00%	5.45%	66.00%	64.00%	65.57%	$0.00	10.89%	20.54	3.77
Xcel Energy Inc.	XEL	$44.19	5.70%	5.89%	5.50%	5.89%	5.45%	62.00%	63.00%	65.57%	($0.00)	10.27%	20.54	3.77
											Mean	10.42%	20.54	
											Max	13.40%		
											Min	7.91%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.32	$3.52	$3.73	$3.95	$4.19	$4.44	$4.69	$4.96	$5.24	$5.53	$5.83	$6.15	$6.49	$6.84	$7.21
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.64	$3.84	$4.05	$4.27	$4.51	$4.75
Ameren Corporation	AEE	$2.77	$2.98	$3.20	$3.44	$3.70	$3.98	$4.26	$4.55	$4.85	$5.14	$5.44	$5.74	$6.05	$6.38	$6.73	$7.09
American Electric Power Company, Inc.	AEP	$3.62	$3.83	$4.05	$4.29	$4.53	$4.80	$5.07	$5.36	$5.66	$5.98	$6.30	$6.65	$7.01	$7.39	$7.79	$8.22
Avangrid, Inc.	AGR	$1.67	$1.89	$2.13	$2.41	$2.72	$3.08	$3.44	$3.80	$4.15	$4.48	$4.78	$5.04	$5.31	$5.60	$5.91	$6.23
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.56	$5.87	$6.19	$6.52	$6.88	$7.25
CMS Energy Corporation	CMS	$2.17	$2.32	$2.49	$2.66	$2.85	$3.05	$3.26	$3.47	$3.69	$3.91	$4.13	$4.36	$4.59	$4.84	$5.11	$5.38
DTE Energy Company	DTE	$5.73	$6.13	$6.56	$7.02	$7.51	$8.04	$8.58	$9.13	$9.70	$10.28	$10.87	$11.46	$12.08	$12.74	$13.44	$14.17
Duke Energy Corporation	DUK	$4.22	$4.45	$4.70	$4.96	$5.23	$5.52	$5.82	$6.14	$6.47	$6.83	$7.20	$7.59	$8.00	$8.44	$8.90	$9.39
El Paso Electric	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.45	$3.64	$3.83	$4.04	$4.26	$4.49	$4.74	$5.00	$5.27
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.79	$1.95	$2.13	$2.32	$2.53	$2.75	$2.97	$3.18	$3.39	$3.60	$3.80	$4.00	$4.22	$4.45	$4.69
IDACORP, Inc.	IDA	$4.21	$4.37	$4.54	$4.72	$4.91	$5.10	$5.31	$5.54	$5.80	$6.09	$6.41	$6.75	$7.12	$7.51	$7.92	$8.35
NextEra Energy, Inc.	NEE	$6.50	$7.14	$7.83	$8.60	$9.44	$10.37	$11.31	$12.25	$13.19	$14.09	$14.96	$15.78	$16.64	$17.54	$18.50	$19.51
NorthWestern Corporation	NWE	$3.34	$3.46	$3.58	$3.70	$3.83	$3.97	$4.12	$4.29	$4.48	$4.70	$4.94	$5.21	$5.49	$5.79	$6.10	$6.44
OGE Energy Corp.	OGE	$1.92	$2.04	$2.16	$2.29	$2.42	$2.57	$2.72	$2.88	$3.04	$3.22	$3.39	$3.58	$3.77	$3.98	$4.20	$4.42
Otter Tail Corporation	OTTR	$1.86	$2.03	$2.21	$2.41	$2.63	$2.86	$3.10	$3.34	$3.59	$3.82	$4.06	$4.28	$4.51	$4.75	$5.01	$5.29
Pinnacle West Capital Corporation	PNW	$4.43	$4.65	$4.88	$5.13	$5.38	$5.65	$5.94	$6.25	$6.57	$6.92	$7.29	$7.69	$8.11	$8.55	$9.02	$9.51
PNM Resources, Inc.	PNM	$1.92	$2.06	$2.22	$2.39	$2.56	$2.76	$2.95	$3.16	$3.36	$3.57	$3.77	$3.98	$4.19	$4.42	$4.66	$4.92
Portland General Electric Company	POR	$2.29	$2.38	$2.48	$2.58	$2.68	$2.79	$2.90	$3.03	$3.18	$3.34	$3.51	$3.70	$3.90	$4.11	$4.34	$4.57
Southern Company	SO	$3.21	$3.35	$3.51	$3.66	$3.83	$4.00	$4.19	$4.39	$4.61	$4.84	$5.10	$5.38	$5.67	$5.98	$6.30	$6.65
WEC Energy Group, Inc.	WEC	$3.14	$3.36	$3.59	$3.85	$4.12	$4.40	$4.70	$5.01	$5.32	$5.63	$5.96	$6.28	$6.62	$6.98	$7.36	$7.76
Xcel Energy Inc.	XEL	$2.30	$2.44	$2.58	$2.73	$2.89	$3.06	$3.24	$3.43	$3.62	$3.82	$4.03	$4.25	$4.49	$4.73	$4.99	$5.26

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Projected Annual Dividend Payout Ratio		[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.25%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.25%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.50%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.75%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.25%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.00%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.75%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.50%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.50%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.50%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.75%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.25%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.50%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	$2.16	$2.28	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$4.73	$148.16
Alliant Energy Corporation	LNT	$1.36	$1.44	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$3.11	$97.59
Ameren Corporation	AEE	$1.79	$1.91	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$4.65	$145.72
American Electric Power Company, Inc.	AEP	$2.57	$2.67	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$5.39	$168.83
Avangrid, Inc.	AGR	$1.43	$1.57	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$4.09	$128.00
Black Hills Corporation	BKH	$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$149.02
CMS Energy Corporation	CMS	$1.42	$1.52	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$3.53	$110.61
DTE Energy Company	DTE	$3.74	$3.99	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$9.29	$291.06
Duke Energy Corporation	DUK	$3.38	$3.62	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$6.15	$192.80
El Paso Electric	EE	$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$3.45	$108.23
Hawaiian Electric Industries, Inc.	HE	$1.18	$1.25	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$3.08	$96.42
IDACORP, Inc.	IDA	$2.49	$2.66	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$5.47	$171.53
NextEra Energy, Inc.	NEE	$3.92	$4.47	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$12.79	$400.75
NorthWestern Corporation	NWE	$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$4.22	$132.21
OGE Energy Corp.	OGE	$1.40	$1.50	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$2.90	$90.89
Otter Tail Corporation	OTTR	$1.34	$1.43	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$3.47	$108.60
Pinnacle West Capital Corporation	PNW	$2.93	$3.08	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$6.23	$195.31
PNM Resources, Inc.	PNM	$1.09	$1.16	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$3.22	$101.01
Portland General Electric Company	POR	$1.52	$1.58	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$3.00	$93.98
Southern Company	SO	$2.68	$2.75	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$4.36	$136.55
WEC Energy Group, Inc.	WEC	$2.22	$2.35	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$5.09	$159.50
Xcel Energy Inc.	XEL	$1.51	$1.61	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$3.45	$108.03

Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($75.23)	$0.00	$1.18	$2.22	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$152.89
Alliant Energy Corporation	LNT	($40.60)	$0.00	$0.74	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$100.70
Ameren Corporation	AEE	($57.18)	$0.00	$0.97	$1.85	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$150.37
American Electric Power Company, Inc.	AEP	($66.01)	$0.00	$1.40	$2.64	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$174.22
Avangrid, Inc.	AGR	($51.90)	$0.00	$0.78	$1.53	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$132.09
Black Hills Corporation	BKH	($57.15)	$0.00	$1.06	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$153.78
CMS Energy Corporation	CMS	($44.59)	$0.00	$0.77	$1.47	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$114.14
DTE Energy Company	DTE	($100.10)	$0.00	$2.04	$3.87	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$300.35
Duke Energy Corporation	DUK	($75.51)	$0.00	$1.84	$3.48	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$198.95
El Paso Electric	EE	($56.45)	$0.00	$0.79	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$111.68
Hawaiian Electric Industries, Inc.	HE	($33.60)	$0.00	$0.64	$1.23	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$99.50
IDACORP, Inc.	IDA	($89.53)	$0.00	$1.36	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$177.01
NextEra Energy, Inc.	NEE	($159.84)	$0.00	$2.14	$4.12	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$413.55
NorthWestern Corporation	NWE	($53.53)	$0.00	$1.21	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$136.43
OGE Energy Corp.	OGE	($34.04)	$0.00	$0.77	$1.45	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$93.79
Otter Tail Corporation	OTTR	($45.22)	$0.00	$0.73	$1.40	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$112.07
Pinnacle West Capital Corporation	PNW	($76.97)	$0.00	$1.60	$3.00	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$201.55
PNM Resources, Inc.	PNM	($38.00)	$0.00	$0.60	$1.13	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$104.23
Portland General Electric Company	POR	($41.01)	$0.00	$0.83	$1.55	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$96.98
Southern Company	SO	($44.06)	$0.00	$1.46	$2.74	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$140.91
WEC Energy Group, Inc.	WEC	($61.25)	$0.00	$1.21	$2.30	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$164.59
Xcel Energy Inc.	XEL	($44.19)	$0.00	$0.82	$1.55	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$111.48

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
30 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.23	6.00%	6.00%	5.00%	5.00%	5.45%	65.00%	64.00%	65.57%	$0.00	7.63%	20.54	3.77
Alliant Energy Corporation	LNT	$40.60	5.60%	5.85%	6.50%	5.60%	5.45%	64.00%	64.00%	65.57%	($0.00)	9.55%	20.54	3.77
Ameren Corporation	AEE	$57.18	6.50%	6.30%	7.50%	6.30%	5.45%	60.00%	59.00%	65.57%	$0.00	9.73%	20.54	3.77
American Electric Power Company, Inc.	AEP	$66.01	5.70%	5.79%	4.50%	4.50%	5.45%	67.00%	63.00%	65.57%	$0.00	9.97%	20.54	3.77
Avangrid, Inc.	AGR	$51.90	9.10%	10.40%	13.00%	9.10%	5.45%	76.00%	66.00%	65.57%	($0.00)	7.83%	20.54	3.77
Black Hills Corporation	BKH	$57.15	4.10%	3.86%	5.00%	3.86%	5.45%	55.00%	60.00%	65.57%	$0.00	10.09%	20.54	3.77
CMS Energy Corporation	CMS	$44.60	6.40%	7.05%	7.00%	6.40%	5.45%	61.00%	61.00%	65.57%	($0.00)	9.88%	20.54	3.77
DTE Energy Company	DTE	$100.10	5.30%	5.59%	7.00%	5.30%	5.45%	61.00%	60.00%	65.57%	$0.00	10.76%	20.54	3.77
Duke Energy Corporation	DUK	$75.51	4.70%	4.22%	5.50%	4.22%	5.45%	76.00%	80.00%	65.57%	($0.00)	10.45%	20.54	3.77
El Paso Electric	EE	$56.46	5.10%	5.20%	4.50%	4.50%	5.45%	57.00%	61.00%	65.57%	$0.00	7.48%	20.54	3.77
Hawaiian Electric Industries, Inc.	HE	$33.60	7.10%	9.10%	3.50%	3.50%	5.45%	66.00%	59.00%	65.57%	($0.00)	8.13%	20.54	3.77
IDACORP, Inc.	IDA	$89.53	3.90%	3.10%	3.50%	3.10%	5.45%	57.00%	63.00%	65.57%	($0.00)	7.51%	20.54	3.77
NextEra Energy, Inc.	NEE	$159.84	8.60%	9.79%	8.50%	8.50%	5.45%	55.00%	63.00%	65.57%	$0.00	9.44%	20.54	3.77
NorthWestern Corporation	NWE	$53.53	3.00%	3.16%	3.50%	3.00%	5.45%	64.00%	64.00%	65.57%	($0.00)	10.27%	20.54	3.77
OGE Energy Corp.	OGE	$34.04	6.00%	4.30%	6.00%	4.30%	5.45%	69.00%	71.00%	65.57%	$0.00	10.32%	20.54	3.77
Otter Tail Corporation	OTTR	$45.22	NA	9.00%	7.50%	7.50%	5.45%	66.00%	60.00%	65.57%	($0.00)	8.98%	20.54	3.77
Pinnacle West Capital Corporation	PNW	$76.97	4.50%	3.78%	5.00%	3.78%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.94%	20.54	3.77
PNM Resources, Inc.	PNM	$38.00	5.10%	4.30%	7.50%	4.30%	5.45%	53.00%	50.00%	65.57%	($0.00)	8.64%	20.54	3.77
Portland General Electric Company	POR	$41.01	2.80%	2.65%	4.00%	2.65%	5.45%	64.00%	63.00%	65.57%	$0.00	8.93%	20.54	3.77
Southern Company	SO	$44.06	4.50%	2.72%	3.00%	2.72%	5.45%	80.00%	74.00%	65.57%	($0.00)	12.19%	20.54	3.77
WEC Energy Group, Inc.	WEC	$61.25	4.10%	4.43%	7.00%	4.10%	5.45%	66.00%	64.00%	65.57%	$0.00	9.07%	20.54	3.77
Xcel Energy Inc.	XEL	$44.19	5.70%	5.89%	5.50%	5.50%	5.45%	62.00%	63.00%	65.57%	($0.00)	10.03%	20.54	3.77
											Mean	9.40%	20.54	
											Max	12.19%		
											Min	7.48%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.29	$3.45	$3.62	$3.80	$3.99	$4.20	$4.41	$4.64	$4.89	$5.15	$5.43	$5.73	$6.04	$6.37	$6.72
Alliant Energy Corporation	LNT	$1.99	$2.10	$2.22	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.24	$3.42	$3.61	$3.80	$4.01	$4.23	$4.46
Ameren Corporation	AEE	$2.77	$2.94	$3.13	$3.33	$3.54	$3.76	$3.99	$4.23	$4.48	$4.74	$5.00	$5.27	$5.56	$5.86	$6.18	$6.52
American Electric Power Company, Inc.	AEP	$3.62	$3.78	$3.95	$4.13	$4.32	$4.51	$4.72	$4.95	$5.19	$5.46	$5.75	$6.06	$6.39	$6.74	$7.11	$7.50
Avangrid, Inc.	AGR	$1.67	$1.82	$1.99	$2.17	$2.37	$2.58	$2.80	$3.02	$3.24	$3.46	$3.67	$3.87	$4.08	$4.30	$4.53	$4.78
Black Hills Corporation	BKH	$3.38	$3.51	$3.65	$3.79	$3.93	$4.08	$4.25	$4.44	$4.65	$4.87	$5.13	$5.41	$5.70	$6.01	$6.34	$6.68
CMS Energy Corporation	CMS	$2.17	$2.31	$2.46	$2.61	$2.78	$2.96	$3.14	$3.34	$3.53	$3.74	$3.95	$4.16	$4.39	$4.63	$4.88	$5.14
DTE Energy Company	DTE	$5.73	$6.03	$6.35	$6.69	$7.04	$7.42	$7.81	$8.23	$8.67	$9.14	$9.64	$10.16	$10.72	$11.30	$11.91	$12.56
Duke Energy Corporation	DUK	$4.22	$4.40	$4.58	$4.78	$4.98	$5.19	$5.42	$5.67	$5.94	$6.24	$6.57	$6.93	$7.30	$7.70	$8.12	$8.56
El Paso Electric	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.84	$4.05	$4.27	$4.51	$4.75	$5.01
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.70	$1.76	$1.82	$1.88	$1.95	$2.02	$2.11	$2.20	$2.31	$2.42	$2.56	$2.70	$2.84	$3.00	$3.16
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.75	$6.05	$6.37	$6.72	$7.09	$7.47	$7.88
NextEra Energy, Inc.	NEE	$6.50	$7.05	$7.65	$8.30	$9.01	$9.77	$10.55	$11.34	$12.14	$12.92	$13.69	$14.43	$15.22	$16.05	$16.92	$17.85
NorthWestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.87	$4.00	$4.16	$4.33	$4.53	$4.76	$5.02	$5.29	$5.58	$5.89	$6.21
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Otter Tail Corporation	OTTR	$1.86	$2.00	$2.15	$2.31	$2.48	$2.67	$2.86	$3.06	$3.25	$3.45	$3.65	$3.85	$4.06	$4.28	$4.52	$4.76
Pinnacle West Capital Corporation	PNW	$4.43	$4.60	$4.77	$4.95	$5.14	$5.33	$5.55	$5.79	$6.06	$6.35	$6.68	$7.05	$7.43	$7.83	$8.26	$8.71
PNM Resources, Inc.	PNM	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Portland General Electric Company	POR	$2.29	$2.35	$2.41	$2.48	$2.54	$2.61	$2.69	$2.79	$2.90	$3.03	$3.18	$3.36	$3.54	$3.73	$3.93	$4.15
Southern Company	SO	$3.21	$3.30	$3.39	$3.48	$3.57	$3.67	$3.79	$3.92	$4.09	$4.27	$4.48	$4.73	$4.99	$5.26	$5.54	$5.85
WEC Energy Group, Inc.	WEC	$3.14	$3.27	$3.40	$3.54	$3.69	$3.84	$4.00	$4.19	$4.39	$4.61	$4.85	$5.11	$5.39	$5.68	$5.99	$6.32
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$3.34	$3.53	$3.72	$3.92	$4.14	$4.36	$4.60	$4.85	$5.12

Projected Annual
Dividend Payout Ratio

Company	Ticker	[30] 2018	[31] 2019	[32] 2020	[33] 2021	[34] 2022	[35] 2023	[36] 2024	[37] 2025	[38] 2026	[39] 2027	[40] 2028	[41] 2029	[42] 2030	[43] 2031	[44] 2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.25%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.25%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.50%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.75%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.25%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.00%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.75%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.50%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.50%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.50%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.75%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.25%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.50%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual
Cash Flows

Company	Ticker	[45] 2018	[46] 2019	[47] 2020	[48] 2021	[49] 2022	[50] 2023	[51] 2024	[52] 2025	[53] 2026	[54] 2027	[55] 2028	[56] 2029	[57] 2030	[58] 2031	[59] 2032	[60] Terminal Value
ALLETE, Inc.	ALE	$2.14	$2.23	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$4.40	$138.00
Alliant Energy Corporation	LNT	$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$2.92	$91.57
Ameren Corporation	AEE	$1.77	$1.87	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$4.27	$133.93
American Electric Power Company, Inc.	AEP	$2.53	$2.61	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$4.92	$153.99
Avangrid, Inc.	AGR	$1.38	$1.46	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$3.13	$98.19
Black Hills Corporation	BKH	$1.93	$2.05	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$4.38	$137.32
CMS Energy Corporation	CMS	$1.41	$1.50	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$3.37	$105.67
DTE Energy Company	DTE	$3.68	$3.86	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$8.24	$258.09
Duke Energy Corporation	DUK	$3.34	$3.53	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$5.62	$175.94
El Paso Electric	EE	$1.44	$1.53	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$3.29	$102.94
Hawaiian Electric Industries, Inc.	HE	$1.12	$1.13	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$2.07	$64.92
IDACORP, Inc.	IDA	$2.47	$2.62	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$5.17	$161.89
NextEra Energy, Inc.	NEE	$3.88	$4.36	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$11.70	$366.61
NorthWestern Corporation	NWE	$2.20	$2.27	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$4.07	$127.51
OGE Energy Corp.	OGE	$1.38	$1.45	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$2.57	$80.51
Otter Tail Corporation	OTTR	$1.32	$1.39	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$3.12	$97.85
Pinnacle West Capital Corporation	PNW	$2.90	$3.01	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$5.71	$178.94
PNM Resources, Inc.	PNM	$1.06	$1.09	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$2.57	$80.51
Portland General Electric Company	POR	$1.50	$1.54	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$2.72	$85.23
Southern Company	SO	$2.64	$2.66	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$3.83	$120.08
WEC Energy Group, Inc.	WEC	$2.16	$2.23	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$4.14	$129.79
Xcel Energy Inc.	XEL	$1.50	$1.59	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$3.35	$105.08

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($75.23)	$0.00	$1.16	$2.19	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$142.40
Alliant Energy Corporation	LNT	($40.60)	$0.00	$0.73	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$94.49
Ameren Corporation	AEE	($57.18)	$0.00	$0.96	$1.82	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$138.21
American Electric Power Company, Inc.	AEP	($66.01)	$0.00	$1.38	$2.59	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$158.91
Avangrid, Inc.	AGR	($51.90)	$0.00	$0.75	$1.45	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$101.32
Black Hills Corporation	BKH	($57.15)	$0.00	$1.05	$1.97	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$141.70
CMS Energy Corporation	CMS	($44.60)	$0.00	$0.77	$1.45	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$109.04
DTE Energy Company	DTE	($100.10)	$0.00	$2.01	$3.78	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$266.33
Duke Energy Corporation	DUK	($75.51)	$0.00	$1.82	$3.41	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$181.56
El Paso Electric	EE	($56.45)	$0.00	$0.79	$1.47	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$106.23
Hawaiian Electric Industries, Inc.	HE	($33.60)	$0.00	$0.61	$1.14	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$66.99
IDACORP, Inc.	IDA	($89.53)	$0.00	$1.35	$2.51	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$167.06
NextEra Energy, Inc.	NEE	($159.84)	$0.00	$2.11	$4.04	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$378.32
NorthWestern Corporation	NWE	($53.53)	$0.00	$1.20	$2.23	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$131.58
OGE Energy Corp.	OGE	($34.04)	$0.00	$0.75	$1.41	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$83.08
Otter Tail Corporation	OTTR	($45.22)	$0.00	$0.72	$1.37	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$100.97
Pinnacle West Capital Corporation	PNW	($76.97)	$0.00	$1.58	$2.95	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$184.65
PNM Resources, Inc.	PNM	($38.00)	$0.00	$0.58	$1.08	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$83.08
Portland General Electric Company	POR	($41.01)	$0.00	$0.82	$1.52	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$87.95
Southern Company	SO	($44.06)	$0.00	$1.44	$2.67	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$123.91
WEC Energy Group, Inc.	WEC	($61.25)	$0.00	$1.18	$2.20	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$133.93
Xcel Energy Inc.	XEL	($44.19)	$0.00	$0.82	$1.55	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$108.43

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
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
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.50	6.00%	6.00%	5.00%	5.67%	5.45%	65.00%	64.00%	65.57%	$0.00	8.39%	20.54	3.77
Alliant Energy Corporation	LNT	$40.29	5.60%	5.85%	6.50%	5.98%	5.45%	64.00%	64.00%	65.57%	$0.00	9.86%	20.54	3.77
Ameren Corporation	AEE	$56.21	6.50%	6.30%	7.50%	6.77%	5.45%	60.00%	59.00%	65.57%	$0.00	10.18%	20.54	3.77
American Electric Power Company, Inc.	AEP	$66.84	5.70%	5.79%	4.50%	5.33%	5.45%	67.00%	63.00%	65.57%	$0.00	10.37%	20.54	3.77
Avangrid, Inc.	AGR	$50.61	9.10%	10.40%	13.00%	10.83%	5.45%	76.00%	66.00%	65.57%	$0.00	9.09%	20.54	3.77
Black Hills Corporation	BKH	$54.56	4.10%	3.86%	5.00%	4.32%	5.45%	55.00%	60.00%	65.57%	$0.00	10.84%	20.54	3.77
CMS Energy Corporation	CMS	$44.34	6.40%	7.05%	7.00%	6.82%	5.45%	61.00%	61.00%	65.57%	$0.00	10.20%	20.54	3.77
DTE Energy Company	DTE	$101.87	5.30%	5.59%	7.00%	5.96%	5.45%	61.00%	60.00%	65.57%	$0.00	11.01%	20.54	3.77
Duke Energy Corporation	DUK	$76.57	4.70%	4.22%	5.50%	4.81%	5.45%	76.00%	80.00%	65.57%	($0.00)	10.69%	20.54	3.77
El Paso Electric	EE	$52.05	5.10%	5.20%	4.50%	4.93%	5.45%	57.00%	61.00%	65.57%	$0.00	8.50%	20.54	3.77
Hawaiian Electric Industries, Inc.	HE	$33.76	7.10%	9.10%	3.50%	6.57%	5.45%	66.00%	59.00%	65.57%	$0.00	9.99%	20.54	3.77
IDACORP, Inc.	IDA	$87.21	3.90%	3.10%	3.50%	3.50%	5.45%	57.00%	63.00%	65.57%	$0.00	8.01%	20.54	3.77
NextEra Energy, Inc.	NEE	$158.65	8.60%	9.79%	8.50%	8.96%	5.45%	55.00%	63.00%	65.57%	$0.00	9.79%	20.54	3.77
NorthWestern Corporation	NWE	$52.95	3.00%	3.16%	3.50%	3.22%	5.45%	64.00%	64.00%	65.57%	$0.00	10.53%	20.54	3.77
OGE Energy Corp.	OGE	$32.61	6.00%	4.30%	6.00%	5.43%	5.45%	69.00%	71.00%	65.57%	$0.00	11.49%	20.54	3.77
Otter Tail Corporation	OTTR	$43.41	NA	9.00%	7.50%	8.25%	5.45%	66.00%	60.00%	65.57%	($0.00)	9.83%	20.54	3.77
Pinnacle West Capital Corporation	PNW	$77.79	4.50%	3.78%	5.00%	4.43%	5.45%	63.00%	63.00%	65.57%	($0.00)	10.25%	20.54	3.77
PNM Resources, Inc.	PNM	$37.36	5.10%	4.30%	7.50%	5.63%	5.45%	53.00%	50.00%	65.57%	$0.00	9.62%	20.54	3.77
Portland General Electric Company	POR	$40.54	2.80%	2.65%	4.00%	3.15%	5.45%	64.00%	63.00%	65.57%	$0.00	9.36%	20.54	3.77
Southern Company	SO	$44.31	4.50%	2.72%	3.00%	3.41%	5.45%	80.00%	74.00%	65.57%	$0.00	12.59%	20.54	3.77
WEC Energy Group, Inc.	WEC	$61.59	4.10%	4.43%	7.00%	5.18%	5.45%	66.00%	64.00%	65.57%	$0.00	9.69%	20.54	3.77
Xcel Energy Inc.	XEL	$44.41	5.70%	5.89%	5.50%	5.70%	5.45%	62.00%	63.00%	65.57%	$0.00	10.10%	20.54	3.77
											Mean	10.02%	20.54	
											Max	12.59%		
											Min	8.01%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.31	$3.49	$3.69	$3.90	$4.12	$4.36	$4.60	$4.85	$5.12	$5.40	$5.70	$6.01	$6.34	$6.68	$7.04
Alliant Energy Corporation	LNT	$1.99	$2.11	$2.24	$2.37	$2.51	$2.66	$2.82	$2.98	$3.15	$3.33	$3.51	$3.70	$3.91	$4.12	$4.34	$4.58
Ameren Corporation	AEE	$2.77	$2.96	$3.16	$3.37	$3.60	$3.84	$4.09	$4.35	$4.62	$4.89	$5.17	$5.45	$5.75	$6.06	$6.39	$6.74
American Electric Power Company, Inc.	AEP	$3.62	$3.81	$4.02	$4.23	$4.46	$4.69	$4.94	$5.21	$5.49	$5.79	$6.10	$6.43	$6.78	$7.15	$7.54	$7.95
Avangrid, Inc.	AGR	$1.67	$1.85	$2.05	$2.27	$2.52	$2.79	$3.07	$3.35	$3.62	$3.88	$4.13	$4.35	$4.59	$4.84	$5.10	$5.38
Black Hills Corporation	BKH	$3.38	$3.53	$3.68	$3.84	$4.00	$4.18	$4.36	$4.57	$4.79	$5.04	$5.30	$5.59	$5.89	$6.21	$6.55	$6.91
CMS Energy Corporation	CMS	$2.17	$2.32	$2.48	$2.64	$2.82	$3.02	$3.22	$3.42	$3.63	$3.84	$4.06	$4.28	$4.52	$4.76	$5.02	$5.30
DTE Energy Company	DTE	$5.73	$6.07	$6.43	$6.82	$7.22	$7.65	$8.10	$8.57	$9.06	$9.57	$10.10	$10.65	$11.23	$11.84	$12.49	$13.17
Duke Energy Corporation	DUK	$4.22	$4.42	$4.64	$4.86	$5.09	$5.34	$5.60	$5.88	$6.18	$6.50	$6.85	$7.23	$7.62	$8.03	$8.47	$8.93
El Paso Electric	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.57	$3.76	$3.97	$4.18	$4.41	$4.65	$4.90	$5.17
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.75	$1.86	$1.98	$2.12	$2.25	$2.40	$2.55	$2.70	$2.86	$3.02	$3.18	$3.35	$3.54	$3.73	$3.93
IDACORP, Inc.	IDA	$4.21	$4.36	$4.51	$4.67	$4.83	$5.00	$5.19	$5.41	$5.65	$5.92	$6.22	$6.56	$6.92	$7.30	$7.69	$8.11
NextEra Energy, Inc.	NEE	$6.50	$7.08	$7.72	$8.41	$9.16	$9.98	$10.82	$11.66	$12.50	$13.33	$14.14	$14.91	$15.72	$16.57	$17.48	$18.43
NorthWestern Corporation	NWE	$3.34	$3.45	$3.56	$3.67	$3.79	$3.91	$4.05	$4.21	$4.40	$4.60	$4.84	$5.10	$5.38	$5.67	$5.98	$6.31
OGE Energy Corp.	OGE	$1.92	$2.02	$2.13	$2.25	$2.37	$2.50	$2.64	$2.78	$2.93	$3.09	$3.26	$3.44	$3.62	$3.82	$4.03	$4.25
Otter Tail Corporation	OTTR	$1.86	$2.01	$2.18	$2.36	$2.55	$2.76	$2.98	$3.20	$3.42	$3.63	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02
Pinnacle West Capital Corporation	PNW	$4.43	$4.63	$4.83	$5.04	$5.27	$5.50	$5.75	$6.03	$6.33	$6.65	$7.00	$7.38	$7.78	$8.21	$8.65	$9.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.13	$3.31	$3.49	$3.68	$3.88	$4.09	$4.31
Portland General Electric Company	POR	$2.29	$2.36	$2.44	$2.51	$2.59	$2.67	$2.77	$2.88	$3.00	$3.14	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30
Southern Company	SO	$3.21	$3.32	$3.43	$3.55	$3.67	$3.80	$3.94	$4.10	$4.28	$4.48	$4.71	$4.97	$5.24	$5.53	$5.83	$6.14
WEC Energy Group, Inc.	WEC	$3.14	$3.30	$3.47	$3.65	$3.84	$4.04	$4.25	$4.48	$4.71	$4.97	$5.23	$5.52	$5.82	$6.14	$6.47	$6.82
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.57	$2.72	$2.87	$3.03	$3.21	$3.39	$3.57	$3.77	$3.98	$4.20	$4.42	$4.67	$4.92	$5.19

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Projected Annual
Dividend Payout Ratio

Company	Ticker	[30] 2018	[31] 2019	[32] 2020	[33] 2021	[34] 2022	[35] 2023	[36] 2024	[37] 2025	[38] 2026	[39] 2027	[40] 2028	[41] 2029	[42] 2030	[43] 2031	[44] 2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.25%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.25%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.50%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.75%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.25%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.00%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.75%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.50%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.50%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.50%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.75%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.25%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.50%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual
Cash Flows

Company	Ticker	[45] 2018	[46] 2019	[47] 2020	[48] 2021	[49] 2022	[50] 2023	[51] 2024	[52] 2025	[53] 2026	[54] 2027	[55] 2028	[56] 2029	[57] 2030	[58] 2031	[59] 2032	[60] Terminal Value
ALLETE, Inc.	ALE	$2.15	$2.26	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$4.62	$144.70
Alliant Energy Corporation	LNT	$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$3.00	$94.09
Ameren Corporation	AEE	$1.77	$1.89	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$4.42	$138.41
American Electric Power Company, Inc.	AEP	$2.55	$2.65	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$5.22	$163.40
Avangrid, Inc.	AGR	$1.41	$1.51	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$3.53	$110.58
Black Hills Corporation	BKH	$1.94	$2.07	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$4.53	$141.94
CMS Energy Corporation	CMS	$1.41	$1.51	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$3.47	$108.81
DTE Energy Company	DTE	$3.70	$3.91	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$8.64	$270.54
Duke Energy Corporation	DUK	$3.36	$3.57	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$5.86	$183.50
El Paso Electric	EE	$1.45	$1.55	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$3.39	$106.19
Hawaiian Electric Industries, Inc.	HE	$1.15	$1.20	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$2.58	$80.80
IDACORP, Inc.	IDA	$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$5.32	$166.65
NextEra Energy, Inc.	NEE	$3.90	$4.40	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$12.08	$378.57
NorthWestern Corporation	NWE	$2.21	$2.28	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$4.14	$129.56
OGE Energy Corp.	OGE	$1.40	$1.48	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$2.79	$87.30
Otter Tail Corporation	OTTR	$1.33	$1.41	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$3.29	$103.10
Pinnacle West Capital Corporation	PNW	$2.91	$3.04	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$5.98	$187.46
PNM Resources, Inc.	PNM	$1.07	$1.12	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$2.83	$88.55
Portland General Electric Company	POR	$1.51	$1.55	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$2.82	$88.38
Southern Company	SO	$2.66	$2.69	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$4.03	$126.21
WEC Energy Group, Inc.	WEC	$2.18	$2.28	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$4.47	$140.19
Xcel Energy Inc.	XEL	$1.51	$1.60	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$3.40	$106.56

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($72.50)	$0.00	$1.17	$2.21	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$149.32
Alliant Energy Corporation	LNT	($40.29)	$0.00	$0.74	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$97.09
Ameren Corporation	AEE	($56.21)	$0.00	$0.97	$1.83	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$142.83
American Electric Power Company, Inc.	AEP	($66.84)	$0.00	$1.39	$2.62	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$168.61
Avangrid, Inc.	AGR	($50.61)	$0.00	$0.77	$1.48	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$114.11
Black Hills Corporation	BKH	($54.56)	$0.00	$1.06	$1.98	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$146.47
CMS Energy Corporation	CMS	($44.34)	$0.00	$0.77	$1.46	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$112.29
DTE Energy Company	DTE	($101.87)	$0.00	$2.02	$3.81	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$279.17
Duke Energy Corporation	DUK	($76.57)	$0.00	$1.83	$3.44	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$189.36
El Paso Electric	EE	($52.05)	$0.00	$0.79	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$109.58
Hawaiian Electric Industries, Inc.	HE	($33.76)	$0.00	$0.63	$1.19	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$83.38
IDACORP, Inc.	IDA	($87.21)	$0.00	$1.35	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$171.97
NextEra Energy, Inc.	NEE	($158.65)	$0.00	$2.12	$4.07	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$390.65
NorthWestern Corporation	NWE	($52.95)	$0.00	$1.20	$2.24	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$133.70
OGE Energy Corp.	OGE	($32.60)	$0.00	$0.76	$1.43	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$90.09
Otter Tail Corporation	OTTR	($43.41)	$0.00	$0.72	$1.38	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$106.39
Pinnacle West Capital Corporation	PNW	($77.79)	$0.00	$1.59	$2.98	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$193.44
PNM Resources, Inc.	PNM	($37.36)	$0.00	$0.59	$1.11	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$91.38
Portland General Electric Company	POR	($40.54)	$0.00	$0.82	$1.54	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$91.20
Southern Company	SO	($44.30)	$0.00	$1.45	$2.70	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$130.24
WEC Energy Group, Inc.	WEC	($61.59)	$0.00	$1.19	$2.24	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$144.67
Xcel Energy Inc.	XEL	($44.41)	$0.00	$0.82	$1.55	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$109.96

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
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	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.50	6.00%	6.00%	5.00%	6.00%	5.45%	65.00%	64.00%	65.57%	$0.00	8.59%	20.54	3.77
Alliant Energy Corporation	LNT	$40.29	5.60%	5.85%	6.50%	6.50%	5.45%	64.00%	64.00%	65.57%	$0.00	10.19%	20.54	3.77
Ameren Corporation	AEE	$56.21	6.50%	6.30%	7.50%	7.50%	5.45%	60.00%	59.00%	65.57%	$0.00	10.64%	20.54	3.77
American Electric Power Company, Inc.	AEP	$66.84	5.70%	5.79%	4.50%	5.79%	5.45%	67.00%	63.00%	65.57%	$0.00	10.66%	20.54	3.77
Avangrid, Inc.	AGR	$50.61	9.10%	10.40%	13.00%	13.00%	5.45%	76.00%	66.00%	65.57%	$0.00	10.37%	20.54	3.77
Black Hills Corporation	BKH	$54.56	4.10%	3.86%	5.00%	5.00%	5.45%	55.00%	60.00%	65.57%	$0.00	11.28%	20.54	3.77
CMS Energy Corporation	CMS	$44.34	6.40%	7.05%	7.00%	7.05%	5.45%	61.00%	61.00%	65.57%	$0.00	10.34%	20.54	3.77
DTE Energy Company	DTE	$101.87	5.30%	5.59%	7.00%	7.00%	5.45%	61.00%	60.00%	65.57%	$0.00	11.67%	20.54	3.77
Duke Energy Corporation	DUK	$76.57	4.70%	4.22%	5.50%	5.50%	5.45%	76.00%	80.00%	65.57%	($0.00)	11.14%	20.54	3.77
El Paso Electric	EE	$52.05	5.10%	5.20%	4.50%	5.20%	5.45%	57.00%	61.00%	65.57%	$0.00	8.67%	20.54	3.77
Hawaiian Electric Industries, Inc.	HE	$33.76	7.10%	9.10%	3.50%	9.10%	5.45%	66.00%	59.00%	65.57%	$0.00	11.56%	20.54	3.77
IDACORP, Inc.	IDA	$87.21	3.90%	3.10%	3.50%	3.90%	5.45%	57.00%	63.00%	65.57%	$0.00	8.25%	20.54	3.77
NextEra Energy, Inc.	NEE	$158.65	8.60%	9.79%	8.50%	9.79%	5.45%	55.00%	63.00%	65.57%	$0.00	10.29%	20.54	3.77
NorthWestern Corporation	NWE	$52.95	3.00%	3.16%	3.50%	3.50%	5.45%	64.00%	64.00%	65.57%	$0.00	10.71%	20.54	3.77
OGE Energy Corp.	OGE	$32.61	6.00%	4.30%	6.00%	6.00%	5.45%	69.00%	71.00%	65.57%	$0.00	11.86%	20.54	3.77
Otter Tail Corporation	OTTR	$43.41	NA	9.00%	7.50%	9.00%	5.45%	66.00%	60.00%	65.57%	($0.00)	10.29%	20.54	3.77
Pinnacle West Capital Corporation	PNW	$77.79	4.50%	3.78%	5.00%	5.00%	5.45%	63.00%	63.00%	65.57%	($0.00)	10.61%	20.54	3.77
PNM Resources, Inc.	PNM	$37.36	5.10%	4.30%	7.50%	7.50%	5.45%	53.00%	50.00%	65.57%	$0.00	10.77%	20.54	3.77
Portland General Electric Company	POR	$40.54	2.80%	2.65%	4.00%	4.00%	5.45%	64.00%	63.00%	65.57%	$0.00	9.90%	20.54	3.77
Southern Company	SO	$44.31	4.50%	2.72%	3.00%	4.50%	5.45%	80.00%	74.00%	65.57%	$0.00	13.34%	20.54	3.77
WEC Energy Group, Inc.	WEC	$61.59	4.10%	4.43%	7.00%	7.00%	5.45%	66.00%	64.00%	65.57%	$0.00	10.84%	20.54	3.77
Xcel Energy Inc.	XEL	$44.41	5.70%	5.89%	5.50%	5.89%	5.45%	62.00%	63.00%	65.57%	$0.00	10.22%	20.54	3.77
											Mean	10.55%	20.54	
											Max	13.34%		
											Min	8.25%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.32	$3.52	$3.73	$3.95	$4.19	$4.44	$4.69	$4.96	$5.24	$5.53	$5.83	$6.15	$6.49	$6.84	$7.21
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.64	$3.84	$4.05	$4.27	$4.51	$4.75
Ameren Corporation	AEE	$2.77	$2.98	$3.20	$3.44	$3.70	$3.98	$4.26	$4.55	$4.85	$5.14	$5.44	$5.74	$6.05	$6.38	$6.73	$7.09
American Electric Power Company, Inc.	AEP	$3.62	$3.83	$4.05	$4.29	$4.53	$4.80	$5.07	$5.36	$5.66	$5.98	$6.30	$6.65	$7.01	$7.39	$7.79	$8.22
Avangrid, Inc.	AGR	$1.67	$1.89	$2.13	$2.41	$2.72	$3.08	$3.44	$3.80	$4.15	$4.48	$4.78	$5.04	$5.31	$5.60	$5.91	$6.23
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.56	$5.87	$6.19	$6.52	$6.88	$7.25
CMS Energy Corporation	CMS	$2.17	$2.32	$2.49	$2.66	$2.85	$3.05	$3.26	$3.47	$3.69	$3.91	$4.13	$4.36	$4.59	$4.84	$5.11	$5.38
DTE Energy Company	DTE	$5.73	$6.13	$6.56	$7.02	$7.51	$8.04	$8.58	$9.13	$9.70	$10.28	$10.87	$11.46	$12.08	$12.74	$13.44	$14.17
Duke Energy Corporation	DUK	$4.22	$4.45	$4.70	$4.96	$5.23	$5.52	$5.82	$6.14	$6.47	$6.83	$7.20	$7.59	$8.00	$8.44	$8.90	$9.39
El Paso Electric	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.45	$3.64	$3.83	$4.04	$4.26	$4.49	$4.74	$5.00	$5.27
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.79	$1.95	$2.13	$2.32	$2.53	$2.75	$2.97	$3.18	$3.39	$3.60	$3.80	$4.00	$4.22	$4.45	$4.69
IDACORP, Inc.	IDA	$4.21	$4.37	$4.54	$4.72	$4.91	$5.10	$5.31	$5.54	$5.80	$6.09	$6.41	$6.75	$7.12	$7.51	$7.92	$8.35
NextEra Energy, Inc.	NEE	$6.50	$7.14	$7.83	$8.60	$9.44	$10.37	$11.31	$12.25	$13.19	$14.09	$14.96	$15.78	$16.64	$17.54	$18.50	$19.51
NorthWestern Corporation	NWE	$3.34	$3.46	$3.58	$3.70	$3.83	$3.97	$4.12	$4.29	$4.48	$4.70	$4.94	$5.21	$5.49	$5.79	$6.10	$6.44
OGE Energy Corp.	OGE	$1.92	$2.04	$2.16	$2.29	$2.42	$2.57	$2.72	$2.88	$3.04	$3.22	$3.39	$3.58	$3.77	$3.98	$4.20	$4.42
Otter Tail Corporation	OTTR	$1.86	$2.03	$2.21	$2.41	$2.63	$2.86	$3.10	$3.34	$3.59	$3.82	$4.06	$4.28	$4.51	$4.75	$5.01	$5.29
Pinnacle West Capital Corporation	PNW	$4.43	$4.65	$4.88	$5.13	$5.38	$5.65	$5.94	$6.25	$6.57	$6.92	$7.29	$7.69	$8.11	$8.55	$9.02	$9.51
PNM Resources, Inc.	PNM	$1.92	$2.06	$2.22	$2.39	$2.56	$2.76	$2.95	$3.16	$3.36	$3.57	$3.77	$3.98	$4.19	$4.42	$4.66	$4.92
Portland General Electric Company	POR	$2.29	$2.38	$2.48	$2.58	$2.68	$2.79	$2.90	$3.03	$3.18	$3.34	$3.51	$3.70	$3.90	$4.11	$4.34	$4.57
Southern Company	SO	$3.21	$3.35	$3.51	$3.66	$3.83	$4.00	$4.19	$4.39	$4.61	$4.84	$5.10	$5.38	$5.67	$5.98	$6.30	$6.65
WEC Energy Group, Inc.	WEC	$3.14	$3.36	$3.59	$3.85	$4.12	$4.40	$4.70	$5.01	$5.32	$5.63	$5.96	$6.28	$6.62	$6.98	$7.36	$7.76
Xcel Energy Inc.	XEL	$2.30	$2.44	$2.58	$2.73	$2.89	$3.06	$3.24	$3.43	$3.62	$3.82	$4.03	$4.25	$4.49	$4.73	$4.99	$5.26

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Projected Annual Dividend Payout Ratio		[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.25%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.25%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.50%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.75%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.25%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.00%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.75%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.50%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.50%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.50%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.75%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.25%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.50%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	$2.16	$2.28	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$4.73	$148.16
Alliant Energy Corporation	LNT	$1.36	$1.44	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$3.11	$97.59
Ameren Corporation	AEE	$1.79	$1.91	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$4.65	$145.72
American Electric Power Company, Inc.	AEP	$2.57	$2.67	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$5.39	$168.83
Avangrid, Inc.	AGR	$1.43	$1.57	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$4.09	$128.00
Black Hills Corporation	BKH	$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$149.02
CMS Energy Corporation	CMS	$1.42	$1.52	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$3.53	$110.61
DTE Energy Company	DTE	$3.74	$3.99	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$9.29	$291.06
Duke Energy Corporation	DUK	$3.38	$3.62	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$6.15	$192.80
El Paso Electric	EE	$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$3.45	$108.23
Hawaiian Electric Industries, Inc.	HE	$1.18	$1.25	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$3.08	$96.42
IDACORP, Inc.	IDA	$2.49	$2.66	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$5.47	$171.53
NextEra Energy, Inc.	NEE	$3.92	$4.47	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$12.79	$400.75
NorthWestern Corporation	NWE	$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$4.22	$132.21
OGE Energy Corp.	OGE	$1.40	$1.50	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$2.90	$90.89
Otter Tail Corporation	OTTR	$1.34	$1.43	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$3.47	$108.60
Pinnacle West Capital Corporation	PNW	$2.93	$3.08	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$6.23	$195.31
PNM Resources, Inc.	PNM	$1.09	$1.16	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$3.22	$101.01
Portland General Electric Company	POR	$1.52	$1.58	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$3.00	$93.98
Southern Company	SO	$2.68	$2.75	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$4.36	$136.55
WEC Energy Group, Inc.	WEC	$2.22	$2.35	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$5.09	$159.50
Xcel Energy Inc.	XEL	$1.51	$1.61	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$3.45	$108.03

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($72.50)	$0.00	$1.18	$2.22	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$152.89
Alliant Energy Corporation	LNT	($40.29)	$0.00	$0.74	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$100.70
Ameren Corporation	AEE	($56.21)	$0.00	$0.97	$1.85	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$150.37
American Electric Power Company, Inc.	AEP	($66.84)	$0.00	$1.40	$2.64	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$174.22
Avangrid, Inc.	AGR	($50.61)	$0.00	$0.78	$1.53	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$132.09
Black Hills Corporation	BKH	($54.56)	$0.00	$1.06	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$153.78
CMS Energy Corporation	CMS	($44.34)	$0.00	$0.77	$1.47	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$114.14
DTE Energy Company	DTE	($101.87)	$0.00	$2.04	$3.87	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$300.35
Duke Energy Corporation	DUK	($76.57)	$0.00	$1.84	$3.48	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$198.95
El Paso Electric	EE	($52.05)	$0.00	$0.79	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$111.68
Hawaiian Electric Industries, Inc.	HE	($33.76)	$0.00	$0.64	$1.23	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$99.50
IDACORP, Inc.	IDA	($87.21)	$0.00	$1.36	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$177.01
NextEra Energy, Inc.	NEE	($158.65)	$0.00	$2.14	$4.12	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$413.55
NorthWestern Corporation	NWE	($52.95)	$0.00	$1.21	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$136.43
OGE Energy Corp.	OGE	($32.60)	$0.00	$0.77	$1.45	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$93.79
Otter Tail Corporation	OTTR	($43.41)	$0.00	$0.73	$1.40	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$112.07
Pinnacle West Capital Corporation	PNW	($77.79)	$0.00	$1.60	$3.00	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$201.55
PNM Resources, Inc.	PNM	($37.36)	$0.00	$0.60	$1.13	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$104.23
Portland General Electric Company	POR	($40.54)	$0.00	$0.83	$1.55	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$96.98
Southern Company	SO	($44.30)	$0.00	$1.46	$2.74	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$140.91
WEC Energy Group, Inc.	WEC	($61.59)	$0.00	$1.21	$2.30	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$164.59
Xcel Energy Inc.	XEL	($44.41)	$0.00	$0.82	$1.55	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$111.48

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
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
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.50	6.00%	6.00%	5.00%	5.00%	5.45%	65.00%	64.00%	65.57%	$0.00	7.98%	20.54	3.77
Alliant Energy Corporation	LNT	$40.29	5.60%	5.85%	6.50%	5.60%	5.45%	64.00%	64.00%	65.57%	$0.00	9.62%	20.54	3.77
Ameren Corporation	AEE	$56.21	6.50%	6.30%	7.50%	6.30%	5.45%	60.00%	59.00%	65.57%	$0.00	9.89%	20.54	3.77
American Electric Power Company, Inc.	AEP	$66.84	5.70%	5.79%	4.50%	4.50%	5.45%	67.00%	63.00%	65.57%	$0.00	9.85%	20.54	3.77
Avangrid, Inc.	AGR	$50.61	9.10%	10.40%	13.00%	9.10%	5.45%	76.00%	66.00%	65.57%	$0.00	8.06%	20.54	3.77
Black Hills Corporation	BKH	$54.56	4.10%	3.86%	5.00%	3.86%	5.45%	55.00%	60.00%	65.57%	$0.00	10.55%	20.54	3.77
CMS Energy Corporation	CMS	$44.34	6.40%	7.05%	7.00%	6.40%	5.45%	61.00%	61.00%	65.57%	$0.00	9.94%	20.54	3.77
DTE Energy Company	DTE	$101.87	5.30%	5.59%	7.00%	5.30%	5.45%	61.00%	60.00%	65.57%	$0.00	10.59%	20.54	3.77
Duke Energy Corporation	DUK	$76.57	4.70%	4.22%	5.50%	4.22%	5.45%	76.00%	80.00%	65.57%	($0.00)	10.31%	20.54	3.77
El Paso Electric	EE	$52.05	5.10%	5.20%	4.50%	4.50%	5.45%	57.00%	61.00%	65.57%	$0.00	8.24%	20.54	3.77
Hawaiian Electric Industries, Inc.	HE	$33.76	7.10%	9.10%	3.50%	3.50%	5.45%	66.00%	59.00%	65.57%	$0.00	8.08%	20.54	3.77
IDACORP, Inc.	IDA	$87.21	3.90%	3.10%	3.50%	3.10%	5.45%	57.00%	63.00%	65.57%	$0.00	7.76%	20.54	3.77
NextEra Energy, Inc.	NEE	$158.65	8.60%	9.79%	8.50%	8.50%	5.45%	55.00%	63.00%	65.57%	$0.00	9.51%	20.54	3.77
NorthWestern Corporation	NWE	$52.95	3.00%	3.16%	3.50%	3.00%	5.45%	64.00%	64.00%	65.57%	$0.00	10.38%	20.54	3.77
OGE Energy Corp.	OGE	$32.61	6.00%	4.30%	6.00%	4.30%	5.45%	69.00%	71.00%	65.57%	$0.00	10.75%	20.54	3.77
Otter Tail Corporation	OTTR	$43.41	NA	9.00%	7.50%	7.50%	5.45%	66.00%	60.00%	65.57%	($0.00)	9.37%	20.54	3.77
Pinnacle West Capital Corporation	PNW	$77.79	4.50%	3.78%	5.00%	3.78%	5.45%	63.00%	63.00%	65.57%	($0.00)	9.83%	20.54	3.77
PNM Resources, Inc.	PNM	$37.36	5.10%	4.30%	7.50%	4.30%	5.45%	53.00%	50.00%	65.57%	$0.00	8.80%	20.54	3.77
Portland General Electric Company	POR	$40.54	2.80%	2.65%	4.00%	2.65%	5.45%	64.00%	63.00%	65.57%	$0.00	9.04%	20.54	3.77
Southern Company	SO	$44.31	4.50%	2.72%	3.00%	2.72%	5.45%	80.00%	74.00%	65.57%	$0.00	12.13%	20.54	3.77
WEC Energy Group, Inc.	WEC	$61.59	4.10%	4.43%	7.00%	4.10%	5.45%	66.00%	64.00%	65.57%	$0.00	9.01%	20.54	3.77
Xcel Energy Inc.	XEL	$44.41	5.70%	5.89%	5.50%	5.50%	5.45%	62.00%	63.00%	65.57%	$0.00	9.98%	20.54	3.77
											Mean	9.53%	20.54	
											Max	12.13%		
											Min	7.76%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.29	$3.45	$3.62	$3.80	$3.99	$4.20	$4.41	$4.64	$4.89	$5.15	$5.43	$5.73	$6.04	$6.37	$6.72
Alliant Energy Corporation	LNT	$1.99	$2.10	$2.22	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.24	$3.42	$3.61	$3.80	$4.01	$4.23	$4.46
Ameren Corporation	AEE	$2.77	$2.94	$3.13	$3.33	$3.54	$3.76	$3.99	$4.23	$4.48	$4.74	$5.00	$5.27	$5.56	$5.86	$6.18	$6.52
American Electric Power Company, Inc.	AEP	$3.62	$3.78	$3.95	$4.13	$4.32	$4.51	$4.72	$4.95	$5.19	$5.46	$5.75	$6.06	$6.39	$6.74	$7.11	$7.50
Avangrid, Inc.	AGR	$1.67	$1.82	$1.99	$2.17	$2.37	$2.58	$2.80	$3.02	$3.24	$3.46	$3.67	$3.87	$4.08	$4.30	$4.53	$4.78
Black Hills Corporation	BKH	$3.38	$3.51	$3.65	$3.79	$3.93	$4.08	$4.25	$4.44	$4.65	$4.87	$5.13	$5.41	$5.70	$6.01	$6.34	$6.68
CMS Energy Corporation	CMS	$2.17	$2.31	$2.46	$2.61	$2.78	$2.96	$3.14	$3.34	$3.53	$3.74	$3.95	$4.16	$4.39	$4.63	$4.88	$5.14
DTE Energy Company	DTE	$5.73	$6.03	$6.35	$6.69	$7.04	$7.42	$7.81	$8.23	$8.67	$9.14	$9.64	$10.16	$10.72	$11.30	$11.91	$12.56
Duke Energy Corporation	DUK	$4.22	$4.40	$4.58	$4.78	$4.98	$5.19	$5.42	$5.67	$5.94	$6.24	$6.57	$6.93	$7.30	$7.70	$8.12	$8.56
El Paso Electric	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.84	$4.05	$4.27	$4.51	$4.75	$5.01
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.70	$1.76	$1.82	$1.88	$1.95	$2.02	$2.11	$2.20	$2.31	$2.42	$2.56	$2.70	$2.84	$3.00	$3.16
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.75	$6.05	$6.37	$6.72	$7.09	$7.47	$7.88
NextEra Energy, Inc.	NEE	$6.50	$7.05	$7.65	$8.30	$9.01	$9.77	$10.55	$11.34	$12.14	$12.92	$13.69	$14.43	$15.22	$16.05	$16.92	$17.85
NorthWestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.87	$4.00	$4.16	$4.33	$4.53	$4.76	$5.02	$5.29	$5.58	$5.89	$6.21
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Otter Tail Corporation	OTTR	$1.86	$2.00	$2.15	$2.31	$2.48	$2.67	$2.86	$3.06	$3.25	$3.45	$3.65	$3.85	$4.06	$4.28	$4.52	$4.76
Pinnacle West Capital Corporation	PNW	$4.43	$4.60	$4.77	$4.95	$5.14	$5.33	$5.55	$5.79	$6.06	$6.35	$6.68	$7.05	$7.43	$7.83	$8.26	$8.71
PNM Resources, Inc.	PNM	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Portland General Electric Company	POR	$2.29	$2.35	$2.41	$2.48	$2.54	$2.61	$2.69	$2.79	$2.90	$3.03	$3.18	$3.36	$3.54	$3.73	$3.93	$4.15
Southern Company	SO	$3.21	$3.30	$3.39	$3.48	$3.57	$3.67	$3.79	$3.92	$4.09	$4.27	$4.48	$4.73	$4.99	$5.26	$5.54	$5.85
WEC Energy Group, Inc.	WEC	$3.14	$3.27	$3.40	$3.54	$3.69	$3.84	$4.00	$4.19	$4.39	$4.61	$4.85	$5.11	$5.39	$5.68	$5.99	$6.32
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$3.34	$3.53	$3.72	$3.92	$4.14	$4.36	$4.60	$4.85	$5.12

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Projected Annual
Dividend Payout Ratio

Company	Ticker	[30] 2018	[31] 2019	[32] 2020	[33] 2021	[34] 2022	[35] 2023	[36] 2024	[37] 2025	[38] 2026	[39] 2027	[40] 2028	[41] 2029	[42] 2030	[43] 2031	[44] 2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.25%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.25%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.50%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.75%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.25%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.00%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.75%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.50%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.50%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.50%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.75%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.25%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.50%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual
Cash Flows

Company	Ticker	[45] 2018	[46] 2019	[47] 2020	[48] 2021	[49] 2022	[50] 2023	[51] 2024	[52] 2025	[53] 2026	[54] 2027	[55] 2028	[56] 2029	[57] 2030	[58] 2031	[59] 2032	[60] Terminal Value
ALLETE, Inc.	ALE	$2.14	$2.23	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$4.40	$138.00
Alliant Energy Corporation	LNT	$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$2.92	$91.57
Ameren Corporation	AEE	$1.77	$1.87	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$4.27	$133.93
American Electric Power Company, Inc.	AEP	$2.53	$2.61	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$4.92	$153.99
Avangrid, Inc.	AGR	$1.38	$1.46	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$3.13	$98.19
Black Hills Corporation	BKH	$1.93	$2.05	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$4.38	$137.32
CMS Energy Corporation	CMS	$1.41	$1.50	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$3.37	$105.67
DTE Energy Company	DTE	$3.68	$3.86	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$8.24	$258.09
Duke Energy Corporation	DUK	$3.34	$3.53	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$5.62	$175.94
El Paso Electric	EE	$1.44	$1.53	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$3.29	$102.94
Hawaiian Electric Industries, Inc.	HE	$1.12	$1.13	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$2.07	$64.92
IDACORP, Inc.	IDA	$2.47	$2.62	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$5.17	$161.89
NextEra Energy, Inc.	NEE	$3.88	$4.36	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$11.70	$366.61
NorthWestern Corporation	NWE	$2.20	$2.27	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$4.07	$127.51
OGE Energy Corp.	OGE	$1.38	$1.45	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$2.57	$80.51
Otter Tail Corporation	OTTR	$1.32	$1.39	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$3.12	$97.85
Pinnacle West Capital Corporation	PNW	$2.90	$3.01	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$5.71	$178.94
PNM Resources, Inc.	PNM	$1.06	$1.09	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$2.57	$80.51
Portland General Electric Company	POR	$1.50	$1.54	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$2.72	$85.23
Southern Company	SO	$2.64	$2.66	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$3.83	$120.08
WEC Energy Group, Inc.	WEC	$2.16	$2.23	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$4.14	$129.79
Xcel Energy Inc.	XEL	$1.50	$1.59	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$3.35	$105.08

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($72.50)	$0.00	$1.16	$2.19	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$142.40
Alliant Energy Corporation	LNT	($40.29)	$0.00	$0.73	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$94.49
Ameren Corporation	AEE	($56.21)	$0.00	$0.96	$1.82	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$138.21
American Electric Power Company, Inc.	AEP	($66.84)	$0.00	$1.38	$2.59	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$158.91
Avangrid, Inc.	AGR	($50.61)	$0.00	$0.75	$1.45	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$101.32
Black Hills Corporation	BKH	($54.56)	$0.00	$1.05	$1.97	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$141.70
CMS Energy Corporation	CMS	($44.34)	$0.00	$0.77	$1.45	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$109.04
DTE Energy Company	DTE	($101.87)	$0.00	$2.01	$3.78	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$266.33
Duke Energy Corporation	DUK	($76.57)	$0.00	$1.82	$3.41	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$181.56
El Paso Electric	EE	($52.05)	$0.00	$0.79	$1.47	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$106.23
Hawaiian Electric Industries, Inc.	HE	($33.76)	$0.00	$0.61	$1.14	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$66.99
IDACORP, Inc.	IDA	($87.21)	$0.00	$1.35	$2.51	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$167.06
NextEra Energy, Inc.	NEE	($158.65)	$0.00	$2.11	$4.04	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$378.32
NorthWestern Corporation	NWE	($52.95)	$0.00	$1.20	$2.23	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$131.58
OGE Energy Corp.	OGE	($32.60)	$0.00	$0.75	$1.41	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$83.08
Otter Tail Corporation	OTTR	($43.41)	$0.00	$0.72	$1.37	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$100.97
Pinnacle West Capital Corporation	PNW	($77.79)	$0.00	$1.58	$2.95	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$184.65
PNM Resources, Inc.	PNM	($37.36)	$0.00	$0.58	$1.08	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$83.08
Portland General Electric Company	POR	($40.54)	$0.00	$0.82	$1.52	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$87.95
Southern Company	SO	($44.30)	$0.00	$1.44	$2.67	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$123.91
WEC Energy Group, Inc.	WEC	($61.59)	$0.00	$1.18	$2.20	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$133.93
Xcel Energy Inc.	XEL	($44.41)	$0.00	$0.82	$1.55	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$108.43

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
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	Value Line	Average	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.39	6.00%	6.00%	5.00%	5.67%	5.45%	65.00%	64.00%	65.57%	$0.00	8.15%	20.54	3.77
Alliant Energy Corporation	LNT	$41.41	5.60%	5.85%	6.50%	5.98%	5.45%	64.00%	64.00%	65.57%	$0.00	9.60%	20.54	3.77
Ameren Corporation	AEE	$58.05	6.50%	6.30%	7.50%	6.77%	5.45%	60.00%	59.00%	65.57%	$0.00	9.87%	20.54	3.77
American Electric Power Company, Inc.	AEP	$69.91	5.70%	5.79%	4.50%	5.33%	5.45%	67.00%	63.00%	65.57%	$0.00	9.93%	20.54	3.77
Avangrid, Inc.	AGR	$50.25	9.10%	10.40%	13.00%	10.83%	5.45%	76.00%	66.00%	65.57%	$0.00	9.15%	20.54	3.77
Black Hills Corporation	BKH	$57.41	4.10%	3.86%	5.00%	4.32%	5.45%	55.00%	60.00%	65.57%	($0.00)	10.34%	20.54	3.77
CMS Energy Corporation	CMS	$45.84	6.40%	7.05%	7.00%	6.82%	5.45%	61.00%	61.00%	65.57%	$0.00	9.88%	20.54	3.77
DTE Energy Company	DTE	$105.75	5.30%	5.59%	7.00%	5.96%	5.45%	61.00%	60.00%	65.57%	$0.00	10.64%	20.54	3.77
Duke Energy Corporation	DUK	$80.74	4.70%	4.22%	5.50%	4.81%	5.45%	76.00%	80.00%	65.57%	$0.00	10.15%	20.54	3.77
El Paso Electric	EE	$54.16	5.10%	5.20%	4.50%	4.93%	5.45%	57.00%	61.00%	65.57%	$0.00	8.13%	20.54	3.77
Hawaiian Electric Industries, Inc.	HE	$34.70	7.10%	9.10%	3.50%	6.57%	5.45%	66.00%	59.00%	65.57%	$0.00	9.72%	20.54	3.77
IDACORP, Inc.	IDA	$89.13	3.90%	3.10%	3.50%	3.50%	5.45%	57.00%	63.00%	65.57%	$0.00	7.80%	20.54	3.77
NextEra Energy, Inc.	NEE	$156.22	8.60%	9.79%	8.50%	8.96%	5.45%	55.00%	63.00%	65.57%	$0.00	9.93%	20.54	3.77
NorthWestern Corporation	NWE	$55.80	3.00%	3.16%	3.50%	3.22%	5.45%	64.00%	64.00%	65.57%	$0.00	10.00%	20.54	3.77
OGE Energy Corp.	OGE	$33.47	6.00%	4.30%	6.00%	5.43%	5.45%	69.00%	71.00%	65.57%	$0.00	11.22%	20.54	3.77
Otter Tail Corporation	OTTR	$44.07	NA	9.00%	7.50%	8.25%	5.45%	66.00%	60.00%	65.57%	($0.00)	9.68%	20.54	3.77
Pinnacle West Capital Corporation	PNW	$81.85	4.50%	3.78%	5.00%	4.43%	5.45%	63.00%	63.00%	65.57%	$0.00	9.75%	20.54	3.77
PNM Resources, Inc.	PNM	$39.36	5.10%	4.30%	7.50%	5.63%	5.45%	53.00%	50.00%	65.57%	$0.00	9.13%	20.54	3.77
Portland General Electric Company	POR	$43.26	2.80%	2.65%	4.00%	3.15%	5.45%	64.00%	63.00%	65.57%	$0.00	8.73%	20.54	3.77
Southern Company	SO	$46.80	4.50%	2.72%	3.00%	3.41%	5.45%	80.00%	74.00%	65.57%	$0.00	12.00%	20.54	3.77
WEC Energy Group, Inc.	WEC	$63.81	4.10%	4.43%	7.00%	5.18%	5.45%	66.00%	64.00%	65.57%	$0.00	9.34%	20.54	3.77
Xcel Energy Inc.	XEL	$46.44	5.70%	5.89%	5.50%	5.70%	5.45%	62.00%	63.00%	65.57%	$0.00	9.67%	20.54	3.77
											Mean	9.67%	20.54	
											Max	12.00%		
											Min	7.80%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.31	$3.49	$3.69	$3.90	$4.12	$4.36	$4.60	$4.85	$5.12	$5.40	$5.70	$6.01	$6.34	$6.68	$7.04
Alliant Energy Corporation	LNT	$1.99	$2.11	$2.24	$2.37	$2.51	$2.66	$2.82	$2.98	$3.15	$3.33	$3.51	$3.70	$3.91	$4.12	$4.34	$4.58
Ameren Corporation	AEE	$2.77	$2.96	$3.16	$3.37	$3.60	$3.84	$4.09	$4.35	$4.62	$4.89	$5.17	$5.45	$5.75	$6.06	$6.39	$6.74
American Electric Power Company, Inc.	AEP	$3.62	$3.81	$4.02	$4.23	$4.46	$4.69	$4.94	$5.21	$5.49	$5.79	$6.10	$6.43	$6.78	$7.15	$7.54	$7.95
Avangrid, Inc.	AGR	$1.67	$1.85	$2.05	$2.27	$2.52	$2.79	$3.07	$3.35	$3.62	$3.88	$4.13	$4.35	$4.59	$4.84	$5.10	$5.38
Black Hills Corporation	BKH	$3.38	$3.53	$3.68	$3.84	$4.00	$4.18	$4.36	$4.57	$4.79	$5.04	$5.30	$5.59	$5.89	$6.21	$6.55	$6.91
CMS Energy Corporation	CMS	$2.17	$2.32	$2.48	$2.64	$2.82	$3.02	$3.22	$3.42	$3.63	$3.84	$4.06	$4.28	$4.52	$4.76	$5.02	$5.30
DTE Energy Company	DTE	$5.73	$6.07	$6.43	$6.82	$7.22	$7.65	$8.10	$8.57	$9.06	$9.57	$10.10	$10.65	$11.23	$11.84	$12.49	$13.17
Duke Energy Corporation	DUK	$4.22	$4.42	$4.64	$4.86	$5.09	$5.34	$5.60	$5.88	$6.18	$6.50	$6.85	$7.23	$7.62	$8.03	$8.47	$8.93
El Paso Electric	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.57	$3.76	$3.97	$4.18	$4.41	$4.65	$4.90	$5.17
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.75	$1.86	$1.98	$2.12	$2.25	$2.40	$2.55	$2.70	$2.86	$3.02	$3.18	$3.35	$3.54	$3.73	$3.93
IDACORP, Inc.	IDA	$4.21	$4.36	$4.51	$4.67	$4.83	$5.00	$5.19	$5.41	$5.65	$5.92	$6.22	$6.56	$6.92	$7.30	$7.69	$8.11
NextEra Energy, Inc.	NEE	$6.50	$7.08	$7.72	$8.41	$9.16	$9.98	$10.82	$11.66	$12.50	$13.33	$14.14	$14.91	$15.72	$16.57	$17.48	$18.43
NorthWestern Corporation	NWE	$3.34	$3.45	$3.56	$3.67	$3.79	$3.91	$4.05	$4.21	$4.40	$4.60	$4.84	$5.10	$5.38	$5.67	$5.98	$6.31
OGE Energy Corp.	OGE	$1.92	$2.02	$2.13	$2.25	$2.37	$2.50	$2.64	$2.78	$2.93	$3.09	$3.26	$3.44	$3.62	$3.82	$4.03	$4.25
Otter Tail Corporation	OTTR	$1.86	$2.01	$2.18	$2.36	$2.55	$2.76	$2.98	$3.20	$3.42	$3.63	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02
Pinnacle West Capital Corporation	PNW	$4.43	$4.63	$4.83	$5.04	$5.27	$5.50	$5.75	$6.03	$6.33	$6.65	$7.00	$7.38	$7.78	$8.21	$8.65	$9.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.13	$3.31	$3.49	$3.68	$3.88	$4.09	$4.31
Portland General Electric Company	POR	$2.29	$2.36	$2.44	$2.51	$2.59	$2.67	$2.77	$2.88	$3.00	$3.14	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30
Southern Company	SO	$3.21	$3.32	$3.43	$3.55	$3.67	$3.80	$3.94	$4.10	$4.28	$4.48	$4.71	$4.97	$5.24	$5.53	$5.83	$6.14
WEC Energy Group, Inc.	WEC	$3.14	$3.30	$3.47	$3.65	$3.84	$4.04	$4.25	$4.48	$4.71	$4.97	$5.23	$5.52	$5.82	$6.14	$6.47	$6.82
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.57	$2.72	$2.87	$3.03	$3.21	$3.39	$3.57	$3.77	$3.98	$4.20	$4.42	$4.67	$4.92	$5.19

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Projected Annual Dividend Payout Ratio		[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.25%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.25%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.50%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.75%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.25%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.00%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.75%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.50%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.50%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.50%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.75%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.25%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.50%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	$2.15	$2.26	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$4.62	$144.70
Alliant Energy Corporation	LNT	$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$3.00	$94.09
Ameren Corporation	AEE	$1.77	$1.89	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$4.42	$138.41
American Electric Power Company, Inc.	AEP	$2.55	$2.65	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$5.22	$163.40
Avangrid, Inc.	AGR	$1.41	$1.51	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$3.53	$110.58
Black Hills Corporation	BKH	$1.94	$2.07	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$4.53	$141.94
CMS Energy Corporation	CMS	$1.41	$1.51	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$3.47	$108.81
DTE Energy Company	DTE	$3.70	$3.91	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$8.64	$270.54
Duke Energy Corporation	DUK	$3.36	$3.57	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$5.86	$183.50
El Paso Electric	EE	$1.45	$1.55	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$3.39	$106.19
Hawaiian Electric Industries, Inc.	HE	$1.15	$1.20	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$2.58	$80.80
IDACORP, Inc.	IDA	$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$5.32	$166.65
NextEra Energy, Inc.	NEE	$3.90	$4.40	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$12.08	$378.57
NorthWestern Corporation	NWE	$2.21	$2.28	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$4.14	$129.56
OGE Energy Corp.	OGE	$1.40	$1.48	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$2.79	$87.30
Otter Tail Corporation	OTTR	$1.33	$1.41	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$3.29	$103.10
Pinnacle West Capital Corporation	PNW	$2.91	$3.04	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$5.98	$187.46
PNM Resources, Inc.	PNM	$1.07	$1.12	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$2.83	$88.55
Portland General Electric Company	POR	$1.51	$1.55	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$2.82	$88.38
Southern Company	SO	$2.66	$2.69	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$4.03	$126.21
WEC Energy Group, Inc.	WEC	$2.18	$2.28	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$4.47	$140.19
Xcel Energy Inc.	XEL	$1.51	$1.60	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$3.40	$106.56

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($74.39)	$0.00	$1.17	$2.21	$2.38	$2.51	$2.64	$2.80	$2.97	$3.14	$3.33	$3.53	$3.74	$3.94	$4.15	$4.38	$149.32
Alliant Energy Corporation	LNT	($41.41)	$0.00	$0.74	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.29	$2.43	$2.56	$2.70	$2.85	$97.09
Ameren Corporation	AEE	($58.05)	$0.00	$0.97	$1.83	$2.01	$2.13	$2.27	$2.46	$2.66	$2.88	$3.10	$3.33	$3.57	$3.77	$3.97	$4.19	$142.83
American Electric Power Company, Inc.	AEP	($69.91)	$0.00	$1.39	$2.62	$2.75	$2.85	$2.96	$3.14	$3.33	$3.53	$3.75	$3.97	$4.22	$4.45	$4.69	$4.95	$168.61
Avangrid, Inc.	AGR	($50.25)	$0.00	$0.77	$1.48	$1.61	$1.73	$1.84	$2.02	$2.20	$2.38	$2.55	$2.71	$2.85	$3.01	$3.17	$3.35	$114.11
Black Hills Corporation	BKH	($57.41)	$0.00	$1.06	$1.98	$2.21	$2.35	$2.51	$2.66	$2.83	$3.01	$3.21	$3.43	$3.66	$3.86	$4.07	$4.30	$146.47
CMS Energy Corporation	CMS	($45.84)	$0.00	$0.77	$1.46	$1.61	$1.72	$1.84	$1.99	$2.14	$2.30	$2.46	$2.63	$2.81	$2.96	$3.12	$3.29	$112.29
DTE Energy Company	DTE	($105.75)	$0.00	$2.02	$3.81	$4.12	$4.35	$4.59	$4.94	$5.30	$5.69	$6.10	$6.53	$6.98	$7.36	$7.77	$8.19	$279.17
Duke Energy Corporation	DUK	($80.74)	$0.00	$1.83	$3.44	$3.79	$4.02	$4.27	$4.34	$4.42	$4.50	$4.58	$4.66	$4.74	$5.00	$5.27	$5.55	$189.36
El Paso Electric	EE	($54.16)	$0.00	$0.79	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.21	$109.58
Hawaiian Electric Industries, Inc.	HE	($34.70)	$0.00	$0.63	$1.19	$1.24	$1.28	$1.33	$1.44	$1.56	$1.68	$1.81	$1.95	$2.09	$2.20	$2.32	$2.45	$83.38
IDACORP, Inc.	IDA	($89.13)	$0.00	$1.35	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.05	$4.30	$4.54	$4.78	$5.04	$171.97
NextEra Energy, Inc.	NEE	($156.22)	$0.00	$2.12	$4.07	$4.96	$5.59	$6.29	$6.86	$7.45	$8.04	$8.63	$9.21	$9.77	$10.31	$10.87	$11.46	$390.65
NorthWestern Corporation	NWE	($55.80)	$0.00	$1.20	$2.24	$2.35	$2.43	$2.50	$2.61	$2.72	$2.85	$2.99	$3.16	$3.34	$3.53	$3.72	$3.92	$133.70
OGE Energy Corp.	OGE	($33.47)	$0.00	$0.76	$1.43	$1.58	$1.67	$1.78	$1.85	$1.92	$2.00	$2.08	$2.17	$2.25	$2.38	$2.51	$2.64	$90.09
Otter Tail Corporation	OTTR	($44.07)	$0.00	$0.72	$1.38	$1.49	$1.57	$1.66	$1.82	$1.98	$2.15	$2.32	$2.49	$2.66	$2.81	$2.96	$3.12	$106.39
Pinnacle West Capital Corporation	PNW	($81.85)	$0.00	$1.59	$2.98	$3.18	$3.32	$3.47	$3.65	$3.85	$4.07	$4.30	$4.56	$4.84	$5.10	$5.38	$5.67	$193.44
PNM Resources, Inc.	PNM	($39.36)	$0.00	$0.59	$1.11	$1.17	$1.21	$1.26	$1.40	$1.55	$1.72	$1.89	$2.08	$2.29	$2.41	$2.54	$2.68	$91.38
Portland General Electric Company	POR	($43.26)	$0.00	$0.82	$1.54	$1.60	$1.64	$1.68	$1.76	$1.84	$1.93	$2.03	$2.15	$2.28	$2.41	$2.54	$2.68	$91.20
Southern Company	SO	($46.79)	$0.00	$1.45	$2.70	$2.73	$2.77	$2.81	$2.86	$2.92	$2.99	$3.07	$3.16	$3.26	$3.44	$3.62	$3.82	$130.24
WEC Energy Group, Inc.	WEC	($63.81)	$0.00	$1.19	$2.24	$2.37	$2.48	$2.59	$2.73	$2.89	$3.05	$3.23	$3.42	$3.62	$3.82	$4.02	$4.24	$144.67
Xcel Energy Inc.	XEL	($46.44)	$0.00	$0.82	$1.55	$1.70	$1.80	$1.91	$2.03	$2.16	$2.30	$2.44	$2.59	$2.75	$2.90	$3.06	$3.23	$109.96

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
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
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.39	6.00%	6.00%	5.00%	6.00%	5.45%	65.00%	64.00%	65.57%	$0.00	8.35%	20.54	3.77
Alliant Energy Corporation	LNT	$41.41	5.60%	5.85%	6.50%	6.50%	5.45%	64.00%	64.00%	65.57%	$0.00	9.92%	20.54	3.77
Ameren Corporation	AEE	$58.05	6.50%	6.30%	7.50%	7.50%	5.45%	60.00%	59.00%	65.57%	$0.00	10.32%	20.54	3.77
American Electric Power Company, Inc.	AEP	$69.91	5.70%	5.79%	4.50%	5.79%	5.45%	67.00%	63.00%	65.57%	$0.00	10.22%	20.54	3.77
Avangrid, Inc.	AGR	$50.25	9.10%	10.40%	13.00%	13.00%	5.45%	76.00%	66.00%	65.57%	$0.00	10.44%	20.54	3.77
Black Hills Corporation	BKH	$57.41	4.10%	3.86%	5.00%	5.00%	5.45%	55.00%	60.00%	65.57%	($0.00)	10.77%	20.54	3.77
CMS Energy Corporation	CMS	$45.84	6.40%	7.05%	7.00%	7.05%	5.45%	61.00%	61.00%	65.57%	$0.00	10.02%	20.54	3.77
DTE Energy Company	DTE	$105.75	5.30%	5.59%	7.00%	7.00%	5.45%	61.00%	60.00%	65.57%	$0.00	11.29%	20.54	3.77
Duke Energy Corporation	DUK	$80.74	4.70%	4.22%	5.50%	5.50%	5.45%	76.00%	80.00%	65.57%	$0.00	10.59%	20.54	3.77
El Paso Electric	EE	$54.16	5.10%	5.20%	4.50%	5.20%	5.45%	57.00%	61.00%	65.57%	$0.00	8.29%	20.54	3.77
Hawaiian Electric Industries, Inc.	HE	$34.70	7.10%	9.10%	3.50%	9.10%	5.45%	66.00%	59.00%	65.57%	$0.00	11.29%	20.54	3.77
IDACORP, Inc.	IDA	$89.13	3.90%	3.10%	3.50%	3.90%	5.45%	57.00%	63.00%	65.57%	$0.00	8.05%	20.54	3.77
NextEra Energy, Inc.	NEE	$156.22	8.60%	9.79%	8.50%	9.79%	5.45%	55.00%	63.00%	65.57%	$0.00	10.43%	20.54	3.77
NorthWestern Corporation	NWE	$55.80	3.00%	3.16%	3.50%	3.50%	5.45%	64.00%	64.00%	65.57%	$0.00	10.18%	20.54	3.77
OGE Energy Corp.	OGE	$33.47	6.00%	4.30%	6.00%	6.00%	5.45%	69.00%	71.00%	65.57%	$0.00	11.59%	20.54	3.77
Otter Tail Corporation	OTTR	$44.07	NA	9.00%	7.50%	9.00%	5.45%	66.00%	60.00%	65.57%	($0.00)	10.14%	20.54	3.77
Pinnacle West Capital Corporation	PNW	$81.85	4.50%	3.78%	5.00%	5.00%	5.45%	63.00%	63.00%	65.57%	$0.00	10.11%	20.54	3.77
PNM Resources, Inc.	PNM	$39.36	5.10%	4.30%	7.50%	7.50%	5.45%	53.00%	50.00%	65.57%	$0.00	10.28%	20.54	3.77
Portland General Electric Company	POR	$43.26	2.80%	2.65%	4.00%	4.00%	5.45%	64.00%	63.00%	65.57%	$0.00	9.27%	20.54	3.77
Southern Company	SO	$46.80	4.50%	2.72%	3.00%	4.50%	5.45%	80.00%	74.00%	65.57%	$0.00	12.73%	20.54	3.77
WEC Energy Group, Inc.	WEC	$63.81	4.10%	4.43%	7.00%	7.00%	5.45%	66.00%	64.00%	65.57%	$0.00	10.48%	20.54	3.77
Xcel Energy Inc.	XEL	$46.44	5.70%	5.89%	5.50%	5.89%	5.45%	62.00%	63.00%	65.57%	$0.00	9.79%	20.54	3.77
											Mean	10.21%	20.54	
											Max	12.73%		
											Min	8.05%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.32	$3.52	$3.73	$3.95	$4.19	$4.44	$4.69	$4.96	$5.24	$5.53	$5.83	$6.15	$6.49	$6.84	$7.21
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.64	$3.84	$4.05	$4.27	$4.51	$4.75
Ameren Corporation	AEE	$2.77	$2.98	$3.20	$3.44	$3.70	$3.98	$4.26	$4.55	$4.85	$5.14	$5.44	$5.74	$6.05	$6.38	$6.73	$7.09
American Electric Power Company, Inc.	AEP	$3.62	$3.83	$4.05	$4.29	$4.53	$4.80	$5.07	$5.36	$5.66	$5.98	$6.30	$6.65	$7.01	$7.39	$7.79	$8.22
Avangrid, Inc.	AGR	$1.67	$1.89	$2.13	$2.41	$2.72	$3.08	$3.44	$3.80	$4.15	$4.48	$4.78	$5.04	$5.31	$5.60	$5.91	$6.23
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.56	$5.87	$6.19	$6.52	$6.88	$7.25
CMS Energy Corporation	CMS	$2.17	$2.32	$2.49	$2.66	$2.85	$3.05	$3.26	$3.47	$3.69	$3.91	$4.13	$4.36	$4.59	$4.84	$5.11	$5.38
DTE Energy Company	DTE	$5.73	$6.13	$6.56	$7.02	$7.51	$8.04	$8.58	$9.13	$9.70	$10.28	$10.87	$11.46	$12.08	$12.74	$13.44	$14.17
Duke Energy Corporation	DUK	$4.22	$4.45	$4.70	$4.96	$5.23	$5.52	$5.82	$6.14	$6.47	$6.83	$7.20	$7.59	$8.00	$8.44	$8.90	$9.39
El Paso Electric	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.45	$3.64	$3.83	$4.04	$4.26	$4.49	$4.74	$5.00	$5.27
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.79	$1.95	$2.13	$2.32	$2.53	$2.75	$2.97	$3.18	$3.39	$3.60	$3.80	$4.00	$4.22	$4.45	$4.69
IDACORP, Inc.	IDA	$4.21	$4.37	$4.54	$4.72	$4.91	$5.10	$5.31	$5.54	$5.80	$6.09	$6.41	$6.75	$7.12	$7.51	$7.92	$8.35
NextEra Energy, Inc.	NEE	$6.50	$7.14	$7.83	$8.60	$9.44	$10.37	$11.31	$12.25	$13.19	$14.09	$14.96	$15.78	$16.64	$17.54	$18.50	$19.51
NorthWestern Corporation	NWE	$3.34	$3.46	$3.58	$3.70	$3.83	$3.97	$4.12	$4.29	$4.48	$4.70	$4.94	$5.21	$5.49	$5.79	$6.10	$6.44
OGE Energy Corp.	OGE	$1.92	$2.04	$2.16	$2.29	$2.42	$2.57	$2.72	$2.88	$3.04	$3.22	$3.39	$3.58	$3.77	$3.98	$4.20	$4.42
Otter Tail Corporation	OTTR	$1.86	$2.03	$2.21	$2.41	$2.63	$2.86	$3.10	$3.34	$3.59	$3.82	$4.06	$4.28	$4.51	$4.75	$5.01	$5.29
Pinnacle West Capital Corporation	PNW	$4.43	$4.65	$4.88	$5.13	$5.38	$5.65	$5.94	$6.25	$6.57	$6.92	$7.29	$7.69	$8.11	$8.55	$9.02	$9.51
PNM Resources, Inc.	PNM	$1.92	$2.06	$2.22	$2.39	$2.56	$2.76	$2.95	$3.16	$3.36	$3.57	$3.77	$3.98	$4.19	$4.42	$4.66	$4.92
Portland General Electric Company	POR	$2.29	$2.38	$2.48	$2.58	$2.68	$2.79	$2.90	$3.03	$3.18	$3.34	$3.51	$3.70	$3.90	$4.11	$4.34	$4.57
Southern Company	SO	$3.21	$3.35	$3.51	$3.66	$3.83	$4.00	$4.19	$4.39	$4.61	$4.84	$5.10	$5.38	$5.67	$5.98	$6.30	$6.65
WEC Energy Group, Inc.	WEC	$3.14	$3.36	$3.59	$3.85	$4.12	$4.40	$4.70	$5.01	$5.32	$5.63	$5.96	$6.28	$6.62	$6.98	$7.36	$7.76
Xcel Energy Inc.	XEL	$2.30	$2.44	$2.58	$2.73	$2.89	$3.06	$3.24	$3.43	$3.62	$3.82	$4.03	$4.25	$4.49	$4.73	$4.99	$5.26

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Projected Annual
Dividend Payout Ratio

Company	Ticker	[30] 2018	[31] 2019	[32] 2020	[33] 2021	[34] 2022	[35] 2023	[36] 2024	[37] 2025	[38] 2026	[39] 2027	[40] 2028	[41] 2029	[42] 2030	[43] 2031	[44] 2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.25%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.25%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.50%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.75%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.25%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.00%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.75%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.50%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.50%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.50%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.75%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.25%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.50%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual
Cash Flows

Company	Ticker	[45] 2018	[46] 2019	[47] 2020	[48] 2021	[49] 2022	[50] 2023	[51] 2024	[52] 2025	[53] 2026	[54] 2027	[55] 2028	[56] 2029	[57] 2030	[58] 2031	[59] 2032	[60] Terminal Value
ALLETE, Inc.	ALE	$2.16	$2.28	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$4.73	$148.16
Alliant Energy Corporation	LNT	$1.36	$1.44	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$3.11	$97.59
Ameren Corporation	AEE	$1.79	$1.91	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$4.65	$145.72
American Electric Power Company, Inc.	AEP	$2.57	$2.67	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$5.39	$168.83
Avangrid, Inc.	AGR	$1.43	$1.57	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$4.09	$128.00
Black Hills Corporation	BKH	$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$149.02
CMS Energy Corporation	CMS	$1.42	$1.52	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$3.53	$110.61
DTE Energy Company	DTE	$3.74	$3.99	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$9.29	$291.06
Duke Energy Corporation	DUK	$3.38	$3.62	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$6.15	$192.80
El Paso Electric	EE	$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$3.45	$108.23
Hawaiian Electric Industries, Inc.	HE	$1.18	$1.25	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$3.08	$96.42
IDACORP, Inc.	IDA	$2.49	$2.66	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$5.47	$171.53
NextEra Energy, Inc.	NEE	$3.92	$4.47	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$12.79	$400.75
NorthWestern Corporation	NWE	$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$4.22	$132.21
OGE Energy Corp.	OGE	$1.40	$1.50	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$2.90	$90.89
Otter Tail Corporation	OTTR	$1.34	$1.43	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$3.47	$108.60
Pinnacle West Capital Corporation	PNW	$2.93	$3.08	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$6.23	$195.31
PNM Resources, Inc.	PNM	$1.09	$1.16	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$3.22	$101.01
Portland General Electric Company	POR	$1.52	$1.58	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$3.00	$93.98
Southern Company	SO	$2.68	$2.75	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$4.36	$136.55
WEC Energy Group, Inc.	WEC	$2.22	$2.35	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$5.09	$159.50
Xcel Energy Inc.	XEL	$1.51	$1.61	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$3.45	$108.03

Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($74.39)	$0.00	$1.18	$2.22	$2.40	$2.54	$2.68	$2.85	$3.03	$3.22	$3.41	$3.61	$3.83	$4.03	$4.25	$4.48	$152.89
Alliant Energy Corporation	LNT	($41.41)	$0.00	$0.74	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.95	$100.70
Ameren Corporation	AEE	($58.05)	$0.00	$0.97	$1.85	$2.05	$2.19	$2.35	$2.56	$2.79	$3.02	$3.26	$3.51	$3.76	$3.97	$4.18	$4.41	$150.37
American Electric Power Company, Inc.	AEP	($69.91)	$0.00	$1.40	$2.64	$2.79	$2.90	$3.02	$3.22	$3.42	$3.64	$3.87	$4.11	$4.36	$4.60	$4.85	$5.11	$174.22
Avangrid, Inc.	AGR	($50.25)	$0.00	$0.78	$1.53	$1.71	$1.87	$2.03	$2.27	$2.50	$2.73	$2.94	$3.14	$3.30	$3.48	$3.67	$3.87	$132.09
Black Hills Corporation	BKH	($57.41)	$0.00	$1.06	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.36	$3.60	$3.85	$4.06	$4.28	$4.51	$153.78
CMS Energy Corporation	CMS	($45.84)	$0.00	$0.77	$1.47	$1.62	$1.74	$1.86	$2.01	$2.17	$2.33	$2.50	$2.68	$2.86	$3.01	$3.18	$3.35	$114.14
DTE Energy Company	DTE	($105.75)	$0.00	$2.04	$3.87	$4.25	$4.53	$4.82	$5.23	$5.65	$6.09	$6.55	$7.03	$7.51	$7.92	$8.36	$8.81	$300.35
Duke Energy Corporation	DUK	($80.74)	$0.00	$1.84	$3.48	$3.87	$4.13	$4.41	$4.51	$4.61	$4.71	$4.80	$4.89	$4.98	$5.25	$5.53	$5.84	$198.95
El Paso Electric	EE	($54.16)	$0.00	$0.79	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.79	$2.95	$3.11	$3.28	$111.68
Hawaiian Electric Industries, Inc.	HE	($34.70)	$0.00	$0.64	$1.23	$1.33	$1.41	$1.50	$1.65	$1.82	$1.98	$2.15	$2.32	$2.49	$2.62	$2.77	$2.92	$99.50
IDACORP, Inc.	IDA	($89.13)	$0.00	$1.36	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.92	$5.19	$177.01
NextEra Energy, Inc.	NEE	($156.22)	$0.00	$2.14	$4.12	$5.08	$5.76	$6.53	$7.17	$7.82	$8.48	$9.12	$9.75	$10.35	$10.91	$11.50	$12.13	$413.55
NorthWestern Corporation	NWE	($55.80)	$0.00	$1.21	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.05	$3.22	$3.41	$3.60	$3.80	$4.00	$136.43
OGE Energy Corp.	OGE	($33.47)	$0.00	$0.77	$1.45	$1.60	$1.71	$1.82	$1.91	$1.99	$2.08	$2.17	$2.26	$2.35	$2.47	$2.61	$2.75	$93.79
Otter Tail Corporation	OTTR	($44.07)	$0.00	$0.73	$1.40	$1.52	$1.61	$1.72	$1.89	$2.07	$2.25	$2.44	$2.62	$2.80	$2.96	$3.12	$3.29	$112.07
Pinnacle West Capital Corporation	PNW	($81.85)	$0.00	$1.60	$3.00	$3.23	$3.39	$3.56	$3.77	$3.99	$4.23	$4.48	$4.75	$5.04	$5.32	$5.61	$5.91	$201.55
PNM Resources, Inc.	PNM	($39.36)	$0.00	$0.60	$1.13	$1.23	$1.30	$1.38	$1.55	$1.74	$1.94	$2.15	$2.38	$2.61	$2.75	$2.90	$3.06	$104.23
Portland General Electric Company	POR	($43.26)	$0.00	$0.83	$1.55	$1.64	$1.69	$1.76	$1.84	$1.94	$2.04	$2.16	$2.29	$2.43	$2.56	$2.70	$2.84	$96.98
Southern Company	SO	($46.79)	$0.00	$1.46	$2.74	$2.82	$2.89	$2.96	$3.04	$3.12	$3.21	$3.31	$3.41	$3.53	$3.72	$3.92	$4.13	$140.91
WEC Energy Group, Inc.	WEC	($63.81)	$0.00	$1.21	$2.30	$2.50	$2.65	$2.82	$3.02	$3.23	$3.44	$3.66	$3.89	$4.12	$4.34	$4.58	$4.83	$164.59
Xcel Energy Inc.	XEL	($46.44)	$0.00	$0.82	$1.55	$1.71	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.63	$2.79	$2.94	$3.10	$3.27	$111.48

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
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	Value Line	Low Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.39	6.00%	6.00%	5.00%	5.00%	5.45%	65.00%	64.00%	65.57%	$0.00	7.74%	20.54	3.77
Alliant Energy Corporation	LNT	$41.41	5.60%	5.85%	6.50%	5.60%	5.45%	64.00%	64.00%	65.57%	$0.00	9.36%	20.54	3.77
Ameren Corporation	AEE	$58.05	6.50%	6.30%	7.50%	6.30%	5.45%	60.00%	59.00%	65.57%	$0.00	9.58%	20.54	3.77
American Electric Power Company, Inc.	AEP	$69.91	5.70%	5.79%	4.50%	4.50%	5.45%	67.00%	63.00%	65.57%	$0.00	9.41%	20.54	3.77
Avangrid, Inc.	AGR	$50.25	9.10%	10.40%	13.00%	9.10%	5.45%	76.00%	66.00%	65.57%	$0.00	8.13%	20.54	3.77
Black Hills Corporation	BKH	$57.41	4.10%	3.86%	5.00%	3.86%	5.45%	55.00%	60.00%	65.57%	($0.00)	10.05%	20.54	3.77
CMS Energy Corporation	CMS	$45.84	6.40%	7.05%	7.00%	6.40%	5.45%	61.00%	61.00%	65.57%	$0.00	9.62%	20.54	3.77
DTE Energy Company	DTE	$105.75	5.30%	5.59%	7.00%	5.30%	5.45%	61.00%	60.00%	65.57%	$0.00	10.22%	20.54	3.77
Duke Energy Corporation	DUK	$80.74	4.70%	4.22%	5.50%	4.22%	5.45%	76.00%	80.00%	65.57%	$0.00	9.77%	20.54	3.77
El Paso Electric	EE	$54.16	5.10%	5.20%	4.50%	4.50%	5.45%	57.00%	61.00%	65.57%	$0.00	7.87%	20.54	3.77
Hawaiian Electric Industries, Inc.	HE	$34.70	7.10%	9.10%	3.50%	3.50%	5.45%	66.00%	59.00%	65.57%	$0.00	7.82%	20.54	3.77
IDACORP, Inc.	IDA	$89.13	3.90%	3.10%	3.50%	3.10%	5.45%	57.00%	63.00%	65.57%	$0.00	7.55%	20.54	3.77
NextEra Energy, Inc.	NEE	$156.22	8.60%	9.79%	8.50%	8.50%	5.45%	55.00%	63.00%	65.57%	$0.00	9.65%	20.54	3.77
NorthWestern Corporation	NWE	$55.80	3.00%	3.16%	3.50%	3.00%	5.45%	64.00%	64.00%	65.57%	$0.00	9.86%	20.54	3.77
OGE Energy Corp.	OGE	$33.47	6.00%	4.30%	6.00%	4.30%	5.45%	69.00%	71.00%	65.57%	$0.00	10.49%	20.54	3.77
Otter Tail Corporation	OTTR	$44.07	NA	9.00%	7.50%	7.50%	5.45%	66.00%	60.00%	65.57%	($0.00)	9.23%	20.54	3.77
Pinnacle West Capital Corporation	PNW	$81.85	4.50%	3.78%	5.00%	3.78%	5.45%	63.00%	63.00%	65.57%	$0.00	9.34%	20.54	3.77
PNM Resources, Inc.	PNM	$39.36	5.10%	4.30%	7.50%	4.30%	5.45%	53.00%	50.00%	65.57%	$0.00	8.32%	20.54	3.77
Portland General Electric Company	POR	$43.26	2.80%	2.65%	4.00%	2.65%	5.45%	64.00%	63.00%	65.57%	$0.00	8.42%	20.54	3.77
Southern Company	SO	$46.80	4.50%	2.72%	3.00%	2.72%	5.45%	80.00%	74.00%	65.57%	$0.00	11.53%	20.54	3.77
WEC Energy Group, Inc.	WEC	$63.81	4.10%	4.43%	7.00%	4.10%	5.45%	66.00%	64.00%	65.57%	$0.00	8.67%	20.54	3.77
Xcel Energy Inc.	XEL	$46.44	5.70%	5.89%	5.50%	5.50%	5.45%	62.00%	63.00%	65.57%	$0.00	9.55%	20.54	3.77
											Mean	9.19%	20.54	
											Max	11.53%		
											Min	7.55%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.29	$3.45	$3.62	$3.80	$3.99	$4.20	$4.41	$4.64	$4.89	$5.15	$5.43	$5.73	$6.04	$6.37	$6.72
Alliant Energy Corporation	LNT	$1.99	$2.10	$2.22	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.24	$3.42	$3.61	$3.80	$4.01	$4.23	$4.46
Ameren Corporation	AEE	$2.77	$2.94	$3.13	$3.33	$3.54	$3.76	$3.99	$4.23	$4.48	$4.74	$5.00	$5.27	$5.56	$5.86	$6.18	$6.52
American Electric Power Company, Inc.	AEP	$3.62	$3.78	$3.95	$4.13	$4.32	$4.51	$4.72	$4.95	$5.19	$5.46	$5.75	$6.06	$6.39	$6.74	$7.11	$7.50
Avangrid, Inc.	AGR	$1.67	$1.82	$1.99	$2.17	$2.37	$2.58	$2.80	$3.02	$3.24	$3.46	$3.67	$3.87	$4.08	$4.30	$4.53	$4.78
Black Hills Corporation	BKH	$3.38	$3.51	$3.65	$3.79	$3.93	$4.08	$4.25	$4.44	$4.65	$4.87	$5.13	$5.41	$5.70	$6.01	$6.34	$6.68
CMS Energy Corporation	CMS	$2.17	$2.31	$2.46	$2.61	$2.78	$2.96	$3.14	$3.34	$3.53	$3.74	$3.95	$4.16	$4.39	$4.63	$4.88	$5.14
DTE Energy Company	DTE	$5.73	$6.03	$6.35	$6.69	$7.04	$7.42	$7.81	$8.23	$8.67	$9.14	$9.64	$10.16	$10.72	$11.30	$11.91	$12.56
Duke Energy Corporation	DUK	$4.22	$4.40	$4.58	$4.78	$4.98	$5.19	$5.42	$5.67	$5.94	$6.24	$6.57	$6.93	$7.30	$7.70	$8.12	$8.56
El Paso Electric	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.84	$4.05	$4.27	$4.51	$4.75	$5.01
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.70	$1.76	$1.82	$1.88	$1.95	$2.02	$2.11	$2.20	$2.31	$2.42	$2.56	$2.70	$2.84	$3.00	$3.16
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.75	$6.05	$6.37	$6.72	$7.09	$7.47	$7.88
NextEra Energy, Inc.	NEE	$6.50	$7.05	$7.65	$8.30	$9.01	$9.77	$10.55	$11.34	$12.14	$12.92	$13.69	$14.43	$15.22	$16.05	$16.92	$17.85
NorthWestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.87	$4.00	$4.16	$4.33	$4.53	$4.76	$5.02	$5.29	$5.58	$5.89	$6.21
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Otter Tail Corporation	OTTR	$1.86	$2.00	$2.15	$2.31	$2.48	$2.67	$2.86	$3.06	$3.25	$3.45	$3.65	$3.85	$4.06	$4.28	$4.52	$4.76
Pinnacle West Capital Corporation	PNW	$4.43	$4.60	$4.77	$4.95	$5.14	$5.33	$5.55	$5.79	$6.06	$6.35	$6.68	$7.05	$7.43	$7.83	$8.26	$8.71
PNM Resources, Inc.	PNM	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.48	$2.59	$2.72	$2.86	$3.01	$3.17	$3.34	$3.52	$3.72	$3.92
Portland General Electric Company	POR	$2.29	$2.35	$2.41	$2.48	$2.54	$2.61	$2.69	$2.79	$2.90	$3.03	$3.18	$3.36	$3.54	$3.73	$3.93	$4.15
Southern Company	SO	$3.21	$3.30	$3.39	$3.48	$3.57	$3.67	$3.79	$3.92	$4.09	$4.27	$4.48	$4.73	$4.99	$5.26	$5.54	$5.85
WEC Energy Group, Inc.	WEC	$3.14	$3.27	$3.40	$3.54	$3.69	$3.84	$4.00	$4.19	$4.39	$4.61	$4.85	$5.11	$5.39	$5.68	$5.99	$6.32
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$3.34	$3.53	$3.72	$3.92	$4.14	$4.36	$4.60	$4.85	$5.12

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Projected Annual
Dividend Payout Ratio

Company	Ticker	[30] 2018	[31] 2019	[32] 2020	[33] 2021	[34] 2022	[35] 2023	[36] 2024	[37] 2025	[38] 2026	[39] 2027	[40] 2028	[41] 2029	[42] 2030	[43] 2031	[44] 2032
ALLETE, Inc.	ALE	65.00%	64.75%	64.50%	64.25%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	60.00%	59.75%	59.50%	59.25%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	67.00%	66.00%	65.00%	64.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	76.00%	73.50%	71.00%	68.50%	66.00%	65.93%	65.86%	65.79%	65.71%	65.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	55.00%	56.25%	57.50%	58.75%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.75%	60.50%	60.25%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Duke Energy Corporation	DUK	76.00%	77.00%	78.00%	79.00%	80.00%	77.60%	75.19%	72.79%	70.38%	67.98%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric	EE	57.00%	58.00%	59.00%	60.00%	61.00%	61.76%	62.52%	63.29%	64.05%	64.81%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	66.00%	64.25%	62.50%	60.75%	59.00%	60.10%	61.19%	62.29%	63.38%	64.48%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.50%	60.00%	61.50%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	55.00%	57.00%	59.00%	61.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	64.00%	64.00%	64.00%	64.00%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	69.00%	69.50%	70.00%	70.50%	71.00%	70.10%	69.19%	68.29%	67.38%	66.48%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	66.00%	64.50%	63.00%	61.50%	60.00%	60.93%	61.86%	62.79%	63.71%	64.64%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	53.00%	52.25%	51.50%	50.75%	50.00%	52.60%	55.19%	57.79%	60.38%	62.98%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	64.00%	63.75%	63.50%	63.25%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	80.00%	78.50%	77.00%	75.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	66.00%	65.50%	65.00%	64.50%	64.00%	64.26%	64.52%	64.79%	65.05%	65.31%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.43%	63.86%	64.29%	64.71%	65.14%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual
Cash Flows

Company	Ticker	[45] 2018	[46] 2019	[47] 2020	[48] 2021	[49] 2022	[50] 2023	[51] 2024	[52] 2025	[53] 2026	[54] 2027	[55] 2028	[56] 2029	[57] 2030	[58] 2031	[59] 2032	[60] Terminal Value
ALLETE, Inc.	ALE	$2.14	$2.23	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$4.40	$138.00
Alliant Energy Corporation	LNT	$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$2.92	$91.57
Ameren Corporation	AEE	$1.77	$1.87	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$4.27	$133.93
American Electric Power Company, Inc.	AEP	$2.53	$2.61	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$4.92	$153.99
Avangrid, Inc.	AGR	$1.38	$1.46	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$3.13	$98.19
Black Hills Corporation	BKH	$1.93	$2.05	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$4.38	$137.32
CMS Energy Corporation	CMS	$1.41	$1.50	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$3.37	$105.67
DTE Energy Company	DTE	$3.68	$3.86	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$8.24	$258.09
Duke Energy Corporation	DUK	$3.34	$3.53	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$5.62	$175.94
El Paso Electric	EE	$1.44	$1.53	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$3.29	$102.94
Hawaiian Electric Industries, Inc.	HE	$1.12	$1.13	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$2.07	$64.92
IDACORP, Inc.	IDA	$2.47	$2.62	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$5.17	$161.89
NextEra Energy, Inc.	NEE	$3.88	$4.36	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$11.70	$366.61
NorthWestern Corporation	NWE	$2.20	$2.27	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$4.07	$127.51
OGE Energy Corp.	OGE	$1.38	$1.45	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$2.57	$80.51
Otter Tail Corporation	OTTR	$1.32	$1.39	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$3.12	$97.85
Pinnacle West Capital Corporation	PNW	$2.90	$3.01	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$5.71	$178.94
PNM Resources, Inc.	PNM	$1.06	$1.09	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$2.57	$80.51
Portland General Electric Company	POR	$1.50	$1.54	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$2.72	$85.23
Southern Company	SO	$2.64	$2.66	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$3.83	$120.08
WEC Energy Group, Inc.	WEC	$2.16	$2.23	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$4.14	$129.79
Xcel Energy Inc.	XEL	$1.50	$1.59	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$3.35	$105.08

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Projected Annual Data
Investor Cash Flows

Company	Ticker	[61] Initial Outflow	[62] 6/15/18	[63] 12/31/18	[64] 6/30/19	[65] 6/30/20	[66] 6/30/21	[67] 6/30/22	[68] 6/30/23	[69] 6/30/24	[70] 6/30/25	[71] 6/30/26	[72] 6/30/27	[73] 6/30/28	[74] 6/30/29	[75] 6/30/30	[76] 6/30/31	[77] 6/30/32
ALLETE, Inc.	ALE	($74.39)	$0.00	$1.16	$2.19	$2.34	$2.44	$2.56	$2.70	$2.85	$3.01	$3.18	$3.37	$3.56	$3.76	$3.96	$4.18	$142.40
Alliant Energy Corporation	LNT	($41.41)	$0.00	$0.73	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.36	$2.49	$2.63	$2.77	$94.49
Ameren Corporation	AEE	($58.05)	$0.00	$0.96	$1.82	$1.98	$2.10	$2.22	$2.40	$2.59	$2.79	$3.00	$3.22	$3.46	$3.65	$3.84	$4.05	$138.21
American Electric Power Company, Inc.	AEP	($69.91)	$0.00	$1.38	$2.59	$2.69	$2.76	$2.84	$2.99	$3.16	$3.34	$3.53	$3.75	$3.98	$4.19	$4.42	$4.66	$158.91
Avangrid, Inc.	AGR	($50.25)	$0.00	$0.75	$1.45	$1.54	$1.62	$1.70	$1.85	$1.99	$2.13	$2.27	$2.41	$2.53	$2.67	$2.82	$2.97	$101.32
Black Hills Corporation	BKH	($57.41)	$0.00	$1.05	$1.97	$2.18	$2.31	$2.45	$2.59	$2.75	$2.92	$3.11	$3.31	$3.55	$3.74	$3.94	$4.16	$141.70
CMS Energy Corporation	CMS	($45.84)	$0.00	$0.77	$1.45	$1.59	$1.70	$1.81	$1.94	$2.09	$2.24	$2.39	$2.56	$2.73	$2.88	$3.03	$3.20	$109.04
DTE Energy Company	DTE	($105.75)	$0.00	$2.01	$3.78	$4.05	$4.24	$4.45	$4.76	$5.09	$5.45	$5.82	$6.23	$6.66	$7.03	$7.41	$7.81	$266.33
Duke Energy Corporation	DUK	($80.74)	$0.00	$1.82	$3.41	$3.73	$3.93	$4.15	$4.20	$4.26	$4.33	$4.39	$4.47	$4.54	$4.79	$5.05	$5.33	$181.56
El Paso Electric	EE	($54.16)	$0.00	$0.79	$1.47	$1.63	$1.73	$1.84	$1.95	$2.07	$2.20	$2.34	$2.49	$2.66	$2.80	$2.96	$3.12	$106.23
Hawaiian Electric Industries, Inc.	HE	($34.70)	$0.00	$0.61	$1.14	$1.14	$1.14	$1.15	$1.22	$1.29	$1.37	$1.46	$1.56	$1.68	$1.77	$1.86	$1.97	$66.99
IDACORP, Inc.	IDA	($89.13)	$0.00	$1.35	$2.51	$2.77	$2.93	$3.09	$3.22	$3.37	$3.53	$3.72	$3.94	$4.18	$4.41	$4.65	$4.90	$167.06
NextEra Energy, Inc.	NEE	($156.22)	$0.00	$2.11	$4.04	$4.90	$5.49	$6.16	$6.69	$7.24	$7.80	$8.36	$8.92	$9.47	$9.98	$10.52	$11.10	$378.32
NorthWestern Corporation	NWE	($55.80)	$0.00	$1.20	$2.23	$2.34	$2.41	$2.48	$2.57	$2.68	$2.81	$2.95	$3.11	$3.29	$3.47	$3.66	$3.86	$131.58
OGE Energy Corp.	OGE	($33.47)	$0.00	$0.75	$1.41	$1.52	$1.60	$1.68	$1.74	$1.79	$1.86	$1.92	$2.00	$2.08	$2.19	$2.31	$2.44	$83.08
Otter Tail Corporation	OTTR	($44.07)	$0.00	$0.72	$1.37	$1.46	$1.53	$1.60	$1.74	$1.89	$2.04	$2.20	$2.36	$2.53	$2.66	$2.81	$2.96	$100.97
Pinnacle West Capital Corporation	PNW	($81.85)	$0.00	$1.58	$2.95	$3.12	$3.24	$3.36	$3.52	$3.70	$3.89	$4.11	$4.35	$4.62	$4.87	$5.14	$5.42	$184.65
PNM Resources, Inc.	PNM	($39.36)	$0.00	$0.58	$1.08	$1.12	$1.15	$1.18	$1.30	$1.43	$1.57	$1.72	$1.89	$2.08	$2.19	$2.31	$2.44	$83.08
Portland General Electric Company	POR	($43.26)	$0.00	$0.82	$1.52	$1.57	$1.61	$1.64	$1.71	$1.78	$1.86	$1.96	$2.07	$2.20	$2.32	$2.45	$2.58	$87.95
Southern Company	SO	($46.79)	$0.00	$1.44	$2.67	$2.68	$2.70	$2.72	$2.75	$2.79	$2.85	$2.92	$3.00	$3.10	$3.27	$3.45	$3.63	$123.91
WEC Energy Group, Inc.	WEC	($63.81)	$0.00	$1.18	$2.20	$2.30	$2.38	$2.46	$2.57	$2.70	$2.84	$3.00	$3.17	$3.35	$3.53	$3.73	$3.93	$133.93
Xcel Energy Inc.	XEL	($46.44)	$0.00	$0.82	$1.55	$1.69	$1.79	$1.89	$2.01	$2.14	$2.27	$2.41	$2.56	$2.71	$2.86	$3.02	$3.18	$108.43

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Multi-Stage DCF Notes:

[1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of June 15, 2018
[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, Blue Chip Financial Forecast
[7] Source: Value Line
[8] Source: Value Line
[9] Source: Bloomberg Professional
[10] Equals Column [1] + Column [61]
[11] Equals result of Excel Solver function; goal: Column [10] equals $0.00
[12] Equals Column [60] / Column [29] or Proxy Group 30-day average PE ratio. Source: S&P Global Market Intelligence
[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 [5] + (((Column [6] − Column [5]) / (2028 − 2023 + 1)) x (2023 − 2022)))) x Column [19]
[21] Equals (1 + (Column [5] + (((Column [6] − Column [5]) / (2028 − 2023 + 1)) x (2024 − 2022)))) x Column [20]
[22] Equals (1 + (Column [5] + (((Column [6] − Column [5]) / (2028 − 2023 + 1)) x (2025 − 2022)))) x Column [21]
[23] Equals (1 + (Column [5] + (((Column [6] − Column [5]) / (2028 − 2023 + 1)) x (2026 − 2022)))) x Column [22]
[24] Equals (1 + (Column [5] + (((Column [6] − Column [5]) / (2028 − 2023 + 1)) x (2027 − 2022)))) 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 [7]
[31] Equals Column [30] + ((Column [34] − Column [30]) / 4)
[32] Equals Column [31] + ((Column [34] − Column [30]) / 4)
[33] Equals Column [32] + ((Column [34] − Column [30]) / 4)
[34] Equals Column [8]
[35] Equals Column [34] + ((Column [40] − Column [34]) / 6)
[36] Equals Column [35] + ((Column [40] − Column [34]) / 6)
[37] Equals Column [36] + ((Column [40] − Column [34]) / 6)
[38] Equals Column [37] + ((Column [40] − Column [34]) / 6)
[39] Equals Column [38] + ((Column [40] − Column [34]) / 6)
[40] Equals Column [9]
[41] Equals Column [9]
[42] Equals Column [9]
[43] Equals Column [9]
[44] Equals Column [9]
[45] Equals Column [15] x Column [30]
[46] Equals Column [16] x Column [31]
[47] Equals Column [17] x Column [32]
[48] Equals Column [18] x Column [33]
[49] Equals Column [19] x Column [34]
[50] Equals Column [20] x Column [35]
[51] Equals Column [21] x Column [36]
[52] Equals Column [22] x Column [37]
[53] Equals Column [23] x Column [38]
[54] Equals Column [24] x Column [39]
[55] Equals Column [25] x Column [40]
[56] Equals Column [26] x Column [41]
[57] Equals Column [27] x Column [42]
[58] Equals Column [28] x Column [43]
[59] Equals Column [29] x Column [44]
[60] Equals (Column [60] x (1 + Column [6])) / (Column [11] − Column [6]), or Column [12] x Column [29]
[61] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [63] through Column [77]
[62] Equals $0.00
[63] Equals Column [45] x (12/31/2018 - 6/15/2018) / 365
[64] Equals Column [45] x (1 + (0.5 x Column [5]))
[65] Equals Column [47]
[66] Equals Column [48]
[67] Equals Column [49]
[68] Equals Column [50]
[69] Equals Column [51]
[70] Equals Column [52]
[71] Equals Column [53]
[72] Equals Column [54]
[73] Equals Column [55]
[74] Equals Column [56]
[75] Equals Column [57]
[76] Equals Column [58]
[77] Equals Column [59] + [60]

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

[1] S&P 500 Est. Required Market Return	[2] Current 30-Year Treasury (30-day average)	[3] Implied Market Risk Premium
15.73%	3.11%	12.62%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	$ 21,158.43	0.08%	0.91%	-0.45%	0.46%	0.0004%
AMERICAN AIRLINES GROUP INC	AAL	$ 20,022.89	0.08%	0.99%	17.10%	18.18%	0.0146%
ADVANCE AUTO PARTS INC	AAP	$ 10,154.13	0.04%	0.18%	16.64%	16.84%	0.0069%
APPLE INC	AAPL	$ 928,174.66	3.73%	1.45%	11.21%	12.74%	0.4746%
ABBVIE INC	ABBV	$ 158,005.59	0.63%	3.86%	13.63%	17.75%	0.1126%
AMERISOURCEBERGEN CORP	ABC	$ 20,848.42	0.08%	1.59%	9.92%	11.59%	0.0097%
ABIOMED INC	ABMD	$ 19,729.48	0.08%	0.00%	37.00%	37.00%	0.0293%
ABBOTT LABORATORIES	ABT	$ 110,293.04	0.44%	1.78%	12.67%	14.56%	0.0645%
ACCENTURE PLC-CL A	ACN	$ 105,289.11	0.42%	1.63%	11.10%	12.82%	0.0542%
ADOBE SYSTEMS INC	ADBE	$ 124,013.88	0.50%	0.00%	18.66%	18.66%	0.0929%
ANALOG DEVICES INC	ADI	$ 37,646.08	0.15%	1.86%	9.60%	11.55%	0.0175%
ARCHER-DANIELS-MIDLAND CO	ADM	$ 25,739.25	N/A	2.83%	N/A	N/A	N/A
AUTOMATIC DATA PROCESSING	ADP	$ 61,483.70	0.25%	1.77%	13.50%	15.39%	0.0380%
ALLIANCE DATA SYSTEMS CORP	ADS	$ 12,871.02	0.05%	0.95%	12.40%	13.41%	0.0069%
AUTODESK INC	ADSK	$ 30,239.83	0.12%	0.00%	34.00%	34.00%	0.0413%
AMEREN CORPORATION	AEE	$ 13,820.92	0.06%	3.28%	8.97%	12.40%	0.0069%
AMERICAN ELECTRIC POWER	AEP	$ 32,038.65	0.13%	3.86%	5.64%	9.61%	0.0124%
AES CORP	AES	$ 8,644.49	0.03%	4.00%	8.23%	12.39%	0.0043%
AETNA INC	AET	$ 61,985.45	0.25%	1.06%	11.08%	12.19%	0.0303%
AFLAC INC	AFL	$ 35,418.14	0.14%	2.28%	6.52%	8.87%	0.0126%
ALLERGAN PLC	AGN	$ 58,719.04	0.24%	1.70%	9.24%	11.01%	0.0260%
AMERICAN INTERNATIONAL GROUP	AIG	$ 49,561.10	0.20%	2.37%	11.00%	13.50%	0.0269%
APARTMENT INVT & MGMT CO -A	AIV	$ 6,492.27	0.03%	3.69%	6.02%	9.82%	0.0026%
ASSURANT INC	AIZ	$ 6,024.46	N/A	2.38%	N/A	N/A	N/A
ARTHUR J GALLAGHER & CO	AJG	$ 11,995.39	0.05%	2.47%	10.32%	12.91%	0.0062%
AKAMAI TECHNOLOGIES INC	AKAM	$ 13,986.57	0.06%	0.00%	11.71%	11.71%	0.0066%
ALBEMARLE CORP	ALB	$ 10,337.53	0.04%	1.43%	12.90%	14.43%	0.0060%
ALIGN TECHNOLOGY INC	ALGN	$ 29,067.07	0.12%	0.00%	31.45%	31.45%	0.0367%
ALASKA AIR GROUP INC	ALK	$ 7,769.93	0.03%	2.03%	15.52%	17.71%	0.0055%
ALLSTATE CORP	ALL	$ 32,973.17	0.13%	1.88%	9.00%	10.96%	0.0145%
ALLEGION PLC	ALLE	$ 7,793.32	0.03%	0.93%	12.06%	13.04%	0.0041%
ALEXION PHARMACEUTICALS INC	ALXN	$ 27,038.28	0.11%	0.00%	18.87%	18.87%	0.0205%
APPLIED MATERIALS INC	AMAT	$ 49,706.84	0.20%	1.21%	14.46%	15.76%	0.0314%
ADVANCED MICRO DEVICES	AMD	$ 15,839.08	0.06%	0.00%	23.60%	23.60%	0.0150%
AMETEK INC	AME	$ 17,389.27	0.07%	0.75%	10.58%	11.36%	0.0079%
AFFILIATED MANAGERS GROUP	AMG	$ 8,462.84	0.03%	0.73%	12.85%	13.63%	0.0046%
AMGEN INC	AMGN	$ 122,422.23	0.49%	2.83%	5.11%	8.01%	0.0394%
AMERIPRISE FINANCIAL INC	AMP	$ 21,305.80	N/A	2.40%	N/A	N/A	N/A
AMERICAN TOWER CORP	AMT	$ 61,196.40	0.25%	2.25%	15.02%	17.44%	0.0428%
AMAZON.COM INC	AMZN	$ 832,634.81	3.34%	0.00%	41.51%	41.51%	1.3876%
ANDEAVOR	ANDV	$ 20,552.66	0.08%	1.80%	7.95%	9.82%	0.0081%
ANSYS INC	ANSS	$ 14,936.52	0.06%	0.00%	13.17%	13.17%	0.0079%
ANTHEM INC	ANTM	$ 62,564.65	0.25%	1.24%	10.09%	11.39%	0.0286%
AON PLC	AON	$ 34,116.83	0.14%	1.11%	11.42%	12.60%	0.0173%
SMITH (A.O.) CORP	AOS	$ 10,761.42	0.04%	1.15%	11.50%	12.71%	0.0055%
APACHE CORP	APA	$ 15,901.44	0.06%	2.40%	-17.09%	-14.89%	-0.0095%
ANADARKO PETROLEUM CORP	APC	$ 35,278.39	0.14%	1.07%	19.23%	20.40%	0.0289%
AIR PRODUCTS & CHEMICALS INC	APD	$ 35,987.21	0.14%	2.59%	11.42%	14.15%	0.0204%
AMPHENOL CORP-CL A	APH	$ 27,527.12	0.11%	0.93%	10.86%	11.84%	0.0131%
APTIV PLC	APTV	$ 27,199.73	0.11%	0.86%	10.59%	11.50%	0.0126%
ALEXANDRIA REAL ESTATE EQUIT	ARE	$ 13,165.30	0.05%	2.86%	6.78%	9.73%	0.0051%
ARCONIC INC	ARNC	$ 8,464.05	0.03%	1.39%	15.95%	17.45%	0.0059%
ACTIVISION BLIZZARD INC	ATVI	$ 58,924.87	0.24%	0.44%	15.55%	16.02%	0.0379%
AVALONBAY COMMUNITIES INC	AVB	$ 23,318.59	0.09%	3.47%	6.41%	9.98%	0.0093%
BROADCOM INC	AVGO	$ 116,653.12	0.47%	2.59%	13.01%	15.77%	0.0739%
AVERY DENNISON CORP	AVY	$ 9,325.99	0.04%	1.74%	9.83%	11.66%	0.0044%
AMERICAN WATER WORKS CO INC	AWK	$ 14,430.78	0.06%	2.22%	8.00%	10.31%	0.0060%
AMERICAN EXPRESS CO	AXP	$ 84,762.88	0.34%	1.48%	17.30%	18.90%	0.0643%
ACUITY BRANDS INC	AYI	$ 5,010.54	0.02%	0.43%	10.00%	10.45%	0.0021%
AUTOZONE INC	AZO	$ 18,330.00	0.07%	0.00%	13.58%	13.58%	0.0100%
BOEING CO/THE	BA	$ 208,494.08	0.84%	1.95%	15.33%	17.43%	0.1459%
BANK OF AMERICA CORP	BAC	$ 296,880.30	1.19%	2.06%	13.40%	15.59%	0.1858%
BAXTER INTERNATIONAL INC	BAX	$ 40,453.85	0.16%	0.96%	13.06%	14.09%	0.0229%
BB&T CORP	BBT	$ 40,796.62	0.16%	3.02%	14.32%	17.56%	0.0288%
BEST BUY CO INC	BBY	$ 20,901.31	0.08%	2.41%	11.22%	13.76%	0.0115%
BECTON DICKINSON AND CO	BDX	$ 62,033.58	0.25%	1.32%	13.91%	15.33%	0.0382%
FRANKLIN RESOURCES INC	BEN	$ 18,345.47	0.07%	10.06%	10.00%	20.56%	0.0151%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
BROWN-FORMAN CORP-CLASS B	BF/B	$ 25,338.31	0.10%	1.26%	13.62%	14.97%	0.0152%
BRIGHTHOUSE FINANCIAL INC	BHF	$ 5,395.78	0.02%	0.00%	8.00%	8.00%	0.0017%
BAKER HUGHES A GE CO	BHGE	$ 36,246.24	0.15%	2.01%	66.45%	69.13%	0.1006%
BIOGEN INC	BIIB	$ 64,363.75	0.26%	0.00%	5.41%	5.41%	0.0140%
BANK OF NEW YORK MELLON CORP	BK	$ 57,537.79	0.23%	1.85%	8.10%	10.02%	0.0231%
BOOKING HOLDINGS INC	BKNG	$ 103,164.28	0.41%	0.00%	14.12%	14.12%	0.0585%
BLACKROCK INC	BLK	$ 84,519.21	0.34%	2.22%	11.38%	13.72%	0.0466%
BALL CORP	BLL	$ 12,799.67	0.05%	1.02%	5.50%	6.55%	0.0034%
BRISTOL-MYERS SQUIBB CO	BMY	$ 89,572.71	0.36%	2.93%	9.23%	12.29%	0.0442%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	$ 473,175.06	1.90%	0.00%	6.70%	6.70%	0.1273%
BOSTON SCIENTIFIC CORP	BSX	$ 45,478.55	0.18%	0.00%	21.34%	21.34%	0.0390%
BORGWARNER INC	BWA	$ 10,133.21	0.04%	1.39%	4.83%	6.25%	0.0025%
BOSTON PROPERTIES INC	BXP	$ 18,536.02	0.07%	2.70%	5.91%	8.69%	0.0065%
CITIGROUP INC	C	$ 169,162.59	0.68%	2.21%	13.86%	16.22%	0.1102%
CA INC	CA	$ 15,527.32	0.06%	2.76%	3.08%	5.87%	0.0037%
CONAGRA BRANDS INC	CAG	$ 15,150.51	0.06%	2.19%	10.35%	12.65%	0.0077%
CARDINAL HEALTH INC	CAH	$ 17,010.01	0.07%	3.38%	9.96%	13.51%	0.0092%
CATERPILLAR INC	CAT	$ 89,704.42	0.36%	2.13%	25.67%	28.07%	0.1011%
CHUBB LTD	CB	$ 60,964.18	0.24%	2.23%	10.00%	12.35%	0.0302%
CBOE GLOBAL MARKETS INC	CBOE	$ 11,566.25	0.05%	1.12%	18.64%	19.86%	0.0092%
CBRE GROUP INC - A	CBRE	$ 16,524.94	0.07%	0.00%	10.75%	10.75%	0.0071%
CBS CORP-CLASS B NON VOTING	CBS	$ 21,294.67	0.09%	1.38%	15.32%	16.80%	0.0144%
CROWN CASTLE INTL CORP	CCI	$ 41,934.45	0.17%	4.23%	12.77%	17.27%	0.0291%
CARNIVAL CORP	CCL	$ 46,254.07	0.19%	2.93%	14.40%	17.54%	0.0326%
CADENCE DESIGN SYS INC	CDNS	$ 12,691.41	0.05%	0.00%	12.00%	12.00%	0.0061%
CELGENE CORP	CELG	$ 56,594.50	0.23%	0.00%	19.05%	19.05%	0.0433%
CERNER CORP	CERN	$ 20,529.35	0.08%	0.00%	11.94%	11.94%	0.0098%
CF INDUSTRIES HOLDINGS INC	CF	$ 10,403.17	0.04%	2.69%	11.75%	14.60%	0.0061%
CITIZENS FINANCIAL GROUP	CFG	$ 20,213.10	0.08%	2.36%	20.98%	23.58%	0.0191%
CHURCH & DWIGHT CO INC	CHD	$ 12,298.73	0.05%	1.74%	10.24%	12.07%	0.0060%
C.H. ROBINSON WORLDWIDE INC	CHRW	$ 12,544.01	0.05%	2.08%	9.58%	11.76%	0.0059%
CHARTER COMMUNICATIONS INC-A	CHTR	$ 78,244.80	0.31%	0.00%	29.32%	29.32%	0.0921%
CIGNA CORP	CI	$ 42,584.10	0.17%	0.02%	11.84%	11.87%	0.0203%
CINCINNATI FINANCIAL CORP	CINF	$ 11,324.43	N/A	3.07%	N/A	N/A	N/A
COLGATE-PALMOLIVE CO	CL	$ 56,465.32	0.23%	2.57%	8.43%	11.10%	0.0252%
CLOROX COMPANY	CLX	$ 16,687.10	0.07%	2.68%	8.53%	11.32%	0.0076%
COMERICA INC	CMA	$ 16,259.73	0.07%	1.55%	26.85%	28.60%	0.0187%
COMCAST CORP-CLASS A	CMCSA	$ 155,903.56	0.63%	2.22%	15.40%	17.79%	0.1114%
CME GROUP INC	CME	$ 57,838.26	0.23%	3.79%	15.00%	19.07%	0.0443%
CHIPOTLE MEXICAN GRILL INC	CMG	$ 12,840.81	0.05%	0.00%	18.94%	18.94%	0.0098%
CUMMINS INC	CMI	$ 23,583.95	0.09%	3.09%	9.06%	12.29%	0.0116%
CMS ENERGY CORP	CMS	$ 12,453.76	0.05%	3.24%	6.29%	9.62%	0.0048%
CENTENE CORP	CNC	$ 25,394.98	0.10%	0.00%	15.49%	15.49%	0.0158%
CENTERPOINT ENERGY INC	CNP	$ 11,170.84	0.04%	4.32%	5.54%	9.98%	0.0045%
CAPITAL ONE FINANCIAL CORP	COF	$ 47,310.58	0.19%	1.73%	16.36%	18.23%	0.0346%
CABOT OIL & GAS CORP	COG	$ 10,609.96	0.04%	1.01%	39.25%	40.46%	0.0172%
ROCKWELL COLLINS INC	COL	$ 22,599.77	0.09%	1.08%	11.60%	12.75%	0.0116%
COOPER COS INC/THE	COO	$ 11,639.15	0.05%	0.03%	10.73%	10.76%	0.0050%
CONOCOPHILLIPS	COP	$ 76,475.53	0.31%	1.75%	6.00%	7.80%	0.0240%
COSTCO WHOLESALE CORP	COST	$ 90,918.43	0.36%	1.03%	10.89%	11.98%	0.0437%
COTY INC-CL A	COTY	$ 10,882.79	0.04%	3.45%	15.63%	19.35%	0.0085%
CAMPBELL SOUP CO	CPB	$ 11,153.95	0.04%	3.87%	3.40%	7.34%	0.0033%
SALESFORCE.COM INC	CRM	$ 102,820.51	0.41%	0.00%	26.30%	26.30%	0.1086%
CISCO SYSTEMS INC	CSCO	$ 208,102.55	0.84%	2.82%	6.24%	9.14%	0.0764%
CSX CORP	CSX	$ 58,342.31	0.23%	1.32%	15.16%	16.58%	0.0388%
CINTAS CORP	CTAS	$ 20,331.40	0.08%	0.85%	11.60%	12.50%	0.0102%
CENTURYLINK INC	CTL	$ 19,440.81	0.08%	11.99%	-15.40%	-4.34%	-0.0034%
COGNIZANT TECH SOLUTIONS-A	CTSH	$ 47,282.04	0.19%	0.93%	15.03%	16.03%	0.0304%
CITRIX SYSTEMS INC	CTXS	$ 14,493.08	0.06%	0.00%	11.00%	11.00%	0.0064%
CVS HEALTH CORP	CVS	$ 71,256.74	0.29%	3.01%	11.23%	14.41%	0.0412%
CHEVRON CORP	CVX	$ 237,035.48	0.95%	3.61%	54.01%	58.59%	0.5575%
CONCHO RESOURCES INC	CXO	$ 18,743.97	0.08%	0.00%	32.85%	32.85%	0.0247%
DOMINION ENERGY INC	D	$ 43,287.17	0.17%	5.04%	5.55%	10.72%	0.0186%
DELTA AIR LINES INC	DAL	$ 38,707.50	0.16%	2.40%	16.18%	18.77%	0.0292%
DEERE & CO	DE	$ 48,237.33	0.19%	1.68%	7.67%	9.41%	0.0182%
DISCOVER FINANCIAL SERVICES	DFS	$ 26,023.23	0.10%	1.98%	8.89%	10.96%	0.0114%
DOLLAR GENERAL CORP	DG	$ 26,041.37	0.10%	1.19%	15.95%	17.23%	0.0180%
QUEST DIAGNOSTICS INC	DGX	$ 15,117.81	0.06%	1.72%	9.95%	11.76%	0.0071%
DR HORTON INC	DHI	$ 16,168.46	0.06%	1.13%	20.52%	21.77%	0.0141%
DANAHER CORP	DHR	$ 71,470.98	0.29%	0.58%	8.15%	8.76%	0.0251%
WALT DISNEY CO/THE	DIS	$ 161,832.80	0.65%	1.55%	5.00%	6.59%	0.0428%
DISCOVERY INC - A	DISCA	$ 18,493.49	N/A	0.00%	N/A	N/A	N/A
DISH NETWORK CORP-A	DISH	$ 16,176.03	0.06%	0.00%	-11.61%	-11.61%	-0.0075%
DIGITAL REALTY TRUST INC	DLR	$ 22,806.44	0.09%	3.80%	7.28%	11.21%	0.0103%
DOLLAR TREE INC	DLTR	$ 20,929.01	0.08%	0.00%	13.37%	13.37%	0.0112%
DOVER CORP	DOV	$ 11,882.35	0.05%	2.51%	12.63%	15.30%	0.0073%
DR PEPPER SNAPPLE GROUP INC	DPS	$ 21,898.33	0.09%	2.02%	11.00%	13.14%	0.0115%
DUKE REALTY CORP	DRE	$ 10,153.94	0.04%	2.84%	-4.09%	-1.31%	-0.0005%
DARDEN RESTAURANTS INC	DRI	$ 11,648.59	0.05%	2.69%	10.72%	13.56%	0.0063%
DTE ENERGY COMPANY	DTE	$ 17,614.76	0.07%	3.69%	5.30%	9.09%	0.0064%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
DUKE ENERGY CORP	DUK	$ 52,084.30	0.21%	4.92%	4.45%	9.47%	0.0198%
DAVITA INC	DVA	$ 12,820.52	0.05%	0.00%	20.25%	20.25%	0.0104%
DEVON ENERGY CORP	DVN	$ 21,066.85	0.08%	0.74%	10.58%	11.35%	0.0096%
DOWDUPONT INC	DWDP	$ 157,233.30	0.63%	2.28%	8.23%	10.61%	0.0670%
DXC TECHNOLOGY CO	DXC	$ 23,882.69	0.10%	0.91%	6.15%	7.09%	0.0068%
ELECTRONIC ARTS INC	EA	$ 44,891.32	0.18%	0.00%	13.50%	13.50%	0.0243%
EBAY INC	EBAY	$ 38,655.81	0.16%	0.00%	10.04%	10.04%	0.0156%
ECOLAB INC	ECL	$ 42,288.45	0.17%	1.10%	13.30%	14.47%	0.0246%
CONSOLIDATED EDISON INC	ED	$ 22,910.16	0.09%	3.89%	3.00%	6.95%	0.0064%
EQUIFAX INC	EFX	$ 14,916.47	0.06%	1.26%	8.00%	9.31%	0.0056%
EDISON INTERNATIONAL	EIX	$ 19,692.03	0.08%	4.02%	5.26%	9.39%	0.0074%
ESTEE LAUDER COMPANIES-CL A	EL	$ 58,003.16	0.23%	0.93%	19.60%	20.62%	0.0480%
EASTMAN CHEMICAL CO	EMN	$ 15,549.28	0.06%	2.09%	7.65%	9.82%	0.0061%
EMERSON ELECTRIC CO	EMR	$ 45,542.91	0.18%	2.69%	11.79%	14.64%	0.0268%
EOG RESOURCES INC	EOG	$ 66,094.38	0.27%	0.60%	8.00%	8.62%	0.0229%
EQUINIX INC	EQIX	$ 31,684.58	0.13%	2.29%	18.75%	21.26%	0.0270%
EQUITY RESIDENTIAL	EQR	$ 23,374.21	0.09%	3.40%	5.31%	8.80%	0.0083%
EQT CORP	EQT	$ 14,724.18	0.06%	0.22%	17.50%	17.74%	0.0105%
EVERSOURCE ENERGY	ES	$ 17,311.47	0.07%	3.70%	6.27%	10.09%	0.0070%
EXPRESS SCRIPTS HOLDING CO	ESRX	$ 45,905.17	0.18%	0.00%	6.73%	6.73%	0.0124%
ESSEX PROPERTY TRUST INC	ESS	$ 15,487.18	0.06%	3.15%	6.48%	9.74%	0.0061%
E*TRADE FINANCIAL CORP	ETFC	$ 16,972.04	0.07%	0.00%	28.18%	28.18%	0.0192%
EATON CORP PLC	ETN	$ 34,656.03	0.14%	3.30%	9.04%	12.49%	0.0174%
ENTERGY CORP	ETR	$ 15,335.55	0.06%	4.62%	0.91%	5.56%	0.0034%
ENVISION HEALTHCARE CORP	EVHC	$ 5,416.45	0.02%	0.00%	14.96%	14.96%	0.0033%
EVERGY INC	EVRG	$ 14,319.24	0.06%	3.07%	9.40%	12.61%	0.0072%
EDWARDS LIFESCIENCES CORP	EW	$ 32,145.92	0.13%	0.00%	15.33%	15.33%	0.0198%
EXELON CORP	EXC	$ 40,037.31	0.16%	3.33%	5.31%	8.73%	0.0140%
EXPEDITORS INTL WASH INC	EXPD	$ 13,431.15	0.05%	1.17%	10.83%	12.06%	0.0065%
EXPEDIA GROUP INC	EXPE	$ 18,636.34	0.07%	0.98%	16.76%	17.82%	0.0133%
EXTRA SPACE STORAGE INC	EXR	$ 12,196.03	0.05%	3.39%	6.04%	9.54%	0.0047%
FORD MOTOR CO	F	$ 47,341.25	0.19%	5.05%	-7.42%	-2.56%	-0.0049%
FASTENAL CO	FAST	$ 15,156.15	0.06%	2.81%	17.50%	20.55%	0.0125%
FACEBOOK INC-A	FB	$ 567,125.83	2.28%	0.00%	21.49%	21.49%	0.4892%
FORTUNE BRANDS HOME & SECURI	FBHS	$ 8,298.63	0.03%	1.41%	12.68%	14.18%	0.0047%
FREEPORT-MCMORAN INC	FCX	$ 24,470.13	0.10%	1.16%	-1.41%	-0.26%	-0.0003%
FEDEX CORP	FDX	$ 70,694.46	0.28%	0.76%	14.60%	15.41%	0.0437%
FIRSTENERGY CORP	FE	$ 16,548.75	0.07%	4.15%	-0.12%	4.03%	0.0027%
F5 NETWORKS INC	FFIV	$ 11,153.41	0.04%	0.00%	10.31%	10.31%	0.0046%
FIDELITY NATIONAL INFO SERV	FIS	$ 35,564.19	0.14%	1.20%	4.40%	5.62%	0.0080%
FISERV INC	FISV	$ 31,317.82	0.13%	0.00%	11.00%	11.00%	0.0138%
FIFTH THIRD BANCORP	FITB	$ 21,024.15	0.08%	2.42%	6.00%	8.49%	0.0072%
FOOT LOCKER INC	FL	$ 6,648.62	0.03%	2.43%	6.58%	9.09%	0.0024%
FLIR SYSTEMS INC	FLIR	$ 7,527.58	N/A	1.15%	N/A	N/A	N/A
FLUOR CORP	FLR	$ 6,843.78	0.03%	1.77%	27.68%	29.69%	0.0082%
FLOWSERVE CORP	FLS	$ 5,339.32	0.02%	1.89%	19.47%	21.54%	0.0046%
FMC CORP	FMC	$ 12,088.80	0.05%	0.89%	14.17%	15.12%	0.0073%
TWENTY-FIRST CENTURY FOX-A	FOXA	$ 82,655.19	0.33%	0.83%	10.60%	11.48%	0.0381%
FEDERAL REALTY INVS TRUST	FRT	$ 8,761.68	0.04%	3.40%	4.20%	7.67%	0.0027%
TECHNIPFMC PLC	FTI	$ 14,331.85	0.06%	1.69%	8.47%	10.23%	0.0059%
FORTIVE CORP	FTV	$ 28,257.82	0.11%	0.36%	13.04%	13.42%	0.0152%
GENERAL DYNAMICS CORP	GD	$ 58,159.15	0.23%	1.87%	11.45%	13.42%	0.0313%
GENERAL ELECTRIC CO	GE	$ 115,515.00	0.46%	3.73%	4.03%	7.84%	0.0363%
GGP INC	GGP	$ 19,800.38	0.08%	4.52%	1.10%	5.64%	0.0045%
GILEAD SCIENCES INC	GILD	$ 91,317.32	0.37%	3.22%	-5.21%	-2.07%	-0.0076%
GENERAL MILLS INC	GIS	$ 26,934.99	0.11%	4.33%	7.33%	11.82%	0.0128%
CORNING INC	GLW	$ 24,154.85	0.10%	2.48%	4.96%	7.50%	0.0073%
GENERAL MOTORS CO	GM	$ 61,888.59	0.25%	3.47%	11.05%	14.71%	0.0365%
ALPHABET INC-CL A	GOOGL	$ 802,558.86	3.22%	0.00%	18.96%	18.96%	0.6107%
GENUINE PARTS CO	GPC	$ 13,950.36	0.06%	3.01%	-2.49%	0.48%	0.0003%
GLOBAL PAYMENTS INC	GPN	$ 18,746.52	0.08%	0.03%	22.03%	22.07%	0.0166%
GAP INC/THE	GPS	$ 12,255.66	0.05%	3.07%	9.25%	12.46%	0.0061%
GARMIN LTD	GRMN	$ 11,545.09	0.05%	3.43%	5.90%	9.43%	0.0044%
GOLDMAN SACHS GROUP INC	GS	$ 90,986.74	0.37%	1.38%	16.05%	17.54%	0.0641%
GOODYEAR TIRE & RUBBER CO	GT	$ 6,012.51	N/A	2.15%	N/A	N/A	N/A
WW GRAINGER INC	GWW	$ 17,904.22	0.07%	1.71%	14.70%	16.53%	0.0119%
HALLIBURTON CO	HAL	$ 40,820.50	0.16%	1.57%	67.55%	69.65%	0.1141%
HASBRO INC	HAS	$ 11,684.93	0.05%	2.75%	8.17%	11.03%	0.0052%
HUNTINGTON BANCSHARES INC	HBAN	$ 16,890.53	0.07%	3.05%	13.77%	17.03%	0.0115%
HANESBRANDS INC	HBI	$ 7,315.52	0.03%	2.96%	5.87%	8.91%	0.0026%
HCA HEALTHCARE INC	HCA	$ 37,203.86	0.15%	1.31%	12.58%	13.97%	0.0209%
HCP INC	HCP	$ 11,284.48	0.05%	6.19%	-0.37%	5.81%	0.0026%
HOME DEPOT INC	HD	$ 231,331.64	0.93%	2.03%	13.25%	15.41%	0.1431%
HESS CORP	HES	$ 18,018.78	0.07%	1.72%	-7.90%	-6.25%	-0.0045%
HARTFORD FINANCIAL SVCS GRP	HIG	$ 19,253.56	0.08%	1.93%	9.50%	11.53%	0.0089%
HUNTINGTON INGALLS INDUSTRIE	HII	$ 9,813.25	0.04%	1.29%	27.50%	28.97%	0.0114%
HILTON WORLDWIDE HOLDINGS IN	HLT	$ 25,186.95	0.10%	0.72%	11.23%	12.00%	0.0121%
HARLEY-DAVIDSON INC	HOG	$ 7,646.10	0.03%	3.23%	8.95%	12.32%	0.0038%
HOLOGIC INC	HOLX	$ 11,037.83	0.04%	0.00%	9.51%	9.51%	0.0042%
HONEYWELL INTERNATIONAL INC	HON	$ 112,211.27	0.45%	2.03%	10.68%	12.82%	0.0578%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
HELMERICH & PAYNE	HP	$ 6,882.41	0.03%	4.43%	122.99%	130.15%	0.0360%
HEWLETT PACKARD ENTERPRISE	HPE	$ 24,147.68	0.10%	2.37%	-4.05%	-1.73%	-0.0017%
HP INC	HPQ	$ 37,991.99	0.15%	2.37%	7.75%	10.21%	0.0156%
H&R BLOCK INC	HRB	$ 4,950.98	0.02%	4.27%	11.00%	15.50%	0.0031%
HORMEL FOODS CORP	HRL	$ 19,331.67	0.08%	2.05%	8.05%	10.19%	0.0079%
HARRIS CORP	HRS	$ 17,717.92	N/A	1.53%	N/A	N/A	N/A
HENRY SCHEIN INC	HSIC	$ 11,288.49	0.05%	0.00%	8.34%	8.34%	0.0038%
HOST HOTELS & RESORTS INC	HST	$ 15,783.06	0.06%	3.90%	3.98%	7.95%	0.0050%
HERSHEY CO/THE	HSY	$ 19,671.09	0.08%	2.91%	8.10%	11.13%	0.0088%
HUMANA INC	HUM	$ 42,261.54	0.17%	0.65%	13.13%	13.83%	0.0235%
INTL BUSINESS MACHINES CORP	IBM	$ 133,463.41	0.54%	4.26%	1.97%	6.26%	0.0336%
INTERCONTINENTAL EXCHANGE IN	ICE	$ 43,071.40	0.17%	1.29%	10.43%	11.79%	0.0204%
IDEXX LABORATORIES INC	IDXX	$ 19,796.13	0.08%	0.00%	16.91%	16.91%	0.0134%
INTL FLAVORS & FRAGRANCES	IFF	$ 9,962.21	0.04%	2.21%	6.20%	8.48%	0.0034%
ILLUMINA INC	ILMN	$ 42,446.25	0.17%	0.00%	16.22%	16.22%	0.0276%
INCYTE CORP	INCY	$ 15,677.24	0.06%	0.00%	58.81%	58.81%	0.0370%
IHS MARKIT LTD	INFO	$ 20,315.11	0.08%	0.00%	12.33%	12.33%	0.0101%
INTEL CORP	INTC	$ 256,812.60	1.03%	2.05%	8.98%	11.12%	0.1146%
INTUIT INC	INTU	$ 53,616.69	0.22%	0.74%	16.29%	17.09%	0.0368%
INTERNATIONAL PAPER CO	IP	$ 22,953.09	0.09%	3.51%	8.67%	12.33%	0.0114%
INTERPUBLIC GROUP OF COS INC	IPG	$ 9,086.70	0.04%	3.59%	4.96%	8.63%	0.0031%
IPG PHOTONICS CORP	IPGP	$ 12,939.30	0.05%	0.00%	12.00%	12.00%	0.0062%
IQVIA HOLDINGS INC	IQV	$ 20,895.00	0.08%	0.00%	15.73%	15.73%	0.0132%
INGERSOLL-RAND PLC	IR	$ 22,847.51	0.09%	2.00%	10.92%	13.02%	0.0119%
IRON MOUNTAIN INC	IRM	$ 9,509.83	0.04%	6.83%	9.00%	16.14%	0.0062%
INTUITIVE SURGICAL INC	ISRG	$ 55,570.11	0.22%	0.00%	11.75%	11.75%	0.0262%
GARTNER INC	IT	$ 12,585.67	0.05%	0.00%	15.00%	15.00%	0.0076%
ILLINOIS TOOL WORKS	ITW	$ 50,357.06	0.20%	2.36%	10.16%	12.64%	0.0255%
INVESCO LTD	IVZ	$ 11,300.08	0.05%	4.35%	8.97%	13.52%	0.0061%
HUNT (JB) TRANSPRT SVCS INC	JBHT	$ 14,294.57	0.06%	0.72%	12.72%	13.48%	0.0077%
JOHNSON CONTROLS INTERNATION	JCI	$ 32,454.20	0.13%	3.03%	10.47%	13.66%	0.0178%
JACOBS ENGINEERING GROUP INC	JEC	$ 9,152.67	0.04%	0.92%	19.36%	20.36%	0.0075%
JEFFERIES FINANCIAL GROUP IN	JEF	$ 7,655.70	0.03%	1.80%	18.00%	19.96%	0.0061%
JOHNSON & JOHNSON	JNJ	$ 328,858.41	1.32%	2.96%	7.39%	10.46%	0.1381%
JUNIPER NETWORKS INC	JNPR	$ 9,528.37	0.04%	2.43%	8.68%	11.21%	0.0043%
JPMORGAN CHASE & CO	JPM	$ 367,375.43	1.47%	2.28%	9.80%	12.19%	0.1798%
NORDSTROM INC	JWN	$ 8,451.44	0.03%	2.98%	8.55%	11.66%	0.0040%
KELLOGG CO	K	$ 23,259.65	0.09%	3.31%	8.07%	11.51%	0.0107%
KEYCORP	KEY	$ 21,647.32	0.09%	2.54%	16.47%	19.22%	0.0167%
KRAFT HEINZ CO/THE	KHC	$ 75,113.20	0.30%	4.13%	6.90%	11.17%	0.0337%
KIMCO REALTY CORP	KIM	$ 7,006.56	0.03%	6.86%	2.94%	9.90%	0.0028%
KLA-TENCOR CORP	KLAC	$ 17,558.47	0.07%	2.22%	11.16%	13.50%	0.0095%
KIMBERLY-CLARK CORP	KMB	$ 36,134.60	0.15%	3.87%	14.07%	18.21%	0.0264%
KINDER MORGAN INC	KMI	$ 36,995.82	0.15%	4.71%	88.15%	94.94%	0.1410%
CARMAX INC	KMX	$ 12,890.48	0.05%	0.00%	12.90%	12.90%	0.0067%
COCA-COLA CO/THE	KO	$ 187,742.19	0.75%	3.47%	8.39%	12.01%	0.0905%
MICHAEL KORS HOLDINGS LTD	KORS	$ 10,120.71	0.04%	0.00%	7.83%	7.83%	0.0032%
KROGER CO	KR	$ 20,807.26	0.08%	2.06%	5.57%	7.69%	0.0064%
KOHLS CORP	KSS	$ 12,365.13	0.05%	3.38%	6.73%	10.23%	0.0051%
KANSAS CITY SOUTHERN	KSU	$ 11,296.32	0.05%	1.34%	8.70%	10.10%	0.0046%
LOEWS CORP	L	$ 15,930.99	N/A	0.50%	N/A	N/A	N/A
L BRANDS INC	LB	$ 10,087.46	0.04%	6.60%	9.95%	16.88%	0.0068%
LEGGETT & PLATT INC	LEG	$ 5,817.86	0.02%	3.32%	10.00%	13.48%	0.0031%
LENNAR CORP-A	LEN	$ 16,805.13	0.07%	0.30%	20.99%	21.32%	0.0144%
LABORATORY CRP OF AMER HLDGS	LH	$ 19,376.64	0.08%	0.00%	9.15%	9.15%	0.0071%
LKQ CORP	LKQ	$ 10,359.82	0.04%	0.00%	13.15%	13.15%	0.0055%
L3 TECHNOLOGIES INC	LLL	$ 15,498.10	0.06%	1.66%	11.07%	12.82%	0.0080%
ELI LILLY & CO	LLY	$ 94,758.42	0.38%	2.62%	10.57%	13.33%	0.0507%
LOCKHEED MARTIN CORP	LMT	$ 88,554.11	0.36%	2.65%	22.09%	25.04%	0.0890%
LINCOLN NATIONAL CORP	LNC	$ 14,694.92	0.06%	1.99%	8.00%	10.07%	0.0059%
ALLIANT ENERGY CORP	LNT	$ 9,250.01	0.04%	3.35%	5.92%	9.37%	0.0035%
LOWE'S COS INC	LOW	$ 80,946.15	0.32%	1.84%	15.34%	17.32%	0.0563%
LAM RESEARCH CORP	LRCX	$ 29,267.31	0.12%	1.37%	11.95%	13.40%	0.0157%
SOUTHWEST AIRLINES CO	LUV	$ 30,254.13	0.12%	1.11%	11.62%	12.80%	0.0155%
LYONDELLBASELL INDU-CL A	LYB	$ 45,213.43	0.18%	3.48%	7.73%	11.34%	0.0206%
MACY'S INC	M	$ 11,724.81	0.05%	4.20%	-0.07%	4.14%	0.0019%
MASTERCARD INC - A	MA	$ 208,303.54	0.84%	0.50%	21.41%	21.97%	0.1837%
MID-AMERICA APARTMENT COMM	MAA	$ 10,980.87	0.04%	3.85%	7.00%	10.99%	0.0048%
MACERICH CO/THE	MAC	$ 7,884.30	0.03%	5.35%	4.95%	10.43%	0.0033%
MARRIOTT INTERNATIONAL -CL A	MAR	$ 49,056.33	0.20%	1.10%	17.58%	18.78%	0.0370%
MASCO CORP	MAS	$ 11,873.17	0.05%	1.12%	15.84%	17.04%	0.0081%
MATTEL INC	MAT	$ 6,082.21	0.02%	0.00%	9.73%	9.73%	0.0024%
MCDONALD'S CORP	MCD	$ 130,700.63	0.52%	2.47%	8.77%	11.35%	0.0595%
MICROCHIP TECHNOLOGY INC	MCHP	$ 23,969.04	0.10%	1.43%	11.79%	13.30%	0.0128%
MCKESSON CORP	MCK	$ 30,266.38	0.12%	0.87%	6.35%	7.24%	0.0088%
MOODY'S CORP	MCO	$ 33,927.92	0.14%	1.01%	8.00%	9.05%	0.0123%
MONDELEZ INTERNATIONAL INC-A	MDLZ	$ 60,212.28	0.24%	2.28%	10.73%	13.14%	0.0318%
MEDTRONIC PLC	MDT	$ 117,519.05	0.47%	2.22%	7.07%	9.37%	0.0442%
METLIFE INC	MET	$ 47,075.54	0.19%	3.62%	11.42%	15.25%	0.0288%
MGM RESORTS INTERNATIONAL	MGM	$ 17,388.43	0.07%	1.54%	8.64%	10.24%	0.0072%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
MOHAWK INDUSTRIES INC	MHK	$ 15,890.27	0.06%	0.00%	8.58%	8.58%	0.0055%
MCCORMICK & CO-NON VTG SHRS	MKC	$ 13,953.61	0.06%	1.97%	8.30%	10.35%	0.0058%
MARTIN MARIETTA MATERIALS	MLM	$ 14,402.09	0.06%	0.78%	13.36%	14.19%	0.0082%
MARSH & MCLENNAN COS	MMC	$ 41,853.99	0.17%	1.92%	12.77%	14.81%	0.0249%
3M CO	MMM	$ 121,689.11	0.49%	2.65%	8.70%	11.47%	0.0560%
MONSTER BEVERAGE CORP	MNST	$ 31,752.14	0.13%	0.00%	16.30%	16.30%	0.0208%
ALTRIA GROUP INC	MO	$ 109,376.15	0.44%	5.10%	4.87%	10.09%	0.0443%
MOSAIC CO/THE	MOS	$ 11,169.37	0.04%	0.35%	7.00%	7.36%	0.0033%
MARATHON PETROLEUM CORP	MPC	$ 33,975.80	0.14%	2.51%	6.87%	9.46%	0.0129%
MERCK & CO. INC.	MRK	$ 166,879.55	0.67%	3.12%	7.14%	10.37%	0.0695%
MARATHON OIL CORP	MRO	$ 17,055.35	0.07%	1.01%	5.00%	6.03%	0.0041%
MORGAN STANLEY	MS	$ 90,566.52	0.36%	2.17%	14.35%	16.67%	0.0606%
MSCI INC	MSCI	$ 15,526.24	0.06%	0.97%	10.00%	11.02%	0.0069%
MICROSOFT CORP	MSFT	$ 769,318.57	3.09%	1.68%	11.41%	13.19%	0.4072%
MOTOROLA SOLUTIONS INC	MSI	$ 18,567.73	0.07%	1.83%	4.07%	5.94%	0.0044%
M & T BANK CORP	MTB	$ 25,378.47	0.10%	1.92%	13.84%	15.90%	0.0162%
METTLER-TOLEDO INTERNATIONAL	MTD	$ 14,956.40	0.06%	0.00%	11.95%	11.95%	0.0072%
MICRON TECHNOLOGY INC	MU	$ 67,533.09	0.27%	0.00%	7.50%	7.50%	0.0203%
MYLAN NV	MYL	$ 20,103.33	0.08%	0.00%	6.37%	6.37%	0.0051%
NOBLE ENERGY INC	NBL	$ 16,393.47	0.07%	1.22%	12.50%	13.80%	0.0091%
NORWEGIAN CRUISE LINE HOLDIN	NCLH	$ 12,346.69	0.05%	0.24%	19.90%	20.16%	0.0100%
NASDAQ INC	NDAQ	$ 15,848.39	0.06%	1.82%	10.79%	12.70%	0.0081%
NEXTERA ENERGY INC	NEE	$ 75,212.98	0.30%	2.79%	8.57%	11.47%	0.0346%
NEWMONT MINING CORP	NEM	$ 20,485.88	0.08%	1.46%	-3.00%	-1.56%	-0.0013%
NETFLIX INC	NFLX	$ 170,390.79	0.68%	0.00%	47.27%	47.27%	0.3233%
NEWFIELD EXPLORATION CO	NFX	$ 5,568.37	0.02%	0.00%	13.72%	13.72%	0.0031%
NISOURCE INC	NI	$ 8,800.53	0.04%	3.19%	5.86%	9.14%	0.0032%
NIKE INC -CL B	NKE	$ 122,235.83	0.49%	1.02%	12.18%	13.26%	0.0651%
NEKTAR THERAPEUTICS	NKTR	$ 9,917.35	N/A	0.00%	N/A	N/A	N/A
NIELSEN HOLDINGS PLC	NLSN	$ 11,181.92	0.04%	4.47%	12.00%	16.74%	0.0075%
NORTHROP GRUMMAN CORP	NOC	$ 56,068.00	0.23%	1.45%	14.77%	16.33%	0.0367%
NATIONAL OILWELL VARCO INC	NOV	$ 15,846.30	0.06%	0.48%	77.95%	78.62%	0.0500%
NRG ENERGY INC	NRG	$ 10,510.90	0.04%	0.36%	19.82%	20.22%	0.0085%
NORFOLK SOUTHERN CORP	NSC	$ 43,697.93	0.18%	1.86%	14.38%	16.37%	0.0287%
NETAPP INC	NTAP	$ 20,817.59	0.08%	1.97%	10.17%	12.24%	0.0102%
NORTHERN TRUST CORP	NTRS	$ 24,049.29	0.10%	1.72%	13.84%	15.69%	0.0151%
NUCOR CORP	NUE	$ 21,264.76	0.09%	2.27%	6.45%	8.80%	0.0075%
NVIDIA CORP	NVDA	$ 161,012.82	0.65%	0.23%	10.40%	10.64%	0.0688%
NEWELL BRANDS INC	NWL	$ 12,652.49	0.05%	3.53%	5.30%	8.93%	0.0045%
NEWS CORP - CLASS A	NWSA	$ 9,368.61	0.04%	1.44%	12.95%	14.48%	0.0054%
REALTY INCOME CORP	O	$ 15,063.99	0.06%	4.94%	4.39%	9.43%	0.0057%
ONEOK INC	OKE	$ 27,862.74	0.11%	4.76%	25.16%	30.51%	0.0341%
OMNICOM GROUP	OMC	$ 17,142.18	0.07%	3.23%	5.67%	8.99%	0.0062%
ORACLE CORP	ORCL	$ 188,929.45	0.76%	1.63%	8.50%	10.20%	0.0773%
O'REILLY AUTOMOTIVE INC	ORLY	$ 23,175.29	0.09%	0.00%	14.72%	14.72%	0.0137%
OCCIDENTAL PETROLEUM CORP	OXY	$ 63,811.63	0.26%	3.71%	11.55%	15.48%	0.0396%
PAYCHEX INC	PAYX	$ 25,071.95	0.10%	2.85%	8.50%	11.47%	0.0115%
PEOPLE'S UNITED FINANCIAL	PBCT	$ 6,515.75	0.03%	3.71%	2.00%	5.74%	0.0015%
PACCAR INC	PCAR	$ 22,515.96	0.09%	3.78%	6.80%	10.71%	0.0097%
P G & E CORP	PCG	$ 20,760.39	0.08%	4.51%	5.25%	9.88%	0.0082%
PUBLIC SERVICE ENTERPRISE GP	PEG	$ 26,539.07	0.11%	3.43%	6.62%	10.15%	0.0108%
PEPSICO INC	PEP	$ 152,574.71	0.61%	3.37%	6.92%	10.40%	0.0637%
PFIZER INC	PFE	$ 212,690.40	0.85%	3.74%	7.37%	11.25%	0.0960%
PRINCIPAL FINANCIAL GROUP	PFG	$ 16,152.18	0.06%	3.72%	9.39%	13.28%	0.0086%
PROCTER & GAMBLE CO/THE	PG	$ 194,579.71	0.78%	3.64%	7.30%	11.07%	0.0865%
PROGRESSIVE CORP	PGR	$ 36,324.70	0.15%	2.10%	8.00%	10.18%	0.0148%
PARKER HANNIFIN CORP	PH	$ 22,725.43	0.09%	1.60%	9.59%	11.27%	0.0103%
PULTEGROUP INC	PHM	$ 8,671.39	0.03%	1.21%	21.25%	22.58%	0.0079%
PACKAGING CORP OF AMERICA	PKG	$ 11,230.09	0.05%	2.28%	8.00%	10.38%	0.0047%
PERKINELMER INC	PKI	$ 8,611.78	0.03%	0.36%	15.34%	15.73%	0.0054%
PROLOGIS INC	PLD	$ 34,033.29	0.14%	2.98%	6.47%	9.54%	0.0130%
PHILIP MORRIS INTERNATIONAL	PM	$ 127,280.31	0.51%	5.37%	10.87%	16.52%	0.0844%
PNC FINANCIAL SERVICES GROUP	PNC	$ 67,593.74	0.27%	2.37%	11.11%	13.62%	0.0369%
PENTAIR PLC	PNR	$ 7,824.03	0.03%	1.91%	10.55%	12.56%	0.0039%
PINNACLE WEST CAPITAL	PNW	$ 8,519.23	0.03%	3.70%	4.49%	8.27%	0.0028%
PPG INDUSTRIES INC	PPG	$ 26,273.63	0.11%	1.74%	8.73%	10.55%	0.0111%
PPL CORP	PPL	$ 18,930.42	0.08%	6.05%	5.40%	11.62%	0.0088%
PERRIGO CO PLC	PRGO	$ 10,399.89	0.04%	0.93%	6.52%	7.48%	0.0031%
PRUDENTIAL FINANCIAL INC	PRU	$ 41,395.20	0.17%	3.65%	8.50%	12.31%	0.0205%
PUBLIC STORAGE	PSA	$ 37,288.57	0.15%	3.79%	5.46%	9.35%	0.0140%
PHILLIPS 66	PSX	$ 53,245.16	0.21%	2.62%	10.00%	12.75%	0.0273%
PVH CORP	PVH	$ 12,442.41	0.05%	0.09%	10.56%	10.66%	0.0053%
QUANTA SERVICES INC	PWR	$ 5,343.39	N/A	0.00%	N/A	N/A	N/A
PRAXAIR INC	PX	$ 46,053.83	0.18%	2.07%	13.97%	16.18%	0.0299%
PIONEER NATURAL RESOURCES CO	PXD	$ 31,392.74	0.13%	0.14%	15.00%	15.15%	0.0191%
PAYPAL HOLDINGS INC	PYPL	$ 101,295.97	0.41%	0.00%	18.63%	18.63%	0.0758%
QUALCOMM INC	QCOM	$ 88,749.77	0.36%	3.97%	5.67%	9.76%	0.0348%
QORVO INC	QRVO	$ 10,766.88	0.04%	0.00%	12.39%	12.39%	0.0054%
ROYAL CARIBBEAN CRUISES LTD	RCL	$ 24,247.12	0.10%	2.13%	15.52%	17.82%	0.0173%
EVEREST RE GROUP LTD	RE	$ 9,286.18	0.04%	2.32%	10.00%	12.43%	0.0046%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
REGENCY CENTERS CORP	REG	$ 10,125.40	0.04%	3.74%	8.48%	12.39%	0.0050%
REGENERON PHARMACEUTICALS	REGN	$ 34,008.63	0.14%	0.00%	14.66%	14.66%	0.0200%
REGIONS FINANCIAL CORP	RF	$ 20,879.34	0.08%	2.33%	16.09%	18.61%	0.0156%
ROBERT HALF INTL INC	RHI	$ 8,641.97	0.03%	1.54%	16.20%	17.87%	0.0062%
RED HAT INC	RHT	$ 31,090.99	0.12%	0.00%	17.36%	17.36%	0.0217%
RAYMOND JAMES FINANCIAL INC	RJF	$ 14,240.49	0.06%	1.06%	17.00%	18.15%	0.0104%
RALPH LAUREN CORP	RL	$ 11,394.00	0.05%	1.69%	5.45%	7.18%	0.0033%
RESMED INC	RMD	$ 15,101.72	0.06%	1.31%	16.10%	17.51%	0.0106%
ROCKWELL AUTOMATION INC	ROK	$ 22,310.61	0.09%	1.91%	11.49%	13.51%	0.0121%
ROPER TECHNOLOGIES INC	ROP	$ 29,297.54	0.12%	0.57%	13.27%	13.87%	0.0163%
ROSS STORES INC	ROST	$ 32,058.66	0.13%	1.02%	13.12%	14.21%	0.0183%
RANGE RESOURCES CORP	RRC	$ 3,982.81	0.02%	0.50%	22.54%	23.09%	0.0037%
REPUBLIC SERVICES INC	RSG	$ 22,912.42	0.09%	1.99%	12.32%	14.43%	0.0133%
RAYTHEON COMPANY	RTN	$ 57,889.49	0.23%	1.70%	14.97%	16.80%	0.0390%
SBA COMMUNICATIONS CORP	SBAC	$ 17,988.59	0.07%	0.00%	27.15%	27.15%	0.0196%
STARBUCKS CORP	SBUX	$ 78,811.80	0.32%	2.15%	14.43%	16.73%	0.0529%
SCANA CORP	SCG	$ 5,332.23	0.02%	4.53%	-2.10%	2.39%	0.0005%
SCHWAB (CHARLES) CORP	SCHW	$ 75,675.79	0.30%	0.71%	23.37%	24.16%	0.0734%
SEALED AIR CORP	SEE	$ 7,252.15	0.03%	1.45%	11.28%	12.81%	0.0037%
SHERWIN-WILLIAMS CO/THE	SHW	$ 37,615.66	0.15%	0.85%	12.25%	13.16%	0.0199%
SVB FINANCIAL GROUP	SIVB	$ 16,730.22	0.07%	0.00%	10.75%	10.75%	0.0072%
JM SMUCKER CO/THE	SJM	$ 12,010.84	0.05%	3.16%	5.70%	8.95%	0.0043%
SCHLUMBERGER LTD	SLB	$ 92,568.45	0.37%	2.99%	39.63%	43.21%	0.1606%
SL GREEN REALTY CORP	SLG	$ 8,927.99	0.04%	3.29%	3.62%	6.97%	0.0025%
SNAP-ON INC	SNA	$ 9,121.45	0.04%	2.14%	9.70%	11.95%	0.0044%
SYNOPSYS INC	SNPS	$ 13,495.92	N/A	0.00%	N/A	N/A	N/A
SOUTHERN CO/THE	SO	$ 44,987.50	0.18%	5.37%	4.38%	9.87%	0.0178%
SIMON PROPERTY GROUP INC	SPG	$ 50,939.11	0.20%	4.79%	6.21%	11.16%	0.0228%
S&P GLOBAL INC	SPGI	$ 52,441.28	0.21%	0.94%	11.70%	12.69%	0.0267%
STERICYCLE INC	SRCL	$ 5,484.60	0.02%	0.08%	8.87%	8.95%	0.0020%
SEMPRA ENERGY	SRE	$ 29,533.48	0.12%	3.20%	16.96%	20.43%	0.0242%
SUNTRUST BANKS INC	STI	$ 31,984.72	0.13%	2.54%	13.31%	16.02%	0.0206%
STATE STREET CORP	STT	$ 35,934.23	0.14%	1.85%	17.73%	19.74%	0.0285%
SEAGATE TECHNOLOGY	STX	$ 16,773.04	0.07%	4.32%	3.15%	7.54%	0.0051%
CONSTELLATION BRANDS INC-A	STZ	$ 44,399.73	0.18%	1.27%	11.41%	12.75%	0.0227%
STANLEY BLACK & DECKER INC	SWK	$ 21,904.26	0.09%	1.79%	11.50%	13.40%	0.0118%
SKYWORKS SOLUTIONS INC	SWKS	$ 18,699.07	0.08%	1.26%	11.41%	12.74%	0.0096%
SYNCHRONY FINANCIAL	SYF	$ 26,582.53	0.11%	1.93%	10.60%	12.63%	0.0135%
STRYKER CORP	SYK	$ 62,925.45	0.25%	1.07%	8.89%	10.01%	0.0253%
SYMANTEC CORP	SYMC	$ 13,213.91	0.05%	1.41%	8.52%	9.99%	0.0053%
SYSCO CORP	SYY	$ 34,848.91	0.14%	2.07%	11.85%	14.04%	0.0196%
AT&T INC	T	$ 242,856.90	0.97%	6.06%	5.00%	11.21%	0.1093%
MOLSON COORS BREWING CO -B	TAP	$ 14,668.88	0.06%	2.46%	5.32%	7.84%	0.0046%
TRANSDIGM GROUP INC	TDG	$ 17,821.62	0.07%	0.00%	11.80%	11.80%	0.0084%
TE CONNECTIVITY LTD	TEL	$ 34,663.76	0.14%	1.66%	8.99%	10.72%	0.0149%
TARGET CORP	TGT	$ 41,184.67	0.17%	3.42%	5.17%	8.68%	0.0143%
TIFFANY & CO	TIF	$ 16,930.36	0.07%	1.53%	12.34%	13.97%	0.0095%
TJX COMPANIES INC	TJX	$ 59,500.54	0.24%	1.67%	12.53%	14.29%	0.0341%
TORCHMARK CORP	TMK	$ 9,593.30	0.04%	0.76%	10.45%	11.24%	0.0043%
THERMO FISHER SCIENTIFIC INC	TMO	$ 86,821.37	0.35%	0.30%	11.50%	11.82%	0.0412%
TAPESTRY INC	TPR	$ 13,357.62	0.05%	2.94%	11.31%	14.42%	0.0077%
TRIPADVISOR INC	TRIP	$ 8,043.61	0.03%	0.00%	14.41%	14.41%	0.0047%
T ROWE PRICE GROUP INC	TROW	$ 30,192.12	0.12%	2.14%	12.57%	14.84%	0.0180%
TRAVELERS COS INC/THE	TRV	$ 34,963.70	0.14%	2.37%	16.58%	19.15%	0.0269%
TRACTOR SUPPLY COMPANY	TSCO	$ 9,080.54	0.04%	1.62%	13.29%	15.02%	0.0055%
TYSON FOODS INC-CL A	TSN	$ 28,688.86	0.12%	1.63%	8.50%	10.20%	0.0118%
TOTAL SYSTEM SERVICES INC	TSS	$ 15,760.37	0.06%	0.60%	14.57%	15.21%	0.0096%
TAKE-TWO INTERACTIVE SOFTWRE	TTWO	$ 13,898.27	0.06%	0.00%	10.00%	10.00%	0.0056%
TWITTER INC	TWTR	$ 34,472.13	0.14%	0.00%	30.68%	30.68%	0.0424%
TIME WARNER INC	TWX	$ 77,269.69	0.31%	1.64%	5.10%	6.78%	0.0210%
TEXAS INSTRUMENTS INC	TXN	$ 113,446.82	0.46%	2.19%	10.46%	12.76%	0.0581%
TEXTRON INC	TXT	$ 17,259.54	0.07%	0.12%	13.51%	13.64%	0.0095%
UNDER ARMOUR INC-CLASS A	UAA	$ 9,801.25	0.04%	0.00%	25.39%	25.39%	0.0100%
UNITED CONTINENTAL HOLDINGS	UAL	$ 20,487.15	0.08%	0.00%	20.48%	20.48%	0.0168%
UDR INC	UDR	$ 9,890.51	0.04%	3.49%	5.36%	8.95%	0.0036%
UNIVERSAL HEALTH SERVICES-B	UHS	$ 10,902.08	0.04%	0.23%	9.44%	9.67%	0.0042%
ULTA BEAUTY INC	ULTA	$ 14,917.41	0.06%	0.00%	18.50%	18.50%	0.0111%
UNITEDHEALTH GROUP INC	UNH	$ 245,991.98	0.99%	1.23%	13.05%	14.36%	0.1418%
UNUM GROUP	UNM	$ 8,657.56	0.03%	2.47%	7.00%	9.56%	0.0033%
UNION PACIFIC CORP	UNP	$ 113,241.55	0.45%	1.98%	14.20%	16.32%	0.0742%
UNITED PARCEL SERVICE-CL B	UPS	$ 100,619.33	0.40%	3.07%	8.73%	11.93%	0.0482%
UNITED RENTALS INC	URI	$ 13,446.52	0.05%	0.00%	17.76%	17.76%	0.0096%
US BANCORP	USB	$ 84,389.59	0.34%	2.56%	8.03%	10.69%	0.0362%
UNITED TECHNOLOGIES CORP	UTX	$ 101,535.55	0.41%	2.24%	10.59%	12.95%	0.0528%
VISA INC-CLASS A SHARES	V	$ 276,132.85	1.11%	0.61%	17.35%	18.01%	0.1997%
VARIAN MEDICAL SYSTEMS INC	VAR	$ 11,179.13	0.04%	0.00%	16.00%	16.00%	0.0072%
VF CORP	VFC	$ 33,473.45	0.13%	2.24%	8.06%	10.38%	0.0140%
VIACOM INC-CLASS B	VIAB	$ 12,058.09	0.05%	2.74%	4.17%	6.96%	0.0034%
VALERO ENERGY CORP	VLO	$ 49,645.28	0.20%	2.78%	26.80%	29.95%	0.0597%
VULCAN MATERIALS CO	VMC	$ 17,460.37	0.07%	0.82%	21.09%	22.00%	0.0154%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
VORNADO REALTY TRUST	VNO	$ 13,695.98	0.05%	3.48%	7.45%	11.06%	0.0061%
VERISK ANALYTICS INC	VRSK	$ 18,161.99	0.07%	0.00%	12.84%	12.84%	0.0094%
VERISIGN INC	VRSN	$ 17,511.36	0.07%	0.00%	10.40%	10.40%	0.0073%
VERTEX PHARMACEUTICALS INC	VRTX	$ 39,503.78	0.16%	0.00%	62.50%	62.50%	0.0991%
VENTAS INC	VTR	$ 19,322.82	0.08%	5.84%	1.83%	7.73%	0.0060%
VERIZON COMMUNICATIONS INC	VZ	$ 198,578.95	0.80%	4.97%	2.31%	7.34%	0.0585%
WATERS CORP	WAT	$ 15,766.49	0.06%	0.00%	10.11%	10.11%	0.0064%
WALGREENS BOOTS ALLIANCE INC	WBA	$ 65,251.59	0.26%	2.46%	10.73%	13.32%	0.0349%
WESTERN DIGITAL CORP	WDC	$ 24,118.91	0.10%	2.51%	14.08%	16.77%	0.0162%
WEC ENERGY GROUP INC	WEC	$ 19,121.65	0.08%	3.64%	3.00%	6.69%	0.0051%
WELLTOWER INC	WELL	$ 21,388.94	0.09%	6.06%	5.82%	12.05%	0.0103%
WELLS FARGO & CO	WFC	$ 267,910.60	1.08%	2.98%	10.66%	13.79%	0.1484%
WHIRLPOOL CORP	WHR	$ 10,763.61	0.04%	3.01%	9.98%	13.14%	0.0057%
WILLIS TOWERS WATSON PLC	WLTW	$ 20,419.37	0.08%	1.53%	10.00%	11.61%	0.0095%
WASTE MANAGEMENT INC	WM	$ 36,462.48	0.15%	2.19%	11.71%	14.03%	0.0205%
WILLIAMS COS INC	WMB	$ 22,074.33	0.09%	5.11%	-12.20%	-7.40%	-0.0066%
WALMART INC	WMT	$ 246,985.68	0.99%	2.51%	6.21%	8.79%	0.0872%
WESTROCK CO	WRK	$ 15,338.39	0.06%	2.88%	8.00%	10.99%	0.0068%
WESTERN UNION CO	WU	$ 9,532.45	0.04%	3.64%	4.26%	7.97%	0.0031%
WEYERHAEUSER CO	WY	$ 27,971.67	0.11%	3.51%	9.25%	12.92%	0.0145%
WYNN RESORTS LTD	WYNN	$ 18,819.22	0.08%	1.69%	18.70%	20.55%	0.0155%
CIMAREX ENERGY CO	XEC	$ 8,117.28	0.03%	0.58%	74.20%	74.99%	0.0244%
XCEL ENERGY INC	XEL	$ 22,048.77	0.09%	3.51%	5.88%	9.50%	0.0084%
XL GROUP LTD	XL	$ 14,510.57	N/A	1.64%	N/A	N/A	N/A
XILINX INC	XLNX	$ 17,794.03	0.07%	2.06%	10.20%	12.36%	0.0088%
EXXON MOBIL CORP	XOM	$ 341,501.09	1.37%	3.99%	13.05%	17.29%	0.2371%
DENTSPLY SIRONA INC	XRAY	$ 10,221.09	0.04%	0.80%	8.95%	9.78%	0.0040%
XEROX CORP	XRX	$ 6,980.76	N/A	3.61%	N/A	N/A	N/A
XYLEM INC	XYL	$ 12,837.39	N/A	1.18%	N/A	N/A	N/A
YUM! BRANDS INC	YUM	$ 26,704.20	0.11%	1.74%	12.40%	14.25%	0.0153%
ZIMMER BIOMET HOLDINGS INC	ZBH	$ 23,046.90	0.09%	0.87%	5.54%	6.43%	0.0060%
ZIONS BANCORPORATION	ZION	$ 10,896.52	0.04%	1.77%	10.23%	12.09%	0.0053%
ZOETIS INC	ZTS	$ 43,160.80	0.17%	0.56%	14.89%	15.49%	0.0268%
Total Market Capitalization:		24,910,989.71					15.73%

Notes:
[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]

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

[1] S&P 500 Est. Required Market Return	[2] Current 30-Year Treasury (30-day average)	[3] Implied Market Risk Premium
16.10%	3.11%	12.99%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	$ 21,004.06	0.09%	0.92%	12.00%	12.98%	0.0122%
AMERICAN AIRLINES GROUP INC	AAL	$ 20,490.38	0.09%	0.91%	3.50%	4.43%	0.0041%
ADVANCE AUTO PARTS INC	AAP	$ 9,627.73	0.04%	0.19%	13.00%	13.20%	0.0057%
APPLE INC	AAPL	$ 956,327.30	4.29%	1.53%	13.00%	14.63%	0.6277%
ABBVIE INC	ABBV	$ 157,598.00	0.71%	3.87%	15.00%	19.16%	0.1355%
AMERISOURCEBERGEN CORP	ABC	$ 19,029.83	0.09%	1.76%	7.00%	8.82%	0.0075%
ABIOMED INC	ABMD	$ 17,957.61	0.08%	0.00%	23.00%	23.00%	0.0185%
ABBOTT LABORATORIES	ABT	$ 110,766.40	0.50%	1.77%	9.50%	11.35%	0.0564%
ACCENTURE PLC-CL A	ACN	$ 102,385.70	0.46%	1.81%	9.50%	11.40%	0.0523%
ADOBE SYSTEMS INC	ADBE	$ 121,992.70	0.55%	0.00%	25.50%	25.50%	0.1396%
ANALOG DEVICES INC	ADI	$ 37,816.66	0.17%	1.88%	13.00%	15.00%	0.0255%
ARCHER-DANIELS-MIDLAND CO	ADM	$ 24,981.71	0.11%	3.00%	6.00%	9.09%	0.0102%
AUTOMATIC DATA PROCESSING	ADP	$ 59,443.98	0.27%	2.10%	11.00%	13.22%	0.0352%
ALLIANCE DATA SYSTEMS CORP	ADS	$ 12,241.63	0.05%	1.03%	13.00%	14.10%	0.0077%
AUTODESK INC	ADSK	$ 29,282.77	N/A	0.00%	N/A	N/A	N/A
AMEREN CORPORATION	AEE	$ 13,860.84	0.06%	3.30%	7.50%	10.92%	0.0068%
AMERICAN ELECTRIC POWER	AEP	$ 31,594.64	0.14%	4.01%	4.50%	8.60%	0.0122%
AES CORP	AES	$ 8,412.55	N/A	4.09%	N/A	N/A	N/A
AETNA INC	AET	$ 58,792.95	0.26%	1.11%	10.00%	11.17%	0.0295%
AFLAC INC	AFL	$ 35,436.58	0.16%	2.32%	6.50%	8.90%	0.0141%
ALLERGAN PLC	AGN	$ 55,348.53	0.25%	1.76%	5.00%	6.80%	0.0169%
AMERICAN INTERNATIONAL GROUP	AIG	$ 48,358.13	0.22%	2.38%	52.00%	55.00%	0.1193%
APARTMENT INVT & MGMT CO -A	AIV	$ -	0.00%	3.67%	4.50%	8.25%	0.0000%
ASSURANT INC	AIZ	$ 5,125.58	0.02%	2.30%	5.50%	7.86%	0.0018%
ARTHUR J GALLAGHER & CO	AJG	$ 12,244.41	0.05%	2.44%	17.00%	19.65%	0.0108%
AKAMAI TECHNOLOGIES INC	AKAM	$ 13,350.50	0.06%	0.00%	17.00%	17.00%	0.0102%
ALBEMARLE CORP	ALB	$ 10,546.19	0.05%	1.41%	10.00%	11.48%	0.0054%
ALIGN TECHNOLOGY INC	ALGN	$ 27,194.46	0.12%	0.00%	27.50%	27.50%	0.0336%
ALASKA AIR GROUP INC	ALK	$ 7,668.67	0.03%	2.06%	4.50%	6.61%	0.0023%
ALLSTATE CORP	ALL	$ 32,806.40	0.15%	1.97%	12.00%	14.09%	0.0207%
ALLEGION PLC	ALLE	$ 7,616.18	0.03%	1.05%	9.50%	10.60%	0.0036%
ALEXION PHARMACEUTICALS INC	ALXN	$ 26,390.72	0.12%	0.00%	18.00%	18.00%	0.0213%
APPLIED MATERIALS INC	AMAT	$ 51,662.46	0.23%	1.56%	21.00%	22.72%	0.0527%
ADVANCED MICRO DEVICES	AMD	$ 14,428.41	N/A	0.00%	N/A	N/A	N/A
AMETEK INC	AME	$ 17,549.06	0.08%	0.74%	10.50%	11.28%	0.0089%
AFFILIATED MANAGERS GROUP	AMG	$ 8,968.73	0.04%	0.85%	6.50%	7.38%	0.0030%
AMGEN INC	AMGN	$ 122,151.10	0.55%	2.91%	8.00%	11.03%	0.0604%
AMERIPRISE FINANCIAL INC	AMP	$ 20,602.71	0.09%	2.53%	16.00%	18.73%	0.0173%
AMERICAN TOWER CORP	AMT	$ 61,019.73	0.27%	2.37%	11.50%	14.01%	0.0383%
AMAZON.COM INC	AMZN	$ 819,310.50	3.68%	0.00%	48.00%	48.00%	1.7644%
ANDEAVOR	ANDV	$ 21,880.87	0.10%	1.63%	5.50%	7.17%	0.0070%
ANSYS INC	ANSS	$ 14,341.80	0.06%	0.00%	10.50%	10.50%	0.0068%
ANTHEM INC	ANTM	$ 58,670.57	0.26%	1.31%	15.50%	16.91%	0.0445%
AON PLC	AON	$ 34,828.21	0.16%	1.13%	9.50%	10.68%	0.0167%
SMITH (A.O.) CORP	AOS	$ 10,910.30	0.05%	1.13%	13.00%	14.20%	0.0070%
APACHE CORP	APA	$ 15,954.64	N/A	2.40%	N/A	N/A	N/A
ANADARKO PETROLEUM CORP	APC	$ 36,104.43	N/A	1.40%	N/A	N/A	N/A
AIR PRODUCTS & CHEMICALS INC	APD	$ 36,763.22	0.16%	2.62%	8.00%	10.72%	0.0177%
AMPHENOL CORP-CL A	APH	$ 27,433.70	0.12%	1.01%	9.00%	10.06%	0.0124%
APTIV PLC	APTV	$ 26,650.84	0.12%	0.87%	11.00%	11.92%	0.0142%
ALEXANDRIA REAL ESTATE EQUIT	ARE	N/A	N/A	0.00%	N/A	N/A	N/A
ARCONIC INC	ARNC	$ 8,666.84	N/A	1.34%	N/A	N/A	N/A
ACTIVISION BLIZZARD INC	ATVI	$ 56,266.19	0.25%	0.46%	13.50%	13.99%	0.0353%
AVALONBAY COMMUNITIES INC	AVB	$ -	0.00%	3.58%	7.00%	10.71%	0.0000%
BROADCOM INC	AVGO	$ 108,514.60	0.49%	2.65%	38.00%	41.15%	0.2004%
AVERY DENNISON CORP	AVY	$ 9,356.00	0.04%	1.99%	12.50%	14.61%	0.0061%
AMERICAN WATER WORKS CO INC	AWK	$ 14,113.23	0.06%	2.32%	8.50%	10.92%	0.0069%
AMERICAN EXPRESS CO	AXP	$ 87,272.80	0.39%	1.47%	8.50%	10.03%	0.0393%
ACUITY BRANDS INC	AYI	$ 4,951.98	0.02%	0.43%	13.00%	13.46%	0.0030%
AUTOZONE INC	AZO	$ 18,116.74	0.08%	0.00%	12.50%	12.50%	0.0102%
BOEING CO/THE	BA	$ 215,303.30	0.97%	2.01%	18.00%	20.19%	0.1950%
BANK OF AMERICA CORP	BAC	$ 306,193.10	1.37%	1.80%	13.00%	14.92%	0.2049%
BAXTER INTERNATIONAL INC	BAX	$ 39,888.93	0.18%	1.02%	13.50%	14.59%	0.0261%
BB&T CORP	BBT	$ 42,434.10	0.19%	2.87%	9.00%	12.00%	0.0228%
BEST BUY CO INC	BBY	$ 21,211.36	0.10%	2.51%	10.50%	13.14%	0.0125%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
BECTON DICKINSON AND CO	BDX	$ 61,400.35	0.28%	1.32%	10.00%	11.39%	0.0314%
FRANKLIN RESOURCES INC	BEN	$ 18,569.34	0.08%	2.86%	7.50%	10.47%	0.0087%
BROWN-FORMAN CORP-CLASS B	BF/B	$ 24,640.75	0.11%	1.37%	14.00%	15.47%	0.0171%
BRIGHTHOUSE FINANCIAL INC	BHF	N/A	N/A	0.00%	N/A	N/A	N/A
BAKER HUGHES A GE CO	BHGE	$ 14,639.18	N/A	2.08%	N/A	N/A	N/A
BIOGEN INC	BIIB	$ 64,435.51	0.29%	0.00%	7.50%	7.50%	0.0217%
BANK OF NEW YORK MELLON CORP	BK	$ 58,265.47	0.26%	1.67%	9.00%	10.75%	0.0281%
BOOKING HOLDINGS INC	BKNG	$ 102,863.80	0.46%	0.00%	14.00%	14.00%	0.0646%
BLACKROCK INC	BLK	$ 88,031.54	0.39%	2.10%	12.00%	14.23%	0.0562%
BALL CORP	BLL	$ 13,033.43	0.06%	1.07%	21.00%	22.18%	0.0130%
BRISTOL-MYERS SQUIBB CO	BMY	$ 86,009.39	0.39%	3.04%	15.00%	18.27%	0.0705%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	$ -	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	$ 42,809.67	0.19%	0.00%	16.00%	16.00%	0.0307%
BORGWARNER INC	BWA	$ 10,547.12	0.05%	1.36%	9.00%	10.42%	0.0049%
BOSTON PROPERTIES INC	BXP	$ -	0.00%	2.62%	3.50%	6.17%	0.0000%
CITIGROUP INC	C	$ 174,542.90	0.78%	1.94%	11.00%	13.05%	0.1022%
CA INC	CA	$ 14,975.08	0.07%	2.86%	7.00%	9.96%	0.0067%
CONAGRA BRANDS INC	CAG	$ 14,631.04	0.07%	2.34%	6.50%	8.92%	0.0059%
CARDINAL HEALTH INC	CAH	$ 16,467.45	0.07%	3.61%	11.00%	14.81%	0.0109%
CATERPILLAR INC	CAT	$ 93,446.58	0.42%	2.00%	17.50%	19.68%	0.0825%
CHUBB LTD	CB	$ 61,596.84	0.28%	2.21%	9.50%	11.81%	0.0327%
CBOE GLOBAL MARKETS INC	CBOE	$ 11,582.83	0.05%	1.05%	15.50%	16.63%	0.0086%
CBRE GROUP INC - A	CBRE	$ 16,246.22	0.07%	0.00%	11.50%	11.50%	0.0084%
CBS CORP-CLASS B NON VOTING	CBS	$ 19,434.81	0.09%	1.41%	10.50%	11.98%	0.0104%
CROWN CASTLE INTL CORP	CCI	$ 42,529.20	0.19%	4.39%	12.00%	16.65%	0.0318%
CARNIVAL CORP	CCL	$ 45,487.85	0.20%	3.26%	12.50%	15.96%	0.0326%
CADENCE DESIGN SYS INC	CDNS	$ 12,426.42	0.06%	0.00%	10.50%	10.50%	0.0059%
CELGENE CORP	CELG	$ 57,682.15	0.26%	0.00%	19.50%	19.50%	0.0505%
CERNER CORP	CERN	$ 19,987.21	0.09%	0.00%	9.00%	9.00%	0.0081%
CF INDUSTRIES HOLDINGS INC	CF	$ 10,008.77	0.04%	3.03%	47.00%	50.74%	0.0228%
CITIZENS FINANCIAL GROUP	CFG	$ 20,433.26	0.09%	2.15%	15.50%	17.82%	0.0163%
CHURCH & DWIGHT CO INC	CHD	$ 11,588.78	0.05%	1.84%	9.00%	10.92%	0.0057%
C.H. ROBINSON WORLDWIDE INC	CHRW	$ 12,261.67	0.06%	2.09%	10.50%	12.70%	0.0070%
CHARTER COMMUNICATIONS INC-A	CHTR	$ 66,059.84	0.30%	0.00%	19.50%	19.50%	0.0578%
CIGNA CORP	CI	$ 43,085.19	0.19%	0.02%	12.50%	12.52%	0.0242%
CINCINNATI FINANCIAL CORP	CINF	$ 11,613.36	0.05%	3.00%	7.00%	10.11%	0.0053%
COLGATE-PALMOLIVE CO	CL	$ 54,746.87	0.25%	2.68%	11.00%	13.83%	0.0340%
CLOROX COMPANY	CLX	$ 16,127.86	0.07%	3.08%	8.00%	11.20%	0.0081%
COMERICA INC	CMA	$ 16,681.69	0.07%	1.41%	16.50%	18.03%	0.0135%
COMCAST CORP-CLASS A	CMCSA	$ 147,747.70	0.66%	2.38%	12.50%	15.03%	0.0996%
CME GROUP INC	CME	$ 58,295.08	0.26%	1.63%	4.50%	6.17%	0.0161%
CHIPOTLE MEXICAN GRILL INC	CMG	$ 12,473.84	0.06%	0.00%	18.00%	18.00%	0.0101%
CUMMINS INC	CMI	$ 23,704.24	0.11%	3.00%	8.50%	11.63%	0.0124%
CMS ENERGY CORP	CMS	$ 12,254.85	0.05%	3.41%	7.00%	10.53%	0.0058%
CENTENE CORP	CNC	$ 21,070.43	0.09%	0.00%	11.50%	11.50%	0.0109%
CENTERPOINT ENERGY INC	CNP	$ 10,963.68	0.05%	4.45%	8.50%	13.14%	0.0065%
CAPITAL ONE FINANCIAL CORP	COF	$ 47,013.65	0.21%	1.65%	5.50%	7.20%	0.0152%
CABOT OIL & GAS CORP	COG	$ 10,591.41	N/A	1.03%	N/A	N/A	N/A
ROCKWELL COLLINS INC	COL	$ 22,833.65	0.10%	0.95%	12.50%	13.51%	0.0138%
COOPER COS INC/THE	COO	$ 11,098.50	0.05%	0.03%	16.50%	16.53%	0.0082%
CONOCOPHILLIPS	COP	$ 81,296.18	N/A	1.64%	N/A	N/A	N/A
COSTCO WHOLESALE CORP	COST	$ 88,847.61	0.40%	1.13%	9.00%	10.18%	0.0406%
COTY INC-CL A	COTY	$ 10,064.21	0.05%	3.73%	7.00%	10.86%	0.0049%
CAMPBELL SOUP CO	CPB	$ 10,080.49	0.05%	4.18%	4.50%	8.77%	0.0040%
SALESFORCE.COM INC	CRM	$ 96,000.90	N/A	0.00%	N/A	N/A	N/A
CISCO SYSTEMS INC	CSCO	$ 206,639.10	0.93%	3.02%	7.50%	10.63%	0.0986%
CSX CORP	CSX	$ 57,554.53	0.26%	1.34%	17.50%	18.96%	0.0489%
CINTAS CORP	CTAS	$ 19,927.98	0.09%	0.95%	14.50%	15.52%	0.0139%
CENTURYLINK INC	CTL	$ 19,005.49	0.09%	12.26%	2.50%	14.91%	0.0127%
COGNIZANT TECH SOLUTIONS-A	CTSH	$ 44,957.92	0.20%	1.04%	11.50%	12.60%	0.0254%
CITRIX SYSTEMS INC	CTXS	$ 14,845.84	0.07%	0.00%	6.50%	6.50%	0.0043%
CVS HEALTH CORP	CVS	$ 66,060.32	0.30%	3.08%	9.00%	12.22%	0.0362%
CHEVRON CORP	CVX	$ 242,615.10	1.09%	3.53%	31.00%	35.08%	0.3818%
CONCHO RESOURCES INC	CXO	$ 19,429.91	0.09%	0.00%	33.00%	33.00%	0.0288%
DOMINION ENERGY INC	D	$ 40,740.67	0.18%	5.63%	6.50%	12.31%	0.0225%
DELTA AIR LINES INC	DAL	$ 37,554.47	0.17%	2.69%	10.50%	13.33%	0.0225%
DEERE & CO	DE	$ 51,447.81	0.23%	1.74%	15.50%	17.37%	0.0401%
DISCOVER FINANCIAL SERVICES	DFS	$ 26,545.96	0.12%	1.85%	8.00%	9.92%	0.0118%
DOLLAR GENERAL CORP	DG	$ 25,102.29	0.11%	1.24%	12.50%	13.82%	0.0156%
QUEST DIAGNOSTICS INC	DGX	$ 14,633.60	0.07%	1.86%	9.50%	11.45%	0.0075%
DR HORTON INC	DHI	$ 16,017.28	0.07%	1.18%	12.00%	13.25%	0.0095%
DANAHER CORP	DHR	$ 71,596.25	0.32%	0.62%	10.50%	11.15%	0.0358%
WALT DISNEY CO/THE	DIS	$ 153,705.00	0.69%	1.64%	9.00%	10.71%	0.0739%
DISCOVERY INC - A	DISCA	$ 11,889.20	0.05%	0.00%	15.00%	15.00%	0.0080%
DISH NETWORK CORP-A	DISH	$ 14,937.57	0.07%	0.00%	1.00%	1.00%	0.0007%
DIGITAL REALTY TRUST INC	DLR	$ -	0.00%	3.82%	6.50%	10.44%	0.0000%
DOLLAR TREE INC	DLTR	$ 19,490.09	0.09%	0.00%	19.50%	19.50%	0.0171%
DOVER CORP	DOV	$ 12,208.73	0.05%	2.38%	10.50%	13.00%	0.0071%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
DR PEPPER SNAPPLE GROUP INC	DPS	$ 21,664.13	0.10%	2.00%	7.00%	9.07%	0.0088%
DUKE REALTY CORP	DRE	$ -	0.00%	2.88%	1.00%	3.89%	0.0000%
DARDEN RESTAURANTS INC	DRI	$ 11,314.41	0.05%	2.78%	13.00%	15.96%	0.0081%
DTE ENERGY COMPANY	DTE	$ 17,611.11	0.08%	3.83%	7.00%	10.96%	0.0087%
DUKE ENERGY CORP	DUK	$ 51,509.48	0.23%	5.01%	5.50%	10.65%	0.0246%
DAVITA INC	DVA	$ 12,303.24	0.06%	0.00%	11.00%	11.00%	0.0061%
DEVON ENERGY CORP	DVN	$ 22,048.92	0.10%	0.76%	29.00%	29.87%	0.0295%
DOWDUPONT INC	DWDP	$ 161,093.00	N/A	2.31%	N/A	N/A	N/A
DXC TECHNOLOGY CO	DXC	$ 24,100.67	0.11%	0.90%	17.00%	17.98%	0.0194%
ELECTRONIC ARTS INC	EA	$ 42,031.37	0.19%	0.00%	12.00%	12.00%	0.0226%
EBAY INC	EBAY	$ 40,733.15	0.18%	0.00%	12.50%	12.50%	0.0228%
ECOLAB INC	ECL	$ 42,083.49	0.19%	1.12%	9.00%	10.17%	0.0192%
CONSOLIDATED EDISON INC	ED	$ 22,637.69	0.10%	4.00%	3.00%	7.06%	0.0072%
EQUIFAX INC	EFX	$ 15,216.75	0.07%	1.23%	8.00%	9.28%	0.0063%
EDISON INTERNATIONAL	EIX	$ 19,457.43	0.09%	4.15%	4.50%	8.74%	0.0076%
ESTEE LAUDER COMPANIES-CL A	EL	$ 55,649.78	0.25%	1.08%	13.50%	14.65%	0.0366%
EASTMAN CHEMICAL CO	EMN	$ 15,447.37	0.07%	2.07%	8.50%	10.66%	0.0074%
EMERSON ELECTRIC CO	EMR	$ 46,335.72	0.21%	2.66%	11.50%	14.31%	0.0298%
EOG RESOURCES INC	EOG	$ 68,259.41	N/A	0.64%	N/A	N/A	N/A
EQUINIX INC	EQIX	$ 31,578.20	0.14%	2.30%	26.00%	28.60%	0.0405%
EQUITY RESIDENTIAL	EQR	$ -	0.00%	3.37%	-13.00%	-9.85%	0.0000%
EQT CORP	EQT	$ 14,084.75	0.06%	0.23%	40.50%	40.78%	0.0258%
EVERSOURCE ENERGY	ES	$ 17,895.86	0.08%	3.83%	5.00%	8.93%	0.0072%
EXPRESS SCRIPTS HOLDING CO	ESRX	$ 43,896.85	0.20%	0.00%	14.50%	14.50%	0.0286%
ESSEX PROPERTY TRUST INC	ESS	$ -	0.00%	3.11%	5.00%	8.19%	0.0000%
E*TRADE FINANCIAL CORP	ETFC	$ 17,200.89	0.08%	0.00%	17.00%	17.00%	0.0131%
EATON CORP PLC	ETN	$ 35,132.68	0.16%	3.29%	9.00%	12.44%	0.0196%
ENTERGY CORP	ETR	$ 13,854.63	0.06%	4.72%	2.00%	6.77%	0.0042%
ENVISION HEALTHCARE CORP	EVHC	$ 5,203.88	N/A	0.00%	N/A	N/A	N/A
EVERGY INC	EVRG	N/A	N/A	0.00%	N/A	N/A	N/A
EDWARDS LIFESCIENCES CORP	EW	$ 29,779.50	0.13%	0.00%	15.00%	15.00%	0.0200%
EXELON CORP	EXC	$ 38,654.82	0.17%	3.61%	8.00%	11.75%	0.0204%
EXPEDITORS INTL WASH INC	EXPD	$ 13,263.09	0.06%	1.18%	9.00%	10.23%	0.0061%
EXPEDIA GROUP INC	EXPE	$ 18,148.36	0.08%	1.00%	21.00%	22.11%	0.0180%
EXTRA SPACE STORAGE INC	EXR	$ -	0.00%	3.52%	9.00%	12.68%	0.0000%
FORD MOTOR CO	F	$ 47,939.00	0.22%	4.99%	2.50%	7.55%	0.0162%
FASTENAL CO	FAST	$ 15,230.15	0.07%	2.80%	7.50%	10.41%	0.0071%
FACEBOOK INC-A	FB	$ 546,098.30	2.45%	0.00%	28.50%	28.50%	0.6983%
FORTUNE BRANDS HOME & SECURI	FBHS	$ 8,411.00	0.04%	1.39%	14.00%	15.49%	0.0058%
FREEPORT-MCMORAN INC	FCX	$ 25,980.57	N/A	1.12%	N/A	N/A	N/A
FEDEX CORP	FDX	$ 68,741.06	0.31%	0.86%	11.00%	11.91%	0.0367%
FIRSTENERGY CORP	FE	$ 15,900.14	0.07%	4.32%	3.00%	7.38%	0.0053%
F5 NETWORKS INC	FFIV	$ 10,812.47	0.05%	0.00%	10.50%	10.50%	0.0051%
FIDELITY NATIONAL INFO SERV	FIS	$ 34,805.10	0.16%	1.21%	16.00%	17.31%	0.0270%
FISERV INC	FISV	$ 30,853.77	0.14%	0.00%	10.00%	10.00%	0.0138%
FIFTH THIRD BANCORP	FITB	$ 21,657.87	0.10%	2.28%	6.50%	8.85%	0.0086%
FOOT LOCKER INC	FL	$ 6,760.10	0.03%	2.39%	7.50%	9.98%	0.0030%
FLIR SYSTEMS INC	FLIR	$ 7,565.45	0.03%	1.18%	11.50%	12.75%	0.0043%
FLUOR CORP	FLR	$ 6,983.50	0.03%	1.69%	4.00%	5.72%	0.0018%
FLOWSERVE CORP	FLS	$ 5,496.20	0.02%	1.81%	2.00%	3.83%	0.0009%
FMC CORP	FMC	$ 11,943.50	0.05%	0.83%	19.00%	19.91%	0.0107%
TWENTY-FIRST CENTURY FOX-A	FOXA	$ 73,453.05	0.33%	0.91%	13.00%	13.97%	0.0460%
FEDERAL REALTY INVS TRUST	FRT	$ -	0.00%	3.34%	4.00%	7.41%	0.0000%
TECHNIPFMC PLC	FTI	N/A	N/A	0.00%	N/A	N/A	N/A
FORTIVE CORP	FTV	$ 27,176.03	N/A	0.36%	N/A	N/A	N/A
GENERAL DYNAMICS CORP	GD	$ 60,253.14	0.27%	1.83%	9.00%	10.91%	0.0295%
GENERAL ELECTRIC CO	GE	$ 119,684.00	0.54%	3.48%	9.50%	13.15%	0.0706%
GGP INC	GGP	$ -	0.00%	4.66%	-0.50%	4.15%	0.0000%
GILEAD SCIENCES INC	GILD	$ 93,469.99	0.42%	3.17%	-1.00%	2.15%	0.0090%
GENERAL MILLS INC	GIS	$ 24,069.62	0.11%	4.64%	4.00%	8.73%	0.0094%
CORNING INC	GLW	$ 23,969.92	0.11%	2.50%	13.00%	15.66%	0.0168%
GENERAL MOTORS CO	GM	$ 62,020.35	0.28%	3.55%	3.50%	7.11%	0.0198%
ALPHABET INC-CL A	GOOGL	N/A	N/A	0.00%	N/A	N/A	N/A
GENUINE PARTS CO	GPC	$ 13,855.00	0.06%	3.05%	9.00%	12.19%	0.0076%
GLOBAL PAYMENTS INC	GPN	$ 18,660.57	0.08%	0.03%	11.00%	11.03%	0.0092%
GAP INC/THE	GPS	$ 12,205.98	0.05%	3.08%	6.50%	9.68%	0.0053%
GARMIN LTD	GRMN	$ 11,580.84	0.05%	3.45%	7.00%	10.57%	0.0055%
GOLDMAN SACHS GROUP INC	GS	$ 88,175.47	0.40%	1.37%	9.00%	10.43%	0.0413%
GOODYEAR TIRE & RUBBER CO	GT	$ 6,069.60	0.03%	2.57%	12.50%	15.23%	0.0041%
WW GRAINGER INC	GWW	$ 17,497.47	0.08%	1.74%	8.50%	10.31%	0.0081%
HALLIBURTON CO	HAL	$ 42,813.75	N/A	1.47%	N/A	N/A	N/A
HASBRO INC	HAS	$ 11,100.18	0.05%	2.84%	9.50%	12.47%	0.0062%
HUNTINGTON BANCSHARES INC	HBAN	$ 17,143.95	0.08%	2.96%	11.00%	14.12%	0.0109%
HANESBRANDS INC	HBI	$ 7,138.81	0.03%	3.43%	6.00%	9.53%	0.0031%
HCA HEALTHCARE INC	HCA	$ 36,966.06	0.17%	1.33%	12.50%	13.91%	0.0231%
HCP INC	HCP	$ -	0.00%	6.14%	8.00%	14.39%	0.0000%
HOME DEPOT INC	HD	$ 226,380.20	1.02%	2.10%	12.00%	14.23%	0.1445%
HESS CORP	HES	$ 19,201.07	N/A	1.60%	N/A	N/A	N/A

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
HARTFORD FINANCIAL SVCS GRP	HIG	$ 18,826.62	0.08%	1.90%	13.00%	15.02%	0.0127%
HUNTINGTON INGALLS INDUSTRIE	HII	$ 9,925.73	0.04%	1.29%	12.50%	13.87%	0.0062%
HILTON WORLDWIDE HOLDINGS IN	HLT	$ 26,673.89	0.12%	0.71%	8.50%	9.24%	0.0111%
HARLEY-DAVIDSON INC	HOG	$ 7,081.90	0.03%	3.48%	9.00%	12.64%	0.0040%
HOLOGIC INC	HOLX	$ 10,443.15	0.05%	0.00%	22.00%	22.00%	0.0103%
HONEYWELL INTERNATIONAL INC	HON	$ 113,600.60	0.51%	1.96%	9.50%	11.55%	0.0589%
HELMERICH & PAYNE	HP	$ 7,252.30	0.03%	4.26%	56.50%	61.96%	0.0202%
HEWLETT PACKARD ENTERPRISE	HPE	$ 24,309.84	0.11%	2.83%	-0.50%	2.32%	0.0025%
HP INC	HPQ	$ 37,939.05	0.17%	2.46%	5.50%	8.03%	0.0137%
H&R BLOCK INC	HRB	$ 6,051.90	0.03%	3.39%	10.50%	14.07%	0.0038%
HORMEL FOODS CORP	HRL	$ 19,063.67	0.09%	2.11%	9.50%	11.71%	0.0100%
HARRIS CORP	HRS	$ 18,136.24	0.08%	1.55%	11.50%	13.14%	0.0107%
HENRY SCHEIN INC	HSIC	$ 10,965.04	0.05%	0.00%	9.00%	9.00%	0.0044%
HOST HOTELS & RESORTS INC	HST	$ -	0.00%	3.62%	-1.00%	2.60%	0.0000%
HERSHEY CO/THE	HSY	$ 19,066.96	0.09%	2.88%	7.50%	10.49%	0.0090%
HUMANA INC	HUM	$ 40,811.62	0.18%	0.68%	13.00%	13.72%	0.0251%
INTL BUSINESS MACHINES CORP	IBM	$ 133,435.80	0.60%	4.33%	1.00%	5.35%	0.0320%
INTERCONTINENTAL EXCHANGE IN	ICE	$ 43,859.69	0.20%	1.27%	11.50%	12.84%	0.0253%
IDEXX LABORATORIES INC	IDXX	$ 18,968.83	0.09%	0.00%	17.00%	17.00%	0.0145%
INTL FLAVORS & FRAGRANCES	IFF	$ 9,961.28	0.04%	2.31%	8.50%	10.91%	0.0049%
ILLUMINA INC	ILMN	$ 41,264.37	0.19%	0.00%	16.00%	16.00%	0.0296%
INCYTE CORP	INCY	$ 14,624.51	N/A	0.00%	N/A	N/A	N/A
IHS MARKIT LTD	INFO	$ 20,453.77	0.09%	0.00%	18.50%	18.50%	0.0170%
INTEL CORP	INTC	$ 260,400.80	1.17%	2.15%	13.00%	15.29%	0.1786%
INTUIT INC	INTU	$ 52,920.96	0.24%	0.76%	14.50%	15.32%	0.0364%
INTERNATIONAL PAPER CO	IP	$ 24,269.87	0.11%	3.24%	15.50%	18.99%	0.0207%
INTERPUBLIC GROUP OF COS INC	IPG	$ 8,863.11	0.04%	3.65%	9.50%	13.32%	0.0053%
IPG PHOTONICS CORP	IPGP	$ 13,354.06	0.06%	0.00%	13.50%	13.50%	0.0081%
IQVIA HOLDINGS INC	IQV	$ 21,428.41	0.10%	0.00%	14.50%	14.50%	0.0139%
INGERSOLL-RAND PLC	IR	$ 22,468.80	0.10%	1.99%	9.00%	11.08%	0.0112%
IRON MOUNTAIN INC	IRM	$ 9,950.12	0.04%	6.78%	12.50%	19.70%	0.0088%
INTUITIVE SURGICAL INC	ISRG	$ 54,989.02	0.25%	0.00%	17.50%	17.50%	0.0432%
GARTNER INC	IT	$ 12,529.66	0.06%	0.00%	13.50%	13.50%	0.0076%
ILLINOIS TOOL WORKS	ITW	$ 50,216.94	0.23%	2.11%	11.50%	13.73%	0.0309%
INVESCO LTD	IVZ	$ 11,402.78	0.05%	4.32%	7.50%	11.98%	0.0061%
HUNT (JB) TRANSPRT SVCS INC	JBHT	$ 13,968.26	0.06%	0.76%	13.00%	13.81%	0.0087%
JOHNSON CONTROLS INTERNATION	JCI	$ 32,361.57	0.15%	2.98%	3.00%	6.02%	0.0087%
JACOBS ENGINEERING GROUP INC	JEC	$ 9,360.28	0.04%	0.91%	11.00%	11.96%	0.0050%
JEFFERIES FINANCIAL GROUP IN	JEF	$ 8,215.97	0.04%	1.74%	24.00%	25.95%	0.0096%
JOHNSON & JOHNSON	JNJ	$ 330,794.40	1.48%	2.92%	9.00%	12.05%	0.1789%
JUNIPER NETWORKS INC	JNPR	$ 9,573.07	0.04%	2.63%	4.50%	7.19%	0.0031%
JPMORGAN CHASE & CO	JPM	$ 377,249.30	1.69%	2.13%	9.50%	11.73%	0.1985%
NORDSTROM INC	JWN	$ 8,757.48	0.04%	2.84%	5.50%	8.42%	0.0033%
KELLOGG CO	K	$ 21,604.22	0.10%	3.57%	7.00%	10.69%	0.0104%
KEYCORP	KEY	$ 21,756.70	0.10%	2.35%	12.50%	15.00%	0.0146%
KRAFT HEINZ CO/THE	KHC	$ 70,472.73	0.32%	4.47%	9.50%	14.18%	0.0448%
KIMCO REALTY CORP	KIM	$ -	0.00%	7.00%	-0.50%	6.48%	0.0000%
KLA-TENCOR CORP	KLAC	$ 18,070.24	0.08%	2.59%	15.50%	18.29%	0.0148%
KIMBERLY-CLARK CORP	KMB	$ 35,568.68	0.16%	3.93%	9.50%	13.62%	0.0217%
KINDER MORGAN INC	KMI	$ 37,599.66	0.17%	4.69%	57.00%	63.03%	0.1063%
CARMAX INC	KMX	$ 13,263.22	0.06%	0.00%	11.50%	11.50%	0.0068%
COCA-COLA CO/THE	KO	$ 185,011.00	0.83%	3.59%	6.50%	10.21%	0.0847%
MICHAEL KORS HOLDINGS LTD	KORS	$ 9,651.95	0.04%	0.00%	5.00%	5.00%	0.0022%
KROGER CO	KR	$ 21,732.60	0.10%	2.40%	5.00%	7.46%	0.0073%
KOHLS CORP	KSS	$ 13,073.76	0.06%	3.14%	7.50%	10.76%	0.0063%
KANSAS CITY SOUTHERN	KSU	$ 11,067.57	0.05%	1.34%	12.50%	13.92%	0.0069%
LOEWS CORP	L	$ 16,161.71	0.07%	0.50%	16.50%	17.04%	0.0124%
L BRANDS INC	LB	$ 10,438.90	0.05%	6.53%	0.50%	7.05%	0.0033%
LEGGETT & PLATT INC	LEG	$ 5,648.55	0.03%	3.53%	9.00%	12.69%	0.0032%
LENNAR CORP-A	LEN	$ 17,078.87	0.08%	0.32%	12.00%	12.34%	0.0095%
LABORATORY CRP OF AMER HLDGS	LH	$ 18,782.31	0.08%	0.00%	9.50%	9.50%	0.0080%
LKQ CORP	LKQ	$ 10,084.68	0.05%	0.00%	11.00%	11.00%	0.0050%
L3 TECHNOLOGIES INC	LLL	$ 15,858.68	0.07%	1.58%	11.00%	12.67%	0.0090%
ELI LILLY & CO	LLY	$ 93,216.73	0.42%	2.62%	11.50%	14.27%	0.0597%
LOCKHEED MARTIN CORP	LMT	$ 91,926.06	0.41%	2.61%	13.00%	15.78%	0.0651%
LINCOLN NATIONAL CORP	LNC	$ 14,995.92	0.07%	1.98%	7.50%	9.55%	0.0064%
ALLIANT ENERGY CORP	LNT	$ 9,071.78	0.04%	3.42%	6.50%	10.03%	0.0041%
LOWE'S COS INC	LOW	$ 81,599.95	0.37%	1.93%	13.50%	15.56%	0.0570%
LAM RESEARCH CORP	LRCX	$ 30,987.00	0.14%	2.33%	19.50%	22.06%	0.0307%
SOUTHWEST AIRLINES CO	LUV	$ 29,361.22	0.13%	1.26%	11.50%	12.83%	0.0169%
LYONDELLBASELL INDU-CL A	LYB	$ 46,643.36	0.21%	3.37%	7.50%	11.00%	0.0230%
MACY'S INC	M	$ 12,319.18	0.06%	3.76%	5.00%	8.85%	0.0049%
MASTERCARD INC - A	MA	$ 209,117.90	0.94%	0.50%	15.00%	15.54%	0.1458%
MID-AMERICA APARTMENT COMM	MAA	$ -	0.00%	3.87%	-2.50%	1.32%	0.0000%
MACERICH CO/THE	MAC	$ -	0.00%	5.32%	8.00%	13.53%	0.0000%
MARRIOTT INTERNATIONAL -CL A	MAR	$ 49,473.31	0.22%	1.18%	12.50%	13.75%	0.0305%
MASCO CORP	MAS	$ 11,861.08	0.05%	1.09%	16.00%	17.18%	0.0091%
MATTEL INC	MAT	$ 5,662.24	0.03%	0.00%	26.50%	26.50%	0.0067%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
MCDONALD'S CORP	MCD	$ 133,075.70	0.60%	2.42%	10.00%	12.54%	0.0749%
MICROCHIP TECHNOLOGY INC	MCHP	$ 23,954.34	0.11%	1.43%	13.50%	15.03%	0.0161%
MCKESSON CORP	MCK	$ 30,049.15	0.13%	0.93%	9.50%	10.47%	0.0141%
MOODY'S CORP	MCO	$ 34,115.88	0.15%	0.99%	13.00%	14.05%	0.0215%
MONDELEZ INTERNATIONAL INC-A	MDLZ	$ 58,513.51	0.26%	2.47%	9.50%	12.09%	0.0317%
MEDTRONIC PLC	MDT	$ 117,406.30	0.53%	2.22%	7.50%	9.80%	0.0516%
METLIFE INC	MET	$ 48,225.66	0.22%	3.57%	6.00%	9.68%	0.0209%
MGM RESORTS INTERNATIONAL	MGM	$ 17,454.71	0.08%	1.53%	25.00%	26.72%	0.0209%
MOHAWK INDUSTRIES INC	MHK	$ 15,500.63	0.07%	0.00%	10.00%	10.00%	0.0070%
MCCORMICK & CO-NON VTG SHRS	MKC	$ 13,263.42	0.06%	2.08%	9.50%	11.68%	0.0069%
MARTIN MARIETTA MATERIALS	MLM	$ 14,450.40	0.06%	0.77%	12.00%	12.82%	0.0083%
MARSH & MCLENNAN COS	MMC	$ 41,811.04	0.19%	2.02%	9.00%	11.11%	0.0208%
3M CO	MMM	$ 121,748.40	0.55%	2.65%	9.50%	12.28%	0.0671%
MONSTER BEVERAGE CORP	MNST	$ 29,722.42	0.13%	0.00%	14.50%	14.50%	0.0193%
ALTRIA GROUP INC	MO	$ 107,361.00	0.48%	4.94%	10.50%	15.70%	0.0756%
MOSAIC CO/THE	MOS	$ 11,292.69	0.05%	0.34%	10.00%	10.36%	0.0052%
MARATHON PETROLEUM CORP	MPC	$ 36,963.05	0.17%	2.53%	13.00%	15.69%	0.0260%
MERCK & CO. INC.	MRK	$ 166,906.90	0.75%	3.10%	5.50%	8.69%	0.0650%
MARATHON OIL CORP	MRO	$ 17,998.30	N/A	0.95%	N/A	N/A	N/A
MORGAN STANLEY	MS	$ 92,492.92	0.41%	1.92%	11.00%	13.03%	0.0541%
MSCI INC	MSCI	$ 14,846.67	0.07%	1.09%	22.00%	23.21%	0.0155%
MICROSOFT CORP	MSFT	$ 775,767.30	3.48%	1.67%	12.00%	13.77%	0.4793%
MOTOROLA SOLUTIONS INC	MSI	$ 18,190.86	0.08%	1.99%	12.00%	14.11%	0.0115%
M & T BANK CORP	MTB	$ 26,081.78	0.12%	1.80%	12.00%	13.91%	0.0163%
METTLER-TOLEDO INTERNATIONAL	MTD	$ 14,997.61	0.07%	0.00%	11.00%	11.00%	0.0074%
MICRON TECHNOLOGY INC	MU	$ 69,051.54	0.31%	0.00%	24.00%	24.00%	0.0744%
MYLAN NV	MYL	$ 21,135.37	0.09%	0.00%	8.50%	8.50%	0.0081%
NOBLE ENERGY INC	NBL	$ 17,041.65	N/A	1.26%	N/A	N/A	N/A
NORWEGIAN CRUISE LINE HOLDIN	NCLH	$ 11,671.87	0.05%	0.00%	16.50%	16.50%	0.0086%
NASDAQ INC	NDAQ	$ 15,898.36	0.07%	1.85%	9.00%	10.93%	0.0078%
NEXTERA ENERGY INC	NEE	$ 73,654.98	0.33%	2.93%	8.50%	11.55%	0.0382%
NEWMONT MINING CORP	NEM	$ 20,581.89	0.09%	1.45%	8.50%	10.01%	0.0092%
NETFLIX INC	NFLX	$ 157,085.00	0.70%	0.00%	47.00%	47.00%	0.3312%
NEWFIELD EXPLORATION CO	NFX	$ 5,766.09	0.03%	0.00%	21.00%	21.00%	0.0054%
NISOURCE INC	NI	$ 7,953.81	0.04%	3.31%	18.00%	21.61%	0.0077%
NIKE INC -CL B	NKE	$ 121,036.40	0.54%	1.07%	14.00%	15.14%	0.0822%
NEKTAR THERAPEUTICS	NKTR	$ 8,601.22	N/A	0.00%	N/A	N/A	N/A
NIELSEN HOLDINGS PLC	NLSN	$ 11,025.16	0.05%	4.52%	7.50%	12.19%	0.0060%
NORTHROP GRUMMAN CORP	NOC	$ 58,953.32	0.26%	1.42%	8.50%	9.98%	0.0264%
NATIONAL OILWELL VARCO INC	NOV	$ 16,295.06	0.07%	0.47%	41.50%	42.07%	0.0308%
NRG ENERGY INC	NRG	$ 10,548.68	N/A	0.36%	N/A	N/A	N/A
NORFOLK SOUTHERN CORP	NSC	$ 43,002.89	0.19%	1.89%	13.50%	15.52%	0.0299%
NETAPP INC	NTAP	$ 19,832.00	0.09%	1.08%	14.00%	15.16%	0.0135%
NORTHERN TRUST CORP	NTRS	$ 24,096.54	0.11%	1.57%	11.00%	12.66%	0.0137%
NUCOR CORP	NUE	$ 21,124.82	0.09%	2.29%	19.50%	22.01%	0.0209%
NVIDIA CORP	NVDA	$ 159,580.30	0.72%	0.23%	24.00%	24.26%	0.1737%
NEWELL BRANDS INC	NWL	$ 11,885.08	0.05%	3.76%	9.00%	12.93%	0.0069%
NEWS CORP - CLASS A	NWSA	$ 9,128.03	N/A	1.28%	N/A	N/A	N/A
REALTY INCOME CORP	O	$ -	0.00%	5.01%	4.00%	9.11%	0.0000%
ONEOK INC	OKE	$ 28,179.12	0.13%	4.74%	20.50%	25.73%	0.0325%
OMNICOM GROUP	OMC	$ 16,705.81	0.07%	3.27%	7.00%	10.38%	0.0078%
ORACLE CORP	ORCL	$ 195,154.20	0.88%	1.59%	8.00%	9.65%	0.0845%
O'REILLY AUTOMOTIVE INC	ORLY	$ 23,262.10	0.10%	0.00%	11.50%	11.50%	0.0120%
OCCIDENTAL PETROLEUM CORP	OXY	$ 66,223.79	N/A	3.63%	N/A	N/A	N/A
PAYCHEX INC	PAYX	$ 24,299.46	0.11%	3.31%	10.50%	13.98%	0.0152%
PEOPLE'S UNITED FINANCIAL	PBCT	$ 6,640.73	0.03%	3.66%	10.50%	14.35%	0.0043%
PACCAR INC	PCAR	$ 22,859.96	0.10%	3.52%	6.50%	10.13%	0.0104%
P G & E CORP	PCG	$ 21,501.89	0.10%	0.00%	7.50%	7.50%	0.0072%
PUBLIC SERVICE ENTERPRISE GP	PEG	$ 25,613.28	0.11%	3.58%	4.00%	7.65%	0.0088%
PEPSICO INC	PEP	$ 143,546.00	0.64%	3.67%	7.50%	11.31%	0.0728%
PFIZER INC	PFE	$ 213,450.80	0.96%	3.73%	13.00%	16.97%	0.1625%
PRINCIPAL FINANCIAL GROUP	PFG	$ 16,295.33	0.07%	3.67%	5.00%	8.76%	0.0064%
PROCTER & GAMBLE CO/THE	PG	$ 190,506.00	0.85%	3.79%	9.00%	12.96%	0.1108%
PROGRESSIVE CORP	PGR	$ 36,464.06	0.16%	1.79%	15.50%	17.43%	0.0285%
PARKER HANNIFIN CORP	PH	$ 23,331.65	0.10%	1.73%	14.00%	15.85%	0.0166%
PULTEGROUP INC	PHM	$ 8,962.28	0.04%	1.18%	15.50%	16.77%	0.0067%
PACKAGING CORP OF AMERICA	PKG	$ 11,599.84	0.05%	2.57%	10.00%	12.70%	0.0066%
PERKINELMER INC	PKI	$ 8,638.32	0.04%	0.36%	12.50%	12.88%	0.0050%
PROLOGIS INC	PLD	$ -	0.00%	2.94%	1.00%	3.95%	0.0000%
PHILIP MORRIS INTERNATIONAL	PM	$ 120,300.10	0.54%	5.53%	8.50%	14.27%	0.0770%
PNC FINANCIAL SERVICES GROUP	PNC	$ 69,564.70	0.31%	2.03%	9.50%	11.63%	0.0363%
PENTAIR PLC	PNR	$ 7,998.83	0.04%	1.56%	12.00%	13.65%	0.0049%
PINNACLE WEST CAPITAL	PNW	$ 8,336.77	0.04%	3.84%	5.00%	8.94%	0.0033%
PPG INDUSTRIES INC	PPG	$ 25,893.53	0.12%	1.75%	7.50%	9.32%	0.0108%
PPL CORP	PPL	$ 17,859.98	0.08%	6.48%	2.00%	8.54%	0.0068%
PERRIGO CO PLC	PRGO	$ 10,227.44	0.05%	1.08%	3.50%	4.60%	0.0021%
PRUDENTIAL FINANCIAL INC	PRU	$ 41,992.74	0.19%	3.61%	6.00%	9.72%	0.0183%
PUBLIC STORAGE	PSA	$ -	0.00%	3.90%	7.00%	11.04%	0.0000%

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PHILLIPS 66	PSX	$ 54,707.90	0.25%	2.78%	8.00%	10.89%	0.0267%
PVH CORP	PVH	$ 12,742.86	0.06%	0.09%	11.00%	11.09%	0.0063%
QUANTA SERVICES INC	PWR	$ 5,556.14	0.02%	0.00%	17.50%	17.50%	0.0044%
PRAXAIR INC	PX	$ 45,912.94	0.21%	2.17%	10.00%	12.28%	0.0253%
PIONEER NATURAL RESOURCES CO	PXD	$ 33,303.28	0.15%	0.16%	72.00%	72.22%	0.1079%
PAYPAL HOLDINGS INC	PYPL	$ 98,508.41	0.44%	0.00%	16.50%	16.50%	0.0729%
QUALCOMM INC	QCOM	$ 89,868.48	0.40%	4.09%	4.50%	8.68%	0.0350%
QORVO INC	QRVO	$ 10,249.37	0.05%	0.00%	21.00%	21.00%	0.0097%
ROYAL CARIBBEAN CRUISES LTD	RCL	$ 22,104.61	0.10%	2.30%	11.00%	13.43%	0.0133%
EVEREST RE GROUP LTD	RE	$ 9,428.45	0.04%	2.30%	5.50%	7.86%	0.0033%
REGENCY CENTERS CORP	REG	$ -	0.00%	3.75%	12.50%	16.48%	0.0000%
REGENERON PHARMACEUTICALS	REGN	$ 33,295.76	0.15%	0.00%	14.50%	14.50%	0.0217%
REGIONS FINANCIAL CORP	RF	$ 21,453.14	0.10%	2.10%	13.00%	15.24%	0.0147%
ROBERT HALF INTL INC	RHI	$ 8,408.46	0.04%	1.68%	6.50%	8.23%	0.0031%
RED HAT INC	RHT	$ 29,936.52	0.13%	0.00%	20.50%	20.50%	0.0275%
RAYMOND JAMES FINANCIAL INC	RJF	$ 14,494.07	0.07%	1.21%	14.00%	15.29%	0.0099%
RALPH LAUREN CORP	RL	$ 11,208.02	0.05%	1.81%	3.00%	4.84%	0.0024%
RESMED INC	RMD	$ 15,115.90	0.07%	1.36%	11.00%	12.43%	0.0084%
ROCKWELL AUTOMATION INC	ROK	$ 22,434.87	0.10%	2.06%	8.50%	10.65%	0.0107%
ROPER TECHNOLOGIES INC	ROP	$ 29,329.42	0.13%	0.58%	10.00%	10.61%	0.0140%
ROSS STORES INC	ROST	$ 32,301.69	0.14%	1.06%	11.50%	12.62%	0.0183%
RANGE RESOURCES CORP	RRC	$ 4,049.86	0.02%	0.49%	38.00%	38.58%	0.0070%
REPUBLIC SERVICES INC	RSG	$ 22,384.23	0.10%	2.14%	13.50%	15.78%	0.0159%
RAYTHEON COMPANY	RTN	$ 61,033.42	0.27%	1.63%	11.00%	12.72%	0.0348%
SBA COMMUNICATIONS CORP	SBAC	$ 18,351.33	0.08%	0.00%	45.50%	45.50%	0.0375%
STARBUCKS CORP	SBUX	$ 78,990.34	0.35%	2.36%	15.00%	17.54%	0.0621%
SCANA CORP	SCG	$ 5,135.13	N/A	0.00%	N/A	N/A	N/A
SCHWAB (CHARLES) CORP	SCHW	$ 77,306.76	0.35%	0.70%	15.50%	16.25%	0.0564%
SEALED AIR CORP	SEE	$ 7,004.48	0.03%	1.48%	19.00%	20.62%	0.0065%
SHERWIN-WILLIAMS CO/THE	SHW	$ 36,958.16	0.17%	0.87%	12.00%	12.92%	0.0214%
SVB FINANCIAL GROUP	SIVB	$ 17,062.05	0.08%	0.00%	17.00%	17.00%	0.0130%
JM SMUCKER CO/THE	SJM	$ 11,450.88	0.05%	3.16%	7.50%	10.78%	0.0055%
SCHLUMBERGER LTD	SLB	$ 96,405.27	0.43%	2.87%	28.00%	31.27%	0.1353%
SL GREEN REALTY CORP	SLG	$ -	0.00%	3.37%	0.50%	3.88%	0.0000%
SNAP-ON INC	SNA	$ 8,850.89	0.04%	2.10%	8.50%	10.69%	0.0042%
SYNOPSYS INC	SNPS	$ 13,424.37	0.06%	0.00%	10.50%	10.50%	0.0063%
SOUTHERN CO/THE	SO	$ 43,681.97	0.20%	5.60%	3.00%	8.68%	0.0170%
SIMON PROPERTY GROUP INC	SPG	$ -	0.00%	4.89%	4.00%	8.99%	0.0000%
S&P GLOBAL INC	SPGI	$ 51,204.31	0.23%	1.02%	14.50%	15.59%	0.0358%
STERICYCLE INC	SRCL	$ 5,492.95	0.02%	0.00%	8.00%	8.00%	0.0020%
SEMPRA ENERGY	SRE	$ 26,600.64	0.12%	3.62%	8.50%	12.27%	0.0146%
SUNTRUST BANKS INC	STI	$ 33,034.57	0.15%	2.35%	9.50%	11.96%	0.0177%
STATE STREET CORP	STT	$ 36,851.30	0.17%	1.79%	10.00%	11.88%	0.0196%
SEAGATE TECHNOLOGY	STX	$ 15,852.45	0.07%	4.56%	5.00%	9.67%	0.0069%
CONSTELLATION BRANDS INC-A	STZ	$ 43,522.18	0.20%	1.43%	12.50%	14.02%	0.0274%
STANLEY BLACK & DECKER INC	SWK	$ 22,344.09	0.10%	1.74%	10.00%	11.83%	0.0119%
SKYWORKS SOLUTIONS INC	SWKS	$ 18,663.43	0.08%	1.25%	14.50%	15.84%	0.0133%
SYNCHRONY FINANCIAL	SYF	$ 27,027.92	0.12%	1.69%	10.50%	12.28%	0.0149%
STRYKER CORP	SYK	$ 66,576.61	0.30%	1.06%	14.50%	15.64%	0.0467%
SYMANTEC CORP	SYMC	$ 13,234.78	0.06%	1.41%	7.50%	8.96%	0.0053%
SYSCO CORP	SYY	$ 34,244.91	0.15%	2.19%	14.50%	16.85%	0.0259%
AT&T INC	T	$ 207,848.30	0.93%	5.98%	5.50%	11.64%	0.1086%
MOLSON COORS BREWING CO -B	TAP	$ 13,513.40	0.06%	2.95%	11.50%	14.62%	0.0089%
TRANSDIGM GROUP INC	TDG	$ 17,805.78	0.08%	0.00%	11.00%	11.00%	0.0088%
TE CONNECTIVITY LTD	TEL	$ 34,189.54	0.15%	1.81%	10.50%	12.41%	0.0190%
TARGET CORP	TGT	$ 41,754.05	0.19%	3.17%	6.50%	9.77%	0.0183%
TIFFANY & CO	TIF	$ 16,393.16	0.07%	1.67%	12.00%	13.77%	0.0101%
TJX COMPANIES INC	TJX	$ 59,081.68	0.27%	1.65%	12.50%	14.25%	0.0378%
TORCHMARK CORP	TMK	$ 9,749.99	0.04%	0.75%	10.00%	10.79%	0.0047%
THERMO FISHER SCIENTIFIC INC	TMO	$ 87,086.84	0.39%	0.31%	9.50%	9.82%	0.0384%
TAPESTRY INC	TPR	$ 13,189.88	0.06%	2.95%	13.50%	16.65%	0.0099%
TRIPADVISOR INC	TRIP	$ 7,736.40	0.03%	0.00%	7.00%	7.00%	0.0024%
T ROWE PRICE GROUP INC	TROW	$ 30,463.77	0.14%	2.26%	11.50%	13.89%	0.0190%
TRAVELERS COS INC/THE	TRV	$ 35,063.85	0.16%	2.37%	5.50%	7.94%	0.0125%
TRACTOR SUPPLY COMPANY	TSCO	$ 9,448.47	0.04%	1.62%	10.50%	12.21%	0.0052%
TYSON FOODS INC-CL A	TSN	$ 25,653.28	0.12%	1.79%	10.50%	12.38%	0.0143%
TOTAL SYSTEM SERVICES INC	TSS	$ 15,844.13	0.07%	0.60%	10.50%	11.13%	0.0079%
TAKE-TWO INTERACTIVE SOFTWRE	TTWO	$ 12,966.74	N/A	0.00%	N/A	N/A	N/A
TWITTER INC	TWTR	$ 29,855.87	N/A	0.00%	N/A	N/A	N/A
TIME WARNER INC	TWX	$ 74,579.34	0.33%	1.69%	9.00%	10.77%	0.0360%
TEXAS INSTRUMENTS INC	TXN	$ 115,096.60	0.52%	2.12%	9.50%	11.72%	0.0605%
TEXTRON INC	TXT	$ 17,577.01	0.08%	0.12%	15.00%	15.13%	0.0119%
UNDER ARMOUR INC-CLASS A	UAA	$ 10,466.05	0.05%	0.00%	3.00%	3.00%	0.0014%
UNITED CONTINENTAL HOLDINGS	UAL	$ 19,430.17	0.09%	0.00%	2.50%	2.50%	0.0022%
UDR INC	UDR	$ -	0.00%	3.47%	-2.00%	1.44%	0.0000%
UNIVERSAL HEALTH SERVICES-B	UHS	$ 11,002.19	0.05%	0.34%	11.00%	11.36%	0.0056%
ULTA BEAUTY INC	ULTA	$ 15,506.66	0.07%	0.00%	21.00%	21.00%	0.0146%
UNITEDHEALTH GROUP INC	UNH	$ 239,518.80	1.07%	1.21%	14.50%	15.80%	0.1698%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
UNUM GROUP	UNM	$ 8,680.88	0.04%	2.65%	12.00%	14.81%	0.0058%
UNION PACIFIC CORP	UNP	$ 109,851.90	0.49%	2.05%	13.00%	15.18%	0.0748%
UNITED PARCEL SERVICE-CL B	UPS	$ 100,155.80	0.45%	3.13%	8.50%	11.76%	0.0529%
UNITED RENTALS INC	URI	$ 13,949.18	0.06%	0.00%	14.00%	14.00%	0.0088%
US BANCORP	USB	$ 85,466.53	0.38%	2.47%	8.50%	11.07%	0.0425%
UNITED TECHNOLOGIES CORP	UTX	$ 101,953.00	0.46%	2.20%	9.00%	11.30%	0.0517%
VISA INC-CLASS A SHARES	V	$ 273,970.50	1.23%	0.67%	15.00%	15.72%	0.1932%
VARIAN MEDICAL SYSTEMS INC	VAR	$ 11,166.31	0.05%	0.00%	10.00%	10.00%	0.0050%
VF CORP	VFC	$ 32,925.14	0.15%	2.25%	7.50%	9.83%	0.0145%
VIACOM INC-CLASS B	VIAB	$ 11,176.17	0.05%	2.88%	2.00%	4.91%	0.0025%
VALERO ENERGY CORP	VLO	$ 52,353.45	0.23%	2.68%	10.00%	12.81%	0.0301%
VULCAN MATERIALS CO	VMC	$ 17,270.46	0.08%	0.86%	18.00%	18.94%	0.0147%
VORNADO REALTY TRUST	VNO	$ 13,600.89	0.06%	3.52%	-5.50%	-2.08%	-0.0013%
VERISK ANALYTICS INC	VRSK	$ 18,014.06	0.08%	0.00%	9.50%	9.50%	0.0077%
VERISIGN INC	VRSN	$ 13,245.06	0.06%	0.00%	12.00%	12.00%	0.0071%
VERTEX PHARMACEUTICALS INC	VRTX	$ 36,911.63	N/A	0.00%	N/A	N/A	N/A
VENTAS INC	VTR	$ -	0.00%	5.85%	5.50%	11.51%	0.0000%
VERIZON COMMUNICATIONS INC	VZ	$ 202,504.30	0.91%	4.82%	4.50%	9.43%	0.0857%
WATERS CORP	WAT	$ 15,897.97	0.07%	0.00%	10.50%	10.50%	0.0075%
WALGREENS BOOTS ALLIANCE INC	WBA	$ 63,069.96	0.28%	2.52%	11.00%	13.66%	0.0386%
WESTERN DIGITAL CORP	WDC	$ 24,697.40	0.11%	2.42%	10.50%	13.05%	0.0145%
WEC ENERGY GROUP INC	WEC	$ 18,736.71	0.08%	3.84%	7.00%	10.97%	0.0092%
WELLTOWER INC	WELL	$ -	0.00%	6.10%	7.00%	13.31%	0.0000%
WELLS FARGO & CO	WFC	$ 271,134.00	1.22%	2.89%	5.00%	7.96%	0.0969%
WHIRLPOOL CORP	WHR	$ 10,534.27	0.05%	3.10%	7.50%	10.72%	0.0051%
WILLIS TOWERS WATSON PLC	WLTW	$ 20,642.49	N/A	1.54%	N/A	N/A	N/A
WASTE MANAGEMENT INC	WM	$ 35,975.16	0.16%	2.23%	9.50%	11.84%	0.0191%
WILLIAMS COS INC	WMB	$ 21,841.07	0.10%	5.15%	22.50%	28.23%	0.0277%
WALMART INC	WMT	$ 250,687.40	1.12%	2.45%	5.50%	8.02%	0.0902%
WESTROCK CO	WRK	$ 15,527.58	0.07%	2.84%	9.00%	11.97%	0.0083%
WESTERN UNION CO	WU	$ 9,571.27	0.04%	3.66%	7.00%	10.79%	0.0046%
WEYERHAEUSER CO	WY	$ 28,845.41	0.13%	3.36%	21.50%	25.22%	0.0326%
WYNN RESORTS LTD	WYNN	$ 18,189.35	0.08%	1.70%	27.00%	28.93%	0.0236%
CIMAREX ENERGY CO	XEC	$ 8,169.07	0.04%	0.75%	38.50%	39.39%	0.0144%
XCEL ENERGY INC	XEL	$ 21,730.04	0.10%	3.61%	5.50%	9.21%	0.0090%
XL GROUP LTD	XL	$ 14,414.71	0.06%	1.56%	42.00%	43.89%	0.0284%
XILINX INC	XLNX	$ 18,012.87	0.08%	2.04%	7.50%	9.62%	0.0078%
EXXON MOBIL CORP	XOM	$ 351,162.60	1.58%	3.98%	18.00%	22.34%	0.3519%
DENTSPLY SIRONA INC	XRAY	$ 9,803.21	0.04%	0.81%	8.50%	9.34%	0.0041%
XEROX CORP	XRX	$ 6,998.58	0.03%	3.64%	4.50%	8.22%	0.0026%
XYLEM INC	XYL	$ 13,159.80	0.06%	1.15%	15.50%	16.74%	0.0099%
YUM! BRANDS INC	YUM	$ 27,530.13	0.12%	1.82%	9.50%	11.41%	0.0141%
ZIMMER BIOMET HOLDINGS INC	ZBH	$ 23,109.11	0.10%	0.88%	5.00%	5.90%	0.0061%
ZIONS BANCORPORATION	ZION	$ 11,223.97	0.05%	1.69%	15.00%	16.82%	0.0085%
ZOETIS INC	ZTS	$ 41,521.46	0.19%	0.58%	14.00%	14.62%	0.0272%
Total Market Capitalization:		22,289,621.15					16.10%

Notes:
[1] Equals sum of Col. [9]
[2] Source: Value Line
[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]

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Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1] Bloomberg	[2] Value Line
ALLETE, Inc.	ALE	0.582	0.750
Alliant Energy Corporation	LNT	0.517	0.700
Ameren Corporation	AEE	0.469	0.650
American Electric Power Company, Inc.	AEP	0.565	0.650
Avangrid, Inc.	AGR	0.596	0.400
Black Hills Corporation	BKH	0.639	0.900
CMS Energy Corporation	CMS	0.529	0.650
DTE Energy Company	DTE	0.540	0.650
Duke Energy Corporation	DUK	0.539	0.600
El Paso Electric	EE	0.598	0.750
Hawaiian Electric Industries, Inc.	HE	0.527	0.650
IDACORP, Inc.	IDA	0.590	0.700
NextEra Energy, Inc.	NEE	0.524	0.650
NorthWestern Corporation	NWE	0.513	0.650
OGE Energy Corp.	OGE	0.672	0.950
Otter Tail Corporation	OTTR	0.730	0.850
Pinnacle West Capital Corporation	PNW	0.557	0.650
PNM Resources, Inc.	PNM	0.617	0.700
Portland General Electric Company	POR	0.501	0.650
Southern Company	SO	0.405	0.550
WEC Energy Group, Inc.	WEC	0.527	0.600
Xcel Energy Inc.	XEL	0.503	0.600
Mean		0.556	0.677

Notes:
[1] Source: Bloomberg Professional
[2] Source: Value Line

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

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
					CAPM		ECAPM	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg MRP	Value Line MRP	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE BLOOMBERG BETA COEFFICIENT								
Current 30-Year Treasury [9]	3.11%	0.556	12.62%	12.99%	10.13%	10.34%	11.53%	11.78%
Near-Term Projected 30-Year Treasury [10]	3.48%	0.556	12.62%	12.99%	10.50%	10.71%	11.90%	12.15%
Mean					10.32%	10.52%	11.72%	11.96%

					CAPM		ECAPM	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg MRP	Value Line MRP	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE VALUE LINE AVERAGE BETA COEFFICIENT								
Current 30-Year Treasury [9]	3.11%	0.677	12.62%	12.99%	11.66%	11.91%	12.68%	12.95%
Near-Term Projected 30-Year Treasury [10]	3.48%	0.677	12.62%	12.99%	12.03%	12.28%	13.05%	13.33%
Mean					11.85%	12.09%	12.86%	13.14%

Notes:
[1] *See Notes [9] and [10]*
[2] Source: RBH-3
[3] Source: RBH-2
[4] Source: RBH-2
[5] Equals Col. [1] + (Col. [2] x Col. [3])
[6] Equals Col. [1] + (Col. [2] x Col. [4])
[7] Equals Col. [1] + 0.75 x (Col. [2] x Col. [3]) + 0.25 x Col. [3]
[8] Equals Col. [1] + 0.75 x (Col. [2] x Col. [4]) + 0.25 x Col. [4]
[9] Source: Bloomberg Professional
[10] Blue Chip Financial Forecasts, Vol. 37, No. 6, June 1, 2018, at 2.

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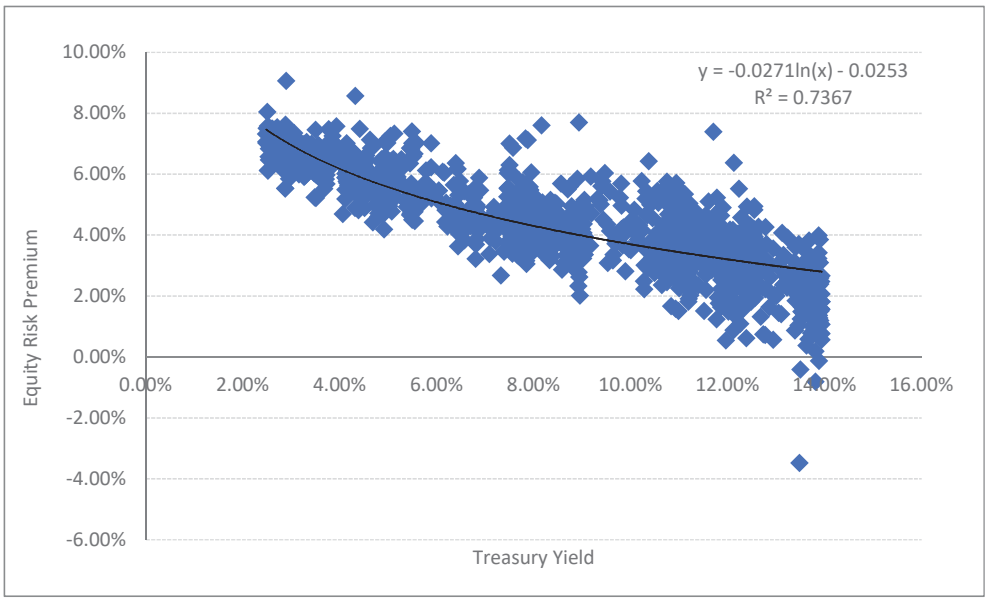
Bond Yield Plus Risk Premium

[1]	[2]	[3]	[4]	[5]
Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
-2.53%	-2.71%			
Current 30-Year Treasury		3.11%	6.85%	9.96%
Near-Term Projected 30-Year Treasury		3.48%	6.55%	10.03%
Long-Term Projected 30-Year Treasury		4.30%	5.98%	10.28%



Notes:
[1] Constant of regression equation
[2] Slope of regression equation
[3] Source: Current = Bloomberg Professional,
Near Term Projected = Blue Chip Financial Forecasts, Vol. 37, No. 6, June 1, 2018, at 2.
Long Term Projected = Blue Chip Financial Forecasts, Vol. 37, No. 6, June 1, 2018, at 14.
[4] Equals [1] + ln([3]) x [2]
[5] Equals [3] + [4]
[6] Source: S&P Global Market Intelligence
[7] Source: S&P Global Market Intelligence
[8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
[9] Equals [7] - [8]

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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%	9.38%	5.01%
1/9/1980	15.00%	9.40%	5.60%
1/14/1980	15.17%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980	15.50%	9.47%	6.03%
1/30/1980	13.86%	9.52%	4.34%
1/31/1980	12.61%	9.53%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980	12.80%	9.63%	3.17%
2/14/1980	13.00%	9.65%	3.35%
2/19/1980	13.50%	9.68%	3.82%
2/27/1980	13.75%	9.78%	3.97%
2/29/1980	13.75%	9.81%	3.94%
2/29/1980	14.00%	9.81%	4.19%
2/29/1980	14.77%	9.81%	4.96%
3/7/1980	12.70%	9.89%	2.81%
3/14/1980	13.50%	9.97%	3.53%
3/26/1980	14.16%	10.10%	4.06%
3/27/1980	14.24%	10.12%	4.12%
3/28/1980	14.50%	10.13%	4.37%
4/11/1980	12.75%	10.27%	2.48%
4/14/1980	13.85%	10.29%	3.56%
4/16/1980	15.50%	10.31%	5.19%
4/22/1980	13.25%	10.35%	2.90%
4/22/1980	13.90%	10.35%	3.55%
4/24/1980	16.80%	10.38%	6.43%
4/29/1980	15.50%	10.41%	5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980	15.00%	10.45%	4.55%
5/8/1980	13.75%	10.46%	3.29%
5/9/1980	14.35%	10.47%	3.88%
5/13/1980	13.60%	10.48%	3.12%
5/15/1980	13.25%	10.49%	2.76%
5/19/1980	13.75%	10.51%	3.24%
5/27/1980	13.62%	10.54%	3.08%
5/27/1980	14.60%	10.54%	4.06%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980	13.80%	10.56%	3.24%
6/2/1980	15.63%	10.57%	5.06%
6/9/1980	15.90%	10.60%	5.30%
6/10/1980	13.78%	10.60%	3.18%
6/12/1980	14.25%	10.61%	3.64%
6/19/1980	13.40%	10.62%	2.78%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/9/1980	14.75%	10.67%	4.08%
7/10/1980	15.00%	10.68%	4.32%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.71%	3.09%
7/22/1980	14.10%	10.72%	3.38%
7/24/1980	15.00%	10.73%	4.27%
7/25/1980	13.48%	10.73%	2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980	13.50%	10.88%	2.62%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.94%	2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.98%	4.52%
10/7/1980	12.50%	10.99%	1.51%
10/9/1980	13.25%	11.00%	2.25%
10/9/1980	14.50%	11.00%	3.50%
10/9/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	13.75%	11.12%	2.63%
11/5/1980	14.00%	11.12%	2.88%
11/8/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/8/1980	14.15%	11.22%	2.93%
12/8/1980	15.10%	11.22%	3.88%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/9/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%
1/2/1981	15.25%	11.22%	4.03%
1/7/1981	14.30%	11.21%	3.09%
1/19/1981	15.25%	11.20%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.21%	3.79%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.33%	3.92%
3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981	16.00%	11.50%	4.50%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.60%	3.70%
4/1/1981	14.53%	11.68%	2.85%
4/3/1981	19.10%	11.71%	7.39%
4/9/1981	15.00%	11.78%	3.22%
4/9/1981	15.30%	11.78%	3.52%
4/9/1981	16.50%	11.78%	4.72%
4/9/1981	17.00%	11.78%	5.22%
4/10/1981	13.75%	11.80%	1.95%
4/13/1981	13.57%	11.82%	1.75%
4/15/1981	15.30%	11.85%	3.45%
4/16/1981	13.50%	11.87%	1.63%
4/17/1981	14.10%	11.87%	2.23%
4/21/1981	14.00%	11.90%	2.10%
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%
5/15/1981	15.75%	12.22%	3.53%
5/18/1981	14.88%	12.23%	2.65%
5/20/1981	16.00%	12.26%	3.74%
5/21/1981	14.00%	12.27%	1.73%
5/26/1981	14.90%	12.30%	2.60%
5/27/1981	15.00%	12.31%	2.69%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.37%	2.30%
6/5/1981	13.00%	12.39%	0.61%
6/10/1981	16.75%	12.42%	4.33%
6/17/1981	14.40%	12.46%	1.94%
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.51%	2.24%
6/26/1981	16.00%	12.52%	3.48%
6/30/1981	15.25%	12.54%	2.71%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.74%	0.74%
7/31/1981	13.50%	12.78%	0.72%
7/31/1981	15.00%	12.78%	2.22%
7/31/1981	16.00%	12.78%	3.22%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981	13.50%	12.95%	0.55%
8/20/1981	16.50%	12.95%	3.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.05%	1.45%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%
3/12/1982	16.25%	13.88%	2.37%
3/17/1982	17.30%	13.88%	3.42%
3/22/1982	15.10%	13.89%	1.21%
3/27/1982	15.40%	13.89%	1.51%
3/30/1982	15.50%	13.90%	1.60%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982	15.50%	13.91%	1.59%
4/5/1982	15.50%	13.92%	1.58%
4/8/1982	16.40%	13.93%	2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%
4/27/1982	15.00%	13.94%	1.06%
4/28/1982	15.75%	13.94%	1.81%
4/30/1982	14.70%	13.94%	0.76%
4/30/1982	15.50%	13.94%	1.56%
5/3/1982	16.60%	13.94%	2.66%
5/4/1982	16.00%	13.94%	2.06%
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982	15.00%	13.91%	1.09%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/1/1982	15.50%	13.15%	2.35%
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	14.63%	12.33%	2.30%
1/12/1983	15.50%	12.33%	3.17%
1/20/1983	17.75%	12.24%	5.51%
1/21/1983	15.00%	12.22%	2.78%
1/24/1983	14.50%	12.21%	2.29%
1/24/1983	15.50%	12.21%	3.29%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.17%	3.97%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.10%	1.90%
2/10/1983	15.00%	12.06%	2.94%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.97%	3.53%
2/23/1983	15.10%	11.96%	3.14%
2/23/1983	16.00%	11.96%	4.04%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.77%	1.23%
3/18/1983	15.25%	11.73%	3.52%
3/23/1983	15.40%	11.69%	3.71%
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983	16.71%	11.61%	5.10%
3/31/1983	15.00%	11.59%	3.41%
4/4/1983	15.20%	11.58%	3.62%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/8/1983	15.50%	11.51%	3.99%
4/11/1983	14.81%	11.49%	3.32%
4/19/1983	14.50%	11.38%	3.12%
4/20/1983	16.00%	11.36%	4.64%
4/29/1983	16.00%	11.24%	4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983	16.46%	11.12%	5.34%
5/12/1983	14.14%	11.11%	3.03%
5/18/1983	15.00%	11.05%	3.95%
5/23/1983	14.90%	11.01%	3.89%
5/23/1983	15.50%	11.01%	4.49%
5/25/1983	15.50%	10.98%	4.52%
5/27/1983	15.00%	10.96%	4.04%
5/31/1983	14.00%	10.95%	3.05%
5/31/1983	15.50%	10.95%	4.55%
6/2/1983	14.50%	10.93%	3.57%
6/17/1983	15.03%	10.84%	4.19%
7/1/1983	14.80%	10.78%	4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.00%	10.74%	4.26%
7/19/1983	15.10%	10.74%	4.36%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%
9/7/1983	15.00%	10.86%	4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983	16.15%	10.95%	5.20%
10/4/1983	14.80%	10.96%	3.84%
10/7/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.25%	11.01%	5.24%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/1/1983	16.00%	11.06%	4.94%
11/9/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	14.69%	11.22%	3.47%
12/20/1983	16.00%	11.22%	4.78%
12/20/1983	16.25%	11.22%	5.03%
12/22/1983	14.75%	11.23%	3.52%
12/22/1983	15.75%	11.23%	4.52%
1/3/1984	14.75%	11.27%	3.48%
1/10/1984	15.90%	11.30%	4.60%
1/12/1984	15.60%	11.31%	4.29%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984	15.90%	11.33%	4.57%
1/30/1984	16.10%	11.37%	4.73%
1/31/1984	15.25%	11.37%	3.88%
2/1/1984	14.80%	11.38%	3.42%
2/6/1984	13.75%	11.40%	2.35%
2/6/1984	14.75%	11.40%	3.35%
2/9/1984	15.25%	11.42%	3.83%
2/15/1984	15.70%	11.44%	4.26%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984	14.75%	11.47%	3.28%
2/28/1984	14.50%	11.51%	2.99%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.64%	4.36%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
4/2/1984	15.50%	11.71%	3.79%
4/6/1984	14.74%	11.75%	2.99%
4/11/1984	15.72%	11.78%	3.94%
4/17/1984	15.00%	11.81%	3.19%
4/18/1984	16.20%	11.82%	4.38%
4/25/1984	14.64%	11.85%	2.79%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/30/1984	14.40%	11.87%	2.53%
5/16/1984	14.69%	11.98%	2.71%
5/16/1984	15.00%	11.98%	3.02%
5/22/1984	14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.15%	3.10%
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984	16.00%	12.31%	3.69%
7/12/1984	16.50%	12.32%	4.18%
7/13/1984	16.25%	12.33%	3.92%
7/17/1984	14.14%	12.35%	1.79%
7/18/1984	15.30%	12.36%	2.94%
7/18/1984	15.50%	12.36%	3.14%
7/19/1984	14.30%	12.37%	1.93%
7/24/1984	16.79%	12.39%	4.40%
7/31/1984	16.00%	12.43%	3.57%
8/3/1984	14.25%	12.44%	1.81%
8/17/1984	14.30%	12.49%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984	16.30%	12.51%	3.79%
8/31/1984	15.55%	12.52%	3.03%
9/6/1984	16.00%	12.53%	3.47%
9/10/1984	14.75%	12.54%	2.21%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984	14.50%	12.57%	1.93%
9/28/1984	15.00%	12.57%	2.43%
9/28/1984	16.25%	12.57%	3.68%
10/9/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.58%	3.82%
10/31/1984	16.25%	12.58%	3.67%
11/7/1984	15.60%	12.58%	3.02%
11/9/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.58%	3.17%
11/20/1984	15.25%	12.58%	2.67%
11/20/1984	15.92%	12.58%	3.34%
11/23/1984	15.00%	12.58%	2.42%
11/28/1984	16.15%	12.57%	3.58%
12/3/1984	15.80%	12.56%	3.24%
12/4/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.53%	2.22%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/19/1984	15.00%	12.53%	2.47%
12/20/1984	16.00%	12.53%	3.47%
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985	15.75%	12.47%	3.28%
1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.35%	2.12%
3/1/1985	13.84%	12.31%	1.53%
3/8/1985	16.85%	12.28%	4.57%
3/14/1985	15.50%	12.25%	3.25%
3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.17%	3.45%
4/3/1985	14.60%	12.14%	2.46%
4/9/1985	15.50%	12.11%	3.39%
4/16/1985	15.70%	12.06%	3.64%
4/22/1985	14.00%	12.02%	1.98%
4/26/1985	15.50%	11.98%	3.52%
4/29/1985	15.00%	11.97%	3.03%
5/2/1985	14.68%	11.94%	2.74%
5/8/1985	15.62%	11.89%	3.73%
5/10/1985	16.50%	11.87%	4.63%
5/29/1985	14.61%	11.73%	2.88%
5/31/1985	16.00%	11.71%	4.29%
6/14/1985	15.50%	11.61%	3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.33%	3.17%
8/2/1985	14.80%	11.29%	3.51%
8/7/1985	15.00%	11.27%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.15%	3.35%
9/9/1985	14.60%	11.11%	3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.50%	11.05%	4.45%
9/27/1985	15.80%	11.05%	4.75%
10/2/1985	14.00%	11.03%	2.97%
10/2/1985	14.75%	11.03%	3.72%
10/3/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985	15.50%	10.90%	4.60%
11/8/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.23%	5.77%
2/24/1986	14.50%	10.18%	4.32%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986	13.40%	9.69%	3.71%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.32%	5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986	15.10%	9.18%	5.92%
6/2/1986	12.81%	9.17%	3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986	12.00%	8.91%	3.09%
6/26/1986	14.75%	8.91%	5.84%
6/30/1986	13.00%	8.87%	4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.66%	3.74%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/25/1986	14.25%	8.57%	5.68%
8/6/1986	13.50%	8.44%	5.06%
8/14/1986	13.50%	8.35%	5.15%
9/16/1986	12.75%	8.06%	4.69%
9/19/1986	13.25%	8.03%	5.22%
10/1/1986	14.00%	7.95%	6.05%
10/3/1986	13.40%	7.93%	5.47%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986	13.00%	7.75%	5.25%
12/3/1986	12.90%	7.58%	5.32%
12/4/1986	14.44%	7.58%	6.86%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.51%	6.29%
12/30/1986	13.00%	7.49%	5.51%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.47%	4.93%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.54%	4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987	13.50%	7.70%	5.80%
6/15/1987	13.20%	7.78%	5.42%
6/29/1987	15.00%	7.83%	7.17%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987	12.90%	7.86%	5.04%
7/15/1987	13.50%	7.88%	5.62%
7/16/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%
7/27/1987	13.00%	7.92%	5.08%
7/27/1987	13.40%	7.92%	5.48%
7/27/1987	13.50%	7.92%	5.58%
7/31/1987	12.98%	7.95%	5.03%
8/26/1987	12.63%	8.06%	4.57%
8/26/1987	12.75%	8.06%	4.69%
8/27/1987	13.25%	8.06%	5.19%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	12.75%	8.31%	4.44%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/30/1987	13.00%	8.31%	4.69%
10/2/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.43%	4.57%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.68%	3.32%
12/3/1987	14.20%	8.70%	5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%
12/16/1987	13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987	13.00%	8.81%	4.19%
1/20/1988	13.80%	8.94%	4.86%
1/26/1988	13.90%	8.95%	4.95%
1/29/1988	13.20%	8.96%	4.24%
2/4/1988	12.60%	8.96%	3.64%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%
3/24/1988	11.24%	8.92%	2.32%
3/30/1988	12.72%	8.92%	3.80%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.93%	4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.99%	4.51%
5/16/1988	13.00%	8.99%	4.01%
6/30/1988	12.75%	9.00%	3.75%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.92%	3.83%
8/23/1988	11.70%	8.93%	2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%
12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989	13.00%	9.05%	3.95%
3/30/1989	14.00%	9.05%	4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.00%	4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
1/10/1990	12.80%	8.24%	4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.20%	3.80%
2/9/1990	12.10%	8.17%	3.93%
2/24/1990	12.86%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%
4/12/1990	12.52%	8.18%	4.34%
4/19/1990	12.75%	8.20%	4.55%
5/21/1990	12.10%	8.28%	3.82%
5/29/1990	12.40%	8.30%	4.10%
5/31/1990	12.00%	8.30%	3.70%
6/4/1990	12.90%	8.30%	4.60%
6/6/1990	12.25%	8.31%	3.94%
6/15/1990	13.20%	8.32%	4.88%
6/20/1990	12.92%	8.32%	4.60%
6/27/1990	12.90%	8.33%	4.57%
6/29/1990	12.50%	8.33%	4.17%
7/6/1990	12.10%	8.34%	3.76%
7/6/1990	12.35%	8.34%	4.01%
8/10/1990	12.55%	8.41%	4.14%
8/16/1990	13.21%	8.43%	4.78%
8/22/1990	13.10%	8.45%	4.65%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
8/24/1990	13.00%	8.46%	4.54%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%
10/5/1990	12.84%	8.62%	4.22%
10/19/1990	13.00%	8.67%	4.33%
10/25/1990	12.30%	8.68%	3.62%
11/21/1990	12.70%	8.69%	4.01%
12/13/1990	12.30%	8.67%	3.63%
12/17/1990	12.87%	8.67%	4.20%
12/18/1990	13.10%	8.67%	4.43%
12/19/1990	12.00%	8.66%	3.34%
12/20/1990	12.75%	8.66%	4.09%
12/21/1990	12.50%	8.66%	3.84%
12/27/1990	12.79%	8.66%	4.13%
1/2/1991	13.10%	8.65%	4.45%
1/4/1991	12.50%	8.65%	3.85%
1/15/1991	12.75%	8.64%	4.11%
1/25/1991	11.70%	8.63%	3.07%
2/4/1991	12.50%	8.60%	3.90%
2/7/1991	12.50%	8.59%	3.91%
2/12/1991	13.00%	8.58%	4.43%
2/14/1991	12.72%	8.57%	4.15%
2/22/1991	12.80%	8.55%	4.25%
3/6/1991	13.10%	8.53%	4.57%
3/8/1991	12.30%	8.52%	3.78%
3/8/1991	13.00%	8.52%	4.48%
4/22/1991	13.00%	8.49%	4.51%
5/7/1991	13.50%	8.47%	5.03%
5/13/1991	13.25%	8.47%	4.78%
5/30/1991	12.75%	8.44%	4.31%
6/12/1991	12.00%	8.41%	3.59%
6/25/1991	11.70%	8.39%	3.31%
6/28/1991	12.50%	8.38%	4.12%
7/1/1991	12.00%	8.38%	3.62%
7/3/1991	12.50%	8.37%	4.13%
7/19/1991	12.10%	8.34%	3.76%
8/1/1991	12.90%	8.32%	4.58%
8/16/1991	13.20%	8.29%	4.91%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.25%	8.23%	4.02%
10/17/1991	13.00%	8.20%	4.80%
10/23/1991	12.50%	8.20%	4.30%
10/23/1991	12.55%	8.20%	4.35%
10/31/1991	11.80%	8.19%	3.61%
11/1/1991	12.00%	8.19%	3.81%
11/5/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.50%	8.18%	4.32%
11/27/1991	12.10%	8.18%	3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
1/9/1992	12.80%	8.09%	4.71%
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.06%	4.94%
1/27/1992	12.65%	8.05%	4.60%
1/31/1992	12.00%	8.04%	3.96%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.01%	4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.94%	3.51%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.93%	3.57%
5/5/1992	11.50%	7.89%	3.61%
5/12/1992	11.87%	7.88%	3.99%
5/12/1992	12.46%	7.88%	4.58%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/13/1992	13.50%	7.84%	5.66%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992	11.40%	7.71%	3.69%
9/30/1992	11.75%	7.70%	4.05%
10/2/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992	11.85%	7.68%	4.17%
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/16/1992	12.40%	7.66%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.63%	4.27%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993	11.90%	7.49%	4.41%
2/26/1993	11.80%	7.48%	4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.25%	4.50%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.23%	4.27%
5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.10%	4.28%
7/23/1993	10.46%	7.09%	3.37%
8/24/1993	11.50%	6.96%	4.54%
9/21/1993	10.50%	6.81%	3.69%
9/29/1993	11.47%	6.77%	4.70%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.57%	5.43%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993	10.55%	6.48%	4.07%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.47%	4.83%
1/4/1994	10.07%	6.44%	3.63%
1/13/1994	11.00%	6.42%	4.58%
1/21/1994	11.00%	6.40%	4.60%
1/28/1994	11.35%	6.39%	4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.39%	3.46%
11/9/1994	10.85%	7.39%	3.46%
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.49%	3.57%
12/8/1994	11.50%	7.54%	3.96%
12/8/1994	11.70%	7.54%	4.16%
12/14/1994	10.95%	7.56%	3.39%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%
1/9/1995	12.28%	7.64%	4.64%
1/31/1995	11.00%	7.69%	3.31%
2/10/1995	12.60%	7.70%	4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.71%	3.79%
3/20/1995	12.00%	7.72%	4.28%
3/23/1995	12.81%	7.72%	5.09%
3/29/1995	11.60%	7.72%	3.88%
4/6/1995	11.10%	7.71%	3.39%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995	11.63%	7.68%	3.95%
5/25/1995	11.20%	7.65%	3.55%
6/9/1995	11.25%	7.60%	3.65%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.52%	3.58%
9/11/1995	11.30%	7.20%	4.10%
9/27/1995	11.30%	7.12%	4.18%
9/27/1995	11.50%	7.12%	4.38%
9/27/1995	11.75%	7.12%	4.63%
9/29/1995	11.00%	7.11%	3.89%
11/9/1995	11.38%	6.90%	4.48%
11/9/1995	12.36%	6.90%	5.46%
11/17/1995	11.00%	6.86%	4.14%
12/4/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.70%	4.90%
12/27/1995	12.00%	6.66%	5.34%
2/5/1996	12.25%	6.48%	5.77%
3/29/1996	10.67%	6.42%	4.25%
4/8/1996	11.00%	6.42%	4.58%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
4/24/1996	11.25%	6.43%	4.82%
4/30/1996	11.00%	6.43%	4.57%
5/13/1996	11.00%	6.44%	4.56%
5/23/1996	11.25%	6.43%	4.82%
6/25/1996	11.25%	6.48%	4.77%
6/27/1996	11.20%	6.48%	4.72%
8/12/1996	10.40%	6.57%	3.83%
9/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%
12/18/1996	11.75%	6.83%	4.92%
12/31/1996	11.50%	6.83%	4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.80%	3.22%
4/2/1997	11.65%	6.80%	4.85%
4/28/1997	11.50%	6.81%	4.69%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
2/2/1998	12.75%	6.39%	6.36%
3/2/1998	11.25%	6.29%	4.96%
3/6/1998	10.75%	6.27%	4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998	11.40%	5.94%	5.46%
9/15/1998	11.90%	5.78%	6.12%
11/30/1998	12.60%	5.58%	7.02%
12/10/1998	12.20%	5.54%	6.66%
12/17/1998	12.10%	5.52%	6.58%
2/5/1999	10.30%	5.38%	4.92%
3/4/1999	10.50%	5.34%	5.16%
4/6/1999	10.94%	5.32%	5.62%
7/29/1999	10.75%	5.52%	5.23%
9/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
1/7/2000	11.50%	6.05%	5.45%
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%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
1/23/2001	11.25%	5.79%	5.46%
2/8/2001	11.50%	5.77%	5.73%
5/8/2001	10.75%	5.62%	5.13%
6/26/2001	11.00%	5.62%	5.38%
7/25/2001	11.02%	5.60%	5.42%
7/25/2001	11.02%	5.60%	5.42%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001	10.50%	5.56%	4.94%
9/7/2001	10.75%	5.55%	5.20%
9/10/2001	11.00%	5.55%	5.45%
9/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/3/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
1/22/2002	10.00%	5.50%	4.50%
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002	10.17%	5.46%	4.71%
6/10/2002	12.00%	5.47%	6.53%
6/18/2002	11.16%	5.48%	5.68%
6/20/2002	11.00%	5.48%	5.52%
6/20/2002	12.30%	5.48%	6.82%
7/15/2002	11.00%	5.48%	5.52%
9/12/2002	12.30%	5.45%	6.85%
9/26/2002	10.45%	5.41%	5.04%
12/4/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
1/8/2003	11.10%	5.19%	5.91%
1/31/2003	12.45%	5.13%	7.32%
2/28/2003	12.30%	5.05%	7.25%
3/6/2003	10.75%	5.03%	5.72%
3/7/2003	9.96%	5.02%	4.94%
3/20/2003	12.00%	4.98%	7.02%
4/3/2003	12.00%	4.96%	7.04%
4/15/2003	11.15%	4.94%	6.21%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003	9.75%	4.79%	4.96%
7/16/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.80%	4.70%
8/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
1/13/2004	12.00%	4.95%	7.05%
3/2/2004	10.75%	4.99%	5.76%
3/26/2004	10.25%	5.02%	5.23%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.08%	5.17%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
7/16/2004	11.60%	5.11%	6.49%
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%
12/29/2004	9.85%	5.07%	4.78%
1/6/2005	10.70%	5.08%	5.62%
2/18/2005	10.30%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005	10.25%	4.87%	5.38%
5/18/2005	10.25%	4.78%	5.47%
5/25/2005	10.75%	4.76%	5.99%
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005	11.50%	4.64%	6.86%
8/5/2005	11.75%	4.62%	7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%

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[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%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.53%	6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006	10.20%	4.83%	5.37%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.89%	4.66%
9/1/2006	10.54%	4.90%	5.64%
9/14/2006	10.00%	4.91%	5.09%
10/6/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/1/2006	10.25%	4.95%	5.30%
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
1/5/2007	10.00%	4.95%	5.05%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.90%	4.95%	5.95%
1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.87%	6.48%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007	9.67%	4.80%	4.87%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/22/2007	10.50%	4.83%	5.67%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/28/2007	10.75%	4.84%	5.91%
7/12/2007	9.67%	4.86%	4.81%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
8/15/2007	10.40%	4.88%	5.52%
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/28/2008	9.40%	4.80%	4.60%
1/30/2008	10.00%	4.79%	5.21%
1/31/2008	10.71%	4.79%	5.92%
2/29/2008	10.25%	4.75%	5.50%
3/12/2008	10.25%	4.73%	5.52%
3/25/2008	9.10%	4.68%	4.42%
4/22/2008	10.25%	4.60%	5.65%
4/24/2008	10.10%	4.60%	5.50%
5/1/2008	10.70%	4.59%	6.11%
5/19/2008	11.00%	4.56%	6.44%
5/27/2008	10.00%	4.55%	5.45%
6/10/2008	10.70%	4.54%	6.16%
6/27/2008	10.50%	4.54%	5.96%
6/27/2008	11.04%	4.54%	6.50%
7/10/2008	10.43%	4.52%	5.91%
7/16/2008	9.40%	4.52%	4.88%
7/30/2008	10.80%	4.51%	6.29%
7/31/2008	10.70%	4.51%	6.19%
8/11/2008	10.25%	4.51%	5.74%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008	10.30%	4.50%	5.80%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.48%	5.72%
10/8/2008	10.15%	4.46%	5.69%
11/13/2008	10.55%	4.45%	6.10%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.79%	6.21%
4/30/2009	11.25%	3.78%	7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%
7/17/2009	10.50%	3.78%	6.72%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.30%	6.70%
1/26/2010	10.13%	4.35%	5.78%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.70%	4.35%	6.35%
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41%	5.77%
3/2/2010	9.63%	4.41%	5.22%
3/4/2010	10.50%	4.41%	6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.10%	4.44%	5.66%
5/28/2010	10.20%	4.44%	5.76%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010	9.67%	4.43%	5.24%
6/28/2010	10.50%	4.43%	6.07%
6/30/2010	9.40%	4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.53%	4.43%	6.10%
7/15/2010	10.70%	4.43%	6.27%
7/30/2010	10.70%	4.41%	6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010	9.90%	4.37%	5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.33%	5.67%
9/16/2010	10.00%	4.33%	5.67%
9/30/2010	9.75%	4.29%	5.46%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010	10.70%	4.20%	6.50%
11/19/2010	10.20%	4.18%	6.02%
11/22/2010	10.00%	4.18%	5.82%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010	10.25%	4.15%	6.10%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.15%	5.85%
12/20/2010	10.60%	4.15%	6.45%
12/21/2010	10.30%	4.14%	6.16%
12/27/2010	9.90%	4.14%	5.76%
12/29/2010	11.15%	4.14%	7.01%
1/5/2011	10.15%	4.13%	6.02%
1/12/2011	10.30%	4.12%	6.18%
1/13/2011	10.30%	4.12%	6.18%
1/18/2011	10.00%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.12%	5.48%
2/3/2011	10.00%	4.12%	5.88%
2/25/2011	10.00%	4.14%	5.86%
3/25/2011	9.80%	4.18%	5.62%
3/30/2011	10.00%	4.18%	5.82%
4/12/2011	10.00%	4.21%	5.79%
4/25/2011	10.74%	4.23%	6.51%
4/26/2011	9.67%	4.23%	5.44%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.24%	5.76%
5/4/2011	10.00%	4.24%	5.76%
5/24/2011	10.50%	4.27%	6.23%
6/8/2011	10.75%	4.30%	6.45%
6/16/2011	9.20%	4.32%	4.88%
6/17/2011	9.95%	4.32%	5.63%
7/13/2011	10.20%	4.36%	5.84%
8/1/2011	9.20%	4.39%	4.81%
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011	10.35%	4.37%	5.98%
8/19/2011	10.25%	4.36%	5.89%
9/2/2011	12.88%	4.32%	8.56%
9/22/2011	10.00%	4.24%	5.76%
10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%
12/14/2011	10.00%	3.80%	6.20%
12/14/2011	10.30%	3.80%	6.50%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.76%	6.44%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/23/2011	10.19%	3.74%	6.45%
1/25/2012	10.50%	3.57%	6.93%
1/27/2012	10.50%	3.56%	6.94%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.44%	6.46%
2/27/2012	10.25%	3.43%	6.82%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012	10.37%	3.32%	7.05%
4/4/2012	10.00%	3.30%	6.70%
4/26/2012	10.00%	3.21%	6.79%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.17%	6.63%
5/15/2012	10.00%	3.14%	6.86%
5/29/2012	10.05%	3.11%	6.94%
6/7/2012	10.30%	3.08%	7.22%
6/14/2012	9.40%	3.06%	6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.06%	6.54%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.02%	6.78%
7/20/2012	9.31%	3.01%	6.30%
7/20/2012	9.81%	3.01%	6.80%
9/13/2012	9.80%	2.94%	6.86%
9/19/2012	9.80%	2.94%	6.86%
9/19/2012	10.05%	2.94%	7.11%
9/26/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.75%	2.89%	6.86%
11/29/2012	9.88%	2.89%	6.99%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.87%	6.84%
12/19/2012	10.25%	2.87%	7.38%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	10.25%	2.87%	7.38%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
7/12/2013	9.36%	3.07%	6.29%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013	10.20%	3.31%	6.89%
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.48%	5.24%
12/9/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%
12/17/2013	10.95%	3.51%	7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/30/2013	9.50%	3.54%	5.96%
2/20/2014	9.20%	3.68%	5.52%
2/26/2014	9.75%	3.69%	6.06%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
6/30/2014	9.55%	3.64%	5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%
7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.57%	6.18%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%
9/11/2014	9.60%	3.51%	6.09%
9/15/2014	10.25%	3.51%	6.74%
10/9/2014	9.80%	3.45%	6.35%
11/6/2014	9.56%	3.37%	6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.33%	6.37%
11/26/2014	10.20%	3.33%	6.87%
12/4/2014	9.68%	3.31%	6.37%
12/10/2014	9.25%	3.29%	5.96%
12/10/2014	9.25%	3.29%	5.96%
12/11/2014	10.07%	3.29%	6.78%
12/12/2014	10.20%	3.28%	6.92%
12/17/2014	9.17%	3.27%	5.90%
12/18/2014	9.83%	3.26%	6.57%
1/23/2015	9.50%	3.14%	6.36%
2/24/2015	9.83%	3.04%	6.79%
3/18/2015	9.75%	2.98%	6.77%
3/25/2015	9.50%	2.96%	6.54%
3/26/2015	9.72%	2.95%	6.77%
4/23/2015	10.20%	2.87%	7.33%
4/29/2015	9.53%	2.86%	6.67%
5/1/2015	9.60%	2.85%	6.75%
5/26/2015	9.75%	2.83%	6.92%
6/17/2015	9.00%	2.82%	6.18%
6/17/2015	9.00%	2.82%	6.18%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.00%	2.88%	7.12%
11/19/2015	10.30%	2.88%	7.42%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/15/2015	9.60%	2.91%	6.69%
12/17/2015	9.70%	2.91%	6.79%
12/18/2015	9.50%	2.91%	6.59%
12/30/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.94%	6.56%
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%	2.78%	6.22%
6/15/2016	9.00%	2.78%	6.22%
7/18/2016	9.98%	2.71%	7.27%
8/9/2016	9.85%	2.66%	7.19%
8/18/2016	9.50%	2.63%	6.87%
8/24/2016	9.75%	2.62%	7.13%
9/1/2016	9.50%	2.59%	6.91%
9/8/2016	10.00%	2.58%	7.42%
9/28/2016	9.58%	2.54%	7.04%
9/30/2016	9.90%	2.53%	7.37%
11/9/2016	9.80%	2.48%	7.32%
11/10/2016	9.50%	2.48%	7.02%
11/15/2016	9.55%	2.49%	7.06%
11/18/2016	10.00%	2.50%	7.50%
11/29/2016	10.55%	2.51%	8.04%
12/1/2016	10.00%	2.51%	7.49%
12/6/2016	8.64%	2.52%	6.12%
12/6/2016	8.64%	2.52%	6.12%
12/7/2016	10.10%	2.52%	7.58%
12/12/2016	9.60%	2.53%	7.07%
12/14/2016	9.10%	2.53%	6.57%
12/19/2016	9.00%	2.54%	6.46%
12/19/2016	9.37%	2.54%	6.83%
12/22/2016	9.60%	2.55%	7.05%
12/22/2016	9.90%	2.55%	7.35%
12/28/2016	9.50%	2.55%	6.95%
1/18/2017	9.45%	2.58%	6.87%
1/24/2017	9.00%	2.59%	6.41%
1/31/2017	10.10%	2.60%	7.50%
2/15/2017	9.60%	2.62%	6.98%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
2/22/2017	9.60%	2.64%	6.96%
2/24/2017	9.75%	2.64%	7.11%
2/28/2017	10.10%	2.64%	7.46%
3/2/2017	9.41%	2.65%	6.76%
3/20/2017	9.50%	2.68%	6.82%
4/4/2017	10.25%	2.71%	7.54%
4/12/2017	9.40%	2.74%	6.66%
4/20/2017	9.50%	2.76%	6.74%
5/3/2017	9.50%	2.79%	6.71%
5/11/2017	9.20%	2.81%	6.39%
5/18/2017	9.50%	2.83%	6.67%
5/23/2017	9.70%	2.84%	6.86%
6/16/2017	9.65%	2.89%	6.76%
6/22/2017	9.70%	2.90%	6.80%
6/22/2017	9.70%	2.90%	6.80%
7/24/2017	9.50%	2.95%	6.55%
8/15/2017	10.00%	2.97%	7.03%
9/22/2017	9.60%	2.93%	6.67%
9/28/2017	9.80%	2.92%	6.88%
10/20/2017	9.50%	2.91%	6.59%
10/26/2017	10.20%	2.91%	7.29%
10/26/2017	10.25%	2.91%	7.34%
10/26/2017	10.30%	2.91%	7.39%
11/6/2017	10.25%	2.90%	7.35%
11/15/2017	11.95%	2.89%	9.06%
11/30/2017	10.00%	2.88%	7.12%
11/30/2017	10.00%	2.88%	7.12%
12/5/2017	9.50%	2.88%	6.62%
12/6/2017	8.40%	2.87%	5.53%
12/6/2017	8.40%	2.87%	5.53%
12/7/2017	9.80%	2.87%	6.93%
12/14/2017	9.60%	2.86%	6.74%
12/14/2017	9.65%	2.86%	6.79%
12/18/2017	9.50%	2.86%	6.64%
12/20/2017	9.58%	2.86%	6.72%
12/21/2017	9.10%	2.85%	6.25%
12/28/2017	9.50%	2.85%	6.65%
12/29/2017	9.51%	2.85%	6.66%
1/18/2018	9.70%	2.84%	6.86%
1/31/2018	9.30%	2.84%	6.46%
2/2/2018	9.98%	2.84%	7.14%
2/23/2018	9.90%	2.85%	7.05%
3/12/2018	9.25%	2.86%	6.39%
3/15/2018	9.00%	2.87%	6.13%
3/29/2018	10.00%	2.88%	7.12%
4/12/2018	9.90%	2.89%	7.01%
4/13/2018	9.73%	2.89%	6.84%

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[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/18/2018	9.25%	2.89%	6.36%
4/18/2018	10.00%	2.89%	7.11%
4/26/2018	9.50%	2.90%	6.60%
5/30/2018	9.95%	2.94%	7.01%
5/31/2018	9.50%	2.94%	6.56%
6/14/2018	8.80%	2.96%	5.84%
		# of Cases:	1,556
		Average:	4.63%