Before the North Dakota Public Service Commission

State of North Dakota

In the Matter of the Application of Otter Tail Power Company

For Authority to Increase Rates for Electric Utility

Service in North Dakota

Case No. PU-17-398

OAH File No. 20170622

Exhibit___

RETURN ON EQUITY

REBUTTAL TESTIMONY AND SCHEDULES OF

ROBERT B. HEVERT

June 22, 2018

TABLE OF CONTENTS

Schedules

I. WITNESS IDENTIFICATION AND PURPOSE OF TESTIMONY

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

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

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS REBUTTAL TESTIMONY?

A. I am submitting this rebuttal testimony ("Rebuttal Testimony") before the North Dakota Public Service Commission ("Commission") on behalf of Otter Tail Power Company ("OTP" or the "Company"), a wholly owned subsidiary of Otter Tail Corporation ("OTTR").

Q. HAVE YOU PREVIOUSLY FILED DIRECT AND SUPPLEMENTAL TESTIMONY IN THIS PROCEEDING?

A. Yes, I have.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my Rebuttal Testimony is to:

1. Respond to the Direct Testimonies of Aaron L. Rothschild on behalf of the North Dakota Public Service Commission Advocacy Staff, and Walmart, Inc. witness Steve W. Chriss, regarding the appropriate Return on Equity ("ROE") for OTP; and
2. Present updated calculations and analytical results regarding OTP's Cost of Equity, and my recommended 10.30 percent ROE.

Q. HOW IS THE BALANCE OF YOUR TESTIMONY ORGANIZED?

A. The balance of my Rebuttal Testimony is organized as follows:

- Section II – Contains a summary of my Rebuttal Testimony;
- Section III – Contains my response to Mr. Rothschild;
- Section IV – Contains my response to Mr. Chriss; and
- Section V – Summarizes my updated analyses, conclusions, and recommendations.

II. SUMMARY OF TESTIMONY

Q. PLEASE PROVIDE A SUMMARY OF YOUR REBUTTAL TESTIMONY.

A. My Rebuttal Testimony discusses several issues relating to the Company's Cost of Equity. The following provides a summary of the principal points:

Mr. Rothschild's ROE Recommendation: My Rebuttal Testimony explains that Mr. Rothschild's 8.31 percent recommendation is below any reasonable measure of the Company's Cost of Equity, and results from the mechanical application of unsound and atypical analyses that often lack transparency, generally are unnecessarily complex, and are uncommon in regulatory and financial practice. Regardless of how Mr. Rothschild arrives at or supports his recommendation, it is so far below those authorized for other utilities nationally and in North Dakota that it cannot be reconciled by the reasonable application of methods, or by reference to market, economic, or industry data. Simply, Mr. Rothschild's testimony provides no reasonable basis to conclude equity investors see OTP as so risky than its peers that they would accept an ROE 140 basis points below those available (on average) to other electric utilities. Those issues aside, Mr. Rothschild's 8.31 percent ROE recommendation does not meet the long-standing regulatory standard under which the reasonableness of the result, rather than the method employed, controls in determining just and reasonable rates.[1]

Mr. Chriss' ROE Recommendation: Mr. Chriss compares my recommended ROE to the average authorized ROE since 2015 but does not address the significant differences between the Company and the average vertically integrated utility, nor does he undertake an independent, market-based analysis of OTP's Cost of Equity. Although I recognize the importance of other authorized ROEs in determining the Cost of Equity, I also believe it is important to consider a broader range of the methods and data considered by investors as they make their investment decisions.

[1] Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944) *("Hope")* Bluefield Water Works and Improvement Co. v. Public Service Comm'n. 262 U.S. 679, 692 (1923) ("Bluefield").

Selection of Otter Tail Power's ROE Within the Reasonable Range of Results: As explained in my Direct Testimony, several factors demonstrate that OTP's ROE should be set at the upper end of the range of reasonable results. Although Mr. Chriss did not address those factors, Mr. Rothschild asserts he did. As discussed later in my Rebuttal Testimony, there are many reasons why I disagree with Mr. Rothschild's analyses and conclusions regarding the Company's relative risk. Mr. Rothschild also is mistaken when he disputes the Commission's ability and discretion to consider a utility's high-quality service and low customer rates when setting the ROE.

Capital Structure: Although Mr. Rothschild argues the Company uses too much common equity to support its utility operations, his focus on parent company capital structures to support his position is fundamentally flawed. Mr. Rothschild's approach fails to recognize operating utilities' need to efficiently access long-term capital regardless of market conditions, and their fundamental reliance on short-term credit markets to fund day-to-day operations. As a result, Mr. Rothschild's method steers him to the incorrect conclusion that the Company has too little debt in its capital structure, and that its ROE should be reduced (from 8.50 percent to 8.31 percent) as a result. There is no reasonable support for an adjustment of any sort, and certainly no reasonable foundation for Mr. Rothschild's mechanical basis point-per-percentage point approach.

Update of Data and Use of Multiple Analytical Methods: In my Direct Testimony, I concluded a ROE of 10.30 percent represents the Cost of Equity for the Company, within a range of 10.00 percent to 10.60 percent.[2] My recommendation considered a variety of factors, including capital market conditions and Company-specific risks. I have updated many of the analyses contained in my Direct Testimony, and I have provided several new analyses in response to issues raised by Mr. Rothschild and Mr. Chriss; those analyses continue to support my ROE range and recommendation. Those updated results are set out in Exhibit__(RBH-2), Schedules 1 through 8)

Q. PLEASE EXPLAIN HOW MR. ROTHSCHILD'S RECOMMENDED ROE COMPARES TO ROES AUTHORIZED FOR VERTICALLY INTEGRATED ELECTRIC UTILITIES.

A. Mr. Rothschild 8.31 percent ROE recommendation falls far below all ROEs authorized for electric utilities since at least 1980.[3] From the beginning of 2014 through April 2018, none of the 95 ROEs authorized for vertically integrated electric utilities were nearly as low as 8.31 percent - the lowest was 9.10 percent.[4] The median authorized ROE, 9.75 percent, was 144 basis points above Mr. Rothschild's "conservatively high"[5] 8.31 percent recommendation. My recommended range (10.00 percent to 10.60 percent), on the other hand, is well within the range of ROEs authorized for other vertically integrated electric utilities (*see* Chart 1, below).

---

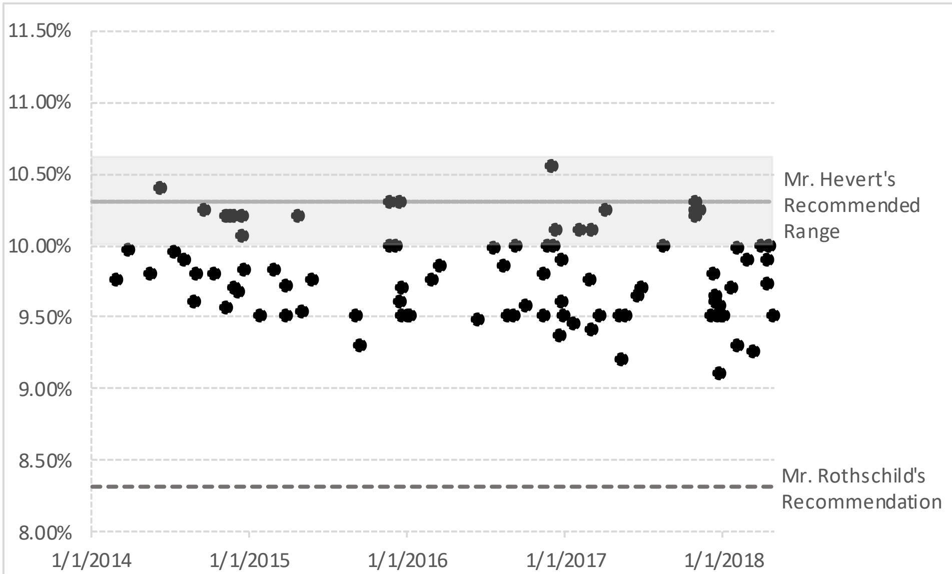
[3] Mr. Rothschild's 8.31 percent recommendation is also below all authorized ROEs for natural gas utilities since at least 1980.

[4] Source: Regulatory Research Associates.

[5] Rothschild Direct, at 12.

Chart 1: ROE Witnesses' Recommendation vs.

Vertically Integrated Electric Utility Authorized ROEs **(2014-2018)**[6]



Q. DO THE UNCOMMON METHODS USED BY MR. ROTHSCHILD CONTRIBUTE TO THE SIGNIFICANT DIFFERENCE BETWEEN HIS ROE RECOMMENDATION AND APPROVED ROES?

A. Yes, the substantial difference between Mr. Rothschild's ROE recommendation and the ROEs authorized elsewhere is the result of his use of atypical methods that, in my experience, are not used by investors when making investment decisions, nor by regulatory commissions in setting authorized ROEs. As discussed later in my Rebuttal Testimony, Mr. Rothschild's approach not only assumes investors use his particular variants of the Discounted Cash Flow ("DCF") model, it presumes they apply his approaches while ignoring the results of other, more conventional and broadly-accepted methods. In my view, Mr. Rothschild's approaches have little, if any, practical application and provide little guidance to the Commission.

Q. DOES MR. ROTHSCHILD'S MECHANICAL APPROACH ALSO CONTRIBUTE TO THAT DIFFERENCE?

---

6 Source: Regulatory Research Associates. Excludes Limited Issue rate proceedings.

A. Yes, I believe it does. Although determining the Cost of Equity requires the application of financial models, it also requires the application of reasoned judgment in vetting the models and assumptions used by various analysts, and in assessing the reasonableness of their analytical results and recommendations. For the most part, Mr. Rothschild appears to accept the results of his methods without further reflection or consideration.[7] Models that produce results far removed from any ROE authorized since at least 1980, as Mr. Rothschild's analyses do, have limited relevance in determining OTP's Cost of Equity.[8]

Q. DO INVESTORS CONSIDER AUTHORIZED ROES IN MAKING THEIR INVESTMENT DECISIONS?

A. Yes, they do. In my experience, authorized ROEs reflect the same type of market-based data at issue in this proceeding. Further, because authorized ROEs are publicly available,[9] it is difficult to imagine they are not reflected, at least to some degree, in investors' return expectations and requirements. It therefore is reasonable to assume that over time, authorized ROEs are a relevant measure of investor-required returns.

Q. WHAT ARE THE PRACTICAL IMPLICATIONS FOR OTP OF AN ROE THAT IS FAR BELOW THOSE AUTHORIZED FOR OTHER UTILITIES?

A. The significant difference between Mr. Rothschild's recommendation and ROEs available to other utilities raises very practical concerns. First, OTP must compete with other companies, including utilities, for the long-term capital needed to provide utility service. Given the choice between two similarly situated utilities, one with an authorized ROE that falls far below industry levels, and another whose authorized ROE more closely aligns with those available to other utilities, investors will choose the latter.

---

[7] As discussed later in my Rebuttal Testimony, one subjective adjustment Mr. Rothschild did make to his methods had the effect of increasing his Discounted Cash Flow model results by about results about 70 basis points to the levels he reports in Schedule ALR 2. As also discussed later in my Rebuttal Testimony, that adjustment is at odds with other portions of Mr. Rothschild's Direct Testimony.

[8] Based on Mr. Rothschild's Constant Growth average DCF result of 8.00 percent. *See*, Rothschild Direct, at 39.

[9] *See e.g.*, ALLETE, Inc., SEC Form 10-K for the year ended December 31, 2017, at 16-17; OGE Energy Corporation, SEC Form 10-K for the year ended December 31, 2017, at 6-7.

Second, because authorized ROEs are relevant to them, investors would react very negatively if Mr. Rothschild's recommendation were to be adopted by the Commission. Such a decision likely would be viewed by investors as a significant departure from the Commission's prior decisions and practice, increasing their views of OTP's regulatory risk. In that case, a likely outcome would be increasing reluctance on the part of investors to provide capital to the Company, thereby decreasing the availability and increasing the cost of that capital.

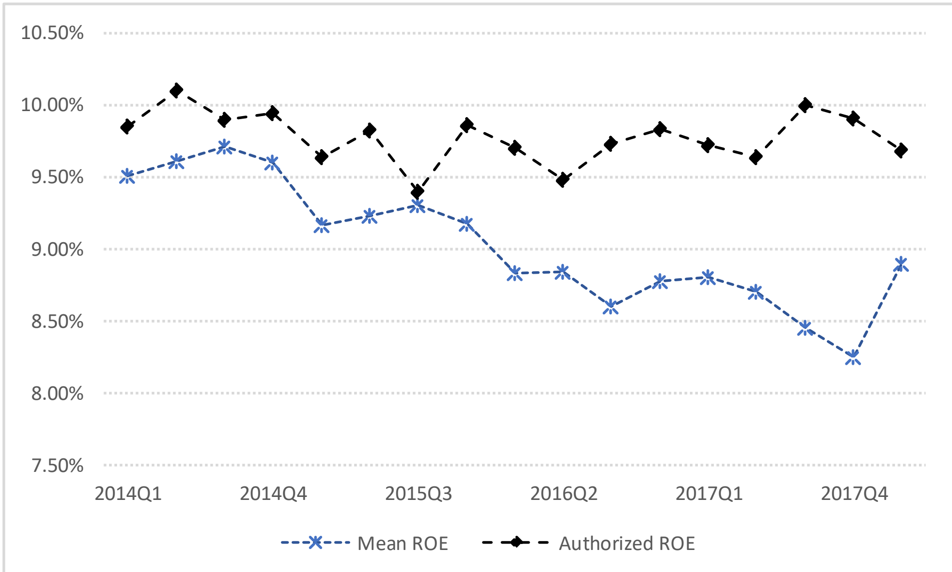
Q. ARE YOU RECOMMENDING THAT THE COMMISSION DETERMINE THE COMPANY'S ROE BASED SOLELY ON DECISIONS IN OTHER JURISDICTIONS?

A. No, nor am I aware of any regulatory commission that does so. Nonetheless, authorized ROEs do provide observable and verifiable benchmarks against which recommendations may be assessed. In my experience, regulatory commissions generally consider the same type of market, methodological, and risk factors at issue in this proceeding. They recognize that financial models are important tools in determining returns, but appreciate that because all models are subject to assumptions, no one method is most reliable at all times, and under all conditions. That holds true in this case. Even if we focus on a single method, it remains critically important to apply reasoned judgment to determine where the Cost of Equity falls within that method's range of results. Just as investors consider company-specific and general market factors, we should do the same. Those considerations, and that judgment, leads to the conclusion that Mr. Rothschild's ROE recommendation is unduly low.

Q. DO YOU CONTINUE TO RECOMMEND THE COMMISSION CONSIDER MULTIPLE METHODS IN SETTING THE ROE?

A. Yes. As Chart 2 (below) demonstrates, since 2014 the Constant Growth DCF model has produced ROE estimates considerably below the ROEs authorized by regulatory commissions. The difference between the two widened from 2016 – 2018, when (on average) DCF results fell 106 basis points below authorized ROEs. Simply put, for several years the DCF method has produced unreasonably low estimates of the Cost of Equity, and regulatory decisions have reflected that relationship.

Chart 2: Authorized ROEs vs. DCF Estimates[10]



Recently, in Opinion No. 531, the Federal Energy Regulatory Commission ("FERC") noted the anomalous nature of prevailing capital markets makes it more difficult to determine the rate of return needed to satisfy the *Hope* and *Bluefield* standards. FERC further expressed concern that economic anomalies may have affected the reliability of DCF analyses.[11] FERC concluded that the mechanical application of the DCF method

---

10 DCF results based on quarterly average stock prices, Earnings Per Share growth rates from Value Line, Zacks, and First Call; assumes a group of 19 vertically integrated electric utilities. Authorized ROEs are quarterly averages for vertically integrated electric utilities; source: S&P Global Market Intelligence. Please note that Q3 2015 included only two ROE decisions.

11 *See, Martha Coakley v. Bangor Hydro-Electric Company*, Opinion No. 531, 147 FERC ¶ 61,234 (2014), at P 41 and P 145. In April 2017 the United States Court of Appeals for the District of Columbia Circuit issued an opinion in *Emera Maine (formerly known as Bangor Hydro-Electric Company), et al., v. FERC* which vacated and remanded Opinion No. 531 because "FERC did not meet the first requirement of Section 206 that it demonstrate the unlawfulness of transmission owners' base ROE" and because FERC had relied on the midpoint of the upper half of the zone of reasonableness without adequately "citing record evidence" demonstrating the resulting ROE was a just and reasonable. Importantly, the D.C. Circuit decision did not suggest FERC was wrong to consider alternative methods, or that the alternative methods used, or their results, were inappropriate.

would be inappropriate and found it necessary to review alternative benchmark approaches, including the Bond Yield Plus Risk Premium and CAPM methods, to gain insight into the effect of market conditions on the Cost of Equity.[12] After reviewing the evidence in that case, including economic conditions and the results of multiple ROE methods, FERC determined it would be appropriate to set the ROE at the midpoint of the upper half of the zone of reasonableness established by the DCF method.[13]

Q. PLEASE SUMMARIZE YOUR POSITION REGARDING THE COMPANY'S ROE.

A. I continue to believe OTP's Cost of Equity falls in the range of 10.00 percent to 10.60 percent, with 10.30 percent as a reasonable point estimate. My position is based on the full range of DCF and CAPM estimates, and considers other model results and data available to investors updated through May 18, 2018.[14] My recommendation also considers the potential effects of the Tax Cuts and Jobs Act ("TCJA"), and its potential influence on the DCF and CAPM models (as discussed in my Supplemental Testimony).

III. RESPONSE TO STAFF WITNESS MR. ROTHSCHILD

Q. PLEASE PROVIDE A SUMMARY OF MR. ROTHSCHILD'S DIRECT TESTIMONY AND RECOMMENDATIONS.

A. Mr. Rothschild recommends an ROE of 8.31 percent based on his applications of the Constant and Non-Constant forms of the DCF model, and his CAPM approach, all of which he applied to the Proxy Group presented in my Direct Testimony.[15] Mr. Rothschild states he also applied his CAPM approach to an additional Proxy Group of the 28 utility companies in the S&P 500 Index ("S&P Utility Group"), but provides no explanation of

---

12 *Ibid*., at P 142 and PP 145-146.

13 *Ibid*., at PP 145-146 and P 152.

14 Mr. Rothschild accepts the Proxy Group filed in my Direct Testimony. Rothschild Direct, at 28. Please note that although the ROE models applied in my Rebuttal Testimony reflect data as of May 18, 2018, I also present other, more recent data in other analyses throughout the balance of my Rebuttal Testimony.

15 Rothschild Direct, at 3, 28.

that analysis, or support for it.[16] Although he accepts OTP's proposed capital structure, Mr. Rothschild's 8.31 percent ROE recommendation includes a 19-basis point downward adjustment, reflecting his view that the Company uses too little debt to finance its utility operations.[17] Lastly, Mr. Rothschild points to certain measures of capital market conditions to support his 8.31 percent ROE recommendation.

Q. PLEASE SUMMARIZE THE PRINCIPAL AREAS IN WHICH YOU DISAGREE WITH MR. ROTHSCHILD'S ANALYSES AND CONCLUSIONS.

A. The principal areas in which I disagree with Mr. Rothschild's analyses and conclusions relate to: (1) the reasonableness of his ROE estimate and recommendation; (2) the application of the Constant Growth DCF model, including application of the "Sustainable Growth" method and the use of one-day "spot" prices to estimate the dividend yield portion of the model; (3) the application of his "Non-Constant Growth DCF" model; (4) Mr. Rothschild's CAPM approach; (5) his interpretation of current capital market conditions and their effect on OTP's Cost of Equity; (6) his assessment of business risks and other considerations; (7) Mr. Rothschild's assessment of the implications of the TCJA; (8) his assessment of OTP's capital structure and related adjustment to ROE; and (9) Mr. Rothschild's criticisms of my approach, conclusions, and recommendation.

1. Unreasonableness of Mr. Rothschild's ROE Results and Recommendation

Q. AS A GENERAL MATTER, DO MR. ROTHSCHILD'S ROE ANALYSES PROVIDE A REASONABLE ESTIMATE OF OTP'S COST OF EQUITY?

A. No, they do not. Putting aside the many flaws in the analyses that form the basis of his estimates, as discussed in Section II above Mr. Rothschild's ROE analyses cannot be corroborated by, or reconciled with observable, relevant, and verifiable data. In particular, Mr. Rothschild's ROE range and recommendation are well below the prevailing ROEs authorized by this and other regulatory commissions. Because Mr. Rothschild argues his

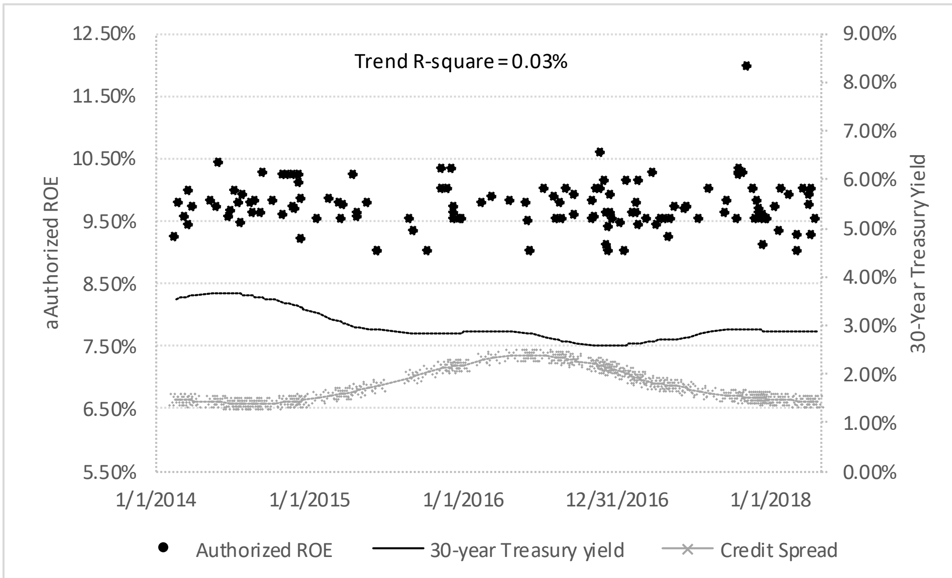
[16] *Ibid*., at 3.

[17] *Ibid*., at 3-4.

ROE recommendation is "conservatively high" in the context of recent interest rates and credit spreads,[18] I reviewed authorized ROEs relative to both (*see* Chart 3 below).

Chart 3: Electric ROE Awards

vs. 30-Year Treasury Yields and Credit Spreads[19]



As shown in Chart 3, authorized ROEs for electric utilities have remained consistent from 2014 to 2018, even as interest rates and credit spreads varied. That finding is consistent with the widely accepted principle that the Equity Risk Premium is not static, but changes inversely with the level of interest rates.

Further, the lowest ROE authorized by this Commission since 2010 was 9.65 percent, 134 basis points above Mr. Rothschild's 8.31 percent recommendation.[20] Despite that

---

[18] Rothschild Direct, at 12-13. *See* Charts 4, 5, and 6 to Mr. Rothschild's Direct Testimony (Mr. Rothschild presents two "Chart 6" in his Direct Testimony; here I refer to the second "Chart 6" on page 21).

[19] Sources: Regulatory Research Associates, Bloomberg Professional. Excludes Illinois Formula Rate proceedings. Credit spread is calculated as the difference between the Moody's Utility Baa Index and the 30-Year Treasury Yield (250-trading day rolling average).

[20] As reported by Regulatory Research Associates. Case PU-16-666 for MDU Resources, authorized on June 16, 2017.

significant difference, Mr. Rothschild failed to explain why the capital markets now are so much more accommodating, or why the Company now is so less risky than its peers that investors would require a return so far below those available to other utility companies. A simple comparison of Otter Tail Corporation's Beta coefficient (an objective measure of risk) relative to the proxy companies demonstrates the Company is riskier than its peers.[21]

2. Mr. Rothschild's Application of Constant Growth DCF Model

Q. DO YOU HAVE ANY GENERAL CONCERNS WITH MR. ROTHSCHILD'S DCF ANALYSES, AND HOW THEY APPEAR TO WEIGH IN HIS ROE RECOMMENDATION?

A. Yes, a significant concern is that although Mr. Rothschild devotes a considerable portion of his Direct Testimony to discussing the DCF method, his base 8.50 percent ROE recommendation[22] is 29 basis points above the highest of his DCF estimates.[23] Even those estimates, however, reflect his assumption that due to the TCJA, utilities such as OTP will issue additional common equity at a rate four times faster than the rate projected by Value Line.[24] As explained later in my Rebuttal Testimony, had he not made that adjustment, Mr. Rothschild's Constant Growth DCF estimates would be in the range of 7.19 percent to 7.46 percent, an even less plausible result than his ROE recommendation. Despite its importance to his recommendation, Mr. Rothschild does not reconcile his adjustment with his position that "the tax law change was implemented long enough ago (December 2017) to have been incorporated in investor expectations."[25]

Q. PLEASE BRIEFLY SUMMARIZE MR. ROTHSCHILD'S APPLICATION OF THE CONSTANT GROWTH DCF MODEL.

---

21 As of April 30, 2018, Value Line reports a Beta coefficient for Otter Tail Corporation of 0.85 relative to the Proxy Group average of about 0.75 (source: DR-ND-OTP 118, Attachments 1 – 11).

22 8.50 percent being Mr. Rothschild's recommendation before his proposed 19 basis point downward adjustment to reflect his view that the Company does not have sufficient debt in its capital structure.

23 Rothschild Direct, at 4 (*see*, Table 2).

24 Schedule ALR 7.

25 Rothschild Direct, at 8.

A. Mr. Rothschild's Constant Growth DCF model combines the dividend yield (based on three days of price data) with an expected growth rate meant to reflect a measure of "retention growth", sometimes referred to as "sustainable growth". Mr. Rothschild suggests his measure of retention growth avoids the bias he believes is reflected in analyst growth projections, and is more rigorous and accurate than the model commonly used by investors and regulatory agencies included in my Direct Testimony.[26] For the reasons discussed below, I disagree with Mr. Rothschild's approach and conclusions.

Q. ON WHAT BASIS DOES MR. ROTHSCHILD CONCLUDE THAT HIS RETENTION GROWTH APPROACH IS PREFERABLE TO THE USE OF ANALYSTS' EARNINGS GROWTH RATE ESTIMATES?

A. Mr. Rothschild's conclusion is based on his assertion that the analysts providing the earnings growth rates used in my analysis are overly optimistic,[27] and his view that his "retention growth" estimate includes a degree of mathematical precision and accuracy absent from consensus growth rate estimates.[28]

Q. PLEASE SUMMARIZE YOUR RESPONSE TO MR. ROTHSCHILD ON THOSE POINTS.

A. Mr. Rothschild argues that estimating four variables in his retention growth estimate (as described below) is more rigorous and accurate than estimating one variable (projected Earnings Per Share, or "EPS" growth developed by equity analysts), but provides no evidence to support that argument. In any event, I disagree with his position. As a practical matter the level of fundamental research underlying analysts' projections far exceeds Mr. Rothschild's summary review of a limited set of data. Further, Mr. Rothschild's "retention growth" model requires several limiting assumptions that cast significant doubt on his decision to rely fundamentally on it. Moreover, (and as discussed in more detail below), because projected earnings growth (provided by analysts) is the only growth rate

---

26 *See*, Rothschild Direct, at 33-34.

27 *See*, Rothschild Direct, at 5.

28 *See*, Rothschild Direct, at 33-34.

statistically related to utility stock valuations, it is the proper measure of growth in DCF analyses.

Q. DO YOU HAVE CONCERNS REGARDING THE ASSUMED RELATIONSHIP OF FUTURE EARNINGS TO THE RETENTION RATIO?

A. Yes, I do. The retention growth model's basic premise is that future earnings will increase as the retention ratio increases.[29] There are several reasons why that may not be the case. Management decisions to conserve cash for capital investments, to signal future earnings prospects, or to avoid the disproportionately negative valuation effects associated with dividend cuts, as opposed to dividend increases,[30] can and do influence dividend payout (and therefore earnings retention) decisions in the near-term. An important question, then, is whether the data on which Mr. Rothschild relies supports the assumption that higher retention ratios necessarily are associated with higher future earnings growth rates.

Q. DID YOU PERFORM ANY ANALYSES TO ADDRESS THAT QUESTION?

A. Yes, I did. The purpose of my analysis was to determine whether the data on which Mr. Rothschild relies empirically supports the assumption that higher retention ratios necessarily produce higher earnings growth rates. Mr. Rothschild relied on Value Line data to calculate the DCF results for the nine companies in the Proxy Group. Value Line provides historical and projected growth rates for both EPS and dividends per Share ("DPS"). For each electric utility covered by Value Line that had a consistent history of dividend payments, I calculated (in each year of the historical period) the dividend payout ratio, the retention ratio, and the subsequent five-year average earnings growth rate. I then performed a regression analysis in which the dependent variable was the five-year earnings growth rate, and the explanatory variable was the earnings retention ratio.

---

29 Mr. Rothschild acknowledges this relationship at pages 32-33 of his Direct Testimony (bullet point 1).

30 *See* Servaes and Tufano, *Corporate Dividend Policy: The Theory and Practice of Corporate Dividend and Share Repurchase Policy*. Deutsche Bank, February 2006.

Q. WHAT DID THAT ANALYSIS REVEAL?

A. The analyses demonstrate a statistically significant negative relationship (Retention Ratio Coefficient and t-Statistic) between the five-year average earnings growth rate and the earnings retention ratio (*see* Exhibit __(RBH-2 Schedule 9). That is, based on Mr. Rothschild's data source, future earnings growth increased as the retention ratio decreased, contradicting the fundamental premise of his approach.

Table 1:

Regression Results - Retention Ratio / Earnings Growth[31]

	Coefficient	Standard Error	t-Statistic
Intercept	0.188	0.014	13.717
Retention Ratio	-0.277	0.024	-11.434

Q. DO VALUE LINE'S PROJECTIONS FOR THE PROXY GROUP COMPANIES' EPS GROWTH SUPPORT MR. ROTHSCHILD'S SUSTAINABLE GROWTH ESTIMATE?

A. No, they do not. As shown in Exhibit __(RBH-2, Schedule 10), Value Line frequently expects actual earnings growth to exceed the growth rate indicated by the sustainable growth formula. Consequently, the assumption that the sustainable growth estimate accurately reflects future growth may be too limiting.

Q. PLEASE DESCRIBE THE DIVIDEND YIELD PORTION OF MR. ROTHSCHILD'S CONSTANT GROWTH DCF MODEL.

A. Mr. Rothschild's model begins with the dividend yield calculation based on the spot price as of April 30, 2018, and a second calculation based on the average of the high and low prices for the twelve months ended April 30, 2018.[32] Consequently, his analysis rests on three market price data points.

31 *See* Exhibit __(RBH-2, Schedule 9).

32 *See*, Rothschild Direct, at 37, Schedule ALR 3, Page 1.

Q. PLEASE FURTHER DESCRIBE THE FORMULA FOR RETENTION GROWTH IN MR. ROTHSCHILD'S CONSTANT GROWTH DCF MODEL.

A. To calculate the "retention growth"[33] rate, Mr. Rothschild relies on the formula:

$$g = (b \text{ x } r) + (s \text{ x } v) \quad [1]$$

where: g = the estimated growth rate;

b = the retention ratio (*i.e.*, the amount of earnings not paid in dividends);

r = the Return on Common Equity;

s = the growth in the number of shares of common stock outstanding; and

v = the portion of new equity raised in excess of the Book Value.

To calculate the "*b*" component (that is, the retention ratio), Mr. Rothschild first calculates the Market/Book ratio, based on the respective spot and average spot prices together with the most recently reported Value Line Book Value per Share estimate. He then multiplies the Market/Book ratio by the dividend yield to arrive at the "Dividend Yield on Book", sometimes referred to as the "Book Yield". That calculation is as follows:

$$\frac{D}{BV} = \frac{P}{BV} \; x \; \frac{D}{P} \quad [2]$$

where the term $\frac{D}{BV}$ is the "Book Yield", P is the market price per share, BV is the Book Value per Share, and D equals dividends per share.

To calculate the retention ratio, Mr. Rothschild divides the Book Yield by his estimate of the expected Return on Common Equity ("ROCE"), or $\frac{E}{BV}$, where E equals Earnings per Share.[34] That calculation reduces to the payout ratio (*i.e.*, the ratio of dividends to earnings): $\frac{D}{E} = \frac{\frac{D}{BV}}{\frac{E}{BV}}$ [3] which then can be expressed as $\frac{D}{E} = \frac{D}{BV} \; x \; \frac{BV}{E}$ [4] . The retention

[33] On page 29 of his Direct Testimony, Mr. Rothschild refers to his approach as the "sustainable retention growth procedure". For convenience, I refer to the method as the "retention growth" rate.

[34] *See*, Schedule ALR 3, Page 3.

ratio is defined as one minus the payout ratio, or $1 - \frac{D}{E}$ [5]. The "*b* x *r*" quantity, then is product of the retention ratio and the earned ROCE.[35]

Q. WHY IS IT IMPORTANT TO UNDERSTAND THOSE RELATIONSHIPS?

A. It is important given Mr. Rothschild's assertion that his retention growth approach is superior to the use of analysts' projections in the Constant Growth DCF model. Equations [1] through [4] require several fundamental assumptions that Mr. Rothschild failed to address, but which typically are the subject of analysts' research and analyses.

For example, Mr. Rothschild's calculation of the payout ratio is based on the combination of the Market/Book ratio, the dividend yield, and the ratio of the Book Yield to the Return on Common Equity. Under that algebraic formulation, the payout ratio is a function of multiple variables, most of which are forward-looking and all of which are subject to the discretion and views of each company's management and Board of Directors. The analysts that cover the Proxy Group companies participate in earnings conference calls, ask questions of management, attend presentations, and analyze a broad array of information regarding financial, operating, regulatory and strategic issues that, taken together, form the basis of their assessments as to the likely range of dividend payouts and, therefore, retention ratios and growth rates.[36] Mr. Rothschild's algebraic expression of the payout ratio fails to incorporate that fundamental research.

Similarly, Mr. Rothschild's ROCE calculation is an approximation of the data that he presents regarding (1) Value Line's projected earned ROCE, and (2) the ROCE implied by analysts' growth rates. As discussed below, however, the ROCE depends on several factors, including operating margins, the ability of fixed assets to generate revenue, and how those assets are financed. All those factors are subject to change depending on the circumstances of the subject company, and all are the focus of research and analyses by the

---

35 *See* Schedule ALR 4.

36 *See*, *for example*, Table 2 and Exhibit__(RBH-2), Schedule 14.

analysts covering them. Here again, although the analysts that cover the proxy companies research and analyze those factors, Mr. Rothschild does not. Nonetheless, Mr. Rothschild seems to be of the view that his algebraic expression of retention growth is more relevant to investors than equity analysts' fundamental research regarding the factors underlying those equations.

Q. DO YOU AGREE WITH MR. ROTHSCHILD'S CALCULATION OF THE "SV" PORTION OF THE MODEL?

A. No, I do not. As noted above, the "*sv*" term is meant to represent an element of growth as the product of (1) the growth in shares outstanding or "*s*", and (2) that portion of the Market/Book ratio that exceeds unity ("*v*"). The "*v*" factor typically is represented as $1 - \frac{1}{M/BV}$, or $1 - \frac{BV}{M}$.[37] Although Mr. Rothschild describes his calculation of "*v*" in a note to his Schedule ALR-4, I was not able to reproduce his result based on that formula. Rather, it appears that Mr. Rothschild has calculated "*v*" (which he refers to as "New Financing Growth") as $\frac{M}{BV} - 1$. That, of course, is not the formula noted above. Correcting Mr. Rothschild's calculation produces a lower "v" component and, therefore, a lower estimate of retention growth (4.36 percent to 4.47 percent; *see*, Exhibit __(RBH-2), Schedule 11).

As to the "*s*" component, Mr. Rothschild has calculated the average expected growth in shares based on data from Value Line, yet he assumes a higher rate of growth.[38] As shown in Exhibit __(RBH-2), Schedule 11, if Mr. Rothschild were to rely on the Value Line data, unadjusted, the average retention growth estimate would be reduced by 90 basis points, and the average DCF estimate would decrease by 92 basis points to 7.08 percent.[39]

---

37 *See*, Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 269.

38 Mr. Rothschild assumes an external financing rate of 1.00 percent "to recognize that the increase in rate base financing caused by the tax change might not yet be accounted for in Value Line projections." *See*, Rothschild Direct, at Schedule ALR 7.

39 For the average price calculation and corrected for the proper calculation of "*v*".

Q. DOES MR. ROTHSCHILD RELY ON VALUE LINE'S PROJECTIONS FOR THE ROCE?

A. Yes, he does. As noted in Schedule ALR 3, page 2, Mr. Rothschild reports average and median expected returns based on Value Line's projected ROCE. Notably, Value Line's average projected ROCE for the Proxy Group is 9.78 percent, nearly 150 basis points above Mr. Rothschild's 8.31 percent recommendation.

Q. IS THE ROCE ASSUMED TO REMAIN CONSTANT IF IT IS USED IN THE LONG-TERM GROWTH MEASURE?

A. Yes, it is. As noted earlier, if retention growth is used as a measure of long-term growth, the determinants of the expected earned ROCE, including the projected level of sales efficiency, profitability, and capitalization ratios, should remain constant over the projection period, and beyond.[40] If that is not the case, the model is an unstable and unreliable measure of the subject company's future growth. To assess the stability of those factors, I applied the "DuPont" formula, which decomposes the Return on Common Equity (that is, the "r" component of the model) into three factors: the Profit Margin (net income/revenues), Asset Turnover (revenues/net plant), and the Equity Multiplier (net plant/equity):

$$Return\ on\ Common\ Equity = \frac{Net\ Income}{Revenue}\ x\ \frac{Revenue}{Assets}\ x\ \frac{Assets}{Equity} \quad [6]$$

As Exhibit __(RBH-2), Schedule 12 demonstrates, the product of those three factors is approximately equal (but for rounding) to Value Line's reported ROCE, both historical and projected.

Q. WHAT DOES THAT ANALYSIS SHOW?

A. It demonstrates that over time, Asset Turnover (the ratio of Revenue to Assets) and the Equity Multiplier (*i.e.*, the ratio of assets to equity) are expected to decrease, indicating (1) the Proxy Group companies are expected to finance a growing proportion of their assets

---

[40] *See*, for example, R. Brealey, S. Myers, J. Marcus, Fundamentals of Corporate Finance, Fourth Edition, at 459.

with equity, and (2) each dollar of assets will produce fewer dollars of revenue. Those findings are consistent with the general observation that utilities have focused on preserving credit quality, which is especially important considering the TCJA's potential effects on near-term cash flow.

Q. DOES MR. ROTHSCHILD'S STATEMENT THAT YOU AGREE THAT "EARNINGS, BOOK VALUE AND CASH FLOW CAN BE CONSIDERED IN DETERMINING INVESTOR'S GROWTH EXPECTATIONS" FULLY REFLECT YOUR POSITION ON THAT ISSUE?

A. No, it is not. Mr. Rothschild's reference,[41] which is in the context of his discussion of "sustainable growth", points to page 19, lines 22 to page 25 of my Direct Testimony. Assuming Mr. Rothschild meant to refer to page 16 (rather than page 19), my testimony noted the following:

> The Constant Growth DCF model assumes: (1) earnings, book value, and dividends all grow at the same, constant rate in perpetuity; (2) the dividend payout ratio remains constant; (3) a Price to Earnings ("P/E") multiple remains constant in perpetuity; and (4) the discount rate is greater than the expected growth rate.

That statement is a basic summary of the Constant Growth DCF model's underlying assumptions - it is not a discussion of what can or cannot be considered by investors in developing growth expectations. Further, Mr. Rothschild failed to point out that on page 17 line 22 through page 18 line 8, I explained why expected earnings is the proper measure of growth in the DCF model. If Mr. Rothchild's reference is meant to suggest I endorse his approach, he is mistaken.

Q. ARE DIVIDEND AND BOOK VALUE GROWTH RATES APPROPRIATE MEASURES OF EXPECTED GROWTH IN THE CONSTANT GROWTH DCF MODEL?

[41] Rothschild Direct at page 40 footnote 58.

A. No, they are not. As noted in my Direct Testimony, to reduce growth to a single measure, it is necessary to assume a fixed payout ratio and a constant growth rate for Earnings Per Share, Dividends Per Share, and Book Value Per Share.[42]

Earnings are the fundamental driver of both book value and dividend growth. As noted earlier, book value increases with the amount of earnings not distributed as dividends (that is, retained earnings), and the price at which new equity is issued is a function of the Earnings Per Share and the then-current Price/Earnings ratio. Similarly, the ability to pay dividends depends fundamentally on expected earnings. Because dividend policy contemplates additional factors, including the disproportionately negative effect on prices resulting from dividend cuts, as opposed to dividend increases,[43] in the short-run dividend growth may be disconnected from earnings growth. In the long-run, however, dividends cannot be increased without earnings growth. Lastly, because investors often assess stock values based on Price/Earnings ratios, it is important to consider whether the growth rates used in the DCF model are related to those valuations measures.

Q. DO BOOK VALUE, DIVIDEND, OR SUSTAINABLE GROWTH RATES EXPLAIN UTILITY P/E RATIOS BETTER THAN EARNINGS GROWTH RATES?

A. No, they do not. To assess that question, I performed a regression analysis of growth rates and utility P/E ratios and found projected earnings growth to be the only growth rate with a statistically strong and theoretically sound ability to explain changes in utility valuations.

Q. PLEASE DESCRIBE THAT ANALYSIS AND ITS RESULTS.

A. My analyses are based on the approach developed by Professors Carleton and Vander Weide, who performed a comparison of the predictive capability of historical growth estimates and analysts' consensus forecasts of five-year earnings growth for the stock

---

42 Hevert Direct, at 17.

43 *See* Servaes and Tufano, *Corporate Dividend Policy: The Theory and Practice of Corporate Dividend and Share Repurchase Policy*. Deutsche Bank, February 2006.

prices of sixty-five utility companies.[44] I structured the analysis to determine whether investors use earnings, dividend, book value, or sustainable growth rate when valuing utility stocks. My analyses examined the statistical relationship between the P/E ratios of the universe of Value Line utility companies, and the projected EPS, dividend per share, book value per share reported by Value Line, and $br + sv$ sustainable growth rate calculated using Value Line data. To determine which, if any, of those growth rates are statistically related to utility stock valuations, I performed a series of regression analyses in which the projected growth rates were explanatory variables and the P/E ratio was the dependent variable. The results of those analyses are presented in Exhibit__(RBH-2, Schedule 13).

In the first set of analyses I considered each growth rate separately (*i.e.*, I performed four separate regressions with P/E as the dependent variable and projected EPS, DPS, BVPS, and sustainable growth, respectively, as the independent variable). To ensure those individual analyses did not bias my results, I also performed a single regression analysis that included all four variables as potential explanatory variables. I then reviewed the T and F-Statistics to determine whether the variables and equations were statistically significant.[45]

Q. WHAT DID YOUR ANALYSES REVEAL?

A. As shown in Exhibit__(RBH-2, Schedule 13), the results demonstrate that the only positive, statistically significant growth rate was projected EPS growth. That is, none of DPS, BVPS, or sustainable growth rates were meaningfully related to valuation levels. Consequently, projected EPS growth rates are the appropriate measure of growth for the purpose of the DCF models.

---

44 Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management, Spring 1988 at 81. Please note that while the original study was published in 1988, it was updated in 2004 under the direction of Dr. Vander Weide. The results of this updated study are consistent with Vander Weide and Carlton's original conclusions.

45 In general, a T-Statistic of 2.00 or greater indicates that the variable is likely to be different than zero, or "statistically significant" (at the 95.00% confidence level, i.e., a p-value less than 0.05). The F-Statistic is used to determine whether the model as a whole has statistically significant predictive capability.

Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE USE OF BOOK VALUE, DIVIDEND, AND SUSTAINABLE GROWTH RATES IN THE CONSTANT GROWTH DCF MODEL?

A. The analyses described above demonstrate that Mr. Rothschild's position (*i.e.*, that sustainable growth rates are more appropriate than earnings growth in the DCF formulation) is not supported by data from Value Line, a source on which he relies in this proceeding. Because projected EPS growth is the only variable that has any explanatory value, projected earnings growth should be the only variable used in the DCF analyses.

Q. DO YOU HAVE EXAMPLES OF UTILITY ANALYSTS' RESEARCH THAT BEARS ON RETENTION GROWTH, AND IS MORE COMPLETE THAN MR. ROTHSCHILD'S REVIEW OF VALUE LINE DATA?

A. Yes, I do. I reviewed the transcripts of the most recent earnings conference calls for several of the companies included in the Proxy Group. During those calls, the analysts asked, and were given answers to numerous issues that bear directly on the factors that determine the ROCE, the company's earnings growth expectations, and its dividend policy. Table 2 (below) provides a summary of issues raised, and their relationship (marked by a "√") to the factors that determine the ROCE.

Table 2: Summary of Issues Raised in Earnings Conference Calls[46]

Company	Date	Issue	Profit Margin	Asset Turnover	Equity Multiplier
OGE Energy Corp.	5/3/2018	Regional economic conditions	√	√	
		Effect of tax reform	√		
		Expected operating expense levels	√		
		Planned capital investments		√	√
		Rate structure	√	√	
		Rate proceedings	√	√	
		Customer and load growth		√	
PNM Resources	4/27/2018	Regional economic conditions	√	√	
		Load growth and customer usage	√	√	
		Effect of tax reform	√		

46 Exhibit__(RBH-2), Schedule 14.

Company	Date	Issue	Profit Margin	Asset Turnover	Equity Multiplier
		Planned equity issuances	√		√
		Rate structure	√	√	
		Rate proceedings	√	√	
		Planned capital investments		√	√
ALLETE, Inc.	5/2/2018	Planned capital investments		√	√
		Effect of tax reform	√		
		Rate proceedings	√	√	
Hawaiian Electric	5/10/2018	Capital investment plans		√	√
		Rate structures	√	√	
		Regional economic conditions	√	√	
		Effect of tax reform	√		
Black Hills Corp.	5/4/2018	Effect of tax reform	√		
		Rate proceedings	√	√	
		Capital investment plans		√	√
		Equity issuances	√		√

Again, the level of primary research performed by analysts on issues that directly bear on the “retention growth” model far exceeds Mr. Rothschild’s review of Value Line data.

Q. IS IT YOUR POSITION THAT VALUE LINE DOES NOT UNDERTAKE SIMILAR ANALYSES?

A. No. Assuming Value Line does undertake those analyses, it is reasonable to assume they are reflected in its EPS growth rate projections.

Q. IS IT YOUR POSITION THAT THE RETENTION GROWTH MODEL IS NEVER APPROPRIATE?

A. No, it is not. As discussed earlier, in this case the components of the expected Return on Common Equity are not expected to remain stable over time. If that were not the case, or if there were reason to believe it not would be the case, the Retention Growth model may be a reasonable method. Even under those conditions, however, I do not believe that it should be used as the sole measure of growth. Rather, to the extent it is used, the model should be considered in conjunction with analysts’ growth rate projections.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S ASSERTION THAT ANALYSTS' EARNINGS GROWTH RATES ARE OVERLY OPTIMISTIC?[47]

A. There is no reason to believe the analyst growth rates used in my DCF analyses are biased, nor has Mr. Rothschild explained why any of the analysts covering the proxy companies would bias their projections despite their certification requirements. To that point, the October 2003 Global Research Analyst Settlement required financial institutions to insulate investment banking from analysis, prohibited analysts from participating in "road shows," and required the settling financial institutions to fund independent third-party research.[48]

Pursuant to Regulation AC, which became effective in April 2003, analysts must certify that "…the views expressed in the report accurately reflect his or her personal views, and disclose whether or not the analyst received compensation or other payments in connection with his or her specific recommendations or views."[49] I further understand industry practice is to avoid conflicts of interest by ensuring compensation is not directly or indirectly linked to the opinions contained in those reports. An article in Financial Analyst Journal found that analyst forecast bias has declined significantly or disappeared entirely since October 2003.[50]

---

47 Rothschild Direct, at 19.

48 The 2002 Global Financial Settlement resolved an investigation by the U.S. Securities and Exchange Commission and the New York Attorney General's Office of a number of investment banks related to concerns about conflicts of interest that might influence the independence of investment research provided by equity analysts.

49 Securities and Exchange Commission, 17 CFR PART 242 [Release Nos. 33-8193; 34-47384; File No. S7-30-02], RIN 3235-AI60 Regulation Analyst Certification.

50 Armen Hovakimian and Ekkachai Saenyasiri, *Conflicts of Interest and Analyst Behavior: Evidence from Recent Changes in Regulation*, Financial Analysts Journal, Volume 66, Number 4, July/August 2010, at 105.

Q. DOES THE 2010 ARTICLE BY MCKINSEY & COMPANY ("MCKINSEY") CITED BY MR. ROTHSCHILD SUPPORT HIS ASSERTION THAT YOUR DCF MODEL RELIES ON BIASED GROWTH RATES?[51]

A. No, it does not. The McKinsey article is general in nature and does not demonstrate bias on the part of utility analysts. In fact, the article focuses on analysts' projections for the S&P 500 - utilities are only one of ten sectors in the S&P 500, and currently represent only 2.80 percent of its total market capitalization.[52] Although he points to the McKinsey article as support for this position that I should not have relied on utility analysts, Mr. Rothschild fails to indicate where the article states any such bias extends to utilities, or whether it was concentrated in other, less stable industry sectors.

Q. DO YOU AGREE WITH MR. ROTHSCHILD'S CLAIM[53] THAT ANALYSTS' EARNINGS PROJECTIONS FOR EIGHT OF THE PROXY COMPANIES WERE "SIGNIFICANTLY HIGHER THAN ACTUAL EARNINGS"?

A. No, Mr. Rothschild's data do not support that assertion. First, Mr. Rothschild's "Chart 11", together with the company-specific data contained in Schedule ALR 9 assume the earnings growth forecasts provided by Zacks and Value Line (respectively) in 2008 apply to expected earnings in 2018. Clearly, that is not the case. Zacks explains that its consensus projections relate to the "Next 5 years"[54], and Value Line explains its projections are for the coming three to five years.[55] Neither apply to the ten-year period included in Mr. Rothschild's chart, a point he seems to acknowledge by labeling those periods "Beyond 5-Year Analyst Per Share Forecast".[56]

---

51 *See*, Rothschild Direct, at 64-65.

52 http://us.spindices.com/indices/equity/sp-500. Accessed 6/12/2018.

53 Rothschild Direct at pages 64-65

54 *See*, for example, https://www.zacks.com/stock/quote/AEP/detailed-estimates.

55 Value Line, *How to Read a Value Line Report*, 2015, at 6.

56 Schedule ALR 9.

Because the projections apply to three to five-year forecast horizons, we should review the direction and extent of "earnings surprises", or differences between projected and actual earnings, over that period. Looking to the eight companies included in Mr. Rothschild's Schedule ALR 9, there are 48 observations (eight companies with two projections for three years). Of those 48 observations, 23 had positive earnings surprises (actual earnings were greater than forecast earnings, and 24 had negative earnings surprises (actual earnings were less than forecast earnings *see* Exhibit__(RBH-2), Schedule 15). In summary, there were effectively equal numbers of observations in which earnings were over- and under-forecast.

From a somewhat different perspective, we can consider the magnitude of the earnings surprise by applying Zacks' approach, which calculates the "EPS Surprise" as the difference (expressed as a percentage) between the actual reported earnings per share relative to the projected earnings per share.[57] As shown in Exhibit__(RBH-2), Schedule 15, across the 48 observations the average earnings surprise was 2.17 percent, indicating actual earnings were somewhat higher than forecast earnings. Again, that data does not support Mr. Rothschild's view that analysts' earnings growth projections should be discarded in favor of his approach.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S CLAIM THAT YOUR ANALYSES DO NOT PROVIDE THE SAME LEVEL OF DISCLOSURE AS VALUE LINE?

A. I disagree. The fact that consensus growth projections such as those provided by Zacks and First Call focus on earnings, rather than book value or dividends, simply demonstrates the lack of demand for dividend or book value growth data. To that point, Dr. Roger Morin has noted the "extreme scarcity of dividend forecasts compared to the widespread availability of earnings forecasts."[58] Dr. Morin goes on to note that "[t]he fact that these investment information providers focus on growth in earnings rather than growth in

---

57 *See*, for example, https://www.zacks.com/stock/chart/AEP/price-consensus-eps-surprise-chart

58 Roger A. Morin, PhD, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 298.

dividends indicates that the investment community regards earnings growth as a superior indicator of long-term growth."[59]

3. Mr. Rothschild's Application of Non-Constant Growth DCF Model

Q. PLEASE DESCRIBE MR. ROTHSCHILD'S NON-CONSTANT DCF MODEL.

A. Mr. Rothschild's Non-Constant Growth DCF model uses Value Line to estimate annual dividends over a 42-year period. For the first five years (2018 - 2022), he applies Value Line's projected DPS. For the remaining 37 years (beginning in 2023), Mr. Rothschild calculates the expected annual dividend as the expected payout ratio in 2022, multiplied by projected EPS. Mr. Rothschild's model calculates the Internal Rate of Return, which sets the current average stock price for the Proxy Group equal to the present value of projected dividends and the terminal value, and produces a result of 8.21 percent based on his average stock price for the twelve months ended April 30, 2018; and 8.17 percent based on spot prices (April 30, 2018).[60]

Q. DO YOU AGREE WITH MR. ROTHSCHILD'S APPLICATION OF THE NON-CONSTANT GROWTH DCF?

A. No, I do not. Mr. Rothschild assumes BVPS is superior to EPS as the measure of capital appreciation expected by investors. As discussed earlier, however, whereas EPS growth is statistically related to changes in stock valuations, BVPS, DPS, and retention growth are not.[61] Moreover, because they are consensus estimates, earnings growth rates do not give complete weight to a single analyst. Consequently, if Mr. Rothschild's approach is to assume the initial stock price will increase at a given rate of capital appreciation, it would be more reasonable to assume a constant Price/Earnings (rather than a constant

---

59 Roger A. Morin, PhD, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 303.

60 *See*, Rothschild Direct, at 41-42; Schedule ALR 5, Pages 1 and 2. As noted on page 29 of his direct testimony, Mr. Rothschild used the non-constant DCF model as a "check" on his constant growth model.

61 *See*, for example, Roger A. Morin, PhD, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 307.

Market/Book ratio) and increase the stock price as a function of earnings growth, rather than BVPS growth.

Q. DOES THE MCKINSEY ARTICLE BEAR ON THIS POINT?

A. Yes, it does. The McKinsey article observes that "…long-term earnings growth for the market as a whole is unlikely to differ significantly from growth in GDP, as prior McKinsey research has shown."[62] McKinsey further states that "Real GDP has averaged 3 to 4 percent over past (*sic*) seven or eight decades, which would indeed be consistent with nominal growth of 5 to 7 percent given current inflation of 2 to 3 percent."[63] As noted above, however, Mr. Rothschild's Non-Constant DCF analysis assumes a long-term growth rate of 4.64 to 4.79 percent.[64] If anything, therefore, the McKinsey article highlights the unduly low final stage growth rate that forms the basis of Mr. Rothschild's unreasonably low ROE recommendation. At the same time, the McKinsey article supports the growth rates used in my Constant Growth and Multi-Stage DCF models; both are within the 5.00 percent to 7.00 percent range noted by McKinsey.[65]

4. Mr. Rothschild's Capital Asset Pricing Model (CAPM)

Q. PLEASE SUMMARIZE MR. ROTHSCHILD'S CAPM ANALYSIS.

A. Mr. Rothschild provided a CAPM estimate of 8.59 percent, which he subsequently revised to 8.33 percent.[66] Mr. Rothschild's CAPM analysis, and any conclusions he derives from it, assume "options-implied" Beta coefficients for three of the nine Proxy Group companies. As Mr. Rothschild explains, YahooFinance did not provide the information

---

62 McKinsey & Company, McKinsey on Finance, Number 35, Spring 2010, *Equity Analysts: Still too bullish*, at 16-17.

63 McKinsey & Company, McKinsey on Finance, Number 35, Spring 2010, *Equity Analysts: Still too bullish,* at 17.

64 Schedule ALR 5, annual growth rate of Mr. Rothschild's projected cash flows.

65 Please also note that consistent with the McKinsey approach, the terminal growth rate used in my Multi-Stage DCF model is the product of real GDP growth (3.27%) and expected inflation (2.36%).

66 *See*, Response to OTP Information Request No. ND-OTP-122; Letter dated June 20, 2018 regarding typographical errors to Mr. Rothschild's testimony.

required information for the remaining six companies.[67] As to the risk-free rate and Market Risk Premium components, Mr. Rothschild assumes 2.27 percent and 8.44 percent, respectively.

Q. DO YOU HAVE SPECIFIC CONCERNS WITH MR. ROTHSCHILD'S CAPM ANALYSIS?

A. Yes, I do. Regarding his options-implied Beta coefficients, Mr. Rothschild has provided no support for the implicit assumption that it is an approach widely used by investors.[68] Further, lacking the underlying data source for the three proxy companies for which he did apply the method, I could not replicate or verify Mr. Rothschild's calculations. Because I could not do so, I could not test the sensitivity of his results to changes in the underlying stock prices, or implied volatilities over time. Nonetheless, I have reviewed the recent implied volatility, and open interest on put and call options for the three companies to which Mr. Rothschild applied his approach. In the case of PNM Energy, as of June 20, 2018 the August 2018 put option with a strike price of $45.00 (the strike price included in Attachment 1 to DR ND-OTP 121 – Corrected) had an open interest of only seven contracts.[69] I appreciate that open interest for a given contract will change over time, but given the low level of open interest (at least in the case of PNM), and knowing that Mr. Rothschild's calculations appear to be based on a given day, it is unclear whether seemingly small changes in the underlying data would have meaningful effects on the option-implied Beta. That is especially the case given that the principal statistics in his calculation (skewness, variance, mean, standard deviation) each rely on only three observations.

[67] *See*, Rothschild Direct, at 45, footnote 69; Response to DR ND-OTP-123.

[68] *See* response to DR ND-OTP-123. Mr. Rothschild did not provide the source data for his calculation of the option-implied Beta for his three proxy companies. The academic support Mr. Rothschild provided in response to discovery was a single working paper (not then published in an academic journal) from 2009.

[69] Source: https://finance.yahoo.com/quote/PNM/options?p=PNM&date=1534464000, accessed 6/20/18. Open interest represents the number of options contracts that are currently open, i.e., contracts that have been traded but have not yet liquidated. At page 6 of the article provided in response to DR ND-OTP-123 (Attachment 1), the authors noted their concern with liquidity in developing the sample of options contracts used in their analyses.

More importantly, the simple fact that Mr. Rothschild's approach could not be applied to two-thirds of the Proxy Group is a clear indication that it is not (at least for the Proxy Group) a commonly used method. The lack of evidence regarding investors' acceptance and use of Mr. Rothschild's approach, the apparently thin open interest in the proxy company options, and the inability to apply the approach to two-thirds of the Proxy Group all call into question the reliability of Mr. Rothschild's options-implied Beta approach for setting the ROE in this proceeding. That is especially true given the availability of more traditionally developed Beta coefficients.

Regarding his assumed risk-free rate, Mr. Rothschild's revised CAPM estimate of 8.33 percent appears to assume a rate of 2.27 percent,[70] even though he states in response to OTP Information Request No. ND-OTP-124a. that he assumed a risk-free rate of 2.61 percent. Whichever rate he used, Mr. Rothschild explains he did so because "it has an option implied beta close to zero."[71] The finding that a given Treasury security has a debt Beta coefficient close to zero, however, does not distinguish it from other debt securities - according to Duff & Phelps, even Baa-rated corporate debt has a Beta coefficient close to zero.[72] In my view, therefore, Mr. Rothschild's criterion is not very meanigful.

Q. WHAT IS THE PROPER CRITERION FOR DETERMINING THE TERM OF THE RISK-FREE SECURITY?

A. As noted by Morningstar, the maturity of the risk-free security should approximate the life of the underlying investment:

> The traditional thinking regarding the time horizon of the chosen Treasury security is that it should match the horizon of whatever is being valued. When valuing a business that is being treated as a going concern, the appropriate Treasury yield should be that of a long-term Treasury bond.

70 Attachment 1 to DR ND-OTP-121 - Corrected, Excel tab "CAPM", cell E35.

71 Response to OTP Information Request No. ND-OTP-124 b.

72 Baa-rated debt had a Beta coefficient ranging from 0.11 in June 2016 to 0.19 in December 2017. Source: Duff & Phelps 2018 Valuation Yearbook, Exhibit 5.7.

> Note that the horizon is a function of the investment, not the investor. If an investor plans to hold stock in a company for only five years, the yield on a five-year Treasury note would not be appropriate since the company will continue to exist beyond those five years.[73]

That view is supported by Pratt and Grabowski, who recommend a similar approach to selecting the risk-free rate, noting that "[i]n theory, when determining the risk-free rate and the matching ERP you should be matching the risk-free security and the ERP with the period in which the investment cash flows are expected."[74]

As a practical matter, equity securities represent a perpetual claim on cash flows; 30-year Treasury bonds are the longest-maturity securities available to match that perpetual claim. That position is consistent with Mr. Rothschild's DCF analyses, both of which assume cash flows in perpetuity. Because the 30-year Treasury bond is the longest duration risk-free security, it is in my view, the appropriate measure of the risk-free rate in the CAPM.

Q WHAT ARE YOUR CONCLUSIONS REGARDING MR. ROTHSCHILD'S CAPM ANALYSIS?

A. First, Mr. Rothschild has provided no evidence to support the position that his "options-implied" Beta method is widely accepted and used in practice. Second, the fact that implied volatilty data is available for only a small subset of the Proxy Group indicates it cannot be applied to a meaningful sample and as such, inferences regarding the Cost of Equity cannot comfortably be drawn from it in this proceeding. Third, the apparently thinly traded nature of the options contacts on which implied volatilty is calculated may provide for less robust conclusions regrading the "implied volatility" Beta coefficients than the Beta coefficients provided by, for example, Value Line. Lastly, Mr. Rothschild's contradictory evidence regarding the risk-free rate used in his analysis dilutes the confidence in any conclusions drawn from his CAPM analysis. On balance, I strongly disagree that Mr. Rothschild's

---

73 Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 44.

74 Shannon Pratt and Roger Gabrowski, Cost of Capital: Applications and Examples, 3rd Ed. (Hoboken, NJ: John Wiley & Sons, Inc., 2008), at 92. "ERP" is the Equity Risk Premium.

CAPM estimate provides any reasonable basis to corrobroate his DCF-based results, or support his 8.31 percent ROE recommendation.

5. Capital Market Conditions

Q. PLEASE SUMMARIZE MR. ROTHSCHILD'S POSITION WITH RESPECT TO THE EFFECT OF CAPITAL MARKET CONDITIONS ON OTP'S COST OF EQUITY.

A. Mr. Rothschild states that "current capital markets indicate that an 8.31% return on equity for investing in a regulated utility like OTP is conservatively high."[75] He further observes that the Chicago Board of Options Exchange ("Cboe") Volatility Index ("VIX") is "significantly lower than it was during the financial crisis" and concludes that the Cost of Equity has decreased. Similarly, Mr. Rothschild notes that Cboe's VIX Volatility Index ("VVIX") has fallen from prior levels, and concludes investors' expectations of volatility have decreased.[76] Mr. Rothschild also points to the current level of interest rates and credit spreads, but advises the Commission to not consider interest rate forecasts as they represent "an [i]llusion of skill" and are not market-based.[77] As to the proxy companies' valuation levels, Mr. Rothschild comments on the market performance of the S&P 500 Index and the Proxy Group for the three months ended April 30, 2018.[78]

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S ARGUMENT THAT HIGH STOCK PRICES INDICATE A LOW COST OF EQUITY?

A. By way of background, at page 12 of his testimony, Mr. Rothschild asserts "investors are paying more for the same earnings, including for utility stocks", which indicates a low cost of equity.[79] In his Chart 2, Mr. Rothschild graphs the performance of the S&P 500 and the

---

75 Rothschild Direct, at 12.

76 Rothschild Direct, at 12. The VVIX is a measure of expected volatility of the 30-day forward price of the VIX.

77 Rothschild Direct, at 19.

78 Rothschild Direct, at 7-8.

79 Rothschild Direct, at 12.

Proxy Group since the Order in the Company's last rate case in 2009, noting that the "Proxy Group has increased by 234.2% while the S&P 500 has increased by 137.5%."[80]

Mr. Rothschild fails to acknowledge utility valuation levels during that period were related to the low interest rates, and the resulting "reach for yield" on the part of some investors. During those periods, when interest rates were intentionally subdued, some investors may turn to dividend-paying sectors such as utilities as an alternative source of income (that is, for the dividend yield).[81] Then, when interest rates increased, investors rotated out of the utility sector, causing prices and valuations to fall.

Mr. Rothschild's position also fails to acknowledge that the low interest rate environment that encouraged investors to "reach for yield" was the intentional result of the Federal Reserve's Quantitative Easing policy. That policy now is being unwound, as the Federal Reserve begins its process of "Policy Normalization". Because the unconventional monetary policy that led investors to seek income from dividend-paying sectors (such as utilities) now is in the process of being "normalized", we cannot say the same type of yield-seeking behavior observed over the recent past will persist in the future. In that regard, it is telling that recently authorized ROEs in other jurisdictions are well above the results indicated by the DCF methods on which Mr. Rothschild's recommendation relies.[82]

Lastly, as discussed below, the relevant comparison period is after the enactment of the TCJA. Because the Proxy Group has considerably under-performed the broad market during that more recent period, Mr. Rothschild's observations regarding the sector's performance during a period in which interest rates were intentionally depressed as a matter

---

80 *Ibid*., at 13.

81 The relationship between utility prices and utility dividend yields is given in Equation [2], page 16 of my Direct Testimony.

82 *See, for example,* Chart 2, above.

of Federal monetary policy provide little information regarding OTP's forward-looking Cost of Equity.

Q. PLEASE DESCRIBE MR. ROTHSCHILD'S DISCUSSION OF THE VIX AND ITS RELATIONSHIP TO OTP'S COST OF EQUITY.

A. Mr. Rothschild first notes that the VIX, which measures the implied volatility on the S&P 500 index over the coming 30 days, has trended downward over time. Referring to the VIX as the "Fear Index", he notes that the VIX may be used as a measure of expected market volatility.[83] Mr. Rothschild also argues that the VVIX, which measures expected volatility of the VIX itself, also has fallen.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD ON THOSE POINTS?

A. Just as market intervention by the Federal Reserve has reduced interest rates, it also has had the effect of reducing volatility. In that regard, one of Mr. Rothschild's sources points out that:

> The prevailing wisdom, at least until 2008, was that while government policy affected equity risk premiums in emerging markets, it was not a major factor in determining equity risk premiums in developed markets. The banking crisis of 2008 and the government responses to it have changed some minds, as both the US government and European governments have made policy changes that at times have calmed markets and at other times roiled them, potentially affecting equity risk premiums.[84]

Notably, as shown in Mr. Rothschild's Chart 8A, as the Federal Reserve has begun "normalizing" its monetary policy, we have seen volatility (as measured by the VIX) double from approximately 10.00 to 20.00.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHCHILD'S REFERENCE TO THE VVIX INDEX?

---

83 Rothschild Direct, at 22.

84 Aswath Damodaran, *Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2014 Edition,* updated March, 2014, at 14.

A. If Mr. Rothschild's view is that the VVIX somehow supports his 8.31 percent ROE recommendation, I strongly disagree. The VVIX is a measure of the volatility of volatility; Cboe describes the index as "an indicator of the expected volatility of the 30-day forward price of the VIX."[85] The VVIX, therefore, is an alternative measure of investors' views of expected market volatility. As a point of reference, since 2007 the average value of the VVIX has been 88.55.

In his review of the VVIX, Mr. Rothschild states:

> As of April 30, 2018, the VVIX was trading at 94.30 indicating investors expect an annualized change of 94.30% over the next 30 days on an annual basis. This is significantly lower than during the financial crisis in 2008.[86]

By looking to a single day, Mr. Rothschild does not acknowledge that on May 29, 2018 the VVIX closed at 108.67, well above the long-term average of 88.55 and considerably higher than the 94.30 level he reports for April 30. That is, the VVIX changed by about 15.00 percent (on a spot basis) in a single month. The point simply is that volatility has increased, and is expected to increase further, still.

That point aside, Mr. Rothschild's statement that the current level of the VVIX is below the levels seen during 2008 and 2009 lacks a broad perspective. As shown in Exhibit__(RBH-2), Schedule 16, in 2008 and 2009 the VVIX averaged 81.85, and 79.78, respectively. In 2018 (through May 31), it has averaged 106.26, about 30.00 percent higher than the 2008 average. As Exhibit__(RBH-2), Schedule 16 also demonstrates, so far in 2018 the VVIX has far exceeded prior annual averages. Those data points are consistent with an observation made earlier, that the Federal Reserve's policy of Quantitative Easing dampened market volatility. As that policy is being unwound, volatility, and expected volatility, have increased, indicating heightened risks to investors.

---

85 http://www.cboe.com/products/vix-index-volatility/volatility-on-stock-indexes/the-cboe-vvix-index

86 Rothschild Direct, at 23.

Q. ARE THERE OTHER, LONGER-TERM MEASURES OF EXPECTED VOLATILITY THAT ALSO SHOULD BE CONSIDERED?

A. Yes, there are. The along with the VIX and VVIX, Cboe also publishes the "Term Structure of Volatility", which provides measures of expected volatility through December 2020, and therefore represents a longer-term measure of expected volatility than the current level of the VIX (or VXV). As of May 31, 2018 the expected level of the VIX in December 2020 was 19.88,[87] rather than the 15.93 level reported by Mr. Rothschild.[88] That increase is consistent with the points made above: (1) as federal intervention in capital markets decreases, volatility would be expected to increase; and (2) the uncertainty regarding the unwinding of the $4 trillion of assets put on the Federal Reserve's balance may itself be a cause of market risk and the recent increase in market volatility.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S POSITION THAT HIGH LEVELS OF CAPACITY UTILIZATION EXPLAIN CORPORATE CREDIT SPREADS, AND THAT CURRENT VIX LEVELS DO NOT INDICATE INVESTORS' "FEAR"?[89]

A. I have several concerns with his position. First, Mr. Rothschild observes there is a correlation between capacity utilization and corporate credit spreads, and explains that correlation by the increasing confidence engendered by increasing capacity utilization. What Mr. Rothschild does not acknowledge is that (based on his data), capacity utilization explains less than 20.00 percent of the changes in credit spreads (that is, the R Square is about 19.00 percent; *see* Exhibit__(RBH-2), Schedule 17). Even if we add time as an explanatory variable (a trend variable), the explanatory value increases only to about 26.00 percent, leaving about 74.00 percent of the variation in credit spreads unexplained. Consequently, although it may be the case that macroeconomic factors such as capacity utilization have a systematic relationship to credit spreads, time and other factors account

87 http://www.cboe.com/data/volatilityindexes/volatilityindexes.aspx.

88 Rothschild Direct, at 22.

89 Rothschild Direct, at 24.

for more than 80.00 percent of the variation in those spreads (*see* Exhibit__(RBH-2), Schedule 17).[90]

Second, Mr. Rothschild's argument appears to extrapolate the relationship between capacity utilization and credit spreads (which are a measure of incremental risk to bond investors) to the VIX (which is a measure of perceived risk to equity investors). Putting aside the fundamental distinction between debt and equity securities, there is no need for that extrapolation - we can directly assess the relationship between capacity utilization and the VIX. As with credit spreads, capacity utilization explains less 20.00 percent of changes in the VIX. Unlike credit spreads, time (the trend variable) increases the total explanatory value to about 44.00 percent (*see* Exhibit__(RBH-2), Schedule 17). Again, the proposition that current capacity utilization can justify Mr. Rothschild's unduly low ROE recommendation is tenuous.

Q. HOW DOES CAPACITY UTILIZATION RELATE TO OTHER ASPECTS OF MR. ROTHSCHILD'S ANALYSES AND HIS ROE RECOMMENDATION?

A. Because high capacity utilization is a factor underlying strong macroeconomic growth, it stands to reason that the growth rates used in DCF analyses would reflect that dynamic. In my view, arguing that the market-required Return on Equity is historically low when capacity utilization, including its effect on growth, is historically high are two contradictory positions that Mr. Rothschild has not reconciled. That is especially the case given Mr. Rothschild's fundamental reliance on DCF-based methods, which themselves rely substantially on measures of expected growth.

Q. LASTLY, ARE THERE OTHER IMPLICATIONS OF EXPECTED INTEREST RATES FOR THE COST OF EQUITY?

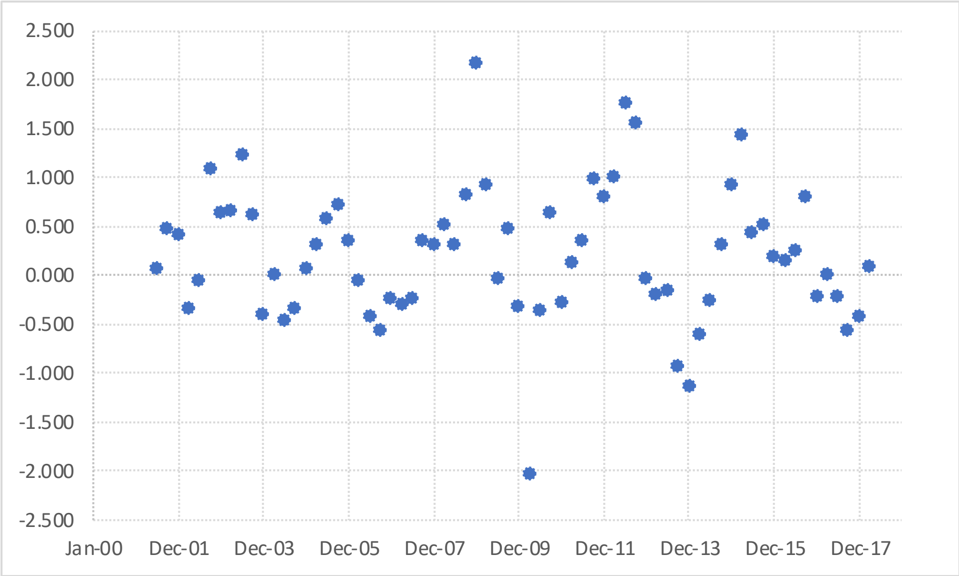
---

90 Avramov, Jostova, and Philipov explain that there are many potential structural and company-specific variables that explain credit spreads, including idiosyncratic equity volatility, stock return momentum, growth opportunities, spot rates, the slope of the yield curve, leverage, measures of market conditions, and the "Fama-French" factors. *See*, Avramov, Jostova, and Philipov, *Understanding Changes in Corporate Credit Spreads*, Financial Analysts Journal, Volume 63, Number 2, 2007, at 91 – 92.

A. Yes, there are. As discussed in my Direct Testimony, the Cost of Equity is a forward-looking concept,[91] and it is important that inputs used in Cost of Equity models reflect market expectations. Mr. Rothschild states that interest rate forecasts are optimistic and inaccurate; he concludes that "current long-term interest rates represent a direct observation of investor expectations and there is no need to use 'expert' forecasts."[92]

Although Mr. Rothschild asserts *Blue Chip's* forecasts are inaccurate and suggests "current market data" are more "accurate",[93] he has provided no evidence to support his claim. As Chart 4 (below) demonstrates, comparing forecasts five quarters in the future to the actual yields observed in those forecast quarters shows actual yields were not accurate predictors of future yields. In fact, through 2015, the forecast error generally was positive, indicating that current yields over-predicted future observed yields.

Chart 4: Forecast Error of Spot 30-Year Treasury Yields[94]



91 Hevert Direct, at 53.

92 Rothschild Direct, at 17.

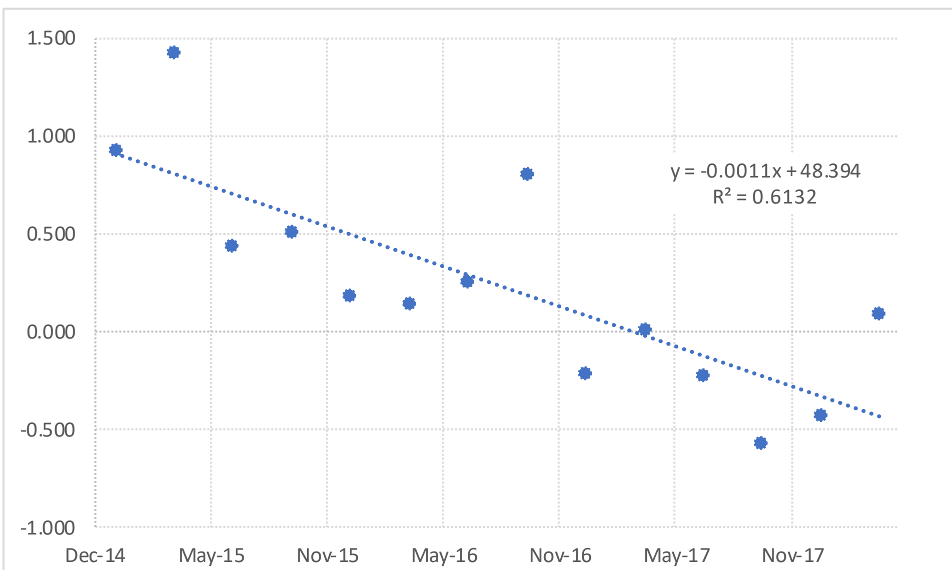
93 Rothschild Direct, at 3.

94 Source: Bloomberg Professional.

Those results make intuitive sense. During much of the review period (2000 through 2018), interest rates were undergoing a secular decline, and with the 2008/2009 recession became the subject of Federal monetary policies specifically designed to keep them low. Because yields fell during that time, prior quarters were likely to over-estimate future quarters. Such over-forecasting is the same outcome Mr. Rothschild finds troubling.

Although interest yields had steadily declined between 2000 and 2015, as noted in my Direct Testimony, in December 2015 the Federal Reserved began its process of monetary policy normalization.[95] The effect of that change in policy and the associated improving economic conditions is shown in Chart 5 (below), which limits the review period to the fourteen quarters from December 2014 through March 2018. As interest rates have begun to increase, spot Treasury yields have begun to under-project future yields.

Chart 5: Forecast Error of Spot 30-Year Treasury Yields Since December 2014[96]



[95] Hevert Direct, at 51-52.

[96] Source: Bloomberg Professional

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S CLAIM THAT A CONGRESSIONAL BUDGET OFFICE ("CBO") REPORT SUPPORTS HIS POSITION THAT *BLUE CHIP'S* FORECASTS ARE UPWARDLY BIASED?[97]

A. The Cost of Equity depends on what the market expects, not what happened in hindsight. As such, I believe the relevant issue is whether investors are likely to rely on those *Blue Chip* consensus forecasts when making investment decision. That point aside, the CBO releases a biennial report reviewing its forecasting record. In its most recent Economic Forecasting Record update, the CBO noted its forecasting record was "comparable in quality" and "generally as accurate"[98] as *Blue Chip's*.

6. Business Risks and Other Considerations

Q. PLEASE SUMMARIZE MR. ROTHSCHILD'S STANCE REGARDING THE COMPANY'S PLANNED CAPITAL EXPENDITURES.

A. Mr. Rothschild argues OTP's capital expenditure plan will not put pressure on cash flow and credit metrics.[99] He argues that the Company's cost recovery mechanisms are credit supportive[100] and concludes that the Company is less risky than the Proxy Group as a result.[101]

Q. SHOULD THE ROE IN THIS PROCEEDING BE ADJUSTED IN CONNECTION WITH OTP'S COST RECOVERY MECHANISMS?

A. No, it should not. The relevant analytical issue is whether the Company is so less risky than its peers as a direct result of the rate mechanisms that investors would specifically and measurably reduce their return requirement.[102] To that point, Exhibit __(RBH-2, Schedule 18), summarizes the types of revenue stabilization mechanisms in effect within the Proxy

97 Rothschild Direct, at 20.

98 *CBO's Economic Forecasting Record: 2017 Update*, October 2017, at 1, 4.

99 Rothschild Direct, at 48-49.

100 Rothschild Direct, at 47.

101 Rothschild Direct, at 50.

102 *See, generally*, Bluefield and Hope.

Group. From the perspective of an equity investor, the question is one of incremental risk based on the suite of revenue stabilization and cost recovery mechanisms, not the presence, or absence, of a given structure. Because revenue stabilization and cost recovery mechanisms are common among the Proxy Group companies, there is no reason to assume OTP would be materially less risky, and its Cost of Equity would be lower than its peers' as a result of the proposed rate design change. That said, given the increasing prevalence of cost recovery mechanisms, a reasonable question becomes whether OTP would become riskier than its peers without a such mechanisms in place.

Q. HAS THE FINANCIAL COMMUNITY RECOGNIZED THE PREVALENCE OF REVENUE STABILIZATION MECHANISMS AMONG UTILITIES?

A. Yes. In 2012, for example, Value Line, noted several mechanisms that were put in place to reduce regulatory lag. In its review, Value Line specifically noted recovery mechanisms for capital expenditures, tracking mechanisms for certain kinds of expenses, and decoupling mechanisms as methods to reduce regulatory lag and provide utilities the opportunity to earn their authorized ROEs.[103] Even then, Value Line believed the use of such mechanisms was "likely to increase as utilities request similar mechanisms in additional states."[104] Similarly, S&P noted it has "seen many state commissions approve alternative ratemaking techniques to traditional base rate case applications, which help utilities sustain cash flow measures, earning power, and ultimately, credit quality."[105] The point simply is that because the use of such structures has been well known among investors, there is no reason to believe their adoption would now reduce required returns.

Q. DID MR. ROTHSCHILD PROVIDE EMPIRICAL PROOF THAT RECOVERY MECHANISMS AFFECT UTILITIES' VALUATION, OR COSTS OF EQUITY?

---

103 Paul E. Debbas, CFA, *What Electric Utilities Are Doing About Regulatory Lag*, Value Line, May 23, 2012.

104 *Ibid*.

105 S&P RatingsDirect, *Industry Economic and Ratings Outlook: U.S. Regulated Utilities Expected to Continue on Stable Trajectory In 2013*, dated January 25, 2013.

A. No, Mr. Rothschild provided no empirical support for his claims that recovery mechanisms affect utility valuations, or their Cost of Equity.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S CLAIM THAT RATING AGENCY MATERIALS SUPPORT HIS POSITION THAT COST MECHANISMS SHOULD REDUCE THE COMPANY'S ROE?[106]

A. There are several points to be made. First, debt and equity are entirely different investments with fundamentally different risk profiles. Mr. Rothschild seems to suggest that comments from rating agencies, which are focused on the ability of utilities to meet their financial obligations in a timely fashion, directly correspond to equity investors. They are related, but not so much that one can be used as a measure of the other, especially if we are looking at marginal changes in capital cost rates.

Second, if rate mechanisms were such that they materially reduced risks to bondholders, we reasonably would expect to see bond ratings upgrades specifically due to those mechanisms. There is no indication that has been the case. It may be, for example, that mechanisms address incremental risks, keeping the utility in the place it would have been but for the risk. In that case, the mechanisms may be seen as credit supportive in that they mitigate incremental risks, but not credit enhancing.

Even if a mechanism is risk-reducing, important questions are whether it is more so for OTP than those in place among the Proxy Group companies, and whether the risks being reduced are systematic, or not.[107] To that point, Mr. Rothschild has not defined what he means by "risk" in this context. For example, if it is a virtual certainty that absent the mechanisms, regulatory lag will dilute cash flow, the implementation of the mechanism does not reduce risk; it puts the subject in the place it would have been but for the capital

[106] Rothschild Direct, at 47.

[107] Under Modern Portfolio Theory (and the CAPM), any reduction in the Cost of Equity depends on the type of risk that is reduced. If the risk assumed to be mitigated by decoupling is diversifiable, there would be no reduction in the Cost of Equity even if total risk (diversifiable plus non-diversifiable risk) has been reduced.

investment. That may be one reason why rating agencies see mechanisms as credit supportive; but Mr. Rothschild is unable to point to empirical evidence showing that the Cost of Equity falls with the implementation of those structures.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S ANALYSIS OF OTP'S CAPITAL EXPENDITURE PLAN AND THE EFFECT ON CREDIT METRICS?

A. Mr. Rothschild claims he "conducted a study to determine how OTP compares to the Proxy Group"; however, his analysis is based on the projected cash flow to debt of not OTP, but of its parent, OTTR, relative to the Proxy Group parent companies. As discussed below, the principle of stand-alone ratemaking indicates the appropriate comparison is OTP to the Proxy Group companies. Mr. Rothschild has not provided any analysis that OTP's capital expenditure plan will not put pressure on its credit metrics on a stand-alone basis.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S CRITICISMS REGARDING YOUR SMALL SIZE ANALYSIS?

A. Mr. Rothschild argues that the Duff & Phelps analysis "does not include small companies that are subsidiaries of larger companies" and that the size of OTP's parent, OTTR, is the relevant benchmark of analysis.[108]

In this proceeding, we are evaluating the return required by investors to invest in OTP, not OTTR. That approach is consistent with the standard of ratemaking in which the risk of the individual utility is considered, not that of its parent company or affiliates. In my experience, that principle (sometimes referred to as the "stand-alone" principle") is a very common regulatory construct that is consistent with the practice of finance. Under that construct, the Cost of Equity depends on the risks to which equity capital is exposed. As Dr. Roger Morin states, "[t]he fact that an operating utility is a wholly owned subsidiary of a parent company is immaterial."[109] As a matter of policy, Dr. Morin notes that the

---

108 Rothschild Direct, at 51.

109 Roger A. Morin, PhD, New Regulatory Finance, Public Utilities, Inc. 2006, at 215 – 216.

stand-alone principle "…is essential if efficient allocation of capital resources is to be promoted and cross-subsidies avoided."[110] That approach, and the stand-alone principle, are consistent with the financial practice of "sum-of-the-parts" valuation under which the equity value of a company is estimated by summing the individual values of its component segments. Here, the capital will be invested in OTP alone, and the risks associated with that capital should be based on OTP alone.

With respect to Mr. Rothschild's assertion that the Duff & Phelps analysis "does not include small companies that are subsidiaries of larger companies," Duff & Phelps states:

> The Risk Premium Report Study can be used to develop estimates of cost of equity capital for **divisions, reporting units and closely held businesses** without "guessing" at the value of the business before one begins the analysis. Rather, fundamental measures of firm size (e.g., sales, net income, EBITDA) and risk (e.g., operating margin) can be used to directly estimate cost of equity capital for non-public businesses.[111]

Duff & Phelps' Risk Premium Report Study therefore is intended to be used to estimate the Cost of Equity for divisions and subsidiaries within a publicly traded parent company, as I have done.

Q. PLEASE SUMMARIZE MR. ROTHSCHILD'S ARGUMENTS REGARDING "TRADING VOLUME AND LIQUIDITY" AND ITS EFFECT OTP'S COST OF EQUITY.

A. Mr. Rothschild argues that investors demand a liquidity premium for securities that "are more difficult to sell during difficult times."[112] As to OTTR, Mr. Rothschild points to the fact that its shares were traded during the financial crisis, and on that basis concludes its investors do not require a liquidity premium.[113] Mr. Rothschild also observes that when

---

110 Roger A. Morin, PhD, New Regulatory Finance, Public Utilities, Inc. 2006, at 215 – 216.

111 Duff and Phelps 2018 Valuation Handbook, at Chapter 9, page 1 [emphasis added].

112 Rothschild Direct, at 52.

113 Rothschild Direct, at 52.

OTTR's price changed by 10.00 percent in one trading day, about 2.00 percent of its outstanding shares were traded; by comparison, a 5.00 percent change in the S&P 500 index was associated with "a similar percentage of outstanding shares" being traded.[114]

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD ON THOSE POINTS?

A. First, Mr. Rothschild's Direct Testimony seems to equate *liquidity* with *liquidity risk*. If that is his position, I disagree. The fact that OTTR's equity investors were able to sell their shares during difficult times does not mean there is no liquidity risk. Any company listed on the NASDAQ exchange, as OTTR is, must have (at least) three registered and active Market Makers. NASDAQ defines a Market Maker as "[o]ne who maintains firm bid and offer prices in a given security by standing ready to buy or sell round lots at publicly quoted prices."[115] By rule, then, a listed company such as OTTR must have Market Makers that will take the other side of trades. Consequently, Mr. Rothschild's observation that OTTR's investors were able to sell during stressed market conditions simply confirms NASDAQ's market structure worked as intended.

Page 46 of my Direct Testimony explains that liquidity risk relates to both price and volume. As discussed above, Mr. Rothschild notes that 10.00 percent price movements in OTTR were associated with 2.00 percent of outstanding shares traded, whereas 2.00 percent trading volume in the S&P 500 was associated with a 5.00 percent price change. That is, OTTR's market prices were much more sensitive to trading volumes than were the S&P 500 Index's prices. From that perspective, the variability in price for a given level of trading value was far greater for OTTR than for the S&P 500. That is, its liquidity risk was higher.

Q. HAVE YOU REVIEWED MR. ROTHSCHILD'S DATA AND ANALYSES SURROUNDING HIS VIEW OF LIQUIDITY AND LIQUIDITY RISK?

---

114 Rothschild Direct, at 53.

115 https://www.nasdaq.com/investing/glossary/m/market-maker

A. Yes, I have. My review demonstrates that daily price changes in OTTR's stock are more sensitive to changes in trading volume than are price changes in the S&P 500 Index, indicating higher volume increase risk to investors. Using the data provided in Schedule ALR 14, I calculated the absolute daily price change, and the daily trading volume as a percentage of shares outstanding for OTTR. I then charted the two, with the absolute daily price change as the dependent variable, and trading volume as the explanatory variable.[116] The resulting slope coefficient shows the sensitivity in price changes relative to volume; it is similar to the Beta coefficient in the CAPM (as calculated, for example, by Bloomberg and Value Line) in that both are measures of the sensitivity of price changes relative to changes in given factor. Here, the factor is trading volume (rather than price changes in a market index). That analysis is provided in Exhibit__(RBH-2), Schedule 19. The slope coefficient (1.9912) suggests that the absolute price change increases by about two times the change in volume.

I then undertook the same analysis for the S&P 500 index, again based on data from Schedule ALR-14; that analysis also is provided in Exhibit__(RBH-2), Schedule 19). There, the slope coefficient (1.1277) was considerably lower than the coefficient for OTTR (1.9912). Simply, daily price changes in OTTR's stock are more sensitive to changes in trading volume than is the S&P 500 Index.

Because Mr. Rothschild's assessment also is based on the ability to sell during "difficult times", I then considered only those days on which price changes were negative. Under that construct, the analysis would measure the sensitivity of price declines to trading volumes. The results for OTTR and the S&P 500 Index are provided in Exhibit__(RBH-2), Schedule 19. As with absolute price changes, negative changes in OTTR's stock was much more sensitive to changes in volume than were changes in the S&P 500. Here again, the conclusion is that OTTR's liquidity risk is higher than the market's liquidity risk.

116 The absolute value was used because the initial focus is on price changes, not the direction of changes.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S OBSERVATION THAT A 10.00 PERCENT PRICE CHANGE IN OTTR'S STOCK PRICE WAS ASSOCIATED WITH 2.00 PERCENT TRADING VOLUME?

A. Mr. Rothschild's observation raises the question of whether OTTR's trading volume is more variable than the market, with outliers that represent sources of risk to investors. To understand the distribution of trading volumes (again, with volumes as a percentage of shares outstanding) I calculated several statistics for both OTTR and the S&P 500; those statistics are provided in Exhibit__(RBH-2), Schedule 19. As Exhibit__(RBH-2), Schedule 19 makes clear, OTTR's trading volume is far more variable than the market:

- The range is three times wider (11.054 percent vs. 3.684 percent);
- The Coefficient of Variation is three times higher (95.14 percent vs. 31.10 percent)[117];
- Kurtosis, which is a measure of extreme deviations from the average, is about 100 times higher;[118] and
- The skew, which measures the distribution's asymmetry, is about ten times greater, again suggesting a larger portion of days in which volume/shares outstanding was unusually large.

Q. WHAT CONCLUSIONS DO YOU DRAW FROM THAT DATA?

A. Taken together, Mr. Rothschild's data demonstrate that OTTR faces considerably more liquidity risk than does the market. That conclusion falls from the finding that the change in OTTR's daily return at a given level of trading volume is far greater than the change in

---

117 The Coefficient of Variation is a measure of relative variability, defined as the standard deviation divided by the mean. It is a measure frequently used in financial analyses to compare the variability of two data sets whose averages may differ.

118 Kurtosis, which refers to the "flatness" of the distribution, has a value of 3.00 when the distribution is perfectly normal. Kurtosis will deviate from 3.00 depending on the "thickness" of the tails, which reflect the distribution of observations. As Exhibit__(RBH-2), Schedule 19 shows, the S&P 500 distribution has a kurtosis value of 3.66, whereas the OTTR distribution has a kurtosis value of 377.67. Higher kurtosis values indicate that a greater proportion of observations lying in the tails. Consequently, distributions with higher kurtosis values (sometimes referred to as leptokurtic distributions) indicate that more of the variance is due to infrequent but extreme deviations. The practical implication of higher kurtosis values is that more of the risks are associated with outlying, unexpected events.

the market's daily price. That greater sensitivity is a measure of greater liquidity risk to investors. Further, relative to the S&P 500, OTTR's volume shows a considerably wider, more skewed distribution with greater possibilities of extreme outcomes. I therefore continue to believe liquidity risk is a concern for the Company's equity investors and should be considered in determining OTP's Return on Equity.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S ARGUMENT THAT YOUR RECOMMENDATION IS NOT MARKET-BASED BECAUSE IT RECOGNIZES THE COMMISSION'S DISCRETION IN DETERMINING THE ROE?[119]

A. I disagree with Mr. Rothschild's suggestion that the scope of my testimony is too broad, and the breadth of the Commission's discretion is narrow. Mr. Rothschild presumes to define the proper scope of my testimony, suggesting that any reference to a policy-related point somehow is beyond that scope. My testimony clearly distinguished between the market-based analyses used to estimate the investor-required Cost of Equity, and the policy-related decisions regarding performance-related premiums. Mr. Rothschild may disagree that performance premiums, or even discounts, are appropriate policy, but it is not for him to decide what I should or should not include in my testimony.

More importantly, Mr. Rothschild's position presumes to define for the Commission what it should, or should not, consider in establishing the ROE. The argument appears to attempt to dictate limits on the Commission's discretion in applying "ratemaking principles".[120] If that is the case, I strongly disagree with that position. To the extent this Commission, or any commission, finds a performance premium or discount to be consistent with the overall objective of setting just and reasonable rates, in my experience it has the discretion to do so.

---

[119] Rothschild Direct, at 46.

[120] Rothschild Direct, at 46.

7. Implications of the Tax Cuts and Jobs Act

Q. PLEASE SUMMARIZE MR. ROTHSCHILD'S TESTIMONY REGARDING THE IMPLICATIONS OF THE TCJA FOR THE COMPANY'S COST OF EQUITY.

A. Mr. Rothschild makes the following arguments: (1) the Proxy Group recently has out-performed the overall market; (2) my "suggestion" that utility dividend yields are increasing is unfounded; (3) the accumulated deferred tax balance arising from the lower income tax rate will increase OTP's rate base and, "everything else being equal", its cash flow; and (4) any implications of the TCJA are reflected in the data used to estimate the Cost of Equity.[121]

Q. DO YOU AGREE WITH MR. ROTHSCHILD'S FIRST TWO POINTS?

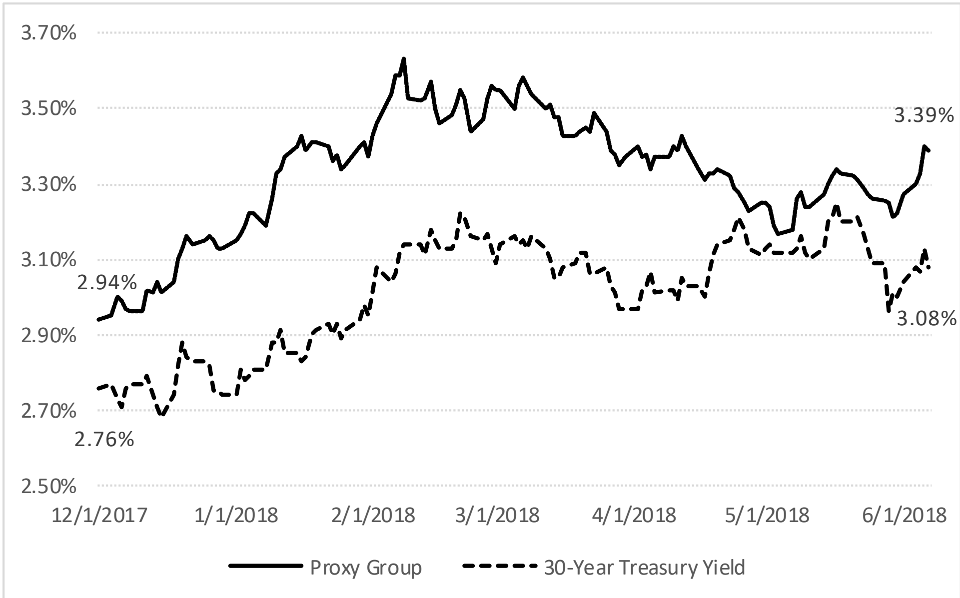
A. No, I do not. Turning first to the question of the Proxy Group companies' dividend yields, there is no question they have increased since December 2017, as stated in my Supplemental Direct Testimony.[122] As Chart 6 below makes clear, through June 7, 2018, the Proxy Group's dividend yield has increased by 45 basis points, and the 30-year Treasury yield has risen by 32 basis points.

121 Rothschild Direct, at 6 – 9.

122 *See*, Supplemental Direct Testimony of Robert B. Hevert, at 3.

Chart 6: Proxy Group Dividend Yield

vs. 30-Year Treasury Yield[123]

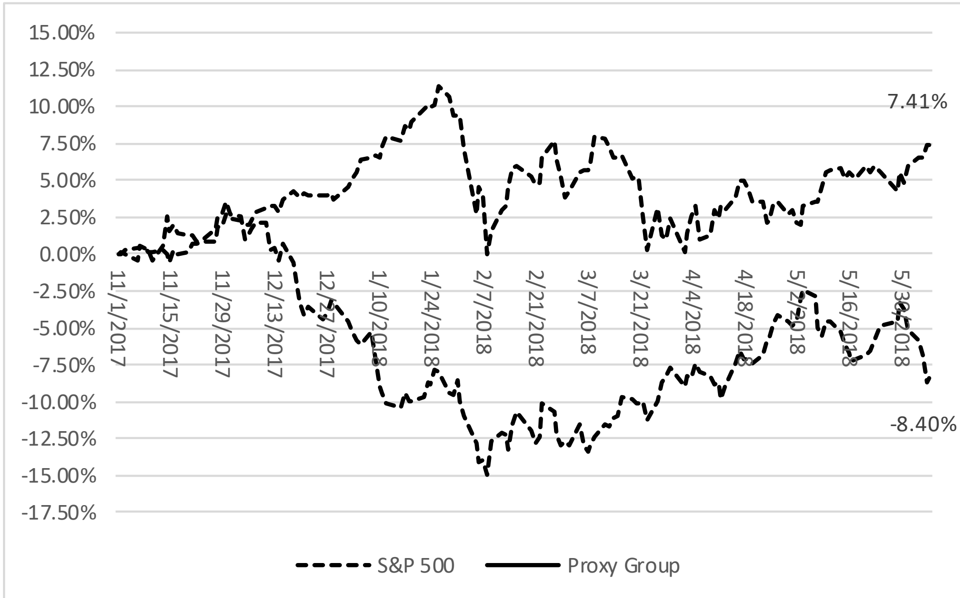


Mr. Rothschild's argument seems to attach some significance to the observation that the Proxy Group's dividend yield had fallen since March 1, 2018, but no meaning to the fact that it remains well above the pre-TCJA level. I disagree with that perspective. Since the TCJA went into effect, interest rates and dividend yields have increased, even if that increase did not occur in a straight line. Mr. Rothschild's sub-period analysis does not change that fact.

The same generally holds true for Mr. Rothschild's observation regarding the Proxy Group's price performance relative to the S&P 500. Since November 2017, the Proxy Group has under-performed the overall market by nearly 16.00 percent (*see* Chart 7, below).

123 Source: S&P Global Market Intelligence. Proxy group calculated as an index.

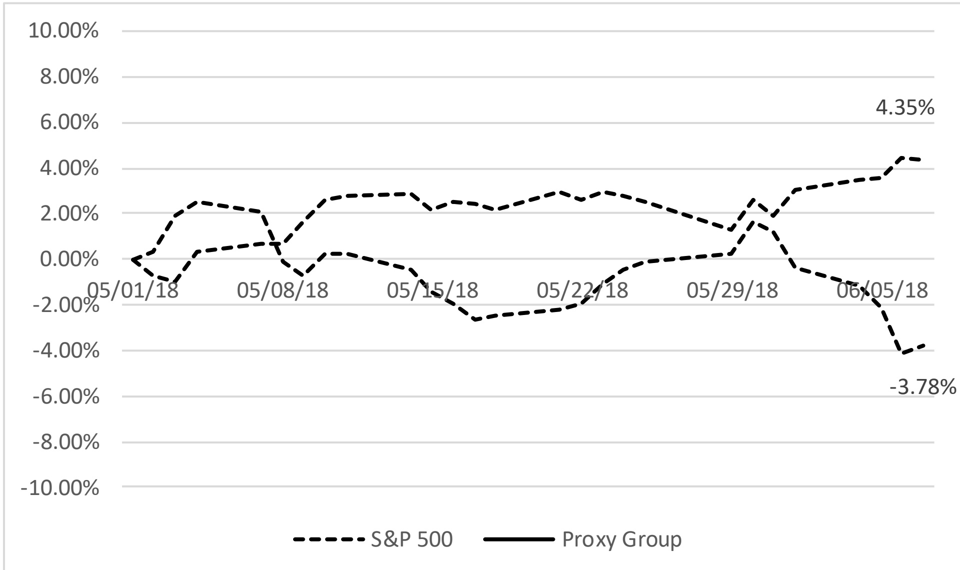
Chart 7: Relative Performance Since November 2017[124]



Although Mr. Rothschild argues that from March through April 2018 the Proxy Group out-performed the market, he neglects to observe that from April through May 2018, the Proxy Group under-performed the market by more than 8.00 percent (*see* Chart 8, below).

124 Source: S&P Global Market Intelligence. Proxy group calculated as an index.

Chart 8: Relative Performance Since May 2018[125]



We can choose a variety of sub-periods during which the relative ROEs will change but doing so only obscures the principal point: Since the TCJA was enacted, utilities have under-performed the overall market.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S ARGUMENT THE TCJA WILL INCREASE THE COMPANY'S RATE BASE AND CASH FLOW?

A. First, it has been my experience that utilities want to pass the benefit of the lower tax rates to customers, while at the same time preserving their credit quality. Because the TCJA affects several aspects of utilities' financial profiles, we cannot assume all else will remain equal, and we cannot conclude based on a single variable – rate base – that cash flow necessarily will increase. As noted in Otter Tail Corporation's May 30, 2018 investor presentation, the TCJA will produce a $148 million regulatory liability to be returned to ratepayers over 30 years, and will negatively affect its annual cash flows by up to $15 million over the next several years.

---

125 Source: S&P Global Market Intelligence. Proxy group calculated as an index.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S ARGUMENT THAT THERE IS NO NEED TO CONSIDER THE TCJA BECAUSE ITS EFFECTS ARE REFLECTED IN THE DATA APPLIED TO THE COST OF EQUITY MODELS?[126]

A. First, all models, including Mr. Rothschild's methods, produce a range of results. Determining where the Cost of Equity likely falls within that range requires the application of reasoned and experienced judgment. Mr. Rothschild himself recommends an ROE above his DCF-based results due to increasing interest rates, and increases his DCF results due to OTP's need to issue additional equity in response to the TCJA.[127] We have seen the loss of value in utility stocks since the TCJA was enacted, we know utilities cannot take advantage of the TCJA in the ways other sectors can, and we see the prospect of increasing interest rates resulting from growing economic activity and potentially increased federal deficit spending.

The financial community's response to the TCJA continues to develop, even since Mr. Rothschild filed his Direct Testimony - 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."[128] 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 in lower authorized returns).

Those factors, and their uncertainty, weigh against utility stock valuations, even if we cannot precisely measure the incremental effect of each. Still, Mr. Rothschild recommends

---

[126] Rothschild Direct, at 8.

[127] Rothschild Direct, at 4; Schedule ALR 7.

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

an ROE of 8.31 percent, far below the ROEs available in other jurisdictions, despite the near-term risks associated with the TCJA.

8. Capital Structure and the Company's Cost of Equity

Q. PLEASE SUMMARIZE MR. ROTHSCHILD'S DIRECT TESTIMONY AS IT RELATES TO OTP'S PROPOSED CAPITAL STRUCTURE.

A Mr. Rothschild considers the Company's proposed 52.50 percent equity ratio is at "the high end of reasonable",[129] relative to the Proxy Group average equity ratio he calculates (47.85 percent). He also suggests my review of the capital structures in place among the Proxy Group companies is off-point, because it did not consider short-term debt, whereas Mr. Moug's discussion at the 2018 Shareholder's meeting did.[130] Lastly, based on his view that the Company's capital structure does not contain sufficient amounts of debt, Mr. Rothschild reduces his 8.50 percent base ROE recommendation by 19 basis points, to 8.31 percent.

Q. PLEASE EXPLAIN THE BASIS OF MR. ROTHSCHILD'S 19-BASIS POINT DOWNWARD ADJUSTMENT TO HIS PROPOSED ROE.

A. Mr. Rothschild's adjustment falls from his conclusion that OTP's capital structure is under-leveraged (that is, it contains too little debt). To calculate his adjustment, Mr. Rothschild first finds the difference between his reported Proxy Group average equity ratio (47.85 percent) and the Company's proposed equity ratio (52.50 percent); he then multiplies that difference (negative 4.65 percent) by four basis points, producing the negative 19-basis point adjustment.[131]

Q. DOES MR. ROTHSCHILD PROVIDE ANY SUPPORT FOR THE FOUR-BASIS POINT ADJUSTMENT FACTOR?

A. No, he does not specific support for his four-basis point adjustment factor.

---

129 Rothschild Direct, at 9.

130 Rothschild Direct, at 10.

131 Schedule ALR 2, note [D].

Q. DO YOU AGREE WITH MR. ROTHSCHILD'S 19-BASIS POINT ADJUSTMENT TO ACCOUNT FOR THE COMPANY'S PROPOSED CAPITAL STRUCTURE?

A. No, I do not. As explained in my Direct Testimony, the Company's proposed equity ratio of 52.50 percent is consistent with those in place within the Proxy Group, and with those authorized by the Commission.[132] Further, although I disagree with Mr. Rothschild's capital structure analysis and conclusion, the Company's proposed equity ratio is within one standard deviation of the Proxy Group average he reports, and within the mean and median if we exclude two evident outliers. Consequently, there is no basis to support a downward adjustment, as Mr. Rothschild recommends.

Q. DO YOU AGREE WITH MR. ROTHSCHILD'S POSITION THAT PARENT COMPANY CONSOLIDATED CAPITAL STRUCTURES PROVIDE THE PROPER BASIS OF COMPARISON TO OTP'S PROPOSED CAPITAL STRUCTURE?

A. No, I do not. Parent company consolidated capital structures include all debt within the consolidated entities, not just the debt supporting utility operations. In my practical experience, utility financing decisions focus on the nature of the assets providing utility service, and recognize the constraints brought about by the obligation to serve. Those capital structures, and the financial strength they support, are set not only to ensure capital access during normal markets, but to enable access when markets are constrained. The reason is straightforward: utilities' obligation to serve is not contingent on market conditions. Given the nature of utility operations and the need for unconstrainted access to capital, regardless of market conditions, operating utilities, not their consolidated parents are the proper basis of comparison.

Q. WHAT IS YOUR RESPONSE TO THE CAPITAL STRUCTURE DATA UNDERLYING MR. ROTHSCHILD'S ARGUMENT THAT THE PROXY GROUP AVERAGE EQUITY RATIO IS 47.85 PERCENT?

---

132 Hevert Direct, at 62-63. *See also* Exhibit __(RBH-2), Schedule 8).

A. For convenience, the average equity ratio as provided in Mr. Rothschild's Schedule ALR 8 is summarized in Table 3, below.

Table 3: Mr. Rothschild's Calculated Equity Ratios[133]

Company	Equity Ratio (as filed)
ALLETE, Inc.	57.9%
Alliant Energy Corporation	45.1%
Black Hills Corporation	34.0%
El Paso Electric Company	45.4%
Hawaiian Electric Industries, Inc.	53.3%
IDACORP, Inc.	56.3%
North Western Corporation	45.7%
OGE Energy Corp.	54.8%
PNM Resources, Inc.	38.1%
Average	47.85%
Median	45.73%

As Table 3 notes, two companies, Black Hills Corporation ("BKH"), and PNM Resources, Inc., ("PNM") had equity ratios below 40.00 percent, suggesting debt ratios above 60.00 percent. That level of leverage is significant; Moody's ratings scale associates 60.00 percent debt/capitalization ratios with the "Ba" ratings category,[134] which are considered "speculative", or below investment grade. Because neither BKH nor PNM is rated below investment grade, it is important to consider why their debt ratios are as high as Mr. Rothschild reports, and whether they reasonably reflect ongoing utility operations, and the financing practices commonly used to support those operations.

Q. HAVE YOU REVIEWED THE SEC FORMS 10-K FOR BKH AND PNM TO UNDERSTAND THEIR 2017 REPORTED EQUTIY RATIOS?

[133] Source: Schedule ALR 8. Please note, I was not able to reconcile all Mr. Rothschild's data with each company's 2017 SEC Form 10-K.

[134] Moody's Investors Service, *Rating Methodology, Regulated Electric and Gas Utilities*, December 23, 2013, at 24.

A. Yes, I have. In the case of BKH, the company notes as part of its 2016 acquisition of SourceGas, long-term debt increased from approximately $1.85 billion to $3.21 billion. BKH also noted that, as part of its decision to divest its oil and gas businesses, it took impairment charges in 2015, 2016, and 2017. Coincident with the SourceGas acquisition debt, and the oil and gas impairment charges, BKH's debt ratio fell from 2014 through 2017.[135] As to PNM, Value Line data indicates that the 43.60 percent equity ratio (excluding short-term debt) included in Mr. Rothschild's analysis is the lowest level of the thirteen periods reported. In fact, Value Line shows the ratio increasing by two percentage points over the near-term.[136] Further, the 2017 equity ratio (including short-term debt) was 45.40 percent and 59.60 percent for PNM's two operating utilities.[137] In my view, PNM's equity ratio reflected in Mr. Rothschild's analysis is atypically low, and should not be seen as a target for utility operating companies.

Q. WHAT ARE THE PROXY GROUP'S MEAN AND MEDIAN EQUITY RATIOS IF BKH AND PNM ARE EXCLUDED FROM THE CALCULATIONS?

A. As shown on Table 4 (below), excluding BKH and PNM produces mean and median equity ratios of 51.22 percent and 53.27 percent, respectively.

Table 4: Mr. Rothschild's Adjusted Equity Ratios[138]

Company	Equity Ratio (as filed)
ALLETE, Inc.	57.9%
Alliant Energy Corporation	45.1%
Black Hills Corporation	---
El Paso Electric Company	45.4%
Hawaiian Electric Industries, Inc.	53.3%
IDACORP, Inc.	56.3%
North Western Corporation	45.7%

135 Black Hills Corporation, SEC Form 10-K for the fiscal year ended December 31, 2017, at 44, 46.

136 Value Line, *PNM Resources*, April 27, 2018.

137 Source: PNM Resources, Inc. SEC Form 10-K For the Fiscal Year Ended December 31, 2017, at B-14, B-21.

138 Source: Schedule ALR 8. Please note, I was not able to reconcile all Mr. Rothschild's data with each company's 2017 SEC Form 10-K.

OGE Energy Corp.	54.8%
PNM Resources, Inc.	---
Average	51.22%
Median	53.27%

By those measures, OTP's proposed 52.50 percent equity ratio is very consistent with the Proxy Group, even by reference to the Proxy Group holding company capital structures.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S NEGATIVE FOUR BASIS POINT/PERCENTAGE POINT OF EQUITY ADJUSTMENT FACTOR?

A. First, Mr. Rothschild's Direct Testimony does not discuss the basis of his four-basis point adjustment; it simply is noted and applied in his Schedule ALR 2. As Mr. Rothschild likely is aware, there are established methods to estimate the effect of financial leverage on the Cost of Equity, including the Hamada, and Modigliani-Miller approaches. Those approaches consider not only the effect of financial leverage, but the tax shield associated with interest expense. Because Mr. Rothschild's Direct Testimony does not explain the basis of his adjustment, we cannot examine the effect of such factors on his approach.

That point aside, any such adjustment reasonably would be applied to a measure of the difference between the actual capital structure, and a target capital structure. Mr. Rothschild assumes the 48.75 percent equity ratio included in his Schedule ALR 8 is the proper target. For the reasons discussed above, I disagree with that assumption. Even if we look to the Proxy Group – at the parent company level – as the measure of industry practice, the appropriate range would be 51.22 percent to 53.27 percent, as discussed above. In my view, there is no reason to assume the Company's proposed equity ratio departs from practice such that an adjustment to its ROE is needed.

9. ***Response to Mr. Rothschild's Criticisms***

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S CRITICISM THAT IN "KEY PLACES" IN YOUR TESTIMONY YOU "FAIL TO ACTUALLY USE MARKET DATA" TO ESTIMATE THE COST OF EQUITY?[139]

A. Mr. Rothschild's criticism is misplaced, and his conclusion that my testimony is not "market-based" is unfounded. All inputs applied in my analyses are market-based, using verifiable data from sources widely used by analysts and investors, including Bloomberg Professional, S&P Global Market Intelligence, and Value Line. Notably, all three models I have applied depend directly on market data.

Mr. Rothschild's position seems to be related to my use of projected Treasury yields in the CAPM and Bond Yield Plus Risk Premium analyses.[140] His testimony appears to be that commercial services such as *Blue Chip Financial Forecasts* are of no interest to investors, due to hindsight reviews of forecast accuracy.[141] At the same time, Mr. Rothschild suggests that forecasts by Charles Schwab (2017) and the McKinsey Global Institute (2016) are reliable forecasts of expected long-term market returns.[142] Mr. Rothschild's Direct Testimony does not explain why investors would dismiss 50 economists' consensus projections of interest rates over the coming year, but put considerable weight on long-term expected market returns of 6.70 percent to 7.50 percent, provided by a single firm.

Further, on page 20 of his Direct Testimony, Mr. Rothschild refers to a 2017 Working Paper by the Congressional Budget Office, to support his position that the *Blue Chip* consensus forecasts are biased and inaccurate. His testimony does not, however, note that

---

139 Rothschild Direct, at 56.

140 Rothschild Direct, at 56-57.

141 See, for example, Rothschild Direct at 5; 19 – 20, including Chart 6.

142 Rothschild Direct, at 6, Table 3.

the paper also concluded that debt market participates (investors) did no better than *Blue Chip*:

> …compared with the *Blue Chip* consensus, Treasury debt markets did not forecast with greater accuracy the decline in long-term interest rates over the past three decades. Over the full sample, none of the methods based on the yield curve and none of the benchmark methods produced more accurate forecasts than the *Blue Chip* consensus. In the context of the yield-curve models examined in this analysis, the answer to the question of whether bond market participants did a better job anticipating the persistent decline in long-term interest rates is "no."[143]

Lastly, Mr. Rothschild's Direct Testimony does not acknowledge that the five estimates in my Direct Testimony that are based on current Treasury yields (four CAPM estimates, one Bond Yield Plus Risk Premium estimate) average 10.35 percent, only five basis points removed from my ROE recommendation.[144]

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S CLAIM THAT YOU DO NOT "DIRECTLY TEST THE IMPACT OF A DECLINING P/E RATIO"?[145]

A. Mr. Rothschild is incorrect. I provide two sets of Multi-Stage DCF analyses in Exhibit __(RBH-1, Schedule 3). Column [12] in Exhibit __(RBH-1, Schedule 3) calculates the terminal P/E ratio. As explained in my Direct Testimony, the first set uses the Gordon Method to calculate the terminal value. In the second set, the terminal value is based on the current Proxy Group P/E ratio of 22.05.[146]

---

143 Edward N. Gamber, *Did Treasury Debt Markets Anticipate the Persistent Decline in Long-Term Interest Rates?,* Working Paper Series, Congressional Budget Office, Working Paper 2017-07, September 2017, at 19 – 20. Although the paper found over the subperiod 1998 to 2012 random walk models were more accurate and less biased than the Blue Chip forecasts, the question remained as to why that was the case. The author suggested a possible source of bias was estimates of the term premium. Nonetheless, the article concluded that the study took place during a period of downward-trending interest rates; it noted that the most accurate method during a period of falling rates is not necessarily the most accurate method during periods of increasing interest rates. Charts 4 and 5 provided earlier in my Rebuttal Testimony also address that point.

144 See, Direct Testimony of Robert B. Hevert, Exhibit__(RBH-1), Schedule 6, Page 1 of 1; Schedule 7, Page 1 of 24.

145 Rothschild Direct, at 59.

146 Interestingly, Mr. Rothschild's Non-Constant DCF analysis assumes a constant P/E ratio.

The assumption that the current P/E ratio will remain constant in perpetuity is fundamental to the Constant Growth DCF model on which Mr. Rothchild's recommendation principally relies. That assumption was discussed in my Direct Testimony, in the passage Mr. Rothschild cited in his footnote 58. It also is akin to fundamental assumption of Mr. Rothschild's, Non-Constant and Constant Growth DCF models, that the Market/Book ratio remains constant in perpetuity. If Mr. Rothschild believes his DCF methods produce reasonable results, he should have no concern with holding the P/E ratio constant in my Multi-Stage analysis. Mr. Rothschild cannot reasonably support the low DCF estimates that result from abnormally high P/E ratios on the one hand, [147] while criticizing the same assumption in my Multi-Stage DCF model on the other.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S ASSERTION THAT EARNINGS GROWTH IS "A POOR INDICATION"[148] OF FUTURE STOCK PRICE GROWTH?

A. As explained in my Direct Testimony, prior research has demonstrated that earnings growth projections have a statistically significant relationship to stock valuation levels, whereas dividend growth rates do not. As noted earlier in my Rebuttal Testimony, my analysis shows earnings growth to be the only growth rate with a statistically strong and theoretically sound ability to explain changes in utility valuations.[149]

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S ASSERTION[150] THAT AN ARTICLE YOU CITE IS INCONSISTENT WITH YOUR APPLICATION OF THE DISCOUNTED CASH FLOW MODEL?

A. Mr. Rothschild refers to an article by Dr. Robert Harris, which I cite in support of my position that considerable academic research supports the use of analysts' earnings growth

147 Rothschild Direct, at 13-16.

148 Rothschild Direct, at 63-64.

149 *See* Exhibit__(RBH-2), Schedule 13.

150 Rothschild Direct at 65-66.

rates in the DCF model.[151] Mr. Rothschild argues Dr. Harris applies the DCF approach to a portfolio of stocks because "future growth changes may be expected to have drastic changes for some specific securities."[152] Mr. Rothschild goes on to suggest my approach is inconsistent with Dr. Harris' method, whereas his approach "control[s] for the difficulties with analyst EPS forecasts.[153]

There are three points on which I disagree with Mr. Rothschild on this issue. First, although he points to Dr. Harris' reference to "drastic changes for some specific securities", nowhere has Mr. Rothschild shown that the analysts providing growth rate estimates for utilities in general, and the Proxy Group companies in particular, have seen "drastic changes". The same extends to Mr. Rothschild's reference to the Goedhart, Raj, and Saxena article[154] – there is no reference to utility analysts providing drastically changing, or systematically biased growth rate projections. Rather, Mr. Rothschild's position presumes utility stocks – which he acknowledges are less volatile than the market in general – are just as likely to be susceptible to analyst bias that he assumes (but has not demonstrated) to be present in other, more volatile sectors.

Second, if Mr. Rothschild's position is that the DCF approach applied to the market is a reasonable approach, his view supports my approach to calculating the Market Risk Premium component of the CAPM. As explained on page 32 of my Direct Testimony, my CAPM analysis calculates the Market Risk Premium based on the expected market return, which is calculated by applying the DCF method to each company in the S&P 500 index. As Mr. Rothschild observed, Dr. Harris applied the "DCF approach to a portfolio of stocks",[155] as I have done.

---

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

152 Rothschild Direct, at 66.

153 Rothschild Direct, at 66.

154 Rothschild Direct, at 65.

155 Rothschild Direct, at 66.

Lastly, as discussed throughout my Rebuttal Testimony Mr. Rothschild's approach and conclusions assume investors would disregard the substantial and fundamental research that form the basis of analysts' growth rate projections in favor of his narrow and self-referential method of calculating expected growth. I do not believe that is the case. Rather, the broad availability of analysts' projections, together with the fundamental research that supports those projections suggest they reasonably are relied on by investors, and are a proper input to DCF and CAPM analyses.[156]

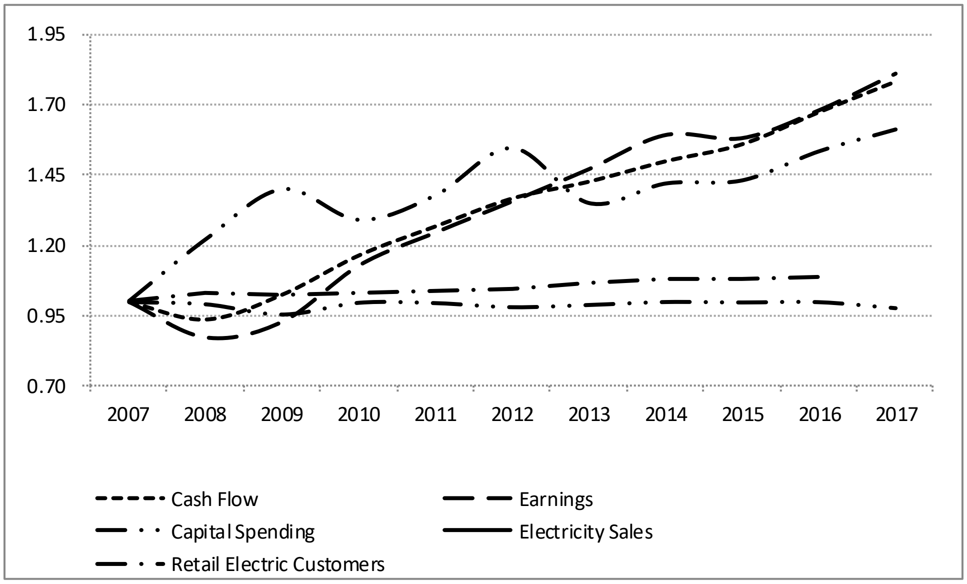
Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S CRITICISM THAT THE LONG-TERM GROWTH RATE IN YOUR MULTI-STAGE DCF ANALYSIS IS HIGHER THAN EIA'S FORECAST OF ELECTRICITY CONSUMPTION AND *BLUE CHIP'S* NOMINAL GDP FORECAST?

A. First, Mr. Rothschild asserts I "assume that growth in electricity consumption will be the same as GDP growth in electricity use."[157] He is incorrect. I have not made that assumption, nor do I believe electricity consumption growth is the relevant measure of long-term growth. Numerous variables fall between electricity use and earnings, including rate design, cost recovery mechanisms, revenue stabilization mechanism, capital investments, operating expenses, capital costs; consumption and earnings are not the same. If Mr. Rothschild's position were correct, we would see earnings and cash flow growth fall with consumption, but that has not been the case. As Chart 9 (below) demonstrates, based on Mr. Rothschild's principal data source (Value Line), earnings and cash flow have grown, despite falling consumption.

156 In applying the CAPM, it remains important to consider the consistency between the index used to calculate the expected market return, and the index used to calculate Beta coefficients.

157 Rothschild Direct, at 67.

Chart 9: Earnings, Cash Flow, and Capital Investment Growth Relative to Electricity Consumption and Retail Customers[158]



As to Mr. Rothschild's second point, as discussed below, *Blue Chip's* GDP projections end in 2027; it does not apply to the terminal period, which begins in 2027. Here again, his observation is misplaced.

Q. DOES FINANCIAL LITERATURE SUPPORT YOUR CALCULATION OF THE LONG-TERM GROWTH RATE BASED ON GDP?

A. Yes. The use of expected long-term GDP growth in the terminal period is consistent with practice and financial literature.[159] Morningstar describes an approach for calculating the long-term growth estimate that is similar to the approach in my model.[160] As with my approach, Morningstar's method combines the historical average real GDP growth rate with a measure of inflation calculated using the TIPS spread.[161]

---

[158] Sources: Value Line, Energy Information Administration.

[159] Dr. Roger Morin, for example, writes "[i]t is useful to remember that eventually all company growth rates, especially utility services growth rates, converge to a level consistent with the growth rate of the aggregate economy." *See* Roger A. Morin, New Regulatory Finance, Public Utilities Report, Inc., 2006, at 308.

[160] *See* Ibbotson SBBI 2013 Valuation Yearbook, Morningstar, Inc., at 50-52.

[161] Implied Expected Nominal GDP = ((1 + Historical Real GDP Growth) x (1 + Implied Forward Inflation)) –

Q. WHAT IS YOUR RESPONSE MR. ROTHSCHILD'S ARGUMENT THAT IT IS "A MATHEMATICAL ERROR" TO USE "UNSUSTAINABLE" GROWTH RATES TO CALCULATE THE EXPECTED MARKET RETURN IN YOUR CAPM ANALYSIS?[162]

A. I disagree with his argument. Mr. Rothschild points to the expected growth rate for Netflix and Halliburton to support his claim that my analysis does not reasonably reflect investors' expectations.[163] In determining the expected growth rate that underlies the expected market return, the relevant points are twofold: (1) investors rely on analysts' growth rate projections to frame their investment decisions; and (2) because we are estimating the market return, it is the expected return on the 500 companies in aggregate that matters, not the expected return on one or two individual companies.

As to the first point, Mr. Rothschild has not shown investors avoid analysts' projections, although he seems to suggest they should. In any case, Mr. Rothschild has provided no empirical evidence that investors would disregard analysts' earnings growth rate projections in favor of his "sustainable growth" method. Agrawal and Chen examined whether conflicts of interest with investment banking and brokerage businesses induced sell-side analysts to issue optimistic stock recommendations and whether investors were misled by any such biases. The authors concluded that their findings "do not support the view that conflicted analysts are able to systematically mislead investors with optimistic stock recommendations".[164] Therefore, even if it were the case that analysts had been, and continue to be biased, those effects would be reflected in the market prices used to calculate the dividend yield portion of the expected market return.

1, or 5.35% = ((1 + 3.22%) x (1 + 2.05%)) - 1. *See* Hevert Direct, at 28-29.

[162] Rothschild Direct, at 71.

[163] Rothschild Direct at 57, 71.

[164] Anup Agrawal & Mark A. Chen, *Do Analyst Conflicts Matter? Evidence from Stock Recommendations*, Journal of Law and Economics, Vol. 51, at 531 (August 2008).

Regarding his second point, whereas Mr. Rothschild points to two companies with comparatively high, positive growth rates, he fails to note the twenty with negative growth rates. Negative growth companies will not exist over the long-term (a company cannot shrink forever), but my approach does not remove them – doing so would introduce an unsupportable (survivorship) bias into the analysis. As Mr. Rothschild points out, when viewing a diversified portfolio, "[u]nanticipated failure is offset by unanticipated success."[165] To that point, at any time the market includes both low-growth and high-growth companies, and the expected market return should reflect that reality. My approach does just that.

Further, because it is used as an element of the CAPM, the expected market return should be based on an index comparable to that used in calculating the Beta coefficient. As Mr. Rothschild points out at page 43 of his Direct Testimony, the Beta coefficient is a measure of "[t]he relationship between the *expected* returns of a stock and the overall market".[166] In his approach, Mr. Rothschild looks to options on the S&P 500 index to calculate options-implied Beta coefficients, and to estimate the expected return on the market.[167] I have used the S&P 500 to calculate the expected market return.

Lastly, over time the average annual total return on large company stocks has been about 12.00 percent with a standard deviation of about 20.00 percent.[168] The expected market returns included in my analyses therefore are well within the range of historical experience.

165 Rothschild Direct, at 44. Clarification added. The market index represents a diversified portfolio.

166 Clarification and emphasis added. *See*, also, Mr. Rothschild's Direct Testimony, footnote 63.

167 Schedule ALR 6. Although requested, Mr. Rothschild did not provide the basis of his assumed 10.71 percent market return.

168 Source: Duff & Phelps 2018 SBBI Yearbook, Appendix A-1.

Q. WHAT IS YOUR RESPONSE TO MR. ROTHSCHILD'S ASSERTION THAT YOUR BOND YIELD PLUS RISK PREMIUM ANALYSIS IS NOT "VALID".[169]

A. Mr. Rothschild argues my Bond Yield Plus Risk Premium analysis is not a valid method because in his view, authorized ROEs are "an entirely different concept" from the Cost of Equity.[170] I disagree. In my practical experience working with clients contemplating investments in utility companies, investors often frame their return expectations and requirements, at least in part, by reference to Returns on Equity authorized in other jurisdictions. That makes sense, given that (as noted in my Direct Testimony) the Cost of Equity is an opportunity cost reflecting the returns available on alternative investments of comparable risk. The fact that authorized returns are important to investors is made clear by the fact that they frequently are disclosed in utility SEC Forms 10-K.[171]

Moreover, the Bond Yield Plus Risk Premium analysis uses allowed returns as a proxy for required returns under the reasonable assumption that regulatory commissions base their decisions on the same type of market data and financial models considered in this proceeding. Mr. Rothschild has not provided any evidence as to why that would not be the case. Further, the analysis explicitly addresses the well-documented finding that the Equity Risk Premium is not static, but changes with capital market conditions (in particular, with interest rates). Given the currently unsettled market, the model addresses an element of utility stock valuation not considered in Mr. Rothschild's methods. On balance, I continue to believe the Bond Yield Plus Risk Premium analysis is relevant to this proceeding and should be considered in setting the Company's ROE.

169 Rothschild Direct, at 72-73.

170 Rothschild Direct, at 73.

171 See *e.g.*, Alliant Energy Corporation, SEC Form 10-K for the fiscal year ended December 31, 2017, at 40; Black Hills Corporation, SEC Form 10-K for the fiscal year ended December 31, 2017, at 14; Otter Tail Corporation, SEC Form 10-K for the year ended December 31, 2017, at 10-16.

IV. RESPONSE TO WAL-MART WITNESS MR. CHRISS

Q. PLEASE SUMMARIZE MR. CHRISS'S TESTIMONY REGARDING OTP'S ROE.

A. Mr. Chriss raises concerns with my recommendation because it is higher than average ROEs since 2015.[172] Mr. Chriss did not, however, undertake an independent, market-based analysis of the Company's Cost of Equity.

Q. HAVE YOU REVIEWED AND UPDATED THE INFORMATION CONTAINED IN MR. CHRISS' EXHIBIT SWC-2?

A. Yes. RRA, which is the source of Mr. Chriss's rate case data, provides an assessment of regulatory jurisdictions from investors' perspectives. As RRA explains, maintains three principal rating categories, Above Average, Average, and Below Average. Within the three principal rating categories, the numbers 1, 2, and 3 indicate relative position.[173] North Dakota is currently ranked as "Average / 1".[174] As Table 5 indicates, since 2014, ROEs for vertically integrated electric utilities in jurisdictions ranked "Average / 1" or higher range from 9.50 percent to 10.55 percent, with a median of 10.00 percent.

Table 5: Average Authorized ROE by RRA Ranking[175]

	Authorized ROE: Vertically Integrated	
RRA Ranking	Average / 1 and Higher	Average / 2 and Lower[176]
Total Cases	44	49
Mean	10.01	9.58
Median	10.00	9.50
Maximum	10.55	10.10
Minimum	9.50	9.10

172 Chriss Direct, at 14-15.

173 Source: RRA, accessed May 22, 2018.

174 Source: RRA.

175 *See* Exhibit__(RBH-2), Schedule 20.

176 Excludes the 11.95% ROE authorized for Alaska Electric Light and Power.

Those observations are important given that the authorized ROE is a very visible measure of the regulatory environment in which utilities operate. The supportiveness of the regulatory environment, in turn, is important to utility analysts and investors.

Q. HAS MR. CHRISS CONSIDERED THE EFFECT OF ITS RECOMMENDATION ON OTP'S FINANCIAL PROFILE?

A. No, he has not. The financial community carefully monitors utility companies' financial conditions, both current and expected, as well as the regulatory environment those companies operate in. Mr. Chriss's recommendation that the Commission authorize an undefined ROE without the benefit of market-based, comparative analyses to support that recommendation likely would indicate an increased degree of regulatory risk. In my view, therefore, Mr. Chriss has not reasonably considered the effect of his recommendation on the Company's financial profile and, therefore, its ability to attract capital on reasonable terms.

V. SUMMARY OF UPDATED RESULTS AND CONCLUSIONS

Q. PLEASE SUMMARIZE THE ANALYTICAL UPDATES CONTAINED IN YOUR REBUTTAL TESTIMONY.

A. Tables 6a and 6b (below) summarizes my updated analytical results (*see also* Exhibit__(RBH-2), Schedules 1 through 8). As discussed in my Direct Testimony, all models used to estimate the Cost of Equity are subject to limiting assumptions or other constraints. As also noted in my Direct Testimony, because adherence to any single approach, or the results of any one approach, can result in misleading conclusions, a reasonable ROE estimate weighs the individual and collective results of multiple methods. Because the capital markets have become increasingly unsettled, with several measures indicating increasing capital costs, it is especially important to consider the breadth of quantitative and qualitative information contained in my Rebuttal Testimony.

Table 6a: Summary of Updated DCF Results[177]

	Mean Low	Mean	Mean High
Constant Growth DCF – Including Flotation Costs[178]			
30-Day Constant Growth DCF	7.60%	8.95%	10.26%
90-Day Constant Growth DCF	7.71%	9.06%	10.37%
180-Day Constant Growth DCF	7.54%	8.90%	10.20%
Multi-Stage DCF – Including Flotation Costs			
30-Day Multi-Stage DCF	8.75%	9.37%	9.95%
90-Day Multi-Stage DCF	9.04%	9.66%	10.24%
180-Day Multi-Stage DCF	8.58%	9.20%	9.78%

Table 6b: Summary of Risk Premium Results[179]

	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
Average Bloomberg Beta Coefficient		
Current 30-Year Treasury (3.12%)	10.49%	10.49%
Near Term Projected 30-Year Treasury (3.52%)	10.88%	10.89%
Average Value Line Beta Coefficient		
Current 30-Year Treasury (3.12%)	12.48%	12.48%
Near Term Projected 30-Year Treasury (3.52%)	12.87%	12.88%
Bond Yield Plus Risk Premium Approach		
Current 30-Year Treasury (3.12%)	9.97%	
Near Term Projected 30-Year Treasury (3.52%)	10.04%	
Long Term Projected 30-Year Treasury (4.20%)	10.24%	

Developing and establishing a Cost of Equity recommendation requires an element of judgment. That judgment should consider the reasonableness of model results and the

177 *See*, also Exhibit __(RBH-2), Schedules 1 and 3.

178 Constant Growth DCF results exclude El Paso Electric Company, IDACORP, Inc., and Northwestern Corporation.

179 *See*, also Exhibit __(RBH-2), Schedule 6 and Schedule 7.

economic environment in which the analyses were undertaken.[180] As discussed earlier in my Rebuttal Testimony, recent trends in the Constant Growth DCF results are difficult to reconcile with other measures of market conditions, included ROEs authorized by other regulatory commissions.

My recommendations therefore take into consideration the results of my Cost of Equity analyses in the context of current and expected capital market conditions and the need for utilities such as OTP to maintain the financial integrity required to access capital at reasonable costs even in constrained capital markets. With such considerations in mind, the analyses and data discussed throughout my Rebuttal Testimony continue to support my recommended Cost of Equity of 10.30 percent, within a range of 10.00 percent to 10.60 percent.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

---

[180] *See* Hevert Direct, at 8, 60-61.

Constant Growth Discounted Cash Flow Model
180 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	$2.24	$74.74	3.00%	3.08%	6.60%	6.00%	4.50%	5.70%	7.56%	8.78%	9.70%
Alliant Energy Corporation	LNT	$1.34	$41.68	3.21%	3.31%	5.60%	5.85%	6.50%	5.98%	8.90%	9.29%	9.82%
Black Hills Corporation	BKH	$1.90	$58.76	3.23%	3.31%	4.40%	4.07%	5.00%	4.49%	7.37%	7.80%	8.31%
El Paso Electric Company	EE	$1.34	$53.98	2.48%	2.54%	5.10%	5.20%	4.50%	4.93%	7.04%	7.48%	7.75%
Hawaiian Electric Industries, Inc.	HE	$1.24	$34.72	3.57%	3.69%	7.10%	8.60%	3.50%	6.40%	7.13%	10.09%	12.32%
IDACORP, Inc.	IDA	$2.36	$89.19	2.65%	2.69%	3.90%	3.10%	3.50%	3.50%	5.79%	6.19%	6.60%
Northwestern Corporation	NWE	$2.20	$56.40	3.90%	3.96%	2.40%	3.16%	3.50%	3.02%	6.35%	6.98%	7.47%
OGE Energy Corp.	OGE	$1.33	$33.67	3.95%	4.03%	6.00%	4.30%	2.50%	4.27%	6.50%	8.30%	10.07%
PNM Resources, Inc.	PNM	$1.06	$39.81	2.66%	2.74%	5.10%	4.30%	7.50%	5.63%	7.02%	8.37%	10.26%
Proxy Group Mean				3.18%	3.26%	5.13%	4.95%	4.56%	4.88%	7.07%	8.14%	9.14%
Proxy Group Median				3.21%	3.31%	5.10%	4.30%	4.50%	4.93%	7.04%	8.30%	9.70%
Proxy Group Mean - Including Flotation Costs										7.20%	8.27%	9.27%
Proxy Group Median - Including Flotation Costs										7.16%	8.42%	9.82%
Proxy Group Mean Excl. EE, IDA, NWE										7.42%	8.77%	10.08%
Proxy Group Median Excl. EE, IDA, NWE										7.25%	8.58%	9.94%
Proxy Group Mean Excl. EE, IDA, NWE - Including Flotation Costs										7.54%	8.90%	10.20%
Proxy Group Median Excl. EE, IDA, NWE - Including Flotation Costs										7.38%	8.70%	10.07%
Flotation Costs										0.12%	0.12%	0.12%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of May 18, 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])

Flotation Cost Adjustment

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

Company	Date	[1] Shares Issued	[2] Offering Price	[3] Underwriting Discount	[4] Offering Expense	[5] Net Proceeds Per Share	[6] Total Flotation Costs	[7] Gross Equity Issue Before Costs	[8] Net Proceeds	[9] Flotation Cost Percentage
Otter Tail Corporation	2004-05	3,075,000	$25.45	$0.9500	$391,452	$24.37	$3,312,702	$78,258,750	$74,946,048	4.233%
Otter Tail Corporation	2008	5,175,000	$30.00	$1.0875	$807,185	$28.76	$6,434,997	$155,250,000	$148,815,003	4.145%
Otter Tail Corporation - ESPP	2004	66,958	$19.31	$0.0000	$0	$19.31	$0	$1,292,959	$1,292,959	0.000%
Otter Tail Corporation - ESPP	2009	62,450	$19.18	$0.0000	$0	$19.18	$0	$1,197,791	$1,197,791	0.000%
Otter Tail Corporation - ESPP	2014	39,222	$26.75	$0.0000	$0	$26.75	$0	$1,049,188	$1,049,188	0.000%
Otter Tail Corporation - ESPP	2015	42,253	$25.93	$0.0000	$0	$25.93	$0	$1,095,620	$1,095,620	0.000%
Otter Tail Corporation - ESPP	2016	53,875	$27.68	$0.0000	$0	$27.66	$1,159	$1,491,266	$1,490,107	0.078%
Otter Tail Corporation - ESPP	2017	5,284	$39.85	$0.0000	$0	$39.78	$367	$210,585	$210,218	0.174%
Otter Tail Corporation - DRIP	2004	223,165	$19.30	$0.0000	$0	$19.30	$0	$4,308,033	$4,308,033	0.000%
Otter Tail Corporation - DRIP	2009	233,943	$19.21	$0.0000	$0	$19.18	$5,877	$4,493,385	$4,487,508	0.131%
Otter Tail Corporation - DRIP	2014	288,045	$26.76	$0.0000	$0	$26.76	$0	$7,707,964	$7,707,964	0.000%
Otter Tail Corporation - DRIP	2015	330,379	$25.93	$0.0000	$56,545	$25.76	$56,545	$8,566,009	$8,509,464	0.660%
Otter Tail Corporation - DRIP	2016	302,524	$36.68	$0.0000	$0	$36.57	$32,973	$11,095,328	$11,062,355	0.297%
Otter Tail Corporation - DRIP	2017	107,285	$38.58	$0.0000	$0	$38.42	$17,554	$4,139,552	$4,121,998	0.424%
Otter Tail Corporation - ATM	2014	519,636	$29.69	$0.5903	$780,616	$27.42	$1,087,343	$15,336,352	$14,249,009	7.090%
Otter Tail Corporation - ATM	2015	133,197	$28.00	$0.4241	$339,160	$25.45	$395,645	$3,785,244	$3,389,599	10.452%
Otter Tail Corporation - ATM	2016	1,014,115	$33.00	$0.0000	$561,548	$32.22	$561,548	$33,235,729	$32,674,181	1.690%
Mean							$700,395	$19,559,633		

WEIGHTED AVERAGE FLOTATION COSTS: 3.58% [10]

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

Company	Ticker	[11] Annualized Dividend	[12] Average Stock Price	[13] Dividend Yield	[14] Expected Dividend Yield: Current	[15] Expected Dividend Yield: Adjusted for Flot. Costs	[16] Zacks Earnings Growth	[17] First Call Earnings Growth	[18] Value Line Earnings Growth	[19] Average Earnings Growth	[20] DCF k(e)	[21] Flotation Adjusted DCF k(e)
ALLETE, Inc.	ALE	$2.24	$75.14	2.98%	3.07%	3.18%	6.60%	6.00%	4.50%	5.70%	8.77%	8.88%
Alliant Energy Corporation	LNT	$1.34	$41.78	3.21%	3.30%	3.43%	5.60%	5.85%	6.50%	5.98%	9.29%	9.41%
Black Hills Corporation	BKH	$1.90	$55.99	3.39%	3.47%	3.60%	4.40%	4.07%	5.00%	4.49%	7.96%	8.09%
El Paso Electric Company	EE	$1.34	$52.19	2.57%	2.63%	2.73%	5.10%	5.20%	4.50%	4.93%	7.56%	7.66%
Hawaiian Electric Industries, Inc.	HE	$1.24	$34.29	3.62%	3.73%	3.87%	7.10%	8.60%	3.50%	6.40%	10.13%	10.27%
IDACORP, Inc.	IDA	$2.36	$90.21	2.62%	2.66%	2.76%	3.90%	3.10%	3.50%	3.50%	6.16%	6.26%
Northwestern Corporation	NWE	$2.20	$54.13	4.06%	4.13%	4.28%	2.40%	3.16%	3.50%	3.02%	7.15%	7.30%
OGE Energy Corp.	OGE	$1.33	$33.02	4.03%	4.11%	4.27%	6.00%	4.30%	2.50%	4.27%	8.38%	8.53%
PNM Resources, Inc.	PNM	$1.06	$38.67	2.74%	2.82%	2.92%	5.10%	4.30%	7.50%	5.63%	8.45%	8.56%
PROXY GROUP MEAN											8.21%	8.33%

DCF Result Adjusted For Flotation Costs:	8.33%	
DCF Result Unadjusted For Flotation Costs:	8.21%	
Difference (Flotation Cost Adjustment):	0.12%	[22]

Notes:

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

[1] Source: Company provided information
[2] Source: Company provided information
[3] Source: Company provided information
[4] Source: Company provided information
[5] Equals [8] / [1]
[6] Equals [4] + ([1] x [3])
[7] Equals [1] x [2]
[8] Equals [7] - [6]
[9] Equals [6] / [7]
[10] Equals Average [6] / Average [7]
[11] Source: Bloomberg Professional
[12] Source: Bloomberg Professional
[13] Equals [11] / [12]
[14] Equals [3] x (1 + 0.5 x [19])
[15] Equals [4] / (1 - 0.0358)
[16] Source: Zacks
[17] Source: Yahoo! Finance
[18] Source: Value Line
[19] Equals Average([16], [17], [18])
[20] Equals [14] + [19]
[21] Equals [15] + [19]
[22] Equals Average [21] - Average [20]

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	$75.14	6.60%	6.00%	4.50%	5.70%	5.46%	66.00%	64.00%	65.57%	$0.00	8.56%	22.33	4.09
Alliant Energy Corporation	LNT	$41.78	5.60%	5.85%	6.50%	5.98%	5.46%	64.00%	64.00%	65.57%	$0.00	9.06%	19.19	3.51
Black Hills Corporation	BKH	$55.99	4.40%	4.07%	5.00%	4.49%	5.46%	55.00%	60.00%	65.57%	$0.00	9.53%	16.99	3.11
El Paso Electric Company	EE	$52.19	5.10%	5.20%	4.50%	4.93%	5.46%	57.00%	61.00%	65.57%	$0.00	8.69%	21.40	3.92
Hawaiian Electric Industries, Inc.	HE	$34.29	7.10%	8.60%	3.50%	6.40%	5.46%	66.00%	59.00%	65.57%	$0.00	9.15%	18.76	3.43
IDACORP, Inc.	IDA	$90.21	3.90%	3.10%	3.50%	3.50%	5.46%	57.00%	63.00%	65.57%	$0.00	8.43%	23.29	4.27
Northwestern Corporation	NWE	$54.13	2.40%	3.16%	3.50%	3.02%	5.46%	64.00%	64.00%	65.57%	$0.00	9.32%	17.90	3.28
OGE Energy Corp.	OGE	$33.02	6.00%	4.30%	2.50%	4.27%	5.46%	68.00%	74.00%	65.57%	$0.00	9.52%	17.02	3.12
PNM Resources, Inc.	PNM	$38.67	5.10%	4.30%	7.50%	5.63%	5.46%	53.00%	50.00%	65.57%	$0.00	8.98%	19.63	3.59

	DCF Result	Including Flotation Costs DCF Result
Mean	9.03%	9.15%
Max	9.53%	9.65%
Min	8.43%	8.55%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.31	$3.50	$3.70	$3.91	$4.13	$4.36	$4.61	$4.87	$5.14	$5.42	$5.71	$6.03	$6.35	$6.70	$7.07	$7.45
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	$3.71	$3.91	$4.12	$4.35	$4.58	$4.84
Black Hills Corporation	BKH	$3.38	$3.53	$3.69	$3.86	$4.03	$4.21	$4.41	$4.62	$4.85	$5.10	$5.37	$5.66	$5.97	$6.29	$6.64	$7.00	$7.38
El Paso Electric Company	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.58	$3.76	$3.97	$4.18	$4.41	$4.65	$4.91	$5.17	$5.46
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.74	$1.86	$1.98	$2.10	$2.24	$2.38	$2.52	$2.67	$2.82	$2.98	$3.15	$3.32	$3.50	$3.69	$3.89	$4.10
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	$7.70	$8.12	$8.56
Northwestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.88	$4.01	$4.16	$4.34	$4.54	$4.77	$5.03	$5.30	$5.59	$5.90	$6.22	$6.56
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.47	$2.59	$2.71	$2.85	$3.00	$3.16	$3.34	$3.52	$3.71	$3.91	$4.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.14	$3.31	$3.49	$3.68	$3.88	$4.09	$4.32	$4.55

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE	68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	$2.18	$2.29	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$4.89	$166.41
Alliant Energy Corporation	LNT	$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$92.78
Black Hills Corporation	BKH	$1.94	$2.08	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$4.84	$125.48
El Paso Electric Company	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	$3.22	$3.39	$3.58	$116.77
Hawaiian Electric Industries, Inc.	HE	$1.15	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$2.69	$76.98
IDACORP, Inc.	IDA	$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$5.62	$199.48
Northwestern Corporation	NWE	$2.20	$2.27	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30	$117.46
OGE Energy Corp.	OGE	$1.36	$1.45	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$2.71	$70.27
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	$2.98	$89.32

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($75.14)	$0.00	$1.36	$2.25	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$171.30
Alliant Energy Corporation	LNT	($41.78)	$0.00	$0.84	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$95.95
Black Hills Corporation	BKH	($55.99)	$0.00	$1.21	$1.99	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$130.32
El Paso Electric Company	EE	($52.19)	$0.00	$0.90	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.22	$3.39	$120.35
Hawaiian Electric Industries, Inc.	HE	($34.29)	$0.00	$0.72	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$79.67
IDACORP, Inc.	IDA	($90.21)	$0.00	$1.54	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$205.09
Northwestern Corporation	NWE	($54.13)	$0.00	$1.37	$2.24	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$121.77
OGE Energy Corp.	OGE	($33.02)	$0.00	$0.85	$1.39	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$72.98
PNM Resources, Inc.	PNM	($38.67)	$0.00	$0.67	$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	$2.83	$92.31

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	$75.14	6.60%	6.00%	4.50%	6.60%	5.46%	66.00%	64.00%	65.57%	$0.00	8.75%	21.05	3.86
Alliant Energy Corporation	LNT	$41.78	5.60%	5.85%	6.50%	6.50%	5.46%	64.00%	64.00%	65.57%	$0.00	9.19%	18.56	3.40
Black Hills Corporation	BKH	$55.99	4.40%	4.07%	5.00%	5.00%	5.46%	55.00%	60.00%	65.57%	$0.00	9.67%	16.45	3.01
El Paso Electric Company	EE	$52.19	5.10%	5.20%	4.50%	5.20%	5.46%	57.00%	61.00%	65.57%	$0.00	8.75%	21.03	3.85
Hawaiian Electric Industries, Inc.	HE	$34.29	7.10%	8.60%	3.50%	8.60%	5.46%	66.00%	59.00%	65.57%	$0.00	9.69%	16.34	2.99
IDACORP, Inc.	IDA	$90.21	3.90%	3.10%	3.50%	3.90%	5.46%	57.00%	63.00%	65.57%	$0.00	8.51%	22.68	4.15
Northwestern Corporation	NWE	$54.13	2.40%	3.16%	3.50%	3.50%	5.46%	64.00%	64.00%	65.57%	$0.00	9.45%	17.34	3.18
OGE Energy Corp.	OGE	$33.02	6.00%	4.30%	2.50%	6.00%	5.46%	68.00%	74.00%	65.57%	$0.00	10.01%	15.21	2.78
PNM Resources, Inc.	PNM	$38.67	5.10%	4.30%	7.50%	7.50%	5.46%	53.00%	50.00%	65.57%	$0.00	9.42%	17.46	3.20

	DCF Result	Including Flotation Costs DCF Result
Mean	9.27%	9.39%
Max	10.01%	10.13%
Min	8.51%	8.63%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.34	$3.56	$3.79	$4.04	$4.31	$4.58	$4.87	$5.16	$5.47	$5.77	$6.09	$6.42	$6.77	$7.14	$7.53	$7.94
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.65	$3.84	$4.05	$4.28	$4.51	$4.76	$5.01
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.57	$5.87	$6.19	$6.53	$6.89	$7.26	$7.66
El Paso Electric Company	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.46	$3.64	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.78	$1.93	$2.10	$2.28	$2.48	$2.68	$2.88	$3.08	$3.28	$3.48	$3.67	$3.87	$4.08	$4.30	$4.54	$4.79
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	$6.76	$7.13	$7.52	$7.93	$8.36	$8.81
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	$6.11	$6.44	$6.79
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	$3.78	$3.98	$4.20	$4.43	$4.67
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	$4.20	$4.43	$4.67	$4.92	$5.19

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE	68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker	2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	$2.20	$2.33	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$5.21	$167.24
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	$2.96	$3.12	$3.29	$93.09
Black Hills Corporation	BKH	$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$125.95
El Paso Electric Company	EE	$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$3.65	$116.96
Hawaiian Electric Industries, Inc.	HE	$1.18	$1.24	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$3.14	$78.22
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	$4.93	$5.20	$5.48	$5.78	$199.89
Northwestern Corporation	NWE	$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$4.46	$117.82
OGE Energy Corp.	OGE	$1.38	$1.50	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$3.06	$71.02
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	$3.23	$3.40	$90.64

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($75.14)	$0.00	$1.37	$2.27	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$172.45
Alliant Energy Corporation	LNT	($41.78)	$0.00	$0.84	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.96	$3.12	$96.38
Black Hills Corporation	BKH	($55.99)	$0.00	$1.21	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$130.97
El Paso Electric Company	EE	($52.19)	$0.00	$0.90	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$120.60
Hawaiian Electric Industries, Inc.	HE	($34.29)	$0.00	$0.73	$1.23	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$81.36
IDACORP, Inc.	IDA	($90.21)	$0.00	$1.55	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.93	$5.20	$5.48	$205.67
Northwestern Corporation	NWE	($54.13)	$0.00	$1.38	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$122.28
OGE Energy Corp.	OGE	($33.02)	$0.00	$0.86	$1.43	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$74.08
PNM Resources, Inc.	PNM	($38.67)	$0.00	$0.68	$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	$3.23	$94.05

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	$75.14	6.60%	6.00%	4.50%	4.50%	5.46%	66.00%	64.00%	65.57%	($0.00)	8.32%	24.17	4.43
Alliant Energy Corporation	LNT	$41.78	5.60%	5.85%	6.50%	5.60%	5.46%	64.00%	64.00%	65.57%	$0.00	8.98%	19.67	3.60
Black Hills Corporation	BKH	$55.99	4.40%	4.07%	5.00%	4.07%	5.46%	55.00%	60.00%	65.57%	$0.00	9.42%	17.46	3.20
El Paso Electric Company	EE	$52.19	5.10%	5.20%	4.50%	4.50%	5.46%	57.00%	61.00%	65.57%	$0.00	8.60%	22.02	4.03
Hawaiian Electric Industries, Inc.	HE	$34.29	7.10%	8.60%	3.50%	3.50%	5.46%	66.00%	59.00%	65.57%	$0.00	8.51%	22.67	4.15
IDACORP, Inc.	IDA	$90.21	3.90%	3.10%	3.50%	3.10%	5.46%	57.00%	63.00%	65.57%	$0.00	8.35%	23.93	4.38
Northwestern Corporation	NWE	$54.13	2.40%	3.16%	3.50%	2.40%	5.46%	64.00%	64.00%	65.57%	$0.00	9.17%	18.66	3.42
OGE Energy Corp.	OGE	$33.02	6.00%	4.30%	2.50%	2.50%	5.46%	68.00%	74.00%	65.57%	$0.00	9.07%	19.17	3.51
PNM Resources, Inc.	PNM	$38.67	5.10%	4.30%	7.50%	4.30%	5.46%	53.00%	50.00%	65.57%	$0.00	8.69%	21.39	3.92

	DCF Result	Including Flotation Costs DCF Result
Mean	8.79%	8.91%
Max	9.42%	9.54%
Min	8.32%	8.44%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.27	$3.42	$3.57	$3.73	$3.90	$4.08	$4.28	$4.49	$4.72	$4.97	$5.25	$5.53	$5.83	$6.15	$6.49	$6.84
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	$4.71
Black Hills Corporation	BKH	$3.38	$3.52	$3.66	$3.81	$3.96	$4.13	$4.30	$4.50	$4.71	$4.95	$5.21	$5.49	$5.79	$6.11	$6.44	$6.79	$7.16
El Paso Electric Company	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$5.29
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	$3.34
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.76	$6.05	$6.38	$6.73	$7.09	$7.48	$7.89	$8.32
Northwestern Corporation	NWE	$3.34	$3.42	$3.50	$3.59	$3.67	$3.76	$3.87	$4.00	$4.16	$4.34	$4.56	$4.81	$5.07	$5.35	$5.64	$5.95	$6.27
OGE Energy Corp.	OGE	$1.92	$1.97	$2.02	$2.07	$2.12	$2.17	$2.24	$2.32	$2.41	$2.52	$2.64	$2.78	$2.94	$3.10	$3.27	$3.44	$3.63
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	$3.53	$3.72	$3.92	$4.14

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE	68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker	2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	$2.16	$2.24	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$4.49	$165.40
Alliant Energy Corporation	LNT	$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$3.09	$92.57
Black Hills Corporation	BKH	$1.93	$2.06	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$4.70	$125.10
El Paso Electric Company	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	$3.47	$116.48
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	$2.19	$75.63
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	$5.46	$199.08
Northwestern Corporation	NWE	$2.19	$2.24	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$4.11	$117.03
OGE Energy Corp.	OGE	$1.34	$1.40	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$2.38	$69.63
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	$2.71	$88.48

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($75.14)	$0.00	$1.34	$2.21	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$169.88
Alliant Energy Corporation	LNT	($41.78)	$0.00	$0.84	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$95.65
Black Hills Corporation	BKH	($55.99)	$0.00	$1.20	$1.97	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$129.80
El Paso Electric Company	EE	($52.19)	$0.00	$0.90	$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	$3.29	$119.95
Hawaiian Electric Industries, Inc.	HE	($34.29)	$0.00	$0.70	$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	$2.07	$77.82
IDACORP, Inc.	IDA	($90.21)	$0.00	$1.54	$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	$5.17	$204.53
Northwestern Corporation	NWE	($54.13)	$0.00	$1.36	$2.22	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$121.14
OGE Energy Corp.	OGE	($33.02)	$0.00	$0.83	$1.35	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$72.01
PNM Resources, Inc.	PNM	($38.67)	$0.00	$0.66	$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	$2.57	$91.20

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	$71.97	6.60%	6.00%	4.50%	5.70%	5.46%	66.00%	64.00%	65.57%	$0.00	8.70%	21.38	3.91
Alliant Energy Corporation	LNT	$40.18	5.60%	5.85%	6.50%	5.98%	5.46%	64.00%	64.00%	65.57%	$0.00	9.21%	18.45	3.38
Black Hills Corporation	BKH	$54.09	4.40%	4.07%	5.00%	4.49%	5.46%	55.00%	60.00%	65.57%	$0.00	9.67%	16.42	3.01
El Paso Electric Company	EE	$50.88	5.10%	5.20%	4.50%	4.93%	5.46%	57.00%	61.00%	65.57%	$0.00	8.78%	20.86	3.82
Hawaiian Electric Industries, Inc.	HE	$33.90	7.10%	8.60%	3.50%	6.40%	5.46%	66.00%	59.00%	65.57%	$0.00	9.19%	18.55	3.40
IDACORP, Inc.	IDA	$86.23	3.90%	3.10%	3.50%	3.50%	5.46%	57.00%	63.00%	65.57%	$0.00	8.57%	22.25	4.08
Northwestern Corporation	NWE	$53.03	2.40%	3.16%	3.50%	3.02%	5.46%	64.00%	64.00%	65.57%	$0.00	9.41%	17.53	3.21
OGE Energy Corp.	OGE	$32.04	6.00%	4.30%	2.50%	4.27%	5.46%	68.00%	74.00%	65.57%	$0.00	9.65%	16.50	3.02
PNM Resources, Inc.	PNM	$37.18	5.10%	4.30%	7.50%	5.63%	5.46%	53.00%	50.00%	65.57%	$0.00	9.12%	18.89	3.46

	DCF Result	Including Flotation Costs DCF Result
Mean	9.14%	9.27%
Max	9.67%	9.80%
Min	8.57%	8.69%

Projected Annual Earnings per Share

Company	Ticker	[14] 2017	[15] 2018	[16] 2019	[17] 2020	[18] 2021	[19] 2022	[20] **2023**	[21] 2024	[22] 2025	[23] 2026	[24] 2027	[25] **2028**	[26] 2029	[27] 2030	[28] 2031	[29] 2032	[30] 2033
ALLETE, Inc.	ALE	$3.13	$3.31	$3.50	$3.70	$3.91	$4.13	$4.36	$4.61	$4.87	$5.14	$5.42	$5.71	$6.03	$6.35	$6.70	$7.07	$7.45
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	$3.71	$3.91	$4.12	$4.35	$4.58	$4.84
Black Hills Corporation	BKH	$3.38	$3.53	$3.69	$3.86	$4.03	$4.21	$4.41	$4.62	$4.85	$5.10	$5.37	$5.66	$5.97	$6.29	$6.64	$7.00	$7.38
El Paso Electric Company	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.58	$3.76	$3.97	$4.18	$4.41	$4.65	$4.91	$5.17	$5.46
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.74	$1.86	$1.98	$2.10	$2.24	$2.38	$2.52	$2.67	$2.82	$2.98	$3.15	$3.32	$3.50	$3.69	$3.89	$4.10
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	$7.70	$8.12	$8.56
Northwestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.88	$4.01	$4.16	$4.34	$4.54	$4.77	$5.03	$5.30	$5.59	$5.90	$6.22	$6.56
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.47	$2.59	$2.71	$2.85	$3.00	$3.16	$3.34	$3.52	$3.71	$3.91	$4.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.14	$3.31	$3.49	$3.68	$3.88	$4.09	$4.32	$4.55

Projected Annual Dividend Payout Ratio

Company	Ticker		[31] 2018	[32] 2019	[33] 2020	[34] 2021	[35] 2022	[36] 2023	[37] 2024	[38] 2025	[39] 2026	[40] 2027	[41] 2028	[42] 2029	[43] 2030	[44] 2031	[45] 2032	[46] 2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows

Company	Ticker		[47] 2017	[48] 2019	[49] 2020	[50] 2021	[51] 2022	[52] 2023	[53] 2024	[54] 2025	[55] 2026	[56] 2027	[57] 2028	[58] 2029	[59] 2030	[60] 2031	[61] 2032	[62] 2033	[63] Terminal Value
ALLETE, Inc.	ALE		$2.18	$2.29	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$4.89	$159.34
Alliant Energy Corporation	LNT		$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$89.19
Black Hills Corporation	BKH		$1.94	$2.08	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$4.84	$121.23
El Paso Electric Company	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	$3.22	$3.39	$3.58	$113.82
Hawaiian Electric Industries, Inc.	HE		$1.15	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$2.69	$76.11
IDACORP, Inc.	IDA		$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$5.62	$190.59
Northwestern Corporation	NWE		$2.20	$2.27	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30	$115.02
OGE Energy Corp.	OGE		$1.36	$1.45	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$2.71	$68.10
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	$2.98	$85.98

Projected Annual Data Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 5/18/18	[66] 12/31/18	[67] 6/30/19	[68] 6/30/20	[69] 6/30/21	[70] 6/30/22	[71] 6/30/23	[72] 6/30/24	[73] 6/30/25	[74] 6/30/26	[75] 6/30/27	[76] 6/30/28	[77] 6/30/29	[78] 6/30/30	[79] 6/30/31	[80] 6/30/32	[81] 6/30/33
ALLETE, Inc.	ALE	($71.97)	$0.00	$1.36	$2.25	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$164.23
Alliant Energy Corporation	LNT	($40.18)	$0.00	$0.84	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$92.37
Black Hills Corporation	BKH	($54.09)	$0.00	$1.21	$1.99	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$126.07
El Paso Electric Company	EE	($50.87)	$0.00	$0.90	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.22	$3.39	$117.40
Hawaiian Electric Industries, Inc.	HE	($33.90)	$0.00	$0.72	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$78.80
IDACORP, Inc.	IDA	($86.23)	$0.00	$1.54	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$196.20
Northwestern Corporation	NWE	($53.03)	$0.00	$1.37	$2.24	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$119.32
OGE Energy Corp.	OGE	($32.04)	$0.00	$0.85	$1.39	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$70.80
PNM Resources, Inc.	PNM	($37.18)	$0.00	$0.67	$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	$2.83	$88.97

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	$71.97	6.60%	6.00%	4.50%	6.60%	5.46%	66.00%	64.00%	65.57%	$0.00	8.89%	20.16	3.69
Alliant Energy Corporation	LNT	$40.18	5.60%	5.85%	6.50%	6.50%	5.46%	64.00%	64.00%	65.57%	$0.00	9.34%	17.85	3.27
Black Hills Corporation	BKH	$54.09	4.40%	4.07%	5.00%	5.00%	5.46%	55.00%	60.00%	65.57%	$0.00	9.81%	15.89	2.91
El Paso Electric Company	EE	$50.88	5.10%	5.20%	4.50%	5.20%	5.46%	57.00%	61.00%	65.57%	$0.00	8.83%	20.50	3.75
Hawaiian Electric Industries, Inc.	HE	$33.90	7.10%	8.60%	3.50%	8.60%	5.46%	66.00%	59.00%	65.57%	$0.00	9.74%	16.16	2.96
IDACORP, Inc.	IDA	$86.23	3.90%	3.10%	3.50%	3.90%	5.46%	57.00%	63.00%	65.57%	$0.00	8.65%	21.67	3.97
Northwestern Corporation	NWE	$53.03	2.40%	3.16%	3.50%	3.50%	5.46%	64.00%	64.00%	65.57%	$0.00	9.53%	16.98	3.11
OGE Energy Corp.	OGE	$32.04	6.00%	4.30%	2.50%	6.00%	5.46%	68.00%	74.00%	65.57%	$0.00	10.15%	14.74	2.70
PNM Resources, Inc.	PNM	$37.18	5.10%	4.30%	7.50%	7.50%	5.46%	53.00%	50.00%	65.57%	$0.00	9.57%	16.82	3.08

	DCF Result	Including Flotation Costs DCF Result
Mean	9.39%	9.51%
Max	10.15%	10.28%
Min	8.65%	8.78%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.34	$3.56	$3.79	$4.04	$4.31	$4.58	$4.87	$5.16	$5.47	$5.77	$6.09	$6.42	$6.77	$7.14	$7.53	$7.94
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.65	$3.84	$4.05	$4.28	$4.51	$4.76	$5.01
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.57	$5.87	$6.19	$6.53	$6.89	$7.26	$7.66
El Paso Electric Company	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.46	$3.64	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.78	$1.93	$2.10	$2.28	$2.48	$2.68	$2.88	$3.08	$3.28	$3.48	$3.67	$3.87	$4.08	$4.30	$4.54	$4.79
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	$6.76	$7.13	$7.52	$7.93	$8.36	$8.81
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	$6.11	$6.44	$6.79
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	$3.78	$3.98	$4.20	$4.43	$4.67
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	$4.20	$4.43	$4.67	$4.92	$5.19

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE		$2.20	$2.33	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$5.21	$160.17
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	$2.96	$3.12	$3.29	$89.50
Black Hills Corporation	BKH		$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$121.70
El Paso Electric Company	EE		$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$3.65	$114.01
Hawaiian Electric Industries, Inc.	HE		$1.18	$1.24	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$3.14	$77.36
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	$4.93	$5.20	$5.48	$5.78	$191.00
Northwestern Corporation	NWE		$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$4.46	$115.37
OGE Energy Corp.	OGE		$1.38	$1.50	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$3.06	$68.84
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	$3.23	$3.40	$87.29

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($71.97)	$0.00	$1.37	$2.27	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$165.38
Alliant Energy Corporation	LNT	($40.18)	$0.00	$0.84	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.96	$3.12	$92.79
Black Hills Corporation	BKH	($54.09)	$0.00	$1.21	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$126.72
El Paso Electric Company	EE	($50.87)	$0.00	$0.90	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$117.65
Hawaiian Electric Industries, Inc.	HE	($33.90)	$0.00	$0.73	$1.23	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$80.49
IDACORP, Inc.	IDA	($86.23)	$0.00	$1.55	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.93	$5.20	$5.48	$196.78
Northwestern Corporation	NWE	($53.03)	$0.00	$1.38	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$119.83
OGE Energy Corp.	OGE	($32.04)	$0.00	$0.86	$1.43	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$71.91
PNM Resources, Inc.	PNM	($37.18)	$0.00	$0.68	$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	$3.23	$90.70

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	$71.97	6.60%	6.00%	4.50%	4.50%	5.46%	66.00%	64.00%	65.57%	$0.00	8.45%	23.14	4.24
Alliant Energy Corporation	LNT	$40.18	5.60%	5.85%	6.50%	5.60%	5.46%	64.00%	64.00%	65.57%	$0.00	9.12%	18.91	3.46
Black Hills Corporation	BKH	$54.09	4.40%	4.07%	5.00%	4.07%	5.46%	55.00%	60.00%	65.57%	$0.00	9.56%	16.87	3.09
El Paso Electric Company	EE	$50.88	5.10%	5.20%	4.50%	4.50%	5.46%	57.00%	61.00%	65.57%	$0.00	8.68%	21.46	3.93
Hawaiian Electric Industries, Inc.	HE	$33.90	7.10%	8.60%	3.50%	3.50%	5.46%	66.00%	59.00%	65.57%	$0.00	8.55%	22.41	4.10
IDACORP, Inc.	IDA	$86.23	3.90%	3.10%	3.50%	3.10%	5.46%	57.00%	63.00%	65.57%	$0.00	8.49%	22.86	4.19
Northwestern Corporation	NWE	$53.03	2.40%	3.16%	3.50%	2.40%	5.46%	64.00%	64.00%	65.57%	$0.00	9.25%	18.27	3.35
OGE Energy Corp.	OGE	$32.04	6.00%	4.30%	2.50%	2.50%	5.46%	68.00%	74.00%	65.57%	$0.00	9.18%	18.57	3.40
PNM Resources, Inc.	PNM	$37.18	5.10%	4.30%	7.50%	4.30%	5.46%	53.00%	50.00%	65.57%	$0.00	8.82%	20.58	3.77

	DCF Result	Including Flotation Costs DCF Result
Mean	8.90%	9.02%
Max	9.56%	9.68%
Min	8.45%	8.57%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.27	$3.42	$3.57	$3.73	$3.90	$4.08	$4.28	$4.49	$4.72	$4.97	$5.25	$5.53	$5.83	$6.15	$6.49	$6.84
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	$4.71
Black Hills Corporation	BKH	$3.38	$3.52	$3.66	$3.81	$3.96	$4.13	$4.30	$4.50	$4.71	$4.95	$5.21	$5.49	$5.79	$6.11	$6.44	$6.79	$7.16
El Paso Electric Company	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$5.29
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	$3.34
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.76	$6.05	$6.38	$6.73	$7.09	$7.48	$7.89	$8.32
Northwestern Corporation	NWE	$3.34	$3.42	$3.50	$3.59	$3.67	$3.76	$3.87	$4.00	$4.16	$4.34	$4.56	$4.81	$5.07	$5.35	$5.64	$5.95	$6.27
OGE Energy Corp.	OGE	$1.92	$1.97	$2.02	$2.07	$2.12	$2.17	$2.24	$2.32	$2.41	$2.52	$2.64	$2.78	$2.94	$3.10	$3.27	$3.44	$3.63
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	$3.53	$3.72	$3.92	$4.14

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE		$2.16	$2.24	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$4.49	$158.33
Alliant Energy Corporation	LNT		$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$3.09	$88.98
Black Hills Corporation	BKH		$1.93	$2.06	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$4.70	$120.85
El Paso Electric Company	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	$3.47	$113.53
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	$2.19	$74.77
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	$5.46	$190.19
Northwestern Corporation	NWE		$2.19	$2.24	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$4.11	$114.58
OGE Energy Corp.	OGE		$1.34	$1.40	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$2.38	$67.45
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	$2.71	$85.15

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($71.97)	$0.00	$1.34	$2.21	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$162.82
Alliant Energy Corporation	LNT	($40.18)	$0.00	$0.84	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$92.06
Black Hills Corporation	BKH	($54.09)	$0.00	$1.20	$1.97	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$125.55
El Paso Electric Company	EE	($50.87)	$0.00	$0.90	$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	$3.29	$117.00
Hawaiian Electric Industries, Inc.	HE	($33.90)	$0.00	$0.70	$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	$2.07	$76.96
IDACORP, Inc.	IDA	($86.23)	$0.00	$1.54	$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	$5.17	$195.64
Northwestern Corporation	NWE	($53.03)	$0.00	$1.36	$2.22	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$118.69
OGE Energy Corp.	OGE	($32.04)	$0.00	$0.83	$1.35	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$69.84
PNM Resources, Inc.	PNM	($37.18)	$0.00	$0.66	$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	$2.57	$87.86

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	$74.74	6.60%	6.00%	4.50%	5.70%	5.46%	66.00%	64.00%	65.57%	$0.00	8.57%	22.21	4.07
Alliant Energy Corporation	LNT	$41.68	5.60%	5.85%	6.50%	5.98%	5.46%	64.00%	64.00%	65.57%	$0.00	9.07%	19.14	3.51
Black Hills Corporation	BKH	$58.76	4.40%	4.07%	5.00%	4.49%	5.46%	55.00%	60.00%	65.57%	$0.00	9.34%	17.83	3.27
El Paso Electric Company	EE	$53.98	5.10%	5.20%	4.50%	4.93%	5.46%	57.00%	61.00%	65.57%	$0.00	8.58%	22.13	4.05
Hawaiian Electric Industries, Inc.	HE	$34.72	7.10%	8.60%	3.50%	6.40%	5.46%	66.00%	59.00%	65.57%	$0.00	9.10%	18.99	3.48
IDACORP, Inc.	IDA	$89.19	3.90%	3.10%	3.50%	3.50%	5.46%	57.00%	63.00%	65.57%	$0.00	8.46%	23.03	4.22
Northwestern Corporation	NWE	$56.40	2.40%	3.16%	3.50%	3.02%	5.46%	64.00%	64.00%	65.57%	$0.00	9.16%	18.68	3.42
OGE Energy Corp.	OGE	$33.67	6.00%	4.30%	2.50%	4.27%	5.46%	68.00%	74.00%	65.57%	$0.00	9.44%	17.38	3.18
PNM Resources, Inc.	PNM	$39.81	5.10%	4.30%	7.50%	5.63%	5.46%	53.00%	50.00%	65.57%	$0.00	8.89%	20.19	3.70

	DCF Result	Including Flotation Costs DCF Result
Mean	8.96%	9.08%
Max	9.44%	9.56%
Min	8.46%	8.59%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.31	$3.50	$3.70	$3.91	$4.13	$4.36	$4.61	$4.87	$5.14	$5.42	$5.71	$6.03	$6.35	$6.70	$7.07	$7.45
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	$3.71	$3.91	$4.12	$4.35	$4.58	$4.84
Black Hills Corporation	BKH	$3.38	$3.53	$3.69	$3.86	$4.03	$4.21	$4.41	$4.62	$4.85	$5.10	$5.37	$5.66	$5.97	$6.29	$6.64	$7.00	$7.38
El Paso Electric Company	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.58	$3.76	$3.97	$4.18	$4.41	$4.65	$4.91	$5.17	$5.46
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.74	$1.86	$1.98	$2.10	$2.24	$2.38	$2.52	$2.67	$2.82	$2.98	$3.15	$3.32	$3.50	$3.69	$3.89	$4.10
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	$7.70	$8.12	$8.56
Northwestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.88	$4.01	$4.16	$4.34	$4.54	$4.77	$5.03	$5.30	$5.59	$5.90	$6.22	$6.56
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.47	$2.59	$2.71	$2.85	$3.00	$3.16	$3.34	$3.52	$3.71	$3.91	$4.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.14	$3.31	$3.49	$3.68	$3.88	$4.09	$4.32	$4.55

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE		$2.18	$2.29	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$4.89	$165.51
Alliant Energy Corporation	LNT		$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$92.55
Black Hills Corporation	BKH		$1.94	$2.08	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$4.84	$131.68
El Paso Electric Company	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	$3.22	$3.39	$3.58	$120.78
Hawaiian Electric Industries, Inc.	HE		$1.15	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$2.69	$77.94
IDACORP, Inc.	IDA		$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$5.62	$197.19
Northwestern Corporation	NWE		$2.20	$2.27	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30	$122.55
OGE Energy Corp.	OGE		$1.36	$1.45	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$2.71	$71.73
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	$2.98	$91.89

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($74.74)	$0.00	$1.36	$2.25	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$170.40
Alliant Energy Corporation	LNT	($41.68)	$0.00	$0.84	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$95.72
Black Hills Corporation	BKH	($58.76)	$0.00	$1.21	$1.99	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$136.52
El Paso Electric Company	EE	($53.98)	$0.00	$0.90	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.22	$3.39	$124.36
Hawaiian Electric Industries, Inc.	HE	($34.72)	$0.00	$0.72	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$80.63
IDACORP, Inc.	IDA	($89.19)	$0.00	$1.54	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$202.81
Northwestern Corporation	NWE	($56.40)	$0.00	$1.37	$2.24	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$126.85
OGE Energy Corp.	OGE	($33.67)	$0.00	$0.85	$1.39	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$74.44
PNM Resources, Inc.	PNM	($39.81)	$0.00	$0.67	$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	$2.83	$94.88

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
					Value	High								
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.74	6.60%	6.00%	4.50%	6.60%	5.46%	66.00%	64.00%	65.57%	$0.00	8.76%	20.94	3.83
Alliant Energy Corporation	LNT	$41.68	5.60%	5.85%	6.50%	6.50%	5.46%	64.00%	64.00%	65.57%	$0.00	9.20%	18.52	3.39
Black Hills Corporation	BKH	$58.76	4.40%	4.07%	5.00%	5.00%	5.46%	55.00%	60.00%	65.57%	$0.00	9.47%	17.26	3.16
El Paso Electric Company	EE	$53.98	5.10%	5.20%	4.50%	5.20%	5.46%	57.00%	61.00%	65.57%	$0.00	8.64%	21.75	3.98
Hawaiian Electric Industries, Inc.	HE	$34.72	7.10%	8.60%	3.50%	8.60%	5.46%	66.00%	59.00%	65.57%	$0.00	9.64%	16.54	3.03
IDACORP, Inc.	IDA	$89.19	3.90%	3.10%	3.50%	3.90%	5.46%	57.00%	63.00%	65.57%	$0.00	8.55%	22.42	4.11
Northwestern Corporation	NWE	$56.40	2.40%	3.16%	3.50%	3.50%	5.46%	64.00%	64.00%	65.57%	$0.00	9.28%	18.09	3.31
OGE Energy Corp.	OGE	$33.67	6.00%	4.30%	2.50%	6.00%	5.46%	68.00%	74.00%	65.57%	$0.00	9.92%	15.52	2.84
PNM Resources, Inc.	PNM	$39.81	5.10%	4.30%	7.50%	7.50%	5.46%	53.00%	50.00%	65.57%	$0.00	9.31%	17.96	3.29

	DCF Result	Including Flotation Costs DCF Result
Mean	9.20%	9.32%
Max	9.92%	10.04%
Min	8.55%	8.67%

Projected Annual Earnings per Share

Company	Ticker	[14] 2017	[15] 2018	[16] 2019	[17] 2020	[18] 2021	[19] 2022	[20] **2023**	[21] 2024	[22] 2025	[23] 2026	[24] 2027	[25] **2028**	[26] 2029	[27] 2030	[28] 2031	[29] 2032	[30] 2033
ALLETE, Inc.	ALE	$3.13	$3.34	$3.56	$3.79	$4.04	$4.31	$4.58	$4.87	$5.16	$5.47	$5.77	$6.09	$6.42	$6.77	$7.14	$7.53	$7.94
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.65	$3.84	$4.05	$4.28	$4.51	$4.76	$5.01
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.57	$5.87	$6.19	$6.53	$6.89	$7.26	$7.66
El Paso Electric Company	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.46	$3.64	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.78	$1.93	$2.10	$2.28	$2.48	$2.68	$2.88	$3.08	$3.28	$3.48	$3.67	$3.87	$4.08	$4.30	$4.54	$4.79
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	$6.76	$7.13	$7.52	$7.93	$8.36	$8.81
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	$6.11	$6.44	$6.79
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	$3.78	$3.98	$4.20	$4.43	$4.67
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	$4.20	$4.43	$4.67	$4.92	$5.19

Projected Annual Dividend Payout Ratio

Company	Ticker		[31] 2018	[32] 2019	[33] 2020	[34] 2021	[35] 2022	[36] 2023	[37] 2024	[38] 2025	[39] 2026	[40] 2027	[41] 2028	[42] 2029	[43] 2030	[44] 2031	[45] 2032	[46] 2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows

Company	Ticker		[47] 2017	[48] 2019	[49] 2020	[50] 2021	[51] 2022	[52] 2023	[53] 2024	[54] 2025	[55] 2026	[56] 2027	[57] 2028	[58] 2029	[59] 2030	[60] 2031	[61] 2032	[62] 2033	[63] Terminal Value
ALLETE, Inc.	ALE		$2.20	$2.33	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$5.21	$166.34
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	$2.96	$3.12	$3.29	$92.86
Black Hills Corporation	BKH		$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$132.16
El Paso Electric Company	EE		$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$3.65	$120.96
Hawaiian Electric Industries, Inc.	HE		$1.18	$1.24	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$3.14	$79.19
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	$4.93	$5.20	$5.48	$5.78	$197.61
Northwestern Corporation	NWE		$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$4.46	$122.91
OGE Energy Corp.	OGE		$1.38	$1.50	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$3.06	$72.48
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	$3.23	$3.40	$93.22

Projected Annual Data Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 5/18/18	[66] 12/31/18	[67] 6/30/19	[68] 6/30/20	[69] 6/30/21	[70] 6/30/22	[71] 6/30/23	[72] 6/30/24	[73] 6/30/25	[74] 6/30/26	[75] 6/30/27	[76] 6/30/28	[77] 6/30/29	[78] 6/30/30	[79] 6/30/31	[80] 6/30/32	[81] 6/30/33
ALLETE, Inc.	ALE	($74.74)	$0.00	$1.37	$2.27	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$171.55
Alliant Energy Corporation	LNT	($41.68)	$0.00	$0.84	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.96	$3.12	$96.14
Black Hills Corporation	BKH	($58.76)	$0.00	$1.21	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$137.18
El Paso Electric Company	EE	($53.98)	$0.00	$0.90	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$124.61
Hawaiian Electric Industries, Inc.	HE	($34.72)	$0.00	$0.73	$1.23	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$82.33
IDACORP, Inc.	IDA	($89.19)	$0.00	$1.55	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.93	$5.20	$5.48	$203.39
Northwestern Corporation	NWE	($56.40)	$0.00	$1.38	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$127.36
OGE Energy Corp.	OGE	($33.67)	$0.00	$0.86	$1.43	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$75.54
PNM Resources, Inc.	PNM	($39.81)	$0.00	$0.68	$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	$3.23	$96.62

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	$74.74	6.60%	6.00%	4.50%	4.50%	5.46%	66.00%	64.00%	65.57%	$0.00	8.34%	24.04	4.40
Alliant Energy Corporation	LNT	$41.68	5.60%	5.85%	6.50%	5.60%	5.46%	64.00%	64.00%	65.57%	$0.00	8.98%	19.62	3.59
Black Hills Corporation	BKH	$58.76	4.40%	4.07%	5.00%	4.07%	5.46%	55.00%	60.00%	65.57%	$0.00	9.23%	18.33	3.36
El Paso Electric Company	EE	$53.98	5.10%	5.20%	4.50%	4.50%	5.46%	57.00%	61.00%	65.57%	$0.00	8.50%	22.78	4.17
Hawaiian Electric Industries, Inc.	HE	$34.72	7.10%	8.60%	3.50%	3.50%	5.46%	66.00%	59.00%	65.57%	$0.00	8.47%	22.96	4.20
IDACORP, Inc.	IDA	$89.19	3.90%	3.10%	3.50%	3.10%	5.46%	57.00%	63.00%	65.57%	$0.00	8.38%	23.65	4.33
Northwestern Corporation	NWE	$56.40	2.40%	3.16%	3.50%	2.40%	5.46%	64.00%	64.00%	65.57%	$0.00	9.01%	19.47	3.56
OGE Energy Corp.	OGE	$33.67	6.00%	4.30%	2.50%	2.50%	5.46%	68.00%	74.00%	65.57%	$0.00	8.99%	19.57	3.58
PNM Resources, Inc.	PNM	$39.81	5.10%	4.30%	7.50%	4.30%	5.46%	53.00%	50.00%	65.57%	$0.00	8.60%	22.01	4.03

	DCF Result	Including Flotation Costs DCF Result
Mean	8.72%	8.85%
Max	9.23%	9.36%
Min	8.34%	8.46%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.27	$3.42	$3.57	$3.73	$3.90	$4.08	$4.28	$4.49	$4.72	$4.97	$5.25	$5.53	$5.83	$6.15	$6.49	$6.84
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	$4.71
Black Hills Corporation	BKH	$3.38	$3.52	$3.66	$3.81	$3.96	$4.13	$4.30	$4.50	$4.71	$4.95	$5.21	$5.49	$5.79	$6.11	$6.44	$6.79	$7.16
El Paso Electric Company	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$5.29
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	$3.34
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.76	$6.05	$6.38	$6.73	$7.09	$7.48	$7.89	$8.32
Northwestern Corporation	NWE	$3.34	$3.42	$3.50	$3.59	$3.67	$3.76	$3.87	$4.00	$4.16	$4.34	$4.56	$4.81	$5.07	$5.35	$5.64	$5.95	$6.27
OGE Energy Corp.	OGE	$1.92	$1.97	$2.02	$2.07	$2.12	$2.17	$2.24	$2.32	$2.41	$2.52	$2.64	$2.78	$2.94	$3.10	$3.27	$3.44	$3.63
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	$3.53	$3.72	$3.92	$4.14

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE	68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker	2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	$2.16	$2.24	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$4.49	$164.50
Alliant Energy Corporation	LNT	$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$3.09	$92.34
Black Hills Corporation	BKH	$1.93	$2.06	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$4.70	$131.30
El Paso Electric Company	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	$3.47	$120.49
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	$2.19	$76.59
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	$5.46	$196.79
Northwestern Corporation	NWE	$2.19	$2.24	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$4.11	$122.11
OGE Energy Corp.	OGE	$1.34	$1.40	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$2.38	$71.09
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	$2.71	$91.05

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($74.74)	$0.00	$1.34	$2.21	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$168.99
Alliant Energy Corporation	LNT	($41.68)	$0.00	$0.84	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$95.42
Black Hills Corporation	BKH	($58.76)	$0.00	$1.20	$1.97	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$136.00
El Paso Electric Company	EE	($53.98)	$0.00	$0.90	$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	$3.29	$123.95
Hawaiian Electric Industries, Inc.	HE	($34.72)	$0.00	$0.70	$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	$2.07	$78.78
IDACORP, Inc.	IDA	($89.19)	$0.00	$1.54	$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	$5.17	$202.25
Northwestern Corporation	NWE	($56.40)	$0.00	$1.36	$2.22	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$126.22
OGE Energy Corp.	OGE	($33.67)	$0.00	$0.83	$1.35	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$73.47
PNM Resources, Inc.	PNM	($39.81)	$0.00	$0.66	$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	$2.57	$93.76

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 20.31
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	$75.14	6.60%	6.00%	4.50%	5.70%	5.46%	66.00%	64.00%	65.57%	$0.00	8.03%	20.31	3.72
Alliant Energy Corporation	LNT	$41.78	5.60%	5.85%	6.50%	5.98%	5.46%	64.00%	64.00%	65.57%	$0.00	9.37%	20.31	3.72
Black Hills Corporation	BKH	$55.99	4.40%	4.07%	5.00%	4.49%	5.46%	55.00%	60.00%	65.57%	$0.00	10.49%	20.31	3.72
El Paso Electric Company	EE	$52.19	5.10%	5.20%	4.50%	4.93%	5.46%	57.00%	61.00%	65.57%	$0.00	8.40%	20.31	3.72
Hawaiian Electric Industries, Inc.	HE	$34.29	7.10%	8.60%	3.50%	6.40%	5.46%	66.00%	59.00%	65.57%	$0.00	9.58%	20.31	3.72
IDACORP, Inc.	IDA	$90.21	3.90%	3.10%	3.50%	3.50%	5.46%	57.00%	63.00%	65.57%	$0.00	7.66%	20.31	3.72
Northwestern Corporation	NWE	$54.13	2.40%	3.16%	3.50%	3.02%	5.46%	64.00%	64.00%	65.57%	$0.00	10.01%	20.31	3.72
OGE Energy Corp.	OGE	$33.02	6.00%	4.30%	2.50%	4.27%	5.46%	68.00%	74.00%	65.57%	$0.00	10.46%	20.31	3.72
PNM Resources, Inc.	PNM	$38.67	5.10%	4.30%	7.50%	5.63%	5.46%	53.00%	50.00%	65.57%	$0.00	9.17%	20.31	3.72

	DCF Result	Including Flotation Costs DCF Result
Mean	9.24%	9.37%
Max	10.49%	10.62%
Min	7.66%	7.78%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.31	$3.50	$3.70	$3.91	$4.13	$4.36	$4.61	$4.87	$5.14	$5.42	$5.71	$6.03	$6.35	$6.70	$7.07	$7.45
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	$3.71	$3.91	$4.12	$4.35	$4.58	$4.84
Black Hills Corporation	BKH	$3.38	$3.53	$3.69	$3.86	$4.03	$4.21	$4.41	$4.62	$4.85	$5.10	$5.37	$5.66	$5.97	$6.29	$6.64	$7.00	$7.38
El Paso Electric Company	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.58	$3.76	$3.97	$4.18	$4.41	$4.65	$4.91	$5.17	$5.46
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.74	$1.86	$1.98	$2.10	$2.24	$2.38	$2.52	$2.67	$2.82	$2.98	$3.15	$3.32	$3.50	$3.69	$3.89	$4.10
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	$7.70	$8.12	$8.56
Northwestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.88	$4.01	$4.16	$4.34	$4.54	$4.77	$5.03	$5.30	$5.59	$5.90	$6.22	$6.56
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.47	$2.59	$2.71	$2.85	$3.00	$3.16	$3.34	$3.52	$3.71	$3.91	$4.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.14	$3.31	$3.49	$3.68	$3.88	$4.09	$4.32	$4.55

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE	68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	$2.18	$2.29	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$4.89	$151.36
Alliant Energy Corporation	LNT	$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$98.19
Black Hills Corporation	BKH	$1.94	$2.08	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$4.84	$149.94
El Paso Electric Company	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	$3.22	$3.39	$3.58	$110.81
Hawaiian Electric Industries, Inc.	HE	$1.15	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$2.69	$83.34
IDACORP, Inc.	IDA	$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$5.62	$173.91
Northwestern Corporation	NWE	$2.20	$2.27	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30	$133.25
OGE Energy Corp.	OGE	$1.36	$1.45	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$2.71	$83.82
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	$2.98	$92.41

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($75.14)	$0.00	$1.36	$2.25	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$156.25
Alliant Energy Corporation	LNT	($41.78)	$0.00	$0.84	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$101.36
Black Hills Corporation	BKH	($55.99)	$0.00	$1.21	$1.99	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$154.78
El Paso Electric Company	EE	($52.19)	$0.00	$0.90	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.22	$3.39	$114.39
Hawaiian Electric Industries, Inc.	HE	($34.29)	$0.00	$0.72	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$86.03
IDACORP, Inc.	IDA	($90.21)	$0.00	$1.54	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$179.52
Northwestern Corporation	NWE	($54.13)	$0.00	$1.37	$2.24	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$137.56
OGE Energy Corp.	OGE	($33.02)	$0.00	$0.85	$1.39	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$86.52
PNM Resources, Inc.	PNM	($38.67)	$0.00	$0.67	$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	$2.83	$95.39

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 20.31
30 Day Average Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term		Payout Ratio		Iterative Solution		Terminal	Terminal
					Value	High								
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.14	6.60%	6.00%	4.50%	6.60%	5.46%	66.00%	64.00%	65.57%	$0.00	8.54%	20.31	3.72
Alliant Energy Corporation	LNT	$41.78	5.60%	5.85%	6.50%	6.50%	5.46%	64.00%	64.00%	65.57%	$0.00	9.68%	20.31	3.72
Black Hills Corporation	BKH	$55.99	4.40%	4.07%	5.00%	5.00%	5.46%	55.00%	60.00%	65.57%	$0.00	10.80%	20.31	3.72
El Paso Electric Company	EE	$52.19	5.10%	5.20%	4.50%	5.20%	5.46%	57.00%	61.00%	65.57%	$0.00	8.55%	20.31	3.72
Hawaiian Electric Industries, Inc.	HE	$34.29	7.10%	8.60%	3.50%	8.60%	5.46%	66.00%	59.00%	65.57%	$0.00	10.87%	20.31	3.72
IDACORP, Inc.	IDA	$90.21	3.90%	3.10%	3.50%	3.90%	5.46%	57.00%	63.00%	65.57%	$0.00	7.89%	20.31	3.72
Northwestern Corporation	NWE	$54.13	2.40%	3.16%	3.50%	3.50%	5.46%	64.00%	64.00%	65.57%	$0.00	10.30%	20.31	3.72
OGE Energy Corp.	OGE	$33.02	6.00%	4.30%	2.50%	6.00%	5.46%	68.00%	74.00%	65.57%	$0.00	11.52%	20.31	3.72
PNM Resources, Inc.	PNM	$38.67	5.10%	4.30%	7.50%	7.50%	5.46%	53.00%	50.00%	65.57%	$0.00	10.25%	20.31	3.72

	DCF Result	Including Flotation Costs DCF Result
Mean	9.82%	9.95%
Max	11.52%	11.65%
Min	7.89%	8.02%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.34	$3.56	$3.79	$4.04	$4.31	$4.58	$4.87	$5.16	$5.47	$5.77	$6.09	$6.42	$6.77	$7.14	$7.53	$7.94
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.65	$3.84	$4.05	$4.28	$4.51	$4.76	$5.01
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.57	$5.87	$6.19	$6.53	$6.89	$7.26	$7.66
El Paso Electric Company	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.46	$3.64	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.78	$1.93	$2.10	$2.28	$2.48	$2.68	$2.88	$3.08	$3.28	$3.48	$3.67	$3.87	$4.08	$4.30	$4.54	$4.79
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	$6.76	$7.13	$7.52	$7.93	$8.36	$8.81
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	$6.11	$6.44	$6.79
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	$3.78	$3.98	$4.20	$4.43	$4.67
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	$4.20	$4.43	$4.67	$4.92	$5.19

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE		$2.20	$2.33	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$5.21	$161.31
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	$2.96	$3.12	$3.29	$101.84
Black Hills Corporation	BKH		$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$155.51
El Paso Electric Company	EE		$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$3.65	$112.94
Hawaiian Electric Industries, Inc.	HE		$1.18	$1.24	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$3.14	$97.20
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	$4.93	$5.20	$5.48	$5.78	$179.00
Northwestern Corporation	NWE		$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$4.46	$137.97
OGE Energy Corp.	OGE		$1.38	$1.50	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$3.06	$94.84
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	$3.23	$3.40	$105.40

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($75.14)	$0.00	$1.37	$2.27	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$166.52
Alliant Energy Corporation	LNT	($41.78)	$0.00	$0.84	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.96	$3.12	$105.13
Black Hills Corporation	BKH	($55.99)	$0.00	$1.21	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$160.53
El Paso Electric Company	EE	($52.19)	$0.00	$0.90	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$116.59
Hawaiian Electric Industries, Inc.	HE	($34.29)	$0.00	$0.73	$1.23	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$100.34
IDACORP, Inc.	IDA	($90.21)	$0.00	$1.55	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.93	$5.20	$5.48	$184.78
Northwestern Corporation	NWE	($54.13)	$0.00	$1.38	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$142.42
OGE Energy Corp.	OGE	($33.02)	$0.00	$0.86	$1.43	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$97.91
PNM Resources, Inc.	PNM	($38.67)	$0.00	$0.68	$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	$3.23	$108.81

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 20.31
30 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term		Payout Ratio		Iterative Solution		Terminal	Terminal
					Value	Low								
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.14	6.60%	6.00%	4.50%	4.50%	5.46%	66.00%	64.00%	65.57%	$0.00	7.34%	20.31	3.72
Alliant Energy Corporation	LNT	$41.78	5.60%	5.85%	6.50%	5.60%	5.46%	64.00%	64.00%	65.57%	$0.00	9.15%	20.31	3.72
Black Hills Corporation	BKH	$55.99	4.40%	4.07%	5.00%	4.07%	5.46%	55.00%	60.00%	65.57%	$0.00	10.24%	20.31	3.72
El Paso Electric Company	EE	$52.19	5.10%	5.20%	4.50%	4.50%	5.46%	57.00%	61.00%	65.57%	$0.00	8.15%	20.31	3.72
Hawaiian Electric Industries, Inc.	HE	$34.29	7.10%	8.60%	3.50%	3.50%	5.46%	66.00%	59.00%	65.57%	$0.00	7.89%	20.31	3.72
IDACORP, Inc.	IDA	$90.21	3.90%	3.10%	3.50%	3.10%	5.46%	57.00%	63.00%	65.57%	$0.00	7.43%	20.31	3.72
Northwestern Corporation	NWE	$54.13	2.40%	3.16%	3.50%	2.40%	5.46%	64.00%	64.00%	65.57%	$0.00	9.63%	20.31	3.72
OGE Energy Corp.	OGE	$33.02	6.00%	4.30%	2.50%	2.50%	5.46%	68.00%	74.00%	65.57%	$0.00	9.38%	20.31	3.72
PNM Resources, Inc.	PNM	$38.67	5.10%	4.30%	7.50%	4.30%	5.46%	53.00%	50.00%	65.57%	$0.00	8.40%	20.31	3.72

	DCF Result	Including Flotation Costs DCF Result
Mean	8.62%	8.75%
Max	10.24%	10.36%
Min	7.34%	7.46%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.27	$3.42	$3.57	$3.73	$3.90	$4.08	$4.28	$4.49	$4.72	$4.97	$5.25	$5.53	$5.83	$6.15	$6.49	$6.84
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	$4.71
Black Hills Corporation	BKH	$3.38	$3.52	$3.66	$3.81	$3.96	$4.13	$4.30	$4.50	$4.71	$4.95	$5.21	$5.49	$5.79	$6.11	$6.44	$6.79	$7.16
El Paso Electric Company	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$5.29
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	$3.34
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.76	$6.05	$6.38	$6.73	$7.09	$7.48	$7.89	$8.32
Northwestern Corporation	NWE	$3.34	$3.42	$3.50	$3.59	$3.67	$3.76	$3.87	$4.00	$4.16	$4.34	$4.56	$4.81	$5.07	$5.35	$5.64	$5.95	$6.27
OGE Energy Corp.	OGE	$1.92	$1.97	$2.02	$2.07	$2.12	$2.17	$2.24	$2.32	$2.41	$2.52	$2.64	$2.78	$2.94	$3.10	$3.27	$3.44	$3.63
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	$3.53	$3.72	$3.92	$4.14

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE	68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker	2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	$2.16	$2.24	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$4.49	$138.95
Alliant Energy Corporation	LNT	$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$3.09	$95.55
Black Hills Corporation	BKH	$1.93	$2.06	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$4.70	$145.48
El Paso Electric Company	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	$3.47	$107.43
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	$2.19	$67.75
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	$5.46	$168.94
Northwestern Corporation	NWE	$2.19	$2.24	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$4.11	$127.38
OGE Energy Corp.	OGE	$1.34	$1.40	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$2.38	$73.76
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	$2.71	$84.02

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($75.14)	$0.00	$1.34	$2.21	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$143.43
Alliant Energy Corporation	LNT	($41.78)	$0.00	$0.84	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$98.64
Black Hills Corporation	BKH	($55.99)	$0.00	$1.20	$1.97	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$150.18
El Paso Electric Company	EE	($52.19)	$0.00	$0.90	$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	$3.29	$110.90
Hawaiian Electric Industries, Inc.	HE	($34.29)	$0.00	$0.70	$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	$2.07	$69.93
IDACORP, Inc.	IDA	($90.21)	$0.00	$1.54	$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	$5.17	$174.40
Northwestern Corporation	NWE	($54.13)	$0.00	$1.36	$2.22	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$131.49
OGE Energy Corp.	OGE	($33.02)	$0.00	$0.83	$1.35	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$76.14
PNM Resources, Inc.	PNM	($38.67)	$0.00	$0.66	$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	$2.57	$86.73

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 20.31
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	$71.97	6.60%	6.00%	4.50%	5.70%	5.46%	66.00%	64.00%	65.57%	($0.00)	8.41%	20.31	3.72
Alliant Energy Corporation	LNT	$40.18	5.60%	5.85%	6.50%	5.98%	5.46%	64.00%	64.00%	65.57%	$0.00	9.73%	20.31	3.72
Black Hills Corporation	BKH	$54.09	4.40%	4.07%	5.00%	4.49%	5.46%	55.00%	60.00%	65.57%	$0.00	10.81%	20.31	3.72
El Paso Electric Company	EE	$50.88	5.10%	5.20%	4.50%	4.93%	5.46%	57.00%	61.00%	65.57%	$0.00	8.63%	20.31	3.72
Hawaiian Electric Industries, Inc.	HE	$33.90	7.10%	8.60%	3.50%	6.40%	5.46%	66.00%	59.00%	65.57%	$0.00	9.69%	20.31	3.72
IDACORP, Inc.	IDA	$86.23	3.90%	3.10%	3.50%	3.50%	5.46%	57.00%	63.00%	65.57%	$0.00	8.06%	20.31	3.72
Northwestern Corporation	NWE	$53.03	2.40%	3.16%	3.50%	3.02%	5.46%	64.00%	64.00%	65.57%	$0.00	10.20%	20.31	3.72
OGE Energy Corp.	OGE	$32.04	6.00%	4.30%	2.50%	4.27%	5.46%	68.00%	74.00%	65.57%	$0.00	10.75%	20.31	3.72
PNM Resources, Inc.	PNM	$37.18	5.10%	4.30%	7.50%	5.63%	5.46%	53.00%	50.00%	65.57%	$0.00	9.52%	20.31	3.72

	DCF Result	Including Flotation Costs DCF Result
Mean	9.53%	9.66%
Max	10.81%	10.94%
Min	8.06%	8.18%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.31	$3.50	$3.70	$3.91	$4.13	$4.36	$4.61	$4.87	$5.14	$5.42	$5.71	$6.03	$6.35	$6.70	$7.07	$7.45
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	$3.71	$3.91	$4.12	$4.35	$4.58	$4.84
Black Hills Corporation	BKH	$3.38	$3.53	$3.69	$3.86	$4.03	$4.21	$4.41	$4.62	$4.85	$5.10	$5.37	$5.66	$5.97	$6.29	$6.64	$7.00	$7.38
El Paso Electric Company	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.58	$3.76	$3.97	$4.18	$4.41	$4.65	$4.91	$5.17	$5.46
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.74	$1.86	$1.98	$2.10	$2.24	$2.38	$2.52	$2.67	$2.82	$2.98	$3.15	$3.32	$3.50	$3.69	$3.89	$4.10
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	$7.70	$8.12	$8.56
Northwestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.88	$4.01	$4.16	$4.34	$4.54	$4.77	$5.03	$5.30	$5.59	$5.90	$6.22	$6.56
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.47	$2.59	$2.71	$2.85	$3.00	$3.16	$3.34	$3.52	$3.71	$3.91	$4.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.14	$3.31	$3.49	$3.68	$3.88	$4.09	$4.32	$4.55

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE	68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker	2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	$2.18	$2.29	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$4.89	$151.36
Alliant Energy Corporation	LNT	$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$98.19
Black Hills Corporation	BKH	$1.94	$2.08	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$4.84	$149.94
El Paso Electric Company	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	$3.22	$3.39	$3.58	$110.81
Hawaiian Electric Industries, Inc.	HE	$1.15	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$2.69	$83.34
IDACORP, Inc.	IDA	$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$5.62	$173.91
Northwestern Corporation	NWE	$2.20	$2.27	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30	$133.25
OGE Energy Corp.	OGE	$1.36	$1.45	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$2.71	$83.82
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	$2.98	$92.41

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($71.97)	$0.00	$1.36	$2.25	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$156.25
Alliant Energy Corporation	LNT	($40.18)	$0.00	$0.84	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$101.36
Black Hills Corporation	BKH	($54.09)	$0.00	$1.21	$1.99	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$154.78
El Paso Electric Company	EE	($50.87)	$0.00	$0.90	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.22	$3.39	$114.39
Hawaiian Electric Industries, Inc.	HE	($33.90)	$0.00	$0.72	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$86.03
IDACORP, Inc.	IDA	($86.23)	$0.00	$1.54	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$179.52
Northwestern Corporation	NWE	($53.03)	$0.00	$1.37	$2.24	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$137.56
OGE Energy Corp.	OGE	($32.04)	$0.00	$0.85	$1.39	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$86.52
PNM Resources, Inc.	PNM	($37.18)	$0.00	$0.67	$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	$2.83	$95.39

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 20.31
90 Day Average Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term		Payout Ratio		Iterative Solution		Terminal	Terminal
					Value	High								
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$71.97	6.60%	6.00%	4.50%	6.60%	5.46%	66.00%	64.00%	65.57%	($0.00)	8.93%	20.31	3.72
Alliant Energy Corporation	LNT	$40.18	5.60%	5.85%	6.50%	6.50%	5.46%	64.00%	64.00%	65.57%	$0.00	10.04%	20.31	3.72
Black Hills Corporation	BKH	$54.09	4.40%	4.07%	5.00%	5.00%	5.46%	55.00%	60.00%	65.57%	$0.00	11.12%	20.31	3.72
El Paso Electric Company	EE	$50.88	5.10%	5.20%	4.50%	5.20%	5.46%	57.00%	61.00%	65.57%	$0.00	8.78%	20.31	3.72
Hawaiian Electric Industries, Inc.	HE	$33.90	7.10%	8.60%	3.50%	8.60%	5.46%	66.00%	59.00%	65.57%	$0.00	10.97%	20.31	3.72
IDACORP, Inc.	IDA	$86.23	3.90%	3.10%	3.50%	3.90%	5.46%	57.00%	63.00%	65.57%	$0.00	8.29%	20.31	3.72
Northwestern Corporation	NWE	$53.03	2.40%	3.16%	3.50%	3.50%	5.46%	64.00%	64.00%	65.57%	$0.00	10.49%	20.31	3.72
OGE Energy Corp.	OGE	$32.04	6.00%	4.30%	2.50%	6.00%	5.46%	68.00%	74.00%	65.57%	$0.00	11.82%	20.31	3.72
PNM Resources, Inc.	PNM	$37.18	5.10%	4.30%	7.50%	7.50%	5.46%	53.00%	50.00%	65.57%	$0.00	10.60%	20.31	3.72

	DCF Result	Including Flotation Costs DCF Result
Mean	10.12%	10.24%
Max	11.82%	11.94%
Min	8.29%	8.41%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.34	$3.56	$3.79	$4.04	$4.31	$4.58	$4.87	$5.16	$5.47	$5.77	$6.09	$6.42	$6.77	$7.14	$7.53	$7.94
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.65	$3.84	$4.05	$4.28	$4.51	$4.76	$5.01
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.57	$5.87	$6.19	$6.53	$6.89	$7.26	$7.66
El Paso Electric Company	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.46	$3.64	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.78	$1.93	$2.10	$2.28	$2.48	$2.68	$2.88	$3.08	$3.28	$3.48	$3.67	$3.87	$4.08	$4.30	$4.54	$4.79
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	$6.76	$7.13	$7.52	$7.93	$8.36	$8.81
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	$6.11	$6.44	$6.79
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	$3.78	$3.98	$4.20	$4.43	$4.67
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	$4.20	$4.43	$4.67	$4.92	$5.19

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE	68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker	2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	$2.20	$2.33	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$5.21	$161.31
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	$2.96	$3.12	$3.29	$101.84
Black Hills Corporation	BKH	$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$155.51
El Paso Electric Company	EE	$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$3.65	$112.94
Hawaiian Electric Industries, Inc.	HE	$1.18	$1.24	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$3.14	$97.20
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	$4.93	$5.20	$5.48	$5.78	$179.00
Northwestern Corporation	NWE	$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$4.46	$137.97
OGE Energy Corp.	OGE	$1.38	$1.50	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$3.06	$94.84
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	$3.23	$3.40	$105.40

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($71.97)	$0.00	$1.37	$2.27	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$166.52
Alliant Energy Corporation	LNT	($40.18)	$0.00	$0.84	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.96	$3.12	$105.13
Black Hills Corporation	BKH	($54.09)	$0.00	$1.21	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$160.53
El Paso Electric Company	EE	($50.87)	$0.00	$0.90	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$116.59
Hawaiian Electric Industries, Inc.	HE	($33.90)	$0.00	$0.73	$1.23	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$100.34
IDACORP, Inc.	IDA	($86.23)	$0.00	$1.55	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.93	$5.20	$5.48	$184.78
Northwestern Corporation	NWE	($53.03)	$0.00	$1.38	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$142.42
OGE Energy Corp.	OGE	($32.04)	$0.00	$0.86	$1.43	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$97.91
PNM Resources, Inc.	PNM	($37.18)	$0.00	$0.68	$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	$3.23	$108.81

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 20.31
90 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term		Payout Ratio		Iterative Solution		Terminal	Terminal
					Value	Low								
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$71.97	6.60%	6.00%	4.50%	4.50%	5.46%	66.00%	64.00%	65.57%	($0.00)	7.72%	20.31	3.72
Alliant Energy Corporation	LNT	$40.18	5.60%	5.85%	6.50%	5.60%	5.46%	64.00%	64.00%	65.57%	$0.00	9.51%	20.31	3.72
Black Hills Corporation	BKH	$54.09	4.40%	4.07%	5.00%	4.07%	5.46%	55.00%	60.00%	65.57%	$0.00	10.56%	20.31	3.72
El Paso Electric Company	EE	$50.88	5.10%	5.20%	4.50%	4.50%	5.46%	57.00%	61.00%	65.57%	$0.00	8.38%	20.31	3.72
Hawaiian Electric Industries, Inc.	HE	$33.90	7.10%	8.60%	3.50%	3.50%	5.46%	66.00%	59.00%	65.57%	$0.00	7.99%	20.31	3.72
IDACORP, Inc.	IDA	$86.23	3.90%	3.10%	3.50%	3.10%	5.46%	57.00%	63.00%	65.57%	$0.00	7.82%	20.31	3.72
Northwestern Corporation	NWE	$53.03	2.40%	3.16%	3.50%	2.40%	5.46%	64.00%	64.00%	65.57%	$0.00	9.82%	20.31	3.72
OGE Energy Corp.	OGE	$32.04	6.00%	4.30%	2.50%	2.50%	5.46%	68.00%	74.00%	65.57%	$0.00	9.66%	20.31	3.72
PNM Resources, Inc.	PNM	$37.18	5.10%	4.30%	7.50%	4.30%	5.46%	53.00%	50.00%	65.57%	$0.00	8.75%	20.31	3.72

	DCF Result	Including Flotation Costs DCF Result
Mean	8.91%	9.04%
Max	10.56%	10.68%
Min	7.72%	7.84%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.27	$3.42	$3.57	$3.73	$3.90	$4.08	$4.28	$4.49	$4.72	$4.97	$5.25	$5.53	$5.83	$6.15	$6.49	$6.84
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	$4.71
Black Hills Corporation	BKH	$3.38	$3.52	$3.66	$3.81	$3.96	$4.13	$4.30	$4.50	$4.71	$4.95	$5.21	$5.49	$5.79	$6.11	$6.44	$6.79	$7.16
El Paso Electric Company	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$5.29
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	$3.34
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.76	$6.05	$6.38	$6.73	$7.09	$7.48	$7.89	$8.32
Northwestern Corporation	NWE	$3.34	$3.42	$3.50	$3.59	$3.67	$3.76	$3.87	$4.00	$4.16	$4.34	$4.56	$4.81	$5.07	$5.35	$5.64	$5.95	$6.27
OGE Energy Corp.	OGE	$1.92	$1.97	$2.02	$2.07	$2.12	$2.17	$2.24	$2.32	$2.41	$2.52	$2.64	$2.78	$2.94	$3.10	$3.27	$3.44	$3.63
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	$3.53	$3.72	$3.92	$4.14

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE		$2.16	$2.24	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$4.49	$138.95
Alliant Energy Corporation	LNT		$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$3.09	$95.55
Black Hills Corporation	BKH		$1.93	$2.06	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$4.70	$145.48
El Paso Electric Company	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	$3.47	$107.43
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	$2.19	$67.75
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	$5.46	$168.94
Northwestern Corporation	NWE		$2.19	$2.24	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$4.11	$127.38
OGE Energy Corp.	OGE		$1.34	$1.40	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$2.38	$73.76
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	$2.71	$84.02

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($71.97)	$0.00	$1.34	$2.21	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$143.43
Alliant Energy Corporation	LNT	($40.18)	$0.00	$0.84	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$98.64
Black Hills Corporation	BKH	($54.09)	$0.00	$1.20	$1.97	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$150.18
El Paso Electric Company	EE	($50.87)	$0.00	$0.90	$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	$3.29	$110.90
Hawaiian Electric Industries, Inc.	HE	($33.90)	$0.00	$0.70	$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	$2.07	$69.93
IDACORP, Inc.	IDA	($86.23)	$0.00	$1.54	$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	$5.17	$174.40
Northwestern Corporation	NWE	($53.03)	$0.00	$1.36	$2.22	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$131.49
OGE Energy Corp.	OGE	($32.04)	$0.00	$0.83	$1.35	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$76.14
PNM Resources, Inc.	PNM	($37.18)	$0.00	$0.66	$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	$2.57	$86.73

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 20.31
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	$74.74	6.60%	6.00%	4.50%	5.70%	5.46%	66.00%	64.00%	65.57%	($0.00)	8.08%	20.31	3.72
Alliant Energy Corporation	LNT	$41.68	5.60%	5.85%	6.50%	5.98%	5.46%	64.00%	64.00%	65.57%	$0.00	9.40%	20.31	3.72
Black Hills Corporation	BKH	$58.76	4.40%	4.07%	5.00%	4.49%	5.46%	55.00%	60.00%	65.57%	$0.00	10.04%	20.31	3.72
El Paso Electric Company	EE	$53.98	5.10%	5.20%	4.50%	4.93%	5.46%	57.00%	61.00%	65.57%	$0.00	8.10%	20.31	3.72
Hawaiian Electric Industries, Inc.	HE	$34.72	7.10%	8.60%	3.50%	6.40%	5.46%	66.00%	59.00%	65.57%	$0.00	9.47%	20.31	3.72
IDACORP, Inc.	IDA	$89.19	3.90%	3.10%	3.50%	3.50%	5.46%	57.00%	63.00%	65.57%	$0.00	7.76%	20.31	3.72
Northwestern Corporation	NWE	$56.40	2.40%	3.16%	3.50%	3.02%	5.46%	64.00%	64.00%	65.57%	$0.00	9.62%	20.31	3.72
OGE Energy Corp.	OGE	$33.67	6.00%	4.30%	2.50%	4.27%	5.46%	68.00%	74.00%	65.57%	$0.00	10.27%	20.31	3.72
PNM Resources, Inc.	PNM	$39.81	5.10%	4.30%	7.50%	5.63%	5.46%	53.00%	50.00%	65.57%	$0.00	8.92%	20.31	3.72

	DCF Result	Including Flotation Costs DCF Result
Mean	9.07%	9.20%
Max	10.27%	10.39%
Min	7.76%	7.88%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.31	$3.50	$3.70	$3.91	$4.13	$4.36	$4.61	$4.87	$5.14	$5.42	$5.71	$6.03	$6.35	$6.70	$7.07	$7.45
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	$3.71	$3.91	$4.12	$4.35	$4.58	$4.84
Black Hills Corporation	BKH	$3.38	$3.53	$3.69	$3.86	$4.03	$4.21	$4.41	$4.62	$4.85	$5.10	$5.37	$5.66	$5.97	$6.29	$6.64	$7.00	$7.38
El Paso Electric Company	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.40	$3.58	$3.76	$3.97	$4.18	$4.41	$4.65	$4.91	$5.17	$5.46
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.74	$1.86	$1.98	$2.10	$2.24	$2.38	$2.52	$2.67	$2.82	$2.98	$3.15	$3.32	$3.50	$3.69	$3.89	$4.10
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	$7.70	$8.12	$8.56
Northwestern Corporation	NWE	$3.34	$3.44	$3.54	$3.65	$3.76	$3.88	$4.01	$4.16	$4.34	$4.54	$4.77	$5.03	$5.30	$5.59	$5.90	$6.22	$6.56
OGE Energy Corp.	OGE	$1.92	$2.00	$2.09	$2.18	$2.27	$2.37	$2.47	$2.59	$2.71	$2.85	$3.00	$3.16	$3.34	$3.52	$3.71	$3.91	$4.13
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.67	$2.82	$2.97	$3.14	$3.31	$3.49	$3.68	$3.88	$4.09	$4.32	$4.55

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE		$2.18	$2.29	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$4.89	$151.36
Alliant Energy Corporation	LNT		$1.35	$1.43	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$3.17	$98.19
Black Hills Corporation	BKH		$1.94	$2.08	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$4.84	$149.94
El Paso Electric Company	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	$3.22	$3.39	$3.58	$110.81
Hawaiian Electric Industries, Inc.	HE		$1.15	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$2.69	$83.34
IDACORP, Inc.	IDA		$2.48	$2.64	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$5.62	$173.91
Northwestern Corporation	NWE		$2.20	$2.27	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.30	$133.25
OGE Energy Corp.	OGE		$1.36	$1.45	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$2.71	$83.82
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	$2.98	$92.41

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($74.74)	$0.00	$1.36	$2.25	$2.40	$2.52	$2.64	$2.80	$2.97	$3.15	$3.34	$3.54	$3.75	$3.95	$4.17	$4.39	$4.63	$156.25
Alliant Energy Corporation	LNT	($41.68)	$0.00	$0.84	$1.39	$1.52	$1.61	$1.70	$1.81	$1.92	$2.04	$2.17	$2.30	$2.43	$2.56	$2.70	$2.85	$3.01	$101.36
Black Hills Corporation	BKH	($58.76)	$0.00	$1.21	$1.99	$2.22	$2.37	$2.53	$2.68	$2.86	$3.04	$3.25	$3.47	$3.71	$3.91	$4.13	$4.35	$4.59	$154.78
El Paso Electric Company	EE	($53.98)	$0.00	$0.90	$1.48	$1.65	$1.76	$1.88	$2.00	$2.12	$2.26	$2.41	$2.57	$2.74	$2.89	$3.05	$3.22	$3.39	$114.39
Hawaiian Electric Industries, Inc.	HE	($34.72)	$0.00	$0.72	$1.19	$1.23	$1.28	$1.32	$1.43	$1.54	$1.66	$1.79	$1.92	$2.06	$2.18	$2.29	$2.42	$2.55	$86.03
IDACORP, Inc.	IDA	($89.19)	$0.00	$1.54	$2.53	$2.80	$2.97	$3.15	$3.29	$3.45	$3.63	$3.83	$4.06	$4.30	$4.54	$4.79	$5.05	$5.32	$179.52
Northwestern Corporation	NWE	($56.40)	$0.00	$1.37	$2.24	$2.34	$2.41	$2.48	$2.58	$2.69	$2.81	$2.95	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$137.56
OGE Energy Corp.	OGE	($33.67)	$0.00	$0.85	$1.39	$1.55	$1.65	$1.75	$1.79	$1.84	$1.89	$1.95	$2.01	$2.07	$2.19	$2.31	$2.43	$2.57	$86.52
PNM Resources, Inc.	PNM	($39.81)	$0.00	$0.67	$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	$2.83	$95.39

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 20.31
180 Day Average Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term		Payout Ratio		Iterative Solution		Terminal	Terminal
					Value	High								
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.74	6.60%	6.00%	4.50%	6.60%	5.46%	66.00%	64.00%	65.57%	($0.00)	8.59%	20.31	3.72
Alliant Energy Corporation	LNT	$41.68	5.60%	5.85%	6.50%	6.50%	5.46%	64.00%	64.00%	65.57%	$0.00	9.70%	20.31	3.72
Black Hills Corporation	BKH	$58.76	4.40%	4.07%	5.00%	5.00%	5.46%	55.00%	60.00%	65.57%	$0.00	10.35%	20.31	3.72
El Paso Electric Company	EE	$53.98	5.10%	5.20%	4.50%	5.20%	5.46%	57.00%	61.00%	65.57%	$0.00	8.26%	20.31	3.72
Hawaiian Electric Industries, Inc.	HE	$34.72	7.10%	8.60%	3.50%	8.60%	5.46%	66.00%	59.00%	65.57%	$0.00	10.75%	20.31	3.72
IDACORP, Inc.	IDA	$89.19	3.90%	3.10%	3.50%	3.90%	5.46%	57.00%	63.00%	65.57%	$0.00	7.99%	20.31	3.72
Northwestern Corporation	NWE	$56.40	2.40%	3.16%	3.50%	3.50%	5.46%	64.00%	64.00%	65.57%	$0.00	9.91%	20.31	3.72
OGE Energy Corp.	OGE	$33.67	6.00%	4.30%	2.50%	6.00%	5.46%	68.00%	74.00%	65.57%	$0.00	11.33%	20.31	3.72
PNM Resources, Inc.	PNM	$39.81	5.10%	4.30%	7.50%	7.50%	5.46%	53.00%	50.00%	65.57%	$0.00	9.99%	20.31	3.72

	DCF Result	Including Flotation Costs DCF Result
Mean	9.65%	9.78%
Max	11.33%	11.45%
Min	7.99%	8.12%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.34	$3.56	$3.79	$4.04	$4.31	$4.58	$4.87	$5.16	$5.47	$5.77	$6.09	$6.42	$6.77	$7.14	$7.53	$7.94
Alliant Energy Corporation	LNT	$1.99	$2.12	$2.26	$2.40	$2.56	$2.73	$2.90	$3.08	$3.26	$3.45	$3.65	$3.84	$4.05	$4.28	$4.51	$4.76	$5.01
Black Hills Corporation	BKH	$3.38	$3.55	$3.73	$3.91	$4.11	$4.31	$4.53	$4.77	$5.02	$5.28	$5.57	$5.87	$6.19	$6.53	$6.89	$7.26	$7.66
El Paso Electric Company	EE	$2.42	$2.55	$2.68	$2.82	$2.96	$3.12	$3.28	$3.46	$3.64	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.78	$1.93	$2.10	$2.28	$2.48	$2.68	$2.88	$3.08	$3.28	$3.48	$3.67	$3.87	$4.08	$4.30	$4.54	$4.79
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	$6.76	$7.13	$7.52	$7.93	$8.36	$8.81
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	$6.11	$6.44	$6.79
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	$3.78	$3.98	$4.20	$4.43	$4.67
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	$4.20	$4.43	$4.67	$4.92	$5.19

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
																			Terminal
Company	Ticker		2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Value
ALLETE, Inc.	ALE		$2.20	$2.33	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$5.21	$161.31
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	$2.96	$3.12	$3.29	$101.84
Black Hills Corporation	BKH		$1.95	$2.10	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$155.51
El Paso Electric Company	EE		$1.45	$1.55	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$3.65	$112.94
Hawaiian Electric Industries, Inc.	HE		$1.18	$1.24	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$3.14	$97.20
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	$4.93	$5.20	$5.48	$5.78	$179.00
Northwestern Corporation	NWE		$2.21	$2.29	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$4.46	$137.97
OGE Energy Corp.	OGE		$1.38	$1.50	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$3.06	$94.84
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	$3.23	$3.40	$105.40

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
		Initial																	
Company	Ticker	Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($74.74)	$0.00	$1.37	$2.27	$2.46	$2.61	$2.76	$2.95	$3.14	$3.35	$3.55	$3.77	$3.99	$4.21	$4.44	$4.68	$4.94	$166.52
Alliant Energy Corporation	LNT	($41.68)	$0.00	$0.84	$1.40	$1.54	$1.64	$1.74	$1.86	$1.99	$2.11	$2.24	$2.38	$2.52	$2.66	$2.80	$2.96	$3.12	$105.13
Black Hills Corporation	BKH	($58.76)	$0.00	$1.21	$2.00	$2.25	$2.41	$2.59	$2.76	$2.95	$3.15	$3.37	$3.60	$3.85	$4.06	$4.28	$4.51	$4.76	$160.53
El Paso Electric Company	EE	($53.98)	$0.00	$0.90	$1.49	$1.66	$1.78	$1.90	$2.03	$2.16	$2.30	$2.46	$2.62	$2.80	$2.95	$3.11	$3.28	$3.46	$116.59
Hawaiian Electric Industries, Inc.	HE	($34.72)	$0.00	$0.73	$1.23	$1.31	$1.39	$1.46	$1.61	$1.76	$1.92	$2.08	$2.24	$2.41	$2.54	$2.68	$2.82	$2.98	$100.34
IDACORP, Inc.	IDA	($89.19)	$0.00	$1.55	$2.54	$2.83	$3.02	$3.21	$3.37	$3.54	$3.73	$3.94	$4.17	$4.43	$4.67	$4.93	$5.20	$5.48	$184.78
Northwestern Corporation	NWE	($56.40)	$0.00	$1.38	$2.25	$2.37	$2.45	$2.54	$2.65	$2.77	$2.90	$3.06	$3.23	$3.42	$3.60	$3.80	$4.01	$4.22	$142.42
OGE Energy Corp.	OGE	($33.67)	$0.00	$0.86	$1.43	$1.62	$1.76	$1.90	$1.98	$2.05	$2.12	$2.20	$2.27	$2.35	$2.48	$2.61	$2.75	$2.90	$97.91
PNM Resources, Inc.	PNM	($39.81)	$0.00	$0.68	$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	$3.23	$108.81

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 20.31
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
					Value	Low								
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.74	6.60%	6.00%	4.50%	4.50%	5.46%	66.00%	64.00%	65.57%	($0.00)	7.39%	20.31	3.72
Alliant Energy Corporation	LNT	$41.68	5.60%	5.85%	6.50%	5.60%	5.46%	64.00%	64.00%	65.57%	$0.00	9.17%	20.31	3.72
Black Hills Corporation	BKH	$58.76	4.40%	4.07%	5.00%	4.07%	5.46%	55.00%	60.00%	65.57%	$0.00	9.79%	20.31	3.72
El Paso Electric Company	EE	$53.98	5.10%	5.20%	4.50%	4.50%	5.46%	57.00%	61.00%	65.57%	$0.00	7.85%	20.31	3.72
Hawaiian Electric Industries, Inc.	HE	$34.72	7.10%	8.60%	3.50%	3.50%	5.46%	66.00%	59.00%	65.57%	$0.00	7.78%	20.31	3.72
IDACORP, Inc.	IDA	$89.19	3.90%	3.10%	3.50%	3.10%	5.46%	57.00%	63.00%	65.57%	$0.00	7.53%	20.31	3.72
Northwestern Corporation	NWE	$56.40	2.40%	3.16%	3.50%	2.40%	5.46%	64.00%	64.00%	65.57%	$0.00	9.24%	20.31	3.72
OGE Energy Corp.	OGE	$33.67	6.00%	4.30%	2.50%	2.50%	5.46%	68.00%	74.00%	65.57%	$0.00	9.19%	20.31	3.72
PNM Resources, Inc.	PNM	$39.81	5.10%	4.30%	7.50%	4.30%	5.46%	53.00%	50.00%	65.57%	$0.00	8.15%	20.31	3.72

	DCF Result	Including Flotation Costs DCF Result
Mean	8.46%	8.58%
Max	9.79%	9.92%
Min	7.39%	7.51%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	**2023**	2024	2025	2026	2027	**2028**	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	$3.13	$3.27	$3.42	$3.57	$3.73	$3.90	$4.08	$4.28	$4.49	$4.72	$4.97	$5.25	$5.53	$5.83	$6.15	$6.49	$6.84
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	$4.71
Black Hills Corporation	BKH	$3.38	$3.52	$3.66	$3.81	$3.96	$4.13	$4.30	$4.50	$4.71	$4.95	$5.21	$5.49	$5.79	$6.11	$6.44	$6.79	$7.16
El Paso Electric Company	EE	$2.42	$2.53	$2.64	$2.76	$2.89	$3.02	$3.16	$3.31	$3.47	$3.65	$3.85	$4.06	$4.28	$4.51	$4.76	$5.02	$5.29
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	$3.34
IDACORP, Inc.	IDA	$4.21	$4.34	$4.48	$4.61	$4.76	$4.90	$5.08	$5.27	$5.50	$5.76	$6.05	$6.38	$6.73	$7.09	$7.48	$7.89	$8.32
Northwestern Corporation	NWE	$3.34	$3.42	$3.50	$3.59	$3.67	$3.76	$3.87	$4.00	$4.16	$4.34	$4.56	$4.81	$5.07	$5.35	$5.64	$5.95	$6.27
OGE Energy Corp.	OGE	$1.92	$1.97	$2.02	$2.07	$2.12	$2.17	$2.24	$2.32	$2.41	$2.52	$2.64	$2.78	$2.94	$3.10	$3.27	$3.44	$3.63
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	$3.53	$3.72	$3.92	$4.14

Projected Annual Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE		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%	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%	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%	65.57%
El Paso Electric Company	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%	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%	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%	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%	65.57%
OGE Energy Corp.	OGE		68.00%	69.50%	71.00%	72.50%	74.00%	72.60%	71.19%	69.79%	68.38%	66.98%	65.57%	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%	65.57%

Projected Annual Cash Flows			[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]
Company	Ticker		2017	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE		$2.16	$2.24	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$4.49	$138.95
Alliant Energy Corporation	LNT		$1.34	$1.42	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$3.09	$95.55
Black Hills Corporation	BKH		$1.93	$2.06	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$4.70	$145.48
El Paso Electric Company	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	$3.47	$107.43
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	$2.19	$67.75
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	$5.46	$168.94
Northwestern Corporation	NWE		$2.19	$2.24	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$4.11	$127.38
OGE Energy Corp.	OGE		$1.34	$1.40	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$2.38	$73.76
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	$2.71	$84.02

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	5/18/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	($74.74)	$0.00	$1.34	$2.21	$2.32	$2.41	$2.50	$2.62	$2.76	$2.91	$3.07	$3.25	$3.44	$3.63	$3.83	$4.03	$4.25	$143.43
Alliant Energy Corporation	LNT	($41.68)	$0.00	$0.84	$1.38	$1.50	$1.58	$1.67	$1.77	$1.88	$1.99	$2.11	$2.23	$2.37	$2.49	$2.63	$2.77	$2.93	$98.64
Black Hills Corporation	BKH	($58.76)	$0.00	$1.20	$1.97	$2.19	$2.33	$2.48	$2.62	$2.78	$2.96	$3.15	$3.37	$3.60	$3.80	$4.00	$4.22	$4.45	$150.18
El Paso Electric Company	EE	($53.98)	$0.00	$0.90	$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	$3.29	$110.90
Hawaiian Electric Industries, Inc.	HE	($34.72)	$0.00	$0.70	$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	$2.07	$69.93
IDACORP, Inc.	IDA	($89.19)	$0.00	$1.54	$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	$5.17	$174.40
Northwestern Corporation	NWE	($56.40)	$0.00	$1.36	$2.22	$2.30	$2.35	$2.41	$2.49	$2.58	$2.69	$2.83	$2.98	$3.15	$3.33	$3.51	$3.70	$3.90	$131.49
OGE Energy Corp.	OGE	($33.67)	$0.00	$0.83	$1.35	$1.47	$1.54	$1.61	$1.62	$1.65	$1.68	$1.72	$1.77	$1.83	$1.93	$2.03	$2.14	$2.26	$76.14
PNM Resources, Inc.	PNM	($39.81)	$0.00	$0.66	$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	$2.57	$86.73

Multi-Stage DCF Notes:

[1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of May 18, 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 [64]
[11] Equals result of Excel Solver function; goal: Column [10] equals $0.00
[12] Equals Column [63] / Column [30] 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 [29] x (1 + Column [6])
[31] Equals Column [7]
[32] Equals Column [31] + ((Column [35] − Column [31]) / 4)
[33] Equals Column [32] + ((Column [35] − Column [31]) / 4)
[34] Equals Column [33] + ((Column [35] − Column [31]) / 4)
[35] Equals Column [8]
[36] Equals Column [35] + ((Column [41] − Column [35]) / 6)
[37] Equals Column [36] + ((Column [41] − Column [35]) / 6)
[38] Equals Column [37] + ((Column [41] − Column [35]) / 6)
[39] Equals Column [38] + ((Column [41] − Column [35]) / 6)
[40] Equals Column [39] + ((Column [41] − Column [35]) / 6)
[41] Equals Column [9]
[42] Equals Column [9]
[43] Equals Column [9]
[44] Equals Column [9]
[45] Equals Column [9]
[46] Equals Column [9]
[47] Equals Column [15] x Column [31]
[48] Equals Column [16] x Column [32]
[49] Equals Column [17] x Column [33]
[50] Equals Column [18] x Column [34]
[51] Equals Column [19] x Column [35]
[52] Equals Column [20] x Column [36]
[53] Equals Column [21] x Column [37]
[54] Equals Column [22] x Column [38]
[55] Equals Column [23] x Column [39]
[56] Equals Column [24] x Column [40]
[57] Equals Column [25] x Column [41]
[58] Equals Column [26] x Column [42]
[59] Equals Column [27] x Column [43]
[60] Equals Column [28] x Column [44]
[61] Equals Column [29] x Column [45]
[62] Equals Column [30] x Column [46]
[63] Equals Gordon Growth (Column [62] x (1 + Column [6])) / (Column [11] − Column [6]); or P/E (Column [12] x Column [30])
[64] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [65] through Column [81]
[65] Equals $0.00
[66] Equals Column [47] x (12/31/2018 - 5/18/2018) / 365
[67] Equals Column [47] x (1 + (0.5 x Column [5]))
[68] Equals Column [49]
[69] Equals Column [50]
[70] Equals Column [51]
[71] Equals Column [52]
[72] Equals Column [53]
[73] Equals Column [54]
[74] Equals Column [55]
[75] Equals Column [56]
[76] Equals Column [57]
[77] Equals Column [58]
[78] Equals Column [59]
[79] Equals Column [60]
[80] Equals Column [61]
[81] Equals Column [62] + [63]

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

[1] S&P 500 Est. Required Market Return	[2] Current 30-Year Treasury (30-day average)	[3] Implied Market Risk Premium
15.59%	3.12%	12.48%

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	20,711.04	0.08%	0.93%	5.13%	6.09%	0.0052%
AMERICAN AIRLINES GROUP INC	AAL	20,308.46	0.08%	0.98%	17.10%	18.17%	0.0151%
ADVANCE AUTO PARTS INC	AAP	8,756.53	0.04%	0.20%	16.43%	16.65%	0.0060%
APPLE INC	AAPL	915,739.36	3.76%	1.46%	12.47%	14.02%	0.5268%
ABBVIE INC	ABBV	168,177.48	0.69%	3.63%	13.63%	17.50%	0.1208%
AMERISOURCEBERGEN CORP	ABC	18,632.79	0.08%	1.80%	10.33%	12.22%	0.0093%
ABBOTT LABORATORIES	ABT	108,189.22	0.44%	1.82%	12.67%	14.60%	0.0648%
ACCENTURE PLC-CL A	ACN	104,062.16	0.43%	1.71%	11.10%	12.91%	0.0551%
ADOBE SYSTEMS INC	ADBE	117,252.26	0.48%	0.00%	18.66%	18.66%	0.0898%
ANALOG DEVICES INC	ADI	35,086.96	0.14%	1.99%	9.68%	11.76%	0.0169%
ARCHER-DANIELS-MIDLAND CO	ADM	25,174.47	0.10%	2.91%	7.50%	10.52%	0.0109%
AUTOMATIC DATA PROCESSING	ADP	56,787.73	0.23%	1.91%	13.00%	15.04%	0.0350%
ALLIANCE DATA SYSTEMS CORP	ADS	11,638.93	0.05%	1.07%	12.40%	13.53%	0.0065%
AUTODESK INC	ADSK	30,423.27	0.12%	0.00%	48.90%	48.90%	0.0611%
AMEREN CORPORATION	AEE	13,648.68	0.06%	3.32%	8.71%	12.18%	0.0068%
AMERICAN ELECTRIC POWER	AEP	31,979.55	0.13%	3.87%	5.64%	9.61%	0.0126%
AES CORP	AES	7,890.50	0.03%	4.38%	8.23%	12.79%	0.0041%
AETNA INC	AET	57,834.55	0.24%	1.13%	11.08%	12.27%	0.0291%
AFLAC INC	AFL	35,139.44	0.14%	2.29%	6.52%	8.89%	0.0128%
ALLERGAN PLC	AGN	53,717.85	0.22%	1.86%	7.65%	9.58%	0.0211%
AMERICAN INTERNATIONAL GROUP	AIG	49,507.24	0.20%	2.42%	11.00%	13.55%	0.0275%
APARTMENT INVT & MGMT CO -A	AIV	6,105.19	0.03%	3.88%	6.01%	10.00%	0.0025%
ASSURANT INC	AIZ	5,054.02	N/A	2.37%	N/A	N/A	N/A
ARTHUR J GALLAGHER & CO	AJG	12,308.90	0.05%	2.40%	10.32%	12.84%	0.0065%
AKAMAI TECHNOLOGIES INC	AKAM	12,855.29	0.05%	0.00%	11.71%	11.71%	0.0062%
ALBEMARLE CORP	ALB	11,621.28	0.05%	1.29%	12.07%	13.44%	0.0064%
ALIGN TECHNOLOGY INC	ALGN	23,884.59	0.10%	0.00%	30.55%	30.55%	0.0299%
ALASKA AIR GROUP INC	ALK	7,174.90	0.03%	2.18%	15.52%	17.87%	0.0053%
ALLSTATE CORP	ALL	33,363.32	0.14%	1.87%	9.00%	10.95%	0.0150%
ALLEGION PLC	ALLE	7,441.97	0.03%	0.97%	11.96%	12.99%	0.0040%
ALEXION PHARMACEUTICALS INC	ALXN	26,938.16	0.11%	0.00%	18.87%	18.87%	0.0209%
APPLIED MATERIALS INC	AMAT	52,019.54	0.21%	1.27%	14.46%	15.82%	0.0338%
ADVANCED MICRO DEVICES	AMD	12,601.47	0.05%	0.00%	23.60%	23.60%	0.0122%
AMETEK INC	AME	17,493.48	0.07%	0.74%	10.58%	11.36%	0.0082%
AFFILIATED MANAGERS GROUP	AMG	9,109.19	0.04%	0.68%	12.85%	13.58%	0.0051%
AMGEN INC	AMGN	116,658.77	0.48%	2.97%	5.11%	8.15%	0.0390%
AMERIPRISE FINANCIAL INC	AMP	20,391.85	0.08%	2.50%	10.90%	13.54%	0.0113%
AMERICAN TOWER CORP	AMT	60,529.49	0.25%	2.29%	15.02%	17.48%	0.0434%
AMAZON.COM INC	AMZN	763,926.68	3.14%	0.00%	39.85%	39.85%	1.2492%
ANDEAVOR	ANDV	21,868.93	0.09%	1.69%	7.95%	9.71%	0.0087%
ANSYS INC	ANSS	13,856.90	0.06%	0.00%	12.17%	12.17%	0.0069%
ANTHEM INC	ANTM	59,173.05	0.24%	1.31%	10.09%	11.47%	0.0278%
AON PLC	AON	34,549.62	0.14%	1.10%	10.39%	11.54%	0.0164%
SMITH (A.O.) CORP	AOS	10,900.04	0.04%	1.13%	11.50%	12.70%	0.0057%
APACHE CORP	APA	16,780.39	0.07%	2.28%	-17.09%	-15.01%	-0.0103%
ANADARKO PETROLEUM CORP	APC	36,349.78	0.15%	1.07%	19.23%	20.41%	0.0304%
AIR PRODUCTS & CHEMICALS INC	APD	36,877.14	0.15%	2.52%	11.42%	14.08%	0.0213%
AMPHENOL CORP-CL A	APH	26,520.32	0.11%	0.97%	10.94%	11.96%	0.0130%
APTIV PLC	APTV	25,772.63	0.11%	0.91%	12.22%	13.18%	0.0139%
ALEXANDRIA REAL ESTATE EQUIT	ARE	12,483.55	0.05%	3.01%	6.78%	9.88%	0.0051%
ARCONIC INC	ARNC	8,729.60	0.04%	1.34%	15.95%	17.40%	0.0062%
ACTIVISION BLIZZARD INC	ATVI	54,799.14	0.22%	0.49%	14.55%	15.07%	0.0339%
AVALONBAY COMMUNITIES INC	AVB	21,803.82	0.09%	3.71%	6.37%	10.19%	0.0091%
BROADCOM INC	AVGO	96,933.36	0.40%	2.97%	12.78%	15.94%	0.0634%
AVERY DENNISON CORP	AVY	9,604.17	0.04%	1.69%	9.83%	11.61%	0.0046%
AMERICAN WATER WORKS CO INC	AWK	14,323.95	0.06%	2.22%	7.72%	10.03%	0.0059%
AMERICAN EXPRESS CO	AXP	86,887.98	0.36%	1.44%	17.30%	18.86%	0.0672%
ACUITY BRANDS INC	AYI	4,844.49	0.02%	0.44%	10.00%	10.46%	0.0021%
AUTOZONE INC	AZO	17,556.59	0.07%	0.00%	13.87%	13.87%	0.0100%
BOEING CO/THE	BA	204,619.92	0.84%	1.97%	15.33%	17.46%	0.1466%
BANK OF AMERICA CORP	BAC	306,816.86	1.26%	1.96%	13.40%	15.49%	0.1951%
BAXTER INTERNATIONAL INC	BAX	37,969.18	0.16%	1.01%	13.06%	14.14%	0.0220%
BB&T CORP	BBT	42,816.17	0.18%	2.84%	14.32%	17.36%	0.0305%
BEST BUY CO INC	BBY	22,059.01	0.09%	2.29%	8.81%	11.20%	0.0101%
BECTON DICKINSON AND CO	BDX	60,123.09	0.25%	1.37%	13.91%	15.38%	0.0379%
FRANKLIN RESOURCES INC	BEN	18,426.50	0.08%	10.02%	10.00%	20.52%	0.0155%
BROWN-FORMAN CORP-CLASS B	BF/B	28,119.30	0.12%	1.83%	13.83%	15.78%	0.0182%
BRIGHTHOUSE FINANCIAL INC	BHF	5,650.90	0.02%	0.00%	8.00%	8.00%	0.0019%
BAKER HUGHES A GE CO	BHGE	39,918.72	0.16%	1.73%	66.45%	68.76%	0.1126%
BIOGEN INC	BIIB	59,166.63	0.24%	0.00%	5.45%	5.45%	0.0132%
BANK OF NEW YORK MELLON CORP	BK	57,568.12	0.24%	1.84%	8.10%	10.01%	0.0237%
BOOKING HOLDINGS INC	BKNG	99,545.86	0.41%	0.00%	14.12%	14.12%	0.0577%
BLACKROCK INC	BLK	86,770.29	0.36%	2.15%	11.38%	13.66%	0.0486%
BALL CORP	BLL	13,257.18	0.05%	1.00%	5.40%	6.42%	0.0035%
BRISTOL-MYERS SQUIBB CO	BMY	86,156.52	0.35%	3.04%	9.00%	12.18%	0.0431%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	484,013.00	1.99%	0.00%	6.70%	6.70%	0.1331%
BOSTON SCIENTIFIC CORP	BSX	42,015.23	0.17%	0.00%	21.44%	21.44%	0.0370%
BORGWARNER INC	BWA	10,908.49	0.04%	1.29%	4.83%	6.15%	0.0028%
BOSTON PROPERTIES INC	BXP	18,074.48	0.07%	2.77%	6.16%	9.01%	0.0067%
CITIGROUP INC	C	178,393.35	0.73%	2.09%	13.86%	16.10%	0.1179%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
CA INC	CA	14,652.43	0.06%	2.92%	3.08%	6.04%	0.0036%
CONAGRA BRANDS INC	CAG	14,725.50	0.06%	2.25%	10.35%	12.72%	0.0077%
CARDINAL HEALTH INC	CAH	16,568.83	0.07%	3.47%	10.75%	14.40%	0.0098%
CATERPILLAR INC	CAT	93,106.76	0.38%	2.06%	21.78%	24.06%	0.0919%
CHUBB LTD	CB	62,203.21	0.26%	2.20%	10.93%	13.26%	0.0338%
CBOE GLOBAL MARKETS INC	CBOE	11,986.96	0.05%	1.08%	18.64%	19.82%	0.0097%
CBRE GROUP INC - A	CBRE	16,113.86	0.07%	0.00%	10.75%	10.75%	0.0071%
CBS CORP-CLASS B NON VOTING	CBS	19,618.28	0.08%	1.49%	14.42%	16.01%	0.0129%
CROWN CASTLE INTL CORP	CCI	42,407.35	0.17%	4.18%	16.53%	21.05%	0.0366%
CARNIVAL CORP	CCL	46,594.62	0.19%	3.01%	14.20%	17.42%	0.0333%
CADENCE DESIGN SYS INC	CDNS	11,783.67	0.05%	0.00%	12.00%	12.00%	0.0058%
CELGENE CORP	CELG	56,804.70	0.23%	0.00%	19.05%	19.05%	0.0444%
CERNER CORP	CERN	20,353.48	0.08%	0.00%	11.94%	11.94%	0.0100%
CF INDUSTRIES HOLDINGS INC	CF	9,649.42	0.04%	2.90%	12.70%	15.79%	0.0063%
CITIZENS FINANCIAL GROUP	CFG	20,145.24	0.08%	2.37%	21.07%	23.68%	0.0196%
CHURCH & DWIGHT CO INC	CHD	11,285.66	0.05%	1.89%	10.31%	12.30%	0.0057%
C.H. ROBINSON WORLDWIDE INC	CHRW	12,322.62	0.05%	2.12%	9.88%	12.10%	0.0061%
CHARTER COMMUNICATIONS INC-A	CHTR	71,128.52	0.29%	0.00%	29.32%	29.32%	0.0856%
CIGNA CORP	CI	43,318.77	0.18%	0.02%	11.33%	11.36%	0.0202%
CINCINNATI FINANCIAL CORP	CINF	11,610.05	N/A	2.97%	N/A	N/A	N/A
COLGATE-PALMOLIVE CO	CL	54,275.80	0.22%	2.69%	8.52%	11.33%	0.0252%
CLOROX COMPANY	CLX	15,195.17	0.06%	2.95%	8.53%	11.60%	0.0072%
COMERICA INC	CMA	16,911.35	0.07%	1.47%	26.85%	28.51%	0.0198%
COMCAST CORP-CLASS A	CMCSA	150,565.66	0.62%	2.30%	16.75%	19.24%	0.1189%
CME GROUP INC	CME	54,410.25	0.22%	4.05%	9.00%	13.23%	0.0296%
CHIPOTLE MEXICAN GRILL INC	CMG	12,005.34	0.05%	0.00%	18.94%	18.94%	0.0093%
CUMMINS INC	CMI	24,534.68	0.10%	2.96%	10.08%	13.19%	0.0133%
CMS ENERGY CORP	CMS	12,462.24	0.05%	3.23%	6.29%	9.62%	0.0049%
CENTENE CORP	CNC	23,673.53	0.10%	0.00%	16.65%	16.65%	0.0162%
CENTERPOINT ENERGY INC	CNP	10,929.22	0.04%	4.41%	5.87%	10.41%	0.0047%
CAPITAL ONE FINANCIAL CORP	COF	46,906.84	0.19%	1.74%	16.15%	18.03%	0.0347%
CABOT OIL & GAS CORP	COG	10,510.63	0.04%	1.01%	39.25%	40.46%	0.0175%
ROCKWELL COLLINS INC	COL	22,391.19	0.09%	1.07%	11.60%	12.74%	0.0117%
COOPER COS INC/THE	COO	11,437.40	0.05%	0.03%	10.73%	10.77%	0.0051%
CONOCOPHILLIPS	COP	81,378.10	0.33%	1.64%	6.00%	7.69%	0.0257%
COSTCO WHOLESALE CORP	COST	87,307.68	0.36%	1.03%	11.47%	12.55%	0.0450%
COTY INC-CL A	COTY	10,507.52	0.04%	3.57%	16.00%	19.85%	0.0086%
CAMPBELL SOUP CO	CPB	10,332.79	0.04%	4.25%	5.57%	9.94%	0.0042%
SALESFORCE.COM INC	CRM	94,314.66	0.39%	0.00%	25.55%	25.55%	0.0989%
CISCO SYSTEMS INC	CSCO	208,164.93	0.85%	2.88%	6.24%	9.21%	0.0787%
CSX CORP	CSX	55,812.54	0.23%	1.38%	13.85%	15.32%	0.0351%
CINTAS CORP	CTAS	19,513.92	0.08%	0.89%	11.60%	12.54%	0.0100%
CENTURYLINK INC	CTL	20,810.95	0.09%	11.20%	-16.54%	-6.27%	-0.0054%
COGNIZANT TECH SOLUTIONS-A	CTSH	44,551.75	0.18%	0.98%	15.03%	16.09%	0.0294%
CITRIX SYSTEMS INC	CTXS	14,276.24	0.06%	0.00%	11.00%	11.00%	0.0064%
CVS HEALTH CORP	CVS	66,000.68	0.27%	3.25%	11.23%	14.66%	0.0397%
CHEVRON CORP	CVX	244,335.34	1.00%	3.50%	54.01%	58.46%	0.5862%
CONCHO RESOURCES INC	CXO	22,881.03	0.09%	0.00%	32.85%	32.85%	0.0308%
DOMINION ENERGY INC	D	41,300.01	0.17%	5.28%	5.55%	10.97%	0.0186%
DELTA AIR LINES INC	DAL	37,143.20	0.15%	2.68%	16.77%	19.67%	0.0300%
DEERE & CO	DE	50,268.06	0.21%	1.61%	7.67%	9.34%	0.0193%
DISCOVER FINANCIAL SERVICES	DFS	26,951.50	0.11%	1.91%	8.89%	10.89%	0.0120%
DOLLAR GENERAL CORP	DG	25,976.57	0.11%	1.20%	15.93%	17.22%	0.0184%
QUEST DIAGNOSTICS INC	DGX	13,873.73	0.06%	1.88%	9.95%	11.92%	0.0068%
DR HORTON INC	DHI	15,791.04	0.06%	1.16%	20.52%	21.80%	0.0141%
DANAHER CORP	DHR	70,730.49	0.29%	0.59%	10.23%	10.85%	0.0315%
WALT DISNEY CO/THE	DIS	154,910.09	0.64%	1.63%	10.20%	11.91%	0.0757%
DISCOVERY INC - A	DISCA	15,898.80	0.07%	0.00%	6.00%	6.00%	0.0039%
DISH NETWORK CORP-A	DISH	15,119.75	0.06%	0.00%	-10.81%	-10.81%	-0.0067%
DIGITAL REALTY TRUST INC	DLR	22,593.90	0.09%	3.83%	7.28%	11.25%	0.0104%
DOLLAR TREE INC	DLTR	22,136.26	0.09%	0.00%	13.27%	13.27%	0.0121%
DOVER CORP	DOV	12,222.64	0.05%	2.44%	12.33%	14.92%	0.0075%
DR PEPPER SNAPPLE GROUP INC	DPS	21,531.04	0.09%	2.05%	7.40%	9.53%	0.0084%
DUKE REALTY CORP	DRE	9,782.63	0.04%	2.94%	-3.93%	-1.04%	-0.0004%
DARDEN RESTAURANTS INC	DRI	10,529.54	0.04%	2.98%	10.67%	13.80%	0.0060%
DTE ENERGY COMPANY	DTE	18,133.80	0.07%	3.58%	5.30%	8.98%	0.0067%
DUKE ENERGY CORP	DUK	51,733.80	0.21%	4.95%	4.45%	9.51%	0.0202%
DAVITA INC	DVA	11,886.94	0.05%	0.00%	20.25%	20.25%	0.0099%
DEVON ENERGY CORP	DVN	21,961.86	0.09%	0.71%	10.58%	11.32%	0.0102%
DOWDUPONT INC	DWDP	156,815.56	0.64%	2.32%	8.05%	10.46%	0.0673%
DXC TECHNOLOGY CO	DXC	28,634.49	0.12%	0.72%	14.95%	15.72%	0.0185%
ELECTRONIC ARTS INC	EA	40,488.10	0.17%	0.00%	13.57%	13.57%	0.0225%
EBAY INC	EBAY	38,089.24	0.16%	0.00%	10.04%	10.04%	0.0157%
ECOLAB INC	ECL	42,651.98	0.18%	1.09%	13.30%	14.46%	0.0253%
CONSOLIDATED EDISON INC	ED	22,984.73	0.09%	3.87%	3.00%	6.93%	0.0065%
EQUIFAX INC	EFX	13,797.83	0.06%	1.37%	8.00%	9.42%	0.0053%
EDISON INTERNATIONAL	EIX	19,955.94	0.08%	3.97%	5.26%	9.33%	0.0076%
ESTEE LAUDER COMPANIES-CL A	EL	53,400.49	0.22%	1.01%	21.15%	22.26%	0.0488%
EASTMAN CHEMICAL CO	EMN	15,553.57	0.06%	2.10%	7.65%	9.83%	0.0063%
EMERSON ELECTRIC CO	EMR	46,084.79	0.19%	2.66%	11.79%	14.61%	0.0276%
EOG RESOURCES INC	EOG	72,814.96	0.30%	0.57%	8.00%	8.58%	0.0257%
EQUINIX INC	EQIX	30,659.58	0.13%	2.37%	18.75%	21.34%	0.0268%
EQUITY RESIDENTIAL	EQR	21,956.58	0.09%	3.59%	6.21%	9.90%	0.0089%
EQT CORP	EQT	13,975.49	0.06%	0.23%	20.00%	20.25%	0.0116%
EVERSOURCE ENERGY	ES	18,163.89	0.07%	3.53%	6.18%	9.82%	0.0073%
EXPRESS SCRIPTS HOLDING CO	ESRX	42,479.83	0.17%	0.00%	6.73%	6.73%	0.0117%
ESSEX PROPERTY TRUST INC	ESS	15,116.00	0.06%	3.22%	6.71%	10.04%	0.0062%
E*TRADE FINANCIAL CORP	ETFC	17,064.41	0.07%	0.00%	29.86%	29.86%	0.0209%
EATON CORP PLC	ETN	34,367.41	0.14%	3.33%	9.04%	12.52%	0.0177%
ENTERGY CORP	ETR	13,767.91	0.06%	4.75%	0.91%	5.69%	0.0032%
ENVISION HEALTHCARE CORP	EVHC	5,087.39	0.02%	0.00%	14.96%	14.96%	0.0031%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
EDWARDS LIFESCIENCES CORP	EW	28,655.42	0.12%	0.00%	15.33%	15.33%	0.0180%
EXELON CORP	EXC	38,059.08	0.16%	3.52%	5.67%	9.29%	0.0145%
EXPEDITORS INTL WASH INC	EXPD	12,610.16	0.05%	1.23%	9.97%	11.26%	0.0058%
EXPEDIA GROUP INC	EXPE	17,277.50	0.07%	1.06%	16.76%	17.91%	0.0127%
EXTRA SPACE STORAGE INC	EXR	11,599.53	0.05%	3.51%	6.16%	9.78%	0.0047%
FORD MOTOR CO	F	45,149.53	0.19%	5.30%	-7.42%	-2.32%	-0.0043%
FASTENAL CO	FAST	15,176.29	0.06%	2.81%	17.50%	20.55%	0.0128%
FACEBOOK INC-A	FB	528,989.26	2.17%	0.00%	21.49%	21.49%	0.4665%
FORTUNE BRANDS HOME & SECURI	FBHS	8,431.42	0.03%	1.35%	12.68%	14.12%	0.0049%
FREEPORT-MCMORAN INC	FCX	24,441.16	0.10%	1.16%	-1.41%	-0.26%	-0.0003%
FEDEX CORP	FDX	66,656.83	0.27%	0.80%	14.60%	15.46%	0.0423%
FIRSTENERGY CORP	FE	15,823.85	0.06%	4.34%	-0.12%	4.22%	0.0027%
F5 NETWORKS INC	FFIV	10,528.21	0.04%	0.00%	10.25%	10.25%	0.0044%
FIDELITY NATIONAL INFO SERV	FIS	34,465.22	0.14%	1.23%	4.40%	5.66%	0.0080%
FISERV INC	FISV	29,880.70	0.12%	0.00%	3.30%	3.30%	0.0040%
FIFTH THIRD BANCORP	FITB	23,005.23	0.09%	2.21%	5.65%	7.93%	0.0075%
FOOT LOCKER INC	FL	5,130.95	0.02%	3.16%	5.42%	8.67%	0.0018%
FLIR SYSTEMS INC	FLIR	7,461.71	N/A	1.16%	N/A	N/A	N/A
FLUOR CORP	FLR	7,015.30	0.03%	1.72%	31.88%	33.87%	0.0098%
FLOWSERVE CORP	FLS	5,831.25	0.02%	1.74%	19.47%	21.37%	0.0051%
FMC CORP	FMC	12,309.40	0.05%	0.78%	13.87%	14.70%	0.0074%
TWENTY-FIRST CENTURY FOX-A	FOXA	69,455.74	0.29%	1.00%	10.60%	11.65%	0.0332%
FEDERAL REALTY INVS TRUST	FRT	8,401.43	0.03%	3.56%	4.20%	7.83%	0.0027%
TECHNIPFMC PLC	FTI	15,786.27	0.06%	1.54%	8.47%	10.07%	0.0065%
FORTIVE CORP	FTV	27,142.43	0.11%	0.37%	13.04%	13.43%	0.0150%
GENERAL DYNAMICS CORP	GD	60,155.21	0.25%	1.81%	11.45%	13.36%	0.0330%
GENERAL ELECTRIC CO	GE	130,019.51	0.53%	3.31%	4.03%	7.41%	0.0396%
GGP INC	GGP	19,436.19	0.08%	4.46%	2.15%	6.66%	0.0053%
GILEAD SCIENCES INC	GILD	88,443.74	0.36%	3.32%	-6.54%	-3.32%	-0.0121%
GENERAL MILLS INC	GIS	24,794.66	0.10%	4.72%	7.33%	12.23%	0.0124%
CORNING INC	GLW	22,992.36	0.09%	2.60%	4.96%	7.62%	0.0072%
GENERAL MOTORS CO	GM	53,262.80	0.22%	4.05%	11.05%	15.32%	0.0335%
ALPHABET INC-CL A	GOOGL	741,695.59	3.04%	0.00%	18.96%	18.96%	0.5769%
GENUINE PARTS CO	GPC	13,554.17	0.06%	3.09%	-2.49%	0.57%	0.0003%
GLOBAL PAYMENTS INC	GPN	18,149.82	0.07%	0.04%	22.03%	22.07%	0.0164%
GAP INC/THE	GPS	12,290.55	0.05%	3.07%	9.20%	12.41%	0.0063%
GARMIN LTD	GRMN	11,266.08	0.05%	3.51%	5.90%	9.52%	0.0044%
GOLDMAN SACHS GROUP INC	GS	92,979.72	0.38%	1.35%	16.05%	17.50%	0.0668%
GOODYEAR TIRE & RUBBER CO	GT	6,271.53	N/A	2.07%	N/A	N/A	N/A
WW GRAINGER INC	GWW	17,231.45	0.07%	1.77%	14.70%	16.60%	0.0117%
HALLIBURTON CO	HAL	47,583.04	0.20%	1.35%	70.36%	72.18%	0.1410%
HASBRO INC	HAS	11,083.23	0.05%	2.83%	8.17%	11.11%	0.0051%
HUNTINGTON BANCSHARES INC	HBAN	16,659.15	0.07%	3.06%	12.54%	15.80%	0.0108%
HANESBRANDS INC	HBI	6,623.61	0.03%	3.26%	5.87%	9.23%	0.0025%
HCA HEALTHCARE INC	HCA	35,918.44	0.15%	1.36%	12.58%	14.02%	0.0207%
HCP INC	HCP	10,813.78	0.04%	6.47%	-0.37%	6.09%	0.0027%
HOME DEPOT INC	HD	216,042.20	0.89%	2.17%	13.25%	15.56%	0.1380%
HESS CORP	HES	19,405.30	0.08%	1.59%	-7.90%	-6.37%	-0.0051%
HARTFORD FINANCIAL SVCS GRP	HIG	19,135.38	0.08%	1.94%	9.50%	11.53%	0.0091%
HUNTINGTON INGALLS INDUSTRIE	HII	9,864.43	0.04%	1.29%	27.50%	28.96%	0.0117%
HILTON WORLDWIDE HOLDINGS IN	HLT	25,186.95	0.10%	0.75%	6.10%	6.87%	0.0071%
HARLEY-DAVIDSON INC	HOG	7,073.56	0.03%	3.49%	8.95%	12.59%	0.0037%
HOLOGIC INC	HOLX	10,598.28	0.04%	0.00%	9.51%	9.51%	0.0041%
HONEYWELL INTERNATIONAL INC	HON	110,799.57	0.45%	2.06%	10.29%	12.45%	0.0566%
HELMERICH & PAYNE	HP	7,838.39	0.03%	3.89%	122.99%	129.27%	0.0416%
HEWLETT PACKARD ENTERPRISE	HPE	27,274.27	0.11%	2.10%	5.12%	7.27%	0.0081%
HP INC	HPQ	36,253.50	0.15%	2.53%	7.19%	9.82%	0.0146%
H&R BLOCK INC	HRB	5,790.72	0.02%	3.47%	11.00%	14.66%	0.0035%
HORMEL FOODS CORP	HRL	19,010.28	0.08%	2.08%	8.20%	10.37%	0.0081%
HARRIS CORP	HRS	18,272.38	N/A	1.48%	N/A	N/A	N/A
HENRY SCHEIN INC	HSIC	11,080.56	0.05%	0.00%	8.34%	8.34%	0.0038%
HOST HOTELS & RESORTS INC	HST	15,197.41	0.06%	4.01%	4.13%	8.23%	0.0051%
HERSHEY CO/THE	HSY	19,145.83	0.08%	2.99%	8.10%	11.21%	0.0088%
HUMANA INC	HUM	40,322.98	0.17%	0.64%	13.13%	13.81%	0.0229%
INTL BUSINESS MACHINES CORP	IBM	132,260.87	0.54%	4.29%	1.97%	6.30%	0.0342%
INTERCONTINENTAL EXCHANGE IN	ICE	41,443.77	0.17%	1.34%	10.43%	11.84%	0.0201%
IDEXX LABORATORIES INC	IDXX	17,438.66	0.07%	0.00%	16.78%	16.78%	0.0120%
INTL FLAVORS & FRAGRANCES	IFF	9,974.05	0.04%	2.30%	8.10%	10.49%	0.0043%
ILLUMINA INC	ILMN	39,641.49	0.16%	0.00%	16.76%	16.76%	0.0273%
INCYTE CORP	INCY	14,377.87	0.06%	0.00%	47.72%	47.72%	0.0282%
IHS MARKIT LTD	INFO	20,563.00	0.08%	0.00%	12.33%	12.33%	0.0104%
INTEL CORP	INTC	249,310.00	1.02%	2.09%	8.98%	11.17%	0.1143%
INTUIT INC	INTU	48,799.40	0.20%	0.81%	16.26%	17.14%	0.0343%
INTERNATIONAL PAPER CO	IP	22,758.47	0.09%	3.54%	8.67%	12.36%	0.0115%
INTERPUBLIC GROUP OF COS INC	IPG	9,163.80	0.04%	3.55%	3.00%	6.60%	0.0025%
IPG PHOTONICS CORP	IPGP	13,018.76	0.05%	0.00%	12.00%	12.00%	0.0064%
IQVIA HOLDINGS INC	IQV	20,797.93	0.09%	0.00%	15.73%	15.73%	0.0134%
INGERSOLL-RAND PLC	IR	22,294.55	0.09%	2.02%	10.92%	13.05%	0.0119%
IRON MOUNTAIN INC	IRM	9,172.44	0.04%	7.08%	9.00%	16.40%	0.0062%
INTUITIVE SURGICAL INC	ISRG	51,978.66	0.21%	0.00%	11.75%	11.75%	0.0251%
GARTNER INC	IT	12,247.17	0.05%	0.00%	15.00%	15.00%	0.0075%
ILLINOIS TOOL WORKS	ITW	49,730.35	0.20%	2.39%	10.16%	12.67%	0.0259%
INVESCO LTD	IVZ	11,760.13	0.05%	4.18%	8.94%	13.31%	0.0064%
HUNT (JB) TRANSPRT SVCS INC	JBHT	13,923.60	0.06%	0.74%	13.10%	13.89%	0.0079%
JOHNSON CONTROLS INTERNATION	JCI	33,297.05	0.14%	2.95%	10.47%	13.58%	0.0186%
JACOBS ENGINEERING GROUP INC	JEC	9,037.82	0.04%	0.91%	16.15%	17.13%	0.0064%
JOHNSON & JOHNSON	JNJ	333,230.31	1.37%	2.90%	7.46%	10.47%	0.1432%
JUNIPER NETWORKS INC	JNPR	9,308.40	0.04%	2.46%	8.68%	11.25%	0.0043%
JPMORGAN CHASE & CO	JPM	378,372.86	1.55%	2.21%	9.80%	12.12%	0.1882%
NORDSTROM INC	JWN	7,611.41	0.03%	3.32%	8.80%	12.26%	0.0038%
KELLOGG CO	K	20,876.80	0.09%	3.69%	8.07%	11.91%	0.0102%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
KEYCORP	KEY	21,498.69	0.09%	2.55%	16.47%	19.24%	0.0170%
KRAFT HEINZ CO/THE	KHC	69,236.79	0.28%	4.48%	7.03%	11.66%	0.0331%
KIMCO REALTY CORP	KIM	5,969.81	0.02%	8.04%	3.17%	11.33%	0.0028%
KLA-TENCOR CORP	KLAC	17,050.85	0.07%	2.29%	11.16%	13.58%	0.0095%
KIMBERLY-CLARK CORP	KMB	36,214.95	0.15%	3.83%	14.24%	18.34%	0.0273%
KINDER MORGAN INC	KMI	35,451.57	0.15%	4.93%	13.75%	19.02%	0.0277%
CARMAX INC	KMX	11,729.46	0.05%	0.00%	12.90%	12.90%	0.0062%
COCA-COLA CO/THE	KO	179,486.98	0.74%	3.62%	8.99%	12.77%	0.0941%
MICHAEL KORS HOLDINGS LTD	KORS	10,068.53	0.04%	0.00%	6.06%	6.06%	0.0025%
KROGER CO	KR	20,011.31	0.08%	2.15%	5.57%	7.78%	0.0064%
KOHLS CORP	KSS	10,711.64	0.04%	3.80%	6.73%	10.66%	0.0047%
KANSAS CITY SOUTHERN	KSU	11,183.45	0.05%	1.36%	13.00%	14.45%	0.0066%
LOEWS CORP	L	16,384.42	N/A	0.49%	N/A	N/A	N/A
L BRANDS INC	LB	9,406.80	0.04%	7.32%	11.66%	19.41%	0.0075%
LEGGETT & PLATT INC	LEG	5,529.07	0.02%	3.49%	10.50%	14.17%	0.0032%
LENNAR CORP-A	LEN	16,561.78	0.07%	0.31%	20.99%	21.32%	0.0145%
LABORATORY CRP OF AMER HLDGS	LH	18,026.28	0.07%	0.00%	9.15%	9.15%	0.0068%
LKQ CORP	LKQ	9,439.98	0.04%	0.00%	13.65%	13.65%	0.0053%
L3 TECHNOLOGIES INC	LLL	15,229.70	0.06%	1.69%	11.07%	12.85%	0.0080%
ELI LILLY & CO	LLY	89,512.24	0.37%	2.74%	10.57%	13.46%	0.0494%
LOCKHEED MARTIN CORP	LMT	91,497.92	0.38%	2.57%	22.09%	24.94%	0.0937%
LINCOLN NATIONAL CORP	LNC	15,086.40	0.06%	1.94%	8.00%	10.01%	0.0062%
ALLIANT ENERGY CORP	LNT	9,391.22	0.04%	3.30%	5.94%	9.34%	0.0036%
LOWE'S COS INC	LOW	71,296.66	0.29%	2.14%	15.76%	18.06%	0.0528%
LAM RESEARCH CORP	LRCX	32,069.20	0.13%	1.25%	6.50%	7.79%	0.0103%
LEUCADIA NATIONAL CORP	LUK	7,958.90	0.03%	1.73%	18.00%	19.89%	0.0065%
SOUTHWEST AIRLINES CO	LUV	30,259.93	0.12%	1.12%	12.03%	13.22%	0.0164%
LYONDELLBASELL INDU-CL A	LYB	45,566.29	0.19%	3.39%	7.73%	11.25%	0.0210%
MACY'S INC	M	10,405.34	0.04%	4.70%	-0.07%	4.63%	0.0020%
MASTERCARD INC - A	MA	198,772.09	0.82%	0.53%	21.41%	21.99%	0.1794%
MID-AMERICA APARTMENT COMM	MAA	10,005.68	0.04%	4.25%	7.00%	11.39%	0.0047%
MACERICH CO/THE	MAC	7,732.03	0.03%	5.45%	4.82%	10.40%	0.0033%
MARRIOTT INTERNATIONAL -CL A	MAR	48,946.79	0.20%	1.09%	16.87%	18.05%	0.0363%
MASCO CORP	MAS	11,752.08	0.05%	1.12%	15.84%	17.05%	0.0082%
MATTEL INC	MAT	5,208.41	0.02%	0.00%	9.73%	9.73%	0.0021%
MCDONALD'S CORP	MCD	126,397.86	0.52%	2.55%	8.74%	11.39%	0.0591%
MICROCHIP TECHNOLOGY INC	MCHP	21,770.88	0.09%	1.57%	9.32%	10.97%	0.0098%
MCKESSON CORP	MCK	30,728.05	0.13%	0.87%	8.27%	9.17%	0.0116%
MOODY'S CORP	MCO	33,106.59	0.14%	1.03%	8.00%	9.07%	0.0123%
MONDELEZ INTERNATIONAL INC-A	MDLZ	58,486.45	0.24%	2.37%	10.73%	13.23%	0.0317%
MEDTRONIC PLC	MDT	114,718.81	0.47%	2.19%	6.50%	8.76%	0.0412%
METLIFE INC	MET	48,569.84	0.20%	3.50%	12.68%	16.41%	0.0327%
MGM RESORTS INTERNATIONAL	MGM	18,006.46	0.07%	1.48%	7.38%	8.92%	0.0066%
MOHAWK INDUSTRIES INC	MHK	16,124.51	0.07%	0.00%	8.58%	8.58%	0.0057%
MCCORMICK & CO-NON VTG SHRS	MKC	13,507.35	0.06%	2.03%	8.30%	10.42%	0.0058%
MARTIN MARIETTA MATERIALS	MLM	13,805.88	0.06%	0.81%	13.36%	14.23%	0.0081%
MARSH & MCLENNAN COS	MMC	41,184.32	0.17%	1.95%	13.04%	15.12%	0.0256%
3M CO	MMM	118,121.02	0.48%	2.73%	8.33%	11.18%	0.0542%
MONSTER BEVERAGE CORP	MNST	27,835.87	0.11%	0.00%	17.80%	17.80%	0.0203%
ALTRIA GROUP INC	MO	105,117.69	0.43%	5.30%	4.87%	10.30%	0.0444%
MONSANTO CO	MON	55,535.59	0.23%	1.84%	7.95%	9.87%	0.0225%
MOSAIC CO/THE	MOS	10,756.97	0.04%	0.36%	7.00%	7.37%	0.0033%
MARATHON PETROLEUM CORP	MPC	36,733.22	0.15%	2.33%	6.87%	9.27%	0.0140%
MERCK & CO. INC.	MRK	159,104.57	0.65%	3.27%	6.58%	9.96%	0.0650%
MARATHON OIL CORP	MRO	18,266.88	0.07%	0.94%	5.00%	5.96%	0.0045%
MORGAN STANLEY	MS	95,452.44	0.39%	2.04%	14.35%	16.54%	0.0648%
MSCI INC	MSCI	14,038.77	0.06%	1.01%	12.90%	13.97%	0.0080%
MICROSOFT CORP	MSFT	740,352.91	3.04%	1.74%	11.35%	13.18%	0.4005%
MOTOROLA SOLUTIONS INC	MSI	17,252.81	0.07%	1.97%	4.07%	6.08%	0.0043%
M & T BANK CORP	MTB	26,408.19	0.11%	1.84%	13.62%	15.58%	0.0169%
METTLER-TOLEDO INTERNATIONAL	MTD	14,554.94	0.06%	0.00%	11.95%	11.95%	0.0071%
MICRON TECHNOLOGY INC	MU	61,919.83	0.25%	0.00%	0.45%	0.45%	0.0011%
MYLAN NV	MYL	20,442.55	0.08%	0.00%	5.76%	5.76%	0.0048%
NAVIENT CORP	NAVI	3,723.01	0.02%	4.62%	-6.00%	-1.52%	-0.0002%
NOBLE ENERGY INC	NBL	17,551.29	0.07%	1.14%	12.50%	13.71%	0.0099%
NORWEGIAN CRUISE LINE HOLDIN	NCLH	11,901.80	0.05%	0.41%	19.90%	20.35%	0.0099%
NASDAQ INC	NDAQ	15,038.61	0.06%	1.89%	10.79%	12.77%	0.0079%
NEXTERA ENERGY INC	NEE	73,756.24	0.30%	2.84%	7.90%	10.85%	0.0328%
NEWMONT MINING CORP	NEM	20,891.33	0.09%	1.44%	-3.00%	-1.58%	-0.0014%
NETFLIX INC	NFLX	140,918.63	0.58%	0.00%	47.27%	47.27%	0.2733%
NEWFIELD EXPLORATION CO	NFX	5,790.06	0.02%	0.00%	13.72%	13.72%	0.0033%
NISOURCE INC	NI	8,250.92	0.03%	3.14%	5.86%	9.09%	0.0031%
NIKE INC -CL B	NKE	114,950.68	0.47%	1.08%	11.18%	12.32%	0.0581%
NEKTAR THERAPEUTICS	NKTR	14,620.63	N/A	0.00%	N/A	N/A	N/A
NIELSEN HOLDINGS PLC	NLSN	11,075.05	0.05%	4.52%	12.00%	16.79%	0.0076%
NORTHROP GRUMMAN CORP	NOC	57,375.88	0.24%	1.42%	14.80%	16.33%	0.0384%
NATIONAL OILWELL VARCO INC	NOV	16,587.43	0.07%	0.46%	48.10%	48.67%	0.0331%
NRG ENERGY INC	NRG	10,614.81	0.04%	0.36%	20.24%	20.63%	0.0090%
NORFOLK SOUTHERN CORP	NSC	43,084.81	0.18%	1.89%	14.33%	16.35%	0.0289%
NETAPP INC	NTAP	18,513.46	0.08%	1.16%	9.83%	11.04%	0.0084%
NORTHERN TRUST CORP	NTRS	24,258.53	0.10%	1.69%	13.84%	15.65%	0.0156%
NUCOR CORP	NUE	20,848.05	0.09%	2.32%	5.90%	8.29%	0.0071%
NVIDIA CORP	NVDA	149,294.55	0.61%	0.25%	10.40%	10.66%	0.0653%
NEWELL BRANDS INC	NWL	12,783.62	0.05%	3.47%	5.42%	8.97%	0.0047%
NEWS CORP - CLASS A	NWSA	9,204.52	0.04%	1.46%	12.95%	14.50%	0.0055%
REALTY INCOME CORP	O	14,691.44	0.06%	5.09%	4.39%	9.59%	0.0058%
ONEOK INC	OKE	27,242.02	0.11%	4.84%	26.54%	32.01%	0.0358%
OMNICOM GROUP	OMC	17,037.63	0.07%	3.23%	5.70%	9.03%	0.0063%
ORACLE CORP	ORCL	189,092.74	0.78%	1.59%	8.71%	10.38%	0.0805%
O'REILLY AUTOMOTIVE INC	ORLY	22,287.37	0.09%	0.00%	14.47%	14.47%	0.0132%
OCCIDENTAL PETROLEUM CORP	OXY	65,412.09	0.27%	3.62%	11.55%	15.38%	0.0413%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
PAYCHEX INC	PAYX	23,289.83	0.10%	3.07%	8.50%	11.70%	0.0112%
PEOPLE'S UNITED FINANCIAL	PBCT	6,480.96	0.03%	3.73%	2.00%	5.76%	0.0015%
PACCAR INC	PCAR	22,871.29	0.09%	3.46%	7.70%	11.30%	0.0106%
P G & E CORP	PCG	22,092.77	0.09%	4.24%	5.25%	9.60%	0.0087%
PUBLIC SERVICE ENTERPRISE GP	PEG	25,124.46	0.10%	3.62%	5.76%	9.49%	0.0098%
PEPSICO INC	PEP	138,254.44	0.57%	3.72%	6.92%	10.77%	0.0611%
PFIZER INC	PFE	208,478.71	0.86%	3.82%	7.37%	11.33%	0.0969%
PRINCIPAL FINANCIAL GROUP	PFG	16,839.51	0.07%	3.57%	9.39%	13.13%	0.0091%
PROCTER & GAMBLE CO/THE	PG	184,697.33	0.76%	3.83%	7.45%	11.42%	0.0866%
PROGRESSIVE CORP	PGR	35,484.19	0.15%	2.02%	8.00%	10.10%	0.0147%
PARKER HANNIFIN CORP	PH	23,811.70	0.10%	1.53%	9.59%	11.19%	0.0109%
PULTEGROUP INC	PHM	8,540.05	0.04%	1.22%	21.25%	22.60%	0.0079%
PACKAGING CORP OF AMERICA	PKG	11,432.93	0.05%	2.21%	8.00%	10.29%	0.0048%
PERKINELMER INC	PKI	8,349.58	0.03%	0.38%	15.34%	15.75%	0.0054%
PROLOGIS INC	PLD	33,655.44	0.14%	3.01%	6.47%	9.58%	0.0132%
PHILIP MORRIS INTERNATIONAL	PM	125,523.75	0.52%	5.43%	10.87%	16.59%	0.0855%
PNC FINANCIAL SERVICES GROUP	PNC	69,842.63	0.29%	2.28%	10.21%	12.61%	0.0361%
PENTAIR PLC	PNR	8,209.34	0.03%	1.72%	10.55%	12.36%	0.0042%
PINNACLE WEST CAPITAL	PNW	8,567.36	0.04%	3.68%	4.59%	8.35%	0.0029%
PPG INDUSTRIES INC	PPG	26,166.43	0.11%	1.75%	8.73%	10.55%	0.0113%
PPL CORP	PPL	20,148.36	0.08%	6.13%	5.40%	11.70%	0.0097%
PERRIGO CO PLC	PRGO	10,552.20	0.04%	0.89%	6.62%	7.54%	0.0033%
PRUDENTIAL FINANCIAL INC	PRU	43,020.60	0.18%	3.43%	8.50%	12.07%	0.0213%
PUBLIC STORAGE	PSA	35,471.36	0.15%	3.98%	5.44%	9.53%	0.0139%
PHILLIPS 66	PSX	56,054.16	0.23%	2.50%	5.05%	7.61%	0.0175%
PVH CORP	PVH	11,952.39	0.05%	0.10%	10.87%	10.97%	0.0054%
QUANTA SERVICES INC	PWR	5,496.49	N/A	0.00%	N/A	N/A	N/A
PRAXAIR INC	PX	45,846.93	0.19%	2.07%	10.50%	12.68%	0.0238%
PIONEER NATURAL RESOURCES CO	PXD	35,728.42	0.15%	0.12%	30.50%	30.64%	0.0449%
PAYPAL HOLDINGS INC	PYPL	95,928.98	0.39%	0.00%	18.07%	18.07%	0.0711%
QUALCOMM INC	QCOM	85,265.61	0.35%	4.14%	5.67%	9.93%	0.0347%
QORVO INC	QRVO	10,067.63	0.04%	0.00%	13.84%	13.84%	0.0057%
ROYAL CARIBBEAN CRUISES LTD	RCL	22,648.44	0.09%	2.28%	15.45%	17.91%	0.0166%
EVEREST RE GROUP LTD	RE	9,283.72	0.04%	2.32%	10.00%	12.44%	0.0047%
REGENCY CENTERS CORP	REG	9,445.40	0.04%	4.03%	8.45%	12.65%	0.0049%
REGENERON PHARMACEUTICALS	REGN	32,553.58	0.13%	0.00%	15.76%	15.76%	0.0210%
REGIONS FINANCIAL CORP	RF	21,485.84	0.09%	2.23%	16.09%	18.50%	0.0163%
ROBERT HALF INTL INC	RHI	7,953.72	0.03%	1.68%	16.20%	18.01%	0.0059%
RED HAT INC	RHT	29,010.44	0.12%	0.00%	17.36%	17.36%	0.0207%
RAYMOND JAMES FINANCIAL INC	RJF	14,447.61	0.06%	1.05%	17.00%	18.14%	0.0108%
RALPH LAUREN CORP	RL	9,385.71	0.04%	1.75%	5.16%	6.96%	0.0027%
RESMED INC	RMD	14,506.50	0.06%	1.42%	16.10%	17.63%	0.0105%
ROCKWELL AUTOMATION INC	ROK	22,898.33	0.09%	1.86%	11.49%	13.45%	0.0126%
ROPER TECHNOLOGIES INC	ROP	28,417.58	0.12%	0.58%	10.93%	11.55%	0.0135%
ROSS STORES INC	ROST	31,225.83	0.13%	1.00%	13.12%	14.19%	0.0182%
RANGE RESOURCES CORP	RRC	3,780.93	0.02%	0.53%	22.54%	23.12%	0.0036%
REPUBLIC SERVICES INC	RSG	21,843.37	0.09%	2.09%	9.69%	11.88%	0.0107%
RAYTHEON COMPANY	RTN	60,626.99	0.25%	1.62%	14.97%	16.71%	0.0416%
SBA COMMUNICATIONS CORP	SBAC	18,163.67	0.07%	0.00%	27.15%	27.15%	0.0202%
STARBUCKS CORP	SBUX	78,880.80	0.32%	2.15%	14.43%	16.74%	0.0542%
SCANA CORP	SCG	4,895.00	0.02%	6.01%	-2.10%	3.85%	0.0008%
SCHWAB (CHARLES) CORP	SCHW	79,790.80	0.33%	0.68%	21.02%	21.77%	0.0713%
SEALED AIR CORP	SEE	7,153.85	0.03%	1.47%	4.47%	5.97%	0.0018%
SHERWIN-WILLIAMS CO/THE	SHW	36,255.50	0.15%	0.89%	12.25%	13.19%	0.0196%
SVB FINANCIAL GROUP	SIVB	17,045.95	0.07%	0.00%	10.75%	10.75%	0.0075%
JM SMUCKER CO/THE	SJM	12,261.89	0.05%	2.86%	6.70%	9.66%	0.0049%
SCHLUMBERGER LTD	SLB	102,901.55	0.42%	2.72%	39.63%	42.89%	0.1811%
SL GREEN REALTY CORP	SLG	8,474.04	0.03%	3.47%	3.62%	7.15%	0.0025%
SNAP-ON INC	SNA	8,507.96	0.03%	2.30%	9.70%	12.11%	0.0042%
SYNOPSYS INC	SNPS	13,273.72	N/A	0.00%	N/A	N/A	N/A
SOUTHERN CO/THE	SO	43,266.17	0.18%	5.59%	4.38%	10.09%	0.0179%
SIMON PROPERTY GROUP INC	SPG	47,749.22	0.20%	5.14%	6.16%	11.46%	0.0225%
S&P GLOBAL INC	SPGI	49,737.30	0.20%	0.99%	11.70%	12.74%	0.0260%
STERICYCLE INC	SRCL	5,457.22	0.02%	0.08%	8.87%	8.95%	0.0020%
SEMPRA ENERGY	SRE	26,910.28	0.11%	3.51%	17.01%	20.82%	0.0230%
SUNTRUST BANKS INC	STI	31,910.34	0.13%	2.55%	13.17%	15.89%	0.0208%
STATE STREET CORP	STT	36,292.33	0.15%	1.82%	17.73%	19.71%	0.0294%
SEAGATE TECHNOLOGY	STX	16,164.47	0.07%	4.49%	3.15%	7.71%	0.0051%
CONSTELLATION BRANDS INC-A	STZ	42,171.24	0.17%	1.34%	14.41%	15.85%	0.0274%
STANLEY BLACK & DECKER INC	SWK	22,347.13	0.09%	1.76%	11.50%	13.36%	0.0122%
SKYWORKS SOLUTIONS INC	SWKS	17,932.53	0.07%	1.32%	10.99%	12.38%	0.0091%
SYNCHRONY FINANCIAL	SYF	26,748.57	0.11%	1.87%	10.60%	12.57%	0.0138%
STRYKER CORP	SYK	64,580.99	0.27%	1.05%	8.89%	9.99%	0.0265%
SYMANTEC CORP	SYMC	13,791.94	0.06%	1.35%	8.52%	9.93%	0.0056%
SYSCO CORP	SYY	33,103.60	0.14%	2.18%	11.85%	14.16%	0.0192%
AT&T INC	T	196,819.05	0.81%	6.27%	5.00%	11.42%	0.0923%
MOLSON COORS BREWING CO -B	TAP	12,993.69	0.05%	2.79%	5.61%	8.48%	0.0045%
TRANSDIGM GROUP INC	TDG	17,307.28	0.07%	0.00%	11.80%	11.80%	0.0084%
TE CONNECTIVITY LTD	TEL	33,319.23	0.14%	1.72%	10.33%	12.15%	0.0166%
TARGET CORP	TGT	40,698.23	0.17%	3.49%	4.48%	8.05%	0.0134%
TIFFANY & CO	TIF	12,867.53	0.05%	2.04%	10.28%	12.42%	0.0066%
TJX COMPANIES INC	TJX	53,157.22	0.22%	1.81%	12.53%	14.45%	0.0315%
TORCHMARK CORP	TMK	9,725.02	0.04%	0.74%	10.45%	11.23%	0.0045%
THERMO FISHER SCIENTIFIC INC	TMO	86,475.37	0.35%	0.30%	10.93%	11.25%	0.0399%
TAPESTRY INC	TPR	12,802.13	0.05%	3.03%	11.31%	14.52%	0.0076%
TRIPADVISOR INC	TRIP	6,584.38	0.03%	0.00%	14.41%	14.41%	0.0039%
T ROWE PRICE GROUP INC	TROW	29,199.36	0.12%	2.19%	12.57%	14.90%	0.0179%
TRAVELERS COS INC/THE	TRV	35,093.43	0.14%	2.35%	20.65%	23.24%	0.0335%
TRACTOR SUPPLY COMPANY	TSCO	8,887.70	0.04%	1.66%	13.29%	15.06%	0.0055%
TYSON FOODS INC-CL A	TSN	27,130.77	0.11%	1.72%	8.50%	10.29%	0.0115%
TOTAL SYSTEM SERVICES INC	TSS	15,795.01	0.06%	0.60%	14.57%	15.21%	0.0099%

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
TAKE-TWO INTERACTIVE SOFTWRE	TTWO	13,246.30	0.05%	0.00%	10.00%	10.00%	0.0054%
TIME WARNER INC	TWX	73,890.07	0.30%	1.71%	5.10%	6.86%	0.0208%
TEXAS INSTRUMENTS INC	TXN	108,209.61	0.44%	2.29%	11.90%	14.33%	0.0636%
TEXTRON INC	TXT	16,980.46	0.07%	0.12%	13.51%	13.64%	0.0095%
UNDER ARMOUR INC-CLASS A	UAA	8,434.52	0.03%	0.00%	25.39%	25.39%	0.0088%
UNITED CONTINENTAL HOLDINGS	UAL	18,970.51	0.08%	0.00%	20.48%	20.48%	0.0159%
UDR INC	UDR	9,277.71	0.04%	3.72%	5.30%	9.12%	0.0035%
UNIVERSAL HEALTH SERVICES-B	UHS	11,126.76	0.05%	0.22%	9.44%	9.67%	0.0044%
ULTA BEAUTY INC	ULTA	15,466.27	0.06%	0.00%	18.60%	18.60%	0.0118%
UNITEDHEALTH GROUP INC	UNH	235,094.45	0.96%	1.28%	12.99%	14.35%	0.1385%
UNUM GROUP	UNM	8,544.75	0.04%	2.47%	7.00%	9.56%	0.0034%
UNION PACIFIC CORP	UNP	110,761.36	0.45%	2.00%	14.45%	16.59%	0.0754%
UNITED PARCEL SERVICE-CL B	UPS	99,421.58	0.41%	3.10%	14.92%	18.26%	0.0745%
UNITED RENTALS INC	URI	14,196.38	0.06%	0.00%	17.76%	17.76%	0.0103%
US BANCORP	USB	83,026.35	0.34%	2.59%	8.03%	10.72%	0.0365%
UNITED TECHNOLOGIES CORP	UTX	100,159.45	0.41%	2.28%	10.59%	13.00%	0.0534%
VISA INC-CLASS A SHARES	V	265,565.82	1.09%	0.64%	17.35%	18.04%	0.1966%
VARIAN MEDICAL SYSTEMS INC	VAR	10,834.16	0.04%	0.00%	16.00%	16.00%	0.0071%
VF CORP	VFC	31,763.68	0.13%	2.39%	8.06%	10.54%	0.0137%
VIACOM INC-CLASS B	VIAB	11,285.78	0.05%	2.96%	9.49%	12.59%	0.0058%
VALERO ENERGY CORP	VLO	51,964.18	0.21%	2.66%	17.26%	20.15%	0.0430%
VULCAN MATERIALS CO	VMC	17,078.35	0.07%	0.84%	21.12%	22.05%	0.0155%
VORNADO REALTY TRUST	VNO	12,537.85	0.05%	3.80%	-0.49%	3.30%	0.0017%
VERISK ANALYTICS INC	VRSK	17,568.71	0.07%	0.00%	12.84%	12.84%	0.0093%
VERISIGN INC	VRSN	15,714.31	0.06%	0.00%	10.40%	10.40%	0.0067%
VERTEX PHARMACEUTICALS INC	VRTX	40,069.51	0.16%	0.00%	69.33%	69.33%	0.1140%
VENTAS INC	VTR	18,335.83	0.08%	6.16%	1.83%	8.05%	0.0061%
VERIZON COMMUNICATIONS INC	VZ	197,256.74	0.81%	5.01%	2.31%	7.38%	0.0597%
WATERS CORP	WAT	15,211.04	0.06%	0.00%	10.11%	10.11%	0.0063%
WALGREENS BOOTS ALLIANCE INC	WBA	63,803.76	0.26%	2.51%	10.73%	13.38%	0.0350%
WESTERN DIGITAL CORP	WDC	25,360.76	0.10%	2.39%	14.08%	16.64%	0.0173%
WEC ENERGY GROUP INC	WEC	19,080.63	0.08%	3.65%	3.00%	6.70%	0.0052%
WELLTOWER INC	WELL	20,187.44	0.08%	6.45%	5.84%	12.47%	0.0103%
WELLS FARGO & CO	WFC	261,673.32	1.07%	3.06%	10.66%	13.87%	0.1490%
WHIRLPOOL CORP	WHR	11,516.86	0.05%	2.88%	9.98%	13.00%	0.0061%
WILLIS TOWERS WATSON PLC	WLTW	20,344.22	0.08%	1.53%	10.00%	11.60%	0.0097%
WASTE MANAGEMENT INC	WM	35,230.20	0.14%	2.26%	11.71%	14.11%	0.0204%
WILLIAMS COS INC	WMB	23,009.61	0.09%	4.90%	-13.30%	-8.73%	-0.0082%
WALMART INC	WMT	246,945.30	1.01%	2.50%	5.91%	8.48%	0.0860%
WESTROCK CO	WRK	15,923.10	0.07%	2.77%	8.00%	10.88%	0.0071%
WESTERN UNION CO	WU	9,256.02	0.04%	3.75%	4.26%	8.08%	0.0031%
WEYERHAEUSER CO	WY	27,593.16	0.11%	3.56%	9.25%	12.97%	0.0147%
WYNDHAM WORLDWIDE CORP	WYN	10,909.27	0.04%	2.19%	17.50%	19.88%	0.0089%
WYNN RESORTS LTD	WYNN	20,526.21	0.08%	1.55%	18.70%	20.40%	0.0172%
CIMAREX ENERGY CO	XEC	9,380.77	0.04%	0.52%	74.80%	75.51%	0.0291%
XCEL ENERGY INC	XEL	22,237.05	0.09%	3.49%	5.88%	9.47%	0.0086%
XL GROUP LTD	XL	14,324.60	0.06%	1.67%	9.00%	10.74%	0.0063%
XILINX INC	XLNX	18,049.97	0.07%	2.03%	10.20%	12.33%	0.0091%
EXXON MOBIL CORP	XOM	344,210.74	1.41%	3.95%	15.96%	20.23%	0.2857%
DENTSPLY SIRONA INC	XRAY	10,803.33	0.04%	0.75%	8.95%	9.74%	0.0043%
XEROX CORP	XRX	7,179.41	N/A	3.51%	N/A	N/A	N/A
XYLEM INC	XYL	12,889.57	0.05%	1.17%	18.00%	19.28%	0.0102%
YUM! BRANDS INC	YUM	26,613.70	0.11%	1.75%	12.20%	14.06%	0.0154%
ZIMMER BIOMET HOLDINGS INC	ZBH	23,274.57	0.10%	0.88%	5.54%	6.44%	0.0061%
ZIONS BANCORPORATION	ZION	11,387.33	0.05%	1.69%	10.23%	12.00%	0.0056%
ZOETIS INC	ZTS	40,838.24	0.17%	0.59%	14.89%	15.52%	0.0260%
Total Market Capitalization:		24,367,546					15.59%

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]

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
15.60%	3.12%	12.48%

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	22,205.70	0.10%	0.87%	12.00%	12.92%	0.0130%
AMERICAN AIRLINES GROUP INC	AAL	19,649.08	0.09%	0.95%	2.00%	2.96%	0.0026%
ADVANCE AUTO PARTS INC	AAP	8,741.45	0.04%	0.20%	13.00%	13.21%	0.0052%
APPLE INC	AAPL	939,421.40	4.25%	1.56%	13.00%	14.66%	0.6230%
ABBVIE INC	ABBV	163,199.30	0.74%	3.73%	15.00%	19.01%	0.1403%
AMERISOURCEBERGEN CORP	ABC	18,688.39	0.08%	1.78%	7.00%	8.84%	0.0075%
ABBOTT LABORATORIES	ABT	106,173.10	0.48%	1.85%	9.50%	11.44%	0.0549%
ACCENTURE PLC-CL A	ACN	99,791.13	0.45%	1.85%	9.50%	11.44%	0.0516%
ADOBE SYSTEMS INC	ADBE	118,858.00	0.54%	0.00%	25.50%	25.50%	0.1371%
ANALOG DEVICES INC	ADI	34,517.50	0.16%	2.06%	13.00%	15.19%	0.0237%
ARCHER-DANIELS-MIDLAND CO	ADM	24,540.10	0.11%	3.05%	6.00%	9.14%	0.0101%
AUTOMATIC DATA PROCESSING	ADP	56,395.55	0.26%	2.21%	11.00%	13.33%	0.0340%
ALLIANCE DATA SYSTEMS CORP	ADS	11,449.52	0.05%	1.10%	15.00%	16.18%	0.0084%
AUTODESK INC	ADSK	29,791.40	N/A	0.00%	N/A	N/A	N/A
AMEREN CORPORATION	AEE	13,724.42	0.06%	3.32%	6.00%	9.42%	0.0058%
AMERICAN ELECTRIC POWER	AEP	32,974.18	0.15%	3.79%	4.50%	8.38%	0.0125%
AES CORP	AES	8,141.39	N/A	4.22%	N/A	N/A	N/A
AETNA INC	AET	55,748.81	0.25%	1.17%	10.50%	11.73%	0.0296%
AFLAC INC	AFL	35,414.27	0.16%	2.34%	6.50%	8.92%	0.0143%
ALLERGAN PLC	AGN	51,497.49	0.23%	1.90%	5.00%	6.95%	0.0162%
AMERICAN INTERNATIONAL GROUP	AIG	47,424.63	0.21%	2.43%	52.00%	55.06%	0.1181%
APARTMENT INVT & MGMT CO -A	AIV	-	0.00%	3.70%	4.50%	8.28%	0.0000%
ASSURANT INC	AIZ	4,589.72	0.02%	2.56%	5.50%	8.13%	0.0017%
ARTHUR J GALLAGHER & CO	AJG	12,612.25	0.06%	2.37%	17.00%	19.57%	0.0112%
AKAMAI TECHNOLOGIES INC	AKAM	13,023.04	0.06%	0.00%	17.00%	17.00%	0.0100%
ALBEMARLE CORP	ALB	10,897.28	0.05%	1.36%	10.00%	11.43%	0.0056%
ALIGN TECHNOLOGY INC	ALGN	22,258.39	0.10%	0.00%	29.50%	29.50%	0.0297%
ALASKA AIR GROUP INC	ALK	7,470.08	0.03%	2.11%	6.00%	8.17%	0.0028%
ALLSTATE CORP	ALL	34,115.50	0.15%	1.92%	11.50%	13.53%	0.0209%
ALLEGION PLC	ALLE	7,340.82	0.03%	1.09%	9.50%	10.64%	0.0035%
ALEXION PHARMACEUTICALS INC	ALXN	25,838.93	0.12%	0.00%	18.00%	18.00%	0.0210%
APPLIED MATERIALS INC	AMAT	58,344.70	0.26%	1.44%	21.00%	22.59%	0.0596%
ADVANCED MICRO DEVICES	AMD	11,753.97	N/A	0.00%	N/A	N/A	N/A
AMETEK INC	AME	17,296.64	0.08%	0.75%	10.50%	11.29%	0.0088%
AFFILIATED MANAGERS GROUP	AMG	9,074.97	0.04%	0.85%	6.50%	7.38%	0.0030%
AMGEN INC	AMGN	113,801.10	0.51%	3.11%	6.50%	9.71%	0.0500%
AMERIPRISE FINANCIAL INC	AMP	19,651.39	0.09%	2.66%	16.00%	18.87%	0.0168%
AMERICAN TOWER CORP	AMT	61,774.87	0.28%	2.23%	11.50%	13.86%	0.0387%
AMAZON.COM INC	AMZN	780,403.80	3.53%	0.00%	48.00%	48.00%	1.6944%
ANDEAVOR	ANDV	21,256.79	0.10%	1.68%	5.50%	7.23%	0.0069%
ANSYS INC	ANSS	14,462.67	0.07%	0.00%	10.50%	10.50%	0.0069%
ANTHEM INC	ANTM	57,668.84	0.26%	1.33%	11.50%	12.91%	0.0337%
AON PLC	AON	35,367.64	0.16%	1.11%	9.50%	10.66%	0.0171%
SMITH (A.O.) CORP	AOS	10,966.78	0.05%	1.12%	13.00%	14.19%	0.0070%
APACHE CORP	APA	15,912.60	N/A	2.40%	N/A	N/A	N/A
ANADARKO PETROLEUM CORP	APC	34,461.72	N/A	1.46%	N/A	N/A	N/A
AIR PRODUCTS & CHEMICALS INC	APD	36,296.34	0.16%	2.66%	8.00%	10.77%	0.0177%
AMPHENOL CORP-CL A	APH	26,364.27	0.12%	1.05%	9.00%	10.10%	0.0120%
APTIV PLC	APTV	25,432.94	0.12%	0.92%	9.50%	10.46%	0.0120%
ALEXANDRIA REAL ESTATE EQUIT	ARE	N/A	N/A	0.00%	N/A	N/A	N/A
ARCONIC INC	ARNC	8,758.57	N/A	1.32%	N/A	N/A	N/A
ACTIVISION BLIZZARD INC	ATVI	55,467.27	0.25%	0.47%	13.50%	14.00%	0.0351%
AVALONBAY COMMUNITIES INC	AVB	-	0.00%	3.56%	7.00%	10.68%	0.0000%
BROADCOM INC	AVGO	99,835.21	0.45%	2.88%	38.00%	41.43%	0.1871%
AVERY DENNISON CORP	AVY	9,480.98	0.04%	1.93%	12.50%	14.55%	0.0062%
AMERICAN WATER WORKS CO INC	AWK	14,937.04	0.07%	2.20%	8.50%	10.79%	0.0073%
AMERICAN EXPRESS CO	AXP	87,186.80	0.39%	1.47%	8.50%	10.03%	0.0396%
ACUITY BRANDS INC	AYI	4,626.74	0.02%	0.46%	13.00%	13.49%	0.0028%
AUTOZONE INC	AZO	17,945.33	0.08%	0.00%	12.50%	12.50%	0.0101%
BOEING CO/THE	BA	201,013.30	0.91%	1.99%	16.00%	18.15%	0.1650%
BANK OF AMERICA CORP	BAC	317,774.80	1.44%	1.75%	13.00%	14.86%	0.2137%
BAXTER INTERNATIONAL INC	BAX	37,877.04	0.17%	1.08%	13.50%	14.65%	0.0251%
BB&T CORP	BBT	42,917.55	0.19%	2.83%	9.00%	11.96%	0.0232%
BEST BUY CO INC	BBY	22,741.68	0.10%	2.34%	10.50%	12.96%	0.0133%
BECTON DICKINSON AND CO	BDX	60,034.91	0.27%	1.35%	10.00%	11.42%	0.0310%
FRANKLIN RESOURCES INC	BEN	17,984.31	0.08%	2.95%	7.50%	10.56%	0.0086%
BROWN-FORMAN CORP-CLASS B	BF/B	27,617.46	0.12%	1.22%	14.00%	15.31%	0.0191%
BRIGHTHOUSE FINANCIAL INC	BHF	N/A	N/A	0.00%	N/A	N/A	N/A
BAKER HUGHES A GE CO	BHGE	15,267.96	N/A	1.99%	N/A	N/A	N/A
BIOGEN INC	BIIB	57,816.19	0.26%	0.00%	7.50%	7.50%	0.0196%
BANK OF NEW YORK MELLON CORP	BK	57,881.41	0.26%	1.68%	9.00%	10.76%	0.0282%
BOOKING HOLDINGS INC	BKNG	100,356.80	0.45%	0.00%	14.00%	14.00%	0.0636%
BLACKROCK INC	BLK	85,789.27	0.39%	2.15%	12.00%	14.28%	0.0554%
BALL CORP	BLL	13,550.16	0.06%	1.03%	21.00%	22.14%	0.0136%
BRISTOL-MYERS SQUIBB CO	BMY	83,118.75	0.38%	3.13%	15.00%	18.36%	0.0690%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	-	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	41,589.46	0.19%	0.00%	16.00%	16.00%	0.0301%
BORGWARNER INC	BWA	10,605.95	0.05%	1.35%	8.50%	9.91%	0.0048%
BOSTON PROPERTIES INC	BXP	-	0.00%	2.56%	3.50%	6.10%	0.0000%
CITIGROUP INC	C	185,048.70	0.84%	1.83%	11.00%	12.93%	0.1082%

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
CA INC	CA	14,468.08	0.07%	2.96%	7.00%	10.06%	0.0066%
CONAGRA BRANDS INC	CAG	14,859.28	0.07%	2.30%	6.50%	8.87%	0.0060%
CARDINAL HEALTH INC	CAH	17,243.10	0.08%	3.49%	11.00%	14.68%	0.0115%
CATERPILLAR INC	CAT	92,059.44	0.42%	2.03%	17.50%	19.71%	0.0821%
CHUBB LTD	CB	62,912.11	0.28%	2.10%	7.00%	9.17%	0.0261%
CBOE GLOBAL MARKETS INC	CBOE	11,864.21	0.05%	1.03%	15.50%	16.61%	0.0089%
CBRE GROUP INC - A	CBRE	16,036.04	0.07%	0.00%	12.00%	12.00%	0.0087%
CBS CORP-CLASS B NON VOTING	CBS	19,933.92	0.09%	1.38%	10.50%	11.95%	0.0108%
CROWN CASTLE INTL CORP	CCI	42,626.37	0.19%	4.19%	9.50%	13.89%	0.0268%
CARNIVAL CORP	CCL	47,512.66	0.21%	3.12%	12.50%	15.82%	0.0340%
CADENCE DESIGN SYS INC	CDNS	11,904.89	0.05%	0.00%	10.50%	10.50%	0.0057%
CELGENE CORP	CELG	60,310.40	0.27%	0.00%	19.50%	19.50%	0.0532%
CERNER CORP	CERN	19,993.85	0.09%	0.00%	9.00%	9.00%	0.0081%
CF INDUSTRIES HOLDINGS INC	CF	9,196.68	0.04%	3.30%	47.00%	51.08%	0.0212%
CITIZENS FINANCIAL GROUP	CFG	20,652.66	0.09%	2.13%	15.50%	17.80%	0.0166%
CHURCH & DWIGHT CO INC	CHD	11,679.24	0.05%	1.82%	9.00%	10.90%	0.0058%
C.H. ROBINSON WORLDWIDE INC	CHRW	11,786.48	0.05%	2.18%	9.50%	11.78%	0.0063%
CHARTER COMMUNICATIONS INC-A	CHTR	64,787.04	0.29%	0.00%	19.50%	19.50%	0.0571%
CIGNA CORP	CI	42,174.67	0.19%	0.02%	12.50%	12.52%	0.0239%
CINCINNATI FINANCIAL CORP	CINF	11,782.77	0.05%	2.95%	6.50%	9.55%	0.0051%
COLGATE-PALMOLIVE CO	CL	54,502.62	0.25%	2.69%	11.00%	13.84%	0.0341%
CLOROX COMPANY	CLX	15,578.82	0.07%	3.19%	8.00%	11.32%	0.0080%
COMERICA INC	CMA	16,886.93	0.08%	1.39%	17.00%	18.51%	0.0141%
COMCAST CORP-CLASS A	CMCSA	145,716.20	0.66%	2.41%	12.50%	15.06%	0.0993%
CME GROUP INC	CME	54,264.03	0.25%	1.75%	4.50%	6.29%	0.0154%
CHIPOTLE MEXICAN GRILL INC	CMG	11,845.75	0.05%	0.00%	18.00%	18.00%	0.0096%
CUMMINS INC	CMI	24,076.63	0.11%	2.96%	8.50%	11.59%	0.0126%
CMS ENERGY CORP	CMS	12,771.83	0.06%	3.23%	7.00%	10.34%	0.0060%
CENTENE CORP	CNC	19,988.44	0.09%	0.00%	14.00%	14.00%	0.0127%
CENTERPOINT ENERGY INC	CNP	11,483.01	0.05%	4.20%	8.50%	12.88%	0.0067%
CAPITAL ONE FINANCIAL CORP	COF	45,026.41	0.20%	1.73%	5.50%	7.28%	0.0148%
CABOT OIL & GAS CORP	COG	10,575.63	N/A	1.05%	N/A	N/A	N/A
ROCKWELL COLLINS INC	COL	22,056.98	0.10%	0.98%	12.50%	13.54%	0.0135%
COOPER COS INC/THE	COO	11,339.58	0.05%	0.03%	16.50%	16.53%	0.0085%
CONOCOPHILLIPS	COP	81,132.38	N/A	1.64%	N/A	N/A	N/A
COSTCO WHOLESALE CORP	COST	85,779.69	0.39%	1.17%	9.00%	10.22%	0.0397%
COTY INC-CL A	COTY	10,882.25	0.05%	3.45%	7.00%	10.57%	0.0052%
CAMPBELL SOUP CO	CPB	12,398.19	0.06%	3.40%	4.50%	7.98%	0.0045%
SALESFORCE.COM INC	CRM	94,346.82	N/A	0.00%	N/A	N/A	N/A
CISCO SYSTEMS INC	CSCO	225,388.40	1.02%	2.85%	7.50%	10.46%	0.1066%
CSX CORP	CSX	54,980.98	0.25%	1.40%	13.50%	14.99%	0.0373%
CINTAS CORP	CTAS	19,178.58	0.09%	0.99%	14.00%	15.06%	0.0131%
CENTURYLINK INC	CTL	20,925.46	0.09%	11.13%	5.50%	16.94%	0.0160%
COGNIZANT TECH SOLUTIONS-A	CTSH	44,506.70	0.20%	1.05%	11.50%	12.61%	0.0254%
CITRIX SYSTEMS INC	CTXS	14,837.61	0.07%	0.00%	6.50%	6.50%	0.0044%
CVS HEALTH CORP	CVS	63,439.04	0.29%	3.20%	9.00%	12.34%	0.0354%
CHEVRON CORP	CVX	246,169.50	1.11%	3.48%	12.50%	16.20%	0.1804%
CONCHO RESOURCES INC	CXO	23,198.69	0.10%	0.00%	20.50%	20.50%	0.0215%
DOMINION ENERGY INC	D	41,293.07	0.19%	5.48%	6.50%	12.16%	0.0227%
DELTA AIR LINES INC	DAL	36,571.00	0.17%	2.34%	10.50%	12.96%	0.0214%
DEERE & CO	DE	47,470.41	0.21%	1.64%	15.50%	17.27%	0.0371%
DISCOVER FINANCIAL SERVICES	DFS	26,314.03	0.12%	1.87%	8.00%	9.94%	0.0118%
DOLLAR GENERAL CORP	DG	25,239.16	0.11%	1.25%	12.50%	13.83%	0.0158%
QUEST DIAGNOSTICS INC	DGX	13,829.84	0.06%	1.97%	10.00%	12.07%	0.0075%
DR HORTON INC	DHI	16,481.70	0.07%	1.14%	12.00%	13.21%	0.0098%
DANAHER CORP	DHR	70,667.24	0.32%	0.63%	10.50%	11.16%	0.0357%
WALT DISNEY CO/THE	DIS	152,520.00	0.69%	1.65%	9.00%	10.72%	0.0740%
DISCOVERY INC - A	DISCA	9,097.03	0.04%	0.00%	15.00%	15.00%	0.0062%
DISH NETWORK CORP-A	DISH	14,834.87	0.07%	0.00%	1.00%	1.00%	0.0007%
DIGITAL REALTY TRUST INC	DLR	-	0.00%	3.81%	6.50%	10.43%	0.0000%
DOLLAR TREE INC	DLTR	21,959.92	0.10%	0.00%	19.50%	19.50%	0.0194%
DOVER CORP	DOV	11,860.71	0.05%	2.45%	10.50%	13.08%	0.0070%
DR PEPPER SNAPPLE GROUP INC	DPS	21,555.99	0.10%	2.01%	7.00%	9.08%	0.0089%
DUKE REALTY CORP	DRE	-	0.00%	2.84%	1.00%	3.85%	0.0000%
DARDEN RESTAURANTS INC	DRI	11,306.98	0.05%	2.78%	13.00%	15.96%	0.0082%
DTE ENERGY COMPANY	DTE	18,389.67	0.08%	3.61%	7.00%	10.74%	0.0089%
DUKE ENERGY CORP	DUK	54,790.16	0.25%	4.71%	5.50%	10.34%	0.0256%
DAVITA INC	DVA	11,737.51	0.05%	0.00%	9.00%	9.00%	0.0048%
DEVON ENERGY CORP	DVN	21,467.25	0.10%	0.78%	14.00%	14.83%	0.0144%
DOWDUPONT INC	DWDP	155,814.90	N/A	2.39%	N/A	N/A	N/A
DXC TECHNOLOGY CO	DXC	29,774.61	0.13%	0.69%	17.00%	17.75%	0.0239%
ELECTRONIC ARTS INC	EA	41,064.32	0.19%	0.00%	12.00%	12.00%	0.0223%
EBAY INC	EBAY	39,616.50	0.18%	0.00%	12.50%	12.50%	0.0224%
ECOLAB INC	ECL	42,599.91	0.19%	1.11%	8.00%	9.15%	0.0176%
CONSOLIDATED EDISON INC	ED	23,736.70	0.11%	3.80%	3.00%	6.86%	0.0074%
EQUIFAX INC	EFX	13,812.85	0.06%	1.36%	8.50%	9.92%	0.0062%
EDISON INTERNATIONAL	EIX	20,105.80	0.09%	4.02%	4.50%	8.61%	0.0078%
ESTEE LAUDER COMPANIES-CL A	EL	50,871.19	0.23%	1.13%	13.50%	14.71%	0.0338%
EASTMAN CHEMICAL CO	EMN	15,361.79	0.07%	2.08%	8.50%	10.67%	0.0074%
EMERSON ELECTRIC CO	EMR	45,451.57	0.21%	2.71%	11.50%	14.37%	0.0295%
EOG RESOURCES INC	EOG	68,849.80	0.31%	0.63%	27.50%	28.22%	0.0879%
EQUINIX INC	EQIX	31,509.29	0.14%	2.29%	26.00%	28.59%	0.0407%
EQUITY RESIDENTIAL	EQR	-	0.00%	3.43%	-13.00%	-9.79%	0.0000%
EQT CORP	EQT	8,953.17	0.04%	0.23%	20.50%	20.75%	0.0084%
EVERSOURCE ENERGY	ES	18,363.48	0.08%	3.54%	5.00%	8.63%	0.0072%
EXPRESS SCRIPTS HOLDING CO	ESRX	39,858.23	0.18%	0.00%	16.00%	16.00%	0.0288%
ESSEX PROPERTY TRUST INC	ESS	-	0.00%	3.07%	5.00%	8.15%	0.0000%
E*TRADE FINANCIAL CORP	ETFC	17,103.61	0.08%	0.00%	17.00%	17.00%	0.0132%
EATON CORP PLC	ETN	33,431.59	0.15%	3.45%	7.00%	10.57%	0.0160%
ENTERGY CORP	ETR	14,253.62	0.06%	4.56%	2.00%	6.61%	0.0043%
ENVISION HEALTHCARE CORP	EVHC	5,176.03	N/A	0.00%	N/A	N/A	N/A

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
EDWARDS LIFESCIENCES CORP	EW	28,682.77	0.13%	0.00%	15.00%	15.00%	0.0195%
EXELON CORP	EXC	39,097.80	0.18%	3.57%	8.00%	11.71%	0.0207%
EXPEDITORS INTL WASH INC	EXPD	12,494.40	0.06%	1.26%	9.00%	10.32%	0.0058%
EXPEDIA GROUP INC	EXPE	17,287.62	0.08%	1.05%	21.00%	22.16%	0.0173%
EXTRA SPACE STORAGE INC	EXR	-	0.00%	3.41%	9.00%	12.56%	0.0000%
FORD MOTOR CO	F	44,671.33	0.20%	5.35%	2.50%	7.92%	0.0160%
FASTENAL CO	FAST	14,766.97	0.07%	2.88%	7.50%	10.49%	0.0070%
FACEBOOK INC-A	FB	538,408.10	2.44%	0.00%	28.50%	28.50%	0.6941%
FORTUNE BRANDS HOME & SECURI	FBHS	8,143.96	0.04%	1.43%	14.00%	15.53%	0.0057%
FREEPORT-MCMORAN INC	FCX	23,502.78	N/A	1.23%	N/A	N/A	N/A
FEDEX CORP	FDX	66,189.16	0.30%	0.93%	11.00%	11.98%	0.0359%
FIRSTENERGY CORP	FE	16,171.99	0.07%	4.25%	3.00%	7.31%	0.0054%
F5 NETWORKS INC	FFIV	10,558.23	0.05%	0.00%	10.00%	10.00%	0.0048%
FIDELITY NATIONAL INFO SERV	FIS	34,620.30	0.16%	1.22%	16.00%	17.32%	0.0271%
FISERV INC	FISV	30,064.63	0.14%	0.00%	10.00%	10.00%	0.0136%
FIFTH THIRD BANCORP	FITB	23,246.93	0.11%	2.12%	8.50%	10.71%	0.0113%
FOOT LOCKER INC	FL	5,016.04	0.02%	3.30%	7.50%	10.92%	0.0025%
FLIR SYSTEMS INC	FLIR	7,591.53	0.03%	1.18%	11.50%	12.75%	0.0044%
FLUOR CORP	FLR	6,518.12	0.03%	1.81%	4.00%	5.85%	0.0017%
FLOWSERVE CORP	FLS	6,249.30	0.03%	1.59%	2.00%	3.61%	0.0010%
FMC CORP	FMC	11,760.56	0.05%	0.85%	19.00%	19.93%	0.0106%
TWENTY-FIRST CENTURY FOX-A	FOXA	70,248.16	0.32%	0.95%	13.00%	14.01%	0.0445%
FEDERAL REALTY INVS TRUST	FRT	-	0.00%	3.39%	4.00%	7.46%	0.0000%
TECHNIPFMC PLC	FTI	N/A	N/A	0.00%	N/A	N/A	N/A
FORTIVE CORP	FTV	26,272.81	N/A	0.37%	N/A	N/A	N/A
GENERAL DYNAMICS CORP	GD	59,902.65	0.27%	1.85%	8.50%	10.43%	0.0283%
GENERAL ELECTRIC CO	GE	127,517.60	0.58%	3.27%	9.50%	12.93%	0.0746%
GGP INC	GGP	-	0.00%	4.70%	-0.50%	4.19%	0.0000%
GILEAD SCIENCES INC	GILD	85,438.59	0.39%	3.49%	-1.00%	2.47%	0.0096%
GENERAL MILLS INC	GIS	24,297.66	0.11%	4.60%	4.00%	8.69%	0.0096%
CORNING INC	GLW	22,763.52	0.10%	2.63%	13.00%	15.80%	0.0163%
GENERAL MOTORS CO	GM	52,367.10	0.24%	4.20%	3.50%	7.77%	0.0184%
ALPHABET INC-CL A	GOOGL	N/A	N/A	0.00%	N/A	N/A	N/A
GENUINE PARTS CO	GPC	13,290.06	0.06%	3.18%	7.50%	10.80%	0.0065%
GLOBAL PAYMENTS INC	GPN	18,505.83	0.08%	0.03%	11.00%	11.03%	0.0092%
GAP INC/THE	GPS	11,203.20	0.05%	3.37%	6.50%	9.98%	0.0051%
GARMIN LTD	GRMN	11,158.56	0.05%	3.58%	7.00%	10.71%	0.0054%
GOLDMAN SACHS GROUP INC	GS	92,479.70	0.42%	1.31%	9.00%	10.37%	0.0434%
GOODYEAR TIRE & RUBBER CO	GT	6,175.20	0.03%	2.41%	12.50%	15.06%	0.0042%
WW GRAINGER INC	GWW	16,908.28	0.08%	1.81%	8.50%	10.39%	0.0079%
HALLIBURTON CO	HAL	46,121.25	N/A	1.37%	N/A	N/A	N/A
HASBRO INC	HAS	10,870.21	0.05%	2.90%	9.50%	12.54%	0.0062%
HUNTINGTON BANCSHARES INC	HBAN	16,230.47	0.07%	3.04%	9.00%	12.18%	0.0089%
HANESBRANDS INC	HBI	5,974.84	0.03%	4.10%	6.00%	10.22%	0.0028%
HCA HEALTHCARE INC	HCA	35,504.66	0.16%	1.38%	13.00%	14.47%	0.0232%
HCP INC	HCP	-	0.00%	6.19%	8.00%	14.44%	0.0000%
HOME DEPOT INC	HD	216,731.30	0.98%	2.20%	12.00%	14.33%	0.1405%
HESS CORP	HES	19,499.88	N/A	1.58%	N/A	N/A	N/A
HARTFORD FINANCIAL SVCS GRP	HIG	18,844.46	0.09%	1.89%	13.00%	15.01%	0.0128%
HUNTINGTON INGALLS INDUSTRIE	HII	9,919.04	0.04%	1.30%	9.50%	10.86%	0.0049%
HILTON WORLDWIDE HOLDINGS IN	HLT	27,428.32	0.12%	0.73%	8.50%	9.26%	0.0115%
HARLEY-DAVIDSON INC	HOG	6,762.34	0.03%	3.64%	9.00%	12.80%	0.0039%
HOLOGIC INC	HOLX	10,456.84	0.05%	0.00%	22.00%	22.00%	0.0104%
HONEYWELL INTERNATIONAL INC	HON	110,022.80	0.50%	2.02%	9.50%	11.62%	0.0578%
HELMERICH & PAYNE	HP	7,514.69	0.03%	4.06%	56.50%	61.71%	0.0210%
HEWLETT PACKARD ENTERPRISE	HPE	27,657.55	0.13%	2.55%	-0.50%	2.04%	0.0026%
HP INC	HPQ	37,332.75	0.17%	2.55%	5.50%	8.12%	0.0137%
H&R BLOCK INC	HRB	5,809.33	0.03%	3.53%	10.50%	14.22%	0.0037%
HORMEL FOODS CORP	HRL	19,169.66	0.09%	2.10%	9.50%	11.70%	0.0101%
HARRIS CORP	HRS	18,578.44	0.08%	1.51%	11.50%	13.10%	0.0110%
HENRY SCHEIN INC	HSIC	11,185.29	0.05%	0.00%	9.00%	9.00%	0.0046%
HOST HOTELS & RESORTS INC	HST	-	0.00%	3.82%	-1.00%	2.80%	0.0000%
HERSHEY CO/THE	HSY	19,445.87	0.09%	2.82%	7.50%	10.43%	0.0092%
HUMANA INC	HUM	40,272.24	0.18%	0.71%	13.00%	13.76%	0.0251%
INTL BUSINESS MACHINES CORP	IBM	133,015.10	0.60%	4.37%	1.00%	5.39%	0.0324%
INTERCONTINENTAL EXCHANGE IN	ICE	41,471.78	0.19%	1.35%	11.50%	12.93%	0.0243%
IDEXX LABORATORIES INC	IDXX	18,191.07	0.08%	0.00%	17.00%	17.00%	0.0140%
INTL FLAVORS & FRAGRANCES	IFF	10,057.57	0.05%	2.26%	8.00%	10.35%	0.0047%
ILLUMINA INC	ILMN	38,952.06	0.18%	0.00%	16.00%	16.00%	0.0282%
INCYTE CORP	INCY	13,829.93	N/A	0.00%	N/A	N/A	N/A
IHS MARKIT LTD	INFO	20,713.64	0.09%	0.00%	19.50%	19.50%	0.0183%
INTEL CORP	INTC	257,691.30	1.17%	2.18%	13.00%	15.32%	0.1786%
INTUIT INC	INTU	49,755.56	0.23%	0.80%	14.50%	15.36%	0.0346%
INTERNATIONAL PAPER CO	IP	21,880.57	0.10%	3.60%	15.50%	19.38%	0.0192%
INTERPUBLIC GROUP OF COS INC	IPG	9,333.44	0.04%	3.47%	9.50%	13.13%	0.0055%
IPG PHOTONICS CORP	IPGP	13,466.24	0.06%	0.00%	13.50%	13.50%	0.0082%
IQVIA HOLDINGS INC	IQV	20,963.16	0.09%	0.00%	14.50%	14.50%	0.0137%
INGERSOLL-RAND PLC	IR	22,005.04	0.10%	2.03%	9.00%	11.12%	0.0111%
IRON MOUNTAIN INC	IRM	9,641.32	0.04%	7.00%	9.50%	16.83%	0.0073%
INTUITIVE SURGICAL INC	ISRG	53,069.72	0.24%	0.00%	17.50%	17.50%	0.0420%
GARTNER INC	IT	12,256.02	0.06%	0.00%	13.50%	13.50%	0.0075%
ILLINOIS TOOL WORKS	ITW	49,403.82	0.22%	2.14%	11.50%	13.76%	0.0308%
INVESCO LTD	IVZ	11,558.87	0.05%	4.26%	7.50%	11.92%	0.0062%
HUNT (JB) TRANSPRT SVCS INC	JBHT	13,488.64	0.06%	0.78%	12.00%	12.83%	0.0078%
JOHNSON CONTROLS INTERNATION	JCI	34,010.21	0.15%	2.83%	3.00%	5.87%	0.0090%
JACOBS ENGINEERING GROUP INC	JEC	9,035.75	0.04%	0.94%	11.00%	11.99%	0.0049%
JOHNSON & JOHNSON	JNJ	336,212.40	1.52%	2.87%	9.00%	12.00%	0.1825%
JUNIPER NETWORKS INC	JNPR	9,192.66	0.04%	2.73%	4.50%	7.29%	0.0030%
JPMORGAN CHASE & CO	JPM	391,477.30	1.77%	2.07%	9.50%	11.67%	0.2066%
NORDSTROM INC	JWN	8,112.86	0.04%	3.05%	5.50%	8.63%	0.0032%
KELLOGG CO	K	21,180.88	0.10%	3.64%	7.00%	10.77%	0.0103%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
KEYCORP	KEY	21,596.96	0.10%	2.37%	12.50%	15.02%	0.0147%
KRAFT HEINZ CO/THE	KHC	72,146.88	0.33%	4.37%	9.50%	14.08%	0.0459%
KIMCO REALTY CORP	KIM	-	0.00%	7.83%	-0.50%	7.31%	0.0000%
KLA-TENCOR CORP	KLAC	17,394.22	0.08%	2.70%	15.50%	18.41%	0.0145%
KIMBERLY-CLARK CORP	KMB	36,270.83	0.16%	3.85%	9.50%	13.53%	0.0222%
KINDER MORGAN INC	KMI	36,365.44	0.16%	4.85%	57.00%	63.23%	0.1040%
CARMAX INC	KMX	11,484.62	0.05%	0.00%	11.50%	11.50%	0.0060%
COCA-COLA CO/THE	KO	179,644.60	0.81%	3.70%	6.50%	10.32%	0.0839%
MICHAEL KORS HOLDINGS LTD	KORS	9,571.31	0.04%	0.00%	5.00%	5.00%	0.0022%
KROGER CO	KR	21,193.20	0.10%	2.46%	5.00%	7.52%	0.0072%
KOHLS CORP	KSS	10,169.04	0.05%	4.03%	7.50%	11.68%	0.0054%
KANSAS CITY SOUTHERN	KSU	11,312.32	0.05%	1.31%	12.50%	13.89%	0.0071%
LOEWS CORP	L	17,242.78	0.08%	0.48%	16.50%	17.02%	0.0133%
L BRANDS INC	LB	8,933.76	0.04%	7.73%	0.50%	8.25%	0.0033%
LEGGETT & PLATT INC	LEG	5,493.65	0.02%	3.44%	9.00%	12.59%	0.0031%
LENNAR CORP-A	LEN	17,648.82	0.08%	0.31%	12.00%	12.33%	0.0098%
LABORATORY CRP OF AMER HLDGS	LH	17,765.40	0.08%	0.00%	9.50%	9.50%	0.0076%
LKQ CORP	LKQ	9,375.63	0.04%	0.00%	11.50%	11.50%	0.0049%
L3 TECHNOLOGIES INC	LLL	15,330.34	0.07%	1.64%	11.00%	12.73%	0.0088%
ELI LILLY & CO	LLY	87,767.87	0.40%	2.78%	11.50%	14.44%	0.0573%
LOCKHEED MARTIN CORP	LMT	92,651.30	0.42%	2.53%	12.50%	15.19%	0.0637%
LINCOLN NATIONAL CORP	LNC	14,760.33	0.07%	2.01%	7.50%	9.59%	0.0064%
ALLIANT ENERGY CORP	LNT	9,662.06	0.04%	3.21%	6.50%	9.81%	0.0043%
LOWE'S COS INC	LOW	70,608.11	0.32%	2.07%	13.50%	15.71%	0.0502%
LAM RESEARCH CORP	LRCX	33,478.04	0.15%	2.16%	19.50%	21.87%	0.0331%
LEUCADIA NATIONAL CORP	LUK	8,855.39	0.04%	1.61%	24.00%	25.80%	0.0103%
SOUTHWEST AIRLINES CO	LUV	30,569.34	0.14%	0.96%	11.50%	12.52%	0.0173%
LYONDELLBASELL INDU-CL A	LYB	44,235.25	0.20%	3.56%	3.50%	7.12%	0.0143%
MACY'S INC	M	8,966.19	0.04%	5.13%	5.00%	10.26%	0.0042%
MASTERCARD INC - A	MA	203,474.70	0.92%	0.52%	15.00%	15.56%	0.1432%
MID-AMERICA APARTMENT COMM	MAA	-	0.00%	3.97%	-2.50%	1.42%	0.0000%
MACERICH CO/THE	MAC	-	0.00%	5.25%	8.00%	13.46%	0.0000%
MARRIOTT INTERNATIONAL -CL A	MAR	49,164.64	0.22%	1.18%	12.50%	13.75%	0.0306%
MASCO CORP	MAS	11,660.88	0.05%	1.11%	16.00%	17.20%	0.0091%
MATTEL INC	MAT	4,991.44	0.02%	0.00%	26.50%	26.50%	0.0060%
MCDONALD'S CORP	MCD	129,613.00	0.59%	2.48%	10.00%	12.60%	0.0739%
MICROCHIP TECHNOLOGY INC	MCHP	21,831.21	0.10%	1.57%	13.50%	15.18%	0.0150%
MCKESSON CORP	MCK	30,385.48	0.14%	0.92%	9.50%	10.46%	0.0144%
MOODY'S CORP	MCO	33,352.03	0.15%	1.01%	12.00%	13.07%	0.0197%
MONDELEZ INTERNATIONAL INC-A	MDLZ	58,186.11	0.26%	2.48%	9.50%	12.10%	0.0318%
MEDTRONIC PLC	MDT	116,118.80	0.53%	2.24%	7.50%	9.82%	0.0516%
METLIFE INC	MET	48,933.84	0.22%	3.58%	6.00%	9.69%	0.0214%
MGM RESORTS INTERNATIONAL	MGM	18,579.38	0.08%	1.44%	25.00%	26.62%	0.0224%
MOHAWK INDUSTRIES INC	MHK	15,765.96	0.07%	0.00%	10.00%	10.00%	0.0071%
MCCORMICK & CO-NON VTG SHRS	MKC	14,096.89	0.06%	1.96%	9.50%	11.55%	0.0074%
MARTIN MARIETTA MATERIALS	MLM	13,248.60	0.06%	0.84%	12.00%	12.89%	0.0077%
MARSH & MCLENNAN COS	MMC	41,597.38	0.19%	1.83%	9.00%	10.91%	0.0205%
3M CO	MMM	121,724.70	0.55%	2.65%	9.50%	12.28%	0.0676%
MONSTER BEVERAGE CORP	MNST	31,197.44	0.14%	0.00%	14.50%	14.50%	0.0205%
ALTRIA GROUP INC	MO	106,130.00	0.48%	5.00%	10.50%	15.76%	0.0757%
MONSANTO CO	MON	55,101.59	0.25%	1.73%	12.50%	14.34%	0.0357%
MOSAIC CO/THE	MOS	10,167.27	0.05%	0.38%	10.00%	10.40%	0.0048%
MARATHON PETROLEUM CORP	MPC	36,211.18	0.16%	2.49%	8.50%	11.10%	0.0182%
MERCK & CO. INC.	MRK	158,295.10	0.72%	3.31%	5.50%	8.90%	0.0637%
MARATHON OIL CORP	MRO	18,032.42	N/A	0.95%	N/A	N/A	N/A
MORGAN STANLEY	MS	98,623.20	0.45%	1.82%	11.00%	12.92%	0.0576%
MSCI INC	MSCI	14,364.12	0.06%	1.08%	22.50%	23.70%	0.0154%
MICROSOFT CORP	MSFT	754,396.60	3.41%	1.72%	12.00%	13.82%	0.4717%
MOTOROLA SOLUTIONS INC	MSI	17,628.38	0.08%	1.99%	14.00%	16.13%	0.0129%
M & T BANK CORP	MTB	27,875.10	0.13%	1.62%	12.00%	13.72%	0.0173%
METTLER-TOLEDO INTERNATIONAL	MTD	14,302.61	0.06%	0.00%	11.00%	11.00%	0.0071%
MICRON TECHNOLOGY INC	MU	60,980.29	0.28%	0.00%	24.00%	24.00%	0.0662%
MYLAN NV	MYL	19,532.56	0.09%	0.00%	8.50%	8.50%	0.0075%
NAVIENT CORP	NAVI	3,596.05	0.02%	4.72%	5.00%	9.84%	0.0016%
NOBLE ENERGY INC	NBL	17,270.95	N/A	1.25%	N/A	N/A	N/A
NORWEGIAN CRUISE LINE HOLDIN	NCLH	11,548.29	0.05%	0.00%	16.50%	16.50%	0.0086%
NASDAQ INC	NDAQ	15,087.00	0.07%	1.95%	9.00%	11.04%	0.0075%
NEXTERA ENERGY INC	NEE	75,468.34	0.34%	2.86%	8.50%	11.48%	0.0392%
NEWMONT MINING CORP	NEM	21,563.50	0.10%	1.39%	8.50%	9.95%	0.0097%
NETFLIX INC	NFLX	143,262.90	0.65%	0.00%	47.00%	47.00%	0.3046%
NEWFIELD EXPLORATION CO	NFX	5,610.30	0.03%	0.00%	19.00%	19.00%	0.0048%
NISOURCE INC	NI	8,409.57	0.04%	3.13%	18.00%	21.41%	0.0081%
NIKE INC -CL B	NKE	109,962.50	0.50%	1.18%	14.00%	15.26%	0.0759%
NEKTAR THERAPEUTICS	NKTR	12,130.90	N/A	0.00%	N/A	N/A	N/A
NIELSEN HOLDINGS PLC	NLSN	10,793.62	0.05%	4.62%	9.00%	13.83%	0.0068%
NORTHROP GRUMMAN CORP	NOC	56,823.41	0.26%	1.35%	8.50%	9.91%	0.0255%
NATIONAL OILWELL VARCO INC	NOV	15,436.02	0.07%	0.49%	41.50%	42.09%	0.0294%
NRG ENERGY INC	NRG	10,974.71	N/A	0.35%	N/A	N/A	N/A
NORFOLK SOUTHERN CORP	NSC	42,878.58	0.19%	1.90%	11.50%	13.51%	0.0262%
NETAPP INC	NTAP	19,250.44	0.09%	1.11%	14.00%	15.19%	0.0132%
NORTHERN TRUST CORP	NTRS	24,276.53	0.11%	1.56%	11.00%	12.65%	0.0139%
NUCOR CORP	NUE	20,299.00	0.09%	2.38%	20.00%	22.62%	0.0208%
NVIDIA CORP	NVDA	157,638.80	0.71%	0.23%	24.00%	24.26%	0.1730%
NEWELL BRANDS INC	NWL	13,317.89	0.06%	3.36%	9.00%	12.51%	0.0075%
NEWS CORP - CLASS A	NWSA	9,667.29	N/A	1.21%	N/A	N/A	N/A
REALTY INCOME CORP	O	-	0.00%	4.99%	4.00%	9.09%	0.0000%
ONEOK INC	OKE	26,843.13	0.12%	4.87%	17.50%	22.80%	0.0277%
OMNICOM GROUP	OMC	16,960.38	0.08%	3.22%	7.00%	10.33%	0.0079%
ORACLE CORP	ORCL	192,084.50	0.87%	1.62%	8.00%	9.68%	0.0841%
O'REILLY AUTOMOTIVE INC	ORLY	21,817.47	0.10%	0.00%	11.50%	11.50%	0.0113%
OCCIDENTAL PETROLEUM CORP	OXY	64,217.47	0.29%	3.72%	21.00%	25.11%	0.0729%

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
PAYCHEX INC	PAYX	22,632.31	0.10%	3.56%	10.50%	14.25%	0.0146%
PEOPLE'S UNITED FINANCIAL	PBCT	6,471.02	0.03%	3.75%	10.50%	14.45%	0.0042%
PACCAR INC	PCAR	22,430.77	0.10%	3.59%	6.50%	10.21%	0.0104%
P G & E CORP	PCG	22,384.25	0.10%	0.00%	7.50%	7.50%	0.0076%
PUBLIC SERVICE ENTERPRISE GP	PEG	25,820.65	0.12%	3.56%	4.00%	7.63%	0.0089%
PEPSICO INC	PEP	138,026.10	0.62%	3.81%	7.50%	11.45%	0.0715%
PFIZER INC	PFE	208,863.20	0.94%	3.88%	13.00%	17.13%	0.1619%
PRINCIPAL FINANCIAL GROUP	PFG	16,978.75	0.08%	3.54%	5.00%	8.63%	0.0066%
PROCTER & GAMBLE CO/THE	PG	183,942.90	0.83%	3.92%	9.00%	13.10%	0.1090%
PROGRESSIVE CORP	PGR	36,280.63	0.16%	1.80%	15.00%	16.94%	0.0278%
PARKER HANNIFIN CORP	PH	23,168.11	0.10%	1.75%	14.00%	15.87%	0.0166%
PULTEGROUP INC	PHM	8,876.51	0.04%	1.19%	15.50%	16.78%	0.0067%
PACKAGING CORP OF AMERICA	PKG	10,970.22	0.05%	2.17%	10.00%	12.28%	0.0061%
PERKINELMER INC	PKI	8,329.69	0.04%	0.37%	12.50%	12.89%	0.0049%
PROLOGIS INC	PLD	-	0.00%	2.96%	1.00%	3.97%	0.0000%
PHILIP MORRIS INTERNATIONAL	PM	129,020.70	0.58%	5.16%	8.50%	13.88%	0.0810%
PNC FINANCIAL SERVICES GROUP	PNC	70,894.80	0.32%	1.99%	9.50%	11.58%	0.0371%
PENTAIR PLC	PNR	7,918.55	0.04%	1.58%	12.00%	13.67%	0.0049%
PINNACLE WEST CAPITAL	PNW	8,745.33	0.04%	3.66%	5.00%	8.75%	0.0035%
PPG INDUSTRIES INC	PPG	26,652.07	0.12%	1.70%	7.50%	9.26%	0.0112%
PPL CORP	PPL	19,652.25	0.09%	5.89%	2.00%	7.95%	0.0071%
PERRIGO CO PLC	PRGO	10,636.03	0.05%	1.05%	3.50%	4.57%	0.0022%
PRUDENTIAL FINANCIAL INC	PRU	42,610.14	0.19%	3.57%	6.00%	9.68%	0.0187%
PUBLIC STORAGE	PSA	-	0.00%	3.97%	7.00%	11.11%	0.0000%
PHILLIPS 66	PSX	59,247.77	0.27%	2.71%	4.50%	7.27%	0.0195%
PVH CORP	PVH	11,808.23	0.05%	0.10%	11.00%	11.11%	0.0059%
QUANTA SERVICES INC	PWR	5,424.50	0.02%	0.00%	17.50%	17.50%	0.0043%
PRAXAIR INC	PX	45,038.32	0.20%	2.15%	8.50%	10.74%	0.0219%
PIONEER NATURAL RESOURCES CO	PXD	34,627.44	0.16%	0.16%	72.00%	72.22%	0.1131%
PAYPAL HOLDINGS INC	PYPL	95,028.00	0.43%	0.00%	16.50%	16.50%	0.0709%
QUALCOMM INC	QCOM	81,465.54	0.37%	4.51%	4.50%	9.11%	0.0336%
QORVO INC	QRVO	10,369.52	0.05%	0.00%	21.00%	21.00%	0.0098%
ROYAL CARIBBEAN CRUISES LTD	RCL	22,712.28	0.10%	2.24%	11.00%	13.36%	0.0137%
EVEREST RE GROUP LTD	RE	9,371.31	0.04%	2.32%	5.50%	7.88%	0.0033%
REGENCY CENTERS CORP	REG	-	0.00%	3.79%	12.50%	16.53%	0.0000%
REGENERON PHARMACEUTICALS	REGN	31,158.16	0.14%	0.00%	14.00%	14.00%	0.0197%
REGIONS FINANCIAL CORP	RF	21,757.04	0.10%	2.07%	13.00%	15.20%	0.0150%
ROBERT HALF INTL INC	RHI	7,791.88	0.04%	1.81%	6.50%	8.37%	0.0029%
RED HAT INC	RHT	30,352.48	0.14%	0.00%	20.50%	20.50%	0.0281%
RAYMOND JAMES FINANCIAL INC	RJF	13,516.74	0.06%	1.07%	14.00%	15.14%	0.0093%
RALPH LAUREN CORP	RL	8,858.45	0.04%	1.84%	3.00%	4.87%	0.0020%
RESMED INC	RMD	14,425.12	0.07%	1.43%	11.00%	12.51%	0.0082%
ROCKWELL AUTOMATION INC	ROK	22,355.75	0.10%	2.07%	8.50%	10.66%	0.0108%
ROPER TECHNOLOGIES INC	ROP	28,805.37	0.13%	0.59%	10.00%	10.62%	0.0138%
ROSS STORES INC	ROST	31,072.29	0.14%	1.11%	11.50%	12.67%	0.0178%
RANGE RESOURCES CORP	RRC	3,678.52	0.02%	0.54%	38.00%	38.64%	0.0064%
REPUBLIC SERVICES INC	RSG	22,568.87	0.10%	2.10%	12.50%	14.73%	0.0150%
RAYTHEON COMPANY	RTN	61,019.07	0.28%	1.63%	11.00%	12.72%	0.0351%
SBA COMMUNICATIONS CORP	SBAC	18,862.64	0.09%	0.00%	88.50%	88.50%	0.0755%
STARBUCKS CORP	SBUX	79,695.36	0.36%	2.26%	15.00%	17.43%	0.0628%
SCANA CORP	SCG	5,100.81	N/A	0.00%	N/A	N/A	N/A
SCHWAB (CHARLES) CORP	SCHW	79,544.80	0.36%	0.68%	15.50%	16.23%	0.0584%
SEALED AIR CORP	SEE	7,159.63	0.03%	1.45%	19.00%	20.59%	0.0067%
SHERWIN-WILLIAMS CO/THE	SHW	35,589.58	0.16%	0.90%	12.00%	12.95%	0.0209%
SVB FINANCIAL GROUP	SIVB	16,921.99	0.08%	0.00%	17.00%	17.00%	0.0130%
JM SMUCKER CO/THE	SJM	12,968.58	0.06%	2.79%	7.50%	10.39%	0.0061%
SCHLUMBERGER LTD	SLB	98,510.65	0.45%	2.81%	28.00%	31.20%	0.1390%
SL GREEN REALTY CORP	SLG	-	0.00%	3.29%	0.50%	3.80%	0.0000%
SNAP-ON INC	SNA	8,361.91	0.04%	2.22%	8.50%	10.81%	0.0041%
SYNOPSYS INC	SNPS	13,583.02	0.06%	0.00%	10.50%	10.50%	0.0065%
SOUTHERN CO/THE	SO	45,229.75	0.20%	5.41%	3.00%	8.49%	0.0174%
SIMON PROPERTY GROUP INC	SPG	-	0.00%	4.99%	4.00%	9.09%	0.0000%
S&P GLOBAL INC	SPGI	51,160.65	0.23%	1.00%	14.50%	15.57%	0.0360%
STERICYCLE INC	SRCL	5,467.65	0.02%	0.00%	6.50%	6.50%	0.0016%
SEMPRA ENERGY	SRE	28,086.96	0.13%	3.43%	8.50%	12.08%	0.0153%
SUNTRUST BANKS INC	STI	32,569.55	0.15%	2.38%	9.50%	11.99%	0.0177%
STATE STREET CORP	STT	37,191.13	0.17%	1.77%	10.00%	11.86%	0.0199%
SEAGATE TECHNOLOGY	STX	16,437.98	0.07%	4.40%	5.00%	9.51%	0.0071%
CONSTELLATION BRANDS INC-A	STZ	42,910.82	0.19%	1.45%	12.50%	14.04%	0.0273%
STANLEY BLACK & DECKER INC	SWK	22,087.94	0.10%	1.76%	10.00%	11.85%	0.0118%
SKYWORKS SOLUTIONS INC	SWKS	17,676.45	0.08%	1.32%	14.50%	15.92%	0.0127%
SYNCHRONY FINANCIAL	SYF	25,773.46	0.12%	1.77%	10.50%	12.36%	0.0144%
STRYKER CORP	SYK	63,194.78	0.29%	1.11%	14.50%	15.69%	0.0449%
SYMANTEC CORP	SYMC	18,131.02	0.08%	1.03%	7.50%	8.57%	0.0070%
SYSCO CORP	SYY	32,672.23	0.15%	2.30%	14.50%	16.97%	0.0251%
AT&T INC	T	195,983.60	0.89%	6.31%	5.50%	11.98%	0.1062%
MOLSON COORS BREWING CO -B	TAP	13,250.12	0.06%	3.01%	11.50%	14.68%	0.0088%
TRANSDIGM GROUP INC	TDG	17,575.43	0.08%	0.00%	11.00%	11.00%	0.0087%
TE CONNECTIVITY LTD	TEL	33,057.02	0.15%	1.87%	10.50%	12.47%	0.0186%
TARGET CORP	TGT	38,047.68	0.17%	3.53%	6.50%	10.14%	0.0175%
TIFFANY & CO	TIF	12,895.71	0.06%	2.05%	12.00%	14.17%	0.0083%
TJX COMPANIES INC	TJX	52,651.88	0.24%	1.87%	12.50%	14.49%	0.0345%
TORCHMARK CORP	TMK	9,783.95	0.04%	0.75%	10.00%	10.79%	0.0048%
THERMO FISHER SCIENTIFIC INC	TMO	86,024.70	0.39%	0.32%	9.50%	9.84%	0.0383%
TAPESTRY INC	TPR	13,224.41	0.06%	2.94%	13.50%	16.64%	0.0100%
TRIPADVISOR INC	TRIP	6,740.08	0.03%	0.00%	7.00%	7.00%	0.0021%
T ROWE PRICE GROUP INC	TROW	28,607.53	0.13%	2.41%	11.50%	14.05%	0.0182%
TRAVELERS COS INC/THE	TRV	35,520.83	0.16%	2.35%	3.00%	5.39%	0.0087%
TRACTOR SUPPLY COMPANY	TSCO	8,495.54	0.04%	1.83%	10.50%	12.43%	0.0048%
TYSON FOODS INC-CL A	TSN	24,920.96	0.11%	1.85%	10.50%	12.45%	0.0140%
TOTAL SYSTEM SERVICES INC	TSS	16,174.10	0.07%	0.59%	10.50%	11.12%	0.0081%

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
TAKE-TWO INTERACTIVE SOFTWRE	TTWO	13,382.88	N/A	0.00%	N/A	N/A	N/A
TIME WARNER INC	TWX	72,366.27	0.33%	1.74%	9.00%	10.82%	0.0354%
TEXAS INSTRUMENTS INC	TXN	107,959.50	0.49%	2.26%	9.50%	11.87%	0.0580%
TEXTRON INC	TXT	16,806.33	0.08%	0.12%	15.00%	15.13%	0.0115%
UNDER ARMOUR INC-CLASS A	UAA	8,241.40	0.04%	0.00%	3.00%	3.00%	0.0011%
UNITED CONTINENTAL HOLDINGS	UAL	18,446.65	0.08%	0.00%	2.50%	2.50%	0.0021%
UDR INC	UDR	-	0.00%	3.53%	-2.00%	1.49%	0.0000%
UNIVERSAL HEALTH SERVICES-B	UHS	11,177.79	0.05%	0.34%	10.50%	10.86%	0.0055%
ULTA BEAUTY INC	ULTA	15,115.82	0.07%	0.00%	21.00%	21.00%	0.0144%
UNITEDHEALTH GROUP INC	UNH	224,829.00	1.02%	1.28%	14.50%	15.87%	0.1614%
UNUM GROUP	UNM	8,528.19	0.04%	2.42%	12.00%	14.57%	0.0056%
UNION PACIFIC CORP	UNP	109,125.80	0.49%	2.07%	11.00%	13.18%	0.0651%
UNITED PARCEL SERVICE-CL B	UPS	98,259.38	0.44%	3.19%	8.50%	11.83%	0.0526%
UNITED RENTALS INC	URI	13,960.93	0.06%	0.00%	14.00%	14.00%	0.0088%
US BANCORP	USB	84,378.20	0.38%	2.42%	7.00%	9.50%	0.0363%
UNITED TECHNOLOGIES CORP	UTX	99,172.04	0.45%	2.26%	9.00%	11.36%	0.0510%
VISA INC-CLASS A SHARES	V	268,157.00	1.21%	0.69%	15.00%	15.74%	0.1909%
VARIAN MEDICAL SYSTEMS INC	VAR	10,837.11	0.05%	0.00%	10.00%	10.00%	0.0049%
VF CORP	VFC	30,744.59	0.14%	2.41%	7.50%	10.00%	0.0139%
VIACOM INC-CLASS B	VIAB	12,295.40	0.06%	2.62%	2.00%	4.65%	0.0026%
VALERO ENERGY CORP	VLO	49,336.95	0.22%	2.80%	7.00%	9.90%	0.0221%
VULCAN MATERIALS CO	VMC	16,631.80	0.08%	0.89%	18.00%	18.97%	0.0143%
VORNADO REALTY TRUST	VNO	13,363.18	0.06%	3.59%	-5.50%	-2.01%	-0.0012%
VERISK ANALYTICS INC	VRSK	17,484.09	0.08%	0.00%	9.50%	9.50%	0.0075%
VERISIGN INC	VRSN	12,085.85	0.05%	0.00%	12.00%	12.00%	0.0066%
VERTEX PHARMACEUTICALS INC	VRTX	38,243.74	N/A	0.00%	N/A	N/A	N/A
VENTAS INC	VTR	-	0.00%	5.94%	5.50%	11.60%	0.0000%
VERIZON COMMUNICATIONS INC	VZ	195,025.50	0.88%	5.00%	4.00%	9.10%	0.0803%
WATERS CORP	WAT	15,363.84	0.07%	0.00%	10.50%	10.50%	0.0073%
WALGREENS BOOTS ALLIANCE INC	WBA	63,278.20	0.29%	2.51%	12.00%	14.66%	0.0420%
WESTERN DIGITAL CORP	WDC	23,474.88	0.11%	2.53%	10.50%	13.16%	0.0140%
WEC ENERGY GROUP INC	WEC	19,623.37	0.09%	3.60%	7.00%	10.73%	0.0095%
WELLTOWER INC	WELL	-	0.00%	6.25%	7.00%	13.47%	0.0000%
WELLS FARGO & CO	WFC	266,357.70	1.20%	2.95%	5.00%	8.02%	0.0967%
WHIRLPOOL CORP	WHR	11,049.02	0.05%	2.96%	7.50%	10.57%	0.0053%
WILLIS TOWERS WATSON PLC	WLTW	20,563.63	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%	0.0193%
WILLIAMS COS INC	WMB	22,072.63	0.10%	5.10%	17.50%	23.05%	0.0230%
WALMART INC	WMT	245,423.90	1.11%	2.52%	5.50%	8.09%	0.0898%
WESTROCK CO	WRK	15,525.02	0.07%	2.84%	9.00%	11.97%	0.0084%
WESTERN UNION CO	WU	9,239.64	0.04%	3.79%	7.00%	10.92%	0.0046%
WEYERHAEUSER CO	WY	27,777.06	0.13%	3.48%	21.50%	25.35%	0.0319%
WYNDHAM WORLDWIDE CORP	WYN	11,202.76	0.05%	2.35%	8.50%	10.95%	0.0055%
WYNN RESORTS LTD	WYNN	20,756.54	0.09%	1.49%	27.00%	28.69%	0.0269%
CIMAREX ENERGY CO	XEC	9,335.26	0.04%	0.65%	27.50%	28.24%	0.0119%
XCEL ENERGY INC	XEL	23,016.96	0.10%	3.40%	5.50%	8.99%	0.0094%
XL GROUP LTD	XL	14,035.44	0.06%	1.61%	11.50%	13.20%	0.0084%
XILINX INC	XLNX	17,765.70	0.08%	2.07%	7.50%	9.65%	0.0078%
EXXON MOBIL CORP	XOM	346,247.70	1.57%	4.01%	9.00%	13.19%	0.2066%
DENTSPLY SIRONA INC	XRAY	10,583.20	0.05%	0.75%	8.50%	9.28%	0.0044%
XEROX CORP	XRX	7,469.74	0.03%	3.41%	4.50%	7.99%	0.0027%
XYLEM INC	XYL	13,069.80	0.06%	1.16%	15.50%	16.75%	0.0099%
YUM! BRANDS INC	YUM	28,706.52	0.13%	1.70%	7.50%	9.26%	0.0120%
ZIMMER BIOMET HOLDINGS INC	ZBH	23,847.09	0.11%	0.85%	5.00%	5.87%	0.0063%
ZIONS BANCORPORATION	ZION	11,385.55	0.05%	1.66%	15.00%	16.78%	0.0086%
ZOETIS INC	ZTS	40,455.07	0.18%	0.60%	14.00%	14.64%	0.0268%
Total Market Capitalization:		22,107,711.66					15.60%

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]

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1] Bloomberg	[2] Value Line
ALLETE, Inc.	ALE	0.590	0.750
Alliant Energy Corporation	LNT	0.525	0.700
Black Hills Corporation	BKH	0.641	0.900
El Paso Electric Company	EE	0.624	0.750
Hawaiian Electric Industries, Inc.	HE	0.517	0.650
IDACORP, Inc.	IDA	0.603	0.700
Northwestern Corporation	NWE	0.516	0.650
OGE Energy Corp.	OGE	0.649	0.950
PNM Resources, Inc.	PNM	0.650	0.700
Mean		0.591	0.750

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

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

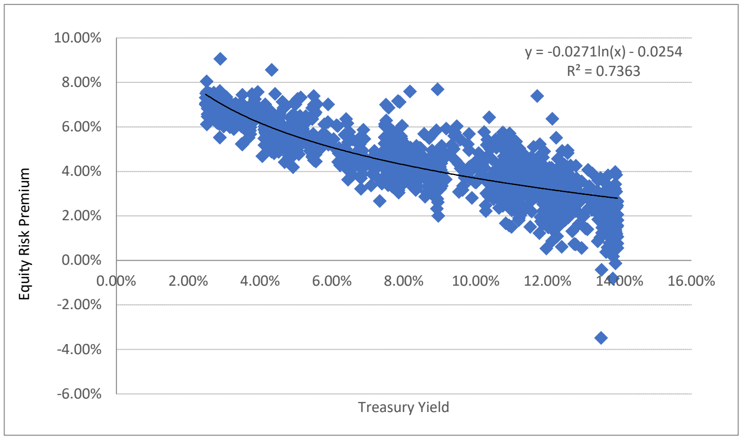
	[1]	[2]	[3]	[4]	[5]	[6]
					CAPM	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE BLOOMBERG BETA COEFFICIENT						
Current 30-Year Treasury [7]	3.12%	0.591	12.48%	12.48%	10.49%	10.49%
Near-Term Projected 30-Year Treasury [8]	3.52%	0.591	12.48%	12.48%	10.88%	10.89%
Mean					10.68%	10.69%

					CAPM	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE VALUE LINE AVERAGE BETA COEFFICIENT						
Current 30-Year Treasury [7]	3.12%	0.750	12.48%	12.48%	12.48%	12.48%
Near-Term Projected 30-Year Treasury [8]	3.52%	0.750	12.48%	12.48%	12.87%	12.88%
Mean					12.67%	12.68%

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

Bond Yield Plus Risk Premium

	[1]	[2]	[3]	[4]	[5]
	Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
	-2.54%	-2.71%			
Current 30-Year Treasury			3.12%	6.85%	9.97%
Near-Term Projected 30-Year Treasury			3.52%	6.52%	10.04%
Long-Term Projected 30-Year Treasury			4.20%	6.04%	10.24%



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. 5, May 1, 2018, at 2.
Long Term Projected = Blue Chip Financial Forecasts, Vol. 36, No. 12, December 1, 2017, 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]

Bond Yield Plus Risk Premium

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

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%
5/15/1981	15.75%	12.22%	3.53%
5/18/1981	14.88%	12.23%	2.65%
5/20/1981	16.00%	12.26%	3.74%
5/21/1981	14.00%	12.27%	1.73%
5/26/1981	14.90%	12.30%	2.60%
5/27/1981	15.00%	12.31%	2.69%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.37%	2.30%
6/5/1981	13.00%	12.39%	0.61%
6/10/1981	16.75%	12.42%	4.33%
6/17/1981	14.40%	12.46%	1.94%
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.51%	2.24%
6/26/1981	16.00%	12.52%	3.48%
6/30/1981	15.25%	12.54%	2.71%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.74%	0.74%
7/31/1981	13.50%	12.78%	0.72%
7/31/1981	15.00%	12.78%	2.22%
7/31/1981	16.00%	12.78%	3.22%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981	13.50%	12.95%	0.55%
8/20/1981	16.50%	12.95%	3.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.05%	1.45%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/1/1982	15.50%	13.15%	2.35%
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	14.63%	12.33%	2.30%
1/12/1983	15.50%	12.33%	3.17%
1/20/1983	17.75%	12.24%	5.51%
1/21/1983	15.00%	12.22%	2.78%
1/24/1983	14.50%	12.21%	2.29%
1/24/1983	15.50%	12.21%	3.29%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.17%	3.97%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.10%	1.90%
2/10/1983	15.00%	12.06%	2.94%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.97%	3.53%
2/23/1983	15.10%	11.96%	3.14%
2/23/1983	16.00%	11.96%	4.04%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.77%	1.23%
3/18/1983	15.25%	11.73%	3.52%
3/23/1983	15.40%	11.69%	3.71%
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983	16.71%	11.61%	5.10%
3/31/1983	15.00%	11.59%	3.41%
4/4/1983	15.20%	11.58%	3.62%
4/8/1983	15.50%	11.51%	3.99%
4/11/1983	14.81%	11.49%	3.32%
4/19/1983	14.50%	11.38%	3.12%
4/20/1983	16.00%	11.36%	4.64%
4/29/1983	16.00%	11.24%	4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983	16.46%	11.12%	5.34%
5/12/1983	14.14%	11.11%	3.03%
5/18/1983	15.00%	11.05%	3.95%
5/23/1983	14.90%	11.01%	3.89%
5/23/1983	15.50%	11.01%	4.49%
5/25/1983	15.50%	10.98%	4.52%
5/27/1983	15.00%	10.96%	4.04%
5/31/1983	14.00%	10.95%	3.05%
5/31/1983	15.50%	10.95%	4.55%
6/2/1983	14.50%	10.93%	3.57%
6/17/1983	15.03%	10.84%	4.19%
7/1/1983	14.80%	10.78%	4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.00%	10.74%	4.26%
7/19/1983	15.10%	10.74%	4.36%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%
9/7/1983	15.00%	10.86%	4.14%

Bond Yield Plus Risk Premium

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

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
6/14/1985	15.50%	11.61%	3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.33%	3.17%
8/2/1985	14.80%	11.29%	3.51%
8/7/1985	15.00%	11.27%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.15%	3.35%
9/9/1985	14.60%	11.11%	3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.50%	11.05%	4.45%
9/27/1985	15.80%	11.05%	4.75%
10/2/1985	14.00%	11.03%	2.97%
10/2/1985	14.75%	11.03%	3.72%
10/3/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985	15.50%	10.90%	4.60%
11/8/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.23%	5.77%
2/24/1986	14.50%	10.18%	4.32%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986	13.40%	9.69%	3.71%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.32%	5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986	15.10%	9.18%	5.92%
6/2/1986	12.81%	9.17%	3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986	12.00%	8.91%	3.09%
6/26/1986	14.75%	8.91%	5.84%
6/30/1986	13.00%	8.87%	4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.66%	3.74%
7/25/1986	14.25%	8.57%	5.68%
8/6/1986	13.50%	8.44%	5.06%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
3/24/1988	11.24%	8.92%	2.32%
3/30/1988	12.72%	8.92%	3.80%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.93%	4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.99%	4.51%
5/16/1988	13.00%	8.99%	4.01%
6/30/1988	12.75%	9.00%	3.75%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.92%	3.83%
8/23/1988	11.70%	8.93%	2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%
12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989	13.00%	9.05%	3.95%
3/30/1989	14.00%	9.05%	4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.00%	4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
1/10/1990	12.80%	8.24%	4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.20%	3.80%
2/9/1990	12.10%	8.17%	3.93%
2/24/1990	12.86%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%
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%

Bond Yield Plus Risk Premium

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

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.39%	3.46%
11/9/1994	10.85%	7.39%	3.46%
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.49%	3.57%
12/8/1994	11.50%	7.54%	3.96%
12/8/1994	11.70%	7.54%	4.16%
12/14/1994	10.95%	7.56%	3.39%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%
1/9/1995	12.28%	7.64%	4.64%
1/31/1995	11.00%	7.69%	3.31%
2/10/1995	12.60%	7.70%	4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.71%	3.79%
3/20/1995	12.00%	7.72%	4.28%
3/23/1995	12.81%	7.72%	5.09%
3/29/1995	11.60%	7.72%	3.88%
4/6/1995	11.10%	7.71%	3.39%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995	11.63%	7.68%	3.95%
5/25/1995	11.20%	7.65%	3.55%
6/9/1995	11.25%	7.60%	3.65%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.52%	3.58%
9/11/1995	11.30%	7.20%	4.10%
9/27/1995	11.30%	7.12%	4.18%
9/27/1995	11.50%	7.12%	4.38%
9/27/1995	11.75%	7.12%	4.63%
9/29/1995	11.00%	7.11%	3.89%
11/9/1995	11.38%	6.90%	4.48%
11/9/1995	12.36%	6.90%	5.46%
11/17/1995	11.00%	6.86%	4.14%
12/4/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.70%	4.90%
12/27/1995	12.00%	6.66%	5.34%
2/5/1996	12.25%	6.48%	5.77%
3/29/1996	10.67%	6.42%	4.25%
4/8/1996	11.00%	6.42%	4.58%
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
4/24/1996	11.25%	6.43%	4.82%
4/30/1996	11.00%	6.43%	4.57%
5/13/1996	11.00%	6.44%	4.56%
5/23/1996	11.25%	6.43%	4.82%
6/25/1996	11.25%	6.48%	4.77%
6/27/1996	11.20%	6.48%	4.72%
8/12/1996	10.40%	6.57%	3.83%
9/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
2/28/2003	12.30%	5.05%	7.25%
3/6/2003	10.75%	5.03%	5.72%
3/7/2003	9.96%	5.02%	4.94%
3/20/2003	12.00%	4.98%	7.02%
4/3/2003	12.00%	4.96%	7.04%
4/15/2003	11.15%	4.94%	6.21%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003	9.75%	4.79%	4.96%
7/16/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.80%	4.70%
8/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
1/13/2004	12.00%	4.95%	7.05%
3/2/2004	10.75%	4.99%	5.76%
3/26/2004	10.25%	5.02%	5.23%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.08%	5.17%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
7/16/2004	11.60%	5.11%	6.49%
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%
12/29/2004	9.85%	5.07%	4.78%
1/6/2005	10.70%	5.08%	5.62%
2/18/2005	10.30%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005	10.25%	4.87%	5.38%
5/18/2005	10.25%	4.78%	5.47%
5/25/2005	10.75%	4.76%	5.99%
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005	11.50%	4.64%	6.86%
8/5/2005	11.75%	4.62%	7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%
12/22/2005	11.15%	4.54%	6.61%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.53%	6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006	10.20%	4.83%	5.37%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.89%	4.66%
9/1/2006	10.54%	4.90%	5.64%
9/14/2006	10.00%	4.91%	5.09%
10/6/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/1/2006	10.25%	4.95%	5.30%
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
1/5/2007	10.00%	4.95%	5.05%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.90%	4.95%	5.95%
1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.87%	6.48%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007	9.67%	4.80%	4.87%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/22/2007	10.50%	4.83%	5.67%
6/28/2007	10.75%	4.84%	5.91%
7/12/2007	9.67%	4.86%	4.81%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
8/15/2007	10.40%	4.88%	5.52%
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.79%	6.21%
4/30/2009	11.25%	3.78%	7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%
7/17/2009	10.50%	3.78%	6.72%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.30%	6.70%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.70%	4.35%	6.35%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.87%	6.84%
12/19/2012	10.25%	2.87%	7.38%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
7/12/2013	9.36%	3.07%	6.29%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013	10.20%	3.31%	6.89%
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.48%	5.24%
12/9/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%
12/17/2013	10.95%	3.51%	7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%
12/30/2013	9.50%	3.54%	5.96%
2/20/2014	9.20%	3.68%	5.52%
2/26/2014	9.75%	3.69%	6.06%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%

Bond Yield Plus Risk Premium

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

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
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%

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
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%
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%
		# of Cases:	1553
		Average:	4.63%

Proxy Group Capital Structure

		% Common Equity								
Company	Ticker	2018Q1	2017Q4	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	Average
ALLETE, Inc.	ALE	63.09%	62.51%	61.03%	60.62%	60.28%	59.02%	59.28%	59.08%	60.61%
Alliant Energy Corporation	LNT	49.55%	49.61%	50.48%	49.72%	50.12%	50.34%	50.60%	50.88%	50.16%
Black Hills Corporation	BKH	53.79%	54.40%	54.75%	53.84%	53.20%	52.81%	52.73%	52.55%	53.51%
El Paso Electric Company	EE	46.55%	48.18%	48.20%	45.25%	45.60%	46.83%	47.33%	44.87%	46.60%
Hawaiian Electric Industries, Inc.	HE	56.18%	58.23%	58.00%	56.96%	57.68%	57.70%	57.60%	56.98%	57.42%
IDACORP, Inc.	IDA	51.37%	54.22%	54.22%	53.48%	53.22%	52.84%	53.15%	52.46%	53.12%
Northwestern Corporation	NWE	47.48%	45.83%	45.40%	44.74%	45.64%	44.30%	44.83%	44.33%	45.32%
OGE Energy Corp.	OGE	53.59%	53.36%	53.05%	52.75%	53.46%	56.09%	56.23%	55.50%	54.26%
PNM Resources, Inc.	PNM	46.20%	45.48%	47.58%	46.32%	46.13%	45.11%	45.44%	43.06%	45.66%
Mean		51.98%	52.43%	52.52%	51.52%	51.70%	51.67%	51.91%	51.08%	51.85%
Median		51.37%	53.36%	53.05%	52.75%	53.20%	52.81%	52.73%	52.46%	53.12%

Operating Company Capital Structure

		% Common Equity								
Operating Company	Parent	2018Q1	2017Q4	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	Average
ALLETE (Minnesota Power)	ALE	60.38%	60.04%	59.73%	59.16%	58.71%	56.92%	56.90%	56.63%	58.56%
Superior Water, Light and Power Company	ALE	65.80%	64.99%	62.33%	62.08%	61.85%	61.12%	61.65%	61.52%	62.67%
Interstate Power and Light Company	LNT	49.92%	50.31%	51.75%	50.89%	50.12%	50.24%	48.99%	50.54%	50.35%
Wisconsin Power and Light Company	LNT	49.18%	48.91%	49.22%	48.55%	50.12%	50.44%	52.20%	51.22%	49.98%
Black Hills Colorado Electric Utility Company, LP	BKH	54.68%	55.69%	54.96%	55.01%	53.08%	52.20%	51.85%	51.39%	53.61%
Black Hills Power, Inc.	BKH	53.22%	53.49%	56.14%	53.26%	53.24%	52.88%	53.13%	53.13%	53.56%
Cheyenne Light, Fuel and Power Company	BKH	53.46%	54.01%	53.16%	53.27%	53.29%	53.35%	53.22%	53.14%	53.36%
El Paso Electric Company	EE	46.55%	48.18%	48.20%	45.25%	45.60%	46.83%	47.33%	44.87%	46.60%
Hawaiian Electric Company, Inc.	HE	56.18%	58.23%	58.00%	56.96%	57.68%	57.70%	57.60%	56.98%	57.42%
Idaho Power Co.	IDA	51.37%	54.22%	54.22%	53.48%	53.22%	52.84%	53.15%	52.46%	53.12%
NorthWestern Corporation	NWE	47.48%	45.83%	45.40%	44.74%	45.64%	44.30%	44.83%	44.33%	45.32%
Oklahoma Gas and Electric Company	OGE	53.59%	53.36%	53.05%	52.75%	53.46%	56.09%	56.23%	55.50%	54.26%
Public Service Company of New Mexico	PNM	46.20%	45.48%	47.58%	46.32%	46.13%	45.11%	45.44%	43.06%	45.66%
Texas-New Mexico Power Company	PNM	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mean		52.92%	53.29%	53.36%	52.44%	52.47%	52.31%	52.50%	51.91%	52.65%
Median		53.22%	53.49%	53.16%	53.26%	53.22%	52.84%	53.13%	52.46%	53.36%

Source: S&P Global Market Intelligence

Proxy Group Capital Structure

		% Long-Term Debt								
Company	Ticker	2018Q1	2017Q4	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	Average
ALLETE, Inc.	ALE	36.91%	37.49%	38.97%	39.38%	39.72%	40.98%	40.72%	40.92%	39.39%
Alliant Energy Corporation	LNT	50.06%	50.07%	46.45%	47.36%	48.48%	48.91%	49.24%	48.47%	48.63%
Black Hills Corporation	BKH	46.21%	45.60%	45.25%	46.16%	46.80%	47.19%	47.27%	47.45%	46.49%
El Paso Electric Company	EE	47.56%	48.29%	48.58%	49.01%	50.44%	51.29%	51.84%	52.20%	49.90%
Hawaiian Electric Industries, Inc.	HE	40.11%	41.61%	41.81%	41.65%	42.27%	42.30%	41.71%	41.81%	41.66%
IDACORP, Inc.	IDA	48.63%	45.78%	45.78%	46.52%	46.78%	46.58%	46.85%	47.54%	46.81%
Northwestern Corporation	NWE	52.52%	46.03%	47.51%	47.31%	48.24%	47.75%	49.12%	48.67%	48.39%
OGE Energy Corp.	OGE	46.41%	46.64%	46.95%	47.25%	46.54%	43.91%	43.77%	44.50%	45.74%
PNM Resources, Inc.	PNM	53.80%	53.25%	52.42%	52.47%	53.34%	52.92%	53.19%	52.88%	53.03%
Mean		46.91%	46.08%	45.97%	46.34%	46.96%	46.87%	47.08%	47.16%	46.67%
Median		47.56%	46.03%	46.45%	47.25%	46.80%	47.19%	47.27%	47.54%	46.81%

Operating Company Capital Structure

		% Long-Term Debt								
Operating Company	Parent	2018Q1	2017Q4	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	Average
ALLETE (Minnesota Power)	ALE	39.62%	39.96%	40.27%	40.84%	41.29%	43.08%	43.10%	43.37%	41.44%
Superior Water, Light and Power Company	ALE	34.20%	35.01%	37.67%	37.92%	38.15%	38.88%	38.35%	38.48%	37.33%
Interstate Power and Light Company	LNT	50.08%	49.69%	48.17%	49.11%	49.67%	49.76%	51.01%	49.46%	49.62%
Wisconsin Power and Light Company	LNT	50.03%	50.45%	44.74%	45.62%	47.29%	48.05%	47.46%	47.48%	47.64%
Black Hills Colorado Electric Utility Company, LP	BKH	45.32%	44.31%	45.04%	44.99%	46.92%	47.80%	48.15%	48.61%	46.39%
Black Hills Power, Inc.	BKH	46.78%	46.51%	43.86%	46.74%	46.76%	47.12%	46.87%	46.87%	46.44%
Cheyenne Light, Fuel and Power Company	BKH	46.54%	45.99%	46.84%	46.73%	46.71%	46.65%	46.78%	46.86%	46.64%
El Paso Electric Company	EE	47.56%	48.29%	48.58%	49.01%	50.44%	51.29%	51.84%	52.20%	49.90%
Hawaiian Electric Company, Inc.	HE	40.11%	41.61%	41.81%	41.65%	42.27%	42.30%	41.71%	41.81%	41.66%
Idaho Power Co.	IDA	48.63%	45.78%	45.78%	46.52%	46.78%	46.58%	46.85%	47.54%	46.81%
NorthWestern Corporation	NWE	52.52%	46.03%	47.51%	47.31%	48.24%	47.75%	49.12%	48.67%	48.39%
Oklahoma Gas and Electric Company	OGE	46.41%	46.64%	46.95%	47.25%	46.54%	43.91%	43.77%	44.50%	45.74%
Public Service Company of New Mexico	PNM	53.80%	53.25%	52.42%	52.47%	53.34%	52.92%	53.19%	52.88%	53.03%
Texas-New Mexico Power Company	PNM	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mean		46.28%	45.65%	45.36%	45.86%	46.49%	46.62%	46.79%	46.83%	46.23%
Median		46.78%	46.03%	45.78%	46.73%	46.78%	47.12%	46.87%	47.48%	46.64%

Proxy Group Capital Structure

		% Short-Term Debt								
Company	Ticker	2018Q1	2017Q4	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	Average
ALLETE, Inc.	ALE	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Alliant Energy Corporation	LNT	0.39%	0.32%	3.07%	2.91%	1.40%	0.75%	0.17%	0.65%	1.21%
Black Hills Corporation	BKH	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
El Paso Electric Company	EE	5.89%	3.53%	3.22%	5.74%	3.96%	1.89%	0.82%	2.92%	3.50%
Hawaiian Electric Industries, Inc.	HE	3.71%	0.16%	0.19%	1.39%	0.05%	0.00%	0.68%	1.21%	0.92%
IDACORP, Inc.	IDA	0.00%	0.00%	0.00%	0.00%	0.00%	0.58%	0.00%	0.00%	0.07%
Northwestern Corporation	NWE	0.00%	8.14%	7.09%	7.95%	6.11%	7.95%	6.04%	6.99%	6.29%
OGE Energy Corp.	OGE	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PNM Resources, Inc.	PNM	0.00%	1.27%	0.00%	1.22%	0.53%	1.97%	1.38%	4.06%	1.30%
Mean		1.11%	1.49%	1.51%	2.13%	1.34%	1.46%	1.01%	1.76%	1.48%
Median		0.00%	0.16%	0.00%	1.22%	0.05%	0.58%	0.17%	0.65%	0.92%

Operating Company Capital Structure

		% Short-Term Debt								
Operating Company	Parent	2018Q1	2017Q4	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	Average
ALLETE (Minnesota Power)	ALE	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Superior Water, Light and Power Company	ALE	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Interstate Power and Light Company	LNT	0.00%	0.00%	0.08%	0.00%	0.21%	0.00%	0.00%	0.00%	0.04%
Wisconsin Power and Light Company	LNT	0.78%	0.64%	6.05%	5.83%	2.59%	1.51%	0.34%	1.30%	2.38%
Black Hills Colorado Electric Utility Company, LP	BKH	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Black Hills Power, Inc.	BKH	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cheyenne Light, Fuel and Power Company	BKH	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
El Paso Electric Company	EE	5.89%	3.53%	3.22%	5.74%	3.96%	1.89%	0.82%	2.92%	3.50%
Hawaiian Electric Company, Inc.	HE	3.71%	0.16%	0.19%	1.39%	0.05%	0.00%	0.68%	1.21%	0.92%
Idaho Power Co.	IDA	0.00%	0.00%	0.00%	0.00%	0.00%	0.58%	0.00%	0.00%	0.07%
NorthWestern Corporation	NWE	0.00%	8.14%	7.09%	7.95%	6.11%	7.95%	6.04%	6.99%	6.29%
Oklahoma Gas and Electric Company	OGE	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Public Service Company of New Mexico	PNM	0.00%	1.27%	0.00%	1.22%	0.53%	1.97%	1.38%	4.06%	1.30%
Texas-New Mexico Power Company	PNM	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mean		0.80%	1.06%	1.28%	1.70%	1.03%	1.07%	0.71%	1.27%	1.12%
Median		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%

Retention Ratio Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.436002363
R Square	0.190098061
Adjusted R Square	0.188644018
Standard Error	0.279950686
Observations	559

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	10.24621617	10.24621617	130.7375804	2.42389E-27
Residual	557	43.65341924	0.078372386		
Total	558	53.89963541			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.188	0.014	13.717	0.000	0.161	0.215
Retention Ratio	-0.277	0.024	-11.434	0.000	-0.324	-0.229

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
2004	ALE	22.22%	77.78%	13.03%
2005	ALE	50.40%	49.60%	-0.53%
2006	ALE	52.35%	47.65%	1.33%
2007	ALE	53.25%	46.75%	-1.44%
2008	ALE	60.99%	39.01%	0.64%
2009	ALE	93.12%	6.88%	9.29%
2010	ALE	80.37%	19.63%	9.42%
2011	ALE	67.17%	32.83%	3.80%
2012	ALE	71.32%	28.68%	4.27%
1996	LNT	86.78%	13.22%	6.92%
1997	LNT	105.26%	-5.26%	-0.07%
1998	LNT	158.73%	-58.73%	13.28%
1999	LNT	91.32%	8.68%	2.08%
2000	LNT	80.97%	19.03%	3.42%
2001	LNT	82.64%	17.36%	2.46%
2002	LNT	169.49%	-69.49%	18.93%
2003	LNT	63.69%	36.31%	11.13%
2004	LNT	55.14%	44.86%	2.52%
2005	LNT	47.51%	52.49%	7.68%
2006	LNT	56.31%	43.69%	9.04%
2007	LNT	47.41%	52.59%	5.00%
2008	LNT	55.12%	44.88%	7.76%
2009	LNT	78.95%	21.05%	13.89%
2010	LNT	57.25%	42.75%	4.26%
2011	LNT	61.59%	38.41%	3.79%
2012	LNT	58.82%	41.18%	5.73%
1996	AEE	87.76%	12.24%	4.29%
1997	AEE	104.10%	-4.10%	2.83%
1998	AEE	90.07%	9.93%	3.32%
1999	AEE	90.39%	9.61%	1.35%
2000	AEE	76.28%	23.72%	-0.15%
2001	AEE	74.49%	25.51%	-3.63%
2002	AEE	95.49%	4.51%	3.17%
2003	AEE	80.89%	19.11%	-1.11%
2004	AEE	90.07%	9.93%	0.24%
2005	AEE	81.15%	18.85%	-2.03%
2006	AEE	95.49%	4.51%	-1.20%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
2007	AEE	85.23%	14.77%	-4.09%
2008	AEE	88.19%	11.81%	-5.99%
2009	AEE	55.40%	44.60%	-2.44%
2010	AEE	55.60%	44.40%	-2.53%
2011	AEE	63.16%	36.84%	2.15%
2012	AEE	66.39%	33.61%	3.31%
1996	AEP	76.43%	23.57%	27.79%
1997	AEP	73.17%	26.83%	24.39%
1998	AEP	85.41%	14.59%	24.95%
1999	AEP	89.22%	10.78%	26.43%
2000	AEP	230.77%	-130.77%	38.93%
2001	AEP	73.39%	26.61%	-2.29%
2002	AEP	83.92%	16.08%	0.22%
2003	AEP	65.22%	34.78%	3.44%
2004	AEP	53.64%	46.36%	2.67%
2005	AEP	53.79%	46.21%	-0.05%
2006	AEP	52.45%	47.55%	2.36%
2007	AEP	55.24%	44.76%	1.40%
2008	AEP	54.85%	45.15%	1.84%
2009	AEP	55.22%	44.78%	2.98%
2010	AEP	65.77%	34.23%	6.96%
2011	AEP	59.11%	40.89%	6.45%
2012	AEP	63.09%	36.91%	4.53%
1996	AVA	91.85%	8.15%	250.94%
1997	AVA	63.27%	36.73%	233.07%
1998	AVA	82.03%	17.97%	250.46%
1999	AVA	400.00%	-300.00%	262.90%
2000	AVA	27.27%	72.73%	-5.23%
2001	AVA	40.00%	60.00%	13.09%
2002	AVA	71.64%	28.36%	11.72%
2003	AVA	48.04%	51.96%	19.05%
2004	AVA	71.23%	28.77%	27.97%
2005	AVA	59.78%	40.22%	23.65%
2006	AVA	38.78%	61.22%	12.54%
2007	AVA	83.33%	16.67%	18.10%
2008	AVA	50.74%	49.26%	8.35%
2009	AVA	51.27%	48.73%	5.01%
2010	AVA	60.61%	39.39%	4.66%
2011	AVA	63.95%	36.05%	6.57%
2012	AVA	87.88%	12.12%	9.36%
1996	BKH	65.71%	34.29%	20.76%
1997	BKH	63.76%	36.24%	13.10%
1998	BKH	62.50%	37.50%	7.41%
1999	BKH	61.18%	38.82%	5.08%
2000	BKH	45.57%	54.43%	1.45%
2001	BKH	32.75%	67.25%	-6.47%
2002	BKH	49.79%	50.21%	4.16%
2003	BKH	65.22%	34.78%	-10.29%
2004	BKH	71.26%	28.74%	228.58%
2005	BKH	60.66%	39.34%	218.63%
2006	BKH	59.73%	40.27%	209.85%
2007	BKH	51.12%	48.88%	224.61%
2008	BKH	777.78%	-677.78%	249.76%
2009	BKH	61.21%	38.79%	14.13%
2010	BKH	86.75%	13.25%	19.41%
2011	BKH	144.55%	-44.55%	25.82%
2012	BKH	75.13%	24.87%	12.52%
2001	CNP	97.40%	2.60%	8.57%
2002	CNP	82.95%	17.05%	9.41%
2003	CNP	29.20%	70.80%	10.39%
2004	CNP	65.57%	34.43%	17.02%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
2005	CNP	59.70%	40.30%	16.24%
2006	CNP	45.11%	54.89%	0.28%
2007	CNP	58.12%	41.88%	3.95%
2008	CNP	56.15%	43.85%	0.10%
2009	CNP	75.25%	24.75%	7.46%
2010	CNP	72.90%	27.10%	1.48%
2011	CNP	62.20%	37.80%	-3.74%
2012	CNP	60.00%	40.00%	6.40%
1996	CMS	41.63%	58.37%	-8.29%
2007	CMS	31.25%	68.75%	25.07%
2008	CMS	29.27%	70.73%	8.33%
2009	CMS	53.76%	46.24%	14.17%
2010	CMS	49.62%	50.38%	7.30%
2011	CMS	57.93%	42.07%	6.44%
2012	CMS	62.75%	37.25%	7.26%
1996	ED	70.99%	29.01%	2.28%
1997	ED	71.19%	28.81%	1.64%
1998	ED	69.74%	30.26%	-0.88%
1999	ED	68.37%	31.63%	-5.08%
2000	ED	79.56%	20.44%	3.19%
2001	ED	68.54%	31.46%	-0.51%
2002	ED	70.93%	29.07%	3.58%
2003	ED	79.15%	20.85%	4.81%
2004	ED	97.41%	2.59%	7.10%
2005	ED	76.25%	23.75%	3.43%
2006	ED	77.97%	22.03%	4.27%
2007	ED	66.67%	33.33%	2.30%
2008	ED	69.64%	30.36%	3.36%
2009	ED	75.16%	24.84%	3.09%
2010	ED	68.59%	31.41%	3.36%
2011	ED	67.23%	32.77%	2.24%
2012	ED	62.69%	37.31%	1.18%
1996	D	97.36%	2.64%	9.50%
1997	D	86.00%	14.00%	19.21%
1998	D	150.00%	-50.00%	24.00%
1999	D	86.00%	14.00%	10.86%
2000	D	103.20%	-3.20%	8.27%
2001	D	86.58%	13.42%	16.43%
2002	D	53.53%	46.47%	1.83%
2003	D	65.82%	34.18%	14.11%
2004	D	61.03%	38.97%	9.75%
2005	D	89.33%	10.67%	17.56%
2006	D	57.50%	42.50%	4.66%
2007	D	68.54%	31.46%	6.83%
2008	D	51.97%	48.03%	0.76%
2009	D	66.29%	33.71%	3.14%
2010	D	63.32%	36.68%	2.23%
2011	D	71.38%	28.62%	4.62%
2012	D	76.73%	23.27%	14.23%
1996	DTE	73.57%	26.43%	-3.62%
1997	DTE	71.53%	28.47%	11.43%
1998	DTE	67.54%	32.46%	5.14%
1999	DTE	61.86%	38.14%	1.19%
2000	DTE	63.00%	37.00%	7.20%
2001	DTE	95.81%	4.19%	9.04%
2002	DTE	53.79%	46.21%	-4.88%
2003	DTE	72.28%	27.72%	0.77%
2004	DTE	80.78%	19.22%	6.61%
2005	DTE	63.00%	37.00%	4.05%
2006	DTE	84.90%	15.10%	8.69%
2007	DTE	79.70%	20.30%	8.12%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
2008	DTE	77.66%	22.34%	6.97%
2009	DTE	65.43%	34.57%	10.37%
2010	DTE	58.29%	41.71%	4.73%
2011	DTE	63.22%	36.78%	6.81%
2012	DTE	62.37%	37.63%	9.39%
2007	DUK	71.67%	28.33%	1.45%
2008	DUK	89.11%	10.89%	6.07%
2009	DUK	83.19%	16.81%	4.45%
2010	DUK	72.39%	27.61%	0.58%
2011	DUK	71.74%	28.26%	-1.92%
2012	DUK	81.67%	18.33%	3.34%
2004	EIX	115.94%	-15.94%	76.47%
2005	EIX	30.54%	69.46%	0.34%
2006	EIX	33.54%	66.46%	-0.02%
2007	EIX	35.54%	64.46%	7.91%
2008	EIX	33.42%	66.58%	2.36%
2009	EIX	38.58%	61.42%	7.66%
2010	EIX	37.91%	62.09%	6.15%
2011	EIX	39.94%	60.06%	5.86%
2012	EIX	28.79%	71.21%	0.58%
2011	EE	26.61%	73.39%	-0.24%
2012	EE	42.92%	57.08%	1.79%
1996	ETR	72.58%	27.42%	5.29%
1997	ETR	80.00%	20.00%	11.04%
1998	ETR	67.57%	32.43%	11.36%
1999	ETR	53.33%	46.67%	12.39%
2000	ETR	41.08%	58.92%	8.38%
2001	ETR	41.56%	58.44%	12.01%
2002	ETR	36.41%	63.59%	9.01%
2003	ETR	43.36%	56.64%	11.09%
2004	ETR	48.09%	51.91%	10.12%
2005	ETR	49.09%	50.91%	8.87%
2006	ETR	40.30%	59.70%	7.18%
2007	ETR	46.07%	53.93%	2.23%
2008	ETR	48.39%	51.61%	-3.44%
2009	ETR	47.62%	52.38%	-0.49%
2010	ETR	48.65%	51.35%	-1.50%
2011	ETR	43.97%	56.03%	-0.49%
2012	ETR	55.15%	44.85%	-1.35%
2001	EXC	41.36%	58.64%	9.84%
2002	EXC	36.67%	63.33%	11.06%
2003	EXC	39.34%	60.66%	11.07%
2004	EXC	45.82%	54.18%	9.46%
2005	EXC	49.84%	50.16%	4.15%
2006	EXC	46.86%	53.14%	1.72%
2007	EXC	45.16%	54.84%	-11.06%
2008	EXC	50.00%	50.00%	-7.35%
2009	EXC	48.95%	51.05%	-10.09%
2010	EXC	54.26%	45.74%	-3.95%
2011	EXC	56.00%	44.00%	-9.15%
2012	EXC	109.38%	-9.38%	29.39%
1996	FE	71.43%	28.57%	6.86%
1997	FE	77.32%	22.68%	6.27%
1998	FE	76.92%	23.08%	-2.26%
1999	FE	60.00%	40.00%	9.78%
2000	FE	55.76%	44.24%	8.77%
2001	FE	52.82%	47.18%	14.56%
2002	FE	59.06%	40.94%	18.76%
2003	FE	102.04%	-2.04%	27.95%
2004	FE	68.95%	31.05%	5.42%
2005	FE	60.21%	39.79%	4.49%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
2006	FE	48.43%	51.57%	-10.84%
2007	FE	48.58%	51.42%	-10.27%
2008	FE	50.23%	49.77%	-3.15%
2009	FE	66.27%	33.73%	-12.58%
2010	FE	67.69%	32.31%	14.90%
2011	FE	117.02%	-17.02%	24.33%
2012	FE	103.29%	-3.29%	26.43%
1996	GXP	94.08%	5.92%	3.75%
1997	GXP	95.86%	4.14%	9.41%
1998	GXP	86.77%	13.23%	9.30%
1999	GXP	131.75%	-31.75%	17.64%
2000	GXP	80.98%	19.02%	2.83%
2001	GXP	104.40%	-4.40%	2.18%
2002	GXP	81.37%	18.63%	-0.52%
2003	GXP	73.13%	26.87%	-10.30%
2004	GXP	67.48%	32.52%	-14.22%
2005	GXP	76.15%	23.85%	-2.23%
2006	GXP	102.47%	-2.47%	-0.76%
2007	GXP	89.25%	10.75%	-2.12%
2008	GXP	143.10%	-43.10%	9.41%
2009	GXP	80.58%	19.42%	11.03%
2010	GXP	54.25%	45.75%	-1.23%
2011	GXP	67.20%	32.80%	5.94%
2012	GXP	63.70%	36.30%	-2.49%
1996	HE	93.08%	6.92%	4.99%
1997	HE	88.41%	11.59%	4.01%
1998	HE	83.78%	16.22%	2.06%
1999	HE	85.52%	14.48%	-0.31%
2000	HE	97.64%	2.36%	3.64%
2001	HE	77.50%	22.50%	-3.34%
2002	HE	76.54%	23.46%	-6.90%
2003	HE	78.48%	21.52%	-7.12%
2004	HE	91.18%	8.82%	-7.33%
2005	HE	84.93%	15.07%	-2.21%
2006	HE	93.23%	6.77%	3.38%
2007	HE	111.71%	-11.71%	9.88%
2008	HE	115.89%	-15.89%	10.00%
2009	HE	136.26%	-36.26%	13.24%
2010	HE	102.48%	-2.48%	4.94%
2011	HE	86.11%	13.89%	11.67%
2012	HE	74.25%	25.75%	2.80%
1996	IDA	84.16%	15.84%	9.88%
1997	IDA	80.17%	19.83%	-1.38%
1998	IDA	78.48%	21.52%	-10.03%
1999	IDA	76.54%	23.46%	9.04%
2000	IDA	53.14%	46.86%	-1.34%
2001	IDA	55.52%	44.48%	6.37%
2002	IDA	114.11%	-14.11%	12.47%
2003	IDA	177.08%	-77.08%	24.13%
2004	IDA	63.16%	36.84%	8.77%
2005	IDA	68.57%	31.43%	12.70%
2006	IDA	51.06%	48.94%	8.62%
2007	IDA	64.52%	35.48%	12.85%
2008	IDA	55.05%	44.95%	11.01%
2009	IDA	45.45%	54.55%	7.94%
2010	IDA	40.68%	59.32%	5.70%
2011	IDA	35.71%	64.29%	3.28%
2012	IDA	40.65%	59.35%	4.59%
1996	MGEE	156.10%	-56.10%	17.27%
1997	MGEE	92.14%	7.86%	4.05%
1998	MGEE	94.20%	5.80%	4.51%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
1999	MGEE	88.51%	11.49%	3.76%
2000	MGEE	79.28%	20.72%	-0.94%
2001	MGEE	82.41%	17.59%	5.70%
2002	MGEE	78.76%	21.24%	6.81%
2003	MGEE	78.95%	21.05%	7.70%
2004	MGEE	77.12%	22.88%	5.49%
2005	MGEE	87.62%	12.38%	10.41%
2006	MGEE	67.88%	32.12%	5.39%
2007	MGEE	62.25%	37.75%	4.49%
2008	MGEE	60.38%	39.62%	6.65%
2009	MGEE	65.99%	34.01%	9.64%
2010	MGEE	59.28%	40.72%	4.68%
2011	MGEE	57.39%	42.61%	4.77%
2012	MGEE	55.91%	44.09%	3.81%
1996	NEE	55.26%	44.74%	6.82%
1997	NEE	53.78%	46.22%	2.78%
1998	NEE	51.95%	48.05%	5.59%
1999	NEE	51.11%	48.89%	4.53%
2000	NEE	52.17%	47.83%	3.04%
2001	NEE	48.48%	51.52%	8.57%
2002	NEE	57.71%	42.29%	11.41%
2003	NEE	48.98%	51.02%	11.93%
2004	NEE	52.85%	47.15%	11.36%
2005	NEE	61.21%	38.79%	16.37%
2006	NEE	46.44%	53.56%	8.87%
2007	NEE	50.15%	49.85%	7.54%
2008	NEE	43.73%	56.27%	3.83%
2009	NEE	47.61%	52.39%	7.51%
2010	NEE	42.19%	57.81%	5.27%
2011	NEE	45.64%	54.36%	4.01%
2012	NEE	52.63%	47.37%	21.32%
2001	ES	32.85%	67.15%	-8.32%
2002	ES	49.07%	50.93%	14.69%
2003	ES	46.77%	53.23%	15.13%
2004	ES	69.23%	30.77%	20.99%
2005	ES	69.39%	30.61%	21.44%
2006	ES	89.02%	10.98%	25.85%
2007	ES	49.06%	50.94%	4.09%
2008	ES	44.62%	55.38%	7.05%
2009	ES	49.74%	50.26%	7.23%
2010	ES	49.05%	50.95%	6.64%
2011	ES	49.55%	50.45%	6.94%
2012	ES	69.84%	30.16%	10.86%
2005	NWE	58.48%	41.52%	5.90%
2006	NWE	94.66%	5.34%	14.23%
2007	NWE	88.89%	11.11%	10.11%
2008	NWE	74.58%	25.42%	7.29%
2009	NWE	66.34%	33.66%	8.78%
2010	NWE	63.55%	36.45%	6.99%
2011	NWE	56.92%	43.08%	6.72%
2012	NWE	65.49%	34.51%	8.56%
1996	OGE	82.10%	17.90%	-2.49%
1997	OGE	82.61%	17.39%	-0.21%
1998	OGE	65.69%	34.31%	-1.39%
1999	OGE	69.07%	30.93%	0.05%
2000	OGE	70.53%	29.47%	1.14%
2001	OGE	103.08%	-3.08%	14.19%
2002	OGE	93.06%	6.94%	13.50%
2003	OGE	77.01%	22.99%	8.28%
2004	OGE	75.28%	24.72%	9.10%
2005	OGE	72.83%	27.17%	10.98%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
2006	OGE	54.47%	45.53%	7.31%
2007	OGE	51.52%	48.48%	6.54%
2008	OGE	56.00%	44.00%	9.27%
2009	OGE	53.38%	46.62%	8.41%
2010	OGE	48.67%	51.33%	2.92%
2011	OGE	43.93%	56.07%	-0.15%
2012	OGE	44.69%	55.31%	1.88%
1996	OTTR	72.58%	27.42%	6.36%
1997	OTTR	72.09%	27.91%	6.86%
1998	OTTR	74.42%	25.58%	3.73%
1999	OTTR	68.28%	31.72%	1.12%
2000	OTTR	63.75%	36.25%	2.78%
2001	OTTR	61.90%	38.10%	0.77%
2002	OTTR	59.22%	40.78%	0.53%
2003	OTTR	71.52%	28.48%	-4.10%
2004	OTTR	73.33%	26.67%	-10.94%
2005	OTTR	62.92%	37.08%	-23.97%
2006	OTTR	68.05%	31.95%	-19.27%
2007	OTTR	65.73%	34.27%	6.33%
2008	OTTR	109.17%	-9.17%	20.18%
2009	OTTR	167.61%	-67.61%	29.78%
2010	OTTR	313.16%	-213.16%	39.20%
2011	OTTR	264.44%	-164.44%	36.03%
2012	OTTR	113.33%	-13.33%	12.61%
2005	PCG	52.34%	47.66%	4.23%
2006	PCG	47.83%	52.17%	0.46%
2007	PCG	51.80%	48.20%	-4.79%
2008	PCG	48.45%	51.55%	-10.28%
2009	PCG	55.45%	44.55%	4.35%
2010	PCG	64.54%	35.46%	-1.20%
2011	PCG	65.47%	34.53%	7.39%
2012	PCG	87.92%	12.08%	17.23%
1996	PNW	41.70%	58.30%	8.36%
1997	PNW	40.94%	59.06%	-0.24%
1998	PNW	43.16%	56.84%	-0.97%
1999	PNW	41.82%	58.18%	-2.81%
2000	PNW	42.69%	57.31%	-6.52%
2001	PNW	41.58%	58.42%	-0.18%
2002	PNW	64.43%	35.57%	4.74%
2003	PNW	68.65%	31.35%	-0.86%
2004	PNW	70.93%	29.07%	-0.01%
2005	PNW	86.16%	13.84%	9.88%
2006	PNW	64.04%	35.96%	0.99%
2007	PNW	70.95%	29.05%	5.73%
2008	PNW	99.06%	0.94%	12.32%
2009	PNW	92.92%	7.08%	10.56%
2010	PNW	68.18%	31.82%	5.20%
2011	PNW	70.23%	29.77%	5.94%
2012	PNW	76.29%	23.71%	4.96%
1996	PNM	20.87%	79.13%	20.65%
1997	PNM	33.60%	66.40%	7.11%
1998	PNM	34.00%	66.00%	4.60%
1999	PNM	41.09%	58.91%	12.27%
2000	PNM	34.19%	65.81%	10.06%
2001	PNM	20.31%	79.69%	-1.57%
2002	PNM	53.27%	46.73%	-0.93%
2003	PNM	53.04%	46.96%	-19.53%
2004	PNM	44.06%	55.94%	61.06%
2005	PNM	50.64%	49.36%	69.24%
2006	PNM	50.00%	50.00%	72.01%
2007	PNM	119.74%	-19.74%	87.44%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
2008	PNM	554.55%	-454.55%	106.07%
2009	PNM	86.21%	13.79%	21.18%
2010	PNM	57.47%	42.53%	13.80%
2011	PNM	46.30%	53.70%	9.10%
2012	PNM	44.27%	55.73%	8.11%
2006	POR	59.65%	40.35%	20.49%
2007	POR	39.91%	60.09%	-1.20%
2008	POR	69.78%	30.22%	5.80%
2009	POR	77.10%	22.90%	11.58%
2010	POR	62.65%	37.35%	4.95%
2011	POR	54.36%	45.64%	2.63%
2012	POR	57.75%	42.25%	4.66%
1996	PPL	81.46%	18.54%	14.34%
1997	PPL	84.34%	15.66%	12.22%
1998	PPL	44.84%	55.16%	13.60%
1999	PPL	52.74%	47.26%	15.89%
2000	PPL	32.32%	67.68%	3.79%
2001	PPL	29.61%	70.39%	5.82%
2002	PPL	46.75%	53.25%	11.58%
2003	PPL	41.85%	58.15%	6.32%
2004	PPL	43.85%	56.15%	-4.30%
2005	PPL	50.00%	50.00%	13.66%
2006	PPL	48.03%	51.97%	12.60%
2007	PPL	46.39%	53.61%	9.63%
2008	PPL	54.69%	45.31%	9.23%
2009	PPL	115.97%	-15.97%	19.52%
2010	PPL	61.14%	38.86%	0.95%
2011	PPL	53.64%	46.36%	1.70%
2012	PPL	55.17%	44.83%	-3.97%
1996	PEG	87.80%	12.20%	8.72%
1997	PEG	89.63%	10.37%	9.45%
1998	PEG	77.42%	22.58%	6.30%
1999	PEG	69.23%	30.77%	0.10%
2000	PEG	60.67%	39.33%	0.83%
2001	PEG	58.38%	41.62%	0.72%
2002	PEG	57.45%	42.55%	8.39%
2003	PEG	57.45%	42.55%	10.79%
2004	PEG	72.37%	27.63%	15.86%
2005	PEG	62.57%	37.43%	12.24%
2006	PEG	61.62%	38.38%	11.83%
2007	PEG	45.17%	54.83%	-0.48%
2008	PEG	44.48%	55.52%	-2.79%
2009	PEG	43.18%	56.82%	0.38%
2010	PEG	44.63%	55.37%	2.52%
2011	PEG	44.05%	55.95%	-0.59%
2012	PEG	58.20%	41.80%	14.81%
1996	SCG	71.71%	28.29%	4.16%
1997	SCG	79.47%	20.53%	7.77%
1998	SCG	72.64%	27.36%	6.46%
1999	SCG	91.67%	8.33%	14.24%
2000	SCG	54.25%	45.75%	5.61%
2001	SCG	55.81%	44.19%	3.97%
2002	SCG	54.62%	45.38%	2.98%
2003	SCG	55.20%	44.80%	3.51%
2004	SCG	54.68%	45.32%	1.47%
2005	SCG	56.12%	43.88%	1.56%
2006	SCG	64.86%	35.14%	2.86%
2007	SCG	64.23%	35.77%	2.91%
2008	SCG	62.37%	37.63%	2.90%
2009	SCG	65.96%	34.04%	5.94%
2010	SCG	63.76%	36.24%	5.13%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
2011	SCG	65.32%	34.68%	7.04%
2012	SCG	62.86%	37.14%	5.30%
1996	SRE	78.79%	21.21%	9.85%
1997	SRE	70.91%	29.09%	9.51%
1998	SRE	125.81%	-25.81%	19.81%
1999	SRE	93.98%	6.02%	19.15%
2000	SRE	48.54%	51.46%	12.24%
2001	SRE	39.22%	60.78%	11.52%
2002	SRE	35.84%	64.16%	9.78%
2003	SRE	33.22%	66.78%	9.00%
2004	SRE	25.45%	74.55%	4.47%
2005	SRE	32.95%	67.05%	3.37%
2006	SRE	28.37%	71.63%	1.58%
2007	SRE	29.11%	70.89%	0.90%
2008	SRE	30.93%	69.07%	-0.50%
2009	SRE	32.64%	67.36%	-0.13%
2010	SRE	38.81%	61.19%	5.64%
2011	SRE	42.95%	57.05%	-0.39%
2012	SRE	55.17%	44.83%	1.99%
1996	SO	75.00%	25.00%	-0.15%
1997	SO	82.28%	17.72%	4.02%
1998	SO	77.46%	22.54%	3.42%
1999	SO	73.22%	26.78%	3.18%
2000	SO	66.67%	33.33%	1.89%
2001	SO	83.23%	16.77%	5.59%
2002	SO	73.51%	26.49%	4.32%
2003	SO	70.56%	29.44%	2.76%
2004	SO	68.93%	31.07%	2.47%
2005	SO	69.48%	30.52%	2.14%
2006	SO	73.33%	26.67%	4.03%
2007	SO	70.18%	29.82%	3.26%
2008	SO	73.78%	26.22%	3.74%
2009	SO	74.57%	25.43%	3.64%
2010	SO	76.27%	23.73%	3.80%
2011	SO	73.33%	26.67%	2.12%
2012	SO	72.66%	27.34%	2.38%
1999	VVC	64.19%	35.81%	2.16%
2000	VVC	83.76%	16.24%	11.84%
2001	VVC	95.37%	4.63%	9.29%
2002	VVC	63.69%	36.31%	3.60%
2003	VVC	71.15%	28.85%	2.84%
2004	VVC	80.99%	19.01%	6.60%
2005	VVC	65.75%	34.25%	-0.46%
2006	VVC	85.42%	14.58%	4.60%
2007	VVC	69.40%	30.60%	1.61%
2008	VVC	80.37%	19.63%	0.91%
2009	VVC	75.42%	24.58%	3.28%
2010	VVC	83.03%	16.97%	8.51%
2011	VVC	80.35%	19.65%	8.88%
2012	VVC	72.68%	27.32%	6.85%
2002	WR	120.00%	-20.00%	15.74%
2003	WR	58.78%	41.22%	0.38%
2004	WR	68.38%	31.62%	4.11%
2005	WR	59.35%	40.65%	5.74%
2006	WR	52.13%	47.87%	1.37%
2007	WR	58.70%	41.30%	5.82%
2008	WR	88.55%	11.45%	12.69%
2009	WR	93.75%	6.25%	13.86%
2010	WR	68.89%	31.11%	3.52%
2011	WR	71.51%	28.49%	6.88%
2012	WR	61.40%	38.60%	1.55%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS Growth
1996	WEC	75.76%	24.24%	35.15%
1997	WEC	285.19%	-185.19%	54.91%
1998	WEC	93.98%	6.02%	12.91%
1999	WEC	82.98%	17.02%	6.72%
2000	WEC	127.78%	-27.78%	22.76%
2001	WEC	43.48%	56.52%	9.31%
2002	WEC	34.48%	65.52%	5.61%
2003	WEC	35.40%	64.60%	7.54%
2004	WEC	45.16%	54.84%	12.13%
2005	WEC	34.38%	65.63%	8.60%
2006	WEC	34.85%	65.15%	10.68%
2007	WEC	35.21%	64.79%	10.73%
2008	WEC	35.53%	64.47%	10.68%
2009	WEC	42.50%	57.50%	10.27%
2010	WEC	41.67%	58.33%	4.34%
2011	WEC	47.71%	52.29%	6.93%
2012	WEC	51.06%	48.94%	6.58%
1996	XEL	71.73%	28.27%	6.01%
1997	XEL	86.96%	13.04%	-7.15%
1998	XEL	77.72%	22.28%	28.57%
1999	XEL	101.40%	-1.40%	33.67%
2000	XEL	92.50%	7.50%	30.19%
2001	XEL	66.08%	33.92%	24.32%
2002	XEL	269.05%	-169.05%	40.62%
2003	XEL	60.98%	39.02%	3.68%
2004	XEL	63.78%	36.22%	3.44%
2005	XEL	70.83%	29.17%	5.48%
2006	XEL	65.19%	34.81%	5.03%
2007	XEL	67.41%	32.59%	6.54%
2008	XEL	64.38%	35.62%	5.56%
2009	XEL	65.10%	34.90%	6.41%
2010	XEL	64.10%	35.90%	6.16%
2011	XEL	59.88%	40.12%	5.15%
2012	XEL	57.84%	42.16%	4.46%

Retention Ratio Regression Analysis

Company	Ticker		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
ALLETE, Inc.	ALE	Earnings Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.35	2.48	2.77	3.08	2.82	1.89	2.19	2.65	2.58	2.63	2.90	3.38	3.14	3.13
		Dividends Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.30	1.25	1.45	1.64	1.72	1.76	1.76	1.78	1.84	1.90	1.96	2.02	2.08	2.14
		Payout Ratio	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.22%	50.40%	52.35%	53.25%	60.99%	93.12%	80.37%	67.17%	71.32%	72.24%	67.59%	59.76%	66.24%	68.37%
		Annual Earnings Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83.70%	11.69%	11.19%	-8.44%	-32.98%	15.87%	21.00%	-2.64%	1.94%	10.27%	16.55%	-7.10%	-0.32%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.03%	-0.53%	1.33%	-1.44%	0.64%	9.29%	9.42%	3.80%	4.27%	N/A	N/A	N/A	N/A	N/A
Alliant Energy Corporation	LNT	Earnings Per Share	1.14	0.95	0.63	1.10	1.24	1.21	0.59	0.79	0.93	1.11	1.03	1.35	1.27	0.95	1.38	1.38	1.53	1.65	1.74	1.69	1.65	1.99
		Dividends Per Share	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.50	0.51	0.53	0.58	0.64	0.70	0.75	0.79	0.85	0.90	0.94	1.02	1.10	1.18	1.26
		Payout Ratio	86.78%	105.26%	158.73%	91.32%	80.97%	82.64%	169.49%	63.69%	55.14%	47.51%	56.31%	47.41%	55.12%	78.95%	57.25%	61.59%	58.82%	56.97%	58.62%	65.09%	71.52%	63.32%
		Annual Earnings Growth	N/A	-16.30%	-33.68%	73.81%	12.79%	-2.02%	-51.24%	33.05%	17.83%	19.46%	-6.79%	31.07%	-5.93%	-25.20%	45.26%	0.00%	10.87%	7.84%	5.45%	-2.87%	-2.37%	20.61%
		5yr Avg Fwd EPS Growth	6.92%	-0.07%	13.28%	2.08%	3.42%	2.46%	18.93%	11.13%	2.52%	7.68%	9.04%	5.00%	7.76%	13.89%	4.26%	3.79%	5.73%	N/A	N/A	N/A	N/A	N/A
Ameren Corporation	AEE	Earnings Per Share	2.86	2.44	2.82	2.81	3.33	3.41	2.66	3.14	2.82	3.13	2.66	2.98	2.88	2.78	2.77	2.47	2.41	2.10	2.40	2.38	2.68	2.77
		Dividends Per Share	2.51	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	1.54	1.54	1.56	1.60	1.60	1.61	1.66	1.72	1.78
		Payout Ratio	87.76%	104.10%	90.07%	90.39%	76.28%	74.49%	95.49%	80.89%	90.07%	81.15%	95.49%	85.23%	88.19%	55.40%	55.60%	63.16%	66.39%	76.19%	67.08%	69.75%	64.18%	64.26%
		Annual Earnings Growth	N/A	-14.69%	15.57%	-0.35%	18.51%	2.40%	-21.99%	18.05%	-10.19%	10.99%	-15.02%	12.03%	-3.36%	-3.47%	-0.36%	-10.83%	-2.43%	-12.86%	14.29%	-0.83%	12.61%	3.36%
		5yr Avg Fwd EPS Growth	4.29%	2.83%	3.32%	1.35%	-0.15%	-3.63%	3.17%	-1.11%	0.24%	-2.03%	-1.20%	-4.09%	-5.99%	-2.44%	-2.53%	2.15%	3.31%	N/A	N/A	N/A	N/A	N/A
American Electric Power Company, Inc.	AEP	Earnings Per Share	3.14	3.28	2.81	2.69	1.04	3.27	2.86	2.53	2.61	2.64	2.86	2.86	2.99	2.97	2.60	3.13	2.98	3.18	3.34	3.59	4.23	3.62
		Dividends Per Share	2.40	2.40	2.40	2.40	2.40	2.40	2.40	1.65	1.40	1.42	1.50	1.58	1.64	1.64	1.71	1.85	1.88	1.95	2.03	2.15	2.27	2.39
		Payout Ratio	76.43%	73.17%	85.41%	89.22%	230.77%	73.39%	83.92%	65.22%	53.64%	53.79%	52.45%	55.24%	54.85%	55.22%	65.77%	59.11%	63.09%	61.32%	60.78%	59.89%	53.66%	66.02%
		Annual Earnings Growth	N/A	4.46%	-14.33%	-4.27%	-61.34%	214.42%	-12.54%	-11.54%	3.16%	1.15%	8.33%	0.00%	4.55%	-0.67%	-12.46%	20.38%	-4.79%	6.71%	5.03%	7.49%	17.83%	-14.42%
		5yr Avg Fwd EPS Growth	27.79%	24.39%	24.95%	26.43%	38.93%	-2.29%	0.22%	3.44%	2.67%	-0.05%	2.36%	1.40%	1.84%	2.98%	6.96%	6.45%	4.53%	N/A	N/A	N/A	N/A	N/A
Avangrid, Inc.	AGR	Earnings Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Dividends Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Payout Ratio	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Annual Earnings Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Avista Corporation	AVA	Earnings Per Share	1.35	1.96	1.28	0.12	1.76	1.20	0.67	1.02	0.73	0.92	1.47	0.72	1.36	1.58	1.65	1.72	1.32	1.85	1.84	1.89	2.15	1.95
		Dividends Per Share	1.24	1.24	1.05	0.48	0.48	0.48	0.48	0.49	0.52	0.55	0.57	0.60	0.69	0.81	1.00	1.10	1.16	1.22	1.27	1.32	1.37	1.43
		Payout Ratio	91.85%	63.27%	82.03%	400.00%	27.27%	40.00%	71.64%	48.04%	71.23%	59.78%	38.78%	83.33%	50.74%	51.27%	60.61%	63.95%	87.88%	65.95%	69.02%	69.84%	63.72%	73.33%
		Annual Earnings Growth	N/A	45.19%	-34.69%	-90.63%	1366.67%	-31.82%	-44.17%	52.24%	-28.43%	26.03%	59.78%	-51.02%	88.89%	16.18%	4.43%	4.24%	-23.26%	40.15%	-0.54%	2.72%	13.76%	-9.30%
		5yr Avg Fwd EPS Growth	250.94%	233.07%	250.46%	262.90%	-5.23%	13.09%	11.72%	19.05%	27.97%	23.65%	12.54%	18.10%	8.35%	5.01%	4.66%	6.57%	9.36%	N/A	N/A	N/A	N/A	N/A
Black Hills Corporation	BKH	Earnings Per Share	1.40	1.49	1.60	1.70	2.37	3.42	2.33	1.84	1.74	2.11	2.21	2.68	0.18	2.32	1.66	1.01	1.97	2.61	2.89	2.83	2.63	3.38
		Dividends Per Share	0.92	0.95	1.00	1.04	1.08	1.12	1.16	1.20	1.24	1.28	1.32	1.37	1.40	1.42	1.44	1.46	1.48	1.52	1.56	1.62	1.68	1.81
		Payout Ratio	65.71%	63.76%	62.50%	61.18%	45.57%	32.75%	49.79%	65.22%	71.26%	60.66%	59.73%	51.12%	777.78%	61.21%	86.75%	144.55%	75.13%	58.24%	53.98%	57.24%	63.88%	53.55%
		Annual Earnings Growth	N/A	6.43%	7.38%	6.25%	39.41%	44.30%	-31.87%	-21.03%	-5.43%	21.26%	4.74%	21.27%	-93.28%	1188.89%	-28.45%	-39.16%	95.05%	32.49%	10.73%	-2.08%	-7.07%	28.52%
		5yr Avg Fwd EPS Growth	20.76%	13.10%	7.41%	5.08%	1.45%	-6.47%	4.16%	-10.29%	228.58%	218.63%	209.85%	224.61%	249.76%	14.13%	19.41%	25.82%	12.52%	N/A	N/A	N/A	N/A	N/A
CenterPoint Energy, Inc.	CNP	Earnings Per Share	N/A	N/A	N/A	N/A	N/A	1.54	1.29	1.37	0.61	0.67	1.33	1.17	1.30	1.01	1.07	1.27	1.35	1.24	1.42	1.08	1.00	1.57
		Dividends Per Share	N/A	N/A	N/A	N/A	N/A	1.50	1.07	0.40	0.40	0.40	0.60	0.68	0.73	0.76	0.78	0.79	0.81	0.83	0.95	0.99	1.03	1.35
		Payout Ratio	N/A	N/A	N/A	N/A	N/A	97.40%	82.95%	29.20%	65.57%	59.70%	45.11%	58.12%	56.15%	75.25%	72.90%	62.20%	60.00%	66.94%	66.90%	91.67%	103.00%	85.99%
		Annual Earnings Growth	N/A	N/A	N/A	N/A	N/A	N/A	-16.23%	6.20%	-55.47%	9.84%	98.51%	-12.03%	11.11%	-22.31%	5.94%	18.69%	6.30%	-8.15%	14.52%	-23.94%	-7.41%	57.00%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	8.57%	9.41%	10.39%	17.02%	16.24%	0.28%	3.95%	0.10%	7.46%	1.48%	-3.74%	6.40%	N/A	N/A	N/A	N/A	N/A
CMS Energy Corporation	CMS	Earnings Per Share	2.45	2.61	2.24	2.85	2.53	1.27	N/A	N/A	0.74	1.1	0.64	0.64	1.23	0.93	1.33	1.45	1.53	1.66	1.74	1.89	1.98	2.17
		Dividends Per Share	1.02	1.14	1.26	1.39	1.46	1.46	1.09	N/A	N/A	N/A	N/A	0.2	0.36	0.5	0.66	0.84	0.96	1.02	1.08	1.16	1.24	1.33
		Payout Ratio	41.63%	43.68%	56.25%	48.77%	57.71%	114.96%	N/A	N/A	N/A	N/A	N/A	31.25%	29.27%	53.76%	49.62%	57.93%	62.75%	61.45%	62.07%	61.38%	62.63%	61.29%
		Annual Earnings Growth	N/A	6.53%	-14.18%	27.23%	-11.23%	-49.80%	N/A	N/A	N/A	48.65%	-41.82%	0.00%	92.19%	-24.39%	43.01%	9.02%	5.52%	8.50%	4.82%	8.62%	4.76%	9.60%
		5yr Avg Fwd EPS Growth	-8.29%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14.93%	13.80%	23.97%	25.07%	8.33%	14.17%	7.30%	6.44%	7.26%	N/A	N/A	N/A	N/A	N/A
Consolidated Edison, Inc.	ED	Earnings Per Share	2.93	2.95	3.04	3.13	2.74	3.21	3.13	2.83	2.32	2.99	2.95	3.48	3.36	3.14	3.47	3.57	3.86	3.93	3.62	4.05	3.94	4.05
		Dividends Per Share	2.08	2.10	2.12	2.14	2.18	2.20	2.22	2.24	2.26	2.28	2.30	2.32	2.34	2.36	2.38	2.40	2.42	2.46	2.52	2.60	2.68	2.76
		Payout Ratio	70.99%	71.19%	69.74%	68.37%	79.56%	68.54%	70.93%	79.15%	97.41%	76.25%	77.97%	66.67%	69.64%	75.16%	68.59%	67.23%	62.69%	62.60%	69.61%	64.20%	68.02%	68.15%
		Annual Earnings Growth	N/A	0.68%	3.05%	2.96%	-12.46%	17.15%	-2.49%	-9.58%	-18.02%	28.88%	-1.34%	17.97%	-3.45%	-6.55%	10.51%	2.88%	8.12%	1.81%	-7.89%	11.88%	-2.72%	2.79%
		5yr Avg Fwd EPS Growth	2.28%	1.64%	-0.88%	-5.08%	3.19%	-0.51%	3.58%	4.81%	7.10%	3.43%	4.27%	2.30%	3.36%	3.09%	3.36%	2.24%	1.18%	N/A	N/A	N/A	N/A	N/A
Dominion Energy Inc.	D	Earnings Per Share	1.33	1.50	0.86	1.50	1.25	1.49	2.41	1.96	2.13	1.50	2.40	2.13	3.04	2.64	2.89	2.76	2.75	3.09	3.05	3.20	3.44	5.08
		Dividends Per Share	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.30	1.34	1.38	1.46	1.58	1.75	1.83	1.97	2.11	2.25	2.40	2.59	2.80	3.04
		Payout Ratio	97.36%	86.00%	150.00%	86.00%	103.20%	86.58%	53.53%	65.82%	61.03%	89.33%	57.50%	68.54%	51.97%	66.29%	63.32%	71.38%	76.73%	72.82%	78.69%	80.94%	81.40%	59.84%
		Annual Earnings Growth	N/A	13.21%	-42.67%	74.42%	-16.67%	19.20%	61.74%	-18.67%	8.67%	-29.58%	60.00%	-11.25%	42.72%	-13.16%	9.47%	-4.50%	-0.36%	12.36%	-1.29%	4.92%	7.50%	47.67%
		5yr Avg Fwd EPS Growth	9.50%	19.21%	24.00%	10.86%	8.27%	16.43%	1.83%	14.11%	9.75%	17.56%	4.66%	6.83%	0.76%	3.14%	2.23%	4.62%	14.23%	N/A	N/A	N/A	N/A	N/A
DTE Energy Co.	DTE	Earnings Per Share	2.80	2.88	3.05	3.33	3.27	2.15	3.83	2.85	2.55	3.27	2.45	2.66	2.73	3.24	3.74	3.67	3.88	3.76	5.10	4.45	4.83	5.73
		Dividends Per Share	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.08	2.12	2.12	2.12	2.18	2.32	2.42	2.59	2.69	2.84	3.06	3.36
		Payout Ratio	73.57%	71.53%	67.54%	61.86%	63.00%	95.81%	53.79%	72.28%	80.78%	63.00%	84.90%	79.70%	77.66%	65.43%	58.29%	63.22%	62.37%	68.88%	52.75%	63.82%	63.35%	58.64%
		Annual Earnings Growth	N/A	2.86%	5.90%	9.18%	-1.80%	-34.25%	78.14%	-25.59%	-10.53%	28.24%	-25.08%	8.57%	2.63%	18.68%	15.43%	-1.87%	5.72%	-3.09%	35.64%	-12.75%	8.54%	18.63%
		5yr Avg Fwd EPS Growth	-3.62%	11.43%	5.14%	1.19%	7.20%	9.04%	-4.88%	0.77%	6.61%	4.05%	8.69%	8.12%	6.97%	10.37%	4.73%	6.81%	9.39%	N/A	N/A	N/A	N/A	N/A
Duke Energy Corporation	DUK	Earnings Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.76	3.60	3.03	3.39	4.02	4.14	3.71	3.98	4.13	4.10	3.71	4.30
		Dividends Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.58	2.70	2.82	2.91	2.97	3.03	3.09	3.15	3.24	3.36	3.49
		Payout Ratio	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	71.67%	89.11%	83.19%	72.39%	71.74%	81.67%	77.64%	76.27%	79.02%	90.57%	81.16%
		Annual Earnings Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30.43%	-15.83%	11.88%	18.58%	2.99%	-10.39%	7.28%	3.77%	-0.73%	-9.51%	15.90%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.61%	1.45%	6.07%	4.45%	0.58%	-1.92%	3.34%	N/A	N/A	N/A	N/A	N/A
Edison International	EIX	Earnings Per Share	1.64	1.75	1.86	2.03	NA	1.30	1.82	2.38	0.69	3.34	3.28	3.32	3.68	3.24	3.35	3.23	4.55	3.78	4.33	4.15	3.94	4.51
		Dividends Per Share	1.00	1.00	1.04	1.08	0.83	N/A	N/A	N/A	0.80	1.02	1.10	1.18	1.23	1.25	1.27	1.29	1.31	1.37	1.48	1.73	1.98	2.23
		Payout Ratio	60.98%	57.31%	55.91%	53.20%	N/A	N/A	N/A	N/A	115.94%	30.54%	33.54%	35.54%	33.42%	38.58%	37.91%	39.94%	28.79%	36.24%	34.18%	41.69%	50.25%	49.45%
		Annual Earnings Growth	N/A	6.40%	6.59%	9.14%	N/A	N/A	40.00%	30.77%	-71.01%	384.06%	-1.80%	1.22%	10.84%	-11.96%	3.40%	-3.58%	40.87%	-16.92%	14.55%	-4.16%	-5.06%	14.47%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	76.40%	68.65%	64.66%	76.47%	0.34%	-0.02%	7.91%	2.36%	7.66%	6.15%	5.86%	0.58%	N/A	N/A	N/A	N/A	N/A

Company	Ticker		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
El Paso Electric	EE	Earnings Per Share	0.52	0.61	0.70	0.86	1.09	1.27	0.57	0.64	0.69	0.76	1.27	1.63	1.73	1.50	2.07	2.48	2.26	2.20	2.27	2.03	2.39	2.42
		Dividends Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.66	0.97	1.05	1.11	1.17	1.23	1.32
		Payout Ratio	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	26.61%	42.92%	47.73%	48.90%	57.64%	51.46%	54.55%
		Annual Earnings Growth	N/A	17.31%	14.75%	22.86%	26.74%	16.51%	-55.12%	12.28%	7.81%	10.14%	67.11%	28.35%	6.13%	-13.29%	38.00%	19.81%	-8.87%	-2.65%	3.18%	-10.57%	17.73%	1.26%
		5yr Avg Fwd EPS Growth	19.64%	5.15%	4.66%	1.65%	-1.67%	8.45%	25.14%	23.91%	19.69%	25.26%	15.80%	8.36%	6.60%	9.89%	0.18%	-0.24%	1.79%	N/A	N/A	N/A	N/A	N/A
Entergy Corporation	ETR	Earnings Per Share	2.48	2.25	2.22	2.25	2.97	3.08	3.68	3.69	3.93	4.40	5.36	5.60	6.20	6.30	6.66	7.55	6.02	4.96	5.77	5.81	6.88	5.19
		Dividends Per Share	1.80	1.80	1.50	1.20	1.22	1.28	1.34	1.60	1.89	2.16	2.16	2.58	3.00	3.00	3.24	3.32	3.32	3.32	3.32	3.34	3.42	3.5
		Payout Ratio	72.58%	80.00%	67.57%	53.33%	41.08%	41.56%	36.41%	43.36%	48.09%	49.09%	40.30%	46.07%	48.39%	47.62%	48.65%	43.97%	55.15%	66.94%	57.54%	57.49%	49.71%	67.44%
		Annual Earnings Growth	N/A	-9.27%	-1.33%	1.35%	32.00%	3.70%	19.48%	0.27%	6.50%	11.96%	21.82%	4.48%	10.71%	1.61%	5.71%	13.36%	-20.26%	-17.61%	16.33%	0.69%	18.42%	-24.56%
		5yr Avg Fwd EPS Growth	5.29%	11.04%	11.36%	12.39%	8.38%	12.01%	9.01%	11.09%	10.12%	8.87%	7.18%	2.23%	-3.44%	-0.49%	-1.50%	-0.49%	-1.35%	N/A	N/A	N/A	N/A	N/A
Exelon Corporation	EXC	Earnings Per Share	N/A	N/A	N/A	1.86	1.39	2.20	2.40	2.44	2.75	3.21	3.50	4.03	4.10	4.29	3.87	3.75	1.92	2.31	2.10	2.54	1.80	4.39
		Dividends Per Share	N/A	N/A	N/A	N/A	N/A	0.91	0.88	0.96	1.26	1.60	1.64	1.82	2.05	2.10	2.10	2.10	2.10	1.46	1.24	1.24	1.26	1.31
		Payout Ratio	N/A	N/A	N/A	N/A	N/A	41.36%	36.67%	39.34%	45.82%	49.84%	46.86%	45.16%	50.00%	48.95%	54.26%	56.00%	109.38%	63.20%	59.05%	48.82%	70.00%	29.84%
		Annual Earnings Growth	N/A	N/A	N/A	N/A	-25.27%	58.27%	9.09%	1.67%	12.70%	16.73%	9.03%	15.14%	1.74%	4.63%	-9.79%	-3.10%	-48.80%	20.31%	-9.09%	20.95%	-29.13%	143.89%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	11.29%	19.69%	9.84%	11.06%	11.07%	9.46%	4.15%	1.72%	-11.06%	-7.35%	-10.09%	-3.95%	-9.15%	29.39%	N/A	N/A	N/A	N/A	N/A
FirstEnergy Corp.	FE	Earnings Per Share	2.10	1.94	1.95	2.50	2.69	2.84	2.54	1.47	2.77	2.84	3.82	4.22	4.38	3.32	3.25	1.88	2.13	2.97	0.85	2.00	2.10	2.60
		Dividends Per Share	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.91	1.71	1.85	2.05	2.20	2.20	2.20	2.20	2.20	1.65	1.44	1.44	1.44	1.44
		Payout Ratio	71.43%	77.32%	76.92%	60.00%	55.76%	52.82%	59.06%	102.04%	68.95%	60.21%	48.43%	48.58%	50.23%	66.27%	67.69%	117.02%	103.29%	55.56%	169.41%	72.00%	68.57%	55.38%
		Annual Earnings Growth	N/A	-7.62%	0.52%	28.21%	7.60%	5.58%	-10.56%	-42.13%	88.44%	2.53%	34.51%	10.47%	3.79%	-24.20%	-2.11%	-42.15%	13.30%	39.44%	-71.38%	135.29%	5.00%	23.81%
		5yr Avg Fwd EPS Growth	6.86%	6.27%	-2.26%	9.78%	8.77%	14.56%	18.76%	27.95%	5.42%	4.49%	-10.84%	-10.27%	-3.15%	-12.58%	14.90%	24.33%	26.43%	N/A	N/A	N/A	N/A	N/A
Great Plains Energy Inc.	GXP	Earnings Per Share	1.69	1.69	1.89	1.26	2.05	1.59	2.04	2.27	2.46	2.18	1.62	1.86	1.16	1.03	1.53	1.25	1.35	1.62	1.57	1.37	1.61	1.06
		Dividends Per Share	1.59	1.62	1.64	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	0.83	0.83	0.84	0.86	0.88	0.94	1.00	1.06	1.10
		Payout Ratio	94.08%	95.86%	86.77%	131.75%	80.98%	104.40%	81.37%	73.13%	67.48%	76.15%	102.47%	89.25%	143.10%	80.58%	54.25%	67.20%	63.70%	54.32%	59.87%	72.99%	65.84%	103.77%
		Annual Earnings Growth	N/A	0.00%	11.83%	-33.33%	62.70%	-22.44%	28.30%	11.27%	8.37%	-11.38%	-25.69%	14.81%	-37.63%	-11.21%	48.54%	-18.30%	8.00%	20.00%	-3.09%	-12.74%	17.52%	-34.16%
		5yr Avg Fwd EPS Growth	3.75%	9.41%	9.30%	17.64%	2.83%	2.18%	-0.52%	-10.30%	-14.22%	-2.23%	-0.76%	-2.12%	9.41%	11.03%	-1.23%	5.94%	-2.49%	N/A	N/A	N/A	N/A	N/A
Hawaiian Electric Industries, Inc.	HE	Earnings Per Share	1.30	1.38	1.48	1.45	1.27	1.60	1.62	1.58	1.36	1.46	1.33	1.11	1.07	0.91	1.21	1.44	1.67	1.62	1.64	1.50	2.29	1.64
		Dividends Per Share	1.21	1.22	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
		Payout Ratio	93.08%	88.41%	83.78%	85.52%	97.64%	77.50%	76.54%	78.48%	91.18%	84.93%	93.23%	111.71%	115.89%	136.26%	102.48%	86.11%	74.25%	76.54%	75.61%	82.67%	54.15%	75.61%
		Annual Earnings Growth	N/A	6.15%	7.25%	-2.03%	-12.41%	25.98%	1.25%	-2.47%	-13.92%	7.35%	-8.90%	-16.54%	-3.60%	-14.95%	32.97%	19.01%	15.97%	-2.99%	1.23%	-8.54%	52.67%	-28.38%
		5yr Avg Fwd EPS Growth	4.99%	4.01%	2.06%	-0.31%	3.64%	-3.34%	-6.90%	-7.12%	-7.33%	-2.21%	3.38%	9.88%	10.00%	13.24%	4.94%	11.67%	2.80%	N/A	N/A	N/A	N/A	N/A
IDACORP, Inc.	IDA	Earnings Per Share	2.21	2.32	2.37	2.43	3.50	3.35	1.63	0.96	1.90	1.75	2.35	1.86	2.18	2.64	2.95	3.36	3.37	3.64	3.85	3.87	3.94	4.21
		Dividends Per Share	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.70	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.37	1.57	1.76	1.92	2.08	2.24
		Payout Ratio	84.16%	80.17%	78.48%	76.54%	53.14%	55.52%	114.11%	177.08%	63.16%	68.57%	51.06%	64.52%	55.05%	45.45%	40.68%	35.71%	40.65%	43.13%	45.71%	49.61%	52.79%	53.21%
		Annual Earnings Growth	N/A	4.98%	2.16%	2.53%	44.03%	-4.29%	-51.34%	-41.10%	97.92%	-7.89%	34.29%	-20.85%	17.20%	21.10%	11.74%	13.90%	0.30%	8.01%	5.77%	0.52%	1.81%	6.85%
		5yr Avg Fwd EPS Growth	9.88%	-1.38%	-10.03%	9.04%	-1.34%	6.37%	12.47%	24.13%	8.77%	12.70%	8.62%	12.85%	11.01%	7.94%	5.70%	3.28%	4.59%	N/A	N/A	N/A	N/A	N/A
MGE Energy, Inc.	MGEE	Earnings Per Share	0.55	0.93	0.92	0.99	1.11	1.08	1.13	1.14	1.18	1.05	1.37	1.51	1.59	1.47	1.67	1.76	1.86	2.16	2.32	2.06	2.18	2.20
		Dividends Per Share	0.85	0.86	0.87	0.87	0.88	0.89	0.89	0.90	0.91	0.92	0.93	0.94	0.96	0.97	0.99	1.01	1.04	1.07	1.11	1.16	1.21	1.26
		Payout Ratio	156.10%	92.14%	94.20%	88.51%	79.28%	82.41%	78.76%	78.95%	77.12%	87.62%	67.88%	62.25%	60.38%	65.99%	59.28%	57.39%	55.91%	49.54%	47.84%	56.31%	55.50%	57.27%
		Annual Earnings Growth	N/A	70.73%	-1.43%	7.25%	12.50%	-2.70%	4.63%	0.88%	3.51%	-11.02%	30.48%	10.22%	5.30%	-7.55%	13.61%	5.39%	5.68%	16.13%	7.41%	-11.21%	5.83%	0.92%
		5yr Avg Fwd EPS Growth	17.27%	4.05%	4.51%	3.76%	-0.94%	5.70%	6.81%	7.70%	5.49%	10.41%	5.39%	4.49%	6.65%	9.64%	4.68%	4.77%	3.81%	N/A	N/A	N/A	N/A	N/A
NextEra Energy, Inc.	NEE	Earnings Per Share	1.67	1.79	1.93	2.04	2.07	2.31	2.01	2.45	2.46	2.32	3.23	3.27	4.07	3.97	4.74	4.82	4.56	4.83	5.60	6.06	5.78	10.47
		Dividends Per Share	0.92	0.96	1.00	1.04	1.08	1.12	1.16	1.20	1.30	1.42	1.50	1.64	1.78	1.89	2.00	2.20	2.40	2.64	2.90	3.08	3.48	3.93
		Payout Ratio	55.26%	53.78%	51.95%	51.11%	52.17%	48.48%	57.71%	48.98%	52.85%	61.21%	46.44%	50.15%	43.73%	47.61%	42.19%	45.64%	52.63%	54.66%	51.79%	50.83%	60.21%	37.54%
		Annual Earnings Growth	N/A	7.21%	7.84%	5.71%	1.72%	11.59%	-12.99%	21.89%	0.41%	-5.69%	39.22%	1.24%	24.46%	-2.46%	19.40%	1.69%	-5.39%	5.92%	15.94%	8.21%	-4.62%	81.14%
		5yr Avg Fwd EPS Growth	6.82%	2.78%	5.59%	4.53%	3.04%	8.57%	11.41%	11.93%	11.36%	16.37%	8.87%	7.54%	3.83%	7.51%	5.27%	4.01%	21.32%	N/A	N/A	N/A	N/A	N/A
Eversource Energy	ES	Earnings Per Share	N/A	N/A	N/A	N/A	NA	1.37	1.08	1.24	0.91	0.98	0.82	1.59	1.86	1.91	2.10	2.22	1.89	2.49	2.58	2.76	2.96	3.10
		Dividends Per Share	1.38	0.25	N/A	0.10	0.40	0.45	0.53	0.58	0.63	0.68	0.73	0.78	0.83	0.95	1.03	1.10	1.32	1.47	1.57	1.67	1.78	1.90
		Payout Ratio	N/A	N/A	N/A	N/A	N/A	32.85%	49.07%	46.77%	69.23%	69.39%	89.02%	49.06%	44.62%	49.74%	49.05%	49.55%	69.84%	59.04%	60.85%	60.51%	60.14%	61.29%
		Annual Earnings Growth	N/A	N/A	N/A	N/A	N/A	N/A	-21.17%	14.81%	-26.61%	7.69%	-16.33%	93.90%	16.98%	2.69%	9.95%	5.71%	-14.86%	31.75%	3.61%	6.98%	7.25%	4.73%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	-8.32%	14.69%	15.13%	20.99%	21.44%	25.85%	4.09%	7.05%	7.23%	6.64%	6.94%	10.86%	N/A	N/A	N/A	N/A	N/A
NorthWestern Corporation	NWE	Earnings Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.71	1.31	1.44	1.77	2.02	2.14	2.53	2.26	2.46	2.99	2.90	3.39	3.34
		Dividends Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00	1.24	1.28	1.32	1.34	1.36	1.44	1.48	1.52	1.60	1.92	2.00	2.10
		Payout Ratio	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	58.48%	94.66%	88.89%	74.58%	66.34%	63.55%	56.92%	65.49%	61.79%	53.51%	66.21%	59.00%	62.87%
		Annual Earnings Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-23.39%	9.92%	22.92%	14.12%	5.94%	18.22%	-10.67%	8.85%	21.54%	-3.01%	16.90%	-1.47%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.90%	14.23%	10.11%	7.29%	8.78%	6.99%	6.72%	8.56%	N/A	N/A	N/A	N/A	N/A
OGE Energy Corp.	OGE	Earnings Per Share	0.81	0.81	1.02	0.97	0.95	0.65	0.72	0.87	0.89	0.92	1.23	1.32	1.25	1.33	1.5	1.73	1.79	1.94	1.98	1.69	1.69	1.92
		Dividends Per Share	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.68	0.7	0.71	0.73	0.76	0.8	0.85	0.95	1.05	1.16	1.27
		Payout Ratio	82.10%	82.61%	65.69%	69.07%	70.53%	103.08%	93.06%	77.01%	75.28%	72.83%	54.47%	51.52%	56.00%	53.38%	48.67%	43.93%	44.69%	43.81%	47.98%	62.13%	68.64%	66.15%
		Annual Earnings Growth	N/A	-0.62%	26.71%	-4.90%	-2.06%	-31.58%	10.77%	20.83%	2.30%	3.37%	33.70%	7.32%	-5.30%	6.40%	12.78%	15.33%	3.47%	8.38%	2.06%	-14.65%	0.00%	13.61%
		5yr Avg Fwd EPS Growth	-2.49%	-0.21%	-1.39%	0.05%	1.14%	14.19%	13.50%	8.28%	9.10%	10.98%	7.31%	6.54%	9.27%	8.41%	2.92%	-0.15%	1.88%	N/A	N/A	N/A	N/A	N/A

Company	Ticker		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Otter Tail Corporation	OTTR	Earnings Per Share	1.24	1.29	1.29	1.45	1.60	1.68	1.79	1.51	1.50	1.78	1.69	1.78	1.09	0.71	0.38	0.45	1.05	1.37	1.55	1.56	1.60	1.86
		Dividends Per Share	0.90	0.93	0.96	0.99	1.02	1.04	1.06	1.08	1.10	1.12	1.15	1.17	1.19	1.19	1.19	1.19	1.19	1.19	1.21	1.23	1.25	1.28
		Payout Ratio	72.58%	72.09%	74.42%	68.28%	63.75%	61.90%	59.22%	71.52%	73.33%	62.92%	68.05%	65.73%	109.17%	167.61%	313.16%	264.44%	113.33%	86.86%	78.06%	78.85%	78.13%	68.82%
		Annual Earnings Growth	N/A	4.03%	0.00%	12.40%	10.34%	5.00%	6.55%	-15.64%	-0.66%	18.67%	-5.06%	5.33%	-38.76%	-34.86%	-46.48%	18.42%	133.33%	30.48%	13.14%	0.65%	2.56%	16.25%
		5yr Avg Fwd EPS Growth	6.36%	6.86%	3.73%	1.12%	2.78%	0.77%	0.53%	-4.10%	-10.94%	-23.97%	-19.27%	6.33%	20.18%	29.78%	39.20%	36.03%	12.61%	N/A	N/A	N/A	N/A	N/A
PG&E Corporation	PCG	Earnings Per Share	2.16	1.57	1.88	2.24	N/A	3.02	N/A	2.05	2.12	2.35	2.76	2.78	3.22	3.03	2.82	2.78	2.07	1.83	3.06	2.00	2.83	3.50
		Dividends Per Share	1.77	1.20	1.20	1.20	1.20	N/A	N/A	N/A	N/A	1.23	1.32	1.44	1.56	1.68	1.82	1.82	1.82	1.82	1.82	1.82	1.93	1.55
		Payout Ratio	81.94%	76.43%	63.83%	53.57%	N/A	N/A	N/A	N/A	N/A	52.34%	47.83%	51.80%	48.45%	55.45%	64.54%	65.47%	87.92%	99.45%	59.48%	91.00%	68.20%	44.29%
		Annual Earnings Growth	N/A	-27.31%	19.75%	19.15%	N/A	N/A	N/A	N/A	3.41%	10.85%	17.45%	0.72%	15.83%	-5.90%	-6.93%	-1.42%	-25.54%	-11.59%	67.21%	-34.64%	41.50%	23.67%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.65%	7.79%	4.23%	0.46%	-4.79%	-10.28%	4.35%	-1.20%	7.39%	17.23%	N/A	N/A	N/A	N/A	N/A
Pinnacle West Capital Corporation	PNW	Earnings Per Share	2.47	2.76	2.85	3.18	3.35	3.68	2.53	2.52	2.58	2.24	3.17	2.96	2.12	2.26	3.08	2.99	3.50	3.66	3.58	3.92	3.95	4.43
		Dividends Per Share	1.03	1.13	1.23	1.33	1.43	1.53	1.63	1.73	1.83	1.93	2.03	2.10	2.10	2.10	2.10	2.10	2.67	2.23	2.33	2.44	2.56	2.70
		Payout Ratio	41.70%	40.94%	43.16%	41.82%	42.69%	41.58%	64.43%	68.65%	70.93%	86.16%	64.04%	70.95%	99.06%	92.92%	68.18%	70.23%	76.29%	60.93%	65.08%	62.24%	64.81%	60.95%
		Annual Earnings Growth	N/A	11.74%	3.26%	11.58%	5.35%	9.85%	-31.25%	-0.40%	2.38%	-13.18%	41.52%	-6.62%	-28.38%	6.60%	36.28%	-2.92%	17.06%	4.57%	-2.19%	9.50%	0.77%	12.15%
		5yr Avg Fwd EPS Growth	8.36%	-0.24%	-0.97%	-2.81%	-6.52%	-0.18%	4.74%	-0.86%	-0.01%	9.88%	0.99%	5.73%	12.32%	10.56%	5.20%	5.94%	4.96%	N/A	N/A	N/A	N/A	N/A
PNM Resources	PNM	Earnings Per Share	1.15	1.25	1.50	1.29	1.55	2.61	1.07	1.15	1.43	1.56	1.72	0.76	0.11	0.58	0.87	1.08	1.31	1.41	1.45	1.64	1.65	1.92
		Dividends Per Share	0.24	0.42	0.51	0.53	0.53	0.53	0.57	0.61	0.63	0.79	0.86	0.91	0.61	0.50	0.50	0.50	0.58	0.68	0.76	0.80	0.88	0.99
		Payout Ratio	20.87%	33.60%	34.00%	41.09%	34.19%	20.31%	53.27%	53.04%	44.06%	50.64%	50.00%	119.74%	554.55%	86.21%	57.47%	46.30%	44.27%	48.23%	52.41%	48.78%	53.33%	51.56%
		Annual Earnings Growth	N/A	8.70%	20.00%	-14.00%	20.16%	68.39%	-59.00%	7.48%	24.35%	9.09%	10.26%	-55.81%	-85.53%	427.27%	50.00%	24.14%	21.30%	7.63%	2.84%	13.10%	0.61%	16.36%
		5yr Avg Fwd EPS Growth	20.65%	7.11%	4.60%	12.27%	10.06%	-1.57%	-0.93%	-19.53%	61.06%	69.24%	72.01%	87.44%	106.07%	21.18%	13.80%	9.10%	8.11%	N/A	N/A	N/A	N/A	N/A
Portland General Electric Company	POR	Earnings Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.02	1.14	2.33	1.39	1.31	1.66	1.95	1.87	1.77	2.18	2.04	2.16	2.29
		Dividends Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.68	0.93	0.97	1.01	1.04	1.06	1.08	1.10	1.12	1.18	1.26	1.34
		Payout Ratio	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	59.65%	39.91%	69.78%	77.10%	62.65%	54.36%	57.75%	62.15%	51.38%	57.84%	58.33%	58.52%
		Annual Earnings Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.76%	104.39%	-40.34%	-5.76%	26.72%	17.47%	-4.10%	-5.35%	23.16%	-6.42%	5.88%	6.02%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.35%	20.49%	-1.20%	5.80%	11.58%	4.95%	2.63%	4.66%	N/A	N/A	N/A	N/A	N/A
PPL Corporation	PPL	Earnings Per Share	1.03	0.99	1.12	1.01	1.64	1.79	1.54	1.84	1.87	1.92	2.29	2.63	2.45	1.19	2.29	2.61	2.61	2.38	2.38	2.37	2.79	2.00
		Dividends Per Share	0.84	0.84	0.50	0.53	0.53	0.53	0.72	0.77	0.82	0.96	1.10	1.22	1.34	1.38	1.40	1.40	1.44	1.47	1.49	1.50	1.52	1.58
		Payout Ratio	81.46%	84.34%	44.84%	52.74%	32.32%	29.61%	46.75%	41.85%	43.85%	50.00%	48.03%	46.39%	54.69%	115.97%	61.14%	53.64%	55.17%	61.76%	62.61%	63.29%	54.48%	79.00%
		Annual Earnings Growth	N/A	-3.41%	12.63%	-9.87%	63.18%	9.15%	-13.97%	19.48%	1.63%	2.67%	19.27%	14.85%	-6.84%	-51.43%	92.44%	13.97%	0.00%	-8.81%	0.00%	-0.42%	17.72%	-28.32%
		5yr Avg Fwd EPS Growth	14.34%	12.22%	13.60%	15.89%	3.79%	5.82%	11.58%	6.32%	-4.30%	13.66%	12.60%	9.63%	9.23%	19.52%	0.95%	1.70%	-3.97%	N/A	N/A	N/A	N/A	N/A
Public Service Enterprise Group Incorpora	PEG	Earnings Per Share	1.23	1.21	1.40	1.56	1.78	1.85	1.88	1.88	1.52	1.79	1.85	2.59	2.90	3.08	3.07	3.11	2.44	2.45	2.99	3.30	2.83	4.40
		Dividends Per Share	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.10	1.12	1.14	1.17	1.29	1.33	1.37	1.37	1.42	1.44	1.48	1.56	1.64	1.72
		Payout Ratio	87.80%	89.63%	77.42%	69.23%	60.67%	58.38%	57.45%	57.45%	72.37%	62.57%	61.62%	45.17%	44.48%	43.18%	44.63%	44.05%	58.20%	58.78%	49.50%	47.27%	57.95%	39.09%
		Annual Earnings Growth	N/A	-2.03%	15.77%	11.83%	14.10%	3.93%	1.62%	0.00%	-19.15%	17.76%	3.35%	40.00%	11.97%	6.21%	-0.32%	1.30%	-21.54%	0.41%	22.04%	10.37%	-14.24%	55.48%
		5yr Avg Fwd EPS Growth	8.72%	9.45%	6.30%	0.10%	0.83%	0.72%	8.39%	10.79%	15.86%	12.24%	11.83%	-0.48%	-2.79%	0.38%	2.52%	-0.59%	14.81%	N/A	N/A	N/A	N/A	N/A
SCANA Corporation	SCG	Earnings Per Share	2.05	1.90	2.12	1.44	2.12	2.15	2.38	2.50	2.67	2.78	2.59	2.74	2.95	2.85	2.98	2.97	3.15	3.39	3.79	3.81	4.16	4.05
		Dividends Per Share	1.47	1.51	1.54	1.32	1.15	1.20	1.30	1.38	1.46	1.56	1.68	1.76	1.84	1.88	1.90	1.94	1.98	2.03	2.10	2.18	2.30	2.45
		Payout Ratio	71.71%	79.47%	72.64%	91.67%	54.25%	55.81%	54.62%	55.20%	54.68%	56.12%	64.86%	64.23%	62.37%	65.96%	63.76%	65.32%	62.86%	59.88%	55.41%	57.22%	55.29%	60.49%
		Annual Earnings Growth	N/A	-7.32%	11.58%	-32.08%	47.22%	1.42%	10.70%	5.04%	6.80%	4.12%	-6.83%	5.79%	7.66%	-3.39%	4.56%	-0.34%	6.06%	7.62%	11.80%	0.53%	9.19%	-2.64%
		5yr Avg Fwd EPS Growth	4.16%	7.77%	6.46%	14.24%	5.61%	3.97%	2.98%	3.51%	1.47%	1.56%	2.86%	2.91%	2.90%	5.94%	5.13%	7.04%	5.30%	N/A	N/A	N/A	N/A	N/A
Sempra Energy	SRE	Earnings Per Share	1.98	2.20	1.24	1.66	2.06	2.55	2.79	3.01	3.93	3.52	4.23	4.26	4.43	4.78	4.02	4.47	4.35	4.22	4.63	5.23	4.24	4.63
		Dividends Per Share	1.56	1.56	1.56	1.56	1.00	1.00	1.00	1.00	1.00	1.16	1.20	1.24	1.37	1.56	1.56	1.92	2.40	2.52	2.64	2.80	3.02	3.29
		Payout Ratio	78.79%	70.91%	125.81%	93.98%	48.54%	39.22%	35.84%	33.22%	25.45%	32.95%	28.37%	29.11%	30.93%	32.64%	38.81%	42.95%	55.17%	59.72%	57.02%	53.54%	71.23%	71.06%
		Annual Earnings Growth	N/A	11.11%	-43.64%	33.87%	24.10%	23.79%	9.41%	7.89%	30.56%	-10.43%	20.17%	0.71%	3.99%	7.90%	-15.90%	11.19%	-2.68%	-2.99%	9.72%	12.96%	-18.93%	9.20%
		5yr Avg Fwd EPS Growth	9.85%	9.51%	19.81%	19.15%	12.24%	11.52%	9.78%	9.00%	4.47%	3.37%	1.58%	0.90%	-0.50%	-0.13%	5.64%	-0.39%	1.99%	N/A	N/A	N/A	N/A	N/A
Southern Company	SO	Earnings Per Share	1.68	1.58	1.73	1.83	2.01	1.61	1.85	1.97	2.06	2.13	2.10	2.28	2.25	2.32	2.36	2.55	2.67	2.70	2.77	2.84	2.83	3.00
		Dividends Per Share	1.26	1.30	1.34	1.34	1.34	1.34	1.36	1.39	1.42	1.48	1.54	1.60	1.66	1.73	1.80	1.87	1.94	2.01	2.08	2.15	2.22	2.30
		Payout Ratio	75.00%	82.28%	77.46%	73.22%	66.67%	83.23%	73.51%	70.56%	68.93%	69.48%	73.33%	70.18%	73.78%	74.57%	76.27%	73.33%	72.66%	74.44%	75.09%	75.70%	78.45%	76.67%
		Annual Earnings Growth	N/A	-5.95%	9.49%	5.78%	9.84%	-19.90%	14.91%	6.49%	4.57%	3.40%	-1.41%	8.57%	-1.32%	3.11%	1.72%	8.05%	4.71%	1.12%	2.59%	2.53%	-0.35%	6.01%
		5yr Avg Fwd EPS Growth	-0.15%	4.02%	3.42%	3.18%	1.89%	5.59%	4.32%	2.76%	2.47%	2.14%	4.03%	3.26%	3.74%	3.64%	3.80%	2.12%	2.38%	N/A	N/A	N/A	N/A	N/A
Vectren Corporation	VVC	Earnings Per Share	N/A	N/A	N/A	1.48	1.17	1.08	1.68	1.56	1.42	1.81	1.44	1.83	1.63	1.79	1.65	1.73	1.94	1.66	2.02	2.39	2.55	2.60
		Dividends Per Share	N/A	N/A	N/A	0.95	0.98	1.03	1.07	1.11	1.15	1.19	1.23	1.27	1.31	1.35	1.37	1.39	1.41	1.43	1.46	1.54	1.62	1.71
		Payout Ratio	N/A	N/A	N/A	64.19%	83.76%	95.37%	63.69%	71.15%	80.99%	65.75%	85.42%	69.40%	80.37%	75.42%	83.03%	80.35%	72.68%	86.14%	72.28%	64.44%	63.53%	65.77%
		Annual Earnings Growth	N/A	N/A	N/A	N/A	-20.95%	-7.69%	55.56%	-7.14%	-8.97%	27.46%	-20.44%	27.08%	-10.93%	9.82%	-7.82%	4.85%	12.14%	-14.43%	21.69%	18.32%	6.69%	1.96%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	2.16%	11.84%	9.29%	3.60%	2.84%	6.60%	-0.46%	4.60%	1.61%	0.91%	3.28%	8.51%	8.88%	6.85%	N/A	N/A	N/A	N/A	N/A
Westar Energy, Inc.	WR	Earnings Per Share	2.60	N/A	2.13	1.48	0.89	NA	1.00	1.48	1.17	1.55	1.88	1.84	1.31	1.28	1.80	1.79	2.15	2.27	2.35	2.09	2.43	2.27
		Dividends Per Share	2.07	2.10	2.14	2.14	1.44	1.20	1.20	0.87	0.80	0.92	0.98	1.08	1.16	1.20	1.24	1.28	1.32	1.36	1.40	1.44	1.52	1.60
		Payout Ratio	79.62%	N/A	100.47%	144.59%	161.80%	N/A	120.00%	58.78%	68.38%	59.35%	52.13%	58.70%	88.55%	93.75%	68.89%	71.51%	61.40%	59.91%	59.57%	68.90%	62.55%	70.48%
		Annual Earnings Growth	N/A	N/A	N/A	-30.52%	-39.86%	N/A	N/A	48.00%	-20.95%	32.48%	21.29%	-2.13%	-28.80%	-2.29%	40.63%	-0.56%	20.11%	5.58%	3.52%	-11.06%	16.27%	-6.58%
		5yr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	N/A	15.74%	0.38%	4.11%	5.74%	1.37%	5.82%	12.69%	13.86%	3.52%	6.88%	1.55%	N/A	N/A	N/A	N/A	N/A
Wisconsin Energy Corporation	WEC	Earnings Per Share	0.99	0.27	0.83	0.94	0.54	0.92	1.16	1.13	0.93	1.28	1.32	1.42	1.52	1.60	1.92	2.18	2.35	2.51	2.59	2.34	2.96	3.14
		Dividends Per Share	0.75	0.77	0.78	0.78	0.69	0.40	0.40	0.40	0.42	0.44	0.46	0.50	0.54	0.68	0.80	1.04	1.20	1.45	1.56	1.74	1.98	2.08
		Payout Ratio	75.76%	285.19%	93.98%	82.98%	127.78%	43.48%	34.48%	35.40%	45.16%	34.38%	34.85%	35.21%	35.53%	42.50%	41.67%	47.71%	51.06%	57.77%	60.23%	74.36%	66.89%	66.24%
		Annual Earnings Growth	N/A	-72.73%	207.41%	13.25%	-42.55%	70.37%	26.09%	-2.59%	-17.70%	37.63%	3.13%	7.58%	7.04%	5.26%	20.00%	13.54%	7.80%	6.81%	3.19%	-9.65%	26.50%	6.08%
		5yr Avg Fwd EPS Growth	35.15%	54.91%	12.91%	6.72%	22.76%	9.31%	5.61%	7.54%	12.13%	8.60%	10.68%	10.73%	10.68%	10.27%	4.34%	6.93%	6.58%	N/A	N/A	N/A	N/A	N/A
Xcel Energy Inc.	XEL	Earnings Per Share	1.91	1.61	1.84	1.43	1.60	2.27	0.42	1.23	1.27	1.20	1.35	1.35	1.46	1.49	1.56	1.72	1.85	1.91	2.03	2.10	2.21	2.30
		Dividends Per Share	1.37	1.40	1.43	1.45	1.48	1.50	1.13	0.75	0.81	0.85	0.88	0.91	0.94	0.97	1.00	1.03	1.07	1.11	1.20	1.28	1.36	1.44
		Payout Ratio	71.73%	86.96%	77.72%	101.40%	92.50%	66.08%	269.05%	60.98%	63.78%	70.83%	65.19%	67.41%	64.38%	65.10%	64.10%	59.88%	57.84%	58.12%	59.11%	60.95%	61.54%	62.61%
		Annual Earnings Growth	N/A	-15.71%	14.29%	-22.28%	11.89%	41.88%	-81.50%	192.86%	3.25%	-5.51%	12.50%	0.00%	8.15%	2.05%	4.70%	10.26%	7.56%	3.24%	6.28%	3.45%	5.24%	4.07%
		5yr Avg Fwd EPS Growth	6.01%	-7.15%	28.57%	33.67%	30.19%	24.32%	40.62%	3.68%	3.44%	5.48%	5.03%	6.54%	5.56%	6.41%	6.16%	5.15%	4.46%	N/A	N/A	N/A	N/A	N/A

Notes:
Source: Value Line
"N/A" indicates no dividend was paid, earnings were negative or financials were not available
Average 5-year forward earnings per share growth is only reported when data is available for all 5 years

Retention Growth Estimate Vs. Value Line EPS Growth Estimate

Company	Ticker	[1] Projected Earnings per share 2018	[2] Projected Dividend per share 2018	[3] Retention Ratio (B)	[4] Projected Book Value per Share 2018	[5] Return on Book Value (R)	[6] B x R	[7] Projected Common Shares Outstanding 2018	[8] Projected Common Shares Outstanding 2021-2023	[9] Common Shares Growth Rate	[10] 2017 High Price	[11] 2017 Low Price	[12] 2017 price midpoint	[13] Book Value per Share 2017	[14] Market/ Book Ratio	[15] "S"	[16] "V"	[17] S x V	[18] BR + SV	2017-18 Value Line Projected EPS Growth	Sustainable Growth Minus EPS Growth
ALLETE, Inc.	ALE	3.40	2.24	34.12%	42.10	8.08%	2.76%	52.00	56.00	2.48%	$ 81.20	$ 61.60	$ 71.40	40.47	1.76	4.37%	43.32%	1.89%	4.65%	8.63%	-3.98%
Alliant Energy Corporation	LNT	2.10	1.34	36.19%	19.00	11.05%	4.00%	233.00	235.00	0.28%	$ 45.60	$ 36.60	$ 41.10	18.08	2.27	0.64%	56.01%	0.36%	4.36%	5.53%	-1.17%
Ameren Corporation	AEE	3.05	1.85	39.34%	31.00	9.84%	3.87%	244.00	250.00	0.80%	$ 64.90	$ 51.40	$ 58.15	29.61	1.96	1.58%	49.08%	0.78%	4.65%	10.11%	-5.46%
American Electric Power Company, Inc.	AEP	3.90	2.51	35.64%	38.70	10.08%	3.59%	493.50	516.00	1.48%	$ 78.10	$ 61.80	$ 69.95	37.17	1.88	2.79%	46.86%	1.31%	4.90%	7.73%	-2.84%
Avangrid, Inc.	AGR	2.30	1.76	23.48%	49.90	4.61%	1.08%	309.00	309.00	0.00%	$ 53.50	$ 37.40	$ 45.45	49.30	0.92	0.00%	-8.47%	0.00%	1.08%	6.98%	-5.89%
Avista Corporation	AVA	1.95	1.49	23.59%	26.95	7.24%	1.71%	67.00	70.00	1.46%	$ 52.80	$ 37.80	$ 45.30	26.41	1.72	2.50%	41.70%	1.04%	2.75%	0.00%	2.75%
Black Hills Corporation	BKH	3.45	1.90	44.93%	35.25	9.79%	4.40%	59.50	59.50	0.00%	$ 72.00	$ 57.00	$ 64.50	31.92	2.02	0.00%	50.51%	0.00%	4.40%	2.07%	2.33%
CenterPoint Energy, Inc.	CNP	1.55	1.11	28.39%	11.35	13.66%	3.88%	431.00	435.00	0.31%	$ 30.50	$ 24.50	$ 27.50	10.88	2.53	0.77%	60.44%	0.47%	4.34%	-1.27%	5.62%
CMS Energy Corporation	CMS	2.35	1.43	39.15%	16.95	13.86%	5.43%	284.00	294.00	1.15%	$ 50.80	$ 41.10	$ 45.95	15.77	2.91	3.35%	65.68%	2.20%	7.63%	8.29%	-0.67%
Consolidated Edison, Inc.	ED	4.20	2.86	31.90%	50.15	8.37%	2.67%	312.00	316.00	0.42%	$ 89.70	$ 72.10	$ 80.90	48.65	1.66	0.70%	39.86%	0.28%	2.95%	3.70%	-0.75%
Dominion Energy Inc.	D	4.10	3.34	18.54%	28.40	14.44%	2.68%	654.00	670.00	0.80%	$ 85.30	$ 70.90	$ 78.10	26.85	2.91	2.33%	65.62%	1.53%	4.20%	-19.29%	23.50%
DTE Energy Company	DTE	5.80	3.59	38.10%	55.95	10.37%	3.95%	182.50	195.00	2.21%	$ 116.70	$ 96.60	$ 106.65	53.03	2.01	4.45%	50.28%	2.23%	6.18%	1.22%	4.96%
Duke Energy Corporation	DUK	4.80	3.64	24.17%	60.45	7.94%	1.92%	702.00	706.00	0.19%	$ 91.80	$ 76.10	$ 83.95	59.35	1.41	0.27%	29.30%	0.08%	2.00%	11.63%	-9.63%
Edison International	EIX	4.55	2.45	46.15%	37.35	12.18%	5.62%	325.81	325.81	0.00%	$ 83.40	$ 62.70	$ 73.05	35.82	2.04	0.00%	50.97%	0.00%	5.62%	0.89%	4.74%
El Paso Electric Company	EE	2.45	1.42	42.04%	29.20	8.39%	3.53%	40.60	41.00	0.32%	$ 61.20	$ 44.70	$ 52.95	28.14	1.88	0.61%	46.86%	0.29%	3.81%	1.24%	2.57%
Entergy Corporation	ETR	4.25	3.58	15.76%	45.75	9.29%	1.46%	183.00	193.00	1.77%	$ 87.90	$ 69.60	$ 78.75	44.28	1.78	3.15%	43.77%	1.38%	2.84%	-18.11%	20.96%
Exelon Corporation	EXC	2.90	1.38	52.41%	32.75	8.85%	4.64%	962.00	978.00	0.55%	$ 42.70	$ 33.30	$ 38.00	29.05	1.31	0.71%	23.55%	0.17%	4.81%	-33.94%	38.75%
FirstEnergy Corp.	FE	2.40	1.44	40.00%	17.45	13.75%	5.50%	478.00	548.00	4.61%	$ 35.20	$ 27.90	$ 31.55	15.40	2.05	9.45%	51.19%	4.84%	10.34%	-7.69%	18.03%
Great Plains Energy Inc.	GXP	1.25	1.14	8.80%	23.10	5.41%	0.48%	216.00	158.00	-9.80%	$ 34.70	$ 26.70	$ 30.70	23.02	1.33	-13.07%	25.02%	-3.27%	-2.79%	17.92%	-20.72%
Hawaiian Electric Industries, Inc.	HE	1.90	1.24	34.74%	19.95	9.52%	3.31%	108.80	113.00	1.26%	$ 38.70	$ 31.70	$ 35.20	19.28	1.83	2.30%	45.23%	1.04%	4.35%	15.85%	-11.51%
IDACORP, Inc.	IDA	4.15	2.40	42.17%	46.40	8.94%	3.77%	50.40	50.40	0.00%	$ 100.00	$ 77.50	$ 88.75	44.65	1.99	0.00%	49.69%	0.00%	3.77%	-1.43%	5.20%
MGE Energy, Inc.	MGEE	2.35	1.32	43.83%	23.70	9.92%	4.35%	35.00	36.00	0.93%	$ 68.70	$ 60.30	$ 64.50	22.45	2.87	2.68%	65.19%	1.75%	6.10%	6.82%	-0.72%
NextEra Energy, Inc.	NEE	7.65	4.48	41.44%	61.90	12.36%	5.12%	500.00	535.00	2.26%	$ 159.40	$ 117.30	$ 138.35	59.90	2.31	5.21%	56.70%	2.96%	8.08%	-26.93%	35.01%
Eversource Energy	ES	3.30	2.02	38.79%	36.30	9.09%	3.53%	316.89	316.89	0.00%	$ 66.10	$ 54.10	$ 60.10	35.00	1.72	0.00%	41.76%	0.00%	3.53%	6.45%	-2.93%
NorthWestern Corporation	NWE	3.45	2.20	36.23%	37.95	9.09%	3.29%	50.25	51.00	0.49%	$ 64.50	$ 55.70	$ 60.10	36.44	1.65	0.81%	39.37%	0.32%	3.61%	3.29%	0.32%
OGE Energy Corp.	OGE	2.05	1.40	31.71%	19.95	10.28%	3.26%	199.70	199.70	0.00%	$ 37.40	$ 32.60	$ 35.00	19.28	1.82	0.00%	44.91%	0.00%	3.26%	6.77%	-3.51%
Otter Tail Corporation	OTTR	1.90	1.34	29.47%	18.75	10.13%	2.99%	40.00	44.00	3.20%	$ 48.70	$ 35.70	$ 42.20	17.62	2.40	7.65%	58.25%	4.46%	7.44%	2.15%	5.29%
PG&E Corporation	PCG	3.50	Nil	N/A	41.05	8.53%	N/A	520.00	550.00	1.87%	$ 71.60	$ 41.60	$ 56.60	37.34	1.52	2.83%	34.03%	0.96%	N/A	0.00%	N/A
Pinnacle West Capital Corporation	PNW	4.50	2.86	36.44%	46.35	9.71%	3.54%	112.00	113.00	0.29%	$ 92.50	$ 75.80	$ 84.15	44.80	1.88	0.55%	46.76%	0.26%	3.80%	1.58%	2.22%
PNM Resources, Inc.	PNM	1.85	1.08	41.62%	21.90	8.45%	3.52%	79.65	79.65	0.00%	$ 46.00	$ 33.30	$ 39.65	21.28	1.86	0.00%	46.33%	0.00%	3.52%	-3.65%	7.16%
Portland General Electric Company	POR	2.20	1.42	35.45%	27.85	7.90%	2.80%	89.25	90.00	0.28%	$ 50.10	$ 42.40	$ 46.25	27.11	1.71	0.47%	41.38%	0.20%	3.00%	-3.93%	6.93%
PPL Corporation	PPL	2.25	1.64	27.11%	16.15	13.93%	3.78%	700.00	740.00	1.85%	$ 40.20	$ 30.70	$ 35.45	15.25	2.32	4.30%	56.98%	2.45%	6.23%	12.50%	-6.27%
Public Service Enterprise Group Incorporated	PEG	3.05	1.80	40.98%	28.75	10.61%	4.35%	506.00	506.00	0.00%	$ 53.30	$ 41.70	$ 47.50	27.45	1.73	0.00%	42.21%	0.00%	4.35%	-30.68%	35.03%
SCANA Corporation	SCG	3.50	Nil	N/A	44.30	7.90%	N/A	142.90	142.90	0.00%	$ 74.10	$ 37.10	$ 55.60	40.75	1.36	0.00%	26.71%	0.00%	N/A	-13.58%	N/A
Sempra Energy	SRE	5.50	3.58	34.91%	58.20	9.45%	3.30%	279.00	296.00	1.97%	$ 123.00	$ 99.70	$ 111.35	50.41	2.21	4.35%	54.73%	2.38%	5.68%	18.79%	-13.11%
Southern Company	SO	3.00	2.38	20.67%	24.50	12.24%	2.53%	1008.00	1016.00	0.26%	$ 53.50	$ 46.70	$ 50.10	23.85	2.10	0.55%	52.40%	0.29%	2.82%	0.00%	2.82%
Vectren Corporation	VVC	2.85	1.83	35.79%	23.60	12.08%	4.32%	83.50	86.00	0.98%	$ 69.90	$ 51.50	$ 60.70	22.28	2.72	2.67%	63.29%	1.69%	6.01%	9.62%	-3.61%
Westar Energy, Inc.	WR	2.60	1.60	38.46%	28.35	9.17%	3.53%	142.50	145.00	0.58%	$ 57.30	$ 49.20	$ 53.25	27.50	1.94	1.11%	48.36%	0.54%	4.07%	14.54%	-10.47%
WEC Energy Group, Inc.	WEC	3.30	2.21	33.03%	30.95	10.66%	3.52%	315.60	315.60	0.00%	$ 70.10	$ 56.10	$ 63.10	29.98	2.10	0.00%	52.49%	0.00%	3.52%	5.10%	-1.57%
Xcel Energy Inc.	XEL	2.45	1.52	37.96%	23.55	10.40%	3.95%	509.50	522.50	0.83%	$ 52.20	$ 40.00	$ 46.10	22.56	2.04	1.71%	51.06%	0.87%	4.82%	6.52%	-1.70%
			Average:	34.30%														Mean:	4.39%	0.89%	3.10%
																		Median:	4.34%	2.72%	-0.18%

Number of underestimates: 19
Number of overestimates: 19

Notes:
[1] Source: Value Line as of May 18, 2018
[2] Source: Value Line
[3] Equals 1 - [2] / [1]
[4] Source: Value Line
[5] Equals [1] / [4]
[6] Equals [3] x [5]
[7] Source: Value Line
[8] Source: Value Line
[9] Equals ([8] / [7]) ^ 0.33 - 1
[10] Source: Value Line
[11] Source: Value Line
[12] Equals Average ([10], [11])
[13] Source: Value Line
[14] Equals [12] / [13]
[15] Equals [9] x [14]
[16] Equals 1 - (1 / [14])
[17] Equals [15] x [16]
[18] Equals [6] + [17]

Retention Growth Estimate Vs. Value Line EPS Growth Estimate

Company	Ticker	[1] Projected Earnings per share 2021-23	[2] Projected Dividend per share 2021-23	[3] Retention Ratio (B)	[4] Projected Book Value per Share 2021-23	[5] Return on Book Value (R)	[6] B x R	[7] Projected Common Shares Outstanding 2018	[8] Projected Common Shares Outstanding 2021-2023	[9] Common Shares Growth Rate	[10] 2017 High Price	[11] 2017 Low Price	[12] 2017 price midpoint	[13] Book Value per Share 2017	[14] Market/ Book Ratio	[15] "S"	[16] "V"	[17] S x V	[18] 2022 BR + SV	[19] 2018 BR + SV	[20] Average 2018/2022 BR + SV	2018-20 Value Line Projected Annual EPS Growth	Average 2018/2020 Sustainable Growth Minus EPS Growth
ALLETE, Inc.	ALE	4.25	2.70	36.47%	49.25	8.63%	3.15%	52.00	56.00	2.48%	$ 81.20	$ 61.60	$ 71.40	40.47	1.76	4.37%	43.32%	1.89%	5.04%	4.65%	4.84%	7.72%	-2.88%
Alliant Energy Corporation	LNT	2.60	1.66	36.15%	22.85	11.38%	4.11%	233.00	235.00	0.28%	$ 45.60	$ 36.60	$ 41.10	18.08	2.27	0.64%	56.01%	0.36%	4.47%	4.36%	4.42%	7.38%	-2.96%
Ameren Corporation	AEE	3.75	2.25	40.00%	37.25	10.07%	4.03%	244.00	250.00	0.80%	$ 64.90	$ 51.40	$ 58.15	29.61	1.96	1.58%	49.08%	0.78%	4.80%	4.65%	4.72%	7.13%	-2.41%
American Electric Power Company, Inc.	AEP	5.00	3.05	39.00%	46.75	10.70%	4.17%	493.50	516.00	1.48%	$ 78.10	$ 61.80	$ 69.95	37.17	1.88	2.79%	46.86%	1.31%	5.48%	4.90%	5.19%	8.63%	-3.45%
Avangrid, Inc.	AGR	3.00	1.95	35.00%	53.25	5.63%	1.97%	309.00	309.00	0.00%	$ 53.50	$ 37.40	$ 45.45	49.30	0.92	0.00%	-8.47%	0.00%	1.97%	1.08%	1.53%	9.26%	-7.73%
Avista Corporation	AVA	2.50	1.67	33.20%	29.75	8.40%	2.79%	67.00	70.00	1.46%	$ 52.80	$ 37.80	$ 45.30	26.41	1.72	2.50%	41.70%	1.04%	3.83%	2.75%	3.29%	8.63%	-5.34%
Black Hills Corporation	BKH	4.00	2.45	38.75%	41.25	9.70%	3.76%	59.50	59.50	0.00%	$ 72.00	$ 57.00	$ 64.50	31.92	2.02	0.00%	50.51%	0.00%	3.76%	4.40%	4.08%	5.05%	-0.98%
CenterPoint Energy, Inc.	CNP	2.00	1.27	36.50%	14.00	14.29%	5.21%	431.00	435.00	0.31%	$ 30.50	$ 24.50	$ 27.50	10.88	2.53	0.77%	60.44%	0.47%	5.68%	4.34%	5.01%	8.87%	-3.86%
CMS Energy Corporation	CMS	3.00	1.85	38.33%	22.25	13.48%	5.17%	284.00	294.00	1.15%	$ 50.80	$ 41.10	$ 45.95	15.77	2.91	3.35%	65.68%	2.20%	7.37%	7.63%	7.50%	8.48%	-0.98%
Consolidated Edison, Inc.	ED	4.75	3.30	30.53%	56.50	8.41%	2.57%	312.00	316.00	0.42%	$ 89.70	$ 72.10	$ 80.90	48.65	1.66	0.70%	39.86%	0.28%	2.85%	2.95%	2.90%	4.19%	-1.29%
Dominion Energy Inc.	D	5.25	4.65	11.43%	32.00	16.41%	1.88%	654.00	670.00	0.80%	$ 85.30	$ 70.90	$ 78.10	26.85	2.91	2.33%	65.62%	1.53%	3.40%	4.20%	3.80%	8.59%	-4.79%
DTE Energy Company	DTE	7.50	4.55	39.33%	68.50	10.95%	4.31%	182.50	195.00	2.21%	$ 116.70	$ 96.60	$ 106.65	53.03	2.01	4.45%	50.28%	2.23%	6.54%	6.18%	6.36%	8.95%	-2.58%
Duke Energy Corporation	DUK	5.50	4.40	20.00%	65.00	8.46%	1.69%	702.00	706.00	0.19%	$ 91.80	$ 76.10	$ 83.95	59.35	1.41	0.27%	29.30%	0.08%	1.77%	2.00%	1.88%	4.64%	-2.76%
Edison International	EIX	5.50	3.10	43.64%	44.50	12.36%	5.39%	325.81	325.81	0.00%	$ 83.40	$ 62.70	$ 73.05	35.82	2.04	0.00%	50.97%	0.00%	5.39%	5.62%	5.51%	6.52%	-1.02%
El Paso Electric Company	EE	3.00	1.85	38.33%	33.50	8.96%	3.43%	40.60	41.00	0.32%	$ 61.20	$ 44.70	$ 52.95	28.14	1.88	0.61%	46.86%	0.29%	3.72%	3.81%	3.77%	6.98%	-3.22%
Entergy Corporation	ETR	6.75	3.90	42.22%	56.50	11.95%	5.04%	183.00	193.00	1.77%	$ 87.90	$ 69.60	$ 78.75	44.28	1.78	3.15%	43.77%	1.38%	6.42%	2.84%	4.63%	16.67%	-12.04%
Exelon Corporation	EXC	3.25	1.70	47.69%	39.25	8.28%	3.95%	962.00	978.00	0.55%	$ 42.70	$ 33.30	$ 38.00	29.05	1.31	0.71%	23.55%	0.17%	4.12%	4.81%	4.46%	3.87%	0.59%
FirstEnergy Corp.	FE	3.00	1.60	46.67%	24.00	12.50%	5.83%	478.00	548.00	4.61%	$ 35.20	$ 27.90	$ 31.55	15.40	2.05	9.45%	51.19%	4.84%	10.67%	10.34%	10.51%	7.72%	2.78%
Great Plains Energy Inc.	GXP	2.25	1.45	35.56%	22.75	9.89%	3.52%	216.00	158.00	-9.80%	$ 34.70	$ 26.70	$ 30.70	23.02	1.33	-13.07%	25.02%	-3.27%	0.25%	-2.79%	-1.27%	21.64%	-22.92%
Hawaiian Electric Industries, Inc.	HE	2.25	1.40	37.78%	23.75	9.47%	3.58%	108.80	113.00	1.26%	$ 38.70	$ 31.70	$ 35.20	19.28	1.83	2.30%	45.23%	1.04%	4.62%	4.35%	4.48%	5.80%	-1.32%
IDACORP, Inc.	IDA	4.75	3.05	35.79%	53.25	8.92%	3.19%	50.40	50.40	0.00%	$ 100.00	$ 77.50	$ 88.75	44.65	1.99	0.00%	49.69%	0.00%	3.19%	3.77%	3.48%	4.60%	-1.12%
MGE Energy, Inc.	MGEE	3.30	1.60	51.52%	32.65	10.11%	5.21%	35.00	36.00	0.93%	$ 68.70	$ 60.30	$ 64.50	22.45	2.87	2.68%	65.19%	1.75%	6.96%	6.10%	6.53%	11.98%	-5.46%
NextEra Energy, Inc.	NEE	10.25	5.90	42.44%	76.50	13.40%	5.69%	500.00	535.00	2.26%	$ 159.40	$ 117.30	$ 138.35	59.90	2.31	5.21%	56.70%	2.96%	8.64%	8.08%	8.36%	10.24%	-1.88%
Eversource Energy	ES	4.25	2.50	41.18%	42.50	10.00%	4.12%	316.89	316.89	0.00%	$ 66.10	$ 54.10	$ 60.10	35.00	1.72	0.00%	41.76%	0.00%	4.12%	3.53%	3.82%	8.80%	-4.98%
NorthWestern Corporation	NWE	4.00	2.60	35.00%	42.75	9.36%	3.27%	50.25	51.00	0.49%	$ 64.50	$ 55.70	$ 60.10	36.44	1.65	0.81%	39.37%	0.32%	3.59%	3.61%	3.60%	5.05%	-1.45%
OGE Energy Corp.	OGE	2.50	1.85	26.00%	22.50	11.11%	2.89%	199.70	199.70	0.00%	$ 37.40	$ 32.60	$ 35.00	19.28	1.82	0.00%	44.91%	0.00%	2.89%	3.26%	3.07%	6.84%	-3.77%
Otter Tail Corporation	OTTR	2.50	1.55	38.00%	24.45	10.22%	3.89%	40.00	44.00	3.20%	$ 48.70	$ 35.70	$ 42.20	17.62	2.40	7.65%	58.25%	4.46%	8.34%	7.44%	7.89%	9.58%	-1.69%
PG&E Corporation	PCG	4.25	2.30	45.88%	48.50	8.76%	4.02%	520.00	550.00	1.87%	$ 71.60	$ 41.60	$ 56.60	37.34	1.52	2.83%	34.03%	0.96%	4.98%	N/A	4.98%	6.69%	-1.70%
Pinnacle West Capital Corporation	PNW	5.50	3.50	36.36%	54.00	10.19%	3.70%	112.00	113.00	0.29%	$ 92.50	$ 75.80	$ 84.15	44.80	1.88	0.55%	46.76%	0.26%	3.96%	3.80%	3.88%	6.92%	-3.04%
PNM Resources, Inc.	PNM	2.50	1.35	46.00%	27.00	9.26%	4.26%	79.65	79.65	0.00%	$ 46.00	$ 33.30	$ 39.65	21.28	1.86	0.00%	46.33%	0.00%	4.26%	3.52%	3.89%	10.56%	-6.67%
Portland General Electric Company	POR	2.75	1.80	34.55%	31.50	8.73%	3.02%	89.25	90.00	0.28%	$ 50.10	$ 42.40	$ 46.25	27.11	1.71	0.47%	41.38%	0.20%	3.21%	3.00%	3.10%	7.72%	-4.62%
PPL Corporation	PPL	2.75	1.88	31.64%	20.25	13.58%	4.30%	700.00	740.00	1.85%	$ 40.20	$ 30.70	$ 35.45	15.25	2.32	4.30%	56.98%	2.45%	6.75%	6.23%	6.49%	6.92%	-0.43%
Public Service Enterprise Group Incorporated	PEG	3.50	2.20	37.14%	34.00	10.29%	3.82%	506.00	506.00	0.00%	$ 53.30	$ 41.70	$ 47.50	27.45	1.73	0.00%	42.21%	0.00%	3.82%	4.35%	4.09%	4.69%	-0.61%
SCANA Corporation	SCG	3.75	1.50	60.00%	56.00	6.70%	4.02%	142.90	142.90	0.00%	$ 74.10	$ 37.10	$ 55.60	40.75	1.36	0.00%	26.71%	0.00%	4.02%	N/A	4.02%	2.33%	1.69%
Sempra Energy	SRE	7.75	4.90	36.77%	71.00	10.92%	4.01%	279.00	296.00	1.97%	$ 123.00	$ 99.70	$ 111.35	50.41	2.21	4.35%	54.73%	2.38%	6.40%	5.68%	6.04%	12.11%	-6.07%
Southern Company	SO	3.75	2.70	28.00%	28.00	13.39%	3.75%	1008.00	1016.00	0.26%	$ 53.50	$ 46.70	$ 50.10	23.85	2.10	0.55%	52.40%	0.29%	4.04%	2.82%	3.43%	7.72%	-4.29%
Vectren Corporation	VVC	3.65	2.35	35.62%	29.05	12.56%	4.48%	83.50	86.00	0.98%	$ 69.90	$ 51.50	$ 60.70	22.28	2.72	2.67%	63.29%	1.69%	6.16%	6.01%	6.09%	8.60%	-2.51%
Westar Energy, Inc.	WR	3.45	1.92	44.35%	31.60	10.92%	4.84%	142.50	145.00	0.58%	$ 57.30	$ 49.20	$ 53.25	27.50	1.94	1.11%	48.36%	0.54%	5.38%	4.07%	4.72%	9.89%	-5.16%
WEC Energy Group, Inc.	WEC	4.25	2.75	35.29%	35.50	11.97%	4.23%	315.60	315.60	0.00%	$ 70.10	$ 56.10	$ 63.10	29.98	2.10	0.00%	52.49%	0.00%	4.23%	3.52%	3.87%	8.80%	-4.93%
Xcel Energy Inc.	XEL	3.00	1.90	36.67%	28.00	10.71%	3.93%	509.50	522.50	0.83%	$ 52.20	$ 40.00	$ 46.10	22.56	2.04	1.71%	51.06%	0.87%	4.80%	4.82%	4.81%	6.98%	-2.17%
			Average:	37.62%		10.53%	0.0396											Mean:	4.80%	4.39%	4.59%	8.09%	-3.50%
																		Median:	4.37%	4.34%	4.44%	7.72%	-2.82%

Number of underestimates: 37
Number of overestimates: 3

Notes:
[1] Source: Value Line
[2] Source: Value Line
[3] Equals 1 - [2] / [1]
[4] Source: Value Line
[5] Equals [1] / [4]
[6] Equals [3] x [5]
[7] Source: Value Line
[8] Source: Value Line
[9] Equals ([8] / [7]) ^ 0.33 - 1
[10] Source: Value Line
[11] Source: Value Line
[12] Equals Average ([10], [11])
[13] Source: Value Line
[14] Equals [12] / [13]
[15] Equals [9] x [14]
[16] Equals 1 - (1 / [14])
[17] Equals [15] x [16]
[18] Equals [6] + [17]

Re-Creation of Schedule ALR-4, Page 1 Constant Growth Discounted Cash Flow (DCF) Indicated Cost of Equity

		As Filed (SCHEDULE ALR-4)		Corrected Calculation of New Financing Growth (v)			Reflect Average Expected Growth in Shares (s) [mean]			Reflect Average Expected Growth in Shares (s) [median]		
		Spot Yield	Avg. Yield	Spot Yield	Avg. Yield		Spot Yield	Avg. Yield		Spot Yield	Avg. Yield	
[1]	Dividend Yield	3.20%	3.05%	3.20%	3.05%		3.20%	3.05%		3.20%	3.05%	
	Retention Ratio											
[2]	Market/Book Ratio	1.87	2.01	1.87	2.01		1.87	2.01		1.87	2.01	
[3]	Dividend Yield on Book Value	5.99%	6.14%	5.99%	6.14%		5.99%	6.14%		5.99%	6.14%	
[4]	Return on Equity	10.00%	10.00%	10.00%	10.00%		10.00%	10.00%		10.00%	10.00%	
[5]	Retention Ratio	40.07%	38.61%	40.07%	38.61%		40.07%	38.61%		40.07%	38.61%	
[6]	Reinvestment Growth	4.01%	3.86%	4.01%	3.86%		4.01%	3.86%		4.01%	3.86%	
[7]	New Financing Growth	0.87%	1.01%	0.47%	0.50%	[12]	0.10%	0.11%		0.12%	0.12%	[12]
[8]	Total Estimate of Investor Anticipated Growth	4.88%	4.88%	4.47%	4.36%		4.11%	3.97%		4.12%	3.99%	
[9]	Increment to Dividend Yield for Growth to Next Year	0.08%	0.07%	0.07%	0.07%		0.07%	0.06%		0.07%	0.06%	
[10]	Indicated Cost of Equity	8.16%	8.00%	7.74%	7.48%		7.37%	7.08%		7.39%	7.09%	
[11]	New Financing Growth	1.00%	1.00%	1.00%	1.00%		0.22%	0.22%	[13]	0.25%	0.25%	[13]

Notes:
[1] Source: SCHEDULE ALR-3, Page 1
[2] Source: SCHEDULE ALR-3, Page 1
[3] Equals Line [1] x Line [2]
[4] Source: SCHEDULE ALR-3, Page 1
[5] Equals 1 - (Line [3] / Line [4]
[6] Equals Line [4] x Line [5]
[7] Equals (Line [2] - 1) x Line 11
[8] Equals Line [6] + Line [7]
[9] Equals ((1 + (0.5 x Line [8])) x Line [1]) - Line [1]
[10] Equals Line [1] + Line [8] + Line [9]
[11] Source: SCHEDULE ALR-7, Page 1
[12] Equals (1 - (1 / Line [2])) x Line [11]
[13] Source: SCHEDULE ALR-7, Page 1

ROE Component Analysis - DuPont Formula

Year	Profit Margin	Asset Turnover	Equity Multiplier	Return on Equity
2008	7.29%	65.02%	240.76%	10.83%
2009	8.15%	53.51%	238.94%	9.85%
2010	8.76%	52.39%	240.06%	10.29%
2011	9.02%	50.10%	243.50%	10.26%
2012	9.58%	44.48%	247.41%	9.96%
2013	9.83%	44.89%	241.10%	9.95%
2014	10.07%	43.34%	242.11%	9.90%
2015	10.76%	37.49%	250.88%	9.64%
2016	11.58%	35.36%	262.01%	10.06%
2017	12.35%	34.95%	263.16%	10.59%
5-year Projection	13.83%	34.20%	248.73%	10.81%

		Net Profit	Revenue	Net Plant	Total Capital	Common Equity Ratio	Book Value per Share	Shares Outstanding	Reported Return on Com Equity	Profit Margin	Asset Turnover	Equity Multiplier	Calculated Return on Equity	Common Equity Check	ROE Check	Annual Increase in Net Plant
ALE	2008	$ 82.50	$ 801.00	$ 1,387.30	$ 1,415.40	58.40%	$ 25.37	32.60	10.00%	10.30%	57.74%	167.83%	9.98%	100.06%	99.81%	
	2009	61.00	759.10	1,622.70	1,625.30	57.20%	26.41	35.20	6.60%	8.04%	46.78%	174.55%	6.56%	100.00%	99.42%	17.0%
	2010	75.30	907.00	1,805.60	1,747.60	55.80%	27.26	35.80	7.70%	8.30%	50.23%	185.16%	7.72%	100.08%	100.28%	11.3%
	2011	93.80	928.20	1,982.70	1,937.20	55.70%	28.78	37.50	8.70%	10.11%	46.81%	183.75%	8.69%	100.02%	99.92%	9.8%
	2012	97.10	961.20	2,347.60	2,134.60	56.30%	30.48	39.40	8.10%	10.10%	40.94%	195.34%	8.08%	99.93%	99.75%	18.4%
	2013	104.70	1,018.40	2,576.50	2,425.90	55.40%	32.44	41.40	7.80%	10.28%	39.53%	191.71%	7.79%	99.93%	99.88%	9.8%
	2014	124.80	1,136.80	3,286.40	2,882.20	55.80%	35.06	45.90	7.80%	10.98%	34.59%	204.34%	7.76%	100.06%	99.49%	27.6%
	2015	163.40	1,486.40	3,669.10	3,388.90	53.70%	37.07	49.10	9.00%	10.99%	40.51%	201.62%	8.98%	100.02%	99.76%	11.6%
	2016	155.30	1,339.70	3,741.20	3,263.40	58.00%	38.17	49.60	8.20%	11.59%	35.81%	197.66%	8.20%	100.02%	100.06%	2.0%
	2017	159.20	1,419.30	3,822.40	3,507.40	59.00%	40.47	51.10	7.70%	11.22%	37.13%	184.71%	7.69%	99.93%	99.91%	2.2%
	2021-23	$ 235.00	$ 1,725.00	$ 4,275.00	$ 4,450.00	62.00%	$ 49.25	56.00	8.50%	13.62%	40.35%	154.95%	8.52%	99.96%	100.21%	11.8%
LNT	2008	$ 280.00	$ 3,681.70	$ 5,353.50	$ 4,815.60	58.60%	$ 12.78	220.90	9.30%	7.61%	68.77%	189.71%	9.92%	100.04%	106.69%	
	2009	208.60	3,432.80	6,203.00	5,423.00	51.20%	12.54	221.31	6.80%	6.08%	55.34%	223.40%	7.51%	99.95%	110.48%	15.9%
	2010	303.90	3,416.10	6,730.60	5,840.80	49.50%	13.05	221.79	9.90%	8.90%	50.75%	232.80%	10.51%	100.11%	106.17%	8.5%
	2011	304.40	3,665.30	7,037.10	5,921.20	50.90%	13.57	222.04	9.50%	8.30%	52.09%	233.49%	10.10%	99.97%	106.31%	4.6%
	2012	337.80	3,094.50	7,838.00	6,476.60	48.40%	14.12	221.97	10.30%	10.92%	39.48%	250.04%	10.78%	99.99%	104.62%	11.4%
	2013	382.10	3,276.80	7,147.30	6,461.00	50.80%	14.79	221.89	11.30%	11.66%	45.85%	217.76%	11.64%	99.99%	103.02%	-8.8%
	2014	385.50	3,350.30	6,442.00	7,257.20	47.50%	15.54	221.87	10.90%	11.51%	52.01%	186.88%	11.18%	100.02%	102.60%	-9.9%
	2015	380.70	3,253.60	8,970.20	7,246.30	51.40%	16.41	226.92	10.20%	11.70%	36.27%	240.84%	10.22%	99.98%	100.21%	39.2%
	2016	373.80	3,320.00	9,809.90	8,177.60	47.20%	16.96	227.67	9.70%	11.26%	33.84%	254.15%	9.68%	100.04%	99.84%	9.4%
	2017	455.90	3,382.20	10,797.90	8,192.80	51.00%	18.08	231.35	10.90%	13.48%	31.32%	258.43%	10.91%	100.11%	100.10%	10.1%
	2021-23	$ 610.00	$ 4,175.00	$ 12,900.00	$ 8,700.00	50.00%	$ 22.85	235.00	11.50%	14.61%	32.36%	296.55%	14.02%	123.44%	121.94%	19.5%
AEE	2008	$ 615.00	$ 7,839.00	$ 16,567.00	$ 13,712.00	50.80%	$ 32.80	212.30	8.70%	7.85%	47.32%	237.84%	8.83%	99.97%	101.48%	
	2009	624.00	7,090.00	17,610.00	15,991.00	49.10%	33.08	237.40	7.80%	8.80%	40.26%	224.29%	7.95%	100.02%	101.89%	6.3%
	2010	669.00	7,638.00	17,853.00	15,185.00	50.90%	32.15	240.40	8.60%	8.76%	42.78%	230.98%	8.66%	100.00%	100.65%	1.4%
	2011	602.00	7,531.00	18,127.00	14,738.00	53.70%	32.64	242.60	7.50%	7.99%	41.55%	229.04%	7.61%	100.05%	101.42%	1.5%
	2012	589.00	6,828.00	16,096.00	13,384.00	49.40%	27.27	242.63	8.80%	8.63%	42.42%	243.45%	8.91%	100.07%	101.23%	-11.2%
	2013	518.00	5,838.00	16,205.00	12,190.00	53.70%	26.97	242.63	7.80%	8.87%	36.03%	247.55%	7.91%	99.96%	101.45%	0.7%
	2014	593.00	6,053.00	17,424.00	12,975.00	51.70%	27.67	242.63	8.70%	9.80%	34.74%	259.75%	8.84%	100.08%	101.61%	7.5%
	2015	585.00	6,098.00	18,799.00	13,968.00	49.70%	28.63	242.63	8.30%	9.59%	32.44%	270.80%	8.43%	100.06%	101.53%	7.9%
	2016	659.00	6,076.00	20,113.00	13,840.00	51.30%	29.27	242.63	9.20%	10.85%	30.21%	283.28%	9.28%	100.03%	100.89%	7.0%
	2017	683.00	6,177.00	21,466.00	14,420.00	49.80%	29.61	242.63	9.40%	11.06%	28.78%	298.92%	9.51%	100.04%	101.18%	6.7%
	2021-23	$ 950.00	$ 7,000.00	$ 27,100.00	$ 18,600.00	50.00%	$ 37.25	250.00	10.00%	13.57%	25.83%	291.40%	10.22%	100.13%	102.15%	26.2%
AEP	2008	$ 1,208.00	$ 14,440.00	$ 32,987.00	$ 26,290.00	40.70%	$ 26.33	406.07	11.30%	8.37%	43.77%	308.29%	11.29%	99.92%	99.91%	
	2009	1,365.00	13,489.00	34,344.00	28,958.00	45.40%	27.49	478.05	10.40%	10.12%	39.28%	261.23%	10.38%	99.96%	99.83%	4.1%
	2010	1,248.00	14,427.00	35,674.00	29,184.00	46.70%	28.33	480.81	9.10%	8.65%	40.44%	261.75%	9.16%	99.94%	100.63%	3.9%
	2011	1,513.00	15,116.00	36,971.00	29,747.00	49.30%	30.33	483.42	10.30%	10.01%	40.89%	252.10%	10.32%	99.98%	100.16%	3.6%
	2012	1,443.00	14,945.00	38,763.00	30,823.00	49.40%	31.37	485.67	9.50%	9.66%	38.55%	254.57%	9.48%	100.06%	99.76%	4.8%
	2013	1,549.00	15,357.00	40,997.00	32,913.00	48.90%	32.98	487.78	9.60%	10.09%	37.46%	254.73%	9.62%	99.95%	100.25%	5.8%
	2014	1,634.00	17,020.00	44,117.00	33,001.00	51.00%	34.37	489.40	9.70%	9.60%	38.58%	262.13%	9.71%	99.94%	100.09%	7.6%
	2015	1,763.40	16,453.00	46,133.00	35,633.00	50.20%	36.44	491.05	9.90%	10.72%	35.66%	257.90%	9.86%	100.03%	99.58%	4.6%
	2016	2,073.60	16,380.00	45,639.00	34,775.00	50.00%	35.38	491.71	11.90%	12.66%	35.89%	262.48%	11.93%	100.05%	100.22%	-1.1%
	2017	1,783.20	15,425.00	50,262.00	37,707.00	48.50%	37.17	492.01	9.80%	11.56%	30.69%	274.84%	9.75%	100.00%	99.50%	10.1%
	2021-23	$ 2,490.00	$ 17,000.00	$ 68,700.00	$ 48,800.00	49.50%	$ 46.75	516.00	10.50%	14.65%	24.75%	284.40%	10.31%	99.86%	98.17%	36.7%
AGR	2014	$ 424.00	$ 4,594.00	$ 17,099.00	$ 14,956.00	83.20%	N/A	N/A	3.40%	9.23%	26.87%	137.41%	3.41%	N/A	100.22%	
	2015	267.00	4,367.00	20,711.00	19,583.00	76.90%	48.74	308.86	1.80%	6.11%	21.09%	137.53%	1.77%	99.96%	98.50%	21.1%
	2016	611.00	6,018.00	21,548.00	19,619.00	77.00%	48.90	308.99	4.00%	10.15%	27.93%	142.64%	4.04%	100.02%	101.11%	4.0%
	2017	660.00	5,900.00	22,900.00	20,075.00	76.00%	49.30	309.00	4.50%	11.19%	25.76%	150.10%	4.33%	99.85%	96.13%	6.3%
	2021-23	$ 895.00	$ 7,050.00	$ 27,100.00	$ 22,300.00	73.50%	$ 53.25	309.00	5.50%	12.70%	26.01%	165.34%	5.46%	100.39%	99.28%	18.3%
AVA	2008	$ 73.60	$ 1,676.80	$ 2,492.20	$ 1,919.50	51.90%	$ 18.30	54.49	7.40%	4.39%	67.28%	250.17%	7.39%	100.10%	99.84%	
	2009	87.10	1,512.60	2,607.00	2,139.00	49.10%	19.17	54.84	8.30%	5.76%	58.02%	248.23%	8.29%	100.10%	99.92%	4.6%
	2010	92.40	1,558.70	2,714.20	2,325.30	48.40%	19.71	57.12	8.20%	5.93%	57.43%	241.17%	8.21%	100.03%	100.12%	4.1%
	2011	100.20	1,619.80	2,860.80	2,439.90	48.60%	20.30	58.42	8.50%	6.19%	56.62%	241.26%	8.45%	100.01%	99.41%	5.4%
	2012	78.20	1,547.00	3,023.70	2,561.20	49.20%	21.06	59.81	6.20%	5.05%	51.16%	239.96%	6.21%	99.96%	100.09%	5.7%
	2013	111.10	1,618.50	3,202.40	2,669.70	48.60%	21.61	60.08	8.60%	6.86%	50.54%	246.82%	8.56%	100.07%	99.57%	5.9%
	2014	114.20	1,472.60	3,620.00	3,027.30	49.00%	23.84	62.24	7.70%	7.75%	40.68%	244.04%	7.70%	100.03%	99.98%	13.0%
	2015	118.10	1,484.80	3,898.60	3,060.30	50.00%	24.53	62.31	7.70%	7.95%	38.09%	254.79%	7.72%	99.89%	100.24%	7.7%
	2016	137.20	1,442.50	4,147.50	3,379.00	48.80%	25.69	64.19	8.30%	9.51%	34.78%	251.52%	8.32%	100.01%	100.25%	6.4%
	2017	126.10	1,445.90	4,398.80	3,273.20	52.80%	26.41	65.49	7.30%	8.72%	32.87%	254.52%	7.30%	100.08%	99.95%	6.1%
	2021-23	$ 180.00	$ 1,675.00	$ 5,050.00	$ 4,050.00	51.50%	$ 29.75	70.00	8.50%	10.75%	33.17%	242.12%	8.63%	99.84%	101.53%	14.8%
BKH	2008	$ 6.80	$ 1,005.80	$ 2,022.20	$ 1,551.80	67.70%	$ 27.19	38.64	0.70%	0.68%	49.74%	192.49%	0.65%	100.01%	92.47%	
	2009	89.70	1,269.60	2,160.70	2,100.70	51.60%	27.84	38.97	8.30%	7.07%	58.76%	199.33%	8.28%	100.09%	99.70%	6.8%
	2010	64.60	1,307.30	2,495.40	2,286.30	48.10%	28.02	39.27	5.90%	4.94%	52.39%	226.91%	5.87%	100.06%	99.56%	15.5%
	2011	40.40	1,272.20	2,789.60	2,489.70	48.60%	27.53	43.92	3.30%	3.18%	45.61%	230.55%	3.34%	99.93%	101.18%	11.8%
	2012	86.90	1,173.90	2,742.70	2,171.40	56.80%	27.88	44.21	7.10%	7.40%	42.80%	222.38%	7.05%	99.94%	99.24%	-1.7%
	2013	115.80	1,275.90	2,990.30	2,704.70	48.40%	29.39	44.50	8.90%	9.08%	42.67%	228.43%	8.85%	99.91%	99.39%	9.0%
	2014	128.80	1,393.60	3,239.40	2,643.60	52.10%	30.80	44.67	9.40%	9.24%	43.02%	235.20%	9.35%	99.89%	99.48%	8.3%
	2015	128.30	1,304.60	3,259.10	3,332.70	44.00%	28.63	51.19	8.80%	9.83%	40.03%	222.25%	8.75%	99.94%	99.42%	0.6%
	2016	140.30	1,573.00	4,469.00	4,825.80	33.50%	30.25	53.38	8.70%	8.92%	35.20%	276.44%	8.68%	99.88%	99.75%	37.1%
	2017	186.50	1,680.30	4,541.40	4,818.40	35.50%	31.92	53.54	10.90%	11.10%	37.00%	265.50%	10.90%	99.91%	100.03%	1.6%
	2021-23	$ 240.00	$ 1,900.00	$ 5,525.00	$ 5,325.00	46.00%	$ 41.25	59.50	10.00%	12.63%	34.39%	225.56%	9.80%	100.20%	97.98%	21.7%
CNP	2008	$ 447.00	$ 11,322.00	$ 10,296.00	$ 12,218.00	16.70%	$ 5.89	346.09	21.90%	3.95%	109.97%	504.61%	21.91%	99.91%	100.03%	
	2009	372.00	8,281.00	10,788.00	11,758.00	22.40%	6.74	391.75	14.10%	4.49%	76.76%	409.60%	14.12%	100.25%	100.17%	4.8%
	2010	442.00	8,785.00	11,732.00	12,199.00	26.20%	7.53	424.70	13.80%	5.03%	74.88%	367.07%	13.83%	100.06%	100.21%	8.8%
	2011	546.00	8,450.00	12,402.00	12,863.00	32.80%	9.91	426.03	12.90%	6.46%	68.13%	293.95%	12.94%	100.07%	100.32%	5.7%
	2012	581.00	7,452.00	13,597.00	12,658.00	34.00%	10.06	427.44	13.50%	7.80%	54.81%	315.94%	13.50%	99.91%	100.00%	9.6%
	2013	536.00	8,106.00	9,593.00	12,146.00	35.60%	10.09	429.00	12.40%	6.61%	84.50%	221.86%	12.40%	100.11%	99.97%	-29.4%
	2014	611.00	9,226.00	10,502.00	12,557.00	36.20%	10.60	429.00	13.40%	6.62%	87.85%	231.03%	13.44%	100.04%	100.31%	9.5%
	2015	465.00	7,386.00	11,537.00	11,362.00	30.50%	8.05	430.00	13.40%	6.30%	64.02%	332.92%	13.42%	99.89%	100.14%	9.9%
	2016	432.00	7,528.00	12,307.00	10,992.00	31.50%	8.03	430.68	12.50%	5.74%	61.17%	355.44%	12.48%	99.88%	99.81%	6.7%
	2017	679.00	9,614.00	13,057.00	12,883.00	36.40%	10.88	431.04	14.50%	7.06%	73.63%	278.44%	14.48%	100.01%	99.86%	6.1%
	2021-23	$ 865.00	$ 12,000.00	$ 16,600.00	$ 15,300.00	39.50%	$ 14.00	435.00	14.50%	7.21%	72.29%	274.68%	14.31%	100.77%	98.71%	27.1%
CMS	2008	$ 300.00	$ 6,821.00	$ 9,190.00	$ 8,993.00	27.40%	$ 10.88	226.41	11.70%	4.40%	74.22%	372.96%	12.17%	99.97%	104.06%	
	2009	231.00	6,205.00	9,682.00	8,977.00	29.00%	11.42	227.89	8.50%	3.72%	64.09%	371.91%	8.87%	99.97%	104.39%	5.4%
	2010	356.00	6,432.00	10,069.00	9,473.00	29.50%	11.19	249.60	12.50%	5.53%	63.88%	360.31%	12.74%	99.95%	101.91%	4.0%
	2011	384.00	6,503.00	10,633.00	9,279.00	32.60%	11.92	254.10	12.60%	5.90%	61.16%	351.51%	12.69%	100.13%	100.75%	5.6%
	2012	413.00	6,312.00	11,551.00	10,101.00	31.60%	12.09	264.10	12.90%	6.54%	54.64%	361.88%	12.94%	100.03%	100.30%	8.6%
	2013	454.00	6,566.00	12,246.00	10,730.00	32.20%	12.98	266.10	13.10%	6.91%	53.62%	354.44%	13.14%	99.97%	100.31%	6.0%
	2014	479.00	7,179.00	13,412.00	11,846.00	31.00%	13.34	275.20	13.00%	6.67%	53.53%	365.22%	13.04%	99.97%	100.34%	9.5%
	2015	525.00	6,456.00	14,705.00	12,534.00	31.40%	14.21	277.16	13.30%	8.13%	43.90%	373.63%	13.34%	100.07%	100.30%	9.6%
	2016	553.00	6,399.00	15,715.00	13,040.00	32.60%	15.23	279.21	13.00%	8.64%	40.72%	369.67%	13.01%	100.03%	100.07%	6.9%
	2017	610.00	6,583.00	16,761.00	13,692.00	32.40%	15.77	281.65	13.70%	9.27%	39.28%	377.82%	13.75%	100.12%	100.37%	6.7%
	2021-23	$ 900.00	$ 7,650.00	$ 22,100.00	$ 17,500.00	37.50%	$ 22.25	294.00	13.50%	11.76%	34.62%	336.76%	13.71%	99.68%	101.59%	31.9%

		Net Profit	Revenue	Net Plant	Total Capital	Common Equity Ratio	Book Value per Share	Shares Outstanding	Reported Return on Com Equity	Profit Margin	Asset Turnover	Equity Multiplier	Calculated Return on Equity	Common Equity Check	ROE Check	Annual Increase in Net Plant
ED	2008	$ 933.00	$ 13,583.00	$ 20,874.00	$ 19,160.00	50.60%	$ 35.43	273.72	9.50%	6.87%	65.07%	215.31%	9.62%	100.03%	101.30%	
	2009	868.00	13,032.00	22,464.00	20,330.00	50.40%	36.46	281.12	8.40%	6.66%	58.01%	219.24%	8.47%	100.03%	100.85%	7.6%
	2010	992.00	13,325.00	23,863.00	21,952.00	50.40%	37.93	291.62	8.90%	7.44%	55.84%	215.69%	8.97%	99.98%	100.74%	6.2%
	2011	1,062.00	12,938.00	25,093.00	21,794.00	52.50%	39.05	292.89	9.20%	8.21%	51.56%	219.31%	9.28%	99.96%	100.89%	5.2%
	2012	1,141.00	12,188.00	26,939.00	21,933.00	54.10%	40.53	292.87	9.60%	9.36%	45.24%	227.03%	9.62%	100.04%	100.17%	7.4%
	2013	1,157.00	12,381.00	28,436.00	22,735.00	53.90%	41.81	292.87	9.40%	9.34%	43.54%	232.05%	9.44%	99.92%	100.44%	5.6%
	2014	1,066.00	12,919.00	29,827.00	24,207.00	52.00%	42.94	292.88	8.50%	8.25%	43.31%	236.95%	8.47%	99.91%	99.63%	4.9%
	2015	1,193.00	12,554.00	32,209.00	25,058.00	52.10%	44.55	293.00	9.10%	9.50%	38.98%	246.71%	9.14%	99.98%	100.42%	8.0%
	2016	1,189.00	12,075.00	35,216.00	29,033.00	49.20%	46.88	305.00	8.30%	9.85%	34.29%	246.54%	8.32%	100.10%	100.29%	9.3%
	2017	1,265.00	11,700.00	37,550.00	30,175.00	50.00%	48.65	311.00	8.50%	10.81%	31.16%	248.88%	8.38%	100.28%	98.64%	6.6%
	2021-23	$ 1,550.00	$ 13,600.00	$ 47,900.00	$ 34,400.00	52.00%	$ 56.50	316.00	8.50%	11.40%	28.39%	267.78%	8.67%	99.81%	101.94%	27.6%
D	2008	$ 1,781.00	$ 16,290.00	$ 23,274.00	$ 25,290.00	39.80%	$ 17.28	583.20	17.50%	10.93%	69.99%	231.23%	17.69%	100.12%	101.11%	
	2009	1,585.00	15,131.00	25,592.00	26,923.00	41.50%	18.66	599.40	14.00%	10.48%	59.12%	229.05%	14.19%	100.11%	101.33%	10.0%
	2010	1,724.00	15,197.00	26,713.00	28,012.00	42.80%	20.66	580.80	14.20%	11.34%	56.89%	222.81%	14.38%	100.09%	101.27%	4.4%
	2011	1,603.00	14,379.00	29,670.00	29,097.00	39.30%	20.09	569.70	13.90%	11.15%	48.46%	259.46%	14.02%	100.09%	100.85%	11.1%
	2012	1,594.00	13,093.00	30,773.00	27,676.00	38.20%	18.34	576.10	14.90%	12.17%	42.55%	291.07%	15.08%	99.94%	101.19%	3.7%
	2013	1,806.00	13,120.00	32,628.00	31,229.00	37.30%	20.02	581.50	15.40%	13.77%	40.21%	280.11%	15.50%	99.94%	100.68%	6.0%
	2014	1,793.00	12,436.00	36,270.00	33,360.00	34.60%	19.74	585.30	15.40%	14.42%	34.29%	314.23%	15.53%	100.10%	100.87%	11.2%
	2015	1,899.00	11,683.00	41,554.00	36,280.00	34.90%	21.24	596.30	15.00%	16.25%	28.12%	328.19%	15.00%	100.03%	99.99%	14.6%
	2016	2,123.00	11,737.00	49,964.00	44,836.00	32.60%	23.26	627.80	14.50%	18.09%	23.49%	341.83%	14.52%	99.90%	100.17%	20.2%
	2017	3,352.00	12,586.00	53,758.00	48,225.00	36.00%	26.85	643.50	18.50%	26.63%	23.41%	309.65%	19.31%	99.52%	104.37%	7.6%
	2021-23	$ 3,630.00	$ 14,000.00	$ 65,200.00	$ 57,300.00	37.50%	$ 32.00	670.00	16.50%	25.93%	21.47%	303.43%	16.89%	99.78%	102.39%	21.3%
DTE	2008	$ 445.00	$ 9,329.00	$ 12,231.00	$ 13,736.00	43.60%	$ 36.77	163.02	7.40%	4.77%	76.27%	204.23%	7.43%	100.09%	100.41%	
	2009	532.00	8,014.00	12,431.00	13,648.00	46.00%	37.96	165.40	8.50%	6.64%	64.47%	198.01%	8.47%	100.01%	99.69%	1.6%
	2010	630.00	8,557.00	12,992.00	13,811.00	48.70%	39.67	169.43	9.40%	7.36%	65.86%	193.16%	9.37%	99.93%	99.65%	4.5%
	2011	624.00	8,897.00	13,746.00	14,196.00	49.40%	41.41	169.25	8.90%	7.01%	64.72%	196.01%	8.90%	99.94%	99.98%	5.8%
	2012	666.00	8,791.00	14,684.00	14,387.00	51.20%	42.78	172.35	9.00%	7.58%	59.87%	199.34%	9.04%	100.09%	100.46%	6.8%
	2013	661.00	9,661.00	15,800.00	15,135.00	52.30%	44.73	177.09	8.30%	6.84%	61.15%	199.61%	8.35%	100.07%	100.61%	7.6%
	2014	905.00	12,301.00	16,820.00	16,670.00	50.00%	47.05	176.99	10.90%	7.36%	73.13%	201.80%	10.86%	99.91%	99.61%	6.5%
	2015	796.00	10,337.00	18,034.00	17,607.00	49.80%	48.88	179.47	9.10%	7.70%	57.32%	205.67%	9.08%	100.05%	99.76%	7.2%
	2016	868.00	10,630.00	19,730.00	20,280.00	44.40%	50.22	179.43	9.60%	8.17%	53.88%	219.12%	9.64%	100.07%	100.41%	9.4%
	2017	1,029.00	12,607.00	20,721.00	21,697.00	43.80%	53.03	179.39	10.80%	8.16%	60.84%	218.04%	10.83%	100.10%	100.26%	5.0%
	2021-23	$ 1,445.00	$ 15,800.00	$ 27,700.00	$ 29,600.00	45.00%	$ 68.50	195.00	11.00%	9.15%	57.04%	207.96%	10.85%	100.28%	98.62%	33.7%
DUK	2008	$ 1,279.00	$ 13,207.00	$ 34,036.00	$ 34,238.00	61.30%	$ 49.51	423.96	6.10%	9.68%	38.80%	162.17%	6.09%	100.01%	99.90%	
	2009	1,461.00	12,731.00	37,950.00	37,863.00	57.40%	49.85	436.29	6.70%	11.48%	33.55%	174.62%	6.72%	100.07%	100.33%	11.5%
	2010	1,765.00	14,272.00	40,344.00	40,457.00	55.70%	50.84	442.96	7.80%	12.37%	35.38%	179.03%	7.83%	99.94%	100.42%	6.3%
	2011	1,839.00	14,529.00	42,661.00	41,451.00	54.90%	51.14	445.29	8.10%	12.66%	34.06%	187.47%	8.08%	100.07%	99.77%	5.7%
	2012	2,136.00	19,624.00	68,558.00	77,307.00	52.90%	58.04	704.00	5.20%	10.88%	28.62%	167.64%	5.22%	99.91%	100.44%	60.7%
	2013	2,813.00	24,598.00	69,490.00	79,482.00	52.00%	58.54	706.00	6.80%	11.44%	35.40%	168.13%	6.81%	100.00%	100.09%	1.4%
	2014	2,934.00	23,925.00	70,046.00	78,088.00	52.30%	57.81	707.00	7.20%	12.26%	34.16%	171.51%	7.18%	100.08%	99.78%	0.8%
	2015	2,854.00	23,459.00	75,709.00	77,222.00	51.40%	57.74	688.00	7.20%	12.17%	30.99%	190.74%	7.19%	100.08%	99.87%	8.1%
	2016	2,560.00	22,743.00	82,520.00	86,609.00	47.40%	58.62	700.00	6.20%	11.26%	27.56%	201.01%	6.24%	99.95%	100.58%	9.0%
	2017	3,005.00	23,500.00	87,850.00	90,200.00	46.00%	59.35	701.00	7.00%	12.79%	26.75%	211.73%	7.24%	100.27%	103.46%	6.5%
	2021-23	$ 3,970.00	$ 26,650.00	$ 112,900.00	$ 107,000.00	43.00%	$ 65.00	706.00	8.50%	14.90%	23.60%	245.38%	8.63%	99.74%	101.51%	28.5%
EIX	2008	$ 1,266.00	$ 14,112.00	$ 18,969.00	$ 21,374.00	44.50%	$ 29.21	325.81	12.80%	8.97%	74.40%	199.43%	13.31%	100.06%	103.99%	
	2009	1,115.00	12,374.00	21,966.00	21,185.00	46.50%	30.20	325.81	10.80%	9.01%	56.33%	222.98%	11.32%	99.88%	104.80%	15.8%
	2010	1,153.00	12,409.00	24,778.00	23,861.00	44.30%	32.44	325.81	10.40%	9.29%	50.08%	234.41%	10.91%	99.99%	104.88%	12.8%
	2011	1,112.00	12,760.00	32,116.00	24,773.00	40.60%	30.86	325.81	10.50%	8.71%	39.73%	319.31%	11.06%	99.97%	105.30%	29.6%
	2012	1,594.00	11,862.00	30,273.00	20,422.00	46.20%	28.95	325.81	15.90%	13.44%	39.18%	320.86%	16.89%	99.97%	106.26%	-5.7%
	2013	1,344.00	12,581.00	30,455.00	21,516.00	46.20%	30.50	325.81	12.50%	10.68%	41.31%	306.38%	13.52%	99.97%	108.16%	0.6%
	2014	1,539.00	13,413.00	32,981.00	23,216.00	47.20%	33.64	325.81	13.00%	11.47%	40.67%	300.98%	14.04%	100.02%	108.04%	8.3%
	2015	1,480.00	11,524.00	35,085.00	24,352.00	46.70%	34.89	325.81	12.00%	12.84%	32.85%	308.51%	13.01%	99.96%	108.45%	6.4%
	2016	1,422.00	11,869.00	37,000.00	24,362.00	49.20%	36.82	325.81	10.80%	11.98%	32.08%	308.69%	11.86%	100.09%	109.85%	5.5%
	2017	1,603.00	12,320.00	39,050.00	25,506.00	45.80%	35.82	325.81	12.70%	13.01%	31.55%	334.28%	13.72%	99.90%	108.05%	5.5%
	2021-23	$ 1,970.00	$ 15,200.00	$ 50,700.00	$ 31,800.00	45.50%	$ 44.50	325.81	12.50%	12.96%	29.98%	350.40%	13.62%	100.20%	108.92%	29.8%
EE	2008	$ 77.60	$ 1,038.90	$ 1,595.60	$ 1,503.90	46.20%	$ 15.47	44.88	11.20%	7.47%	65.11%	229.65%	11.17%	99.93%	99.72%	
	2009	66.90	828.00	1,756.00	1,527.70	47.30%	16.45	43.92	9.30%	8.08%	47.15%	243.01%	9.26%	99.98%	99.55%	10.1%
	2010	90.30	877.30	1,865.80	1,660.10	48.80%	19.04	42.57	11.10%	10.29%	47.02%	230.31%	11.15%	100.05%	100.42%	6.3%
	2011	103.50	918.00	1,947.10	1,576.70	48.20%	19.03	39.96	13.60%	11.27%	47.15%	256.21%	13.62%	100.06%	100.14%	4.4%
	2012	90.80	852.90	2,102.30	1,824.50	45.20%	20.57	40.11	11.00%	10.65%	40.57%	254.92%	11.01%	100.05%	100.09%	8.0%
	2013	88.60	890.40	2,257.50	1,943.50	48.60%	23.44	40.27	9.40%	9.95%	39.44%	239.00%	9.38%	99.94%	99.79%	7.4%
	2014	91.40	917.50	2,488.40	2,118.40	46.50%	24.39	40.36	9.30%	9.96%	36.87%	252.62%	9.28%	99.93%	99.77%	10.2%
	2015	81.90	849.90	2,695.50	2,150.80	47.30%	25.13	40.44	8.10%	9.64%	31.53%	264.96%	8.05%	99.89%	99.39%	8.3%
	2016	96.80	886.90	2,821.20	2,269.90	47.30%	26.52	40.52	9.00%	10.91%	31.44%	262.76%	9.02%	100.09%	100.18%	4.7%
	2017	98.30	916.80	2,928.40	2,338.20	48.80%	28.14	40.58	8.60%	10.72%	31.31%	256.64%	8.61%	100.08%	100.17%	3.8%
	2021-23	$ 125.00	$ 1,025.00	$ 3,550.00	$ 3,025.00	45.50%	$ 33.50	41.00	9.00%	12.20%	28.87%	257.92%	9.08%	99.79%	100.91%	21.2%
ETR	2008	$ 1,240.50	$ 13,094.00	$ 22,429.00	$ 19,795.00	40.20%	$ 42.07	189.36	15.30%	9.47%	58.38%	281.86%	15.59%	100.11%	101.89%	
	2009	1,251.10	10,746.00	23,389.00	19,985.00	43.10%	45.54	189.12	14.30%	11.64%	45.94%	271.54%	14.52%	99.99%	101.57%	4.3%
	2010	1,270.30	11,488.00	23,848.00	20,166.00	42.10%	47.53	178.75	14.70%	11.06%	48.17%	280.90%	14.96%	100.07%	101.79%	2.0%
	2011	1,367.40	11,229.00	25,609.00	19,324.00	46.40%	50.81	176.36	15.00%	12.18%	43.85%	285.61%	15.25%	99.94%	101.67%	7.4%
	2012	1,091.90	10,302.00	27,299.00	21,432.00	42.90%	51.73	177.81	11.60%	10.60%	37.74%	296.91%	11.88%	100.04%	102.38%	6.6%
	2013	904.50	11,391.00	27,882.00	22,109.00	43.60%	54.00	178.37	9.20%	7.94%	40.85%	289.25%	9.38%	99.92%	101.99%	2.1%
	2014	1,060.00	12,495.00	28,723.00	22,842.00	43.80%	55.83	179.24	10.40%	8.48%	43.50%	287.09%	10.59%	100.02%	101.87%	3.0%
	2015	1,061.20	11,513.00	27,824.00	22,714.00	40.80%	51.89	178.39	11.20%	9.22%	41.38%	300.24%	11.45%	99.89%	102.24%	-3.1%
	2016	1,249.80	10,846.00	27,921.00	22,777.00	35.50%	45.12	179.13	15.20%	11.52%	38.85%	345.31%	15.46%	99.96%	101.69%	0.3%
	2017	950.70	11,074.00	29,664.00	22,528.00	35.50%	44.28	180.52	11.70%	8.58%	37.33%	370.92%	11.89%	99.95%	101.60%	6.2%
	2021-23	$ 1,320.00	$ 10,600.00	$ 35,500.00	$ 27,000.00	40.50%	$ 56.50	193.00	12.00%	12.45%	29.86%	324.65%	12.07%	99.72%	100.59%	19.7%
EXC	2008	$ 2,721.00	$ 18,859.00	$ 25,813.00	$ 23,726.00	46.60%	$ 16.78	658.15	24.60%	14.43%	73.06%	233.47%	24.61%	99.89%	100.04%	
	2009	2,844.00	17,318.00	27,341.00	24,112.00	52.40%	19.16	659.76	22.50%	16.42%	63.34%	216.40%	22.51%	100.05%	100.04%	5.9%
	2010	2,567.00	18,644.00	29,941.00	25,651.00	52.90%	20.49	661.85	18.90%	13.77%	62.27%	220.65%	18.92%	99.94%	100.09%	9.5%
	2011	2,499.00	18,924.00	32,570.00	26,661.00	54.00%	21.68	663.37	17.30%	13.21%	58.10%	226.23%	17.36%	99.90%	100.33%	8.8%
	2012	1,579.00	23,489.00	45,186.00	40,057.00	53.50%	25.07	854.78	7.30%	6.72%	51.98%	210.85%	7.37%	99.99%	100.93%	38.7%
	2013	1,999.00	24,888.00	47,330.00	41,196.00	55.20%	26.52	857.29	8.70%	8.03%	52.58%	208.13%	8.79%	99.98%	101.04%	4.7%
	2014	1,826.00	27,429.00	52,087.00	42,811.00	52.80%	26.29	859.83	8.00%	6.66%	52.66%	230.43%	8.08%	100.00%	100.98%	10.1%
	2015	2,282.00	29,447.00	57,439.00	50,272.00	51.30%	28.04	919.92	8.80%	7.75%	51.27%	222.72%	8.85%	100.02%	100.55%	10.3%
	2016	1,677.00	31,360.00	71,555.00	58,053.00	44.50%	27.96	924.04	6.50%	5.35%	43.83%	276.98%	6.49%	100.01%	99.87%	24.6%
	2017	4,279.00	33,531.00	74,202.00	62,425.00	48.00%	29.05	958.00	14.00%	12.76%	45.19%	247.64%	14.28%	92.88%	102.00%	3.7%
	2021-23	$ 3,275.00	$ 34,000.00	$ 83,600.00	$ 77,300.00	49.50%	$ 39.25	978.00	8.50%	9.63%	40.67%	218.48%	8.56%	100.32%	100.69%	12.7%

		Net Profit	Revenue	Net Plant	Total Capital	Common Equity Ratio	Book Value per Share	Shares Outstanding	Reported Return on Com Equity	Profit Margin	Asset Turnover	Equity Multiplier	Calculated Return on Equity	Common Equity Check	ROE Check	Annual Increase in Net Plant
FE	2008	$ 1,342.00	$ 13,627.00	$ 17,723.00	$ 17,383.00	47.70%	$ 27.17	304.84	16.20%	9.85%	76.89%	213.74%	16.18%	99.89%	99.91%	
	2009	1,015.00	12,712.00	19,164.00	20,467.00	41.80%	28.08	304.84	11.90%	7.98%	66.33%	224.00%	11.86%	100.05%	99.70%	8.1%
	2010	991.00	13,339.00	19,788.00	21,124.00	40.50%	28.03	304.84	11.60%	7.43%	67.41%	231.30%	11.58%	99.88%	99.86%	3.3%
	2011	752.00	16,258.00	30,337.00	28,996.00	45.80%	31.75	418.22	5.70%	4.63%	53.59%	228.44%	5.66%	99.99%	99.34%	53.3%
	2012	891.00	15,294.00	32,903.00	28,263.00	46.30%	31.29	418.22	6.80%	5.83%	46.48%	251.44%	6.81%	100.00%	100.13%	8.5%
	2013	1,245.00	14,903.00	33,252.00	28,523.00	44.50%	30.32	418.63	9.80%	8.35%	44.82%	261.98%	9.81%	100.00%	100.09%	1.1%
	2014	356.00	15,049.00	35,783.00	31,596.00	39.30%	29.49	421.10	2.90%	2.37%	42.06%	288.17%	2.87%	100.01%	98.86%	7.6%
	2015	844.00	15,029.00	37,214.00	31,613.00	39.30%	29.33	423.56	6.80%	5.62%	40.39%	299.54%	6.79%	99.99%	99.90%	4.0%
	2016	892.00	14,562.00	29,387.00	24,433.00	25.50%	14.11	442.34	14.30%	6.13%	49.55%	471.67%	14.32%	100.18%	100.12%	-21.0%
	2017	1,155.00	14,000.00	30,675.00	27,750.00	24.50%	15.40	445.00	17.00%	8.25%	45.64%	451.19%	16.99%	100.80%	99.93%	4.4%
	2021-23	$ 1,660.00	$ 16,250.00	$ 34,700.00	$ 35,600.00	37.00%	$ 24.00	548.00	12.50%	10.22%	46.83%	263.44%	12.60%	99.85%	100.82%	13.1%
GXP	2008	$ 119.50	$ 1,670.10	$ 6,081.30	$ 5,146.20	49.60%	$ 21.39	119.26	4.60%	7.16%	27.46%	238.25%	4.68%	99.94%	101.78%	
	2009	135.60	1,965.00	6,651.10	6,044.50	46.20%	20.62	135.42	4.80%	6.90%	29.54%	238.17%	4.86%	99.99%	101.16%	9.4%
	2010	211.70	2,255.50	6,892.30	5,867.60	49.20%	21.26	135.71	7.30%	9.39%	32.72%	238.75%	7.33%	99.94%	100.46%	3.6%
	2011	174.40	2,318.00	7,053.50	5,741.20	51.60%	21.74	136.14	5.80%	7.52%	32.86%	238.10%	5.89%	99.91%	101.50%	2.3%
	2012	199.90	2,309.90	7,402.10	6,135.80	54.40%	21.75	153.53	5.90%	8.65%	31.21%	221.76%	5.99%	100.04%	101.51%	4.9%
	2013	250.20	2,446.30	7,746.40	7,029.10	49.40%	22.58	153.87	7.20%	10.23%	31.58%	223.09%	7.21%	100.06%	100.08%	4.7%
	2014	242.80	2,568.20	8,279.60	7,113.10	50.40%	23.26	154.16	6.70%	9.45%	31.02%	230.95%	6.77%	100.02%	101.08%	6.9%
	2015	213.00	2,502.20	8,662.40	7,440.60	49.10%	23.68	154.40	5.80%	8.51%	28.89%	237.11%	5.83%	100.08%	100.52%	4.6%
	2016	290.00	2,676.00	8,956.70	9,527.20	55.90%	24.73	215.35	5.10%	10.84%	29.88%	168.18%	5.45%	100.00%	106.77%	3.4%
	2017	24.10	2,708.20	9,124.70	8,277.40	60.00%	23.02	215.66	NMF	0.89%	29.68%	183.73%	0.49%	99.96%	#VALUE!	1.9%
	2021-23	$ 370.00	$ 3,150.00	$ 9,125.00	$ 7,025.00	51.00%	$ 22.75	158.00	10.50%	11.75%	34.52%	254.69%	10.33%	100.33%	98.35%	0.0%
HE	2008	$ 92.20	$ 3,218.90	$ 2,907.40	$ 2,635.20	52.70%	$ 15.35	90.52	6.50%	2.86%	110.71%	209.35%	6.64%	100.05%	102.14%	
	2009	84.90	2,309.60	3,088.60	2,840.80	50.70%	15.58	92.52	5.80%	3.68%	74.78%	214.44%	5.89%	100.08%	101.63%	6.2%
	2010	115.40	2,665.00	3,165.90	2,732.90	54.30%	15.67	94.69	7.70%	4.33%	84.18%	213.34%	7.78%	99.99%	100.99%	2.5%
	2011	140.10	3,242.30	3,334.50	2,841.30	53.90%	15.95	96.04	9.00%	4.32%	97.23%	217.73%	9.15%	100.02%	101.65%	5.3%
	2012	164.90	3,375.00	3,594.80	3,001.00	53.10%	16.28	97.93	10.20%	4.89%	93.89%	225.59%	10.35%	100.05%	101.45%	7.8%
	2013	163.40	3,238.50	3,858.90	3,142.90	55.00%	17.06	101.26	9.40%	5.05%	83.92%	223.24%	9.45%	99.94%	100.56%	7.3%
	2014	170.20	3,239.50	4,148.80	3,332.30	53.80%	17.47	102.57	9.40%	5.25%	78.08%	231.42%	9.49%	99.95%	101.00%	7.5%
	2015	161.80	2,603.00	4,377.70	3,473.50	55.50%	17.94	107.46	8.30%	6.22%	59.46%	227.08%	8.39%	100.00%	101.12%	5.5%
	2016	250.10	2,380.70	4,603.50	3,595.10	57.50%	19.03	108.58	12.00%	10.51%	51.71%	222.69%	12.10%	99.96%	100.82%	5.2%
	2017	180.60	2,555.60	5,025.90	3,765.50	55.70%	19.28	108.79	8.50%	7.07%	50.85%	239.63%	8.61%	100.00%	101.30%	9.2%
	2021-23	$ 270.00	$ 3,050.00	$ 6,025.00	$ 4,875.00	55.50%	$ 23.75	113.00	10.00%	8.85%	50.62%	222.68%	9.98%	99.19%	99.79%	19.9%
IDA	2008	$ 98.40	$ 960.40	$ 2,758.20	$ 2,485.90	52.40%	$ 27.76	46.92	7.60%	10.25%	34.82%	211.74%	7.55%	99.99%	99.40%	
	2009	124.40	1,049.80	2,917.00	2,807.10	49.80%	29.17	47.90	8.90%	11.85%	35.99%	208.66%	8.90%	99.95%	99.99%	5.8%
	2010	142.50	1,036.00	3,161.40	3,020.40	50.70%	31.01	49.41	9.30%	13.75%	32.77%	206.45%	9.31%	100.06%	100.06%	8.4%
	2011	166.90	1,026.80	3,406.60	3,045.20	54.40%	33.19	49.95	10.10%	16.25%	30.14%	205.64%	10.07%	100.08%	99.75%	7.8%
	2012	168.90	1,080.70	3,536.00	3,225.40	54.50%	35.07	50.16	9.60%	15.63%	30.56%	201.16%	9.61%	100.07%	100.09%	3.8%
	2013	182.40	1,246.20	3,665.00	3,465.90	53.40%	36.84	50.23	9.90%	14.64%	34.00%	198.02%	9.86%	99.98%	99.55%	3.6%
	2014	193.50	1,282.50	3,833.50	3,567.60	54.70%	38.85	50.27	9.90%	15.09%	33.46%	196.44%	9.92%	100.08%	100.16%	4.6%
	2015	194.70	1,270.30	3,992.40	3,783.30	54.40%	40.88	50.34	9.50%	15.33%	31.82%	193.98%	9.46%	99.99%	99.58%	4.1%
	2016	198.30	1,262.00	4,172.00	3,898.50	55.20%	42.74	50.40	9.20%	15.71%	30.25%	193.87%	9.21%	100.10%	100.16%	4.5%
	2017	212.40	1,349.50	4,283.90	3,997.50	56.30%	44.65	50.42	9.40%	15.74%	31.50%	190.35%	9.44%	100.03%	100.40%	2.7%
	2021-23	$ 245.00	$ 1,450.00	$ 4,850.00	$ 4,775.00	56.00%	$ 53.25	50.40	9.00%	16.90%	29.90%	181.38%	9.16%	100.37%	101.80%	13.2%
MGEE	2008	$ 52.80	$ 596.00	$ 901.20	$ 750.60	63.70%	$ 13.92	34.36	11.00%	8.86%	66.13%	188.48%	11.04%	100.03%	100.39%	
	2009	51.00	533.80	939.80	822.70	61.00%	14.47	34.67	10.20%	9.55%	56.80%	187.27%	10.16%	99.97%	99.63%	4.3%
	2010	57.70	532.60	968.00	859.40	61.10%	15.14	34.67	11.00%	10.83%	55.02%	184.35%	10.99%	99.96%	99.90%	3.0%
	2011	60.90	546.40	995.60	911.90	60.40%	15.89	34.67	11.10%	11.15%	54.88%	180.76%	11.06%	100.02%	99.61%	2.9%
	2012	64.40	541.30	1,073.50	937.90	61.80%	16.71	34.67	11.10%	11.90%	50.42%	185.21%	11.11%	99.95%	100.10%	7.8%
	2013	74.90	590.90	1,160.20	1,016.90	60.70%	17.81	34.67	12.10%	12.68%	50.93%	187.96%	12.13%	100.03%	100.28%	8.1%
	2014	80.30	619.90	1,208.10	1,054.70	62.50%	19.02	34.67	12.20%	12.95%	51.31%	183.27%	12.18%	100.04%	99.85%	4.1%
	2015	71.30	564.00	1,243.40	1,081.50	64.00%	19.92	34.67	10.30%	12.64%	45.36%	179.64%	10.30%	99.78%	100.01%	2.9%
	2016	75.60	544.70	1,282.10	1,106.90	65.40%	20.89	34.67	10.40%	13.88%	42.48%	177.11%	10.44%	100.05%	100.42%	3.1%
	2017	76.10	563.10	1,341.40	1,176.30	66.20%	22.45	34.67	9.80%	13.51%	41.98%	172.26%	9.77%	99.95%	99.72%	4.6%
	2021-23	$ 120.00	$ 775.00	$ 1,650.00	$ 1,725.00	68.00%	$ 32.65	36.00	10.00%	15.48%	46.97%	140.66%	10.23%	100.20%	102.30%	23.0%
NEE	2008	$ 1,639.00	$ 16,410.00	$ 32,411.00	$ 25,514.00	45.80%	$ 28.57	408.92	14.00%	9.99%	50.63%	277.36%	14.03%	99.98%	100.19%	
	2009	1,615.00	15,643.00	36,078.00	29,267.00	44.30%	31.35	413.62	12.50%	10.32%	43.36%	278.27%	12.46%	100.01%	99.65%	11.3%
	2010	1,957.00	15,317.00	39,075.00	32,474.00	44.50%	34.36	420.86	13.50%	12.78%	39.20%	270.40%	13.54%	100.07%	100.31%	8.3%
	2011	2,021.00	15,341.00	42,490.00	35,753.00	41.80%	35.92	416.00	13.50%	13.17%	36.10%	284.31%	13.52%	99.99%	100.17%	8.7%
	2012	1,911.00	14,256.00	49,413.00	39,245.00	40.90%	37.90	424.00	11.90%	13.40%	28.85%	307.85%	11.91%	100.11%	100.05%	16.3%
	2013	2,062.00	15,136.00	52,720.00	42,009.00	42.90%	41.47	435.00	11.40%	13.62%	28.71%	292.53%	11.44%	100.10%	100.37%	6.7%
	2014	2,465.00	17,021.00	55,705.00	44,283.00	45.00%	44.96	443.00	12.40%	14.48%	30.56%	279.54%	12.37%	99.95%	99.76%	5.7%
	2015	2,752.00	17,486.00	61,386.00	49,255.00	45.80%	48.97	461.00	12.20%	15.74%	28.49%	272.12%	12.20%	100.07%	99.99%	10.2%
	2016	2,693.00	16,155.00	66,912.00	52,159.00	46.70%	52.01	468.00	11.10%	16.67%	24.14%	274.70%	11.06%	99.93%	99.60%	9.0%
	2017	4,893.00	17,195.00	72,416.00	59,675.00	47.50%	59.90	471.00	17.50%	28.46%	23.74%	255.48%	17.26%	99.53%	98.64%	8.2%
	2021-23	$ 5,680.00	$ 21,450.00	$ 101,200.00	$ 80,400.00	51.00%	$ 76.50	535.00	14.00%	26.48%	21.20%	246.81%	13.85%	99.81%	98.95%	39.7%
ES	2008	$ 296.20	$ 5,800.10	$ 8,207.90	$ 7,926.20	38.10%	$ 19.38	155.83	9.60%	5.11%	70.66%	271.80%	9.81%	100.00%	102.17%	
	2009	335.60	5,439.40	8,840.00	8,629.50	41.50%	20.37	175.62	9.20%	6.17%	61.53%	246.84%	9.37%	99.89%	101.86%	7.7%
	2010	377.80	4,898.20	9,567.70	8,741.80	43.60%	21.60	176.45	9.80%	7.71%	51.20%	251.03%	9.91%	100.00%	101.15%	8.2%
	2011	400.30	4,465.70	10,403.00	8,856.00	45.30%	22.65	177.16	9.80%	8.96%	42.93%	259.31%	9.98%	100.02%	101.82%	8.7%
	2012	533.00	6,273.80	16,605.00	16,675.00	55.40%	29.41	314.05	5.70%	8.50%	37.78%	179.75%	5.77%	99.98%	101.22%	59.6%
	2013	793.70	7,301.20	17,576.00	17,544.00	54.80%	30.49	315.27	8.20%	10.87%	41.54%	182.81%	8.26%	99.98%	100.68%	5.8%
	2014	827.10	7,741.90	18,647.00	18,738.00	53.20%	31.47	316.98	8.20%	10.68%	41.52%	187.06%	8.30%	100.07%	101.18%	6.1%
	2015	886.00	7,954.80	19,892.00	19,313.00	53.60%	32.64	317.19	8.50%	11.14%	39.99%	192.16%	8.56%	100.01%	100.69%	6.7%
	2016	949.80	7,639.10	21,351.00	19,697.00	54.40%	33.80	316.89	8.80%	12.43%	35.78%	199.26%	8.86%	99.96%	100.73%	7.3%
	2017	995.00	7,650.00	23,375.00	22,375.00	49.50%	35.00	316.89	9.00%	13.01%	32.73%	211.05%	8.98%	100.14%	99.82%	9.5%
	2021-23	$ 1,370.00	$ 8,700.00	$ 29,700.00	$ 27,800.00	48.50%	$ 42.50	316.89	10.00%	15.75%	29.29%	220.28%	10.16%	99.89%	101.61%	27.1%
NWE	2008	$ 67.60	$ 1,260.80	$ 1,839.70	$ 1,434.30	53.20%	$ 21.25	35.93	8.90%	5.36%	68.53%	241.10%	8.86%	100.06%	99.54%	
	2009	73.40	1,141.90	1,964.10	1,803.90	43.60%	21.86	36.00	9.30%	6.43%	58.14%	249.73%	9.33%	100.06%	100.35%	6.8%
	2010	77.40	1,110.70	2,118.00	1,916.40	42.80%	22.64	36.23	9.40%	6.97%	52.44%	258.22%	9.44%	100.00%	100.39%	7.8%
	2011	92.60	1,117.30	2,213.30	1,797.10	47.80%	23.68	36.28	10.80%	8.29%	50.48%	257.66%	10.78%	100.01%	99.81%	4.5%
	2012	83.70	1,070.30	2,435.60	2,020.70	46.20%	25.09	37.22	9.00%	7.82%	43.94%	260.89%	8.97%	100.03%	99.62%	10.0%
	2013	94.00	1,154.50	2,690.10	2,215.70	46.50%	26.60	38.75	9.10%	8.14%	42.92%	261.10%	9.12%	100.04%	100.26%	10.4%
	2014	120.70	1,204.90	3,758.00	3,168.00	46.60%	31.50	46.91	8.20%	10.02%	32.06%	254.56%	8.18%	100.09%	99.71%	39.7%
	2015	138.40	1,214.30	4,059.50	3,408.60	46.90%	33.22	48.17	8.60%	11.40%	29.91%	253.94%	8.66%	100.10%	100.67%	8.0%
	2016	164.20	1,257.20	4,214.90	3,493.90	48.00%	34.68	48.33	9.80%	13.06%	29.83%	251.32%	9.79%	99.94%	99.91%	3.8%
	2017	162.70	1,305.70	4,358.30	3,614.50	49.80%	36.44	49.37	9.00%	12.46%	29.96%	242.12%	9.04%	99.95%	100.43%	3.4%
	2021-23	$ 205.00	$ 1,500.00	$ 4,975.00	$ 4,050.00	54.00%	$ 42.75	51.00	9.50%	13.67%	30.15%	227.48%	9.37%	99.69%	98.67%	14.2%
OGE	2008	$ 231.40	$ 4,070.70	$ 5,249.80	$ 4,058.60	46.70%	$ 10.14	187.00	12.20%	5.68%	77.54%	276.98%	12.21%	100.04%	100.07%	
	2009	258.30	2,869.70	5,911.60	4,129.70	49.40%	10.52	194.00	12.70%	9.00%	48.54%	289.77%	12.66%	100.04%	99.70%	12.6%
	2010	295.30	3,716.90	6,464.40	4,652.50	49.20%	11.73	195.20	12.90%	7.94%	57.50%	282.41%	12.90%	100.03%	100.01%	9.4%
	2011	342.90	3,915.90	7,474.00	5,300.40	48.40%	13.06	196.20	13.40%	8.76%	52.39%	291.34%	13.37%	99.88%	99.75%	15.6%
	2012	355.00	3,671.20	8,344.80	5,615.80	49.30%	14.00	197.60	12.80%	9.67%	43.99%	301.41%	12.82%	99.92%	100.18%	11.7%
	2013	387.60	2,867.70	6,672.80	5,337.20	56.90%	15.30	198.50	12.80%	13.52%	42.98%	219.73%	12.76%	100.01%	99.71%	-20.0%
	2014	395.80	2,453.10	6,979.90	5,999.70	54.10%	16.27	199.40	12.20%	16.13%	35.15%	215.04%	12.19%	99.95%	99.95%	4.6%
	2015	337.60	2,196.90	7,322.40	5,971.60	55.70%	16.66	199.70	10.20%	15.37%	30.00%	220.14%	10.15%	100.02%	99.51%	4.9%
	2016	338.20	2,259.20	7,696.20	5,849.60	58.90%	17.24	199.70	9.80%	14.97%	29.35%	223.38%	9.82%	99.92%	100.16%	5.1%
	2017	384.30	2,261.10	8,339.90	6,600.70	58.30%	19.28	199.70	10.00%	17.00%	27.11%	216.72%	9.99%	100.05%	99.86%	8.4%
	2021-23	$ 500.00	$ 2,950.00	$ 9,450.00	$ 8,225.00	54.50%	$ 22.50	199.70	11.00%	16.95%	31.22%	210.81%	11.15%	100.24%	101.40%	13.3%
OTTR	2008	$ 35.10	$ 1,311.20	$ 1,037.60	$ 1,032.50	65.60%	$ 19.14	35.38	5.10%	2.68%	126.37%	153.19%	5.18%	99.98%	101.61%	
	2009	26.00	1,039.50	1,098.60	1,124.40	59.80%	18.78	35.81	3.80%	2.50%	94.62%	163.39%	3.87%	100.02%	101.76%	5.9%
	2010	13.60	1,119.10	1,108.70	1,083.30	58.40%	17.57	36.00	2.00%	1.22%	100.94%	175.25%	2.15%	99.98%	107.48%	0.9%
	2011	16.40	1,077.90	1,077.50	1,058.90	54.00%	15.83	36.10	2.70%	1.52%	100.04%	188.44%	2.87%	99.94%	106.23%	-2.8%
	2012	39.00	859.20	1,049.50	959.20	54.40%	14.43	36.17	7.30%	4.54%	81.87%	201.13%	7.47%	100.02%	102.38%	-2.6%
	2013	50.20	893.30	1,167.00	924.40	57.90%	14.75	36.27	9.30%	5.62%	76.55%	218.04%	9.38%	99.95%	100.85%	11.2%
	2014	56.90	799.30	1,268.50	1,071.30	53.50%	15.39	37.22	9.90%	7.12%	63.01%	221.32%	9.93%	99.94%	100.28%	8.7%
	2015	58.60	779.80	1,387.80	1,051.00	57.60%	15.98	37.86	9.70%	7.51%	56.19%	229.25%	9.68%	99.94%	99.79%	9.4%
	2016	62.00	803.50	1,477.20	1,175.40	57.00%	17.03	39.35	9.30%	7.72%	54.39%	220.48%	9.25%	100.02%	99.51%	6.4%
	2017	73.90	849.40	1,539.60	1,187.30	58.70%	17.62	39.56	10.60%	8.70%	55.17%	220.91%	10.60%	100.01%	100.03%	4.2%
	2021-23	$ 110.00	$ 1,150.00	$ 1,950.00	$ 1,755.00	61.50%	$ 24.45	44.00	10.00%	9.57%	58.97%	180.67%	10.19%	99.67%	101.92%	26.7%

		Net Profit	Revenue	Net Plant	Total Capital	Common Equity Ratio	Book Value per Share	Shares Outstanding	Reported Return on Com Equity	Profit Margin	Asset Turnover	Equity Multiplier	Calculated Return on Equity	Common Equity Check	ROE Check	Annual Increase in Net Plant
PCG	2008	$ 1,198.00	$ 14,628.00	$ 26,261.00	$ 20,163.00	46.50%	$ 25.97	361.06	12.60%	8.19%	55.70%	280.09%	12.78%	100.01%	101.41%	
	2009	1,168.00	13,399.00	28,892.00	21,793.00	47.40%	27.88	370.60	11.20%	8.72%	46.38%	279.69%	11.31%	100.02%	100.96%	10.0%
	2010	1,113.00	13,841.00	31,449.00	22,863.00	49.30%	28.55	395.23	9.70%	8.04%	44.01%	279.01%	9.87%	100.11%	101.80%	8.9%
	2011	1,132.00	14,956.00	33,655.00	24,119.00	50.20%	29.35	412.26	9.20%	7.57%	44.44%	277.96%	9.35%	99.93%	101.62%	7.0%
	2012	893.00	15,040.00	37,523.00	25,956.00	50.40%	30.35	430.72	6.70%	5.94%	40.08%	286.83%	6.83%	99.93%	101.88%	11.5%
	2013	828.00	15,598.00	41,252.00	27,311.00	52.50%	31.41	456.67	5.70%	5.31%	37.81%	287.71%	5.77%	100.04%	101.31%	9.9%
	2014	1,450.00	17,090.00	43,941.00	31,050.00	50.70%	33.09	475.91	9.10%	8.48%	38.89%	279.13%	9.21%	100.04%	101.22%	6.5%
	2015	988.00	16,833.00	46,723.00	32,858.00	50.40%	33.69	492.03	5.90%	5.87%	36.03%	282.14%	5.97%	100.10%	101.12%	6.3%
	2016	1,431.00	17,666.00	50,581.00	34,412.00	52.10%	35.39	506.89	7.90%	8.10%	34.93%	282.12%	7.98%	100.06%	101.03%	8.3%
	2017	1,807.00	17,135.00	53,789.00	37,225.00	51.60%	37.34	514.76	9.30%	10.55%	31.86%	280.03%	9.41%	100.07%	101.16%	6.3%
	2021-23	$ 2,370.00	$ 21,000.00	$ 68,500.00	$ 52,100.00	51.00%	$ 48.50	550.00	9.00%	11.29%	30.66%	257.80%	8.92%	100.39%	99.11%	27.3%
PNW	2008	$ 213.60	$ 3,367.10	$ 8,916.70	$ 6,477.60	53.20%	$ 34.16	100.89	6.20%	6.34%	37.76%	258.75%	6.20%	100.01%	99.97%	
	2009	229.20	3,297.10	9,257.80	6,686.60	49.60%	32.69	101.43	6.90%	6.95%	35.61%	279.14%	6.91%	99.98%	100.16%	3.8%
	2010	330.40	3,263.60	9,578.80	6,729.10	54.70%	33.86	108.77	9.00%	10.12%	34.07%	260.24%	8.98%	100.06%	99.74%	3.5%
	2011	328.20	3,241.40	9,962.30	6,840.90	55.90%	34.98	109.25	8.60%	10.13%	32.54%	260.52%	8.58%	99.93%	99.80%	4.0%
	2012	387.40	3,301.80	10,396.00	7,171.90	55.40%	36.20	109.74	9.80%	11.73%	31.76%	261.65%	9.75%	99.98%	99.49%	4.4%
	2013	406.10	3,454.60	10,889.00	6,990.90	60.00%	38.07	110.18	9.70%	11.76%	31.73%	259.60%	9.68%	100.00%	99.81%	4.7%
	2014	397.60	3,491.60	11,194.00	7,398.70	59.00%	39.50	110.57	9.10%	11.39%	31.19%	256.44%	9.11%	100.05%	100.09%	2.8%
	2015	437.30	3,495.40	11,809.00	8,046.30	57.00%	41.30	110.98	9.50%	12.51%	29.60%	257.48%	9.53%	99.94%	100.37%	5.5%
	2016	442.00	3,498.70	12,714.00	8,825.40	54.40%	43.15	111.34	9.20%	12.63%	27.52%	264.82%	9.21%	100.07%	100.07%	7.7%
	2017	497.80	3,565.30	13,445.00	9,796.40	51.10%	44.80	111.75	9.90%	13.96%	26.52%	268.58%	9.94%	100.01%	100.45%	5.7%
	2021-23	$ 630.00	$ 4,500.00	$ 16,125.00	$ 11,175.00	54.50%	$ 54.00	113.00	10.50%	14.00%	27.91%	264.76%	10.34%	100.19%	98.52%	19.9%
PNM	2008	$ 8.10	$ 1,959.50	$ 3,192.00	$ 3,025.40	54.00%	$ 18.89	86.53	0.50%	0.41%	61.39%	195.38%	0.50%	100.05%	99.16%	
	2009	53.50	1,647.70	3,332.40	3,214.90	51.00%	18.90	86.67	3.20%	3.25%	49.44%	203.24%	3.26%	99.91%	101.97%	4.4%
	2010	80.00	1,673.50	3,444.40	3,100.30	49.20%	17.60	86.67	5.20%	4.78%	48.59%	225.81%	5.24%	100.00%	100.86%	3.4%
	2011	96.60	1,700.60	3,627.10	3,245.60	48.10%	19.62	79.65	6.10%	5.68%	46.89%	232.34%	6.19%	100.10%	101.44%	5.3%
	2012	105.60	1,342.40	3,746.50	3,277.90	48.70%	20.05	79.65	6.60%	7.87%	35.83%	234.69%	6.62%	100.04%	100.23%	3.3%
	2013	113.50	1,387.90	3,933.90	3,344.00	49.70%	20.87	79.65	6.80%	8.18%	35.28%	236.70%	6.83%	100.02%	100.43%	5.0%
	2014	116.30	1,435.90	4,270.00	3,437.10	51.90%	22.39	79.65	6.50%	8.10%	33.63%	239.37%	6.52%	99.97%	100.30%	8.5%
	2015	131.50	1,439.10	4,535.40	3,633.30	45.50%	20.78	79.65	7.90%	9.14%	31.73%	274.35%	7.95%	100.12%	100.69%	6.2%
	2016	132.40	1,363.00	4,904.70	3,806.80	44.00%	21.04	79.65	7.90%	9.71%	27.79%	292.82%	7.90%	100.05%	100.06%	8.1%
	2017	154.40	1,445.00	4,980.20	3,887.50	43.60%	21.28	79.65	9.10%	10.69%	29.01%	293.83%	9.11%	100.00%	100.10%	1.5%
	2021-23	$ 225.00	$ 1,800.00	$ 5,975.00	$ 4,900.00	45.50%	$ 27.00	79.65	9.50%	12.50%	30.13%	268.00%	10.09%	96.46%	106.23%	20.0%
POR	2008	$ 87.00	$ 1,745.00	$ 3,301.00	$ 2,518.00	53.80%	$ 21.64	62.58	6.40%	4.99%	52.86%	243.67%	6.42%	99.97%	100.35%	
	2009	95.00	1,804.00	3,858.00	3,100.00	49.70%	20.50	75.21	6.20%	5.27%	46.76%	250.41%	6.17%	100.07%	99.45%	16.9%
	2010	125.00	1,783.00	4,133.00	3,390.00	47.00%	21.14	75.32	7.90%	7.01%	43.14%	259.40%	7.85%	99.94%	99.31%	7.1%
	2011	147.00	1,813.00	4,285.00	3,298.00	50.40%	22.07	75.36	8.80%	8.11%	42.31%	257.79%	8.84%	100.06%	100.50%	3.7%
	2012	141.00	1,805.00	4,392.00	3,264.00	52.90%	22.87	75.56	8.20%	7.81%	41.10%	254.36%	8.17%	100.08%	99.59%	2.5%
	2013	137.00	1,810.00	4,880.00	3,735.00	48.70%	23.30	78.09	7.50%	7.57%	37.09%	268.29%	7.53%	100.03%	100.42%	11.1%
	2014	175.00	1,900.00	5,679.00	4,037.00	47.30%	24.43	78.23	9.20%	9.21%	33.46%	297.41%	9.16%	100.09%	99.62%	16.4%
	2015	172.00	1,898.00	6,012.00	4,329.00	52.20%	25.43	88.79	7.60%	9.06%	31.57%	266.05%	7.61%	99.92%	100.15%	5.9%
	2016	193.00	1,923.00	6,434.00	4,544.00	51.60%	26.35	88.95	8.20%	10.04%	29.89%	274.41%	8.23%	99.96%	100.38%	7.0%
	2017	204.00	2,009.00	6,741.00	4,842.00	49.90%	27.11	89.11	8.40%	10.15%	29.80%	279.00%	8.44%	99.98%	100.51%	4.8%
	2021-23	$ 255.00	$ 2,325.00	$ 7,000.00	$ 5,500.00	51.50%	$ 31.50	90.00	9.00%	10.97%	33.21%	247.13%	9.00%	100.09%	100.03%	3.8%
PPL	2008	$ 940.00	$ 8,044.00	$ 12,416.00	$ 12,529.00	40.50%	$ 13.55	374.58	18.20%	11.69%	64.79%	244.69%	18.52%	100.03%	101.79%	
	2009	465.00	7,556.00	13,174.00	12,940.00	42.50%	14.57	377.18	8.10%	6.15%	57.36%	239.55%	8.46%	99.93%	104.39%	6.1%
	2010	1,009.00	8,521.00	20,858.00	20,621.00	39.80%	16.98	483.39	12.00%	11.84%	40.85%	254.14%	12.29%	100.01%	102.45%	58.3%
	2011	1,456.00	12,737.00	27,266.00	29,071.00	37.20%	18.72	578.41	13.30%	11.43%	46.71%	252.13%	13.46%	100.12%	101.23%	30.7%
	2012	1,536.00	12,286.00	30,032.00	29,205.00	35.90%	18.01	581.94	14.60%	12.50%	40.91%	286.44%	14.65%	99.96%	100.34%	10.1%
	2013	1,541.00	11,860.00	33,087.00	33,058.00	37.70%	19.78	630.32	12.40%	12.99%	35.84%	265.48%	12.36%	100.04%	99.72%	10.2%
	2014	1,583.00	11,499.00	34,597.00	32,484.00	42.00%	20.47	665.85	11.60%	13.77%	33.24%	253.58%	11.60%	99.90%	100.02%	4.6%
	2015	1,603.00	7,669.00	30,382.00	28,482.00	34.80%	14.72	673.86	16.20%	20.90%	25.24%	306.53%	16.17%	100.08%	99.83%	-12.2%
	2016	1,902.00	7,517.00	30,074.00	27,707.00	35.70%	14.56	679.73	19.20%	25.30%	25.00%	304.04%	19.23%	100.06%	100.15%	-1.0%
	2017	1,385.00	7,300.00	32,425.00	29,200.00	36.00%	15.25	690.00	13.00%	18.97%	22.51%	308.46%	13.18%	100.10%	101.35%	7.8%
	2021-23	$ 2,040.00	$ 8,100.00	$ 41,500.00	$ 35,100.00	42.50%	$ 20.25	740.00	13.50%	25.19%	19.52%	278.20%	13.68%	100.45%	101.30%	28.0%
PEG	2008	$ 1,477.00	$ 14,139.00	$ 14,433.00	$ 15,856.00	49.00%	$ 15.36	506.02	19.00%	10.45%	97.96%	185.77%	19.01%	100.04%	100.05%	
	2009	1,567.00	12,431.00	15,440.00	16,513.00	53.20%	17.37	505.99	17.80%	12.61%	80.51%	175.76%	17.84%	100.05%	100.21%	7.0%
	2010	1,557.00	11,793.00	16,390.00	17,452.00	55.20%	19.04	505.97	16.20%	13.20%	71.95%	170.14%	16.16%	100.00%	99.77%	6.2%
	2011	1,577.00	11,343.00	17,849.00	17,731.00	57.90%	20.30	505.95	15.40%	13.90%	63.55%	173.86%	15.36%	100.04%	99.75%	8.9%
	2012	1,239.00	9,781.00	19,736.00	17,467.00	61.70%	21.31	505.89	11.50%	12.67%	49.56%	183.13%	11.50%	100.03%	99.97%	10.6%
	2013	1,243.00	9,968.00	21,645.00	19,470.00	59.60%	22.95	505.86	10.70%	12.47%	46.05%	186.53%	10.71%	100.05%	100.11%	9.7%
	2014	1,518.00	10,886.00	23,589.00	20,446.00	59.60%	24.09	505.84	12.50%	13.94%	46.15%	193.58%	12.46%	100.00%	99.66%	9.0%
	2015	1,679.00	10,415.00	26,539.00	21,900.00	59.70%	25.86	505.28	12.90%	16.12%	39.24%	202.99%	12.84%	99.94%	99.55%	12.5%
	2016	1,436.00	9,198.00	29,286.00	24,025.00	54.70%	26.01	504.87	10.90%	15.61%	31.41%	222.85%	10.93%	99.92%	100.25%	10.4%
	2017	2,245.00	9,100.00	31,625.00	25,500.00	54.50%	27.45	506.00	16.00%	24.67%	28.77%	227.56%	16.15%	99.94%	100.96%	8.0%
	2021-23	$ 1,840.00	$ 10,750.00	$ 37,100.00	$ 33,800.00	51.00%	$ 34.00	506.00	10.50%	17.12%	28.98%	215.22%	10.67%	99.80%	101.66%	17.3%
SCG	2008	$ 353.00	$ 5,319.00	$ 8,305.00	$ 7,519.00	40.50%	$ 25.85	117.78	11.40%	6.64%	64.05%	272.72%	11.59%	99.98%	101.68%	
	2009	357.00	4,237.00	9,009.00	7,891.00	43.20%	27.63	123.34	10.20%	8.43%	47.03%	264.28%	10.47%	99.97%	102.67%	8.5%
	2010	376.00	4,601.00	9,662.00	7,854.00	47.10%	29.05	127.45	10.20%	8.17%	47.62%	261.19%	10.16%	100.09%	99.65%	7.2%
	2011	387.00	4,409.00	10,047.00	8,511.00	45.70%	29.94	129.88	10.00%	8.78%	43.88%	258.31%	9.95%	99.98%	99.50%	4.0%
	2012	420.00	4,176.00	10,896.00	9,103.00	45.60%	31.47	132.01	10.10%	10.06%	38.33%	262.49%	10.12%	100.08%	100.18%	8.5%
	2013	471.00	4,495.00	11,643.00	10,059.00	46.40%	33.08	141.00	10.10%	10.48%	38.61%	249.45%	10.09%	99.93%	99.91%	6.9%
	2014	538.00	4,951.00	12,232.00	10,518.00	47.40%	34.95	142.70	10.80%	10.87%	40.48%	245.35%	10.79%	100.04%	99.92%	5.1%
	2015	544.00	4,380.00	13,425.00	11,325.00	48.10%	38.09	142.90	10.00%	12.42%	32.63%	246.45%	9.99%	99.92%	99.87%	9.8%
	2016	595.00	4,227.00	14,324.00	12,198.00	46.90%	40.06	142.90	10.40%	14.08%	29.51%	250.38%	10.40%	100.06%	100.01%	6.7%
	2017	580.00	4,250.00	15,525.00	11,750.00	49.50%	40.75	142.90	10.00%	13.65%	27.38%	266.92%	9.97%	100.12%	99.72%	8.4%
	2021-23	$ 540.00	$ 4,550.00	$ 17,300.00	$ 14,800.00	54.00%	$ 56.00	142.90	7.00%	11.87%	26.30%	216.47%	6.76%	100.13%	96.53%	11.4%
SRE	2008	$ 1,123.00	$ 10,758.00	$ 16,865.00	$ 14,692.00	54.20%	$ 32.75	243.32	14.00%	10.44%	63.79%	211.79%	14.10%	100.07%	100.73%	
	2009	1,193.00	8,106.00	18,281.00	16,646.00	54.10%	36.54	246.51	13.10%	14.72%	44.34%	203.00%	13.25%	100.02%	101.13%	8.4%
	2010	1,008.00	9,003.00	19,876.00	18,186.00	49.60%	37.54	240.45	11.10%	11.20%	45.30%	220.35%	11.17%	100.07%	100.67%	8.7%
	2011	1,088.00	10,036.00	23,572.00	20,015.00	49.20%	41.00	239.93	11.00%	10.84%	42.58%	239.37%	11.05%	99.90%	100.44%	18.6%
	2012	1,079.00	9,647.00	25,191.00	22,002.00	46.70%	42.42	242.37	10.40%	11.18%	38.30%	245.17%	10.50%	100.06%	100.97%	6.9%
	2013	1,060.00	10,557.00	25,460.00	22,281.00	49.40%	45.03	244.46	9.60%	10.04%	41.47%	231.31%	9.63%	100.01%	100.32%	1.1%
	2014	1,162.00	11,035.00	25,902.00	23,513.00	48.20%	45.98	246.33	10.30%	10.53%	42.60%	228.55%	10.25%	99.94%	99.54%	1.7%
	2015	1,314.00	10,231.00	28,039.00	24,963.00	47.30%	47.56	248.30	11.10%	12.84%	36.49%	237.47%	11.13%	100.01%	100.26%	8.3%
	2016	1,065.00	10,183.00	32,931.00	27,400.00	47.30%	51.77	250.15	8.20%	10.46%	30.92%	254.09%	8.22%	99.92%	100.21%	17.4%
	2017	1,169.00	11,207.00	36,503.00	29,135.00	43.50%	50.41	251.36	9.20%	10.43%	30.70%	288.02%	9.22%	99.98%	100.26%	10.8%
	2021-23	$ 2,440.00	$ 13,600.00	$ 41,400.00	$ 46,700.00	45.00%	$ 71.00	296.00	11.00%	17.94%	32.85%	197.00%	11.61%	100.00%	105.55%	13.4%
SO	2008	$ 1,807.00	$ 17,127.00	$ 35,878.00	$ 31,174.00	42.60%	$ 17.08	777.19	13.10%	10.55%	47.74%	270.16%	13.61%	99.96%	103.87%	
	2009	1,910.00	15,743.00	39,230.00	34,091.00	43.60%	18.15	819.65	12.40%	12.13%	40.13%	263.93%	12.85%	100.09%	103.63%	9.3%
	2010	2,040.00	17,456.00	42,002.00	35,438.00	45.70%	19.21	843.34	12.20%	11.69%	41.56%	259.35%	12.60%	100.03%	103.25%	7.1%
	2011	2,268.00	17,657.00	45,010.00	37,307.00	47.10%	20.32	865.13	12.50%	12.84%	39.23%	256.15%	12.91%	100.04%	103.26%	7.2%
	2012	2,415.00	16,537.00	48,390.00	38,653.00	47.30%	21.09	867.77	12.80%	14.60%	34.17%	264.67%	13.21%	100.10%	103.20%	7.5%
	2013	2,439.00	17,087.00	51,208.00	41,483.00	45.80%	21.43	887.09	12.50%	14.27%	33.37%	269.53%	12.84%	100.06%	102.70%	5.8%
	2014	2,567.00	18,467.00	54,868.00	42,142.00	47.30%	21.98	907.78	12.50%	13.90%	33.66%	275.26%	12.88%	100.10%	103.02%	7.1%
	2015	2,647.00	17,489.00	61,114.00	46,788.00	44.00%	22.59	911.72	12.60%	15.14%	28.62%	296.86%	12.86%	100.04%	102.05%	11.4%
	2016	2,757.00	19,896.00	78,446.00	69,359.00	35.70%	25.00	990.39	11.00%	13.86%	25.36%	316.81%	11.13%	99.99%	101.22%	28.4%
	2017	3,100.00	22,650.00	83,950.00	71,375.00	33.50%	23.85	1,006.00	12.50%	13.69%	26.98%	351.10%	12.96%	100.34%	103.72%	7.0%
	2021-23	$ 3,845.00	$ 26,750.00	$ 103,200.00	$ 80,600.00	35.50%	$ 28.00	1,016.00	13.00%	14.37%	25.92%	360.68%	13.44%	99.42%	103.37%	22.9%

		Net Profit	Revenue	Net Plant	Total Capital	Common Equity Ratio	Book Value per Share	Shares Outstanding	Reported Return on Com Equity	Profit Margin	Asset Turnover	Equity Multiplier	Calculated Return on Equity	Common Equity Check	ROE Check	Annual Increase in Net Plant
VVC	2008	$ 129.00	$ 2,484.70	$ 2,720.30	$ 2,599.50	52.00%	$ 16.68	81.03	9.50%	5.19%	91.34%	201.24%	9.54%	99.99%	100.46%	
	2009	145.00	2,088.90	2,878.80	2,937.70	47.60%	17.23	81.10	10.40%	6.94%	72.56%	205.87%	10.37%	99.93%	99.71%	5.8%
	2010	133.70	2,129.50	2,955.40	2,874.10	50.10%	17.61	81.70	9.30%	6.28%	72.05%	205.25%	9.29%	99.92%	99.84%	2.7%
	2011	141.60	2,325.20	3,032.60	3,025.10	48.40%	17.89	81.90	9.70%	6.09%	76.67%	207.12%	9.67%	100.07%	99.70%	2.6%
	2012	159.00	2,232.80	3,119.60	3,079.50	49.60%	18.57	82.20	10.40%	7.12%	71.57%	204.24%	10.41%	99.94%	100.09%	2.9%
	2013	136.60	2,491.20	3,224.30	3,331.40	46.70%	18.86	82.40	8.80%	5.48%	77.26%	207.25%	8.78%	99.89%	99.78%	3.4%
	2014	166.90	2,611.70	3,439.00	3,013.90	53.30%	19.45	82.60	10.40%	6.39%	75.94%	214.08%	10.39%	100.01%	99.90%	6.7%
	2015	197.30	2,434.70	4,089.50	3,406.60	49.40%	20.34	82.80	11.70%	8.10%	59.54%	243.01%	11.72%	100.08%	100.21%	18.9%
	2016	211.60	2,448.30	4,406.80	3,358.00	52.70%	21.33	82.90	12.00%	8.64%	55.56%	249.02%	11.96%	99.92%	99.64%	7.8%
	2017	216.00	2,657.30	4,740.80	3,588.00	51.50%	22.28	83.00	11.70%	8.13%	56.05%	256.56%	11.69%	100.08%	99.91%	7.6%
	2021-23	$ 315.00	$ 3,500.00	$ 6,000.00	$ 4,700.00	53.00%	$ 29.05	86.00	12.50%	9.00%	58.33%	240.87%	12.65%	100.29%	101.16%	26.6%
WR	2008	$ 136.80	$ 1,839.00	$ 5,533.50	$ 4,400.10	49.70%	$ 20.18	108.31	6.20%	7.44%	33.23%	253.04%	6.26%	99.95%	100.90%	
	2009	141.30	1,858.20	5,771.70	4,866.80	46.10%	20.59	109.07	6.30%	7.60%	32.20%	257.25%	6.30%	100.10%	99.97%	4.3%
	2010	203.90	2,056.20	6,309.50	5,180.90	46.00%	21.25	112.13	8.50%	9.92%	32.59%	264.75%	8.56%	99.98%	100.65%	9.3%
	2011	214.00	2,171.00	6,745.40	5,531.00	50.10%	22.03	125.70	7.70%	9.86%	32.18%	243.43%	7.72%	99.93%	100.30%	6.9%
	2012	275.10	2,261.50	7,335.70	5,938.20	48.80%	22.89	126.50	9.40%	12.16%	30.83%	253.14%	9.49%	99.92%	100.99%	8.8%
	2013	292.50	2,370.70	7,848.50	6,131.10	50.00%	23.88	128.25	9.60%	12.34%	30.21%	256.02%	9.54%	99.90%	99.39%	7.0%
	2014	313.30	2,601.70	8,441.50	6,596.20	50.00%	25.02	131.69	9.50%	12.04%	30.82%	255.95%	9.50%	99.90%	99.99%	7.6%
	2015	291.90	2,459.20	8,793.10	6,958.80	52.50%	25.87	141.35	8.00%	11.87%	27.97%	240.68%	7.99%	100.09%	99.87%	4.2%
	2016	346.60	2,562.10	9,506.30	7,305.80	52.10%	26.84	141.79	9.10%	13.53%	26.95%	249.75%	9.11%	99.98%	100.06%	8.1%
	2017	323.90	2,571.00	9,553.80	7,595.70	49.00%	27.50	142.09	8.30%	12.60%	26.91%	256.69%	8.70%	104.99%	104.85%	0.5%
	2021-23	$ 500.00	$ 3,000.00	$ 10,500.00	$ 8,225.00	50.00%	$ 31.60	145.00	11.00%	16.67%	28.57%	255.32%	12.16%	111.42%	110.53%	9.9%
WEC	2008	$ 359.80	$ 4,431.00	$ 8,517.00	$ 7,442.00	44.80%	$ 14.27	233.84	10.70%	8.12%	52.03%	255.46%	10.79%	100.09%	100.86%	
	2009	378.40	4,127.90	9,070.50	7,473.10	47.70%	15.26	233.82	10.60%	9.17%	45.51%	254.46%	10.62%	100.10%	100.14%	6.5%
	2010	455.60	4,202.50	9,601.50	7,764.50	49.00%	16.26	233.77	12.00%	10.84%	43.77%	252.37%	11.97%	99.91%	99.79%	5.9%
	2011	514.00	4,486.40	10,160.00	8,608.00	46.00%	17.20	230.49	12.90%	11.46%	44.16%	256.59%	12.98%	100.12%	100.63%	5.8%
	2012	547.50	4,246.40	10,572.00	8,619.30	48.00%	18.05	229.04	13.20%	12.89%	40.17%	255.53%	13.23%	99.93%	100.25%	4.1%
	2013	578.60	4,519.00	10,907.00	8,626.60	49.10%	18.73	225.96	13.60%	12.80%	41.43%	257.50%	13.66%	99.92%	100.44%	3.2%
	2014	589.50	4,997.10	11,258.00	8,636.50	51.20%	19.60	225.52	13.30%	11.80%	44.39%	254.60%	13.33%	99.96%	100.24%	3.2%
	2015	640.30	5,926.10	19,190.00	17,809.00	48.60%	27.42	315.68	7.40%	10.80%	30.88%	221.72%	7.40%	100.01%	99.97%	70.5%
	2016	940.20	7,472.30	19,916.00	18,118.00	49.30%	28.29	315.62	10.50%	12.58%	37.52%	222.97%	10.53%	99.96%	100.25%	3.8%
	2017	998.20	7,648.50	21,347.00	18,238.00	51.90%	29.98	315.57	10.50%	13.05%	35.83%	225.52%	10.55%	99.95%	100.43%	7.2%
	2021-23	$ 1,320.00	$ 9,000.00	$ 28,800.00	$ 21,300.00	52.50%	$ 35.50	315.60	12.00%	14.67%	31.25%	257.55%	11.80%	100.19%	98.37%	34.9%
XEL	2008	$ 645.70	$ 11,203.00	$ 17,689.00	$ 14,800.00	47.10%	$ 15.35	453.79	9.20%	5.76%	63.33%	253.76%	9.26%	99.93%	100.68%	
	2009	685.50	9,644.30	18,508.00	15,277.00	47.70%	15.92	457.51	9.40%	7.11%	52.11%	253.98%	9.41%	99.95%	100.07%	4.6%
	2010	727.00	10,311.00	20,663.00	17,452.00	46.30%	16.76	482.33	8.90%	7.05%	49.90%	255.72%	9.00%	100.04%	101.09%	11.6%
	2011	841.40	10,655.00	22,353.00	17,331.00	48.90%	17.44	486.49	9.90%	7.90%	47.67%	263.76%	9.93%	100.11%	100.28%	8.2%
	2012	905.20	10,128.00	23,809.00	19,018.00	46.70%	18.19	487.96	10.20%	8.94%	42.54%	268.08%	10.19%	99.94%	99.92%	6.5%
	2013	948.20	10,915.00	26,122.00	20,477.00	46.70%	19.21	497.97	9.90%	8.69%	41.78%	273.16%	9.92%	100.03%	100.16%	9.7%
	2014	1,021.30	11,686.00	28,757.00	21,714.00	47.00%	20.20	505.73	10.00%	8.74%	40.64%	281.78%	10.01%	100.10%	100.07%	10.1%
	2015	1,063.60	11,024.00	31,206.00	23,092.00	45.90%	20.89	507.54	10.00%	9.65%	35.33%	294.42%	10.03%	100.03%	100.35%	8.5%
	2016	1,123.40	11,107.00	32,842.00	25,216.00	43.70%	21.73	507.22	10.20%	10.11%	33.82%	298.04%	10.19%	100.02%	99.95%	5.2%
	2017	1,171.00	11,404.00	34,329.00	25,975.00	44.10%	22.56	507.76	10.20%	10.27%	33.22%	299.69%	10.22%	100.00%	100.22%	4.5%
	2021-23	$ 1,575.00	$ 13,250.00	$ 42,900.00	$ 34,800.00	42.00%	$ 28.00	522.50	10.50%	11.89%	30.89%	293.51%	10.78%	100.10%	102.63%	25.0%

Growth Rate Regression Analysis

Company	Ticker	Median P/E Ratio	Proj. Earnings Growth Rate	Proj. Dividend Growth Rate	Proj. Book Value Growth Rate	BR + SV Sustainable Growth
ALLETE, Inc.	ALE	16.00	4.50%	4.50%	4.00%	4.73%
Alliant Energy Corporation	LNT	15.00	6.50%	6.00%	5.00%	4.45%
Ameren Corporation	AEE	15.00	7.50%	4.50%	4.00%	4.63%
American Electric Power Company, Inc.	AEP	14.00	4.50%	5.00%	4.50%	5.02%
Avangrid, Inc.	AGR	NMF	NMF	NMF	NMF	1.82%
Avista Corporation	AVA	16.00	5.50%	4.00%	3.00%	4.21%
Black Hills Corporation	BKH	19.00	5.00%	6.00%	5.50%	4.00%
CenterPoint Energy, Inc.	CNP	15.00	-0.50%	2.00%	7.50%	5.65%
CMS Energy Corporation	CMS	16.00	8.50%	7.00%	6.50%	7.09%
Consolidated Edison, Inc.	ED	15.00	3.00%	3.50%	3.50%	3.05%
Dominion Energy Inc.	D	19.00	7.00%	8.50%	6.00%	3.69%
DTE Energy Company	DTE	15.00	6.50%	6.50%	5.00%	6.19%
Duke Energy Corporation	DUK	17.00	4.50%	4.50%	1.50%	1.93%
Edison International	EIX	12.00	4.50%	8.00%	3.50%	5.25%
El Paso Electric Company	EE	15.00	4.50%	7.00%	4.00%	3.76%
Entergy Corporation	ETR	12.00	5.00%	2.00%	3.00%	6.27%
Exelon Corporation	EXC	15.00	6.00%	4.50%	5.50%	4.25%
FirstEnergy Corp.	FE	16.00	9.00%	1.50%	Nil	9.64%
Great Plains Energy Inc.	GXP	17.00	NMF	5.50%	-1.00%	0.87%
Hawaiian Electric Industries, Inc.	HE	18.00	3.50%	2.00%	4.00%	4.98%
IDACORP, Inc.	IDA	14.00	3.50%	6.50%	3.50%	3.33%
MGE Energy, Inc.	MGEE	17.00	6.00%	5.00%	7.50%	6.52%
NextEra Energy, Inc.	NEE	16.00	8.50%	9.50%	6.50%	9.50%
Eversource Energy	ES	17.00	6.50%	6.00%	4.00%	4.20%
NorthWestern Corporation	NWE	16.00	3.50%	4.50%	3.50%	3.64%
OGE Energy Corp.	OGE	15.00	2.50%	8.00%	4.00%	2.86%
Otter Tail Corporation	OTTR	24.00	7.00%	3.50%	6.50%	7.65%
PG&E Corporation	PCG	18.00	7.50%	4.50%	5.50%	4.19%
Pinnacle West Capital Corporation	PNW	15.00	5.00%	5.50%	4.00%	4.10%
PNM Resources, Inc.	PNM	18.00	7.50%	7.00%	4.50%	4.75%
Portland General Electric Company	POR	16.00	4.00%	6.00%	3.00%	3.47%
PPL Corporation	PPL	13.00	NMF	3.50%	NMF	6.00%
Public Service Enterprise Group Incorporat	PEG	13.00	2.00%	5.00%	4.50%	3.68%
SCANA Corporation	SCG	14.00	-0.50%	-5.50%	6.00%	4.20%
Sempra Energy	SRE	17.00	8.50%	8.50%	6.00%	5.72%
Southern Company	SO	16.00	4.00%	3.50%	2.50%	3.86%
Vectren Corporation	VVC	17.00	6.50%	6.50%	5.50%	6.08%
Westar Energy, Inc.	WR	16.00	7.50%	4.00%	3.00%	5.28%
WEC Energy Group, Inc.	WEC	16.00	6.00%	6.00%	3.50%	4.08%
Xcel Energy Inc.	XEL	15.00	5.50%	5.50%	4.50%	4.64%
Atmos Energy Corporation	ATO	16.00	7.50%	7.00%	5.50%	9.73%
Chesapeake Utilities Corporation	CPK	15.00	6.50%	5.00%	6.50%	14.70%
Spire Inc	SR	16.00	9.00%	4.00%	5.50%	4.92%
New Jersey Resources Corporation	NJR	16.00	9.50%	4.00%	9.00%	7.54%
NiSource Inc.	NI	20.00	18.00%	9.00%	3.00%	4.69%
Northwest Natural Gas Company	NWN	19.00	7.00%	2.50%	1.00%	4.53%
ONE Gas, Inc.	OGS	NMF	8.00%	12.00%	3.00%	4.56%
South Jersey Industries, Inc.	SJI	18.00	6.50%	4.00%	4.50%	5.63%
Southwest Gas Corporation	SWX	17.00	7.50%	7.00%	8.50%	6.41%
UGI Corporation	UGI	16.00	6.50%	3.00%	8.00%	7.36%
WGL Holdings, Inc.	WGL	16.00	6.50%	2.50%	8.00%	5.24%

Notes:
Source: Value Line Reports as of May 18, 2018

Growth Rate Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.450138243
R Square	0.202624438
Adjusted R Square	0.184904981
Standard Error	1.844283523
Observations	47

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	38.8952698	38.8952698	11.4351381	0.00149978
Residual	45	153.062177	3.40138171		
Total	46	191.957447			

	Coefficients	*Standard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	14.22610868	0.62904275	22.6154879	3.2767E-26	12.9591515	15.4930658
Proj.EarningsGrowth Rate	32.2184998	9.52762393	3.38158811	0.00149978	13.0288802	51.4081194

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.134124446
R Square	0.017989367
Adjusted R Square	-0.00290448
Standard Error	2.05688844
Observations	49

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.64266327	3.64266327	0.8609889	0.35820298
Residual	47	198.847133	4.23079006		
Total	48	202.489796			

	Coefficients	*Standard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	15.547673	0.66579676	23.3519806	1.6599E-27	14.2082627	16.8870833
Proj.Dividend Growth Rate	11.15565627	12.0225433	0.92789487	0.35820298	-13.030581	35.3418936

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.062630349
R Square	0.003922561
Adjusted R Square	-0.01821249
Standard Error	2.064959846
Observations	47

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.75563541	0.75563541	0.17721035	0.67578548
Residual	45	191.882662	4.26405917		
Total	46	192.638298			

	Coefficients	*Standard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	15.86256615	0.79045279	20.0676958	4.4126E-24	14.2705125	17.4546198
Proj. Book Value Growth Rate	6.498602771	15.437446	0.42096359	0.67578548	-24.59401	37.5912152

Growth Rate Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.012000494
R Square	0.000144012
Adjusted R Square	-0.02112952
Standard Error	2.075493456
Observations	49

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.02916093	0.02916093	0.00676953	0.93477571
Residual	47	202.460635	4.30767308		
Total	48	202.489796			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	16.0444588	0.76007068	21.1091668	1.274E-25	14.5153938	17.5735238
BR + SV Sustainable Growth	1.09277344	13.2816121	0.08227717	0.93477571	-25.626384	27.8119305

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.495055221
R Square	0.245079672
Adjusted R Square	0.171428908
Standard Error	1.879903144
Observations	46

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	4	47.0393136	11.7598284	3.32759173	0.01891766
Residual	41	144.895469	3.53403583		
Total	45	191.934783			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	14.51669504	1.05243986	13.7933725	5.3857E-17	12.3912496	16.6421405
Proj.EarningsGrowth Rate	40.77125626	11.7786665	3.46144924	0.0012693	16.9837566	64.5587559
Proj.Dividend Growth Rate	-11.6695198	12.9855642	-0.8986533	0.37408487	-37.894399	14.5553591
Proj. Book Value Growth Rate	14.13711249	18.4164927	0.76763327	0.4471036	-23.055749	51.3299741
BR + SV Sustainable Growth	-16.4959221	16.0819971	-1.0257384	0.31102887	-48.974174	15.9823299

Summary of Issues Raised in Earnings Conference Calls

Company	Date	Issue	Profit Margin	Asset Turnover	Equity Multiplier
OGE Energy Corp.	5/3/2018	Regional economic conditions	√	√	
		Effect of tax reform	√		
		Expected operating expense leve	√		
		Planned capital investments		√	√
		Rate structure	√	√	
		Rate proceedings	√	√	
		Customer and load growth		√	
PNM Resources	4/27/2018	Regional economic conditions	√	√	
		Load growth and customer usage	√	√	
		Effect of tax reform	√		
		Planned equity issuances	√		√
		Rate structure	√	√	
		Rate proceedings	√	√	
		Planned capital investments		√	√
ALLETE, Inc.	5/2/2018	Planned capital investments		√	√
		Effect of tax reform	√		
		Rate proceedings	√	√	
Hawaiian Electric	5/10/2018	Capital investment plans		√	√
		Rate structures	√	√	
		Regional economic conditions	√	√	
		Effect of tax reform	√		
Black Hills Corp.	5/4/2018	Effect of tax reform	√		
		Rate proceedings	√	√	
		Capital investment plans		√	√
		Equity issuances	√		√

Forecast Provider	Forecast Year		
	2011	2012	2013
Zacks	1.44%	-1.70%	-6.04%
Value Line	7.39%	7.25%	4.66%
	2011 – 2013 (Average)		
Zacks	-2.02%		
Value Line	6.17%		
Combined	2.17%		

Earnings Surprise - Schedule ALR-9

American Electric Power - AEP	3.13	2.98	3.18			
	3.59	3.82	4.06			
	3.71	3.99	4.29			
Zacks	-12.85%	-21.94%	-21.64%	0	0	0
Value Line	-15.73%	-25.37%	-25.92%	0	0	0
Edison International - EIX	3.23	4.55	3.78			
	4.74	5.16	5.61			
	4.26	4.47	4.70			
Zacks	-31.85%	-11.76%	-32.62%	0	0	0
Value Line	-24.18%	1.72%	-19.52%	0	1	0
Entergy Corp - ETR	7.55	6.02	4.96			
	8.59	9.58	10.68			
	8.25	9.08	9.99			
Zacks	-12.15%	-37.18%	-53.58%	0	0	0
Value Line	-8.51%	-33.68%	-50.33%	0	0	0
IDACORP, Inc. - IDA	3.36	3.37	3.64			
	2.60	2.75	2.92			
	2.31	2.36	2.41			
Zacks	29.41%	22.45%	24.77%	1	1	1
Value Line	45.24%	42.81%	51.23%	1	1	1
Eversource Energy - ES*	2.22	1.89	2.49			
	2.48	2.72	3.00			
	2.58	2.87	3.21			
Zacks	-10.33%	-30.60%	-16.88%	0	0	0
Value Line	-13.90%	-34.26%	-22.32%	0	0	0
Pinnacle West - PNW	2.99	3.50	3.66			
	2.58	2.75	2.93			
	2.25	2.29	2.34			
Zacks	16.10%	27.37%	24.83%	1	1	1
Value Line	32.90%	52.52%	56.37%	1	1	1
Portland General - POR	1.95	1.87	1.77			
	1.68	1.79	1.90			
	1.70	1.82	1.95			
Zacks	16.14%	4.58%	-7.06%	1	1	0
Value Line	14.52%	2.63%	-9.21%	1	1	0
Weststar - WR	1.79	2.15	2.27			
	1.53	1.61	1.70			
	1.39	1.42	1.45			
Zacks	17.03%	33.49%	33.85%	1	1	1
Value Line	28.76%	51.62%	56.95%	1	1	1
Zacks	1.44%	-1.70%	-6.04%			
Value Line	7.39%	7.25%	4.66%			
Zacks	-2.02%			Earnings > Forecast		23
Value Line	6.17%			Count		48
Overall	2.17%					

VVIX, 2007 - 2018

Year	Average	Maximum	Minimum	Range
2018	106.26	180.61	88.12	92.49
2017	90.01	135.32	75.64	59.68
2016	92.80	125.13	76.17	48.96
2015	94.82	168.75	73.18	95.57
2014	83.01	138.60	61.76	76.84
2013	80.64	111.43	62.71	48.72
2012	94.84	117.44	78.42	39.02
2011	92.94	134.63	75.94	58.69
2010	88.36	145.12	64.87	80.25
2009	79.78	104.02	64.95	39.07
2008	81.85	134.87	59.74	75.13
2007	87.68	142.99	63.52	79.47
Overall	88.55	180.61	59.74	120.87

Regression of Credit Spread on Capacity Utilization

Regression Statistics			
	Multiple R	0.436	
	R Square	0.190	
	Adjusted R Square	0.187	
	Standard Error	0.627	
	Observations	219	
	Coefficients	*Standard Error*	*t Stat*
Intercept	9.588	1.058	9.061
TCU	-0.098	0.014	-7.142

Regression of Credit Spread on Capacity Utilization and Time

Regression Statistics			
	Multiple R	0.509	
	R Square	0.259	
	Adjusted R Square	0.253	
	Standard Error	0.601	
	Observations	219	
	Coefficients	*Standard Error*	*t Stat*
Intercept	14.291	1.458	9.799
Time	0.000	0.000	-4.488
TCU	-0.109	0.013	-8.155

Regression of VIX on Capacity Utilization

Regression Statistics			
Multiple R		0.437	
R Square		0.191	
Adjusted R Square		0.185	
Standard Error		8.011	
Observations		135	
	Coefficients	*Standard Error*	*t Stat*
Intercept	111.881	16.418	6.815
TCU	-1.205	0.215	-5.605

Regression of VIX on Capacity Utilization and Time

Regression Statistics			
Multiple R		0.661	
R Square		0.437	
Adjusted R Square		0.428	
Standard Error		6.709	
Observations		135	
	Coefficients	*Standard Error*	*t Stat*
Intercept	257.477	23.595	10.912
Time	-0.004	0.000	-7.593
TCU	-1.117	0.180	-6.193

Proxy Group Cost Recovery and Revenue Stabilization Mechanisms

Company	Ticker	State	Fuel/ Purchased Power	Decoupling (F/P) [1]	New Capital Investment [2]	Energy Efficiency [3]	Renewables & RPS [4]	Environmental [5]	Other [6]
ALLETE (Minnesota Power)	ALE	MN	✓			✓	✓	✓	✓
Superior Water, Light and Power Company	ALE	WI	✓						
Black Hills Colorado Electric Utility Company, LP	BKH	CO	✓		✓	✓	✓		✓
Black Hills Power, Inc.	BKH	SD	✓	P	✓	✓		✓	✓
Black Hills Power, Inc.	BKH	WY	✓						
Cheyenne Light, Fuel and Power Company	BKH	WY	✓	P		✓			✓
El Paso Electric Company	EE	NM	✓			✓			✓
El Paso Electric Company	EE	TX	✓			✓			✓
Hawaii Electric Light Company, Inc.	HE	HI	✓	F	✓	✓	✓		✓
Hawaiian Electric Company, Inc.	HE	HI	✓	F	✓	✓	✓		✓
Maui Electric Company, Limited	HE	HI	✓	F	✓	✓	✓		✓
Idaho Power Co.	IDA	ID	✓	F		✓			✓
Idaho Power Co.	IDA	OR	✓			✓	✓	✓	✓
Interstate Power and Light Company	LNT	IA	✓			✓	✓	✓	✓
Wisconsin Power and Light Company	LNT	WI	✓						
NorthWestern Corporation	NWE	MT	✓			✓			✓
NorthWestern Corporation	NWE	SD	✓			✓		✓	✓
Oklahoma Gas and Electric Company	OGE	AR	✓	P	✓	✓		✓	✓
Oklahoma Gas and Electric Company	OGE	OK	✓	P		✓			✓
Public Service Company of New Mexico	PNM	NM	✓			✓	✓		✓
Texas New Mexico Power	PNM	TX	NA		✓	✓			✓
Otter Tail Power Company	OTTR	ND	✓		✓		✓	✓	✓

Notes:

Note: Texas T&D-only utilities do not have provider of last resort obligations, therefore fuel/power cost recovery is not applicable. A mechanism may cover one or more cost categories; therefore, designations may not indicate separate mechanisms for each category.

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

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

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

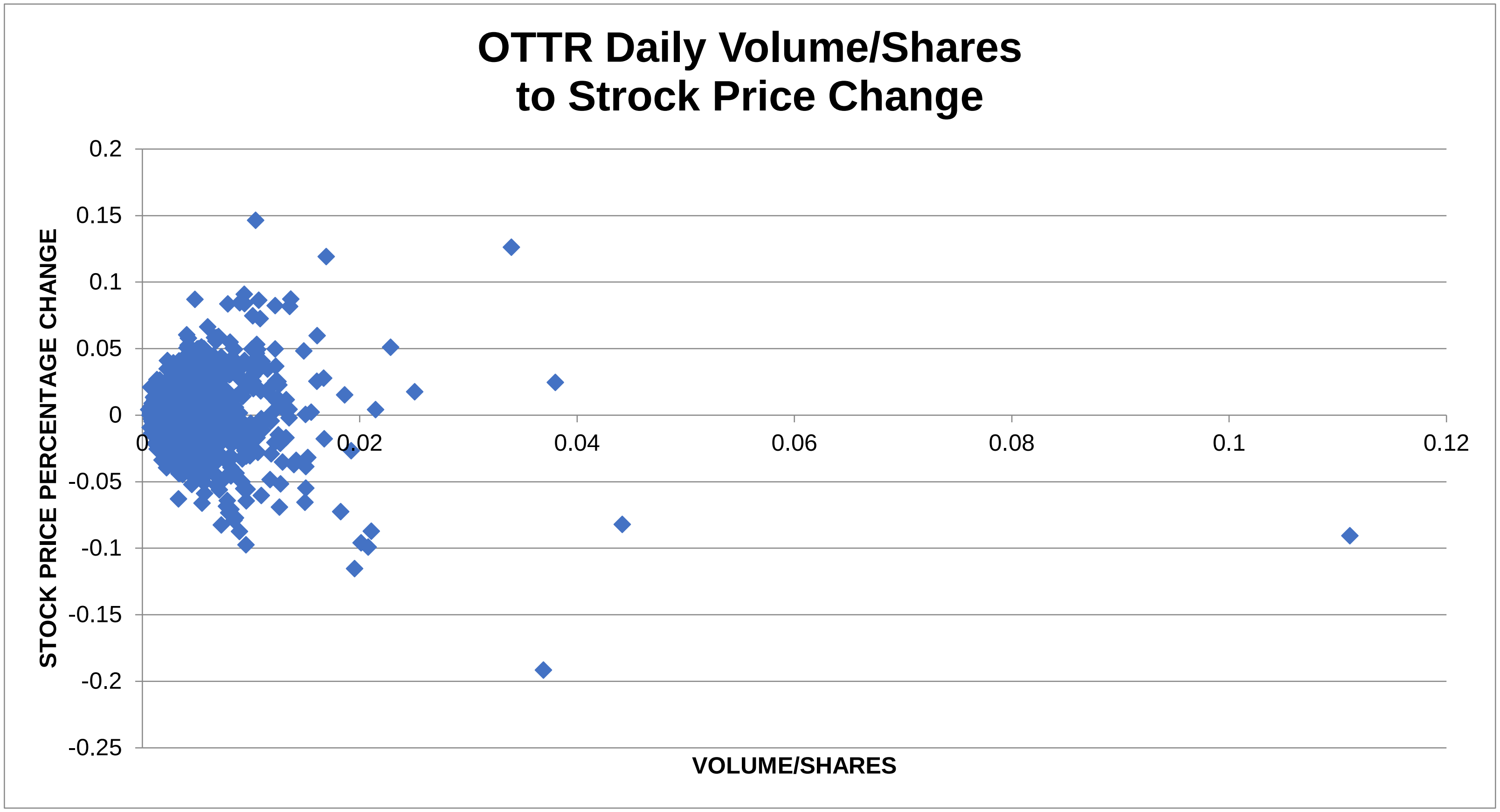
[4] Recovers costs associated with renewable energy projects, Distributed Energy Resources, REC purchases, net metering, RPS expense, and renewable PPAs.

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

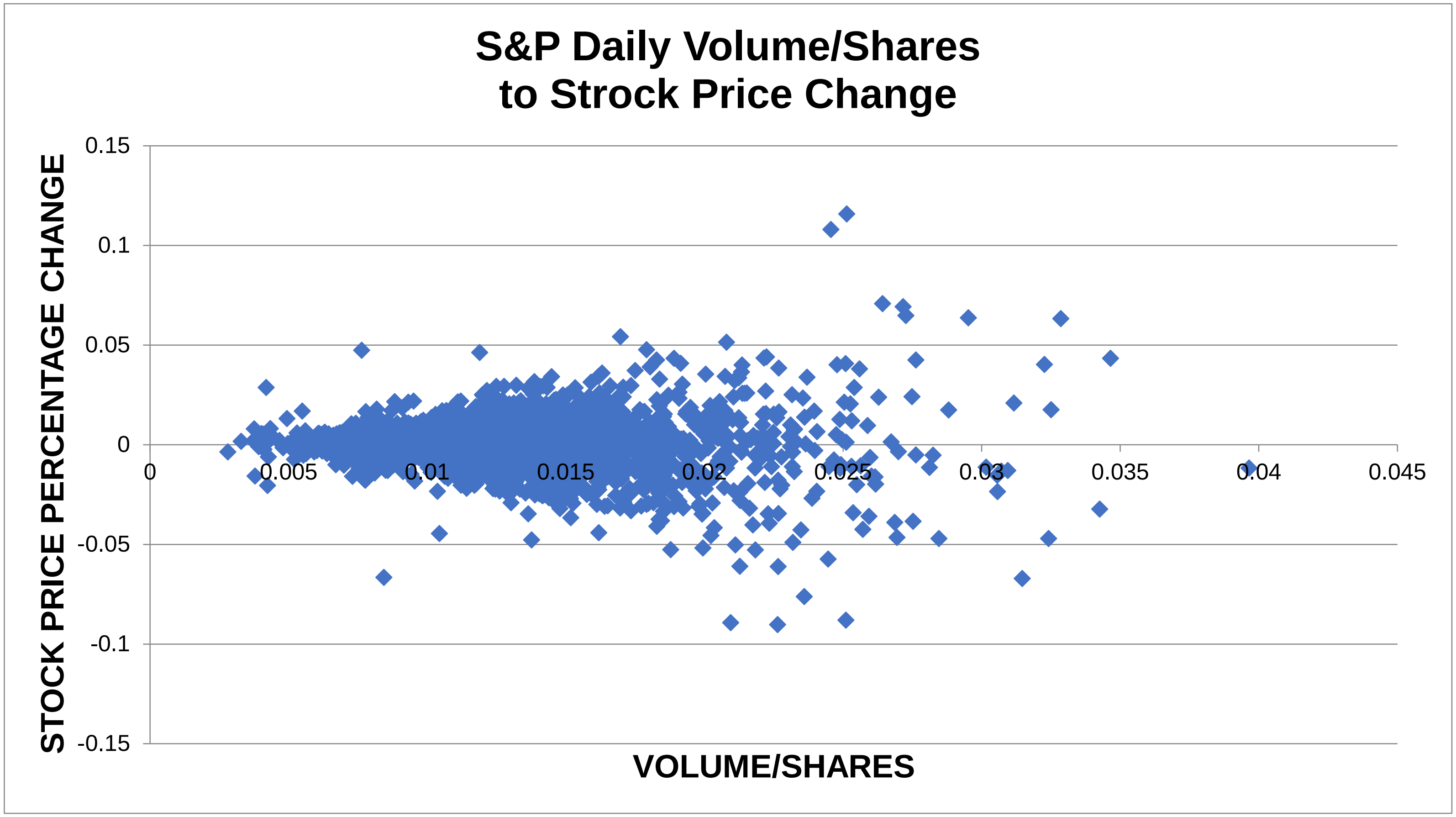
[6] Pension expenses, bad debt costs, storm costs, vegetation management, RTO/Transmission Expense, capacity costs, transmission costs, government & franchise fees and taxes, economic development, and low income programs.

Sources: Company SEC Form 10-Ks; Operating company tariffs; Regulatory Research Associates, *Adjustment Clauses: A State-by-State Overview, September 12, 2017* .

SCHEDULE ALR 14, Page 1



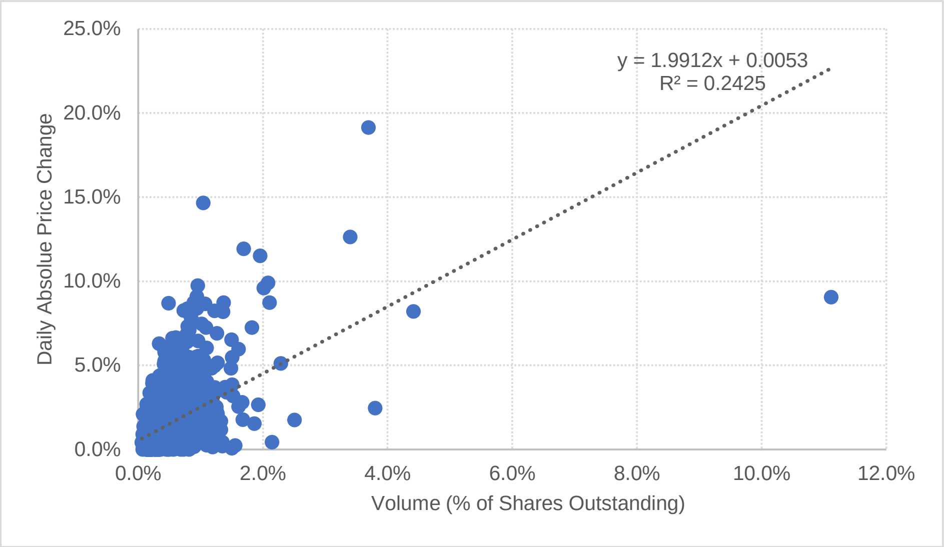
SCHEDULE ALR 14, Page 2



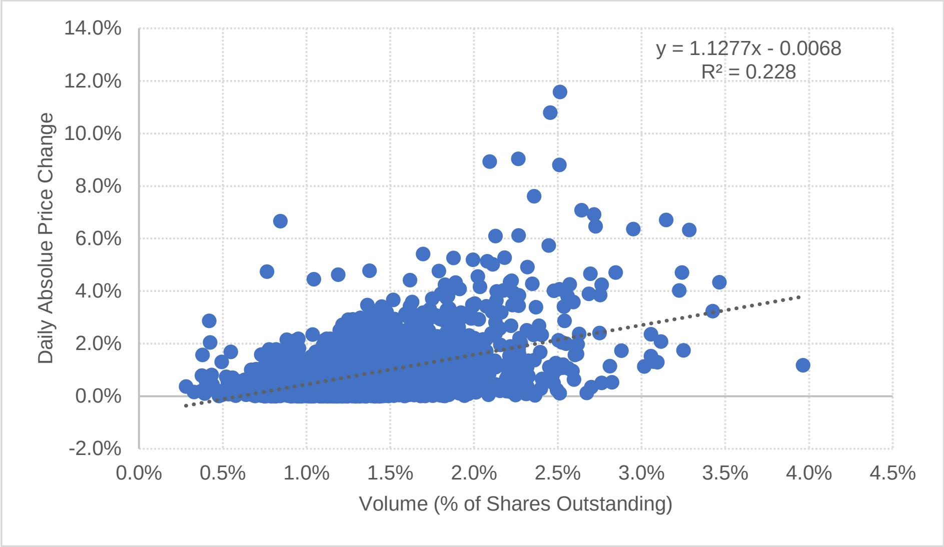
OTTR	Range	11.054%
	Maximum	11.111%
	Minimum	0.057%
	Average	0.348%
	Standard Deviation	0.331%
	Coefficient of Variation	95.14%
	Kurtosis	377.67
	Skew	13.67

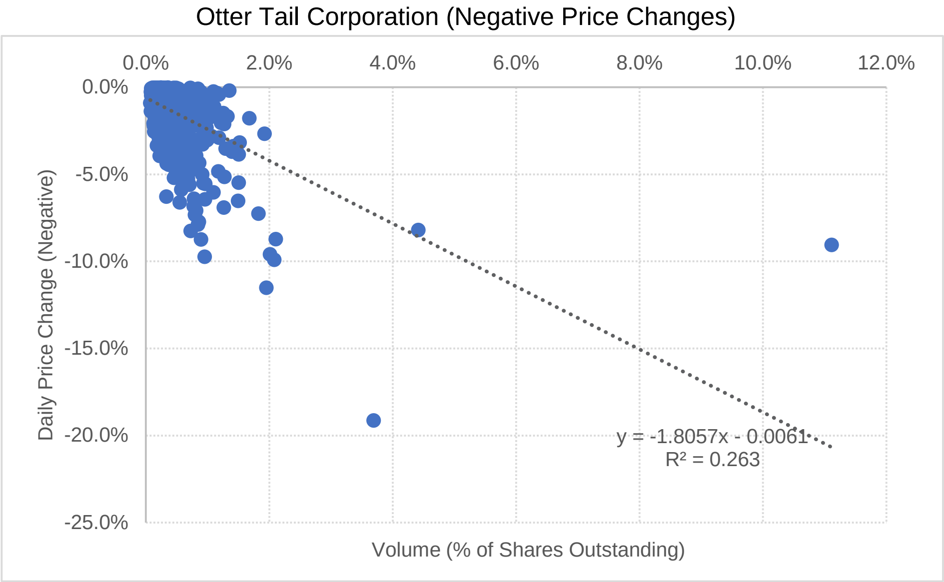
S&P 500	Range	3.684%
	Maximum	3.964%
	Minimum	0.280%
	Average	1.288%
	Standard Deviation	0.400%
	Coefficient of Variation	31.10%
	Kurtosis	3.66
	Skew	1.40

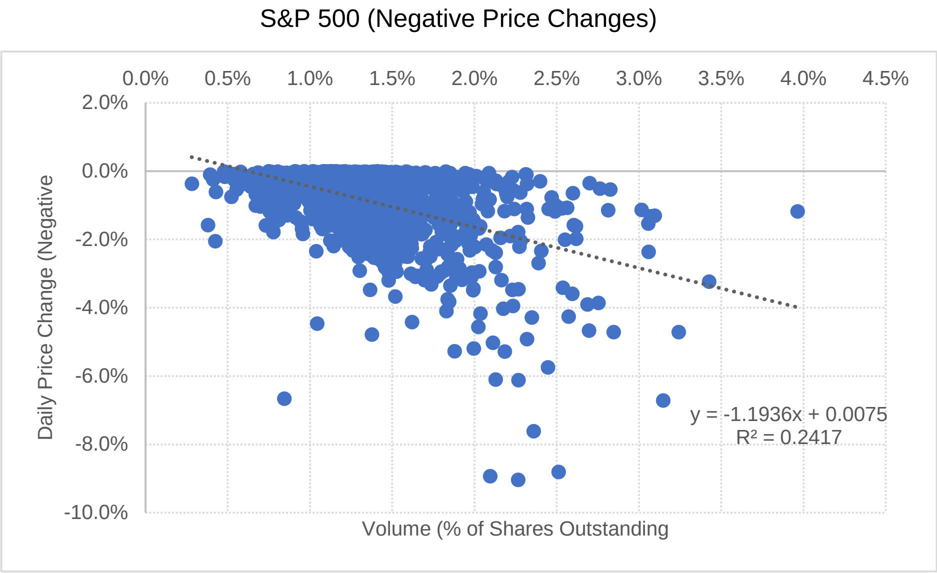
Otter Tail Corporation



S&P 500




Otter Tail Corporation (Negative Price Changes)
0.0%
2.0%
4.0%
6.0%
8.0%
10.0%
12.0%
0.0%
-5.0%
-10.0%
-15.0%
-20.0%
-25.0%
Daily Price Change (Negative)
y = -1.8057x - 0.0061
R² = 0.263
Volume (% of Shares Outstanding)


S&P 500 (Negative Price Changes)
0.0%
0.5%
1.0%
1.5%
2.0%
2.5%
3.0%
3.5%
4.0%
4.5%
2.0%
0.0%
-2.0%
-4.0%
-6.0%
-8.0%
-10.0%
Daily Price Change (Negative
y = -1.1936x + 0.0075
R² = 0.2417
Volume (% of Shares Outstanding

Recently Authorized ROEs

										Vertically Integrated	
State	Company	Case Identification	Service	Case Type	Date	Return on Equity (%)	Vertically Integrated	Distribution	RRA Rank	Average / 1 and higher	Average / 2 and Lower
New York	Consolidated Edison Co. of NY	C-13-E-0030	Electric	Distribution	2/20/2014	9.20		9.20	Average / 1		
North Dakota	Northern States Power Co. - MN	C-PU-12-813	Electric	Vertically Integrated	2/26/2014	9.75	9.75		Average / 1	9.75	
New Hampshire	Liberty Utilities Granite St	D-DE-13-063	Electric	Distribution	3/17/2014	9.55		9.55	Average / 3		
District of Columbia	Potomac Electric Power Co.	FC-1103-2013-E	Electric	Distribution	3/26/2014	9.40		9.40	Below Average / 3		
New Mexico	Southwestern Public Service Co	C-12-00350-UT	Electric	Vertically Integrated	3/26/2014	9.96	9.96		Below Average / 2		9.96
Delaware	Delmarva Power & Light Co.	D-13-115	Electric	Distribution	4/2/2014	9.70		9.70	Average / 3		
Texas	Entergy Texas Inc.	D-41791	Electric	Vertically Integrated	5/16/2014	9.80	9.80		Average / 3		9.80
Massachusetts	Fitchburg Gas & Electric Light	DPU 13-90	Electric	Distribution	5/30/2014	9.70		9.70	Average / 2		
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-119 (Elec)	Electric	Vertically Integrated	6/6/2014	10.40	10.40		Above Average / 2	10.40	
Maine	Emera Maine	D-2013-00443	Electric	Distribution	6/30/2014	9.55		9.55	Average / 2		
Maryland	Potomac Electric Power Co.	C-9336	Electric	Distribution	7/2/2014	9.62		9.62	Below Average / 3		
Louisiana	Entergy Louisiana LLC	D-UD-13-01	Electric	Vertically Integrated	7/10/2014	9.95	9.95		Average / 2		9.95
New Jersey	Rockland Electric Company	D-ER-13111135	Electric	Distribution	7/23/2014	9.75		9.75	Below Average / 2		
Maine	Central Maine Power Co.	D-2013-00168	Electric	Distribution	7/29/2014	9.45		9.45	Average / 2		
Wyoming	Cheyenne Light Fuel Power Co.	D-20003-132-ER-13	Electric	Vertically Integrated	7/31/2014	9.90	9.90		Average / 3		9.90
New Jersey	Atlantic City Electric Co.	D-ER-14030245	Electric	Distribution	8/20/2014	9.75		9.75	Below Average / 2		
Vermont	Green Mountain Power Corp.	D-8190, 8191	Electric	Vertically Integrated	8/25/2014	9.60	9.60		Average / 2		9.60
Utah	PacifiCorp	D-13-035-184	Electric	Vertically Integrated	8/29/2014	9.80	9.80		Average / 1	9.80	
Texas	Lone Star Transmission LLC	D-42469	Electric	Transmission	9/11/2014	9.60			Average / 3		
Florida	Florida Public Utilities Co.	D-140025-EI	Electric	Vertically Integrated	9/15/2014	10.25	10.25		Above Average / 2	10.25	
Nevada	Nevada Power Co.	D-14-05004	Electric	Vertically Integrated	10/9/2014	9.80	9.80		Average / 2		9.80
Illinois	MidAmerican Energy Co.	D-14-0066	Electric	Vertically Integrated	11/6/2014	9.56	9.56		Average / 2		9.56
Wisconsin	Wisconsin Public Service Corp.	D-6690-UR-123 (Elec)	Electric	Vertically Integrated	11/6/2014	10.20	10.20		Above Average / 2	10.20	
Wisconsin	Wisconsin Electric Power Co.	D-05-UR-107 (WEP-Elec)	Electric	Vertically Integrated	11/14/2014	10.20	10.20		Above Average / 2	10.20	
Virginia	Appalachian Power Co.	C-PUE-2014-00026	Electric	Vertically Integrated	11/26/2014	9.70	9.70		Above Average / 2	9.70	
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-120 (Elec)	Electric	Vertically Integrated	11/26/2014	10.20	10.20		Above Average / 2	10.20	
Oregon	Portland General Electric Co.	D-UE-283	Electric	Vertically Integrated	12/4/2014	9.68	9.68		Average / 2		9.68
Illinois	Ameren Illinois	D-14-0317	Electric	Distribution	12/10/2014	9.25		9.25	Average / 2		
Illinois	Commonwealth Edison Co.	D-14-0312	Electric	Distribution	12/10/2014	9.25		9.25	Average / 2		
Mississippi	Entergy Mississippi Inc.	D-2014-UN-0132	Electric	Vertically Integrated	12/11/2014	10.07	10.07		Average / 1	10.07	
Wisconsin	Northern States Power Co - WI	D-4220-UR-120 (Elec)	Electric	Vertically Integrated	12/12/2014	10.20	10.20		Above Average / 2	10.20	
Connecticut	Connecticut Light & Power Co.	D-14-05-06	Electric	Distribution	12/17/2014	9.17		9.17	Below Average / 2		
Colorado	Black Hills Colorado Electric	D-14AL-0393E	Electric	Vertically Integrated	12/18/2014	9.83	9.83		Average / 2		9.83
Wyoming	PacifiCorp	D-20000-446-ER-14	Electric	Vertically Integrated	1/23/2015	9.50	9.50		Average / 3		9.50
Colorado	Public Service Co. of CO	D-14AL-0660E	Electric	Vertically Integrated	2/24/2015	9.83	9.83		Average / 2		9.83
New Jersey	Jersey Cntrl Power & Light Co.	D-ER-12111052	Electric	Distribution	3/18/2015	9.75		9.75	Below Average / 2		
Washington	PacifiCorp	D-UE-140762	Electric	Vertically Integrated	3/25/2015	9.50	9.50		Average / 3		9.50
Minnesota	Northern States Power Co. - MN	D-E-002/GR-13-868	Electric	Vertically Integrated	3/26/2015	9.72	9.72		Average / 2		9.72
Michigan	Wisconsin Public Service Corp.	C-U-17669	Electric	Vertically Integrated	4/23/2015	10.20	10.20		Above Average / 3	10.20	
Missouri	Union Electric Co.	C-ER-2014-0258	Electric	Vertically Integrated	4/29/2015	9.53	9.53		Below Average / 1		9.53
Texas	Cross Texas Transmission	D-43950	Electric	Transmission	5/1/2015	9.60			Average / 3		
West Virginia	Appalachian Power Co.	C-14-1152-E-42T	Electric	Vertically Integrated	5/26/2015	9.75	9.75		Below Average / 1		9.75
New York	Central Hudson Gas & Electric	C-14-E-0318	Electric	Distribution	6/17/2015	9.00		9.00	Average / 1		
New York	Consolidated Edison Co. of NY	C-15-E-0050/C-13-E-0030 (Ext)	Electric	Distribution	6/17/2015	9.00		9.00	Average / 1		
Missouri	Kansas City Power & Light	C-ER-2014-0370	Electric	Vertically Integrated	9/2/2015	9.50	9.50		Below Average / 1		9.50
Kansas	Kansas City Power & Light	D-15-KCPE-116-RTS	Electric	Vertically Integrated	9/10/2015	9.30	9.30		Below Average / 1		9.30
New York	Orange & Rockland Utlts Inc.	C-14-E-0493	Electric	Distribution	10/15/2015	9.00		9.00	Average / 1		
Michigan	Consumers Energy Co.	C-U-17735	Electric	Vertically Integrated	11/19/2015	10.30	10.30		Above Average / 3	10.30	
Wisconsin	Wisconsin Public Service Corp.	D-6690-UR-124 (Elec)	Electric	Vertically Integrated	11/19/2015	10.00	10.00		Above Average / 2	10.00	
Wisconsin	Northern States Power Co - WI	D-4220-UR-121 (Elec)	Electric	Vertically Integrated	12/3/2015	10.00	10.00		Above Average / 2	10.00	
Illinois	Ameren Illinois	D-15-0305	Electric	Distribution	12/9/2015	9.14		9.14	Average / 2		
Illinois	Commonwealth Edison Co.	D-15-0287	Electric	Distribution	12/9/2015	9.14		9.14	Average / 2		
Michigan	DTE Electric Co.	C-U-17767	Electric	Vertically Integrated	12/11/2015	10.30	10.30		Above Average / 3	10.30	
Oregon	Portland General Electric Co.	D-UE-294	Electric	Vertically Integrated	12/15/2015	9.60	9.60		Average / 2		9.60
Texas	Southwestern Public Service Co	D-43695	Electric	Vertically Integrated	12/17/2015	9.70	9.70		Average / 3		9.70
Idaho	Avista Corp.	C-AVU-E-15-05	Electric	Vertically Integrated	12/18/2015	9.50	9.50		Average / 2		9.50
Wyoming	PacifiCorp	D-20000-469-ER-15	Electric	Vertically Integrated	12/30/2015	9.50	9.50		Average / 3		9.50
Washington	Avista Corp.	D-UE-150204	Electric	Vertically Integrated	1/6/2016	9.50	9.50		Average / 3		9.50
Arkansas	Entergy Arkansas Inc.	D-15-015-U	Electric	Vertically Integrated	2/23/2016	9.75	9.75		Average / 1	9.75	
Indiana	Indianapolis Power & Light Co.	Ca-44576	Electric	Vertically Integrated	3/16/2016	9.85	9.85		Average / 1	9.85	
Massachusetts	Fitchburg Gas & Electric Light	DPU 15-80	Electric	Distribution	4/29/2016	9.80		9.80	Average / 2		
Maryland	Baltimore Gas and Electric Co.	C-9406 (elec)	Electric	Distribution	6/3/2016	9.75		9.75	Below Average / 3		
New Mexico	El Paso Electric Co.	C-15-00127-UT	Electric	Vertically Integrated	6/8/2016	9.48	9.48		Below Average / 2		9.48
New York	NY State Electric & Gas Corp.	C-15-E-0283	Electric	Distribution	6/15/2016	9.00		9.00	Average / 1		
New York	Rochester Gas & Electric Corp.	C-15-E-0285	Electric	Distribution	6/15/2016	9.00		9.00	Average / 1		
Indiana	Northern IN Public Svc Co.	Ca-44688	Electric	Vertically Integrated	7/18/2016	9.98	9.98		Average / 1	9.98	
Tennessee	Kingsport Power Company	D-16-00001	Electric	Vertically Integrated	8/9/2016	9.85	9.85		Above Average / 3	9.85	
Arizona	UNS Electric Inc.	D-E-04204A-15-0142	Electric	Vertically Integrated	8/18/2016	9.50	9.50		Average / 3		9.50
New Jersey	Atlantic City Electric Co.	D-ER-16030252	Electric	Distribution	8/24/2016	9.75		9.75	Below Average / 2		
Washington	PacifiCorp	D-UE-152253	Electric	Vertically Integrated	9/1/2016	9.50	9.50		Average / 3		9.50
Michigan	Upper Peninsula Power Co.	C-U-17895	Electric	Vertically Integrated	9/8/2016	10.00	10.00		Above Average / 3	10.00	
New Mexico	Public Service Co. of NM	C-15-00261-UT	Electric	Vertically Integrated	9/28/2016	9.58	9.58		Below Average / 2		9.58
Massachusetts	Massachusetts Electric Co.	DPU-15-155	Electric	Distribution	9/30/2016	9.90		9.90	Average / 2		
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-121 (Elec)	Electric	Vertically Integrated	11/9/2016	9.80	9.80		Above Average / 2	9.80	
Oklahoma	Public Service Co. of OK	Ca-PUD201500208	Electric	Vertically Integrated	11/10/2016	9.50	9.50		Average / 3		9.50
Maryland	Potomac Electric Power Co.	C-9418	Electric	Distribution	11/15/2016	9.55		9.55	Below Average / 3		

State	Company	Case Identification	Service	Case Type	Date	Return on Equity (%)	Vertically Integrated	Distribution	RRA Rank	Vertically Integrated Average / 1 and higher	Vertically Integrated Average / 2 and Lower
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-120 (Elec)	Electric	Vertically Integrated	11/18/2016	10.00	10.00		Above Average / 2	10.00	
Florida	Florida Power & Light Co.	D-160021-EI	Electric	Vertically Integrated	11/29/2016	10.55	10.55		Above Average / 2	10.55	
California	Liberty Utilities CalPeco Ele	A-15-05-008	Electric	Vertically Integrated	12/1/2016	10.00	10.00		Above Average / 3	10.00	
Illinois	Ameren Illinois	D-16-0262	Electric	Distribution	12/6/2016	8.64		8.64	Average / 2		
Illinois	Commonwealth Edison Co.	D-16-0259	Electric	Distribution	12/6/2016	8.64		8.64	Average / 2		
South Carolina	Duke Energy Progress LLC	D-2016-227-E	Electric	Vertically Integrated	12/7/2016	10.10	10.10		Average / 2		10.10
New Jersey	Jersey Cntrl Power & Light Co.	D-ER-16040383	Electric	Distribution	12/12/2016	9.60		9.60	Below Average / 2		
Connecticut	United Illuminating Co.	D-16-06-04	Electric	Distribution	12/14/2016	9.10		9.10	Below Average / 2		
Colorado	Black Hills Colorado Electric	D-16AL-0326E	Electric	Vertically Integrated	12/19/2016	9.37	9.37		Average / 2		9.37
Maine	Emera Maine	D-2015-00360	Electric	Distribution	12/19/2016	9.00		9.00	Average / 2		
North Carolina	Virginia Electric & Power Co.	D-E-22, Sub 532	Electric	Vertically Integrated	12/22/2016	9.90	9.90		Average / 1	9.90	
Nevada	Sierra Pacific Power Co.	D-16-06006	Electric	Vertically Integrated	12/22/2016	9.60	9.60		Average / 2		9.60
Idaho	Avista Corp.	C-AVU-E-16-03	Electric	Vertically Integrated	12/28/2016	9.50	9.50		Average / 2		9.50
Wyoming	MDU Resources Group Inc.	D-20004-117-ER-16	Electric	Vertically Integrated	1/18/2017	9.45	9.45		Average / 3		9.45
New York	Consolidated Edison Co. of NY	C-16-E-0060	Electric	Distribution	1/24/2017	9.00		9.00	Average / 1		
Michigan	DTE Electric Co.	C-U-18014	Electric	Vertically Integrated	1/31/2017	10.10	10.10		Above Average / 3	10.10	
Maryland	Delmarva Power & Light Co.	C-9424	Electric	Distribution	2/15/2017	9.60		9.60	Below Average / 3		
New Jersey	Rockland Electric Company	D-ER-16050428	Electric	Distribution	2/22/2017	9.60		9.60	Below Average / 2		
Arizona	Tucson Electric Power Co.	D-E-01933A-15-0322	Electric	Vertically Integrated	2/24/2017	9.75	9.75		Average / 3		9.75
Michigan	Consumers Energy Co.	C-U-17990	Electric	Vertically Integrated	2/28/2017	10.10	10.10		Above Average / 3	10.10	
Minnesota	Otter Tail Power Co.	D-E-017/GR-15-1033	Electric	Vertically Integrated	3/2/2017	9.41	9.41		Average / 2		9.41
Oklahoma	Oklahoma Gas and Electric Co.	Ca-PUD201500273	Electric	Vertically Integrated	3/20/2017	9.50	9.50		Average / 3		9.50
Florida	Gulf Power Co.	D-160186-EI	Electric	Vertically Integrated	4/4/2017	10.25	10.25		Above Average / 2	10.25	
New Hampshire	Liberty Utilities Granite St	D-DE-16-383	Electric	Distribution	4/12/2017	9.40		9.40	Average / 3		
New Hampshire	Unitil Energy Systems Inc.	D-DE-16-384	Electric	Distribution	4/20/2017	9.50		9.50	Average / 3		
Missouri	Kansas City Power & Light	C-ER-2016-0285	Electric	Vertically Integrated	5/3/2017	9.50	9.50		Below Average / 1		9.50
Minnesota	Northern States Power Co. - MN	D-E-002/GR-15-826	Electric	Vertically Integrated	5/11/2017	9.20	9.20		Average / 2		9.20
Arkansas	Oklahoma Gas and Electric Co.	D-16-052-U	Electric	Vertically Integrated	5/18/2017	9.50	9.50		Average / 1	9.50	
Delaware	Delmarva Power & Light Co.	D-16-0649	Electric	Distribution	5/23/2017	9.70		9.70	Average / 3		
North Dakota	MDU Resources Group Inc.	C-PU-16-666	Electric	Vertically Integrated	6/16/2017	9.65	9.65		Average / 1	9.65	
Kentucky	Kentucky Utilities Co.	C-2016-00370	Electric	Vertically Integrated	6/22/2017	9.70	9.70		Average / 1	9.70	
Kentucky	Louisville Gas & Electric Co.	C-2016-00371 (elec.)	Electric	Vertically Integrated	6/22/2017	9.70	9.70		Average / 1	9.70	
District of Columbia	Potomac Electric Power Co.	FC-1139	Electric	Distribution	7/24/2017	9.50		9.50	Below Average / 3		
Arizona	Arizona Public Service Co.	D-E-01345A-16-0036	Electric	Vertically Integrated	8/15/2017	10.00	10.00		Average / 3		10.00
New Jersey	Atlantic City Electric Co.	D-ER-17030308	Electric	Distribution	9/22/2017	9.60		9.60	Below Average / 2		
Texas	Oncor Electric Delivery Co.	D-46957	Electric	Distribution	9/28/2017	9.80		9.80	Average / 3		
Maryland	Potomac Electric Power Co.	C-9443	Electric	Distribution	10/20/2017	9.50		9.50	Below Average / 3		
California	Pacific Gas and Electric Co.	Advise No. 3887-G/5148-E	Electric	Vertically Integrated	10/26/2017	10.25	10.25		Above Average / 3	10.25	
California	San Diego Gas & Electric Co.	Advice No. 3120-E	Electric	Vertically Integrated	10/26/2017	10.20	10.20		Above Average / 3	10.20	
California	Southern California Edison Co.	Advice No. 3665-E	Electric	Vertically Integrated	10/26/2017	10.30	10.30		Above Average / 3	10.30	
Florida	Tampa Electric Co.	D-20170210-EI	Electric	Vertically Integrated	11/6/2017	10.25	10.25		Above Average / 2	10.25	
Massachusetts	NSTAR Electric Co.	DPU 17-05 (NSTAR)	Electric	Distribution	11/30/2017	10.00		10.00	Average / 2		
Massachusetts	Western Massachusetts Electric	DPU 17-05 (WMECO)	Electric	Distribution	11/30/2017	10.00		10.00	Average / 2		
Washington	Puget Sound Energy Inc.	D-UE-170033	Electric	Vertically Integrated	12/5/2017	9.50	9.50		Average / 3		9.50
Illinois	Ameren Illinois	D-17-0197	Electric	Distribution	12/6/2017	8.40		8.40	Average / 2		
Illinois	Commonwealth Edison Co.	D-17-0196	Electric	Distribution	12/6/2017	8.40		8.40	Average / 2		
Wisconsin	Northern States Power Co - WI	D-4220-UR-123 (Elec)	Electric	Vertically Integrated	12/7/2017	9.80	9.80		Above Average / 2	9.80	
Texas	Southwestern Electric Power Co	D-46449	Electric	Vertically Integrated	12/14/2017	9.60	9.60		Average / 3		9.60
Texas	El Paso Electric Co.	D-46831	Electric	Vertically Integrated	12/14/2017	9.65	9.65		Average / 3		9.65
Oregon	Portland General Electric Co.	D-UE-319	Electric	Vertically Integrated	12/18/2017	9.50	9.50		Average / 2		9.50
New Mexico	Public Service Co. of NM	C-16-00276-UT	Electric	Vertically Integrated	12/20/2017	9.58	9.58		Below Average / 2		9.58
Vermont	Green Mountain Power Corp.	C-17-3112-INV	Electric	Vertically Integrated	12/21/2017	9.10	9.10		Average / 2		9.10
Idaho	Avista Corp.	D-AVU-E-17-01	Electric	Vertically Integrated	12/28/2017	9.50	9.50		Average / 2		9.50
Nevada	Nevada Power Co.	D-17-06003	Electric	Vertically Integrated	12/29/2017	9.51	9.51		Average / 2		9.51
Kentucky	Kentucky Power Co.	C-2017-00179	Electric	Vertically Integrated	1/18/2018	9.70	9.70		Average / 1	9.70	
Oklahoma	Public Service Co. of OK	Ca-PUD201700151	Electric	Vertically Integrated	1/31/2018	9.30	9.30		Average / 3		9.30
Iowa	Interstate Power & Light Co.	D-RPU-2017-0001	Electric	Vertically Integrated	2/2/2018	9.98	9.98		Average / 1	9.98	
North Carolina	Duke Energy Progress LLC	D-E-2, Sub 1142	Electric	Vertically Integrated	2/23/2018	9.90	9.90		Average / 1	9.90	
Minnesota	ALLETE (Minnesota Power)	D-E-015/GR-16-664	Electric	Vertically Integrated	3/12/2018	9.25	9.25		Average / 2		9.25
New York	Niagara Mohawk Power Corp.	C-17-E-0238	Electric	Distribution	3/15/2018	9.00		9.00	Average / 1		
Michigan	Consumers Energy Co.	C-U-18322	Electric	Vertically Integrated	3/29/2018	10.00	10.00		Above Average / 3	10.00	
Michigan	Indiana Michigan Power Co.	C-U-18370	Electric	Vertically Integrated	4/12/2018	9.90	9.90		Above Average / 3	9.90	
Kentucky	Duke Energy Kentucky Inc.	C-2017-00321	Electric	Vertically Integrated	4/13/2018	9.73	9.73		Average / 1	9.73	
Connecticut	Connecticut Light & Power Co.	D-17-10-46	Electric	Distribution	4/18/2018	9.25		9.25	Below Average / 2		
Michigan	DTE Electric Co.	C-U-18255	Electric	Vertically Integrated	4/18/2018	10.00	10.00		Above Average / 3	10.00	
Washington	Avista Corp.	D-UE-170485	Electric	Vertically Integrated	4/26/2018	9.50	9.50		Average / 3		9.50
					Total Cases	142	93	47		44	49
					Mean	9.64	9.78	9.37		10.01	9.58
					Median	9.64	9.75	9.50		10.00	9.50
					Maximum	10.55	10.55	10.00		10.55	10.10
					Minimum	8.40	9.10	8.40		9.50	9.10

Source: SNL Financial