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# MISSOURI PUBLIC SERVICE COMMISSION 

FILE NO. ER-2014-0258

REBUTTAL TESTIMONY
OF

ROBERT B. HEVERT

ON
BEHALF OF

## UNION ELECTRIC COMPANY <br> d/b/a Ameren Missouri

## Framingham, Massachusetts January 2015

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## I. INTRODUCTION

Q. Please state your name, affiliation and business address.
A. My name is Robert B. Hevert. I am Managing Partner of Sussex Economic Advisors, LLC. My business address is 161 Worcester Road, Suite 503, Framingham, Massachusetts 01701.
Q. Are you the same Robert B. Hevert who submitted direct testimony in this proceeding?
A. Yes, I filed Direct Testimony on behalf of Union Electric Company d/b/a Ameren Missouri. I use the terms "Ameren Missouri" and the "Company" to refer to Union Electric Company.

## Q. What is the purpose of your Rebuttal Testimony?

A. On behalf of Ameren Missouri, my Rebuttal Testimony responds to the Revenue Requirement Cost of Service Report (the "Report") submitted in this proceeding by the Missouri Public Service Commission Utility Services Division ("Staff") as it relates to the recommended Return on Equity ("ROE") for the Company. Mr. David Murray presents Staff's ROE recommendation. I also respond to the direct testimony of Mr. Michael P. Gorman on behalf of the Missouri Industrial Energy Consumers ("MIEC"), Mr. Lance Schafer on behalf of the Missouri Office of the Public Counsel ("OPC" or "Public Counsel"), and Mr. Steve W. Chriss on behalf of Wal-Mart Stores

East, LP and Sam's East, Inc. (together with Mr. Murray, the "Opposing ROE Witnesses") as each witness' direct testimony relates to the Company's ROE. In addition, I provide updated calculations and analytical results regarding the Company's Cost of Equity. ${ }^{1}$ My analyses and conclusions are supported by the data presented in Schedules RBH-R7 through RBH-R28, which have been prepared by me or under my direction.

## II. SUMMARY AND OVERVIEW OF TESTIMONY

Q. Please provide an overview of the key issues and recommendations addressed in your Rebuttal Testimony.
A. In my Direct Testimony, I recommended a Return on Equity ("ROE") of 10.40 percent, based on a range of 10.20 percent to 10.60 percent. As my Direct Testimony discussed, my ROE recommendation, and the analytical results on which it is based, considers a variety of factors including the specific risks faced by Ameren Missouri. Because the application of financial models and interpretation of their results is often the subject of differences among analysts in regulatory proceedings, I believe that it is important to review and consider a variety of data points - doing so enables us to put in context both quantitative analyses and the associated recommendations. As such, I have updated many of the analyses contained in my Direct Testimony, and provided several new analyses in response to issues raised by the Opposing ROE Witnesses.

[^0]Q. Please now summarize your response to the Opposing ROE Witnesses.
A. As discussed throughout the balance of my Rebuttal Testimony, my updated analyses support an ROE range of 10.20 percent to 10.60 percent and my recommendation of 10.40 percent. The Opposing ROE Witnesses' recommendations, however, fall within the rather narrow range of 9.01 percent to 9.30 percent. The fact that their recommendations are so tightly clustered does not mean that the Opposing ROE Witnesses' methods are appropriate or that their conclusions are reasonable. In this case, there are two very recent and highly relevant benchmarks that provide a more comprehensive perspective: the range of recently authorized returns for other vertically integrated electric utility companies (see Chart 1, below); ${ }^{2}$ and the ROEs of 10.00 percent and 10.80 percent recently authorized by the Commission for natural gas utility companies. ${ }^{3}$ Taken from that perspective, the Opposing ROE Witnesses' recommendations, individually and as a group, are far below the returns that investors reasonably would expect for a vertically integrated electric utility such as Ameren Missouri.

[^1]
## Chart 1: Authorized ROEs for Vertically Integrated

Electric Utilities (Recent Twelve Months) ${ }^{4}$


Although my Rebuttal Testimony necessarily responds to the Opposing ROE Witnesses' models and methods, I also address a very practical question: Is there any reasonable basis to conclude that the return required by equity investors has fallen by 50 to 79 basis points since the Commission authorized the Company's prevailing ROE of 9.80 percent in December 2012? Since the Company's currently authorized ROE was adopted by the Commission, the average authorized return for vertically integrated electric utilities (nationally) has been 9.96 percent; over the past twelve months, the average authorized return has been 9.96 percent. That is, even though the Company's currently authorized return is 16 basis points below the average return authorized over the past twelve months, the Opposing ROE Witnesses would have the Commission reduce

[^2]Ameren Missouri's ROE even further below the returns available to other vertically integrated electric utilities. In fact, the Opposing ROE Witnesses would reduce the Company's return below the 9.78 percent ROE authorized (on average) for natural gas utilities during calendar year $2014 .{ }^{5}$

As the Commission has pointed out, because no one financial model is any more "correct" than any other method in all circumstances, it is important to consider the results of a variety of methods. ${ }^{6}$ That observation is especially important when market conditions are such that financial models produce results that are widely divergent, and highly sensitive to inputs and assumptions. For example, the market prices used to calculate the dividend yield portion of the Constant Growth Discounted Cash Flow model were taken from a period during which utilities in general, and the proxy companies in particular, traded at unusually high, and likely unsustainable, levels.

In fact, during Opposing ROE Witnesses’ study period, utility Price/Earnings ("P/E") ratios exceeded their long-term average, to the point that they were greater than the market P/E ratio (as measured by the Standard \& Poor’s ("S\&P") 500). ${ }^{7}$ As would be expected, utilities (including the proxy group companies), generally have traded below the market P/E ratio; there is no reason to believe that the currently elevated P/E ratios will remain in perpetuity. Yet, several of the Opposing ROE Witnesses give considerable weight to the Constant Growth Discounted Cash Flow model, which assumes that the current P/E ratio will not change, ever. The inconsistency between model assumptions

[^3]and market data should cause us to view those results with great caution rather than giving them undue weight in developing ROE recommendations. ${ }^{8}$

Although it is important to understand and vet the assumptions and inputs used to arrive at ROE estimates, the basic question of whether or not ROE recommendations are reasonable also may be considered from a more fundamental perspective: What has changed so significantly over the past two years that equity investors now require a dramatically lower rate of return? As discussed throughout my Rebuttal Testimony, neither market conditions in general, nor the Company's situation in particular supports the proposition that the required Return on Equity has fallen, as the Opposing ROE Witnesses recommend.

As to the Opposing ROE Witnesses’ position that the current interest rate environment requires a significant decrease in the Company's Cost of Equity, they fail to consider that recent interest rates have been somewhat above the levels that prevailed in when the Commission authorized the Company’s 9.80 percent ROE in December 2012. From July through December 2012 the average 30-year Treasury yield was 2.80 percent; ${ }^{9}$ during the same period in 2014, the average 30 -year Treasury yield was 3.12 percent, an increase of 32 basis points. Looking forward, consensus forecasts of the 30-year Treasury yield indicate a 100 basis point increase over the coming year. ${ }^{10}$ That is, whether interest rates are viewed in an historical or prospective context, they simply do

[^4]not support a decrease in the Company's ROE, let alone a decrease of nearly 80 basis points.

In summary, my Rebuttal Testimony demonstrates that neither market conditions in general, nor the Company's situation in particular can justify an ROE that is 80 basis points, or more, below the prevailing level of returns authorized for vertically integrated electric utilities, as the Opposing ROE Witnesses suggest. My recommended range (i.e., 10.20 percent to 10.60 percent) is consistent with recently authorized returns for vertically electric utilities with risks similar to those faced by Ameren Missouri, and appropriately reflects current and expected market conditions. The Opposing ROE Witnesses' recommendations, on the other hand, fail to meet that basic test of reasonableness, are incompatible with prevailing returns available to equity investors in utilities with commensurate risk, and would cause investors to question the stability, predictability, and supportiveness of the regulatory environment in Missouri.

## Q. How is the remainder of your Rebuttal Testimony organized?

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

- Section III - Provides my Response to the Staff Cost if Service Report as it Relates to the Return on Equity;
- Section IV - Provides my response to the Direct Testimony of Mr. Schafer;
- Section V - Provides my response to the Direct Testimony of Mr. Gorman;
- Section VI - Provides my response to the Direct Testimony of Mr. Chriss;
- Section VII - Provides my updated analyses; and
- Section VIII - Summarizes my conclusions and recommendations.


## III. RESPONSE TO THE STAFF COST OF SERVICE REPORT AS IT <br> RELATES TO THE RETURN ON EQUITY

Q. Please summarize Staff's ROE recommendation.
A. Staff, through its witness Mr. Murray, states that the Company's Cost of Equity is within a range of 9.00 percent to 9.50 percent, with a midpoint of 9.25 percent. In large measure, Staff's recommendation is based on Mr. Murray's view that the Cost of Equity has fallen by 25 to 75 basis points since the Company's last rate case. ${ }^{11}$ That is, because the Commission found the Company's currently authorized ROE to be fair and reasonable, and since he believes that utility commissions commonly authorize ROEs higher than the Cost of Equity, Mr. Murray's recommended ROE is based on his assessment of the relative change in the Cost of Equity since Ameren Missouri's last rate case; ${ }^{12}$ it is not consistent with the results of the various models that he uses to estimate the current Cost of Equity.

To estimate the change in the Cost of Equity since the Company's last rate case, Mr. Murray compares his 8.00 percent to 8.75 percent Multi-Stage DCF results from the Company's last rate case (after excluding two companies that are currently party to a merger or acquisition) to his updated 7.38 percent to 8.15 percent range of results for the same proxy companies. ${ }^{13}$ Mr. Murray then estimates a 50 to 55 basis point decrease by performing a similar calculation using backdated results for his current proxy group

[^5](excluding Ameren and PNM Resources). ${ }^{14}$ Based on those observations, Mr. Murray recommends a range of 9.00 percent to 9.50 percent, with an ROE point estimate of 9.25 percent. ${ }^{15}$
Q. Please summarize Staff's ROE analyses.
A. Although his recommendation is disconnected from the results of his ROE analyses, Mr. Murray estimates the Company's Cost of Equity using the Multi-Stage DCF model, which he tests for reasonableness by reference to his CAPM, and "rule of thumb" risk premium results. ${ }^{16}$ The DCF model and CAPM were applied to a "broad" proxy group of fourteen companies as well as a "refined" proxy group of twelve companies. ${ }^{17}$ With regard to the DCF model, Mr. Murray indicates he relies on his MultiStage DCF results ( 7.60 percent to 8.72 percent), because he considers his Constant Growth DCF results ( 7.40 percent to 8.40 percent) to be less reliable due to the "nonsustainable" nature of certain growth rate projections. ${ }^{18}$ Mr. Murray's CAPM results range from 6.53 percent to 7.76 percent, ${ }^{19}$ and his "rule of thumb" approach suggests an ROE of 8.13 percent to 8.76 percent. ${ }^{20}$ Mr. Murray also reviews recently authorized electric utility ROEs (which are significantly above the highest of his ROE estimates), although he does not reconcile his analyses or recommendation with that data. ${ }^{21}$

Mr. Murray considers a variety of growth rates for his Constant Growth DCF analyses, including historical and projected Earnings per Share, Dividends per Share, and

[^6]Book Value per Share. ${ }^{22}$ Mr. Murray observes that average analysts’ projected EPS growth rate is 5.74 percent for his broad proxy group and 5.60 percent for his refined proxy group, a rate that Staff considers unsustainable. ${ }^{23}$ Mr. Murray suggests that observed historical growth rates indicate the constant growth rate for the electric utility industry should not be much more than 3.00 percent, and notes that electric utility earnings growth rates were less than half of achieved Gross Domestic Product ("GDP") growth over Staff's study period (1968 through 1999). ${ }^{24}$ On that basis, Mr. Murray selects 3.50 percent to 4.50 percent as a reasonable growth rate for the Constant Growth DCF model. ${ }^{25}$ Because he concludes that the growth rates for certain companies in his proxy group are not sustainable, Mr. Murray relies on the Multi-Stage DCF model.

As to the Multi-Stage DCF model, Staff suggests that its analysis of historical growth rates indicates a 3.00 percent to 4.00 percent perpetual growth rate for electric utilities in general (2.00 percent to 3.00 percent for Missouri's utilities). ${ }^{26}$ Staff further notes that a 2.00 percent stock growth rate "is about what investors would expect," and argues that electric utilities’ financial growth will be limited because electricity demand growth will be lower than it has been historically. ${ }^{27}$ Recognizing that some utility Cost of Equity witnesses have accepted the assumption that utilities’ per share growth can grow at the same rate as nominal GDP, Staff also develops a set of Multi-Stage DCF analyses based on a long-term growth estimate of 4.40 percent. ${ }^{28}$

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Ibid., at 31-32.
Ibid., at 32-33.
Ibid., at 33, }35\mathrm{ and Schedule 13-4.
Ibid., at 33.
Ibid., at }37
Ibid., at 37-38.
Ibid., at 40-41.
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Mr. Murray tests the reasonableness of his DCF results by reference to his CAPM results, along with other data points. Mr. Murray's CAPM analysis produces mean results of 6.53 percent to 6.60 percent (based on the geometric average market risk premium) and 7.66 percent to 7.76 percent (based on the arithmetic average market risk premium). ${ }^{29}$ Mr. Murray also applies a "rule of thumb" estimate based on data that are not specific to the electric utility industry, but establishes the Cost of Equity as 300 to 400 basis points over the cost of long-term debt for A-rated and Baa-rated public utilities. Based on his "rule of thumb" approach, Mr. Murray derives Cost of Equity estimates ranging from 7.13 percent to 8.76 percent. ${ }^{30}$

## Q. Are Mr. Murray's analytical results and recommendation

 reasonable?A. No, they are not. ROE estimates as low as 6.53 percent have no practical meaning, and highlight the inherent risk of not questioning the applicability of models and assumptions in the current market environment. For example, Mr. Murray reviewed recently authorized returns for vertically integrated utilities, which averaged 9.94 percent through November 14, 2014 (9.96 percent in calendar year 2013). ${ }^{31}$ All of Mr. Murray’s ROE estimates, however, fall well below that benchmark: all 28 of Mr. Murray’s CAPM estimates fall substantially below 9.94 percent, and 53 of his 56 Multi-Stage DCF results are below 9.94 percent. ${ }^{32}$

[^7]As another point of reference, over the twelve months ending November 14, 2014, authorized ROEs for vertically integrated electric utilities have ranged from 9.50 percent to 10.95 percent, with a mean authorized ROE of 9.96 percent. ${ }^{33}$ Even Mr. Murray's 9.25 percent ROE recommendation, which is substantially higher than his estimate of the Company's Cost of Equity, is below the range of ROE recently authorized for vertically integrated electric utilities.
Q. What are the specific areas in which you disagree with Mr. Murray's analyses and recommendations?
A. There are several areas in which I disagree with Mr. Murray, including: (1) Mr. Murray's conclusion that Ameren Missouri's Cost of Equity has declined since the Company's last rate case; (2) the composition of Mr. Murray’s proxy groups; (3) the range of growth rates Mr. Murray relies on his Constant Growth DCF analyses; (4) the application and structure of Mr. Murray's Multi-Stage DCF Model; (5) Mr. Murray’s application of the CAPM and the relevance of those results in estimating the Cost of Equity; (6) Mr. Murray’s "rule of thumb" analysis; and (7) Mr. Murray’s failure to consider the effect of his recommendation on Ameren Missouri’s financial integrity and ability to attract capital. I discuss each of those issues in turn, below.

[^8]
## A. Staff's Recommendation to Lower the Company's ROE by 25 to 75 Basis Points

Q. Please briefly summarize the analyses Mr. Murray relies on to determine the Company's Cost of Equity has declined by 25 to 75 basis points. ${ }^{34}$
A. Mr. Murray updated the Multi-Stage DCF analyses he performed on his proxy group from Ameren Missouri's 2012 rate case (excluding CNL and WEC due to merger activity) to "gain insight" as to the direction and magnitude of the change in the Cost of Equity. ${ }^{35}$ Based on that analysis, Mr. Murray concludes that the Cost of Equity has declined from a range of 8.00 percent to 8.75 percent, to a range of 7.38 percent to 8.15 percent (that is, by approximately 60 basis points). ${ }^{36}$

Mr. Murray then "tests" his estimate of the decrease in the Cost of Equity by performing backdated Multi-Stage DCF analyses on the proxy groups used in the current proceeding (excluding Ameren Corporation, and PNM Resources due to earlier "financial difficulties"). ${ }^{37}$ Mr. Murray suggests that his backdated results indicate that the Cost of Equity has declined from a range of 8.16 percent to 8.84 percent to a range of 7.60 percent to 8.36 percent (approximately 50 to 55 basis points). ${ }^{38}$ Lastly, Mr. Murray notes that his "rule of thumb" approach, which adds 3.00 percent to 4.00 percent to the yield on "A" and "Baa" rated long-term utility bonds suggests that the Cost of Equity has declined by 75 basis points. ${ }^{39}$

Based on those analyses, Mr. Murray concludes the Cost of Equity has declined by as much as 75 basis points since the Company's prevailing ROE ( 9.80 percent) was

[^9]authorized and recommends the Commission allow an 9.25 percent ROE, which is the midpoint of his 9.00 percent to 9.50 percent recommended range.

## Q. Do you have any concerns with Mr. Murray's analysis and

## conclusion?

A. Yes, I do. It is important to remember that all models used to estimate the Cost of Equity are subject to limiting assumptions or other methodological constraints. ${ }^{40}$ Strict adherence to any single approach, or the results of any single approach, can result in misleading conclusions. A reasonable ROE estimate therefore considers capital market conditions and weighs the individual and collective results of alternate methodologies. ${ }^{41}$ To that point, Brigham and Ehrhardt discuss the estimation of required return in Financial Management: Theory and Practice, and note:

Three methods typically are used: (1) the Capital Asset Pricing Model (CAPM), (2) the discounted cash flow (DCF) method, and (3) the bond-yield-plus-risk-premium approach. These methods are not mutually exclusive. When faced with the task of estimating a company's cost of equity, we generally use all three methods and then choose among them on the basis of our confidence in the input data available for the specific case at hand. ${ }^{42}$

While Mr. Murray focuses on the decline in the results of his Multi-Stage DCF analyses and infers from that data a decline in the Cost of Equity. A similar comparison using his CAPM analyses, however, would indicate that the Cost of Equity actually has increased by at least 60 basis points (see Schedule RBH-R14). In fact, all three

[^10]components of Mr. Murray’s CAPM analyses (the risk-free rate, Beta coefficient and Market Risk Premium ("MRP")) have remained relatively constant or have increased. ${ }^{43}$

Moreover, applying the Bond Yield Plus Risk Premium model presented in Schedule RBH-6 using the three-month average 30-year Treasury yields reported by Mr. Murray in the prior case and the current proceeding ( 3.13 percent and 3.17 percent, respectively) would indicate the Cost of Equity is essentially unchanged, with results increasing from 10.12 percent to 10.13 percent. That comparison provides a more reasonable estimate of the change in the Company's Cost of Equity than Mr. Murray's "rule of thumb" because it accounts for the inverse relationship between the equity risk premium and interest rates, and does not misinterpret changes in credit spreads as changes in the Cost of Equity. ${ }^{44}$
Q. Has there been a downward trend in authorized ROEs since the

## Commission's order in the Company's last rate case?

A. No, it does not appear so. As shown in Chart 2 (below), there is no discernible trend in the level of authorized ROEs for vertically integrated electric utilities since December 2012.

[^11]Chart 2: Authorized ROEs for Vertically Integrated Electric Utilities: December 12, 2012 - November, 14, 2014


If anything, Ameren Missouri's authorized ROE is on the low end of current market requirements for integrated electric utilities. Regardless of Mr. Murray's conclusions regarding the direction of his Multi-Stage DCF model results, the Hope and Bluefield standards, as Mr. Murray notes, require a return that will allow the Company to earn a return similar to returns earned by companies with similar risks. Taken from that perspective alone, Mr. Murray's recommendation to lower the Company's authorized ROE is unreasonable.
Q. Are there reasons to question whether the Multi-Stage DCF model currently produces results that are a reliable indicator of investors required return on equity?
A. Yes, there are. As discussed above, the utility industry's P/E ratio currently is well above its historical average, both on an absolute basis and relative to the broader market. However, there are several indicators suggesting that the industry's

Rebuttal Testimony of Robert B. Hevert
currently elevated $\mathrm{P} / \mathrm{E}$ ratio may not be sustainable. For example, Value Line expects a decline in stock price for 10 of the 14 companies in Mr. Murray's broad proxy group, with a median projected price decline of 3.78 percent over the coming three to five years, even as the median projected annual growth in earnings is 5.25 percent over the same period (see Schedule RBH-R15). ${ }^{45}$ Similarly, Morningstar assigned the utility industry a price to fair value estimate of 1.09 as of mid-November 2014, which indicates they believe utility stock prices in general are nearly 10.00 percent above their intrinsic value. ${ }^{46}$

In addition, as shown in Chart 3 (below), short interest in the Utilities Select Sector Spider ETF (ticker: XLU) is currently elevated, indicating that at least some investors may not believe that the current valuation levels are sustainable.

Chart 3: Short Interest in Utilities Select Spider ETF: November 14, 2009 - November, 14, $2014{ }^{47}$


[^12]Rebuttal Testimony of
Robert B. Hevert
B. Proxy Group Composition
Q. Please summarize the differences between your proxy group and the one developed by Mr. Murray.
A. While there is significant overlap in the fourteen companies in my revised proxy group and the fourteen companies in Staff's broad proxy group, there are also significant differences. Table 1 (below) provides a summary of the various companies included by Staff and me in this case in our respective proxy groups.

Table 1: Hevert and Murray Proxy Groups

| Company | Ticker | Hevert Original Proxy Group | Hevert Revised Proxy Group | Murray <br> "Broad" Proxy Group [8] |
| :---: | :---: | :---: | :---: | :---: |
| Alliant Energy Corp. | LNT | [1] | [1] | $\checkmark$ |
| Ameren Corp. | AEE | [1], [2] | [1], [2] | $\checkmark$ |
| American Electric Power Co., Inc. | AEP | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Cleco Corp. | CNL | $\checkmark$ | [3] | [4] |
| CMS Energy Corporation | CMS | [1] | [1] | $\checkmark$ |
| DTE Energy Corporation | DTE | [1] | [1] | $\checkmark$ |
| Duke Energy Corporation | DUK | $\checkmark$ | $\checkmark$ | [5] |
| Empire District Electric Company | EDE | $\checkmark$ | $\checkmark$ | [4] |
| Great Plains Energy Inc. | GXP | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Hawaiian Electric Industries, Inc. | HE | $\checkmark$ | $\checkmark$ | [6] |
| IDACORP, Inc. | IDA | $\checkmark$ | $\checkmark$ | [4] |
| NextEra Energy, Inc. | NEE | $\checkmark$ | $\checkmark$ | [6] |
| Northeast Utilities | NU | $\checkmark$ | $\sqrt{ }$ | [7] |
| OGE Energy Corp. | OGE | [3] | [3] | $\checkmark$ |
| Otter Tail Corp. | OTTR | $\checkmark$ | $\checkmark$ | [5] |
| Pinnacle West Capital Corp. | PNW | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| PNM Resources, Inc. | PNM | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Portland General Electric Co. | POR | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Southern Company | SO | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| TECO Energy, Inc. | TE | [1], [3] | [1] | $\checkmark$ |
| Westar Energy, Inc. | WR | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Xcel Energy Inc. | XEL | [1] | [1] | $\checkmark$ |
|  |  |  |  |  |
| $\sqrt{ }$ Included in proxy group |  |  |  |  |
| [1] Removed for having less than an average of $90.00 \%$ of regulated net income from electric operations over prior 3 years |  |  |  |  |
| [2] Removed because company is the parent company of Ameren Missouri |  |  |  |  |
| [3] Removed because company is party to a merger or other significant transaction |  |  |  |  |
| [4] Less than two analysts providing long-term growth estimates within 90 days of analysis date |  |  |  |  |
| [5] Mr. Murray reports less than $80.00 \%$ of income from regulated utility operations |  |  |  |  |
| [6] Not reported as an electric utility by Edison Electric Institute |  |  |  |  |
| [7] Less than $25.00 \%$ of electric plant is from generation |  |  |  |  |
| [8] See Appendix 2 to Staff Revenue Requirement Cost of Service Report, Schedule 7 |  |  |  |  |

Q. Please explain why you exclude Cleco Corporation ("CNL") from your updated analyses.
A. On October 17, 2014 an investor group led by Macquarie Group Limited agreed to acquire the outstanding shares of CNL for approximately $\$ 3.40$ billion. ${ }^{48}$ CNL is excluded from my updated analyses group because it no longer passes the screening criterion that eliminates companies that are party to a significant transaction. ${ }^{49}$ I refer to the proxy group from my Direct Testimony as the "Original Proxy Group" and the updated proxy group excluding CNL as the "Revised Proxy Group."
Q. Please briefly summarize Mr. Murray's proxy group selection process.
A. Mr. Murray starts with the group of companies classified by SNL Financial as power companies and applies a series of screening criteria, as follows: (1) publicly-traded stock; (2) followed by EEI and classified by EEI as a regulated utility; (3) at least 50.00 percent of plant is from electric utility operations; (4) at least 25.00 percent of electric plant is from generation; (5) at least 80.00 percent of income is from regulated utility operations over the past three years; (6) no reduced dividends since 2011; (7) at least an investment grade credit rating; (8) at least two equity analysts providing long-term growth projections in the last 90 days; and (9) no significant merger or acquisition announced recently. ${ }^{50}$ Mr. Murray's "broad proxy group" consists of the fourteen companies that pass the above screening criteria.

[^13]Mr. Murray then develops a "refined proxy group" by eliminating two companies whose regulated utilities' contribution to income had a standard deviation greater than 10.00 percent over the past three years, unless the company has recently divested the segment that caused the swings in the company's net income (such as Ameren Corporation). ${ }^{51}$
Q. What accounts for the differences in your respective proxy groups?
A. The differences between my Revised Proxy Group and Mr. Murray's broad proxy group are primarily attributable to: (1) Mr. Murray’s use of seven companies (Alliant Energy ("LNT"), Ameren Corporation, CMS Energy Corporation ("CMS"), DTE Energy Corporation ("DTE"), OGE Energy Corporation ("OGE"), TECO Energy, Inc. ("TE") and Xcel Energy ("XEL")) that I had excluded on the basis of business segment operating results or the company's involvement in a significant transaction; and (2) the exclusion of seven companies (Duke Energy Corporation ("DUK"), Empire District Electric ("EDE"), Hawaiian Electric Industries, Inc. ("HE"), IDACORP, Inc. ("IDA"), NextEra Energy, Inc. ("NEE"), Northeast Utilities ("NU") and Otter Tail Corp. ("OTTR")) from Mr. Murray’s proxy group that are included in my Revised Proxy Group.
Q. Why were the seven companies included in Mr. Murray's proxy group excluded from your group?
A. Mr. Murray’s screening criteria would include six companies (i.e., LNT, Ameren Corporation, CMS, DTE, TE and XEL) that I have excluded because they failed to derive 90.00 percent or more of total regulated operating income from regulated

[^14]electric utility service over the past three years. ${ }^{52}$ Upon reviewing operating income data for the period from 2011 through 2013 for each of those six companies, I note that they derived between 72.68 percent to 88.74 percent of their total regulated operating income from regulated electric utility service during that three year period. ${ }^{53}$
Q. Why did Mr. Murray exclude certain companies contained in your proxy group from his recommended proxy groups?
A. As noted above, Mr. Murray excluded seven companies (i.e., DUK, EDE, HE, IDA, NEE and NU) that are included in my Revised Proxy Group. Based on Mr. Murray’s Schedule 7, which illustrates his screening process, DUK and OTTR were excluded because they derived less than 80.00 percent of income from regulated utility operations; EDE and IDA were excluded because SNL Financial reported fewer than two analysts providing long-term growth estimates within 90 days of Staff's analysis date; HE and NEE were excluded because they were not reported as regulated electric utilities by Edison Electric Institute; and NU was excluded because electric generation assets accounted for less than 25.00 percent of the company's electric plant.

## Q. Why are DUK and OTTR included in your proxy group?

A. My screening criteria require that proxy group companies derive at least 60.00 percent of total operating income from regulated operations. Over the past three years DUK and OTTR have derived an average of 91.46 percent and 75.71 percent of

[^15]operating income from regulated operations, respectively. ${ }^{54}$ I believe both companies derive a sufficient portion of their operating income from regulated operations to be included in the proxy group. Given that Mr. Murray’s screening criterion requires 80.00 percent of income to be derived from regulated operations, it is unclear why he has excluded DUK.

## Q. Why are EDE and IDA included in your proxy group?

A. Mr. Murray excluded EDE and IDA because the single source of his growth rate estimates (SNL Financial) did not report at least two analyst long-term earnings per share ("EPS") growth estimates in the 90 days prior to Staff's analysis date. While my proxy group selection criteria also require that at least two analyst long-term EPS growth rate estimates are available, two (First Call and Zacks) of the three sources I rely on for analyst long-term EPS growth estimates reported more than one analyst longterm growth estimate.

## Q. Why is NU included in your proxy group?

A. NU passed all of the screening criteria outlined in my Direct Testimony, and I consequently believe it is a reasonable proxy for the Cost of Equity of Ameren Missouri. Mr. Murray, however, excludes NU from his proxy group because less than 25.00 percent of its electric utility assets are related to electric generation. Under the premise that electric generation is riskier than electric distribution operations, I note including NU would only serve to make my proxy group relatively conservative.

[^16]Q. Do you have any concerns with Mr. Murray's decision to exclude HE and NEE from his proxy groups?
A. Yes, I do. As noted above, Mr. Murray excluded HE and NEE from his proxy group because they did not meet his criteria for being classified by EEI as a regulated utility. The companies are, however, classified by Value Line, a source which Mr. Murray relies upon extensively, as Electric Utilities. Moreover, HE and NEE meet my other screening criteria, including the proportion of operating income derived from regulated electric utility service. The EEI screen by which Mr. Murray excluded HE and NEE is based on the percentage of utility assets, as opposed to operating income, devoted to regulated electric utility service. Specifically, EEI classifies investor-owned electric utilities as follows: (1) Regulated: 80.00 percent or more of total assets are regulated; (2) Mostly Regulated: 50.00 percent to 80.00 percent of total assets are regulated; and (3) Diversified: less than 50.00 percent of total assets are regulated. ${ }^{55}$ Mr. Murray's asset screen fails to recognize that to the extent investors consider the percentage of assets used for regulated services, the purpose is to determine the operating income that those regulated assets might be expected to produce, which, in turn, would contribute to cash flows and earnings. Consequently, I believe that it is more appropriate to rely on the percentage of operating income rather than the percentage of regulated assets to develop a risk comparable proxy group.

[^17]Q. Please explain why you excluded OGE from your proxy group.
A. I excluded OGE from my proxy group because the company recently was party to a significant transaction in which its midstream assets ${ }^{56}$ were contributed to Enable Midstream Partners (a joint venture with affiliates of CenterPoint Energy and ArcLight Capital Partners). ${ }^{57}$ Value Line notes Enable Midstream Partners, which had an initial public offering in April 2014, distributed $\$ 76.50$ million to OGE in the first sixmonths of 2014, which is nearly 20.00 percent of OGE's total projected 2014 earnings per share. ${ }^{58}$ Corporate restructuring transactions of a significant size impact the financial performance of a company and can have a material effect on the results of cost of capital models, and accordingly, such companies are properly excluded from the proxy group.
Q. What effect does the composition of your respective proxy groups have on your ROE analyses?
A. Table 2 (below) provides updated DCF results for both my Revised Proxy Group and Mr. Murray’s proxy groups (based on the Constant Growth and Multi-Stage DCF Models) as of November 14, 2014.

[^18]Table 2: DCF Results Comparison: Hevert and Murray Proxy Groups

|  | Hevert <br> Revised <br> Proxy <br> Group | Murray <br> Broad <br> Proxy <br> Group | Murray <br> Refined <br> Proxy <br> Group |
| :---: | :---: | :---: | :---: |
| Constant Growth DCF | Mean | Mean | Mean |
| 30-Day Average | $9.32 \%$ | $9.44 \%$ | $9.40 \%$ |
| 90-Day Average | $9.48 \%$ | $9.57 \%$ | $9.53 \%$ |
| 180-Day Average | $9.51 \%$ | $9.60 \%$ | $9.56 \%$ |
|  |  |  |  |
| Multi-Stage DCF | Mean | Mean | Mean |
| 30-Day Average | $9.81 \%$ | $9.80 \%$ | $9.84 \%$ |
| 90-Day Average | $9.98 \%$ | $9.94 \%$ | $9.98 \%$ |
| 180-Day Average | $10.01 \%$ | $9.97 \%$ | $10.01 \%$ |

As Table 2 demonstrates, the composition of the proxy group affects, to some degree, the Constant Growth DCF results, although proxy group composition has less effect on the Multi-Stage DCF results. I continue to believe that my selection criteria produce a proxy group that is more representative of Ameren Missouri's investment risks than do Mr. Murray's criteria. Nonetheless, in order to reduce the number of contested issues, I have included Mr. Murray's proxy companies in a Combined Proxy Group.

## C. Application of the Constant Growth DCF Model

Q. Please explain the differences between you and Mr. Murray in the selection of growth rates in your respective Constant Growth DCF analyses.
A. My Constant Growth DCF analysis relies on analysts’ earnings growth projections, as provided by Zacks, First Call, and Value Line. ${ }^{59}$ Mr. Murray’s analysis, on the other hand, reflects projected growth in Dividends per Share ("DPS"), Book Value

[^19]per Share ("BVPS"), and Earnings per Share ("EPS"), as well as historical growth rates, although he considers the historical data to be "quite volatile." ${ }^{60}$ Mr. Murray observes that the consensus analyst EPS growth estimates provided by SNL Financial average 5.74 percent for his broader proxy group, and 5.60 percent for his refined proxy group. ${ }^{61} \mathrm{He}$ concludes, however, that those estimates are not reliable indicators of long-term, sustainable growth expectations relative to Staff's "high-end" estimate of long-term GDP growth (approximately 4.50 percent). ${ }^{62}$
Q. Why does Mr. Murray reject the use of analysts' forecasts of five-year EPS growth in his Constant Growth DCF model?
A. Mr. Murray suggests the use of equity analysts' forecasts of five-year EPS growth would be "unreasonable" because they are higher than the approximately 4.50 percent high-end of his long-term GDP growth estimate. ${ }^{63}$ In particular, Mr. Murray notes that the companies in the S\&P 500 recently have retained approximately 65.00 percent to 70.00 percent of their earnings, while electric utilities recently have retained less than half of that proportion. ${ }^{64}$ Mr. Murray further argues that observed historical electric utility growth rates suggest the utility industry could "barely" support a growth rate more than 3.00 percent. ${ }^{65}$ Mr. Murray states that for those reasons, Staff relied on a growth rate range of 3.50 percent to 4.50 percent in its Constant Growth DCF analysis,

[^20]Rebuttal Testimony of
Robert B. Hevert
instead of the 5.60 percent average analyst EPS projection for his broad proxy group or 5.74 percent for his refined proxy group. ${ }^{66}$
Q. As a preliminary matter, does the Constant Growth DCF model produce reasonable results under current market conditions?
A. No, Mr. Murray's Constant Growth DCF results are well below the prevailing level of authorized returns. Moreover, as discussed in my Direct Testimony, the Constant Growth DCF model requires certain assumptions, including: (1) a constant growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings multiple; and (4) a discount rate greater than the expected growth rate. ${ }^{67}$ To the extent any of those assumptions is violated, considered judgment and/or specific adjustments should be applied to the results. Given the recently elevated level of electric utility company $\mathrm{P} / \mathrm{E}$ ratios relative to their historical average level, it is not clear that those assumptions are likely to hold. As such, the Constant Growth DCF model results should be viewed with considerable caution.
Q. Do you agree with Mr. Murray's assessment of growth rates for his

## Constant Growth DCF model?

A. No, I do not. As to Mr. Murray's consideration of dividend and book value growth, it is important to realize that earnings growth enables both. ${ }^{68}$ Corporate decisions to manage the dividend payout ratio for the purpose of minimizing future dividend reductions or to signal future earnings prospects can influence dividend growth

[^21]rates in near-term periods in a manner that is disproportionate to earnings growth. Similarly, book value can increase over time only through the addition of retained earnings, or with the issuance of new equity. Both of those factors are derivative of earnings. Retained earnings increase with the amount of earnings not distributed as dividends, and the price at which new equity is issued is a function of the earnings per share and the then-current P/E ratio.

Mr. Murray's reference to dividend and book value growth rates also is misplaced because the only scenario under which dividend growth rates and book value growth rates are relevant is when the fundamental assumptions underlying the Constant Growth DCF model essentially hold. Under those fundamental assumptions, the Constant Growth DCF model produces the same result whether the stock is held in perpetuity or sold after an assumed holding period, and the assumed growth rate equals the rate of capital appreciation (i.e., the stock price growth rate). Given that investors tend to value common equity on the basis of P/E ratios, the required ROE is a function of the long-term growth in earnings, not dividends or book value.
Q. Why are EPS growth rates the appropriate measure for the Constant

## Growth DCF model?

A. First, as noted above, it is growth in earnings that enables both dividend and book value growth, a position that is firmly supported by academic research. ${ }^{69}$ Moreover, valuation metrics also focus on earnings, as opposed to dividends. As noted over 40 years ago by Charles Phillips in The Economics of Regulation:

[^22]For many years, it was thought that investors bought utility stocks on the basis of dividends. More recently, however, studies indicate that the market is valuing utility stocks with reference to total per share earnings, so that the price-earnings ratio has assumed increased emphasis in rate cases. ${ }^{70}$

Phillips's conclusion continues to hold true. Subsequent academic research has clearly and consistently indicated that measures of earnings and cash flow are strongly related to returns, and that analysts' forecasts of earnings growth are superior to other measures of growth in predicting stock prices. ${ }^{71}$ For example, Vander Weide and Carleton state that "[o]ur results...are consistent with the hypothesis that investors use analysts' forecasts, rather than historically oriented growth calculations, in making stock buy-and-sell decisions."72 ${ }^{72}$ Other research specifically notes the importance of analysts' growth estimates in determining the Cost of Equity, and in the valuation of equity securities. Moreover, Dr. Robert Harris noted that "a growing body of knowledge shows that analysts’ earnings forecasts are indeed reflected in stock prices."73 Citing Cragg and Malkiel, Dr. Harris notes that those authors "found that the evaluations of companies that analysts make are the sorts of ones on which market valuation is based." ${ }^{74}$

To that point, the research of Carleton and Vander Weide (discussed below) demonstrates that earnings growth projections have a statistically significant relationship to stock valuation levels, while dividend growth projections do not. Those findings

[^23]Rebuttal Testimony of
Robert B. Hevert
suggest that investors form their investment decisions based on expectations of growth in earnings, not dividends. Consequently, earnings growth not dividend growth is the appropriate estimate for the purpose of the Constant Growth DCF model. ${ }^{75}$ While Carleton and Vander Weide's research was based on companies and industries in addition to utilities, my own quantitative analyses demonstrate that the same conclusions hold for electric utility companies.

## Q. Please describe the analyses you conducted to determine which measures of growth are statistically related to the proxy companies' stock valuation levels.

A. My analyses are based on the approach developed by Professors Carleton and Vander Weide, who conducted a comparison of the predictive capability of historical growth estimates and analysts' consensus forecasts of five-year earnings growth for the stock prices of sixty-five utility companies. ${ }^{76}$ While their study addressed the use of historical growth rates, the general methodology established by Carleton and Vander Weide also can be used to determine which growth rate projections have the greatest predictive capability with respect to stock valuation levels. As discussed below, my analyses were structured to assess the ability of various growth estimates to explain changes in stock valuation levels. Essentially, the analysis is structured to determine whether investors use earnings, dividend, or book value growth rates when valuing electric utility stocks.

[^24]As shown in Table 3 (see also, Schedule RBH-R16), my analysis examines the relationship between the $\mathrm{P} / \mathrm{E}$ ratios of the Value Line universe of electric utility companies, and the projected EPS, DPS, and BVPS growth rates reported by Value Line as of October 31, 2014, September 19, 2014, and August 22, 2014. I also eliminated any observations wherein Value Line did not report P/E, EPS, DPS, or BVPS projection data. I then performed a series of regression analyses in which the projected growth rates were included as explanatory variables, with the $\mathrm{P} / \mathrm{E}$ ratio as the dependent variable. The intent of those analyses was to determine which, if any, of the growth rates are statistically related to the proxy company stock valuation levels.

Table 3: Regression Results - Price to Earnings v. Growth Rates

|  | Intercept | Coefficient | Standard Error | T-Stat | F-Stat |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Scenario 1Projected EPS | 13.245 | 37.236 | 8.552 | 4.354 | 18.956 |
| Scenario 2Projected DPS | 15.699 | -12.713 | 8.698 | -1.462 | 2.136 |
| Scenario 3- <br> Projected BVPS | 16.523 | -32.711 | 23.078 | -1.417 | 2.009 |
| Scenario 4- <br> Projected EPS <br> Projected DPS <br> Projected BVPS | 14.469 | $\begin{array}{r} 40.125 \\ -16.462 \\ -16.659 \end{array}$ | 8.116 <br> 7.279 <br> 19.035 | $\begin{array}{r} 4.944 \\ -2.262 \\ -0.875 \\ \hline \end{array}$ | 9.875 |

11

In the first set of analyses (see Table 3, Scenarios 1-3), I considered each independent variable separately (i.e., performed three separate regressions with $\mathrm{P} / \mathrm{E}$ as the dependent variable and projected EPS, DPS, and BVPS as the independent variable). To ensure that those separate analyses did not somehow bias my results, I then performed a single regression that included all three variables as potential explanatory variables (Scenario 4). To determine whether the variables and equations are statistically significant, I also reviewed the T- and F-Statistics. In general, a T-Statistic of 2.00 or
greater indicates that the variable is likely to be different than zero, or "statistically significant". The F-Statistic is used to determine whether the model as a whole has statistically significant predictive capability.

## Q. What did those analyses reveal?

A. In all four scenarios, the only theoretically meaningful and statistically significant variable was the projected EPS growth rate; neither projected DPS growth nor projected BVPS growth provided any meaningful explanatory value.

## Q. What conclusions do you draw from those analyses?

A. Since my analyses demonstrate that only EPS growth has a meaningful and statistically significant level of explanatory value with respect to the proxy companies’ stock valuations, I conclude that investors consider expected EPS growth rates, and not expected DPS or BVPS growth rates, in establishing market prices for those companies. Therefore, I have continued to rely on projected EPS growth rates from Value Line, Zacks, and First Call in developing my DCF results.
Q. Please comment on Mr. Murray's use of certain historical data in evaluating the reasonableness of analysts' projected EPS growth rates.
A. As noted above, Mr. Murray suggests that the electric utility industry's historical growth "barely supports" a constant growth rate estimate much more than 3.00 percent. Mr. Murray's analysis of historical electric utility industry growth rates is based on data relating to Central region electric utilities for the period 1968 through 1999. ${ }^{77} \mathrm{He}$ does not use information after 1999, owing to his concerns related to the quality of the

[^25]data due to the consolidation of the electric utility industry, utility diversification, and the potential effects of the Enron bankruptcy and deregulation on investors’ growth expectations. ${ }^{78}$ Mr. Murray notes that he did not apply rigid selection criteria for assembling his study group, stating that instead, "Staff did eliminate companies that generally did not have at least 70\% of revenues from electric utility operations in the late 1990s," ${ }^{79}$ as well as companies that appeared to be affected by restructuring of electric utility markets, and companies that were affected by major mergers, acquisitions or restructurings. ${ }^{80}$ That selection process produced a ten-company study group. ${ }^{81}$

Using that group, Mr. Murray calculates rolling average ten-year growth rates over the study period of 3.62 percent (EPS), 3.99 percent (DPS), and 3.18 percent (BVPS), respectively, with an overall average of 3.59 percent. ${ }^{82}$ Mr. Murray suggests that those growth rates were realized over a much more robust economic environment than the U.S. is expected to achieve in the foreseeable future. ${ }^{83}$ Conducting a similar set of analyses on electric utilities in Missouri for the period 1968-1999, Mr. Murray estimates average rolling ten-year growth rates of 3.11 percent (EPS), 3.59 percent (DPS), and 2.57 percent (BVPS), respectively, with an overall average of 3.09 percent. ${ }^{84}$ Extending the analysis through 2013 for the Missouri electric utilities, Mr. Murray estimates average ten-year growth rates of 1.66 percent (EPS), 1.84 percent (DPS), and 2.39 percent (BVPS), respectively, with an overall average of 1.96 percent. ${ }^{85} \mathrm{Mr}$. Murray

Ibid.
Ibid., at 35.
Ibid.
Ibid., Schedule 13-1.
Ibid., at 35 and Schedule 13-4.
Ibid., at 35.
Ibid., at 36.
Ibid.
then reasons that his analysis supports a long-term growth rate in the 2.00 percent to 3.00 percent range, and suggests it is "quite logical and rational in the current low-yield environment" that electric utility investors expect a return of approximately 6.00 percent. ${ }^{86}$

## Q. Do you agree with Mr. Murray's conclusion?

A. No, I do not. As a preliminary matter, aside from Mr. Murray’s broad assertion that the 32 year period from 1968 through 1999 somehow is representative of investors' current expectations, he has provided no basis for the use of that particular data set. Mr. Murray's conclusion also ignores the effect that changes in other economic or financial variables, such as authorized ROE levels, may have had on the observed growth rates over his study period. For example, SNL Financial, which provides data on authorized utility ROEs as far back as 1980, reports the average authorized electric utility ROE declined from 14.23 percent in 1980 to 10.72 percent in 1999. All else being equal, a decrease in allowed return on equity would be expected to decrease the rate of earnings growth over that portion of Mr. Murray's study period. However, if average authorized ROEs were to increase significantly in the future, it could accelerate earnings growth above the level expected given current ROE levels.

In any event, as noted earlier, academic research has shown that analysts' forecasted growth rates are superior to historical growth rates in terms of projecting future stock prices. Further, academic research and the regression analyses described above demonstrate the superiority of analysts’ EPS growth projections over DPS and BVPS growth projections in the utility stock valuation process.

[^26]Moreover, Mr. Murray's position assumes that historical data ending in 1999 for a ten company group that has only three companies in common with the proxy group used in Staff's DCF and CAPM analyses somehow is relevant to estimating Ameren Missouri’s Cost of Equity. ${ }^{87}$ Given the acknowledged importance of developing a riskcomparable proxy group, it is unclear why Mr. Murray would assume that to be the case. Lastly, I note that regardless of whether historical data for a separate proxy group is a relevant measure of expected growth for Ameren Missouri, Mr. Murray has not demonstrated why a 2.00 percent to 3.00 percent growth rate estimate, which provides little if any real growth over his 2.00 percent inflation rate estimate, ${ }^{88}$ is applicable in this case. Mr. Murray has provided no authoritative or academic support suggesting it would be reasonable to rely on a nominal long-term growth rate of 3.00 percent or lower.

## D. Application of the Multi-Stage DCF Model

## Q. Does Staff apply a Multi-Stage DCF Model to estimate the ROE for

## Ameren Missouri?

A. Yes, Staff believes that its Multi-Stage DCF analysis "provides a more reliable cost of common equity" because in its view, some of the proxy group companies have "non-sustainable" growth rates. ${ }^{89}$ In general, I agree with Mr. Murray that the Multi-Stage form of the DCF model enables the analyst to address many of the

[^27]shortcomings of the Constant Growth form of the DCF model. Of particular relevance, the Multi-Stage model: (1) sets long-term growth rates at a level that is sustainable based on long-term growth in the economy; (2) allows for the dividend payout ratio to change and revert toward the long-term historical industry average over time; and (3) addresses concerns with growth rate estimates that (in the context of the constant growth form of the model) may be too low or too high to be considered sustainable in perpetuity.

## Q. Please describe Mr. Murray's Multi-Stage DCF Model.

A. Similar to my Multi-Stage model, Mr. Murray's analysis includes three stages, the first two of which include five-year horizons, while the third assumes cash flows in perpetuity. ${ }^{90}$ In the first stage, Mr. Murray relies on analyst growth projections; the second stage assumes a linear transition from analysts' growth projections to the 3.00 percent to 4.00 percent range that Mr. Murray has concluded is more "normal/sustainable."91 Since Mr. Murray’s final stage assumes his long-term growth rate in perpetuity, it essentially is equivalent to the "Gordon Growth" form of the Constant Growth DCF model. As discussed later in my Rebuttal Testimony, that structure is the functional equivalent of the "terminal value," or the expected price at which the stock may be sold at the end of the forecast horizon. Based on a long-term growth rate from 3.00 percent to 4.00 percent, Staff's Multi-Stage DCF analysis produces a range of results between 7.65 percent and 8.41 percent for the broad proxy group, and

[^28]7.60 percent to 8.37 percent for the refined proxy group. ${ }^{92}$ Mr. Murray, however, acknowledges that even ROE witnesses for customer groups have used estimated nominal GDP growth as the terminal growth rate in the Multi-Stage DCF Model. ${ }^{93}$ Under that scenario, Staff applies a long-term growth rate of 4.40 percent, which produces a Multi-Stage DCF result of 8.72 percent for the broad proxy group and 8.67 percent for his refined proxy group. ${ }^{94}$

## Q. How did Staff develop its terminal growth estimate?

A. Mr. Murray states that although Staff is confident that "investors do not expect that utilities’ per share growth rates can grow at the same rate [as] nominal GDP in the long-run", Staff recognizes that other ROE witnesses have been willing to accept that assumption for purposes of estimating the Cost of Equity. ${ }^{95}$ As such, Mr. Murray reviews a number of real GDP growth estimates reported in the U.S. Energy Information Administration’s ("EIA") 2014 Annual Energy Outlook, covering various forecast periods that end between eight and 26 years in the future. ${ }^{96}$ Combining the 2.35 percent midpoint of the real GDP growth estimates reported by the EIA for the 2025 - 2040 period with the Congressional Budget Office’s 2.00 percent expected GDP price deflator (which is also the Federal Reserve's stated inflation target), Mr. Murray develops a longterm nominal GDP growth estimate of 4.40 percent. ${ }^{97}$

[^29]
## Q. Do you agree with Staff's estimate of long-term GDP growth?

A. No, I do not. The important distinction between Staff's estimate of longterm GDP growth and mine is the timing and horizon of our estimates. It is important to remember that the terminal growth rate is intended to reflect growth in perpetuity and, as Mr. Murray notes, that the "perpetual growth rate is intended to measure the long-run trend growth rate supported by the long-term fundamentals of the U.S.'s mature economy." ${ }^{98}$ In that important respect, the term of even the longest GDP forecast considered by Mr. Murray does not reflect the perpetual nature of the terminal growth assumed in the DCF model. As explained in my Direct Testimony, I have relied on the long-term historical growth rate in real GDP adjusted to reflect long-term forecasts for inflation in order to establish the projected nominal GDP growth rate in the terminal year of my analysis. ${ }^{99}$

Moreover, the 4.40 percent nominal GDP growth rate that Mr. Murray assumes will persist in perpetuity is at odds with market measures cited elsewhere in Staff's Report. For example, it is unclear why Mr. Murray does not consider the use of longterm historical data for the purpose of developing his terminal growth rate, given that he relies on long-term historical data for the purposes of his CAPM analyses. According to Morningstar (which provides the data Duff \& Phelps relies on to estimate the historical Market Risk Premia on which Mr. Murray relies), the arithmetic average historical capital appreciation rate is 7.70 percent, which is substantially higher than Mr. Murray's

Ibid., at 25.
See, Direct Testimony of Robert B. Hevert, at 28-29.
estimate of long-term GDP growth. ${ }^{100}$ As such, the assumptions used in Mr. Murray's DCF analysis and his CAPM analysis are highly inconsistent. ${ }^{101}$
Q. Have you performed any analysis to assess the reasonableness of

## Mr. Murray's long-term growth estimate?

A. Yes, I have. As Mr. Murray correctly notes, "[c]ost of equity estimates using multi-stage DCF methodologies are extremely sensitive to the assumed perpetual growth rate." ${ }^{102}$ Although Mr. Murray reviews GDP growth estimates that end from eight to 26 years from now, it is important to remember that the long-term growth rate used in the DCF model is a perpetual rate, extending indefinitely. ${ }^{103}$ With respect to nominal GDP growth, I note that the long-term geometric average from 1929 to 2013 was 6.23 percent, and the arithmetic average was 6.47 percent. Those observed growth rates are 183 basis points or more above the high end of the 3.00 percent to 4.40 percent growth rate range on which Mr. Murray relies as a measure of long-term expected growth. ${ }^{104}$

Since Mr. Murray considered ten year average growth rates when comparing GDP growth rates to electric utility EPS, DPS and BVPS growth rates, ${ }^{105}$ I also reviewed ten year average GDP growth rates over the 1929 to 2013 period. I then arranged that data as a histogram to provide a perspective of how frequently various levels of growth have occurred. As Chart 4 demonstrates, average annual growth as low as 4.40 percent has

[^30]Rebuttal Testimony of Robert B. Hevert
been observed very infrequently; when measured over ten year periods, average annual growth exceeded 4.40 percent in 68 of 75 periods. To provide an additional perspective, I calculated average GDP growth over five year periods. In that case, average annual GDP growth exceeded 4.40 percent in 70 of 80 periods (see Chart 5).

Chart 4: Average Annual GDP Growth Measured over Ten-Year Periods ${ }^{106}$


[^31]Chart 5: Average Annual GDP Growth Measured over Five-Year Periods ${ }^{107}$

Q. Are there other benchmarks that may help put that growth rate in context?
A. Yes, there are. Mr. Murray's long-term growth projections also can be assessed in the context of authorized ROEs. The average authorized ROE over the past twelve months (i.e., November 14, 2013 through November 14, 2014) for vertically integrated electric utilities was 9.96 percent. ${ }^{108}$ In the context of the Constant Growth DCF model, that return includes income from dividends (i.e., the dividend yield) and expected growth (i.e., capital appreciation). Assuming Mr. Murray’s proxy group average projected dividend yield of 3.92 percent as the average industry dividend yield, the average reported authorized ROE of 9.96 percent provided in Schedule RBH-R13 implies an expected long-term growth rate of 6.04 percent. ${ }^{109}$ That estimate is consistent

[^32]with, although somewhat higher than, the long-term growth estimate of 5.63 percent used in my updated Multi-Stage DCF analyses.
Q. Is there another approach to calculating the long-term growth rate that produces more reasonable results?
A. Yes, there is. As noted in my Direct Testimony, it is possible to use observable market data regarding nominal and inflation-protected Treasury yields (referred to as "Treasury Inflation Protected Securities" or "TIPS") to calculate the market's forward view of inflation (that is, inflation expected over the long term beginning ten years from now). ${ }^{110}$ In particular, the difference between nominal Treasury yields and TIPS yields is commonly considered to be a measure of expected inflation. That measure of expected inflation can then be combined with average historical real GDP growth. According to data provided by the Bureau of Economic Analysis, over the period 1929 to 2013 the average annual real GDP growth rate was 3.27 percent. Combining real GDP growth with an expected inflation rate of 2.29 percent produces an expected long-term growth rate of 5.63 percent. Interestingly, my estimate of GDP growth is 41 basis points below the 6.04 percent estimate implied by Mr. Murray's Constant Growth DCF model, assuming the average authorized ROE during 2013-2014.
Q. Is it reasonable to assume future real GDP growth will reflect historical real GDP growth?
A. Yes, it is. As shown in Chart 6 (below), but for the recent "great recession" and the continued economic recovery, real GDP growth since the post-World

[^33]Rebuttal Testimony of Robert B. Hevert

War II era has been cyclical, but has reverted to a level close to the long-term historical average of 3.27 percent.

Chart 6: Real GDP Growth Mean Reversion (1948 to 2013) ${ }^{111}$


Over that more recent period, annual real GDP growth rates have been above the long-term 3.27 percent geometric average slightly more than half of the time ( 35 of 66 years).

As noted above, Mr. Murray surveyed a number of GDP forecasts with time horizons ranging from eight to 26 years. Based on that data, Mr. Murray relies on a longterm real GDP growth rate estimate of 2.35 percent. ${ }^{112}$ It is interesting to note that annual real GDP growth has been at or above 2.35 percent approximately 70.00 percent of the time since 1948 ( 46 of 66 years). In fact, of the 20 years with 2.35 percent real growth or less, six have been during or following the recent "great recession." Mr. Murray,

[^34]however, has provided no rationale to explain his assumed decline of more than 90 basis points in the structural growth potential of the economy over the long-term.
Q. Please summarize Mr. Murray's position with respect to the relationship between nominal GDP growth rates and EPS growth rates for electric utilities.
A. Mr. Murray is of the view that investors do not expect earnings per share growth for electric utilities to approximate nominal GDP growth in the long run. ${ }^{113}$ To support his position, Mr. Murray compares nominal GDP growth rates to EPS growth rates for electric utilities from 1968 to 1999, and concludes that EPS growth rates have been less than 50.00 percent of nominal GDP growth over that period of time. ${ }^{114}$
Q. Do you agree with Mr. Murray's position with respect to the relationship between nominal GDP growth rates and EPS growth rates?
A. No, I do not. As a preliminary matter, I disagree with Mr. Murray's premise that it is appropriate to test the reasonableness of long-term expected growth rates for the proxy companies in 2014 based on an analysis that compares GDP growth rates and EPS growth rates for electric utilities from 1968 through 1999. Rather, measures of expected long-term growth that reflect the market's expectations of future price escalation are the relevant source of information. As such, I disagree with Mr. Murray's conclusion that it is not appropriate to rely on nominal GDP growth rates in the terminal stage of the Multi-Stage DCF Model.

[^35]Q. Have you performed any analyses to examine the relationship

## between earnings per share growth and GDP growth?

A. Yes, I compared EPS growth for the S\&P 500 Index to nominal GDP growth from 1968 through 2013. As shown on Schedule RBH-R17, the compound annual growth rate in Earnings per Share for the S\&P 500 companies over that period was 6.55 percent, while the compound annual growth rate in nominal GDP was 6.61 percent. That analysis demonstrates that there has been a strong correlation between earnings per share growth for companies in the S\&P 500 and nominal GDP growth since 1968. I also note that those growth rates are reasonably consistent with the long-term capital appreciation rate as reported by Morningstar for large-cap companies of 7.70 percent (arithmetic average) and 5.80 percent (geometric average); ${ }^{115}$ they also are consistent with the 6.23 percent nominal GDP growth rate for the period from 19292013, which is the period covered by my calculation of long-term real GDP growth. ${ }^{116}$

Further, industry practice has been to assume that nominal GDP growth is a reasonable surrogate for long-term earnings per share growth. In that regard, the Commission has accepted that practice in prior decisions where it relied on nominal GDP growth as the appropriate growth rate for the terminal stage of the Multi-Stage DCF Model. ${ }^{117}$ Likewise, even a brief survey of finance texts speaks to the use of long-term GDP growth as a reasonable estimate for the terminal period. For example, Dr. Roger Morin writes: "It is useful to remember that eventually all company growth rates,

[^36]especially utility services growth rates, converge to a level consistent with the growth rate of the aggregate economy." ${ }^{118}$ Similarly, Eugene F. Brigham and Michael C. Ehrhardt in

## Financial Management: Theory and Practice note:

Expected growth rates vary somewhat among companies, but dividend growth for most mature firms is generally expected to continue in the future at about the same rate as nominal gross domestic product (real GDP plus inflation). On that basis, one might expect the dividends of an average, or "normal," company to grow at a rate of $5 \%$ to $8 \%$ a year. ${ }^{119}$

In addition, Morningstar notes that "...historically, the growth in corporate earnings has been in line with the growth of overall economic productivity," ${ }^{120}$ and Ibbotson and Chen state: "For the whole period [1926-2000], GDP per capita slightly outgrew earnings and dividends, but all four factors grew at approximately the same rate." ${ }^{121}$

As discussed above, and as supported by academic research and industry practice, there is a relationship between GDP growth and earnings per share growth for the companies in the S\&P 500. On that basis, I disagree with Mr. Murray's conclusion that investors do not expect earnings per share growth for electric utilities to approximate nominal GDP growth in the long run. ${ }^{122}$

[^37]Q. Do you agree with Mr. Murray's assertion that because their payout ratios are relatively higher than the average payout ratio for the $\mathbf{S \& P} \mathbf{5 0 0}$, utilities will likely grow at a slower rate than the overall economy? ${ }^{123}$
A. No, I do not. Mr. Murray states:

In fact, considering that companies in the S\&P 500 (a proxy for the U.S. capital markets) in recent years have retained approximately $65 \%$ to $70 \%$ of their earnings for reinvestment, while electric utilities' retention ratio has been less than half that of the S\&P 500, it makes logical sense that utilities will grow at a rate less than that of nominal GDP growth. ${ }^{124}$

However, in 2006, two articles appeared in Financial Analysts Journal, addressing the theory that high dividend payouts (i.e., low retention ratios) are associated with low future earnings growth. ${ }^{125}$ Both of those articles cite a 2003 study by Arnott and Asness, which found that, over the course of 130 years future earnings growth was associated with high, rather than low, payout ratios. ${ }^{126}$ Consequently, a general observation regarding the relative size of the average payout ratio of electric utility companies compared to the S\&P 500 index does not provide sufficient information to determine the extent to which the two growth rates may (or may not) diverge.

It also is interesting to note that based on the information contained in Schedule 13-4 to Appendix 2 of the Staff Report, the long-term historical growth in electric utility EPS, DPS and BVPS from 1968-1999 was 3.59 percent. Assuming Mr. Murray's position implies a payout ratio of approximately 65.00 percent, that 3.59 percent growth

[^38]rate would imply an authorized ROE of 10.26 percent, ${ }^{127}$ which is within my estimated ROE range for Ameren Missouri, and consistent with the range of authorized returns for integrated electric utilities in other jurisdictions over the past twelve months.

## Q. What are the implications of Mr. Murray's analysis suggesting that investors expect long-term EPS growth for electric utilities to be less than $\mathbf{5 0 . 0 0}$ percent of nominal GDP growth?

A. If Mr. Murray is correct that investors expect long-term EPS growth for electric utilities to be less than 50.00 percent of nominal GDP growth, then as shown in Schedule RBH-R18, the Multi-Stage DCF Model would produce results of 7.05 percent for Mr. Murray's proxy group companies, based on a terminal growth rate of 2.20 percent, which is 50.00 percent of the nominal GDP growth estimate of 4.40 percent that Mr. Murray relies on in the Staff Report. That result is not reasonable in the context of other observable, market-based indicators of the Cost of Equity, including returns for vertically integrated electric utilities in other jurisdictions from November 14, 2013 through November 14, 2014 (i.e., 9.96 percent) and the current authorized ROE for Ameren Missouri's electric operations of 9.80 percent, which was approved by the Commission in December 2012.
Q. Do you agree with Mr. Murray's suggestion that lower growth in electricity demand will limit electric utility growth?
A. No, I do not. In suggesting that earnings growth is limited by electricity sales growth, Mr. Murray has implicitly assumed that there is a direct relationship

[^39]Rebuttal Testimony of
Robert B. Hevert
between electricity sales volumes on the one hand, and utility revenue, capital expenditures, and earnings on the other. As a practical matter, however, many variables enter into that relationship. Rate design, for example, will affect the relationship between sales volumes and revenues. In that regard, there has been a move away from volumetric rates, toward higher fixed charges for utility service. ${ }^{128}$ The relationship between revenue and earnings likewise depends on operating margins, which in turn, are influenced by a variety of operating factors, such as productivity improvements. Moreover, additional rate base investment may be driven by the need to meet modern infrastructure requirements including, for example, integration of renewables, increased use of energy efficiency, application of smart grid technologies, and storm-hardening. ${ }^{129}$ The modern economy is dependent on a reliable electric infrastructure today as much as ever, and it is reasonable for investors to expect growth from ongoing investments in the modernization of the electric infrastructure.

Based on data from the EIA and Value Line, it is clear that from 2005 through 2013 (the range of data available from Value Line and EIA) the combined proxy group’s average growth in revenues, earnings, cash flow and capital expenditures far exceeded the growth in electricity sales volume (see Chart 7, below). Consequently, I strongly disagree with Mr. Murray's suggestion that electricity sales growth somehow should be viewed as indicative of long-term growth.

[^40]Chart 7: Percent Annual Growth in Electricity End Use Sales Volume, Revenue, Earnings, Cash Flow and Capital Spending 2005-2013 ${ }^{130}$


Lastly, I note that the EIA’s 2014 Annual Energy Outlook reports expected annual retail electric sales growth of approximately 1.38 percent a year over the next five years, ${ }^{131}$ yet the average earnings growth estimate reported in Staff's Schedule 9-6 is 5.74 percent for the broad proxy group and 5.60 percent for the refined proxy group. In that regard, analysts’ expectations for earnings growth do not appear to be limited by the rate of electric sales growth.
Q. Do you agree with Mr. Murray that it is logical to assume that most utilities should not grow much faster than the rate of inflation in the long-term? ${ }^{132}$
A. No, I do not. Mr. Murray’s statement implies that investors do not expect any real growth from electric utility companies over the long-term. That view ignores the

[^41]fact that electric utility earnings may grow over the long-term due to several factors, including (but not limited to): (1) capital investments that are eventually included in rate base; (2) new customer additions; and (3) increases in customer demand. Electric utilities would face significant difficulty competing for capital if investors believed that the longterm real growth rate for those companies was negligible. In essence, under Mr. Murray's scenario utility stocks would provide a dividend yield and some measure of protection against inflation, but no more than that. At the same time, investors would remain exposed to the risk of capital losses. Since other investments, such as Treasury Inflation Protected Securities provide inflation protection and carry a minimal risk of capital loss (if held to maturity), Mr. Murray's position assumes that investors would require the only difference in in yields as compensation for the additional risk of capital loss. Given the capital market and sector-specific risks discussed throughout my direct and Rebuttal Testimony, that does not appear to be a reasonable assumption.

Since earnings growth supports dividend growth, if Mr. Murray is correct that long-term growth does not exceed the expected inflation rate, electric utilities would not be able to offer investors any prospects for inflation-adjusted dividend growth. Under that scenario, the industry would not be able to attract equity capital, and would not be able to generate the cash flow needed to maintain appropriate credit metrics or liquidity, yet would have to fund increasing amounts of its utility plant with long-term debt. That scenario, of course, would create a downward spiral in which leverage increases, creditworthiness decreases, and access to either debt or equity becomes increasingly constrained. In the long-term, then, utilities would not be able to fund the investments needed to provide safe and reliable utility service.

Nonetheless, if Mr. Murray is correct that most investors expect a long-term growth rate equivalent to the inflation rate, then as shown on Schedule RBH-R18, the Multi-Stage DCF Model would produce results of 7.07 percent for Mr. Murray’s broad proxy group, based on an inflation rate of 2.00 percent, which is the GDP price deflator on which Mr. Murray relies. Once again, that result is not reasonable in the context of other observable, market-based indicators of the Cost of Equity, including returns in other jurisdictions, and would be highly detrimental to the Company's ability to access capital markets.
Q. Please describe each step in your analysis to revise Mr. Murray's application of the Multi-Stage DCF Model for his proxy group.
A. I began with Mr. Murray’s Multi-Stage DCF Model, and made the following five adjustments:

- In Step 1, I adjusted the timing of cash flows in Mr. Murray’s model to reflect the fact that, on average, dividend payments are received at midyear, not year-end, which is consistent with the notion that dividends are increased by one-half of the expected growth rate in the Constant Growth DCF model to account for future increases in dividends.
- In Step 2, I adjusted the dividend payout ratio to converge toward 65.00 percent, which Mr. Murray indicates is consistent with the recent electric utility industry average. ${ }^{133}$

[^42]| Step | Mean ROE | Median ROE |
| :--- | :---: | :---: |
| As Filed (see Schedule 12-4): | $8.72 \%$ | $8.59 \%$ |
| Step 1: Adjust timing of cash flows <br> $\bullet \quad$ Mid-year convention for dividend payments | $8.90 \%$ | $8.76 \%$ |
| Step 2: Adjust dividend payout ratio <br> $\bullet \quad$ Convergence to industry average of 65.00\% | $9.10 \%$ | $8.99 \%$ |
| Step 3: Adjust long-term GDP growth rate estimate <br> $\bullet$ <br> Projected nominal GDP growth rate of 5.63\% | $10.05 \%$ | $9.96 \%$ |
| Total increase in ROE result | $1.33 \%$ | $1.37 \%$ |

- In Step 3, I adjusted the long-term growth rate used in the final stage to reflect my updated estimate of long-term nominal GDP growth of 5.63 percent.
Q. How do the changes you propose to Mr. Murray's assumptions and inputs to the Multi-Stage DCF Model contribute to the difference between his results and yours?
A. Table 4 (below, see also, Schedule RBH-R18) presents the effect that each assumption and input correction to Mr. Murray's Multi-Stage DCF Model has on the results for his proxy group.

Table 4: Adjustments to Mr. Murray's Multi-Stage DCF Model Broad Proxy Group

Table 5: Adjustments to Mr. Murray's Multi-Stage DCF Model Refined Proxy Group

| Step | Mean ROE | Median ROE |
| :--- | :---: | :---: |
| As Filed (see Schedule 12-4): | $8.67 \%$ | $8.59 \%$ |
| Step 1: Adjust timing of cash flows <br> $\bullet ~ M i d-y e a r ~ c o n v e n t i o n ~ f o r ~ d i v i d e n d ~ p a y m e n t s ~$ | $8.85 \%$ | $8.76 \%$ |
| Step 2: Adjust dividend payout ratio <br> $\bullet \quad$ Convergence to industry average of 65.00\% | $9.13 \%$ | $8.99 \%$ |
| Step 3: Adjust long-term GDP growth rate estimate <br> $\bullet$ Projected nominal GDP growth rate of 5.63\% | $10.09 \%$ | $9.96 \%$ |
| Total increase in ROE result | $1.42 \%$ | $1.37 \%$ |

Q. How did your revisions to Staff's Multi-Stage DCF Model affect the results?
A. Based on the adjustments described above, the mean and median results for Staff's Multi-Stage DCF Model increase from 8.72 percent to 10.05 percent for the broad proxy group, and from 8.67 percent to 10.09 percent for the refined proxy group. That analysis demonstrates that reasonable adjustments to Mr. Murray's assumptions and inputs result in ROE estimates for his proxy group that are reasonably consistent with my updated mean results. It is important to note that changes to the long-term growth rate account for the majority of the difference in our respective Multi-Stage DCF results.

## E. Application of the CAPM and Relevance of Results

Q. Please summarize Mr. Murray's CAPM analyses.
A. Mr. Murray's CAPM analyses rely on a risk-free rate of 3.17 percent based on the average 30 -year Treasury yield for the three month period ending

October 31, 2014, calculated Beta coefficients, and historical Market Risk Premium of 4.64 percent (using the geometric mean) and 6.20 percent (using the arithmetic mean). ${ }^{134}$

## Q. Do you agree with Mr. Murray's application of the CAPM?

A. No, I do not. In particular, I disagree with Mr. Murray's sole reliance on a historical risk-free rate and his use of historical MRP estimates. More important than our methodological differences, however, are our respective conclusions regarding the reasonableness and reliability of an analysis that produce ROE estimates of 6.53 percent to 6.60 percent (using the geometric risk premium) and 7.66 percent to 7.76 percent (using the arithmetic risk premium). As noted earlier, there are no market data of which I am aware that rationalize such low results.

## Q. Turning to the risk-free rate component of the CAPM, do you agree

 with Mr. Murray's use of the average 30-year Treasury yield?A. While I agree with Mr. Murray that it is appropriate to use the current average 30-year Treasury yield, I also believe that since the purpose of this proceeding is to establish the Cost of Equity for Ameren Missouri’s electric utility operations on a going-forward basis, it is important to develop a CAPM analysis that reflects investor expectations concerning the risk-free rate and, as discussed in more detail below, the MRP. For that reason, as discussed in my Direct Testimony, I relied on both the current 30-day average 30 -year Treasury yield and the projected near-term 30-year Treasury yield as reported by Blue Chip Financial Forecast. ${ }^{135}$

[^43]
## Q. How did Mr. Murray calculate his MRP estimates?

A. Mr. Murray cites Duff \& Phelps’ 2014 Valuation Handbook and states he calculated his 6.20 percent arithmetic and 4.64 percent geometric historical MRP estimates by taking the difference between the long-term average earned return on stocks and bonds from 1926 - 2013. ${ }^{136}$ I note, however, that Duff \& Phelps reports arithmetic and geometric historical Market Risk Premium estimates of 6.96 percent and 4.89 percent, respectively. ${ }^{137}$
Q. Is it appropriate to rely exclusively on historical data in estimating the

## MRP, as Mr. Murray has done?

A. No. The Market Risk Premium represents the additional return required by equity investors to assume the risks of owning the "market portfolio" of equity relative to long-term Treasury securities. As with other elements of Cost of Equity analyses, the MRP is meant to be a forward-looking parameter. Simply relying on the historical MRP may produce results that are not consistent with investor sentiment and current conditions in capital markets. For example, Morningstar observes:

It is important to note that the expected equity risk premium, as it is used in discount rates and cost of capital analysis, is a forwardlooking concept. That is, the equity risk premium that is used in the discount rate should be reflective of what investors think the risk premium will be going forward. ${ }^{138}$

The relevant analytical issue in the application of the CAPM is to ensure that all three components of the model (i.e., the risk-free rate, Beta, and the MRP) are consistent with current market conditions and investor perceptions.

[^44]
## Q. What is the difference between the geometric and the arithmetic mean

## risk premium?

A. Although I do not endorse the use of a historical MRP, the arithmetic risk premium best reflects the uncertainty associated with returns from year to year. The arithmetic mean is the simple average of single period rates of return, while the geometric mean is the compound rate that equates a beginning value to its ending value. The important distinction between the two methods is that the arithmetic mean assumes that each periodic return is an independent observation and, therefore, incorporates uncertainty into the calculation of the long-term average. The geometric mean, by contrast, is a backward-looking calculation that essentially equates a beginning value to an ending value over a specific period of time. Geometric averages, therefore, provide a standardized basis of review of historical performance across investments or investment managers; they do not, however, reflect forward-looking uncertainty.

Since there is no uncertainty with respect to past returns, the use of geometric averages is appropriate when comparing investment performance on a retrospective basis. On a prospective basis, however, uncertainty exists and should be taken into consideration when developing return expectations and requirements. That is why investors and researchers commonly use the arithmetic mean when estimating the risk premium over historical periods for the purpose of estimating equity cost rates. Moreover, investment risk, or volatility, typically is measured on the basis of the standard deviation. The standard deviation, in turn, is a function of the arithmetic, as opposed to
the geometric mean. In that regard, the Beta coefficients applied in CAPM analyses are a function of the standard deviation of returns. ${ }^{139}$ In any case, Morningstar notes that:

The arithmetic average equity risk premium can be demonstrated to be the most appropriate when discounting future cash flows. For use as the expected equity risk premium in either the CAPM or the building block approach, the arithmetic mean or the simple difference of the arithmetic means of the stock market returns and the riskless rates is the relevant number. ${ }^{140}$

Similarly, an article reviewing literature on the topic noted the following rationale for using the arithmetic mean:

Note that the arithmetic mean, not the geometric mean is the relevant value for this purpose. The quantity desired is the rate of return that investors expect over the next year for the random annual rate of return on the market. The arithmetic mean, or simple average, is the unbiased measure of the expected value of repeated observations of a random variable, not the geometric mean.... [The] geometric mean underestimates the expected annual rate of return. ${ }^{141}$
Q. Putting aside the issue of whether it is more appropriate to use the geometric or arithmetic mean, do you have any concerns with the way in which

## Mr. Murray derived his recommended MRP?

A. Yes, I do. Mr. Murray's MRP estimates are derived using the historical difference in the earned returns on stocks and bonds. According to Morningstar, however, the historical MRP is appropriately calculated by subtracting the income only portion of the government bond return from the total return on large company stocks:

Another point to keep in mind when calculating the equity risk premium is that the income return on the appropriate-horizon Treasury security, rather than the total return, is used in the

[^45]calculation. The total return is comprised of three return components: the income return, the capital appreciation return, and the reinvestment return...The income return is thus used in the estimation of the equity risk premium because it represents the truly riskless portion of the return. ${ }^{142}$

By subtracting the total return on government bonds from the total return on stocks, Mr. Murray has understated the historical MRP by approximately 80 basis points (using the arithmetic mean). ${ }^{143}$ Based on Mr. Murray's average Beta coefficient of 0.74 (broader proxy group), the effect on his mean CAPM estimate would be approximately 59 basis points. Even that correction, however, produces results that are far too low to be reasonable estimates of the Company's Cost of Equity.
Q. What are your conclusions regarding Mr. Murray's CAPM analysis?
A. As a practical matter, estimates as low as 6.53 percent have little, if any, practical meaning for the purpose of determining the Company's ROE. Mr. Murray's view that his 6.53 percent to 7.76 percent CAPM results have any analytical meaning, even if only for the purpose of rationalizing his DCF model estimates, is misplaced on its face, but more importantly points out the difficulty in applying financial models without giving due consideration to the reasonableness of the inputs, assumptions, and results.

## Q. What is your response to Mr. Murray's suggestion that investors consider utility stocks to be close alternatives to bonds? ${ }^{144}$

A. While it may be Mr. Murray's opinion that investors consider utility ROEs as equivalent to the cost of debt, he provides no support for his assertion that electric

[^46]utilities in general (and the Company in particular) essentially have no residual (that is, equity) risk and somehow take on the risk characteristics of debt.

As a preliminary matter, it is important to note that under any condition, debt investors are the beneficiaries of a contractual obligation to make interest and principal payments, while equity investors bear the "residual risk" associated with ownership. In light of that priority and the incremental security provided by the debt agreements, yields on long-term debt are below returns required by equity investors. For that reason alone, it is difficult to imagine that the Cost of Equity would approach the cost of debt. More importantly, it is clear that investors consider equity to be far more risky than debt.
Q. Is it possible to test the conclusion that the equity risk for utility companies approaches the risk associated with long-term bonds?
A. Yes, it is. One approach is to consider the volatility of each investment relative to the broader market. An important component of the CAPM is the Beta coefficient, which measures the volatility of the underlying security relative to the volatility of the market as a whole. ${ }^{145}$ It is possible to calculate the implied Beta coefficient associated with debt yields. To the extent that the implied debt Beta is well below the equity Beta coefficient, Mr. Murray's view that utilities are close alternatives to long-term bonds is called into question. In that regard, since debt holders benefit from the contractual obligation of the debtor to pay both principal and interest, the volatility of debt securities relative to the broad equity market is extremely low; in fact, a common assumption is that debt Beta coefficients are near-zero. In the 1984 edition of their widely-used text, for example, Brealey and Myers note that:

[^47]Debt betas are typically close to zero - close enough that for large blue-chip companies, many financial analysts just assume $\beta_{\text {debt }}=$ $0 .{ }^{146}$

More recently, in their 2008 text, Ross, Westerfield and Jaffe state that "[t]he beta of debt is very low in practice." ${ }^{147}$

The implied debt Beta coefficients of Baa-rated utilities can be calculated using the average yield on that debt. Mr. Murray notes the three-month average of the Moody’s Baa-rated Utility Bond Index was 4.76 percent as of October 31, 2014, and the average risk-free rate over that same time period was 3.17 percent. ${ }^{148}$ For the sake of discussion, using the arithmetic average MRP presented in Mr. Murray’s Schedule 16, the Beta coefficient for Moody’s Baa-rated Utility Bond Index is 0.26 (4.76 percent $=$ 3.17 percent $+(0.26 \times 6.20$ percent $)$ ). The Value Line equity Beta coefficients for Mr. Murray’s proxy groups presented in Schedule 16 range from 0.55 to 0.87 with an average of 0.74 for the broad proxy group and 0.73 for the refined proxy group, or nearly three times the implied debt Beta coefficient. Thus, Mr. Murray's data and assumptions do not support the notion that investors consider utility stocks and bonds to be substitutes or surrogates.

[^48]
## F. Risk Premium Analysis

Q. Did Mr. Murray present a Risk Premium Analysis other than his

## CAPM analysis?

A. Yes. Mr. Murray presented an additional risk premium analysis, referred to as his "rule of thumb" approach, which adds a premium of 3.00 percent to 4.00 percent to the corporate bond yield as represented by the average interest rate on the Moody's A and Baa-rated bond from August through September 2014. Based on that approach, Mr. Murray estimates an ROE range of 7.13 percent to 8.76 percent. ${ }^{149}$ Mr. Murray reasons that the equity risk premium for utilities is toward the lower end of that range, since investors view utility stocks as similar to utility bonds. ${ }^{150}$
Q. Are Mr. Murray's conclusions valid?
A. No. The principal issue is that Mr. Murray's "rule of thumb" approach ignores the well-established finding that the equity risk premium is inversely related to interest rates. That relationship, which was demonstrated with respect to long-term Treasury yields in my Direct Testimony, ${ }^{151}$ also applies to utility bond yields. As Chart 8 (below), demonstrates (See also, Schedule RBH-R19), there is a significant, negative relationship between the Moody's Baa Utility Bond Index yield and the equity risk premium (defined by reference to authorized ROEs).

[^49]Chart 8: Equity Risk Premium vs. Moody's Baa Yield


That finding also is consistent with published academic research. ${ }^{152}$ In fact, applying the 4.76 percent Baa yield noted on page 44 of the Staff Report to the regression equation provided in Chart 8 , which clearly demonstrates that the equity risk premium increases as interest rates decrease, produces a risk premium estimate of approximately 5.12 percent, and an ROE of 9.88 percent, well above Mr. Murray's "rule of thumb" risk premium estimate. ${ }^{153}$

[^50]
## G. Financial Integrity

## Q. Did Mr. Murray quantify the potential effect of his ROE recommendation on Ameren Missouri's financial integrity?

A. No, he did not.
Q. Have you considered how the adoption of Mr. Murray's ROE

## recommendation would affect the Company's financial profile?

A. Yes, I have. There is little question that the financial community puts considerable weight on regulatory issues. For example, Moody's considers the regulatory structure to be so important that 50.00 percent of the factors that weigh in its ratings determination are related to the nature of regulation. ${ }^{154}$ Among the factors considered by Moody's in assessing the regulatory framework, are the predictability and consistency of regulatory actions:

As the revenues set by the regulator are a primary component of a utility's cash flow, the utility's ability to obtain predictable and supportive treatment within its regulatory framework is one of the most significant factors in assessing a utility's credit quality. The regulatory framework generally provides more certainty around a utility's cash flow and typically allows the company to operate with significantly less cushion in its cash flow metrics than comparably rated companies in other industrial sectors.
***
In situations where the regulatory framework is less supportive, or is more contentious, a utility's credit quality can deteriorate rapidly. ${ }^{155}$

Mr. Murray recommends an ROE that falls well below the prevailing level of authorized returns for natural gas utilities, electric distribution utilities, and vertically

[^51]integrated electric utilities. ${ }^{156}$ If the Commission were to adopt his recommendation, it would represent a substantial departure from recently authorized ROEs, and insert a considerable degree of uncertainty regarding the Company's cash flows, and the regulatory environment in which it operates. In light of Moody’s focus on "predictable and supportive treatment," it is my view that Mr. Murray's unreasonably low ROE would put immediate and substantial downward pressure on important credit metrics. Such pressure would diminish the Company's ability to attract capital at reasonable terms, which, as noted above, is a fundamental measure of financial integrity.

## H. Other Issues

Q. Do you agree with Mr. Murray that Staff's 9.25 percent ROE recommendation is higher than Ameren Missouri's actual Cost of Equity, and that it is common practice for utility commissions to set the authorized ROE above the actual Cost of Equity? ${ }^{157}$
A. No, I do not. Mr. Murray acknowledges that the Commission has relied on returns in other jurisdictions as a benchmark to assess the reasonableness of allowed ROEs for Ameren Missouri. He asserts, however, that those returns are higher than the Cost of Equity. ${ }^{158}$ Mr. Murray's position, however, fails to recognize that commissions in other jurisdictions consider the same Hope and Bluefield standards cited by

[^52]Mr. Murray, ${ }^{159}$ and (in my experience) base their decisions on the same type of marketbased analyses that have been presented by the ROE witnesses in this proceeding. The Hope and Bluefield decisions require the authorized ROE must be comparable to those available from companies with similar business and financial risks. In that regard, authorizing a return that is equal to Ameren Missouri's Cost of Equity will allow the Company to compete for capital with utilities with commensurate risks. To that point, the Commission has determined that authorized ROEs in other jurisdictions are a relevant benchmark in developing a zone of reasonableness against which the Commission may test the authorized ROE. ${ }^{160}$

## IV. RESPONSE TO THE DIRECT TESTIMONY OF MR. SCHAFER

Q. Please briefly summarize OPC Witness Schafer's ROE analyses and recommendations.
A. OPC Witness Schafer recommends an ROE of 9.01 percent, which represents the simple average of his Constant Growth DCF, Multi-Stage DCF, and CAPM analyses. ${ }^{161}$ Mr. Schafer’s DCF-based estimates include a 45 basis point adjustment, which he applies to recognize the likelihood of changing economic conditions during 2015. ${ }^{162}$ Absent that adjustment, Mr. Schafer’s average result would be approximately 8.70 percent. To support his recommendation, Mr. Schafer produces a series of pro forma coverage ratios analyses from which he concludes that his 9.01
${ }^{159}$ Ibid., at 11-12.
160 See, for example, Report and Order, Case No. ER-2011-0028, at 67.
161 Direct Testimony of Lance E. Schafer, at 3, 37.
162 Ibid., at 16, 20, 26.
percent ROE recommendation "should support continuation of Ameren Missouri’s current credit rating and financial risk profile." ${ }^{163}$

## Q. Are there specific issues on which you agree with Mr. Schafer?

A. Yes, there are. I generally agree with the screening criteria on which Mr. Schafer relies to develop his proxy group. As briefly discussed below, although we disagree as to one element of those criteria, I do not find his proxy group itself to be unreasonable. Regarding the methods used to estimate the Cost of Equity, I agree with Mr. Schafer that no single model provides the most reliable estimate under all market conditions, and that it is appropriate to use multiple methods. ${ }^{164}$ As to the Constant Growth DCF model, I agree with Mr. Schafer’s focus on expected earnings growth rates, and with his conclusion that long-term nominal GDP growth is the proper measure of terminal growth for the Multi-Stage DCF model. Although those areas of agreement are few in number, they do reduce the scope of differences that I otherwise would address in this section of my Rebuttal Testimony.

## Q. Please now summarize the principal areas of disagreement between

 you and Mr. Schafer.A. Our principal areas of disagreement include: (1) the overall reasonableness of Mr. Schafer’s 9.01 percent ROE recommendation; (2) Mr. Schafer's reliance on the Constant Growth DCF model results, including his 45 basis point adjustment; (3) the structure and application of the Multi-Stage DCF model; (4) the application of the

[^53]CAPM; and (5) Mr. Schafer's conclusion that his recommendation supports the Company's credit and financial risk profile. I discuss each of those issues in turn, below.
Q. Before turning to those issues, please briefly address Mr. Schafer's proxy group, and the screening criteria that he applies to develop that group.
A. As noted above, there is a considerable degree of overlap between our two proxy groups; eight of Mr. Schafer's ten proxy companies are in my proxy group, as well. ${ }^{165}$ In large measure, that consistency is the result of similar screening criteria. The difference between our proxy groups appears to be largely the result of Mr. Schafer's use of revenue, rather than operating income as a screening criterion, and the basis on which Mr. Schafer excluded companies that had been involved in mergers or other transactions. In particular, three companies in my proxy were excluded from Mr. Schafer’s group on the basis of revenue (NextEra Energy: NEE; Otter Tail Power: OTTR); three were excluded based on transactions (Duke Energy: DUK; Cleco Corporation: CNL; Northeast Utilities: NU); one was eliminated due to its dividend history (Empire District Electric: EDE).
Q. What is your concern with the use of revenue, rather than income, as a screening criterion?
A. Measures of income are far more likely to be considered by the financial community in making credit assessments and investment decisions than are measures of revenue. From the perspective of credit markets, measures of financial strength and liquidity are focused on cash from operations, which is directly derivative of earnings, as

[^54]opposed to revenue. As discussed in my response to Mr. Murray, Moody’s assigns a 40.00 percent weight to measures of financial strength and liquidity, of which 32.50 percent specifically relates to the ability to cover debt obligations with cash from operations. Although I disagree with his conclusions, I note that Mr. Schafer himself calculates a series of coverage ratios that are derived from income. ${ }^{166}$

Just as rating agencies focus on measures of cash from operations, equity investors prefer measures of income in assessing equity valuation levels: common measures of relative equity valuation include the Price/Earnings ratio, and the ratio of Enterprise Value/EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization). Revenue, however, may be several steps removed from the earnings and cash flows that that are the basis of equity valuations. Energy trading and marketing units, for example, often represent high revenue but low margin operations. Those operations may generate a comparatively large proportion of the combined entity's revenue, but only a small percentage of its income. In such cases, focusing on revenue may mislead the analyst into assuming that a given operating unit is the primary driver of expected growth, when other business segments create the majority of earnings and cash flows. Here, we are considering whether the underlying utility is the principal source of long-term growth and as such, it could be misleading to focus on revenue rather than earnings for the purpose of identifying proxy companies.

[^55]Q. Turning now to companies eliminated due to transactions, do you agree with Mr. Schafer's decision to remove both Cleco Corporation, Duke Energy, and Northeast Utilities?
A. As discussed in my response to Mr. Murray, because the Cleco transaction fell well within Mr. Schafer's analysis period, I agree that it should be excluded from his proxy group. ${ }^{167}$ I disagree, however, that either Duke Energy or Northeast Utilities should be excluded. As Mr. Schafer's workpapers correctly point out, Duke Energy completed its merger with Progress Energy in July 2012, over two years ago and well before the beginning of his analytical period in this case. Similarly, Mr. Schafer's workpapers noted that Northeast Utilities completed its merger with NSTAR in 2012. As such, I do not agree that the market data relating to either of those two companies would be biased, or would produce misleading results.
Q. Lastly, what is your response to Mr. Schafer's decision to exclude Empire District Electric from his proxy group?
A. Mr. Schafer excluded Empire District Electric Company ("EDE") because the company had not paid consecutive quarterly dividends for four years. Looking more closely at EDE, we see that it suspended its dividend for two quarters in May 2011, after its service territory was severely damaged by the Joplin, Missouri tornados. The company resumed its dividend in February 2012, and has paid twelve consistent quarterly dividends since then. In fact, but for the two quarter suspension, EDE had paid consistent quarterly dividends since at least 1987. Looking forward, the company sees opportunities

[^56]for both earnings and dividend growth. ${ }^{168}$ Given the circumstances surrounding the dividend suspension and having no reason to believe that EDE will suspend its future dividend payments, I disagree with Mr. Schafer’s decision to exclude that company.

## A. Reasonableness of Mr. Schafer's 9.01 Percent ROE Recommendation

Q. Before turning to specific methodological issues, do you believe that

## Mr. Schafer's 9.01 percent ROE recommendation is a reasonable estimate of the

## Company's Cost of Equity?

A. No, I do not. Putting aside the various methodological issues discussed below, Mr. Schafer’s 9.01 percent ROE recommendation falls well below the returns authorized recently for the vertically integrated electric utilities against which Ameren Missouri must compete for capital - it even falls well below the returns authorized for natural gas distribution utilities. As a practical matter, vertically integrated electric utilities face operating, environmental and capital acquisition risks associated with the ownership and operating of generating facilities to which natural gas utilities are not exposed. That difference in risk profiles has been reflected in the returns authorized for the two groups: since the year 2000, vertically integrated electric utilities have been awarded ROEs 24 basis points higher than those awarded to natural gas utilities. ${ }^{169}$ In any case, the average authorized ROE for natural gas utilities during calendar year 2014 was 9.78 percent, approximately 80 basis points above Mr. Schafer’s 9.01 percent ROE recommendation.

[^57]Although Mr. Schafer addresses many analytical issues in his testimony, nowhere does he explain why the Company is so much less risky than other vertically integrated electric utilities, or how it is that Ameren Missouri faces fewer or lower risks than natural gas distribution companies. The distinction between Mr. Schafer’s recommendation and recently authorized returns becomes even more acute when we recognize that his 9.01 percent estimate would be 30 basis points lower still, absent the 45 basis point adjustment made to his DCF-based estimates. In my view, an ROE recommendation for Ameren Missouri that falls approximately 95 basis points below the returns currently authorized for vertically integrated electric utilities (and nearly 80 basis points below the returns authorized for natural gas utilities) should be viewed with considerable caution.

## B. Application of the Constant Growth Discounted Cash Flow Model

Q. Please briefly summarize Mr. Schafer's Constant Growth DCF analyses and the conclusions that he draws from the model's results.
A. Mr. Schafer calculates Constant Growth DCF estimates as the sum of (1) the expected dividend yield, and (2) the expected growth rate. The expected dividend yield reflects the average of weekly high and low prices over the thirteen weeks ended November 17, 2014, together with the current annualized dividend. Mr. Schafer then adjusts the resulting yield by one-half of the expected growth rate. That calculation (that is, the expected dividend yield) is largely consistent with the approach used in my Direct and Rebuttal Testimony. Regarding the expected growth rate, Mr. Schafer relies on
earnings growth projections from Value Line, Zacks, and I/B/E/S. ${ }^{170}$ Here again, Mr. Schafer's approach is consistent with mine.

Based on those assumptions, Mr. Schafer calculates an average Constant Growth DCF result of 8.77 percent. ${ }^{171}$ Mr. Schafer, however, adjusted that result based on his "further study" to ensure that certain model inputs "were not unduly influenced by shortterm economic conditions." ${ }^{172}$ Focusing on the dividend yield component of the model, Mr. Schafer pointed out that utility sector valuations "increased dramatically in 2014" ${ }^{173}$ and that such changes have important implications for the Constant Growth DCF model.
Q. How did Mr. Schafer take the increase in utility stock valuations into account in his analysis?
A. In essence, Mr. Schafer observed that both historical and projected dividend yields for his proxy companies exceeded the current dividend yield by approximately 45 basis points. ${ }^{174}$ Mr. Schafer also observed that Value Line expects interest rates to increase in the 2017 to 2019 time period, and that the Federal Reserve soon will increase interest rates. Mr. Schafer concludes that because current dividend yields are lower than both historical and projected yields, and investors expect interest rates to rise in the future, it would be reasonable to adjust the observed dividend yield by 45 basis points to account for those factors. That adjustment increases Mr. Schafer’s Constant Growth DCF estimate from 8.77 percent to 9.22 percent.

[^58]
## Q. What is your response to Mr. Schafer on those points?

A. First, I agree with Mr. Schafer that recent market conditions likely violate an important assumption underlying the Constant Growth DCF model (that the P/E ratio will remain constant in perpetuity), thereby calling into question the model's reliability. Although I appreciate that Mr. Schafer recognized that his Constant Growth DCF result were unduly low, I disagree with his approach to address that concern. Although it is true that interest rates are expected to rise, that increase is associated with expectations of higher macroeconomic growth. ${ }^{175}$ That is, the same economic factor that calls for increases in dividend yields also calls for increases in expected growth rates. Because Mr. Schafer focused on only expected dividend yields and excluded the effect on expected growth, his adjustment is incomplete.

Second, and perhaps more fundamentally, the conditions that Mr. Schafer identify violate one of the principal assumptions of the Constant Growth DCF model, that the Price/Earnings ratio will remain constant in perpetuity. Historically, utility stocks, including Mr. Schafer's proxy companies, have traded at P/E ratios less than the market P/E ratio. Data provided by Bloomberg, for example, indicates that from 1990 through 2014, the proxy companies' average P/E multiple was approximately 78.00 percent of the market P/E multiple. ${ }^{176}$ As Mr. Schafer points out, however, utility stocks recently have traded well in excess of their historical valuation levels. ${ }^{177}$ Mr. Schafer's Constant

[^59]Growth DCF results therefore assume that the unusually high utility P/E ratios observed during his study period will not change, ever.

There are many reasons why that likely will not be the case. Chief among those factors is that the increase in utility stock prices was highly correlated with the Federal Reserve's asset purchases under its Quantitative Easing policy, a policy that now has been completed. In fact, from January 2003 through August 2012, the period prior to the month in which the Federal Reserve began its third round of Quantitative Easing, the correlation between the Federal Reserve's balance sheet (the measure of the assets purchased under Quantitative Easing) and Mr. Schafer's proxy group average P/E ratio ${ }^{178}$ was negative 7.30 percent; from September 2012 through October 2014 the correlation increased to positive 52.80 percent. It appears, therefore, that past Federal monetary policy was a significant factor in the recent increase in utility P/E ratios and, therefore, in the depressed dividend yields that Mr. Schafer sought to address.

In essence, Mr. Schafer’s 45 basis point adjustment recognizes that his Constant Growth DCF results are unduly low, but does not address the fundamental discontinuities between the model's assumptions, and the market data on which it relies. Because Mr. Schafer's 45 basis point adjustment does not recognize that increased interest rates would be accompanied by increased economic growth, it does not adequately address the model's fundamental shortcomings. In my view, rather than develop an out-of-model adjustment (as Mr. Schafer has done) it is more appropriate to recognize that because the Constant Growth DCF model results are premised on a faulty assumption (i.e., that utility

[^60]P/E ratios will remain elevated in perpetuity), its results are not reliable and should be given little weight in determining the Company's ROE.

## C. Application of the Multi-Stage Discounted Cash Flow Model

Q. Please briefly summarize Mr. Schafer's Multi-Stage Discounted Cash Flow Model.
A. Mr. Schafer’s Multi-Stage DCF model discounts expected dividends over three stages of growth: the first is based on analysts’ earnings growth projections over five years; the third stage is the terminal period reflecting expected GDP growth in perpetuity; the second stage is a transition period between the first and third periods. ${ }^{179}$ The model assumes that in each stage, dividends will grow at the same rate as earnings. Because the third stage is modeled as a terminal price based on the Gordon Model, Mr. Schafer's model is solved iteratively. Those assumptions combine to produce an ROE 8.62 percent, before the same 45 basis point adjustment that Mr. Schafer applied to his Constant Growth DCF results.

## Q. Do you agree with the structure of Mr. Schafer's model?

A. Although I appreciate that Mr. Schafer supplemented his Constant Growth DCF model with the Multi-Stage approach, I disagree with the structure and assumptions underlying his model. In particular, Mr. Schafer’s Multi-Stage model: (1) fails to recognize the likely change in dividend payout ratios during his forecast period; (2) assumes that all dividends are received at the end of each year (that is, it does not reflect the "mid-year convention"); (3) assumes a terminal growth rate that is premised

[^61]on the incorrect assumption that more than 93.00 percent of the proxy companies' terminal value is determined by the first 20 years of cash flows; ${ }^{180}$ and (4) relies an out-of-model, 45 basis point adjustment to arrive at an ROE estimate that exceeds 9.00 percent (but by only seven basis points).
Q. Turning to your first point, what are your concerns regarding the constant payout ratio assumption embedded in Mr. Schafer's model?
A. My first concern is that Mr. Schafer's model appears to maintain one of the assumptions underlying the Constant Growth DCF model, i.e., that earnings and dividends will grow at the same rate. Although it is true that under Mr. Schafer's construct the rate of growth changes across stages, his model assumes that earnings and dividends grow at the same rate within each stage; the model does not accommodate the expected increase in payout ratios over his forecast period. As noted in my Direct Testimony, a principal benefit of the Multi-Stage DCF method is that the structure enables us to address certain of the limiting assumptions underlying the Constant Growth form of the model, including the constant payout ratio assumption. Rather than assuming that dividends will grow at the same rate as earnings, it would be more appropriate to model dividends as the product of earnings and the payout ratio, and use projected earnings as the measure of cash flows.

Over the past several years electric utilities had increased capital investments in response to environmental mandates, system hardening, aging infrastructure, and other capital requirements. During that time, dividends did not increase as quickly as earnings, resulting in relatively low payout ratios. To that point, Mr. Schafer's work papers

[^62]indicate that for the years 2004 through 2007 (that is, before the 2008 - 2009 market contraction) the mean and median payout ratios for his proxy group were approximately 70.00 percent and 67.00 percent, respectively. As of the most recent trailing twelve months, the mean and median payout ratios had fallen to approximately 58.00 percent. ${ }^{181}$
Q. What is the effect of Mr. Schafer's constant payout ratio assumption on his Multi-Stage DCF model results?
A. Because Mr. Schafer's model assumes that dividends will grow at the same rate as earnings in the future, he has assumed that the payout ratio will remain at the current, atypically low level in perpetuity. Since dividends change based on both the rate of growth in earnings and the payout ratio, assuming a historically low payout ratio in perpetuity, without allowing for a reversion to long-term levels, produces lower expected dividends, and therefore a lower ROE estimate.
Q. Please now explain why the mid-year convention, rather than the year-end convention, is the more appropriate approach in calculating cash flows under the Multi-Stage DCF Model.
A. As discussed in my responses to Messrs. Murray and Gorman, utilities (including the proxy companies) pay dividends on a quarterly basis. Assuming that the entire dividend is paid at year-end unrealistically defers the timing of the quarterly cash flows (that is, the quarterly dividends), even though they are paid throughout the year. The mid-year convention, on the other hand, assumes that cash flows are received (on average) in the middle of the year, such that half the quarterly dividend payments are received prior to the assumed dividend payment date, and half are received after.

181 In each case, as reported by Morningstar in Mr. Schafer’s work papers.
Q. What is the effect of revising Mr. Schafer's model to reflect the midyear convention?
A. The mid-year convention has the effect of increasing Mr. Schafer's results by approximately 16 basis points. Even with that change, however, the model produces an unreasonably low estimate of the Company's Cost of Equity.
Q. Turning to the terminal growth rate, please explain how Mr. Schafer developed his estimate.
A. Mr. Schafer's 4.86 percent long-term growth rate represents his estimate of the arithmetic average rate of nominal GDP growth for the first twenty years of his terminal growth period (i.e., 2025 through 2045). Mr. Schafer develops his estimate by combining projections of real GDP growth with estimates of inflation (based on the GDP Price Deflator) for the years 2025 through 2045. ${ }^{182}$ Because those projections end in the year 2040, Mr. Schafer assumes (as I do) that over the long-run the real GDP growth rate will revert to its long-term historical average of approximately 3.30 percent. Regarding the rate of inflation, Mr. Schafer assumes that the 2.17 percent average rate projected by OECD and the Social Security Administration will be in place from 2025 through 2060. ${ }^{183}$ It is interesting to note that the 5.54 percent long-term growth rate that Mr. Schafer assumes for the years 2041 through 2045 is only nine basis points removed from the 5.63 percent terminal growth rate used in my Multi-Stage DCF analysis.

[^63]Q. Do you have any observations regarding the method by which

## Mr. Schafer developed his terminal growth rate estimate?

A. Yes, I do. Mr. Schafer chose to limit his horizon to the 20 years ending in 2045 based on an article by Aaron Rotkowski and Evan Clough, which suggests that the "majority" of the terminal value is generated within the "first few years" beyond the projection period. In particular, Mr. Schafer states that " $93.9 \%$ percent of the value from the terminal value calculation (i.e., the stage three calculation) is accounted for in the 20 years that follow the period for which that calculation is done..." ${ }^{184}$ It is important to note, however, that the assumptions contained in that article are quite different than those used in Mr. Schafer’s analysis. In particular, in arriving at their 93.90 percent estimate Rotkowski and Clough assume a discount rate of 15.00 percent, and a terminal growth rate of zero percent. ${ }^{185}$ In contrast, Mr. Schafer’s Constant Growth DCF model (which is the re-arranged version of the Gordon Model) assumes an average growth rate of 5.03 percent, and an average discount rate of 8.77 percent (before the 45 basis point adjustment).

If we were to rely on Mr. Schafer's assumptions, the length of time needed to realize approximately 93.90 percent of the value under the Gordon model is substantially longer than 20 years. In fact, as shown in Schedule RBH-R20, it takes (on average) 78.30 years to realize 93.90 percent of his proxy companies' value. Consequently, Rotkowski and Clough's theory of limiting the long-term growth rate averaging period to 20 years is based on assumptions far different than those contained in Mr. Schafer's

[^64]analyses and if applied to his analyses, has the effect of unduly reducing his Multi-Stage DCF model results.

## Q. What would be the effect of extending Mr. Schafer's averaging period

## from 20 to 60 years?

A. Extending the averaging period has the practical effect of including more observations with annual GDP growth rates of 5.54 percent. If we were to extend the averaging period from 20 to 60 years, the average annual growth rate would increase from 4.86 percent to 5.30 percent. That one change would increase Mr. Schafer’s average Multi-Stage DCF result from 8.62 percent to 8.97 percent; reflecting the midyear convention further increases the result to 9.14 percent. Similarly, if we were to extend the averaging period to 2125 (that is, one-half of the period needed to realize the full value of the expected cash flows), the average growth rate would increase to 5.40 percent, and the mid-year convention results would increase to 9.21 percent. That 9.21 percent result, together with Mr. Schafer's 45 basis point adjustment produces an ROE estimate of 9.66 percent.

Lastly, as noted above Mr. Schafer's long-term growth rate is only nine basis points removed from the 5.63 percent rate used in my Multi-Stage DCF analysis. If we were to adopt 5.63 percent as the terminal growth rate in Mr. Schafer's model, the average result would be 9.40 percent (based on the mid-year convention), which would produce an adjusted ROE estimate of 9.85 percent (including the 45 basis point adjustment). As discussed earlier, however, Mr. Schafer's model does not reflect the likely increases in dividend payout ratios during the forecast period. If we were to reflect that change, the 9.66 percent ROE estimate likely would increase further.

## D. Application of the Capital Asset Pricing Model

Q. Please briefly summarize Mr. Schafer's CAPM analysis and results.
A. Mr. Schafer’s CAPM analyses reflect (1) assumed risk-free rates of 3.20 percent (current) 4.50 percent (forecast); (2) Beta coefficients provided by Value Line; and (3) measures of the arithmetic and geometric historical average Market Risk Premia based on certain data provided by Morningstar. ${ }^{186}$ Based on those inputs, Mr. Schafer produces CAPM estimates of 7.44 percent (based on the current risk-free rate) and 8.74 percent (based on the projected risk-free rate).
Q. What are the principal areas in which you disagree with Mr. Schafer's analysis?
A. First, I do not believe that CAPM results of 7.44 percent and 8.74 percent are meaningful estimates of the Company's Cost of Equity. As discussed elsewhere in my Rebuttal Testimony, as a practical matter the average authorized ROE for vertically integrated electric utilities has been well in excess of those estimates. That perspective is important since Mr. Schafer’s 9.01 percent ROE recommendation gives one-third weight to his 8.74 percent CAPM estimate. That observation aside, I strongly disagree with Mr. Schafer's Market Risk Premia estimates (4.60 percent and 6.20 percent for the geometric and arithmetic average, respectively).

[^65]Q. Turning to his MRP estimates, do you agree with Mr. Schafer's use of the total return on long-term government bonds in that calculation?
A. No, I do not. As Morningstar points out, the total return on a security is composed of three components: (1) the income return; (2) capital gains (or capital losses, if the value of the security falls); and (3) reinvestment return. ${ }^{187}$ The income return is generally defined as the coupon, or interest rate on the security, which does not change over the life of the security. In contrast, the value of the security rises or falls as interest rates change, resulting in uncertain capital gains. As such, the income return is the only "riskless" component of the total return. Consequently, it is the income-only portion of the return, as opposed to the total return, that should be used in calculating the MRP.

## Q. Why do you disagree with Mr. Schafer's use of geometric average returns?

A. As noted in my response to Mr. Murray, the important distinction between the arithmetic and geometric averages is that the arithmetic mean assumes that each periodic return is an independent observation and, therefore, incorporates uncertainty into the calculation of the long-term average. The geometric mean, by contrast, is a backward-looking calculation that essentially equates a beginning value to an ending value over a specific period of time. Geometric averages, therefore, provide a standardized basis of review of historical performance across investments or investment managers; they do not, however, reflect forward-looking uncertainty. In any case,

[^66]Morningstar (the source of Mr. Schafer's data) makes clear that the arithmetic mean is the appropriate measure for the purpose of the CAPM. ${ }^{188}$

## Q. What are your conclusions regarding Mr. Schafer's CAPM analyses

 and results?A. The principal challenge with Mr. Schafer's CAPM analysis lies in his estimates of the expected Market Risk Premium. Aside from the issues noted above, the 6.20 percent Market Risk Premium on which Mr. Schafer's 9.37 percent (arithmetic average) CAPM result relies assumes a 12.10 percent market return, and a 5.90 percent total return on long-term Government bonds. Even if we were to look at the income-only portion of the long-term Government bond return, it still would be 5.10 percent, or 60 basis points above the 4.50 percent return assumed in Mr. Schafer's CAPM analyses. Because the equity risk premium moves inversely with changes in interest rates, it is apparent that Mr. Schafer’s 6.20 percent MRP does not reasonably reflect the current market. On that basis, even the higher of Mr. Schafer's two CAPM estimates (i.e., 9.37 percent) is unduly low.

Lastly, the lowest ROE authorized for any electric utility over the last thirty years was 8.75 percent, one basis point below Mr. Schafer’s 8.74 percent average CAPM estimate. ${ }^{189}$ Nonetheless, Mr. Schafer gives one-third weight to his CAPM estimate in arriving at his 9.01 percent ROE recommendation.
${ }^{188}$ Ibid.
189 As reported by Regulatory Research Associates. The 8.75 percent ROE was authorized for United Illuminating Company in February 2009 by the Connecticut Public Utility Regulatory Authority. Excludes formula rate based ROEs implemented in Illinois.

## E. Effect of Mr. Schafer's ROE Recommendation on Ameren Missouri's Credit Profile

Q. What does Mr. Schafer conclude regarding the effect of his 9.01 percent ROE recommendation on the Company's credit profile?
A. Mr. Schafer expects that his recommendation "should support Ameren Missouri's current rating." ${ }^{190}$ Although he acknowledges that a comprehensive credit assessment is beyond the scope of his analyses, Mr. Schafer concludes that two pro forma coverage ratio calculations "will provide evidence that [his] recommendation supports the Company's current rating." ${ }^{191}$ After performing those two calculations, Mr. Schafer concludes that his "recommended return on equity should support continuation of Ameren Missouri's current credit rating and financial risk profile." ${ }^{192}$
Q. Do you agree with Mr. Schafer's conclusion in that regard?
A. No, I do not. Mr. Schafer arrives at his conclusion based on two pro forma coverage calculations: (1) the ratio of Earnings Before Interest, Taxes, Depreciation, and Amortization ("EBITDA") to interest expense; and (2) the ratio of Debt to EBITDA. Mr. Schafer states that because those pro forma calculations fall within the bands established by Standard \& Poor's for the Company's current credit rating, reducing the ROE by 79 basis points (to 9.01 percent) would have no effect on Ameren Missouri’s credit profile. I disagree. As discussed below, a wide range of ROE estimates create pro forma coverage ratios within the same bands; that does not mean that rating agencies or investors would consider Mr. Schafer’s 9.01 percent ROE to be credit

[^67]supportive. Rather, rating agencies such as Moody's base their ratings determinations on a variety of factors, well beyond the two ratios that Mr. Schafer considered.
Q. Turning to your first point, have you tested the range of ROE estimates that provide pro forma coverage ratios in the same financial risk profile range as Mr. Schafer's 9.01 percent recommendation?
A. Yes, I have. As a preliminary matter, Standard \& Poor's "core" credit ratios include Funds From Operations ("FFO") to Debt, rather than EBITDA to Interest, as Mr. Schafer suggests (S\&P does include the ratio of Debt to EBITDA). ${ }^{193}$ FFO differs from EBITDA in that FFO excludes Interest and Taxes, whereas EBITDA includes those two elements. In any event, my earlier observation holds: A wide range of ROE estimates produce coverage ratios associated with the Company's current rating.

To develop the range of results that would produce coverage ratios within the same range, I first replicated Mr. Schafer’s analysis. I then added the ability to calculate FFO, and the ratio of FFO to Debt. From there, I simply solved for the minimum ROE that would produce coverage ratios within Mr. Schafer's range, and found that a return as low as 7.05 percent does so. At the same time, my 10.40 percent ROE also produces comparable ratios. Although both fall within the same range, my recommended return provides stronger levels of coverage and, therefore, would provide investors with more confidence in the Company's ability to fund its fixed obligations.

[^68]
## Q. Turning to your second point, are there issues beyond coverage ratios

## that rating agencies consider in arriving at ratings determinations?

A. Yes, there are. As noted in my response to Mr. Murray, 50.00 percent of the factors that Moody's considers relate to the regulatory environment. In fact, while Moody's affords the ratios of Cash Flow to Interest, and Cash Flow to Debt a combined weight of 22.50 percent, it gives the more subjective factors of the Consistency and Predictability of Regulation, and the Sufficiency of Rates and Returns a combined weight of 25.00 percent. ${ }^{194}$ Standard \& Poor's likewise considers the nature of the regulatory environment an important credit factor:

We base our assessment of the regulatory framework's relative credit supportiveness on our view of how regulatory stability, efficiency of tariff setting procedures, financial stability, and regulatory independence protect a utility's credit quality and its ability to recover its costs and earn a timely return. Our view of these four pillars is the foundation of a utility's regulatory support. ${ }^{195}$

Regarding "regulatory stability", S\&P notes that the key factors for consideration include:

- Transparency of the key components of the rate setting and how these are assessed;
- Predictability that lowers uncertainty for the utility and its stakeholders; and
- Consistency in the regulatory framework over time. ${ }^{196}$

In my view, therefore, it is incorrect to conclude that an ROE of 9.01 percent, which is nearly 80 basis points below the Company's existing authorized return, and 95

[^69]basis points below the national average return, would support Ameren Missouri’s credit profile. Rather, it is more likely that the qualitative factors considered by S\&P and Moody's would reflect the inconsistent and essentially unpredictable nature of such an outcome, and would put considerable downward pressure on the Company's credit rating and profile.

## V. RESPONSE TO THE DIRECT TESTIMONY OF MR. GORMAN

Q. Please briefly summarize Mr. Gorman's recommendation regarding the Company's Cost of Equity.
A. Mr. Gorman recommends an ROE of 9.30 percent, within a recommended range of 9.00 percent to 9.60 percent. ${ }^{197}$ Mr. Gorman establishes his ROE recommendation by reference to three versions of Discounted Cash Flow method (with results ranging from 8.57 percent to 8.95 percent, with a point estimate of 9.00 percent), his Risk Premium estimates (ranging from 9.24 percent to 9.91 percent, with a point estimate of 9.60 percent), and his Capital Asset Pricing Model analyses (ranging from 8.82 percent to 9.66 percent, with a point estimate of 9.24 percent). ${ }^{198}$

There are several points of Mr. Gorman's testimony and analyses that are at odds with each other. On the one hand, for example, Mr. Gorman concludes that his Constant Growth DCF estimates are based on growth rates that are not "sustainable" and therefore overstate the Cost of Equity. ${ }^{199}$ On the other hand, Mr. Gorman gives equal weight to his Risk Premium results, which are nearly 60 basis points above those estimates. Moreover (and as discussed in more detail below), Mr. Gorman’s Risk Premium analysis (which

[^70]forms the upper end of his range) is highly subjective and ignores important information provided in his own data. Mr. Gorman's 9.30 percent ROE recommendation, therefore, is based on analytical results that are not supported by his own conclusions, are highly subjective, and are inconsistent with observable data.
Q. What are the principal areas in which you disagree with

## Mr. Gorman?

A. The principal analytical areas in which I disagree with Mr. Gorman include: (1) the use of a near-term estimate of Sustainable Growth in the Constant Growth DCF model; (2) the application of the Multi-Stage DCF model; (3) the Market Risk Premium component of the CAPM and, in particular, the expected market return from which the MRP is calculated; (4) the assumptions and methods underlying Mr. Gorman's Risk Premium analyses; and (5) Mr. Gorman's assessment of the Company's risk relative to the proxy group.

## A. Application of the Constant Growth DCF Model

Q. As a preliminary matter, do Mr. Gorman's Constant Growth DCF model results weigh heavily in his $\mathbf{9 . 3 0}$ percent ROE recommendation?
A. Yes, they do. As noted earlier, Mr. Gorman's 9.30 percent recommendation is the midpoint of his 9.00 percent to 9.60 percent recommended range; the bottom end of that range ( 9.00 percent) is based on Mr. Gorman's Constant Growth DCF estimates. ${ }^{200}$ It appears, then, that Mr. Gorman gives significant weight to his Constant Growth DCF estimates, and that he does so despite his view that those estimates

[^71]somewhat "overstate" the Cost of Equity for companies such as Ameren Missouri. ${ }^{201}$ If Mr. Gorman had used the 4.60 percent growth rate that he considers to be sustainable in the long-run, ${ }^{202}$ his Constant Growth DCF results would be approximately 8.50 percent. ${ }^{203}$ What Mr. Gorman does not make clear, however, is why he would give weight to his Risk Premium estimates, which are approximately 80 basis points higher than the level that he suggests is "sustainable".
Q. Before turning to Mr. Gorman's analyses in particular, do you have any concerns with the Constant Growth DCF model in general, and the weight that Mr. Gorman applies to those results in particular?
A. Yes, I do. As discussed in Section II, the Constant Growth DCF model is based on several underlying assumptions, one of which is that the Price/Earnings ratio will remain constant, in perpetuity. However, that was not the case for Mr. Gorman's proxy group. From January 2004 until August 2014 (that is prior to the period over which Mr. Gorman calculated his average prices), the average P/E ratio for Mr. Gorman's proxy group was 16.13 ; over the thirteen weeks during which he calculated the average prices used in his Constant Growth DCF models, the average P/E ratio was 18.31. ${ }^{204}$ As to the overall market (as measured by the S\&P 500 Index), the corresponding long-term and thirteen-week averages were 16.50 and 17.67, respectively (see Chart 9 below).

[^72]Chart 9: Mr. Gorman's Proxy Group vs. S\&P 500 Price/Earnings Ratio ${ }^{205}$


That data brings up several important points. First, during the period over which Mr. Gorman calculated his average prices the proxy group’s P/E ratio well exceeded its long-term average (that is, the $\mathrm{P} / \mathrm{E}$ ratio expanded). Although the market $\mathrm{P} / \mathrm{E}$ ratio likewise expanded, it did not do so to the same degree. As a consequence, Mr. Gorman's group, which historically had traded at a slight discount to the market, began to trade at a premium to the market; that premium included Mr. Gorman’s August to November 2014 analysis period.

In essence, Mr. Gorman's Constant Growth DCF estimates (which, as noted earlier form the low end of his recommended range) assumes that proxy group's P/E ratio will remain at its recently elevated level in perpetuity. Equally important, the analysis assumes that the proxy group will trade at a premium to the market, also in perpetuity.

[^73]Although I appreciate that Mr. Gorman's analysis simply reflects current market data, it is important to assess that data and determine the weight it should be given in arriving at an ROE recommendation. In my view, the abnormally elevated P/E ratios do not support the weight that Mr. Gorman applies to those results.
Q. Those issues aside, do you agree with Mr. Gorman's application of the

## Constant Growth DCF model?

A. Mr. Gorman's application of the Constant Growth DCF (Analysts' Growth) model is generally consistent with mine. ${ }^{206}$ For example, we both rely on average stock prices to avoid the effect of anomalous fluctuations in a given day and use projected EPS growth estimates as the growth component of the model. Although we use different approaches to calculate the expected dividend yield, I do not believe Mr. Gorman's approach is unreasonable. ${ }^{207}$

Although Mr. Gorman considers both mean and median results, ${ }^{208}$ more than half of the results contained in Mr. Gorman's Constant Growth DCF (Analysts’ Growth) are below reasonable estimates of the Company's Cost of Equity. Of the 44 rate cases involving vertically integrated electric utilities since 2013, none included an authorized ROE below 9.00 percent. ${ }^{209}$ In contrast, eight of the twelve results contained in Mr. Gorman's Schedule MPG-4 are below 9.00 percent; three are below 8.00 percent. Conversely, only three of Mr. Gorman's twelve estimates are as high as 10.00 percent, which is the approximate median authorized ROE for vertically integrated electric

[^74]utilities since January 2013. ${ }^{210}$ On that basis alone, Mr. Gorman’s mean and median Constant Growth DCF results model should be given little, if any weight.

## Q. Do you agree with Mr. Gorman's Sustainable Growth Constant

## Growth DCF approach?

A. No, I do not. The Sustainable Growth model (also referred to as the "Retention Growth" model) is premised on the theory that a firm's growth is a function of its expected earnings and the extent to which those earnings are retained and reinvested in the enterprise. In its simplest form, the model represents long-term growth as the product of the retention ratio (i.e., the percentage of earnings not paid out as dividends, referred to below as ("b") and the expected return on book equity (referred to below as "r")). Thus, the simple "b x r" form of the model projects growth as a function of internally generated funds. That form of the model is limiting, however, in that it does not provide for growth funded from external equity.

The "br +sv " form of the Sustainable Growth estimate is meant to reflect growth from both internally generated funds (i.e., the "b x r" term) and from issuances of equity (i.e., the "sv" term). The first term, which is the product of the retention ratio (i.e., the portion of net income not paid in dividends) and the expected return on equity (i.e., "r") represents the portion of net income that is "plowed back" into the Company as a means of funding growth. The "sv" term is represented as:
$\left(\frac{m}{b}-1\right)$ x Growthrate in CommonShares Equation [1]

210 Ibid. where $\frac{m}{b}$ is the Market-to-Book ratio.

In this form, the "sv" term reflects an element of growth as the product of (a) the growth in shares outstanding, and (b) that portion of the market-to-book ratio that exceeds unity. As discussed in more detail below, the Sustainable Growth method assumes that the payout ratio and earned return on common equity will remain constant in perpetuity, an assumption that may not hold true. Further, historical market data and independent research do not support the principal assumption of the Sustainable Growth model, i.e., that increased retention ratios are directly and positively related to future earnings growth, for electric utilities.

In any case, the salient issue in assessing growth rates in the context of the DCF model is whether investors tend to rely on a particular estimate of growth. Prior academic research indicates that, consistent with the approach used in my analyses (as discussed in my Direct Testimony ${ }^{211}$ and my response to Mr. Murray), investors rely on analysts’ earnings growth projections in valuing equity securities. While Mr. Gorman may be of the view that analyst growth rates are not sustainable, the relevant issue is whether investors rely on those projections in making their investment decisions.
Q. Are there other aspects of Mr. Gorman's sustainable growth estimate that are inconsistent with his 8.71 percent ROE estimate?
A. Yes, there are. Schedule MPG-6, Page 1 of 2 provides the expected Return on Equity, which represents the "r" term of his Sustainable Growth estimate. The average Return on Equity (as adjusted for growth in Book Value) used in his calculations

[^75]is 10.05 percent, 25 basis points higher than the Company's currently authorized ROE of 9.80 percent. I recognize that the Return on Equity used in Mr. Gorman's model is not necessarily the same as the ROE calculated from market-based data. Nonetheless, the ROE determined in regulatory proceedings is applied to the book value of Common Equity, which is the basis of the ROE reported in Mr. Gorman's Schedule MPG-6. Mr. Gorman, however, has not addressed the 134 basis point difference between his Sustainable Growth-based DCF estimate (8.71 percent) and the average expected ROE (10.05 percent).

Putting aside those analytical concerns, as a practical matter eight of the thirteen Sustainable Growth DCF estimates contained in Mr. Gorman’s Schedule MPG-7 are below 9.00 percent, yet only two are as high as 10.00 percent. As discussed earlier, the Constant Growth DCF model must be viewed with great caution in the first instance; results (such as Mr. Gorman's) that are so disconnected from recently authorized returns simply reinforce that need for caution.
Q. Are there other concerns with Mr. Gorman's "sustainable growth" estimate?
A. Yes. It is important to note that the "Sustainable Growth" model itself requires an estimate of the earned return on common equity and is therefore somewhat circular. By adopting Value Line’s earned ROE estimates, Mr. Gorman has effectively pre-supposed the Return on Common Equity projected by Value Line for the proxy group companies. In addition, the use of the "Sustainable Growth" model requires the assumption that the subject company not only maintains its retention ratio and ROE in
perpetuity, but also that the components of "r" (i.e., the earned return on common equity) are reasonably stable over time.

In order to assess whether that assumption holds (that is, whether the components of " r " are stable), I used the "DuPont" formula, which decomposes the Return on Common Equity into three components: the Profit Margin (net income/revenues), Asset Turnover (revenues/net plant), and the Equity Multiplier (net plant/equity). As Schedule RBH-R22 demonstrates, based on Mr. Gorman's proxy group, the product of those three measures is approximately equal (but for rounding) to Value Line's reported Return on Common Equity, on both an historical and projected basis. That analysis also shows that while all three components are expected to change over time, the Profit Margin is expected to increase significantly, as the Asset Turnover ratio moderately improves after substantial compression since 2007.

The decreasing Equity Multiplier (which relates to a greater proportion of equity in the capital structure) is consistent with the general observation that since the 2008 capital market dislocation most often associated with the Lehman Brothers bankruptcy in September 2008, capital-intensive companies such as utilities have been focused on financial integrity and the ability to access the capital markets during turbulent conditions. Given that the fundamental elements of the " r " component of the "Sustainable Growth" model are expected to change over time, I do not believe it is appropriate to use that model as an estimate of constant, perpetual growth.
Q. Are there other reasons why the sustainable growth calculation may not accurately reflect long-term growth rates?
A. Yes, there are. The underlying premise of that model is that future earnings will increase as the retention ratio increases. That is, if future growth is modeled as "b x r" (where "b" is the retention ratio, and "r" is the earned return on book equity), growth will increase as "b" increases. There are several reasons, however, why that may not be the case. Management decisions to conserve cash for capital investments, to manage the dividend payout for the purpose of minimizing future dividend reductions or to signal future earnings prospects, can and do influence dividend payout (and therefore earnings retention) decisions in the near-term. Consequently, it is appropriate to determine whether the data relied upon by Mr. Gorman supports the assumption that higher earnings retention ratios necessarily are associated with higher future earnings growth rates.

## Q. Did you perform any analyses to test that assumption?

A. Yes, I did. For each of the companies in Mr. Gorman's proxy group, I calculated (in each year of the historical period) the dividend payout ratio, the retention ratio, and the subsequent five-year 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. The purpose of that analysis was to determine whether the data source relied upon by Mr. Gorman for his "Sustainable Growth" rate estimates empirically supports the assumption (which, as noted, is central to his Sustainable Growth modeling) that higher retention ratios necessarily produce higher earnings growth rates. See Schedule RBH-R23.

## Q. What did that analysis reveal?

A. As shown in Table 6 (below), there was a significant negative relationship between the five-year earnings growth rate and the earnings retention ratio. That is, on an historical basis, earnings growth actually decreases as the retention ratio increases, which is just the opposite of the central assumption underlying his model. Those findings clearly call into question the reasonableness of Mr. Gorman's reliance on the Sustainable Growth rate.

Table 6: Regression Results ${ }^{212}$

|  | Coefficient | Standard <br> Error | t-Statistic |
| ---: | :---: | :---: | :---: |
| Intercept | 0.137 | 0.017 | 8.133 |
| Retention Ratio | -0.182 | 0.025 | -7.351 |

## B. Application of the Multi-Stage DCF Model

Q. Do you agree with Mr. Gorman's application of the Multi-Stage DCF model?
A. While I agree that the Multi-Stage DCF approach is a reasonable analytical technique, Mr. Gorman's Multi-Stage DCF model contains several assumptions that produce unreasonably low ROE estimates. In particular, Mr. Gorman’s model assumes a perpetual growth rate beginning in the eleventh year of his model (that is, calendar year 2025) based on a GDP growth rate projection that actually ends in 2025. ${ }^{213}$ In addition, Mr. Gorman assumes that all dividends are received at year-end,

[^76]rather than over the course of the year. Those assumptions have the effect of unreasonably decreasing the DCF result.
Q. How does Mr. Gorman's assumption with regard to the timing of dividend payments affect his Multi-Stage DCF model results?
A. Mr. Gorman notes that quarterly dividends in his Multi-Stage DCF model were "annualized (multiplied by 4)." ${ }^{214}$ Considering that Mr. Gorman’s proxy companies pay dividends on a quarterly basis, assuming (as Mr. Gorman has done) that the entire dividend is paid at the end of that year essentially defers the timing of the quarterly cash flows (that is, the quarterly dividends) until year-end, even though they are paid throughout the year. A more reasonable approach would be to assume that cash flows are received (on average) in the middle of the year, such that half the quarterly dividend payments occur prior to the assumed dividend payment date, and half occur after (i.e., the "mid-year convention"). That approach is consistent with the common practice in the Constant Growth DCF model of accounting for periodic growth in dividends by applying one-half of the expected annual dividend growth rate to calculate the expected dividend yield.
Q. How would the mid-year convention affect Mr. Gorman's Multi-Stage

## DCF results?

A. Holding all other assumptions constant, simply changing Mr. Gorman's methodology to reflect the mid-year convention increases both the mean and median results by approximately 17 basis points. ${ }^{215}$

[^77]Q. Do you agree with the long-term growth rate in Mr. Gorman's Multi-

## Stage DCF model?

A. No, I do not. The long-term growth rate represents the expected rate of growth, in perpetuity, as of the beginning of the third, or terminal, stage. ${ }^{216}$ Mr. Gorman assumes a long-term growth rate of 4.60 percent, which is the approximate average of the five year (2016 - 2020) and ten year (2021-2025) nominal GDP growth estimates, as reported by Blue Chip. ${ }^{217}$ Consequently, Mr. Gorman's long-term GDP growth rate projection, which he applies to years eleven through 200 of his model (that is, from year 2025 through 2213), is based on data that includes only year eleven (that is, 2025). That is, despite the fact that the Blue Chip projection period ends in 2025, Mr. Gorman uses it as the measure of expected perpetual GDP growth beginning in 2025 and continuing in perpetuity.

## Q. Are there other benchmarks that put Mr. Gorman's 4.60 percent

## long-term growth rate in context?

A. Yes, there are. While Mr. Gorman suggests that the reasonableness of his ROE estimates may be viewed in the context of his long-term growth projections, an alternative approach is to assess his long-term growth projections in the context of recently authorized ROEs. Given that Mr. Gorman’s Risk Premium approach is premised

[^78]Rebuttal Testimony of
Robert B. Hevert
on the use of authorized returns as a measure of "expectational" data, ${ }^{218}$ it would follow that the long-term growth rate assumed in his Multi-Stage DCF model should produce results that are reasonably consistent with current expectations (that is, with recently authorized equity returns).

Knowing that his average Multi-Stage DCF estimate is 8.57 percent, and that recently authorized equity returns are quite a bit higher (see Schedule RBH-R13, and Mr. Gorman's Schedules MPG-11 and 12), it is reasonable to question the terminal growth rate used in Mr. Gorman’s Multi-Stage DCF analysis. As shown in Schedule RBH-R25, keeping all of Mr. Gorman's data and assumptions constant but for the terminal growth rate, and solving for the growth rate that produces an average ROE of 9.96 percent ${ }^{219}$ produces an implied growth rate of 6.35 percent. ${ }^{220}$ That, of course, is substantially above Mr. Gorman's 4.60 percent estimate, although it is generally consistent with (although somewhat higher than) the assumption included in my MultiStage analysis (5.63 percent) and the long-term geometric average nominal GDP growth rate (6.23 percent). ${ }^{221}$
Q. With those points in mind, did you make any additional adjustments

## to Mr. Gorman's analysis?

A. Yes, Schedule RBH-R24 provides the incremental results of those adjustments. To ensure that I correctly applied the analysis, I first recreated Mr. Gorman’s Multi-Stage model and replicated his results. I then adjusted

[^79]${ }^{219}$ See Schedule RBH-R13. 9.96 percent represents the average authorized return for vertically integrated electric utilities from for the twelve-month period ending November 14, 2014, as reported by Regulatory Research Associates.
220 See Schedule RBH-R25.
221 Source: Bureau of Economic Analysis.

Mr. Gorman's Internal Rate of Return calculation to reflect the mid-year convention (as explained above), and revised the long-term growth rate used in the final stage of Mr. Gorman's model to the more reasonable estimate of perpetual long-term nominal GDP growth described above. The cumulative effect of those adjustments is to increase his median electric proxy group ROE estimate to 9.53 percent. Although those results remain below a reasonable estimate of the Company's Cost of Equity, they are as much as 23 basis points above Mr. Gorman’s 9.30 percent ROE recommendation.
Q. Are there other aspects of Mr. Gorman's model that serve to reduce

## his DCF estimates?

A. Yes, there are. Mr. Gorman assumes that the current level of payout ratios for the proxy group will remain unchanged over the entire study period. Mr. Gorman’s average projected payout ratio for his proxy group is 60.15 percent, below the long-term industry average of 67.23 percent, thus resulting in lower DCF estimates than if the longterm industry average payout ratio was assumed. ${ }^{222}$ That assumption suggests that the current payout ratio, which may be affected by short-term factors such as elevated levels of capital expenditures, is appropriate for all future years. The constant payout assumption, however, does not apply to Mr. Gorman's proxy group. In fact, data provided by Value Line indicates that none of the companies in his proxy group will maintain their payout ratios at a constant level over the next three to five years. My model allows the analyst to reflect assumptions regarding the timing and extent of

[^80]changes in the payout ratio to reflect, for example, increases or decreases in expected capital spending, or transition from current payout levels to long-term expected levels. ${ }^{223}$

## C. Application of Capital Asset Pricing Model

Q. Please summarize Mr. Gorman's CAPM analysis.
A. Mr. Gorman develops two CAPM estimates (9.66 percent and 8.82 percent), based on Morningstar's historical Market Risk Premium estimates of 7.30 percent and 6.20 percent, respectively; Blue Chip's projected 30-year Treasury yield of 4.10 percent (as the risk-free rate), and a 0.76 average proxy group Beta coefficient as reported by Value Line. ${ }^{224}$ For the Market Risk Premium component of the CAPM, Mr. Gorman uses (1) an estimate of 7.30 percent based on the long-term historical arithmetic average real market return from 1926 through 2013 as reported by Morningstar, which he then adjusts for current inflation forecasts; and (2) an estimate of 6.20 percent based on the historical difference between the average return on the $\mathrm{S} \& \mathrm{P}$ 500 and the average total return on long-term government bonds. ${ }^{225}$
Q. Turning first to the expected total return on the market, do you agree with Mr. Gorman's $\mathbf{1 1 . 4 0}$ percent estimate?
A. No, I do not. To put Mr. Gorman's estimate in perspective, it is important to understand how often various ranges of total returns actually have occurred from 1926 to 2013. To perform that analysis, I gathered the annual return on Large Company Stocks reported by Morningstar, produced a histogram of those observations, and

[^81]calculated the probability that a given market return estimate would be observed. The results of that analysis, which are presented in Chart 10, demonstrate that returns of 13.00 percent (which is consistent with my analysis ${ }^{226}$ ) and higher actually occurred quite often.

Chart 10: Frequency Distribution of Observed Market Returns, 1926 - 2013 ${ }^{227}$


In fact, the 12.75 percent and 13.49 percent estimates, which I rely on in my CAPM analysis (as shown in Schedule RBH-R26), represent approximately the 50th percentile of the actual returns observed from 1926 to 2013. In other words, of the 88 annual observations, 45 were 12.75 percent or higher. By that measure, my estimate is entirely consistent with historical experience, although Mr. Gorman’s estimate is low relative to that standard.

[^82]Q. Is Mr. Gorman's use of the historical rate of S\&P $\mathbf{5 0 0}$ total return as a measure of sustainable future market growth consistent with his use of the

## sustainable growth rate in his DCF analysis?

A. No, it is not. The Sustainable Growth rate used in Mr. Gorman's DCF analysis is based on the assumption that there is a positive relationship between the earnings retention ratio and earnings growth. In that regard, Mr. Gorman states:

The internal growth methodology is tied to the percentage of earnings retained in the company and not paid out as dividends. The earnings retention ratio is 1 minus the dividend payout ratio. As the payout ratio declines, the earnings retention ratio increases. An increased earnings retention ratio will fuel stronger growth because the business funds more investments with retained earnings. ${ }^{228}$

While (as discussed above) I do not agree with Mr. Gorman's use of the Sustainable Growth method, it is helpful to consider the current level of the S\&P 500 earnings retention ratio relative to its historical level. If the current market retention ratio is well above its long-term average, it calls into question whether the market will maintain that level in perpetuity. As shown in Chart 11 (below), data reported by Dr. Robert J. Shiller indicates the S\&P 500 earnings retention has trended upward over time and is currently well above its historical average. Consequently, the Sustainable Growth estimate that Mr. Gorman relied upon suggests that future market growth could outpace historical growth.

[^83]Chart 11: S\&P 500 Annual Earnings Retention Ratio, 1926-2013 ${ }^{229}$

Q. Did you also consider where Mr. Gorman's Market Risk Premium estimate falls within the range of historical observations?
A. Yes, I did. Similar to my review of observed market returns, I gathered the annual Market Risk Premia reported by Morningstar and produced a histogram of the observations. The results of that analysis, which are presented in Chart 12, demonstrate that MRPs of at least 10.45 percent (the upper range of my MRP estimates included in my updated analysis; see Schedule RBH-R27) have occurred nearly half of the time.

[^84]4 the same ranges of MRP estimates. Those results, which are provided in Chart 13 5 demonstrate that (based on historical observations) there is approximately a 54.70 percent 6 likelihood that an MRP of at least 10.45 percent will occur.

[^85]Chart 13: Cumulative Probability of Market Risk Premia, 1926-2013 ${ }^{231}$


## D. Application of the Risk Premium Model

Q. Please briefly describe Mr. Gorman's Risk Premium analyses.
A. Mr. Gorman defines the "Risk Premium" as the difference between average annual authorized equity returns for electric utilities, and a measure of long-term interest rates each year from 1986 through September 2014. ${ }^{232}$ Mr. Gorman’s first approach calculates the annual risk premium by reference to the 30 -year Treasury yield, while the second considers the average A-rated utility bond yield. ${ }^{233}$ In each case, Mr. Gorman discards the three lowest and three highest implied equity risk premia, and establishes the range of Risk Premium estimates based on the next highest (or lowest) estimate. In other words, the lower bound of his Risk Premium range is defined by the fourth-lowest risk premium, regardless of the year in which it occurred. In a similar

[^86]Rebuttal Testimony of Robert B. Hevert
manner, the upper bound of Mr. Gorman's Risk Premium range is defined by the fourthhighest estimate, also regardless of the year in which that observation occurred. Mr. Gorman then applies weights of 25.00 percent and 75.00 percent, respectively, to his lower and upper bound estimates. ${ }^{234}$

As to the period over which he gathers and analyzes his data, Mr. Gorman suggests that his 28-year horizon is a "generally accepted period to develop a risk premium study using 'expectational' data." ${ }^{235}$ Mr. Gorman further notes that "it is reasonable to assume that averages of annual achieved returns over long time periods will generally converge on the investors' expected returns," and concludes that his "risk premium study is based on expectational data, not actual investment returns, and, thus, need not encompass a very long historical time period." ${ }^{236}$ Based on those assumptions, Mr. Gorman calculates a range of estimates from 7.74 percent to 10.38 percent which, he suggests, produces a reasonable range of 9.24 percent to 9.91 percent with a (rounded) midpoint of 9.60 percent. ${ }^{237}$
Q. Does Mr. Gorman rely on his Risk Premium model in making his

## ROE recommendation?

A. Yes, he does. As noted above, the upper end of Mr. Gorman's range is set by reference to his Risk Premium model. ${ }^{238}$

[^87]Q. What are your specific concerns with Mr. Gorman's Risk Premium analyses?
A. I have several concerns with Mr. Gorman's analysis: (1) his method of relying on the fourth lowest and highest risk premium is arbitrary and establishes a range of ROE estimates that are predicated on economic and financial conditions that are removed from the current market; (2) Mr. Gorman's method and recommendation ignore an important relationship revealed by his own data, i.e., that the Risk Premium has a strong negative correlation to the level of interest rates (whether measured by Treasury or utility bond yields); and (3) the low end of Mr. Gorman's Risk Premium estimates is far lower than any ROE authorized since at least 1986 and as such, has no relevance in estimating the Company's Cost of Equity.
Q. Turning first to the method by which Mr. Gorman selected the bounds of his Risk Premium estimates, have you reviewed the range of data included in his analysis?
A. Yes, I have. Considering first the Treasury yield-based analysis, I plotted the yields and Risk Premia over the 1986 to 2013 period included in Mr. Gorman’s analysis. That graph is presented in Chart 14 (below).

Chart 14: Mr. Gorman's Treasury Yield-Based Risk Premium Data ${ }^{239}$


There are several important points that may be taken from that data. First, the low end of Mr. Gorman’s Risk Premium range, 4.41 percent, was observed in 1987 and 1991. In my view, discrete observations from economic environments 23 to 27 years ago have little to do with current market conditions. A very visible measure of such differences is the fact that in 1987, Treasury yields exceeded the Risk Premium. As Schedule RBH-R28 demonstrates, however, since the turn of the Millennium, the opposite has been true; the Risk Premium has consistently exceeded Treasury yields. By that measure alone, it is clear that the low end of Mr. Gorman's range has little, if any, relevance to the current market environment.

As to the high end of his range, Mr. Gorman's convention of discarding the three highest Treasury yield-based Risk Premium estimates has the effect of ignoring observations from 2009, 2012 and 2013; the Utility bond-based estimates exclude 2012, 2013 and 2014. Beginning in 2008, the Federal Reserve proceeded on a steady path of

[^88]initiatives designed to lower long-term Treasury yields. ${ }^{240}$ By not including the most recent data in his analysis, Mr. Gorman's selections specifically exclude the market conditions that he finds important in other aspects of his analyses. ${ }^{241}$ Moreover, the Risk Premium tends to move inversely with changes in interest rates: As interest rates have fallen, the Risk Premium has increased. Mr. Gorman's approach, therefore, removes very recent observations for which the Risk Premium would be relatively high.

Combining data from the highest and lowest (rather than the fourth highest and lowest) return produces an ROE estimate of 10.37 percent relative to the 9.91 percent result that Mr. Gorman reports. ${ }^{242}$ In fact, moving from the fourth to the first highest and lowest return would increase the ROE estimate by 46 basis points while an equivalent move downward (i.e., moving from the fourth to the seventh) would decrease the ROE by only 8 basis points. ${ }^{243}$ Given the rather subjective nature of the analysis, and in light of the significant skew in results, it is my view that Mr. Gorman's Risk Premium analysis tends to understate the Company's Cost of Equity.

In fact, if we were to establish the range of estimates based on the highest and lowest risk premium over the past ten years, rather than the fourth highest and lowest over the past 29 years, the results change considerably. As shown in Schedule RBH-R28, combining the same expected Treasury yield (4.10 percent) and utility bond yield (4.71 percent) with the highest and lowest risk premia observed over the most recent ten years

[^89](2005 through 2014) produces a range of 10.10 percent to 10.76 percent. ${ }^{244}$ The midpoint of that range is 10.43 percent, only three basis points removed from my 10.40 percent ROE recommendation.
Q. Please now elaborate on your earlier observation that the Risk Premium has increased as Treasury yields have decreased.
A. As Schedule RBH-R28 demonstrates, over Mr. Gorman's study period the Risk Premium has moved inversely to changes in Treasury yields and this relationship is supported by the data contained in Mr. Gorman's Schedules MPG-11 and 12; the correlation between the two is negative 87.64 percent (see Schedule RBH-R28). To put that degree of correlation in perspective, if the two were to move in exactly opposite directions, the correlation would be negative 100.00 percent, if they did not move together at all, the correlation would be zero. Because correlation coefficients by definition are between zero and one (either positive or negative), a correlation of negative 87.64 percent indicates a strong tendency for the Equity Risk Premium to increase as interest rates decrease. Those findings are supported in academic studies. For example, Dr. Roger Morin notes that:
...[p]ublished studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and Lakonishok (1983), Morin (2005), and McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates - rising when rates fell and declining when interest rates rose. ${ }^{245}$

[^90]Turning back to Mr. Gorman's data, a simple linear regression analysis reveals that for every 100 basis point decrease in yields, the Risk Premium increases by approximately 43 basis points (see Schedule RBH-R28). ${ }^{246}$ That result is consistent with those found by Maddox, Pippert and Sullivan, who determined that the Risk Premium would increase by 37 basis points for every 100 basis point change in the 30 -year Treasury yield. ${ }^{247}$ Citing Harris and Marston, the authors note a similar estimate of 36 basis points. ${ }^{248}$
Q. Have you made any adjustments to Mr. Gorman's analysis to reflect

## the concerns discussed above?

A. Yes, I have. While I believe that the regression analysis described in my Direct Testimony is the appropriate method, I have adjusted Mr. Gorman’s analysis to reflect the Risk Premium associated with the prevailing level of interest rates. Based on Mr. Gorman’s Schedule MPG-11, the average 30-year Treasury yield in 2013 and 2014 was 3.46 percent; the average Risk Premium during those years was 6.31 percent. Applying the projected 4.10 percent (30-year) Treasury yield to that risk premium produces an ROE estimate of 10.41 percent. Assuming the respective 2013 and 2014 Risk Premium estimates (combined with the projected 4.10 percent Treasury yield) produces a range of 10.38 percent to 10.44 percent. Those estimates, which reflect more recent and relevant data, are well above Mr. Gorman's 9.30 percent ROE estimate but very consistent with my 10.40 percent ROE recommendation.

[^91]Q. Have you completed a similar analysis using Mr. Gorman's Utility Bond Yield data?
A. Yes, and those results are consistent with my analysis of Mr. Gorman's Treasury yield-based Risk Premium. ${ }^{249}$ Here again, it is clear that the Risk Premium has increased as the Utility Bond Yield has decreased. In fact, because the two have been moving steadily in opposite directions, the Risk Premium now is higher than the Bond Yield. Mr. Gorman, however, developed his Risk Premium (and, therefore, his ROE) estimates based on data points that occurred approximately 17 years prior to that point of inversion.
Q. Do you have any other observations regarding Mr. Gorman's Risk

## Premium analysis?

A. Yes, I do. Aside from the shortcomings discussed above, Mr. Gorman's Risk Premium recommendation gives considerable weight to ROE estimates that are well below the lowest return that has ever been authorized. Of the 1,433 electric utility rate authorizations since 1980 for which authorized ROEs were disclosed, the lowest was 8.72 percent; that return was associated with an electric distribution utility. ${ }^{250}$ Mr. Gorman, however, gives specific weight to an ROE estimate that is nearly 100 basis points lower, still (that is, the 7.74 percent ROE estimate to which Mr. Gorman gave 25.00 percent weight in his "A" rated utility bond version of the Risk Premium).

[^92]
## E. Ameren Missouri's Risk Relative to the Proxy Group

## Q. What is your response to Mr. Gorman's observation that Standard and Poor's gives Ameren Missouri an "excellent" business risk profile?

A. Although it is the case S\&P assigned Ameren Missouri an "excellent" business risk profile, that ranking is not uncommon. In fact, nearly 90.00 percent of the vertically integrated electric utilities rated by S\&P had an "excellent" business risk profile. If we were to include transmission and distribution-only electric utilities, that proportion increases to approximately 93.00 percent. ${ }^{251}$ Consequently, S\&P’s business risk assessment does not distinguish the Company from other electric utilities.

Moreover, equity and debt investors face different risks, require different returns and invest in different securities. Although credit ratings may be a broad measure of business risk, Mr. Gorman has presented no analyses to indicate how those ratings (or rankings) translate to increments or decrements of equity return requirements. If Mr. Gorman's point is that utilities in general are viewed as less risky than the overall market, I agree. In fact, the Beta coefficients included in my CAPM analysis are less than 1.00, indicating less systematic risk than the market, itself. That does not, however, mean that the return required for equity investments in vertically integrated electric utilities such as Ameren Missouri should be lower than the returns authorized for less risky natural gas utilities, as Mr. Gorman's 9.30 percent ROE recommendation suggests. ${ }^{252}$

[^93]
## F. Financial Integrity

## Q. Please briefly summarize Mr. Gorman's assessment of his recommendation as it affects measures of the Company's financial integrity.

A. Mr. Gorman evaluates the reasonableness of his ROE recommendation by evaluating the pro forma effect that his recommended ROE would have on two of the Company's key financial ratios with the goal of ascertaining whether those ratios would still fall within S\&P's guideline ranges sufficient for an investment grade rating. ${ }^{253}$ In that regard, Mr. Gorman develops the following pro forma ratios: (1) Debt to EBITDA; and (2) FFO to Total Debt. An obvious and important point is that Mr. Gorman's analysis assumes that the Company actually is able to earn the entirety of its authorized ROE on a going-forward basis.

In Schedule MPG-17, Mr. Gorman develops the pro forma financial ratios noted above based on the Company's retail cost of service, and his recommended ROE of 9.30 percent. Mr. Gorman notes that his pro forma financial analysis suggests that his recommended ROE of 9.30 percent would be sufficient to maintain an investment grade credit rating. ${ }^{254}$

## Q. Do you agree with Mr. Gorman's analysis and conclusion?

A. No, I do not. As discussed in my response to Mr. Schafer, a wide range of ROE estimates create pro forma coverage ratios within S\&P's metric guidelines. However, credit rating agencies consider a number of other factors beyond coverage ratios. In my response to Mr. Murray, I note that 50.00 percent of the factors that

[^94]Moody's considers relate to the regulatory environment. An ROE recommendation of 9.30, which is 68 basis points below the national average return for vertically integrated electric utilities, would likely reflect the inconsistent and essentially unpredictable nature of the Company's regulatory environment. As such, it is difficult to reconcile how a recommended ROE reduction of 50 basis points would support Ameren Missouri’s credit profile. Rather, it is more likely that to put considerable downward pressure on the Company's credit rating and credit profile.

## VI. RESPONSE TO THE DIRECT TESTIMONY OF MR. CHRISS

Q. Please summarize Mr. Chriss' testimony regarding the Company's ROE.
A. Mr. Chriss opposes my recommendation because, he states, it is higher than the ROEs authorized by other regulatory commissions since the beginning of 2012, and the Company's currently authorized ROE. ${ }^{255}$ Despite his concerns, Mr. Chriss did not 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-7?

A. Yes, and it is important to note that my recommended range of 10.20 percent to 10.60 percent and my recommended ROE of 10.40 percent is within the range of authorized ROEs for vertically integrated electric utilities (see Schedule RBH-R13). Further, it is important to note that the authorized ROE is a very visible measure of the

[^95]regulatory environment in which utilities operate. The regulatory environment, in turn, is important to utility analysts and investors.
Q. Can you provide an example of how the financial community considers the regulatory environment in assessing utilities?
A. Yes. As noted in my response to Messrs. Murray and Schafer, one-half of the factors that weigh in Moody's ratings relate to the nature of regulation. ${ }^{256}$ While both S\&P and Moody's consider regulatory risk in establishing credit ratings, Moody's has reflected the importance of regulation by establishing credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity, and key financial metrics. Of those criteria, the regulatory framework and the ability to recover costs and earn returns are each given a broad rating factor of 25.00 percent. Therefore, Moody's assigns regulatory risk a 50.00 percent weighting in the overall assessment of business and financial risk for regulated utilities. ${ }^{257}$

As also discussed earlier in my Rebuttal Testimony, the authorized ROE affects not only the cash flow-related metrics that measure financial strength but also provides an indication of the degree of regulatory support, and risk, associated with a given utility and jurisdiction. In that important respect, the Commission's decision in this proceeding will have a direct bearing on the company's credit profile, and its ability to access the capital needed to fund its investments.

[^96]
## VII. SUMMARY OF UPDATED ANALYSES

## Q. Have you updated the analyses presented in your Direct Testimony?

A. Yes. I have updated my DCF (Constant Growth and Multi-Stage models), CAPM and Bond Yield Plus Risk Premium analyses using data as of November 14, 2014.
Q. Please summarize your DCF model results.
A. I continue to use projected earnings growth rates from Zacks, First Call, and Value Line in developing my DCF model results, and have presented those results based on the low, average and high growth rates for each company. The results of the Quarterly Growth DCF model, Constant Growth DCF model and Multi-Stage DCF model are shown in Tables 7a and 7b (below; see also, Schedule RBH-R7 and RBH-R8).

Table 7a: Summary of DCF Model Results - Combined Proxy Group ${ }^{258}$

|  | Mean <br> Low | Mean | Mean <br> High |
| :---: | :---: | :---: | :---: |
| Constant Growth DCF Results |  |  |  |
| 30-Day Average | $8.47 \%$ | $9.44 \%$ | $10.34 \%$ |
| 90-Day Average | $8.62 \%$ | $9.58 \%$ | $10.48 \%$ |
| 180-Day Average | $8.65 \%$ | $9.62 \%$ | $10.52 \%$ |
| Multi-Stage DCF Results |  |  |  |
| 30-Day Average | $9.51 \%$ | $9.77 \%$ | $10.04 \%$ |
| 90-Day Average | $9.65 \%$ | $9.92 \%$ | $10.20 \%$ |
| 180-Day Average | $9.69 \%$ | $9.96 \%$ | $10.24 \%$ |

[^97]Table 7b: Summary of DCF Model Results - Hevert Revised Proxy Group ${ }^{259}$

|  | Mean <br> Low | Mean | Mean <br> High |
| :---: | :---: | :---: | :---: |
| Constant Growth DCF Results |  |  |  |
| 30-Day Average | $8.40 \%$ | $9.32 \%$ | $10.26 \%$ |
| 90-Day Average | $8.55 \%$ | $9.48 \%$ | $10.42 \%$ |
| 180-Day Average | $8.59 \%$ | $9.51 \%$ | $10.46 \%$ |
| Multi-Stage DCF Results |  |  |  |
| 30-Day Average | $9.56 \%$ | $9.81 \%$ | $10.10 \%$ |
| 90-Day Average | $9.72 \%$ | $9.98 \%$ | $10.28 \%$ |
| 180-Day Average | $9.75 \%$ | $10.01 \%$ | $10.31 \%$ |

## Q. Please summarize your updated CAPM analysis.

A. I have used data updated through November 14, 2014 for the CAPM analyses. For the risk-free rate, I continue to refer to: (1) the 30-day average of the 30-year Treasury yield; and (2) a consensus forecast of the average 30-Year Treasury yield for the coming six quarters. For the Beta coefficient, I rely on published estimates from both Value Line and Bloomberg.

For the MRP, I developed an ex-ante Market Risk Premia using the expected return on the S\&P 500 Index less the current 30 -year Treasury yield. To calculate the expected market return, I continue to rely on data from Value Line and Bloomberg.

## Q. What are your updated CAPM results?

A. My updated CAPM results are shown in Tables 8a and 8b (below; see also, Schedule RBH-R11).

[^98]Table 8a: Summary of CAPM Results - Combined Proxy Group ${ }^{260}$

|  |  |  |
| :---: | :---: | :---: |
| Average Bloomberg Beta Coefficient |  |  |
| Current 30-Year Treasury (3.04\%) | Bloomberg <br> Derived <br> Market Risk <br> Premium | Value Line <br> Derived <br> Market Risk <br> Premium |
| Near Term Projected 30-Year Treasury (3.68\%) | $10.95 \%$ | $10.39 \%$ |
| Average Value Line Beta Coefficient | $11.03 \%$ |  |
| Current 30-Year Treasury (3.04\%) | $11.59 \%$ | $10.98 \%$ |
| Near Term Projected 30-Year Treasury (3.68\%) | $11.62 \%$ | $11.06 \%$ |

Table 8b: Summary of CAPM Results - Hevert Revised Proxy Group ${ }^{261}$

|  | Bloomberg <br> Derived <br> Market Risk <br> Premium | Value Line <br> Derived <br> Market Risk <br> Premium |
| :--- | :---: | :---: |
| Average Bloomberg Beta Coefficient |  |  |
| Current 30-Year Treasury (3.04\%) | $10.96 \%$ | $10.40 \%$ |
| Near Term Projected 30-Year Treasury (3.68\%) | $11.60 \%$ | $11.05 \%$ |
| Average Value Line Beta Coefficient |  |  |
| Current 30-Year Treasury (3.04\%) | $10.88 \%$ | $10.33 \%$ |
| Near Term Projected 30-Year Treasury (3.68\%) | $11.52 \%$ | $10.97 \%$ |

Q. Please summarize your updated Risk Premium analysis.
A. My updated Risk Premium analysis includes authorized ROEs as reported by Regulatory Research Associates through November 14, 2014. For the purpose of calculating the expected risk premium and ROE, I have used the current, near-term and long-term projected 30-year Treasury yield, as shown in Schedule RBH-R12.

[^99]Table 9: Summary of Bond Yield Risk Premium Results ${ }^{262}$

| Treasury Yield | Return on <br> Equity |
| :--- | :--- |
| Current 30-Year Treasury (3.04\%) | $10.10 \%$ |
| Near Term Projected 30-Year Treasury (3.68\%) | $10.20 \%$ |
| Long Term Projected 30-Year Treasury (5.45\%) | $10.86 \%$ |

Q. Have you considered whether your recommended returns meet the standard of a fair rate of return?
A. Yes. As I noted in my Direct Testimony, my recommendation is based upon my understanding of the Hope and Bluefield cases, wherein those decisions established the standards for determining a fair and reasonable allowed Return on Equity including: consistency of the allowed return with other businesses having similar risk; adequacy of the return to provide access to capital and support credit quality; and that the end result must lead to just and reasonable rates. ${ }^{263}$

My assessment also reflects the Company's need to attract capital at terms similar to those offered to companies of comparable risk. A recommendation that diminishes the Company's ability to compete for capital in the open market does not meet the "comparable company" standard.

## VIII. CONCLUSIONS AND RECOMMENDATION

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

A. My updated analytical results are provided in Section VIII. Based on the analyses discussed throughout my Rebuttal Testimony, I conclude that the reasonable

[^100]Rebuttal Testimony of Robert B. Hevert
range of ROE estimates is from 10.20 percent to 10.60 percent, and within that range, 10.40 percent is a reasonable and appropriate estimate of the Company's Cost of Equity. The results of the updated DCF, CAPM, and Bond Yield Plus Risk Premium analyses support the reasonableness of my range of ROE estimates and my recommendation.
Q. Does this conclude your Rebuttal Testimony?
A. Yes, it does.

Constant Growth Discounted Cash Flow Model
30 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 | $\begin{aligned} & \text { Low } \\ & \text { ROE } \end{aligned}$ | $\begin{aligned} & \text { Mean } \\ & \text { ROE } \end{aligned}$ | $\begin{aligned} & \text { High } \\ & \text { ROE } \end{aligned}$ |
| Alliant Energy Corporation | LNT | \$2.04 | \$60.06 | 3.40\% | 3.49\% | 4.80\% | 4.90\% | 6.00\% | 5.23\% | 8.28\% | 8.72\% | 9.50\% |
| Ameren Corporation | AEE | \$1.64 | \$41.30 | 3.97\% | 4.11\% | 8.30\% | 8.90\% | 4.50\% | 7.23\% | 8.56\% | 11.35\% | 13.05\% |
| American Electric Power Company, Inc. | AEP | \$2.12 | \$56.09 | 3.78\% | 3.87\% | 4.90\% | 4.97\% | 4.50\% | 4.79\% | 8.36\% | 8.66\% | 8.84\% |
| CMS Energy Corporation | CMS | \$1.08 | \$31.78 | 3.40\% | 3.51\% | 6.10\% | 6.80\% | 6.50\% | 6.47\% | 9.60\% | 9.98\% | 10.31\% |
| DTE Energy Company | DTE | \$2.76 | \$80.22 | 3.44\% | 3.55\% | 6.20\% | 5.87\% | 6.50\% | 6.19\% | 9.41\% | 9.74\% | 10.05\% |
| Duke Energy Corporation | DUK | \$3.18 | \$79.74 | 3.99\% | 4.08\% | 4.70\% | 4.76\% | 5.00\% | 4.82\% | 8.78\% | 8.90\% | 9.09\% |
| Empire District Electric Company | EDE | \$1.04 | \$26.93 | 3.86\% | 3.93\% | 3.00\% | 3.00\% | 4.00\% | 3.33\% | 6.92\% | 7.26\% | 7.94\% |
| Great Plains Energy Inc. | GXP | \$0.98 | \$26.00 | 3.77\% | 3.87\% | 5.00\% | 5.00\% | 6.00\% | 5.33\% | 8.86\% | 9.20\% | 9.88\% |
| Hawaiian Electric Industries, Inc. | HE | \$1.24 | \$27.41 | 4.52\% | 4.61\% | 4.00\% | 4.00\% | 4.00\% | 4.00\% | 8.61\% | 8.61\% | 8.61\% |
| IDACORP, Inc. | IDA | \$1.88 | \$59.53 | 3.16\% | 3.21\% | 4.00\% | 4.00\% | 1.50\% | 3.17\% | 4.68\% | 6.37\% | 7.22\% |
| NextEra Energy, Inc. | NEE | \$2.90 | \$98.23 | 2.95\% | 3.05\% | 6.60\% | 6.47\% | 6.00\% | 6.36\% | 9.04\% | 9.40\% | 9.65\% |
| Northeast Utilities | NU | \$1.57 | \$48.36 | 3.25\% | 3.36\% | 6.70\% | 6.16\% | 8.00\% | 6.95\% | 9.51\% | 10.31\% | 11.38\% |
| OGE Energy Corp. | OGE | \$1.00 | \$36.61 | 2.73\% | 2.82\% | 6.50\% | 7.05\% | 5.50\% | 6.35\% | 8.31\% | 9.17\% | 9.88\% |
| Otter Tail Corporation | OTTR | \$1.21 | \$29.43 | 4.11\% | 4.33\% | NA | 6.00\% | 15.50\% | 10.75\% | 10.23\% | 15.08\% | 19.93\% |
| Pinnacle West Capital Corporation | PNW | \$2.38 | \$59.44 | 4.00\% | 4.08\% | 4.00\% | 3.95\% | 4.00\% | 3.98\% | 8.03\% | 8.07\% | 8.08\% |
| PNM Resources, Inc. | PNM | \$0.74 | \$27.73 | 2.67\% | 2.79\% | 8.50\% | 8.34\% | 11.00\% | 9.28\% | 11.12\% | 12.07\% | 13.82\% |
| Portland General Electric Company | POR | \$1.12 | \$35.16 | 3.19\% | 3.29\% | 7.80\% | 7.83\% | 5.00\% | 6.88\% | 8.26\% | 10.17\% | 11.14\% |
| Southern Company | SO | \$2.10 | \$46.55 | 4.51\% | 4.59\% | 3.60\% | 3.62\% | 3.50\% | 3.57\% | 8.09\% | 8.17\% | 8.21\% |
| TECO Energy, Inc. | TE | \$0.88 | \$19.00 | 4.63\% | 4.76\% | 6.50\% | 6.43\% | 3.50\% | 5.48\% | 8.21\% | 10.23\% | 11.28\% |
| Westar Energy, Inc. | WR | \$1.40 | \$36.85 | 3.80\% | 3.88\% | 3.80\% | 3.20\% | 6.00\% | 4.33\% | 7.06\% | 8.21\% | 9.91\% |
| Xcel Energy Inc. | XEL | \$1.20 | \$32.69 | 3.67\% | 3.76\% | 4.20\% | 4.51\% | 5.50\% | 4.74\% | 7.95\% | 8.49\% | 9.27\% |
| PROXY GROUP MEAN |  |  |  | 3.66\% | 3.76\% | 5.46\% | 5.51\% | 5.81\% | 5.68\% | 8.47\% | 9.44\% | 10.34\% |
| PROXY GROUP MEDIAN |  |  |  | 3.77\% | 3.87\% | 4.95\% | 5.00\% | 5.50\% | 5.33\% | 8.36\% | 9.17\% | 9.88\% |

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service, equals 30-trading day average as of November 14, 2014
[3] Equals [1] / [2]
[4] Equals [3] x (1 + $0.5 \times[8])$
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] $\times(1+0.5 \times$ Minimum([5], [6], [7]) $)+$ Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + $0.5 \times$ Maximum([5], [6], [7]) $)+$ Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model
90 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 | $\begin{aligned} & \text { Low } \\ & \text { ROE } \end{aligned}$ | $\begin{aligned} & \text { Mean } \\ & \text { ROE } \end{aligned}$ | $\begin{aligned} & \text { High } \\ & \text { ROE } \\ & \hline \end{aligned}$ |
| Alliant Energy Corporation | LNT | \$2.04 | \$58.31 | 3.50\% | 3.59\% | 4.80\% | 4.90\% | 6.00\% | 5.23\% | 8.38\% | 8.82\% | 9.60\% |
| Ameren Corporation | AEE | \$1.64 | \$39.75 | 4.13\% | 4.27\% | 8.30\% | 8.90\% | 4.50\% | 7.23\% | 8.72\% | 11.51\% | 13.21\% |
| American Electric Power Company, Inc. | AEP | \$2.12 | \$53.81 | 3.94\% | 4.03\% | 4.90\% | 4.97\% | 4.50\% | 4.79\% | 8.53\% | 8.82\% | 9.01\% |
| CMS Energy Corporation | CMS | \$1.08 | \$30.47 | 3.55\% | 3.66\% | 6.10\% | 6.80\% | 6.50\% | 6.47\% | 9.75\% | 10.13\% | 10.47\% |
| DTE Energy Company | DTE | \$2.76 | \$77.50 | 3.56\% | 3.67\% | 6.20\% | 5.87\% | 6.50\% | 6.19\% | 9.54\% | 9.86\% | 10.18\% |
| Duke Energy Corporation | DUK | \$3.18 | \$75.35 | 4.22\% | 4.32\% | 4.70\% | 4.76\% | 5.00\% | 4.82\% | 9.02\% | 9.14\% | 9.33\% |
| Empire District Electric Company | EDE | \$1.04 | \$25.68 | 4.05\% | 4.12\% | 3.00\% | 3.00\% | 4.00\% | 3.33\% | 7.11\% | 7.45\% | 8.13\% |
| Great Plains Energy Inc. | GXP | \$0.98 | \$25.46 | 3.85\% | 3.95\% | 5.00\% | 5.00\% | 6.00\% | 5.33\% | 8.94\% | 9.28\% | 9.96\% |
| Hawaiian Electric Industries, Inc. | HE | \$1.24 | \$25.74 | 4.82\% | 4.91\% | 4.00\% | 4.00\% | 4.00\% | 4.00\% | 8.91\% | 8.91\% | 8.91\% |
| IDACORP, Inc. | IDA | \$1.88 | \$56.39 | 3.33\% | 3.39\% | 4.00\% | 4.00\% | 1.50\% | 3.17\% | 4.86\% | 6.55\% | 7.40\% |
| NextEra Energy, Inc. | NEE | \$2.90 | \$96.84 | 2.99\% | 3.09\% | 6.60\% | 6.47\% | 6.00\% | 6.36\% | 9.08\% | 9.45\% | 9.69\% |
| Northeast Utilities | NU | \$1.57 | \$46.03 | 3.41\% | 3.53\% | 6.70\% | 6.16\% | 8.00\% | 6.95\% | 9.68\% | 10.48\% | 11.55\% |
| OGE Energy Corp. | OGE | \$1.00 | \$36.65 | 2.73\% | 2.82\% | 6.50\% | 7.05\% | 5.50\% | 6.35\% | 8.30\% | 9.17\% | 9.87\% |
| Otter Tail Corporation | OTTR | \$1.21 | \$28.51 | 4.24\% | 4.47\% | NA | 6.00\% | 15.50\% | 10.75\% | 10.37\% | 15.22\% | 20.07\% |
| Pinnacle West Capital Corporation | PNW | \$2.38 | \$56.85 | 4.19\% | 4.27\% | 4.00\% | 3.95\% | 4.00\% | 3.98\% | 8.22\% | 8.25\% | 8.27\% |
| PNM Resources, Inc. | PNM | \$0.74 | \$26.68 | 2.77\% | 2.90\% | 8.50\% | 8.34\% | 11.00\% | 9.28\% | 11.23\% | 12.18\% | 13.93\% |
| Portland General Electric Company | POR | \$1.12 | \$33.78 | 3.32\% | 3.43\% | 7.80\% | 7.83\% | 5.00\% | 6.88\% | 8.40\% | 10.31\% | 11.28\% |
| Southern Company | SO | \$2.10 | \$44.77 | 4.69\% | 4.77\% | 3.60\% | 3.62\% | 3.50\% | 3.57\% | 8.27\% | 8.35\% | 8.40\% |
| TECO Energy, Inc. | TE | \$0.88 | \$18.10 | 4.86\% | 4.99\% | 6.50\% | 6.43\% | 3.50\% | 5.48\% | 8.45\% | 10.47\% | 11.52\% |
| Westar Energy, Inc. | WR | \$1.40 | \$36.27 | 3.86\% | 3.94\% | 3.80\% | 3.20\% | 6.00\% | 4.33\% | 7.12\% | 8.28\% | 9.98\% |
| Xcel Energy Inc. | XEL | \$1.20 | \$31.70 | 3.79\% | 3.88\% | 4.20\% | 4.51\% | 5.50\% | 4.74\% | 8.07\% | 8.61\% | 9.39\% |
| PROXY GROUP MEAN |  |  |  | 3.80\% | 3.91\% | 5.46\% | 5.51\% | 5.81\% | 5.68\% | 8.62\% | 9.58\% | 10.48\% |
| PROXY GROUP MEDIAN |  |  |  | 3.85\% | 3.94\% | 4.95\% | 5.00\% | 5.50\% | 5.33\% | 8.53\% | 9.17\% | 9.87\% |

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service, equals 90-trading day average as of November 14, 2014
[3] Equals [1] / [2]
[4] Equals [3] x (1 + $0.5 \times[8])$
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] $\times(1+0.5 \times$ Minimum([5], [6], [7]) $)+$ Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + $0.5 \times$ Maximum([5], [6], [7]) $)+$ Maximum([5], [6], [7])

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 | $\begin{aligned} & \text { Low } \\ & \text { ROE } \end{aligned}$ | $\begin{aligned} & \text { Mean } \\ & \text { ROE } \end{aligned}$ | $\begin{aligned} & \text { High } \\ & \text { ROE } \end{aligned}$ |
| Alliant Energy Corporation | LNT | \$2.04 | \$57.79 | 3.53\% | 3.62\% | 4.80\% | 4.90\% | 6.00\% | 5.23\% | 8.41\% | 8.86\% | 9.64\% |
| Ameren Corporation | AEE | \$1.64 | \$39.88 | 4.11\% | 4.26\% | 8.30\% | 8.90\% | 4.50\% | 7.23\% | 8.70\% | 11.49\% | 13.19\% |
| American Electric Power Company, Inc. | AEP | \$2.12 | \$52.99 | 4.00\% | 4.10\% | 4.90\% | 4.97\% | 4.50\% | 4.79\% | 8.59\% | 8.89\% | 9.07\% |
| CMS Energy Corporation | CMS | \$1.08 | \$29.99 | 3.60\% | 3.72\% | 6.10\% | 6.80\% | 6.50\% | 6.47\% | 9.81\% | 10.18\% | 10.52\% |
| DTE Energy Company | DTE | \$2.76 | \$76.33 | 3.62\% | 3.73\% | 6.20\% | 5.87\% | 6.50\% | 6.19\% | 9.59\% | 9.92\% | 10.23\% |
| Duke Energy Corporation | DUK | \$3.18 | \$73.44 | 4.33\% | 4.43\% | 4.70\% | 4.76\% | 5.00\% | 4.82\% | 9.13\% | 9.25\% | 9.44\% |
| Empire District Electric Company | EDE | \$1.04 | \$24.95 | 4.17\% | 4.24\% | 3.00\% | 3.00\% | 4.00\% | 3.33\% | 7.23\% | 7.57\% | 8.25\% |
| Great Plains Energy Inc. | GXP | \$0.98 | \$25.84 | 3.79\% | 3.89\% | 5.00\% | 5.00\% | 6.00\% | 5.33\% | 8.89\% | 9.23\% | 9.91\% |
| Hawaiian Electric Industries, Inc. | HE | \$1.24 | \$25.13 | 4.93\% | 5.03\% | 4.00\% | 4.00\% | 4.00\% | 4.00\% | 9.03\% | 9.03\% | 9.03\% |
| IDACORP, Inc. | IDA | \$1.88 | \$55.86 | 3.37\% | 3.42\% | 4.00\% | 4.00\% | 1.50\% | 3.17\% | 4.89\% | 6.59\% | 7.43\% |
| NextEra Energy, Inc. | NEE | \$2.90 | \$96.70 | 3.00\% | 3.09\% | 6.60\% | 6.47\% | 6.00\% | 6.36\% | 9.09\% | 9.45\% | 9.70\% |
| Northeast Utilities | NU | \$1.57 | \$45.79 | 3.43\% | 3.55\% | 6.70\% | 6.16\% | 8.00\% | 6.95\% | 9.69\% | 10.50\% | 11.57\% |
| OGE Energy Corp. | OGE | \$1.00 | \$36.62 | 2.73\% | 2.82\% | 6.50\% | 7.05\% | 5.50\% | 6.35\% | 8.31\% | 9.17\% | 9.88\% |
| Otter Tail Corporation | OTTR | \$1.21 | \$29.00 | 4.17\% | 4.40\% | NA | 6.00\% | 15.50\% | 10.75\% | 10.30\% | 15.15\% | 20.00\% |
| Pinnacle West Capital Corporation | PNW | \$2.38 | \$56.05 | 4.25\% | 4.33\% | 4.00\% | 3.95\% | 4.00\% | 3.98\% | 8.28\% | 8.31\% | 8.33\% |
| PNM Resources, Inc. | PNM | \$0.74 | \$27.21 | 2.72\% | 2.85\% | 8.50\% | 8.34\% | 11.00\% | 9.28\% | 11.17\% | 12.13\% | 13.87\% |
| Portland General Electric Company | POR | \$1.12 | \$33.29 | 3.36\% | 3.48\% | 7.80\% | 7.83\% | 5.00\% | 6.88\% | 8.45\% | 10.36\% | 11.33\% |
| Southern Company | SO | \$2.10 | \$44.36 | 4.73\% | 4.82\% | 3.60\% | 3.62\% | 3.50\% | 3.57\% | 8.32\% | 8.39\% | 8.44\% |
| TECO Energy, Inc. | TE | \$0.88 | \$17.77 | 4.95\% | 5.09\% | 6.50\% | 6.43\% | 3.50\% | 5.48\% | 8.54\% | 10.57\% | 11.61\% |
| Westar Energy, Inc. | WR | \$1.40 | \$35.95 | 3.89\% | 3.98\% | 3.80\% | 3.20\% | 6.00\% | 4.33\% | 7.16\% | 8.31\% | 10.01\% |
| Xcel Energy Inc. | XEL | \$1.20 | \$31.26 | 3.84\% | 3.93\% | 4.20\% | 4.51\% | 5.50\% | 4.74\% | 8.12\% | 8.67\% | 9.44\% |
| PROXY GROUP MEAN |  |  |  | 3.83\% | 3.94\% | 5.46\% | 5.51\% | 5.81\% | 5.68\% | 8.65\% | 9.62\% | 10.52\% |
| PROXY GROUP MEDIAN |  |  |  | 3.84\% | 3.93\% | 4.95\% | 5.00\% | 5.50\% | 5.33\% | 8.59\% | 9.23\% | 9.88\% |

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service, equals 180-trading day average as of November 14, 2014
[3] Equals [1] / [2]
[4] Equals [3] x (1 + $0.5 \times[8])$
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] $\times(1+0.5 \times$ Minimum([5], [6], [7]) $)+$ Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + $0.5 \times$ Maximum([5], [6], [7]) $)+$ Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model
30 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 | $\begin{aligned} & \text { Low } \\ & \text { ROE } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Mean } \\ & \text { ROE } \end{aligned}$ | High ROE |
| American Electric Power Company, Inc. | AEP | \$2.12 | \$56.09 | 3.78\% | 3.87\% | 4.90\% | 4.97\% | 4.50\% | 4.79\% | 8.36\% | 8.66\% | 8.84\% |
| Duke Energy Corporation | DUK | \$3.18 | \$79.74 | 3.99\% | 4.08\% | 4.70\% | 4.76\% | 5.00\% | 4.82\% | 8.78\% | 8.90\% | 9.09\% |
| Empire District Electric Company | EDE | \$1.04 | \$26.93 | 3.86\% | 3.93\% | 3.00\% | 3.00\% | 4.00\% | 3.33\% | 6.92\% | 7.26\% | 7.94\% |
| Great Plains Energy Inc. | GXP | \$0.98 | \$26.00 | 3.77\% | 3.87\% | 5.00\% | 5.00\% | 6.00\% | 5.33\% | 8.86\% | 9.20\% | 9.88\% |
| Hawaiian Electric Industries, Inc. | HE | \$1.24 | \$27.41 | 4.52\% | 4.61\% | 4.00\% | 4.00\% | 4.00\% | 4.00\% | 8.61\% | 8.61\% | 8.61\% |
| IDACORP, Inc. | IDA | \$1.88 | \$59.53 | 3.16\% | 3.21\% | 4.00\% | 4.00\% | 1.50\% | 3.17\% | 4.68\% | 6.37\% | 7.22\% |
| NextEra Energy, Inc. | NEE | \$2.90 | \$98.23 | 2.95\% | 3.05\% | 6.60\% | 6.47\% | 6.00\% | 6.36\% | 9.04\% | 9.40\% | 9.65\% |
| Northeast Utilities | NU | \$1.57 | \$48.36 | 3.25\% | 3.36\% | 6.70\% | 6.16\% | 8.00\% | 6.95\% | 9.51\% | 10.31\% | 11.38\% |
| Otter Tail Corporation | OTTR | \$1.21 | \$29.43 | 4.11\% | 4.33\% | NA | 6.00\% | 15.50\% | 10.75\% | 10.23\% | 15.08\% | 19.93\% |
| Pinnacle West Capital Corporation | PNW | \$2.38 | \$59.44 | 4.00\% | 4.08\% | 4.00\% | 3.95\% | 4.00\% | 3.98\% | 8.03\% | 8.07\% | 8.08\% |
| PNM Resources, Inc. | PNM | \$0.74 | \$27.73 | 2.67\% | 2.79\% | 8.50\% | 8.34\% | 11.00\% | 9.28\% | 11.12\% | 12.07\% | 13.82\% |
| Portland General Electric Company | POR | \$1.12 | \$35.16 | 3.19\% | 3.29\% | 7.80\% | 7.83\% | 5.00\% | 6.88\% | 8.26\% | 10.17\% | 11.14\% |
| Southern Company | SO | \$2.10 | \$46.55 | 4.51\% | 4.59\% | 3.60\% | 3.62\% | 3.50\% | 3.57\% | 8.09\% | 8.17\% | 8.21\% |
| Westar Energy, Inc. | WR | \$1.40 | \$36.85 | 3.80\% | 3.88\% | 3.80\% | 3.20\% | 6.00\% | 4.33\% | 7.06\% | 8.21\% | 9.91\% |
| PROXY GROUP MEAN |  |  |  | 3.68\% | 3.78\% | 5.12\% | 5.09\% | 6.00\% | 5.54\% | 8.40\% | 9.32\% | 10.26\% |
| PROXY GROUP MEDIAN |  |  |  | 3.79\% | 3.88\% | 4.70\% | 4.87\% | 5.00\% | 4.81\% | 8.49\% | 8.78\% | 9.37\% |

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service, equals 30-trading day average as of November 14, 2014
[3] Equals [1] / [2]
[4] Equals [3] x (1 + $0.5 \times$ [8] $)$
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] x (1 + $0.5 \times$ Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] $\times(1+0.5 \times$ Maximum([5], [6], [7]) $)+$ Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model
90 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 | $\begin{aligned} & \text { Low } \\ & \text { ROE } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Mean } \\ & \text { ROE } \end{aligned}$ | High ROE |
| American Electric Power Company, Inc. | AEP | \$2.12 | \$53.81 | 3.94\% | 4.03\% | 4.90\% | 4.97\% | 4.50\% | 4.79\% | 8.53\% | 8.82\% | 9.01\% |
| Duke Energy Corporation | DUK | \$3.18 | \$75.35 | 4.22\% | 4.32\% | 4.70\% | 4.76\% | 5.00\% | 4.82\% | 9.02\% | 9.14\% | 9.33\% |
| Empire District Electric Company | EDE | \$1.04 | \$25.68 | 4.05\% | 4.12\% | 3.00\% | 3.00\% | 4.00\% | 3.33\% | 7.11\% | 7.45\% | 8.13\% |
| Great Plains Energy Inc. | GXP | \$0.98 | \$25.46 | 3.85\% | 3.95\% | 5.00\% | 5.00\% | 6.00\% | 5.33\% | 8.94\% | 9.28\% | 9.96\% |
| Hawaiian Electric Industries, Inc. | HE | \$1.24 | \$25.74 | 4.82\% | 4.91\% | 4.00\% | 4.00\% | 4.00\% | 4.00\% | 8.91\% | 8.91\% | 8.91\% |
| IDACORP, Inc. | IDA | \$1.88 | \$56.39 | 3.33\% | 3.39\% | 4.00\% | 4.00\% | 1.50\% | 3.17\% | 4.86\% | 6.55\% | 7.40\% |
| NextEra Energy, Inc. | NEE | \$2.90 | \$96.84 | 2.99\% | 3.09\% | 6.60\% | 6.47\% | 6.00\% | 6.36\% | 9.08\% | 9.45\% | 9.69\% |
| Northeast Utilities | NU | \$1.57 | \$46.03 | 3.41\% | 3.53\% | 6.70\% | 6.16\% | 8.00\% | 6.95\% | 9.68\% | 10.48\% | 11.55\% |
| Otter Tail Corporation | OTTR | \$1.21 | \$28.51 | 4.24\% | 4.47\% | NA | 6.00\% | 15.50\% | 10.75\% | 10.37\% | 15.22\% | 20.07\% |
| Pinnacle West Capital Corporation | PNW | \$2.38 | \$56.85 | 4.19\% | 4.27\% | 4.00\% | 3.95\% | 4.00\% | 3.98\% | 8.22\% | 8.25\% | 8.27\% |
| PNM Resources, Inc. | PNM | \$0.74 | \$26.68 | 2.77\% | 2.90\% | 8.50\% | 8.34\% | 11.00\% | 9.28\% | 11.23\% | 12.18\% | 13.93\% |
| Portland General Electric Company | POR | \$1.12 | \$33.78 | 3.32\% | 3.43\% | 7.80\% | 7.83\% | 5.00\% | 6.88\% | 8.40\% | 10.31\% | 11.28\% |
| Southern Company | SO | \$2.10 | \$44.77 | 4.69\% | 4.77\% | 3.60\% | 3.62\% | 3.50\% | 3.57\% | 8.27\% | 8.35\% | 8.40\% |
| Westar Energy, Inc. | WR | \$1.40 | \$36.27 | 3.86\% | 3.94\% | 3.80\% | 3.20\% | 6.00\% | 4.33\% | 7.12\% | 8.28\% | 9.98\% |
| PROXY GROUP MEAN |  |  |  | 3.83\% | 3.94\% | 5.12\% | 5.09\% | 6.00\% | 5.54\% | 8.55\% | 9.48\% | 10.42\% |
| PROXY GROUP MEDIAN |  |  |  | 3.90\% | 3.99\% | 4.70\% | 4.87\% | 5.00\% | 4.81\% | 8.72\% | 9.03\% | 9.51\% |

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service, equals 90-trading day average as of November 14, 2014
[3] Equals [1] / [2]
[4] Equals [3] x (1 + $0.5 \times$ [8] $)$
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] x (1 + $0.5 \times$ Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] $\times(1+0.5 \times$ Maximum([5], [6], [7]) $)+$ Maximum([5], [6], [7])

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 | $\begin{aligned} & \text { Low } \\ & \text { ROE } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Mean } \\ & \text { ROE } \end{aligned}$ | High ROE |
| American Electric Power Company, Inc. | AEP | \$2.12 | \$52.99 | 4.00\% | 4.10\% | 4.90\% | 4.97\% | 4.50\% | 4.79\% | 8.59\% | 8.89\% | 9.07\% |
| Duke Energy Corporation | DUK | \$3.18 | \$73.44 | 4.33\% | 4.43\% | 4.70\% | 4.76\% | 5.00\% | 4.82\% | 9.13\% | 9.25\% | 9.44\% |
| Empire District Electric Company | EDE | \$1.04 | \$24.95 | 4.17\% | 4.24\% | 3.00\% | 3.00\% | 4.00\% | 3.33\% | 7.23\% | 7.57\% | 8.25\% |
| Great Plains Energy Inc. | GXP | \$0.98 | \$25.84 | 3.79\% | 3.89\% | 5.00\% | 5.00\% | 6.00\% | 5.33\% | 8.89\% | 9.23\% | 9.91\% |
| Hawaiian Electric Industries, Inc. | HE | \$1.24 | \$25.13 | 4.93\% | 5.03\% | 4.00\% | 4.00\% | 4.00\% | 4.00\% | 9.03\% | 9.03\% | 9.03\% |
| IDACORP, Inc. | IDA | \$1.88 | \$55.86 | 3.37\% | 3.42\% | 4.00\% | 4.00\% | 1.50\% | 3.17\% | 4.89\% | 6.59\% | 7.43\% |
| NextEra Energy, Inc. | NEE | \$2.90 | \$96.70 | 3.00\% | 3.09\% | 6.60\% | 6.47\% | 6.00\% | 6.36\% | 9.09\% | 9.45\% | 9.70\% |
| Northeast Utilities | NU | \$1.57 | \$45.79 | 3.43\% | 3.55\% | 6.70\% | 6.16\% | 8.00\% | 6.95\% | 9.69\% | 10.50\% | 11.57\% |
| Otter Tail Corporation | OTTR | \$1.21 | \$29.00 | 4.17\% | 4.40\% | NA | 6.00\% | 15.50\% | 10.75\% | 10.30\% | 15.15\% | 20.00\% |
| Pinnacle West Capital Corporation | PNW | \$2.38 | \$56.05 | 4.25\% | 4.33\% | 4.00\% | 3.95\% | 4.00\% | 3.98\% | 8.28\% | 8.31\% | 8.33\% |
| PNM Resources, Inc. | PNM | \$0.74 | \$27.21 | 2.72\% | 2.85\% | 8.50\% | 8.34\% | 11.00\% | 9.28\% | 11.17\% | 12.13\% | 13.87\% |
| Portland General Electric Company | POR | \$1.12 | \$33.29 | 3.36\% | 3.48\% | 7.80\% | 7.83\% | 5.00\% | 6.88\% | 8.45\% | 10.36\% | 11.33\% |
| Southern Company | SO | \$2.10 | \$44.36 | 4.73\% | 4.82\% | 3.60\% | 3.62\% | 3.50\% | 3.57\% | 8.32\% | 8.39\% | 8.44\% |
| Westar Energy, Inc. | WR | \$1.40 | \$35.95 | 3.89\% | 3.98\% | 3.80\% | 3.20\% | 6.00\% | 4.33\% | 7.16\% | 8.31\% | 10.01\% |
| PROXY GROUP MEAN |  |  |  | 3.87\% | 3.97\% | 5.12\% | 5.09\% | 6.00\% | 5.54\% | 8.59\% | 9.51\% | 10.46\% |
| PROXY GROUP MEDIAN |  |  |  | 3.95\% | 4.04\% | 4.70\% | 4.87\% | 5.00\% | 4.81\% | 8.74\% | 9.13\% | 9.57\% |

Notes:
[1] Source: Bloomberg Professional Service
[2] Source: Bloomberg Professional Service, equals 180-trading day average as of November 14, 2014
[3] Equals [1] / [2]
[4] Equals [3] x (1 + $0.5 \times$ [8] $)$
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] x (1 + $0.5 \times$ Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] $\times(1+0.5 \times$ Maximum([5], [6], [7]) $)+$ Maximum([5], [6], [7])


| Projected Annual Cash Flows |  |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| Alliant Energy Corporation | LNT |  | \$2.04 | \$2.16 | \$2.28 | \$2.41 | \$2.55 | \$2.73 | \$2.94 | \$3.15 | \$3.39 | \$3.64 | \$3.92 | \$4.14 | \$4.37 | \$4.62 | \$4.88 | \$5.15 | \$134.43 |
| Ameren Corporation | AEE |  | \$1.53 | \$1.59 | \$1.64 | \$1.70 | \$1.76 | \$1.93 | \$2.11 | \$2.30 | \$2.49 | \$2.70 | \$2.91 | \$3.07 | \$3.25 | \$3.43 | \$3.62 | \$3.83 | \$93.16 |
| American Electric Power Company, Inc. | AEP |  | \$2.03 | \$2.15 | \$2.27 | \$2.40 | \$2.53 | \$2.68 | \$2.85 | \$3.03 | \$3.22 | \$3.43 | \$3.66 | \$3.87 | \$4.09 | \$4.32 | \$4.56 | \$4.82 | \$124.00 |
| CMS Energy Corporation | CMS |  | \$1.06 | \$1.12 | \$1.18 | \$1.25 | \$1.32 | \$1.44 | \$1.57 | \$1.71 | \$1.85 | \$2.01 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$2.70 | \$2.86 | \$72.01 |
| DTE Energy Company | DTE |  | \$2.28 | \$2.43 | \$2.59 | \$2.76 | \$2.94 | \$3.21 | \$3.49 | \$3.79 | \$4.12 | \$4.46 | \$4.82 | \$5.09 | \$5.37 | \$5.68 | \$6.00 | \$6.33 | \$181.70 |
| Duke Energy Corporation | DUK |  | \$2.96 | \$3.03 | \$3.09 | \$3.16 | \$3.22 | \$3.41 | \$3.61 | \$3.82 | \$4.06 | \$4.32 | \$4.60 | \$4.85 | \$5.13 | \$5.42 | \$5.72 | \$6.04 | \$174.45 |
| Empire District Electric Company | EDE |  | \$1.01 | \$1.03 | \$1.05 | \$1.08 | \$1.10 | \$1.15 | \$1.20 | \$1.27 | \$1.34 | \$1.43 | \$1.52 | \$1.61 | \$1.70 | \$1.80 | \$1.90 | \$2.00 | \$58.71 |
| Great Plains Energy Inc. | GXP |  | \$0.99 | \$1.06 | \$1.14 | \$1.22 | \$1.30 | \$1.39 | \$1.49 | \$1.59 | \$1.70 | \$1.82 | \$1.95 | \$2.05 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$58.02 |
| Hawaiian Electric Industries, Inc. | HE |  | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$58.96 |
| IDACORP, Inc. | IDA |  | \$1.92 | \$2.04 | \$2.18 | \$2.32 | \$2.47 | \$2.61 | \$2.78 | \$2.97 | \$3.18 | \$3.42 | \$3.70 | \$3.91 | \$4.13 | \$4.36 | \$4.61 | \$4.87 | \$133.08 |
| NextEra Energy, Inc. | NEE |  | \$3.13 | \$3.28 | \$3.43 | \$3.58 | \$3.75 | \$4.10 | \$4.49 | \$4.89 | \$5.32 | \$5.78 | \$6.27 | \$6.62 | \$6.99 | \$7.38 | \$7.80 | \$8.24 | \$222.55 |
| Northeast Utilities | NU |  | \$1.60 | \$1.69 | \$1.80 | \$1.91 | \$2.02 | \$2.22 | \$2.43 | \$2.65 | \$2.88 | \$3.13 | \$3.38 | \$3.57 | \$3.77 | \$3.98 | \$4.21 | \$4.44 | \$109.98 |
| OGE Energy Corp. | OGE |  | \$0.97 | \$1.07 | \$1.18 | \$1.30 | \$1.43 | \$1.58 | \$1.74 | \$1.92 | \$2.10 | \$2.30 | \$2.52 | \$2.66 | \$2.81 | \$2.96 | \$3.13 | \$3.31 | \$84.77 |
| Otter Tail Corporation | OTTR |  | \$1.06 | \$1.13 | \$1.20 | \$1.27 | \$1.35 | \$1.53 | \$1.71 | \$1.90 | \$2.09 | \$2.28 | \$2.46 | \$2.60 | \$2.74 | \$2.90 | \$3.06 | \$3.23 | \$68.16 |
| Pinnacle West Capital Corporation | PNW |  | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.34 | \$3.52 | \$3.73 | \$3.96 | \$4.19 | \$4.42 | \$4.67 | \$4.93 | \$5.21 | \$129.60 |
| PNM Resources, Inc. | PNM |  | \$0.77 | \$0.84 | \$0.91 | \$0.99 | \$1.08 | \$1.25 | \$1.44 | \$1.63 | \$1.84 | \$2.05 | \$2.27 | \$2.40 | \$2.54 | \$2.68 | \$2.83 | \$2.99 | \$66.41 |
| Portland General Electric Company | POR |  | \$0.95 | \$1.03 | \$1.12 | \$1.22 | \$1.33 | \$1.48 | \$1.64 | \$1.81 | \$1.99 | \$2.19 | \$2.39 | \$2.52 | \$2.66 | \$2.81 | \$2.97 | \$3.14 | \$81.41 |
| Southern Company | So |  | \$2.07 | \$2.13 | \$2.19 | \$2.25 | \$2.32 | \$2.37 | \$2.44 | \$2.52 | \$2.61 | \$2.71 | \$2.83 | \$2.99 | \$3.16 | \$3.34 | \$3.53 | \$3.73 | \$98.51 |
| TECO Energy, Inc. | TE |  | \$0.90 | \$0.90 | \$0.89 | \$0.87 | \$0.85 | \$0.89 | \$0.93 | \$0.97 | \$1.02 | \$1.07 | \$1.12 | \$1.18 | \$1.25 | \$1.32 | \$1.39 | \$1.47 | \$40.27 |
| Westar Energy, Inc. | WR |  | \$1.37 | \$1.41 | \$1.46 | \$1.50 | \$1.54 | \$1.67 | \$1.81 | \$1.96 | \$2.13 | \$2.32 | \$2.53 | \$2.67 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$83.04 |
| Xcel Energy Inc. | XEL |  | \$1.22 | \$1.27 | \$1.33 | \$1.38 | \$1.44 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.31 | \$2.45 | \$2.58 | \$2.73 | \$2.88 | \$72.74 |
| 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 | Outfow | 11/14/14 | 12/31/14 | 6/30/15 | 6/30/16 | 6/30/17 | 6/30/18 | 6/30/19 | 6/30/20 | 6/30/21 | 6/30/22 | 6/30/23 | 6/30/24 | 6/30/25 | 6/30/26 | 6/30/27 | 6/30/28 | 6/30/29 |
| Alliant Energy Corporation | LNT | (\$60.06) | \$0.00 | \$0.26 | \$2.10 | \$2.28 | \$2.41 | \$2.55 | \$2.73 | \$2.94 | \$3.15 | \$3.39 | \$3.64 | \$3.92 | \$4.14 | \$4.37 | \$4.62 | \$4.88 | \$139.59 |
| Ameren Corporation | AEE | (\$41.30) | \$0.00 | \$0.20 | \$1.59 | \$1.64 | \$1.70 | \$1.76 | \$1.93 | \$2.11 | \$2.30 | \$2.49 | \$2.70 | \$2.91 | \$3.07 | \$3.25 | \$3.43 | \$3.62 | \$96.98 |
| American Electric Power Company, Inc. | AEP | (\$56.09) | \$0.00 | \$0.26 | \$2.08 | \$2.27 | \$2.40 | \$2.53 | \$2.68 | \$2.85 | \$3.03 | \$3.22 | \$3.43 | \$3.66 | \$3.87 | \$4.09 | \$4.32 | \$4.56 | \$128.82 |
| CMS Energy Corporation | CMS | (\$31.78) | \$0.00 | \$0.14 | \$1.09 | \$1.18 | \$1.25 | \$1.32 | \$1.44 | \$1.57 | \$1.71 | \$1.85 | \$2.01 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$2.70 | \$74.87 |
| DTE Energy Company | DTE | (\$80.22) | \$0.00 | \$0.29 | \$2.35 | \$2.59 | \$2.76 | \$2.94 | \$3.21 | \$3.49 | \$3.79 | \$4.12 | \$4.46 | \$4.82 | \$5.09 | \$5.37 | \$5.68 | \$6.00 | \$188.04 |
| Duke Energy Corporation | DUK | (\$79.74) | \$0.00 | \$0.38 | \$3.03 | \$3.09 | \$3.16 | \$3.22 | \$3.41 | \$3.61 | \$3.82 | \$4.06 | \$4.32 | \$4.60 | \$4.85 | \$5.13 | \$5.42 | \$5.72 | \$180.49 |
| Empire District Electric Company | EDE | (\$26.93) | \$0.00 | \$0.13 | \$1.03 | \$1.05 | \$1.08 | \$1.10 | \$1.15 | \$1.20 | \$1.27 | \$1.34 | \$1.43 | \$1.52 | \$1.61 | \$1.70 | \$1.80 | \$1.90 | \$60.71 |
| Great Plains Energy Inc. | GXP | (\$26.00) | \$0.00 | \$0.13 | \$1.02 | \$1.14 | \$1.22 | \$1.30 | \$1.39 | \$1.49 | \$1.59 | \$1.70 | \$1.82 | \$1.95 | \$2.05 | \$2.17 | \$2.29 | \$2.42 | \$60.58 |
| Hawaiian Electric Industries, Inc. | HE | (\$27.41) | \$0.00 | \$0.16 | \$1.31 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$61.27 |
| IDACORP, Inc. | IDA | (\$59.53) | \$0.00 | \$0.25 | \$1.95 | \$2.18 | \$2.32 | \$2.47 | \$2.61 | \$2.78 | \$2.97 | \$3.18 | \$3.42 | \$3.70 | \$3.91 | \$4.13 | \$4.36 | \$4.61 | \$137.95 |
| NextEra Energy, Inc. | NEE | (\$98.23) | \$0.00 | \$0.40 | \$3.23 | \$3.43 | \$3.58 | \$3.75 | \$4.10 | \$4.49 | \$4.89 | \$5.32 | \$5.78 | \$6.27 | \$6.62 | \$6.99 | \$7.38 | \$7.80 | \$230.79 |
| Northeast Utilities | NU | (\$48.36) | \$0.00 | \$0.21 | \$1.65 | \$1.80 | \$1.91 | \$2.02 | \$2.22 | \$2.43 | \$2.65 | \$2.88 | \$3.13 | \$3.38 | \$3.57 | \$3.77 | \$3.98 | \$4.21 | \$114.43 |
| OGE Energy Corp. | OGE | (\$36.61) | \$0.00 | \$0.12 | \$1.00 | \$1.18 | \$1.30 | \$1.43 | \$1.58 | \$1.74 | \$1.92 | \$2.10 | \$2.30 | \$2.52 | \$2.66 | \$2.81 | \$2.96 | \$3.13 | \$88.08 |
| Otter Tail Corporation | OTTR | (\$29.43) | \$0.00 | \$0.14 | \$1.12 | \$1.20 | \$1.27 | \$1.35 | \$1.53 | \$1.71 | \$1.90 | \$2.09 | \$2.28 | \$2.46 | \$2.60 | \$2.74 | \$2.90 | \$3.06 | \$71.39 |
| Pinnacle West Capital Corporation | PNW | (\$59.44) | \$0.00 | \$0.31 | \$2.45 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.34 | \$3.52 | \$3.73 | \$3.96 | \$4.19 | \$4.42 | \$4.67 | \$4.93 | \$134.81 |
| PNM Resources, Inc. | PNM | (\$27.73) | \$0.00 | \$0.10 | \$0.81 | \$0.91 | \$0.99 | \$1.08 | \$1.25 | \$1.44 | \$1.63 | \$1.84 | \$2.05 | \$2.27 | \$2.40 | \$2.54 | \$2.68 | \$2.83 | \$69.40 |
| Portland General Electric Company | POR | (\$35.16) | \$0.00 | \$0.12 | \$0.98 | \$1.12 | \$1.22 | \$1.33 | \$1.48 | \$1.64 | \$1.81 | \$1.99 | \$2.19 | \$2.39 | \$2.52 | \$2.66 | \$2.81 | \$2.97 | \$84.55 |
| Southern Company | so | (\$46.55) | \$0.00 | \$0.27 | \$2.11 | \$2.19 | \$2.25 | \$2.32 | \$2.37 | \$2.44 | \$2.52 | \$2.61 | \$2.71 | \$2.83 | \$2.99 | \$3.16 | \$3.34 | \$3.53 | \$102.24 |
| TECO Energy, Inc. | TE | (\$19.00) | \$0.00 | \$0.12 | \$0.93 | \$0.89 | \$0.87 | \$0.85 | \$0.89 | \$0.93 | \$0.97 | \$1.02 | \$1.07 | \$1.12 | \$1.18 | \$1.25 | \$1.32 | \$1.39 | \$41.74 |
| Westar Energy, Inc. | WR | (\$36.85) | \$0.00 | \$0.18 | \$1.40 | \$1.46 | \$1.50 | \$1.54 | \$1.67 | \$1.81 | \$1.96 | \$2.13 | \$2.32 | \$2.53 | \$2.67 | \$2.82 | \$2.98 | \$3.14 | \$86.36 |
| Xcel Energy Inc. | XEL | (\$32.69) | \$0.00 | \$0.16 | \$1.25 | \$1.33 | \$1.38 | \$1.44 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.31 | \$2.45 | \$2.58 | \$2.73 | \$75.62 |



High EPS Growth Rate Estimate in First Stage

| Projected Annual Cash Flows |  |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| Alliant Energy Corporation | LNT |  | \$2.06 | \$2.19 | \$2.33 | \$2.48 | \$2.64 | \$2.86 | \$3.09 | \$3.33 | \$3.59 | \$3.86 | \$4.15 | \$4.39 | \$4.64 | \$4.90 | \$5.17 | \$5.46 | \$135.19 |
| Ameren Corporation | AEE |  | \$1.56 | \$1.64 | \$1.72 | \$1.81 | \$1.90 | \$2.11 | \$2.34 | \$2.57 | \$2.81 | \$3.05 | \$3.29 | \$3.48 | \$3.67 | \$3.88 | \$4.10 | \$4.33 | \$94.45 |
| American Electric Power Company, Inc. | AEP |  | \$2.04 | \$2.15 | \$2.28 | \$2.41 | \$2.55 | \$2.71 | \$2.88 | \$3.06 | \$3.26 | \$3.48 | \$3.71 | \$3.92 | \$4.14 | \$4.38 | \$4.62 | \$4.88 | \$124.15 |
| CMS Energy Corporation | CMS |  | \$1.06 | \$1.13 | \$1.19 | \$1.26 | \$1.34 | \$1.47 | \$1.60 | \$1.75 | \$1.90 | \$2.06 | \$2.23 | \$2.35 | \$2.48 | \$2.62 | \$2.77 | \$2.93 | \$72.20 |
| DTE Energy Company | DTE |  | \$2.28 | \$2.44 | \$2.61 | \$2.79 | \$2.99 | \$3.27 | \$3.56 | \$3.88 | \$4.21 | \$4.56 | \$4.93 | \$5.21 | \$5.50 | \$5.81 | \$6.14 | \$6.48 | \$182.10 |
| Duke Energy Corporation | DUK |  | \$2.97 | \$3.04 | \$3.11 | \$3.18 | \$3.25 | \$3.44 | \$3.65 | \$3.87 | \$4.11 | \$4.38 | \$4.66 | \$4.92 | \$5.20 | \$5.49 | \$5.80 | \$6.13 | \$174.64 |
| Empire District Electric Company | EDE |  | \$1.02 | \$1.04 | \$1.07 | \$1.10 | \$1.13 | \$1.19 | \$1.26 | \$1.33 | \$1.41 | \$1.50 | \$1.60 | \$1.70 | \$1.79 | \$1.89 | \$2.00 | \$2.11 | \$58.94 |
| Great Plains Energy Inc. | GXP |  | \$1.00 | \$1.07 | \$1.16 | \$1.25 | \$1.34 | \$1.44 | \$1.55 | \$1.66 | \$1.78 | \$1.91 | \$2.05 | \$2.16 | \$2.28 | \$2.41 | \$2.55 | \$2.69 | \$58.34 |
| Hawaiian Electric Industries, Inc. | HE |  | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$58.96 |
| IDACORP, Inc. | IDA |  | \$1.93 | \$2.08 | \$2.23 | \$2.40 | \$2.57 | \$2.74 | \$2.93 | \$3.15 | \$3.39 | \$3.65 | \$3.95 | \$4.17 | \$4.40 | \$4.65 | \$4.91 | \$5.19 | \$133.88 |
| NextEra Energy, Inc. | NEE |  | \$3.14 | \$3.29 | \$3.45 | \$3.62 | \$3.79 | \$4.16 | \$4.56 | \$4.98 | \$5.42 | \$5.89 | \$6.38 | \$6.74 | \$7.12 | \$7.52 | \$7.94 | \$8.39 | \$222.95 |
| Northeast Utilities | NU |  | \$1.61 | \$1.73 | \$1.85 | \$1.98 | \$2.12 | \$2.35 | \$2.59 | \$2.85 | \$3.11 | \$3.38 | \$3.65 | \$3.86 | \$4.08 | \$4.30 | \$4.55 | \$4.80 | \$110.93 |
| OGE Energy Corp. | OGE |  | \$0.98 | \$1.08 | \$1.20 | \$1.33 | \$1.47 | \$1.64 | \$1.82 | \$2.01 | \$2.21 | \$2.43 | \$2.65 | \$2.80 | \$2.96 | \$3.12 | \$3.30 | \$3.49 | \$85.27 |
| Otter Tail Corporation | OTTR |  | \$1.11 | \$1.23 | \$1.36 | \$1.51 | \$1.66 | \$1.96 | \$2.28 | \$2.60 | \$2.91 | \$3.20 | \$3.45 | \$3.64 | \$3.85 | \$4.06 | \$4.29 | \$4.53 | \$71.68 |
| Pinnacle West Capital Corporation | PNW |  | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.03 | \$3.18 | \$3.34 | \$3.53 | \$3.74 | \$3.97 | \$4.19 | \$4.43 | \$4.68 | \$4.94 | \$5.22 | \$129.61 |
| PNM Resources, Inc. | PNM |  | \$0.78 | \$0.86 | \$0.95 | \$1.05 | \$1.16 | \$1.37 | \$1.60 | \$1.83 | \$2.08 | \$2.33 | \$2.58 | \$2.72 | \$2.88 | \$3.04 | \$3.21 | \$3.39 | \$67.61 |
| Portland General Electric Company | POR |  | \$0.95 | \$1.05 | \$1.15 | \$1.27 | \$1.39 | \$1.56 | \$1.75 | \$1.94 | \$2.14 | \$2.35 | \$2.56 | \$2.71 | \$2.86 | \$3.02 | \$3.19 | \$3.37 | \$82.06 |
| Southern Company | So |  | \$2.07 | \$2.13 | \$2.19 | \$2.26 | \$2.32 | \$2.38 | \$2.45 | \$2.53 | \$2.62 | \$2.72 | \$2.84 | \$3.00 | \$3.17 | \$3.35 | \$3.54 | \$3.74 | \$98.53 |
| TECO Energy, Inc. | TE |  | \$0.91 | \$0.91 | \$0.91 | \$0.91 | \$0.89 | \$0.94 | \$1.00 | \$1.05 | \$1.10 | \$1.15 | \$1.21 | \$1.27 | \$1.35 | \$1.42 | \$1.50 | \$1.59 | \$40.50 |
| Westar Energy, Inc. | WR |  | \$1.40 | \$1.46 | \$1.53 | \$1.60 | \$1.67 | \$1.84 | \$2.02 | \$2.21 | \$2.41 | \$2.63 | \$2.87 | \$3.03 | \$3.20 | \$3.38 | \$3.57 | \$3.77 | \$84.20 |
| Xcel Energy Inc. | XEL |  | \$1.23 | \$1.29 | \$1.36 | \$1.43 | \$1.50 | \$1.61 | \$1.73 | \$1.87 | \$2.01 | \$2.16 | \$2.32 | \$2.45 | \$2.59 | \$2.74 | \$2.89 | \$3.05 | \$73.16 |
| 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 | Outfow | 11/14/14 | 12/31/14 | 6/30/15 | 6/30/16 | 6/30/17 | 6/30/18 | 6/30/19 | 6/30/20 | 6/30/21 | 6/30/22 | 6/30/23 | 6/30/24 | 6/30/25 | 6/30/26 | 6/30/27 | 6/30/28 | 6/30/29 |
| Alliant Energy Corporation | LNT | (\$60.06) | \$0.00 | \$0.26 | \$2.12 | \$2.33 | \$2.48 | \$2.64 | \$2.86 | \$3.09 | \$3.33 | \$3.59 | \$3.86 | \$4.15 | \$4.39 | \$4.64 | \$4.90 | \$5.17 | \$140.66 |
| Ameren Corporation | AEE | (\$41.30) | \$0.00 | \$0.20 | \$1.62 | \$1.72 | \$1.81 | \$1.90 | \$2.11 | \$2.34 | \$2.57 | \$2.81 | \$3.05 | \$3.29 | \$3.48 | \$3.67 | \$3.88 | \$4.10 | \$98.78 |
| American Electric Power Company, Inc. | AEP | (\$56.09) | \$0.00 | \$0.26 | \$2.09 | \$2.28 | \$2.41 | \$2.55 | \$2.71 | \$2.88 | \$3.06 | \$3.26 | \$3.48 | \$3.71 | \$3.92 | \$4.14 | \$4.38 | \$4.62 | \$129.04 |
| CMS Energy Corporation | CMS | (\$31.78) | \$0.00 | \$0.14 | \$1.10 | \$1.19 | \$1.26 | \$1.34 | \$1.47 | \$1.60 | \$1.75 | \$1.90 | \$2.06 | \$2.23 | \$2.35 | \$2.48 | \$2.62 | \$2.77 | \$75.13 |
| DTE Energy Company | DTE | (\$80.22) | \$0.00 | \$0.29 | \$2.36 | \$2.61 | \$2.79 | \$2.99 | \$3.27 | \$3.56 | \$3.88 | \$4.21 | \$4.56 | \$4.93 | \$5.21 | \$5.50 | \$5.81 | \$6.14 | \$188.58 |
| Duke Energy Corporation | DUK | (\$79.74) | \$0.00 | \$0.38 | \$3.04 | \$3.11 | \$3.18 | \$3.25 | \$3.44 | \$3.65 | \$3.87 | \$4.11 | \$4.38 | \$4.66 | \$4.92 | \$5.20 | \$5.49 | \$5.80 | \$180.76 |
| Empire District Electric Company | EDE | (\$26.93) | \$0.00 | \$0.13 | \$1.04 | \$1.07 | \$1.10 | \$1.13 | \$1.19 | \$1.26 | \$1.33 | \$1.41 | \$1.50 | \$1.60 | \$1.70 | \$1.79 | \$1.89 | \$2.00 | \$61.05 |
| Great Plains Energy Inc. | GXP | (\$26.00) | \$0.00 | \$0.13 | \$1.03 | \$1.16 | \$1.25 | \$1.34 | \$1.44 | \$1.55 | \$1.66 | \$1.78 | \$1.91 | \$2.05 | \$2.16 | \$2.28 | \$2.41 | \$2.55 | \$61.03 |
| Hawaiian Electric Industries, Inc. | HE | (\$27.41) | \$0.00 | \$0.16 | \$1.31 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$61.27 |
| IDACORP, Inc. | IDA | (\$59.53) | \$0.00 | \$0.25 | \$1.97 | \$2.23 | \$2.40 | \$2.57 | \$2.74 | \$2.93 | \$3.15 | \$3.39 | \$3.65 | \$3.95 | \$4.17 | \$4.40 | \$4.65 | \$4.91 | \$139.07 |
| NextEra Energy, Inc. | NEE | (\$98.23) | \$0.00 | \$0.40 | \$3.24 | \$3.45 | \$3.62 | \$3.79 | \$4.16 | \$4.56 | \$4.98 | \$5.42 | \$5.89 | \$6.38 | \$6.74 | \$7.12 | \$7.52 | \$7.94 | \$231.34 |
| Northeast Utilities | NU | (\$48.36) | \$0.00 | \$0.21 | \$1.68 | \$1.85 | \$1.98 | \$2.12 | \$2.35 | \$2.59 | \$2.85 | \$3.11 | \$3.38 | \$3.65 | \$3.86 | \$4.08 | \$4.30 | \$4.55 | \$115.73 |
| OGE Energy Corp. | OGE | (\$36.61) | \$0.00 | \$0.13 | \$1.01 | \$1.20 | \$1.33 | \$1.47 | \$1.64 | \$1.82 | \$2.01 | \$2.21 | \$2.43 | \$2.65 | \$2.80 | \$2.96 | \$3.12 | \$3.30 | \$88.75 |
| Otter Tail Corporation | OTTR | (\$29.43) | \$0.00 | \$0.14 | \$1.19 | \$1.36 | \$1.51 | \$1.66 | \$1.96 | \$2.28 | \$2.60 | \$2.91 | \$3.20 | \$3.45 | \$3.64 | \$3.85 | \$4.06 | \$4.29 | \$76.22 |
| Pinnacle West Capital Corporation | PNW | (\$59.44) | \$0.00 | \$0.31 | \$2.45 | \$2.63 | \$2.76 | \$2.89 | \$3.03 | \$3.18 | \$3.34 | \$3.53 | \$3.74 | \$3.97 | \$4.19 | \$4.43 | \$4.68 | \$4.94 | \$134.83 |
| PNM Resources, Inc. | PNM | (\$27.73) | \$0.00 | \$0.10 | \$0.83 | \$0.95 | \$1.05 | \$1.16 | \$1.37 | \$1.60 | \$1.83 | \$2.08 | \$2.33 | \$2.58 | \$2.72 | \$2.88 | \$3.04 | \$3.21 | \$71.00 |
| Portland General Electric Company | POR | (\$35.16) | \$0.00 | \$0.12 | \$0.99 | \$1.15 | \$1.27 | \$1.39 | \$1.56 | \$1.75 | \$1.94 | \$2.14 | \$2.35 | \$2.56 | \$2.71 | \$2.86 | \$3.02 | \$3.19 | \$85.43 |
| Southern Company | so | (\$46.55) | \$0.00 | \$0.27 | \$2.11 | \$2.19 | \$2.26 | \$2.32 | \$2.38 | \$2.45 | \$2.53 | \$2.62 | \$2.72 | \$2.84 | \$3.00 | \$3.17 | \$3.35 | \$3.54 | \$102.27 |
| TECO Energy, Inc. | TE | (\$19.00) | \$0.00 | \$0.12 | \$0.94 | \$0.91 | \$0.91 | \$0.89 | \$0.94 | \$1.00 | \$1.05 | \$1.10 | \$1.15 | \$1.21 | \$1.27 | \$1.35 | \$1.42 | \$1.50 | \$42.09 |
| Westar Energy, Inc. | WR | (\$36.85) | \$0.00 | \$0.18 | \$1.44 | \$1.53 | \$1.60 | \$1.67 | \$1.84 | \$2.02 | \$2.21 | \$2.41 | \$2.63 | \$2.87 | \$3.03 | \$3.20 | \$3.38 | \$3.57 | \$87.97 |
| Xcel Energy Inc. | XEL | (\$32.69) | \$0.00 | \$0.16 | \$1.26 | \$1.36 | \$1.43 | \$1.50 | \$1.61 | \$1.73 | \$1.87 | \$2.01 | \$2.16 | \$2.32 | \$2.45 | \$2.59 | \$2.74 | \$2.89 | \$76.21 |



| Projected Annual Cash Flows |  |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| Alliant Energy Corporation | LNT |  | \$2.03 | \$2.14 | \$2.25 | \$2.37 | \$2.50 | \$2.67 | \$2.86 | \$3.06 | \$3.28 | \$3.53 | \$3.79 | \$4.01 | \$4.23 | \$4.47 | \$4.72 | \$4.99 | \$134.02 |
| Ameren Corporation | AEE |  | \$1.49 | \$1.51 | \$1.52 | \$1.53 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.95 | \$3.11 | \$91.38 |
| American Electric Power Company, Inc. | AEP |  | \$2.03 | \$2.14 | \$2.25 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.96 | \$3.15 | \$3.36 | \$3.58 | \$3.78 | \$4.00 | \$4.22 | \$4.46 | \$4.71 | \$123.76 |
| CMS Energy Corporation | CMS |  | \$1.06 | \$1.11 | \$1.17 | \$1.23 | \$1.29 | \$1.41 | \$1.53 | \$1.66 | \$1.80 | \$1.95 | \$2.11 | \$2.23 | \$2.36 | \$2.49 | \$2.63 | \$2.78 | \$71.81 |
| DTE Energy Company | DTE |  | \$2.27 | \$2.41 | \$2.57 | \$2.73 | \$2.90 | \$3.15 | \$3.42 | \$3.71 | \$4.02 | \$4.35 | \$4.70 | \$4.97 | \$5.25 | \$5.54 | \$5.85 | \$6.18 | \$181.31 |
| Duke Energy Corporation | DUK |  | \$2.96 | \$3.02 | \$3.08 | \$3.14 | \$3.20 | \$3.38 | \$3.58 | \$3.79 | \$4.02 | \$4.28 | \$4.55 | \$4.81 | \$5.08 | \$5.37 | \$5.67 | \$5.99 | \$174.33 |
| Empire District Electric Company | EDE |  | \$1.01 | \$1.02 | \$1.04 | \$1.06 | \$1.08 | \$1.13 | \$1.18 | \$1.24 | \$1.31 | \$1.39 | \$1.49 | \$1.57 | \$1.66 | \$1.75 | \$1.85 | \$1.95 | \$58.60 |
| Great Plains Energy Inc. | GXP |  | \$0.99 | \$1.05 | \$1.13 | \$1.20 | \$1.28 | \$1.36 | \$1.45 | \$1.55 | \$1.66 | \$1.77 | \$1.90 | \$2.00 | \$2.12 | \$2.23 | \$2.36 | \$2.49 | \$57.87 |
| Hawaiian Electric Industries, Inc. | HE |  | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$58.96 |
| IDACORP, Inc. | IDA |  | \$1.88 | \$1.98 | \$2.07 | \$2.17 | \$2.27 | \$2.37 | \$2.49 | \$2.63 | \$2.80 | \$3.01 | \$3.25 | \$3.43 | \$3.63 | \$3.83 | \$4.05 | \$4.27 | \$131.65 |
| NextEra Energy, Inc. | NEE |  | \$3.12 | \$3.26 | \$3.39 | \$3.54 | \$3.68 | \$4.02 | \$4.38 | \$4.77 | \$5.19 | \$5.63 | \$6.10 | \$6.44 | \$6.81 | \$7.19 | \$7.59 | \$8.02 | \$221.98 |
| Northeast Utilities | NU |  | \$1.59 | \$1.67 | \$1.76 | \$1.85 | \$1.95 | \$2.12 | \$2.31 | \$2.51 | \$2.72 | \$2.94 | \$3.18 | \$3.36 | \$3.55 | \$3.75 | \$3.96 | \$4.18 | \$109.32 |
| OGE Energy Corp. | OGE |  | \$0.96 | \$1.05 | \$1.15 | \$1.26 | \$1.37 | \$1.50 | \$1.65 | \$1.81 | \$1.98 | \$2.16 | \$2.36 | \$2.49 | \$2.63 | \$2.78 | \$2.94 | \$3.10 | \$84.20 |
| Otter Tail Corporation | OTTR |  | \$1.02 | \$1.04 | \$1.05 | \$1.07 | \$1.08 | \$1.17 | \$1.27 | \$1.38 | \$1.49 | \$1.60 | \$1.73 | \$1.83 | \$1.93 | \$2.04 | \$2.15 | \$2.27 | \$65.66 |
| Pinnacle West Capital Corporation | PNW |  | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.33 | \$3.52 | \$3.72 | \$3.95 | \$4.18 | \$4.41 | \$4.66 | \$4.92 | \$5.20 | \$129.57 |
| PNM Resources, Inc. | PNM |  | \$0.76 | \$0.82 | \$0.89 | \$0.96 | \$1.03 | \$1.19 | \$1.35 | \$1.53 | \$1.72 | \$1.92 | \$2.12 | \$2.24 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$65.81 |
| Portland General Electric Company | POR |  | \$0.93 | \$1.00 | \$1.07 | \$1.14 | \$1.22 | \$1.33 | \$1.46 | \$1.59 | \$1.74 | \$1.90 | \$2.07 | \$2.19 | \$2.31 | \$2.44 | \$2.58 | \$2.72 | \$80.26 |
| Southern Company | So |  | \$2.07 | \$2.13 | \$2.19 | \$2.25 | \$2.31 | \$2.36 | \$2.43 | \$2.51 | \$2.60 | \$2.70 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$3.51 | \$3.70 | \$98.47 |
| TECO Energy, Inc. | TE |  | \$0.89 | \$0.86 | \$0.84 | \$0.81 | \$0.78 | \$0.80 | \$0.82 | \$0.85 | \$0.88 | \$0.92 | \$0.96 | \$1.01 | \$1.07 | \$1.13 | \$1.20 | \$1.26 | \$39.90 |
| Westar Energy, Inc. | WR |  | \$1.36 | \$1.38 | \$1.41 | \$1.44 | \$1.46 | \$1.56 | \$1.68 | \$1.81 | \$1.96 | \$2.12 | \$2.31 | \$2.44 | \$2.58 | \$2.73 | \$2.88 | \$3.04 | \$82.34 |
| Xcel Energy Inc. | XEL |  | \$1.21 | \$1.26 | \$1.31 | \$1.36 | \$1.41 | \$1.50 | \$1.59 | \$1.70 | \$1.82 | \$1.96 | \$2.10 | \$2.22 | \$2.35 | \$2.48 | \$2.62 | \$2.77 | \$72.47 |
| 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 | Outfow | 11/14/14 | 12/31/14 | 6/30/15 | 6/30/16 | 6/30/17 | 6/30/18 | 6/30/19 | 6/30/20 | 6/30/21 | 6/30/22 | 6/30/23 | 6/30/24 | 6/30/25 | 6/30/26 | 6/30/27 | 6/30/28 | 6/30/29 |
| Alliant Energy Corporation | LNT | (\$60.06) | \$0.00 | \$0.26 | \$2.08 | \$2.25 | \$2.37 | \$2.50 | \$2.67 | \$2.86 | \$3.06 | \$3.28 | \$3.53 | \$3.79 | \$4.01 | \$4.23 | \$4.47 | \$4.72 | \$139.01 |
| Ameren Corporation | AEE | (\$41.30) | \$0.00 | \$0.19 | \$1.53 | \$1.52 | \$1.53 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.95 | \$94.50 |
| American Electric Power Company, Inc. | AEP | (\$56.09) | \$0.00 | \$0.26 | \$2.07 | \$2.25 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.96 | \$3.15 | \$3.36 | \$3.58 | \$3.78 | \$4.00 | \$4.22 | \$4.46 | \$128.47 |
| CMS Energy Corporation | CMS | (\$31.78) | \$0.00 | \$0.14 | \$1.09 | \$1.17 | \$1.23 | \$1.29 | \$1.41 | \$1.53 | \$1.66 | \$1.80 | \$1.95 | \$2.11 | \$2.23 | \$2.36 | \$2.49 | \$2.63 | \$74.59 |
| DTE Energy Company | DTE | (\$80.22) | \$0.00 | \$0.29 | \$2.34 | \$2.57 | \$2.73 | \$2.90 | \$3.15 | \$3.42 | \$3.71 | \$4.02 | \$4.35 | \$4.70 | \$4.97 | \$5.25 | \$5.54 | \$5.85 | \$187.49 |
| Duke Energy Corporation | DUK | (\$79.74) | \$0.00 | \$0.38 | \$3.03 | \$3.08 | \$3.14 | \$3.20 | \$3.38 | \$3.58 | \$3.79 | \$4.02 | \$4.28 | \$4.55 | \$4.81 | \$5.08 | \$5.37 | \$5.67 | \$180.32 |
| Empire District Electric Company | EDE | (\$26.93) | \$0.00 | \$0.13 | \$1.02 | \$1.04 | \$1.06 | \$1.08 | \$1.13 | \$1.18 | \$1.24 | \$1.31 | \$1.39 | \$1.49 | \$1.57 | \$1.66 | \$1.75 | \$1.85 | \$60.55 |
| Great Plains Energy Inc. | GXP | (\$26.00) | \$0.00 | \$0.13 | \$1.01 | \$1.13 | \$1.20 | \$1.28 | \$1.36 | \$1.45 | \$1.55 | \$1.66 | \$1.77 | \$1.90 | \$2.00 | \$2.12 | \$2.23 | \$2.36 | \$60.37 |
| Hawaiian Electric Industries, Inc. | HE | (\$27.41) | \$0.00 | \$0.16 | \$1.31 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$61.27 |
| IDACORP, Inc. | IDA | (\$59.53) | \$0.00 | \$0.24 | \$1.90 | \$2.07 | \$2.17 | \$2.27 | \$2.37 | \$2.49 | \$2.63 | \$2.80 | \$3.01 | \$3.25 | \$3.43 | \$3.63 | \$3.83 | \$4.05 | \$135.93 |
| NextEra Energy, Inc. | NEE | (\$98.23) | \$0.00 | \$0.40 | \$3.22 | \$3.39 | \$3.54 | \$3.68 | \$4.02 | \$4.38 | \$4.77 | \$5.19 | \$5.63 | \$6.10 | \$6.44 | \$6.81 | \$7.19 | \$7.59 | \$230.00 |
| Northeast Utilities | NU | (\$48.36) | \$0.00 | \$0.20 | \$1.63 | \$1.76 | \$1.85 | \$1.95 | \$2.12 | \$2.31 | \$2.51 | \$2.72 | \$2.94 | \$3.18 | \$3.36 | \$3.55 | \$3.75 | \$3.96 | \$113.50 |
| OGE Energy Corp. | OGE | (\$36.61) | \$0.00 | \$0.12 | \$0.99 | \$1.15 | \$1.26 | \$1.37 | \$1.50 | \$1.65 | \$1.81 | \$1.98 | \$2.16 | \$2.36 | \$2.49 | \$2.63 | \$2.78 | \$2.94 | \$87.30 |
| Otter Tail Corporation | OTTR | (\$29.43) | \$0.00 | \$0.13 | \$1.05 | \$1.05 | \$1.07 | \$1.08 | \$1.17 | \$1.27 | \$1.38 | \$1.49 | \$1.60 | \$1.73 | \$1.83 | \$1.93 | \$2.04 | \$2.15 | \$67.94 |
| Pinnacle West Capital Corporation | PNW | (\$59.44) | \$0.00 | \$0.31 | \$2.44 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.33 | \$3.52 | \$3.72 | \$3.95 | \$4.18 | \$4.41 | \$4.66 | \$4.92 | \$134.77 |
| PNM Resources, Inc. | PNM | (\$27.73) | \$0.00 | \$0.10 | \$0.80 | \$0.89 | \$0.96 | \$1.03 | \$1.19 | \$1.35 | \$1.53 | \$1.72 | \$1.92 | \$2.12 | \$2.24 | \$2.37 | \$2.50 | \$2.64 | \$68.60 |
| Portland General Electric Company | POR | (\$35.16) | \$0.00 | \$0.12 | \$0.95 | \$1.07 | \$1.14 | \$1.22 | \$1.33 | \$1.46 | \$1.59 | \$1.74 | \$1.90 | \$2.07 | \$2.19 | \$2.31 | \$2.44 | \$2.58 | \$82.98 |
| Southern Company | so | (\$46.55) | \$0.00 | \$0.27 | \$2.10 | \$2.19 | \$2.25 | \$2.31 | \$2.36 | \$2.43 | \$2.51 | \$2.60 | \$2.70 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$3.51 | \$102.18 |
| TECO Energy, Inc. | TE | (\$19.00) | \$0.00 | \$0.11 | \$0.90 | \$0.84 | \$0.81 | \$0.78 | \$0.80 | \$0.82 | \$0.85 | \$0.88 | \$0.92 | \$0.96 | \$1.01 | \$1.07 | \$1.13 | \$1.20 | \$41.16 |
| Westar Energy, Inc. | WR | (\$36.85) | \$0.00 | \$0.17 | \$1.38 | \$1.41 | \$1.44 | \$1.46 | \$1.56 | \$1.68 | \$1.81 | \$1.96 | \$2.12 | \$2.31 | \$2.44 | \$2.58 | \$2.73 | \$2.88 | \$85.38 |
| Xcel Energy Inc. | XEL | (\$32.69) | \$0.00 | \$0.16 | \$1.24 | \$1.31 | \$1.36 | \$1.41 | \$1.50 | \$1.59 | \$1.70 | \$1.82 | \$1.96 | \$2.10 | \$2.22 | \$2.35 | \$2.48 | \$2.62 | \$75.23 |



| Projected Annual Cash Flows |  |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| Alliant Energy Corporation | LNT |  | \$2.04 | \$2.16 | \$2.28 | \$2.41 | \$2.55 | \$2.73 | \$2.94 | \$3.15 | \$3.39 | \$3.64 | \$3.92 | \$4.14 | \$4.37 | \$4.62 | \$4.88 | \$5.15 | \$130.50 |
| Ameren Corporation | AEE |  | \$1.53 | \$1.59 | \$1.64 | \$1.70 | \$1.76 | \$1.93 | \$2.11 | \$2.30 | \$2.49 | \$2.70 | \$2.91 | \$3.07 | \$3.25 | \$3.43 | \$3.62 | \$3.83 | \$89.70 |
| American Electric Power Company, Inc. | AEP |  | \$2.03 | \$2.15 | \$2.27 | \$2.40 | \$2.53 | \$2.68 | \$2.85 | \$3.03 | \$3.22 | \$3.43 | \$3.66 | \$3.87 | \$4.09 | \$4.32 | \$4.56 | \$4.82 | \$118.92 |
| CMS Energy Corporation | CMS |  | \$1.06 | \$1.12 | \$1.18 | \$1.25 | \$1.32 | \$1.44 | \$1.57 | \$1.71 | \$1.85 | \$2.01 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$2.70 | \$2.86 | \$69.08 |
| DTE Energy Company | DTE |  | \$2.28 | \$2.43 | \$2.59 | \$2.76 | \$2.94 | \$3.21 | \$3.49 | \$3.79 | \$4.12 | \$4.46 | \$4.82 | \$5.09 | \$5.37 | \$5.68 | \$6.00 | \$6.33 | \$175.61 |
| Duke Energy Corporation | DUK |  | \$2.96 | \$3.03 | \$3.09 | \$3.16 | \$3.22 | \$3.41 | \$3.61 | \$3.82 | \$4.06 | \$4.32 | \$4.60 | \$4.85 | \$5.13 | \$5.42 | \$5.72 | \$6.04 | \$164.67 |
| Empire District Electric Company | EDE |  | \$1.01 | \$1.03 | \$1.05 | \$1.08 | \$1.10 | \$1.15 | \$1.20 | \$1.27 | \$1.34 | \$1.43 | \$1.52 | \$1.61 | \$1.70 | \$1.80 | \$1.90 | \$2.00 | \$55.92 |
| Great Plains Energy Inc. | GXP |  | \$0.99 | \$1.06 | \$1.14 | \$1.22 | \$1.30 | \$1.39 | \$1.49 | \$1.59 | \$1.70 | \$1.82 | \$1.95 | \$2.05 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$56.82 |
| Hawaiian Electric Industries, Inc. | HE |  | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$55.23 |
| IDACORP, Inc. | IDA |  | \$1.92 | \$2.04 | \$2.18 | \$2.32 | \$2.47 | \$2.61 | \$2.78 | \$2.97 | \$3.18 | \$3.42 | \$3.70 | \$3.91 | \$4.13 | \$4.36 | \$4.61 | \$4.87 | \$126.07 |
| NextEra Energy, Inc. | NEE |  | \$3.13 | \$3.28 | \$3.43 | \$3.58 | \$3.75 | \$4.10 | \$4.49 | \$4.89 | \$5.32 | \$5.78 | \$6.27 | \$6.62 | \$6.99 | \$7.38 | \$7.80 | \$8.24 | \$219.43 |
| Northeast Utilities | NU |  | \$1.60 | \$1.69 | \$1.80 | \$1.91 | \$2.02 | \$2.22 | \$2.43 | \$2.65 | \$2.88 | \$3.13 | \$3.38 | \$3.57 | \$3.77 | \$3.98 | \$4.21 | \$4.44 | \$104.77 |
| OGE Energy Corp. | OGE |  | \$0.97 | \$1.07 | \$1.18 | \$1.30 | \$1.43 | \$1.58 | \$1.74 | \$1.92 | \$2.10 | \$2.30 | \$2.52 | \$2.66 | \$2.81 | \$2.96 | \$3.13 | \$3.31 | \$84.87 |
| Otter Tail Corporation | OTTR |  | \$1.06 | \$1.13 | \$1.20 | \$1.27 | \$1.35 | \$1.53 | \$1.71 | \$1.90 | \$2.09 | \$2.28 | \$2.46 | \$2.60 | \$2.74 | \$2.90 | \$3.06 | \$3.23 | \$66.08 |
| Pinnacle West Capital Corporation | PNW |  | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.34 | \$3.52 | \$3.73 | \$3.96 | \$4.19 | \$4.42 | \$4.67 | \$4.93 | \$5.21 | \$123.82 |
| PNM Resources, Inc. | PNM |  | \$0.77 | \$0.84 | \$0.91 | \$0.99 | \$1.08 | \$1.25 | \$1.44 | \$1.63 | \$1.84 | \$2.05 | \$2.27 | \$2.40 | \$2.54 | \$2.68 | \$2.83 | \$2.99 | \$64.04 |
| Portland General Electric Company | POR |  | \$0.95 | \$1.03 | \$1.12 | \$1.22 | \$1.33 | \$1.48 | \$1.64 | \$1.81 | \$1.99 | \$2.19 | \$2.39 | \$2.52 | \$2.66 | \$2.81 | \$2.97 | \$3.14 | \$78.30 |
| Southern Company | So |  | \$2.07 | \$2.13 | \$2.19 | \$2.25 | \$2.32 | \$2.37 | \$2.44 | \$2.52 | \$2.61 | \$2.71 | \$2.83 | \$2.99 | \$3.16 | \$3.34 | \$3.53 | \$3.73 | \$94.55 |
| TECO Energy, Inc. | TE |  | \$0.90 | \$0.90 | \$0.89 | \$0.87 | \$0.85 | \$0.89 | \$0.93 | \$0.97 | \$1.02 | \$1.07 | \$1.12 | \$1.18 | \$1.25 | \$1.32 | \$1.39 | \$1.47 | \$38.28 |
| Westar Energy, Inc. | WR |  | \$1.37 | \$1.41 | \$1.46 | \$1.50 | \$1.54 | \$1.67 | \$1.81 | \$1.96 | \$2.13 | \$2.32 | \$2.53 | \$2.67 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$81.73 |
| Xcel Energy Inc. | XEL |  | \$1.22 | \$1.27 | \$1.33 | \$1.38 | \$1.44 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.31 | \$2.45 | \$2.58 | \$2.73 | \$2.88 | \$70.52 |
| Projected Annual Data Investor Cash Flows |  | [64] | [65] | [66] | [67] | [68] | [69] | [70] | [71] | [72] | [73] | [74] | [75] | [76] | [77] | [78] | [79] | [80] | [81] |
|  |  | Initial |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Company | Ticker | Outfow | 11/14/14 | 12/31/14 | 6/30/15 | 6/30/16 | 6/30/17 | 6/30/18 | 6/30/19 | 6/30/20 | 6/30/21 | 6/30/22 | 6/30/23 | 6/30/24 | 6/30/25 | 6/30/26 | 6/30/27 | 6/30/28 | 6/30/29 |
| Alliant Energy Corporation | LNT | (\$58.31) | \$0.00 | \$0.26 | \$2.10 | \$2.28 | \$2.41 | \$2.55 | \$2.73 | \$2.94 | \$3.15 | \$3.39 | \$3.64 | \$3.92 | \$4.14 | \$4.37 | \$4.62 | \$4.88 | \$135.66 |
| Ameren Corporation | AEE | (\$39.75) | \$0.00 | \$0.20 | \$1.59 | \$1.64 | \$1.70 | \$1.76 | \$1.93 | \$2.11 | \$2.30 | \$2.49 | \$2.70 | \$2.91 | \$3.07 | \$3.25 | \$3.43 | \$3.62 | \$93.52 |
| American Electric Power Company, Inc. | AEP | (\$53.81) | \$0.00 | \$0.26 | \$2.08 | \$2.27 | \$2.40 | \$2.53 | \$2.68 | \$2.85 | \$3.03 | \$3.22 | \$3.43 | \$3.66 | \$3.87 | \$4.09 | \$4.32 | \$4.56 | \$123.73 |
| CMS Energy Corporation | CMS | (\$30.47) | \$0.00 | \$0.14 | \$1.09 | \$1.18 | \$1.25 | \$1.32 | \$1.44 | \$1.57 | \$1.71 | \$1.85 | \$2.01 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$2.70 | \$71.93 |
| DTE Energy Company | DTE | (\$77.50) | \$0.00 | \$0.29 | \$2.35 | \$2.59 | \$2.76 | \$2.94 | \$3.21 | \$3.49 | \$3.79 | \$4.12 | \$4.46 | \$4.82 | \$5.09 | \$5.37 | \$5.68 | \$6.00 | \$181.95 |
| Duke Energy Corporation | DUK | (\$75.35) | \$0.00 | \$0.38 | \$3.03 | \$3.09 | \$3.16 | \$3.22 | \$3.41 | \$3.61 | \$3.82 | \$4.06 | \$4.32 | \$4.60 | \$4.85 | \$5.13 | \$5.42 | \$5.72 | \$170.71 |
| Empire District Electric Company | EDE | (\$25.68) | \$0.00 | \$0.13 | \$1.03 | \$1.05 | \$1.08 | \$1.10 | \$1.15 | \$1.20 | \$1.27 | \$1.34 | \$1.43 | \$1.52 | \$1.61 | \$1.70 | \$1.80 | \$1.90 | \$57.93 |
| Great Plains Energy Inc. | GXP | (\$25.46) | \$0.00 | \$0.13 | \$1.02 | \$1.14 | \$1.22 | \$1.30 | \$1.39 | \$1.49 | \$1.59 | \$1.70 | \$1.82 | \$1.95 | \$2.05 | \$2.17 | \$2.29 | \$2.42 | \$59.38 |
| Hawaiian Electric Industries, Inc. | HE | (\$25.74) | \$0.00 | \$0.16 | \$1.31 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$57.54 |
| IDACORP, Inc. | IDA | (\$56.39) | \$0.00 | \$0.25 | \$1.95 | \$2.18 | \$2.32 | \$2.47 | \$2.61 | \$2.78 | \$2.97 | \$3.18 | \$3.42 | \$3.70 | \$3.91 | \$4.13 | \$4.36 | \$4.61 | \$130.94 |
| NextEra Energy, Inc. | NEE | (\$96.84) | \$0.00 | \$0.40 | \$3.23 | \$3.43 | \$3.58 | \$3.75 | \$4.10 | \$4.49 | \$4.89 | \$5.32 | \$5.78 | \$6.27 | \$6.62 | \$6.99 | \$7.38 | \$7.80 | \$227.67 |
| Northeast Utilities | NU | (\$46.03) | \$0.00 | \$0.21 | \$1.65 | \$1.80 | \$1.91 | \$2.02 | \$2.22 | \$2.43 | \$2.65 | \$2.88 | \$3.13 | \$3.38 | \$3.57 | \$3.77 | \$3.98 | \$4.21 | \$109.21 |
| OGE Energy Corp. | OGE | (\$36.65) | \$0.00 | \$0.12 | \$1.00 | \$1.18 | \$1.30 | \$1.43 | \$1.58 | \$1.74 | \$1.92 | \$2.10 | \$2.30 | \$2.52 | \$2.66 | \$2.81 | \$2.96 | \$3.13 | \$88.17 |
| Otter Tail Corporation | OTTR | (\$28.51) | \$0.00 | \$0.14 | \$1.12 | \$1.20 | \$1.27 | \$1.35 | \$1.53 | \$1.71 | \$1.90 | \$2.09 | \$2.28 | \$2.46 | \$2.60 | \$2.74 | \$2.90 | \$3.06 | \$69.31 |
| Pinnacle West Capital Corporation | PNW | (\$56.85) | \$0.00 | \$0.31 | \$2.45 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.34 | \$3.52 | \$3.73 | \$3.96 | \$4.19 | \$4.42 | \$4.67 | \$4.93 | \$129.03 |
| PNM Resources, Inc. | PNM | (\$26.68) | \$0.00 | \$0.10 | \$0.81 | \$0.91 | \$0.99 | \$1.08 | \$1.25 | \$1.44 | \$1.63 | \$1.84 | \$2.05 | \$2.27 | \$2.40 | \$2.54 | \$2.68 | \$2.83 | \$67.03 |
| Portland General Electric Company | POR | (\$33.78) | \$0.00 | \$0.12 | \$0.98 | \$1.12 | \$1.22 | \$1.33 | \$1.48 | \$1.64 | \$1.81 | \$1.99 | \$2.19 | \$2.39 | \$2.52 | \$2.66 | \$2.81 | \$2.97 | \$81.44 |
| Southern Company | so | (\$44.77) | \$0.00 | \$0.27 | \$2.11 | \$2.19 | \$2.25 | \$2.32 | \$2.37 | \$2.44 | \$2.52 | \$2.61 | \$2.71 | \$2.83 | \$2.99 | \$3.16 | \$3.34 | \$3.53 | \$98.28 |
| TECO Energy, Inc. | TE | (\$18.10) | \$0.00 | \$0.12 | \$0.93 | \$0.89 | \$0.87 | \$0.85 | \$0.89 | \$0.93 | \$0.97 | \$1.02 | \$1.07 | \$1.12 | \$1.18 | \$1.25 | \$1.32 | \$1.39 | \$39.75 |
| Westar Energy, Inc. | WR | (\$36.27) | \$0.00 | \$0.18 | \$1.40 | \$1.46 | \$1.50 | \$1.54 | \$1.67 | \$1.81 | \$1.96 | \$2.13 | \$2.32 | \$2.53 | \$2.67 | \$2.82 | \$2.98 | \$3.14 | \$85.05 |
| Xcel Energy Inc. | XEL | (\$31.70) | \$0.00 | \$0.16 | \$1.25 | \$1.33 | \$1.38 | \$1.44 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.31 | \$2.45 | \$2.58 | \$2.73 | \$73.41 |



High EPS Growth Rate Estimate in First Stage

| Projected Annual Cash Flows |  |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Terminal |
| Company | Ticker |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |  |
| Alliant Energy Corporation | LNT |  | \$2.06 | \$2.19 | \$2.33 | \$2.48 | \$2.64 | \$2.86 | \$3.09 | \$3.33 | \$3.59 | \$3.86 | \$4.15 | \$4.39 | \$4.64 | \$4.90 | \$5.17 | \$5.46 | \$131.26 |
| Ameren Corporation | AEE |  | \$1.56 | \$1.64 | \$1.72 | \$1.81 | \$1.90 | \$2.11 | \$2.34 | \$2.57 | \$2.81 | \$3.05 | \$3.29 | \$3.48 | \$3.67 | \$3.88 | \$4.10 | \$4.33 | \$90.98 |
| American Electric Power Company, Inc. | AEP |  | \$2.04 | \$2.15 | \$2.28 | \$2.41 | \$2.55 | \$2.71 | \$2.88 | \$3.06 | \$3.26 | \$3.48 | \$3.71 | \$3.92 | \$4.14 | \$4.38 | \$4.62 | \$4.88 | \$119.07 |
| CMS Energy Corporation | CMS |  | \$1.06 | \$1.13 | \$1.19 | \$1.26 | \$1.34 | \$1.47 | \$1.60 | \$1.75 | \$1.90 | \$2.06 | \$2.23 | \$2.35 | \$2.48 | \$2.62 | \$2.77 | \$2.93 | \$69.26 |
| DTE Energy Company | DTE |  | \$2.28 | \$2.44 | \$2.61 | \$2.79 | \$2.99 | \$3.27 | \$3.56 | \$3.88 | \$4.21 | \$4.56 | \$4.93 | \$5.21 | \$5.50 | \$5.81 | \$6.14 | \$6.48 | \$176.00 |
| Duke Energy Corporation | DUK |  | \$2.97 | \$3.04 | \$3.11 | \$3.18 | \$3.25 | \$3.44 | \$3.65 | \$3.87 | \$4.11 | \$4.38 | \$4.66 | \$4.92 | \$5.20 | \$5.49 | \$5.80 | \$6.13 | \$164.85 |
| Empire District Electric Company | EDE |  | \$1.02 | \$1.04 | \$1.07 | \$1.10 | \$1.13 | \$1.19 | \$1.26 | \$1.33 | \$1.41 | \$1.50 | \$1.60 | \$1.70 | \$1.79 | \$1.89 | \$2.00 | \$2.11 | \$56.16 |
| Great Plains Energy Inc. | GXP |  | \$1.00 | \$1.07 | \$1.16 | \$1.25 | \$1.34 | \$1.44 | \$1.55 | \$1.66 | \$1.78 | \$1.91 | \$2.05 | \$2.16 | \$2.28 | \$2.41 | \$2.55 | \$2.69 | \$57.13 |
| Hawaiian Electric Industries, Inc. | HE |  | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$55.23 |
| IDACORP, Inc. | IDA |  | \$1.93 | \$2.08 | \$2.23 | \$2.40 | \$2.57 | \$2.74 | \$2.93 | \$3.15 | \$3.39 | \$3.65 | \$3.95 | \$4.17 | \$4.40 | \$4.65 | \$4.91 | \$5.19 | \$126.86 |
| NextEra Energy, Inc. | NEE |  | \$3.14 | \$3.29 | \$3.45 | \$3.62 | \$3.79 | \$4.16 | \$4.56 | \$4.98 | \$5.42 | \$5.89 | \$6.38 | \$6.74 | \$7.12 | \$7.52 | \$7.94 | \$8.39 | \$219.83 |
| Northeast Utilities | NU |  | \$1.61 | \$1.73 | \$1.85 | \$1.98 | \$2.12 | \$2.35 | \$2.59 | \$2.85 | \$3.11 | \$3.38 | \$3.65 | \$3.86 | \$4.08 | \$4.30 | \$4.55 | \$4.80 | \$105.71 |
| OGE Energy Corp. | OGE |  | \$0.98 | \$1.08 | \$1.20 | \$1.33 | \$1.47 | \$1.64 | \$1.82 | \$2.01 | \$2.21 | \$2.43 | \$2.65 | \$2.80 | \$2.96 | \$3.12 | \$3.30 | \$3.49 | \$85.37 |
| Otter Tail Corporation | OTTR |  | \$1.11 | \$1.23 | \$1.36 | \$1.51 | \$1.66 | \$1.96 | \$2.28 | \$2.60 | \$2.91 | \$3.20 | \$3.45 | \$3.64 | \$3.85 | \$4.06 | \$4.29 | \$4.53 | \$69.58 |
| Pinnacle West Capital Corporation | PNW |  | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.03 | \$3.18 | \$3.34 | \$3.53 | \$3.74 | \$3.97 | \$4.19 | \$4.43 | \$4.68 | \$4.94 | \$5.22 | \$123.83 |
| PNM Resources, Inc. | PNM |  | \$0.78 | \$0.86 | \$0.95 | \$1.05 | \$1.16 | \$1.37 | \$1.60 | \$1.83 | \$2.08 | \$2.33 | \$2.58 | \$2.72 | \$2.88 | \$3.04 | \$3.21 | \$3.39 | \$65.23 |
| Portland General Electric Company | POR |  | \$0.95 | \$1.05 | \$1.15 | \$1.27 | \$1.39 | \$1.56 | \$1.75 | \$1.94 | \$2.14 | \$2.35 | \$2.56 | \$2.71 | \$2.86 | \$3.02 | \$3.19 | \$3.37 | \$78.95 |
| Southern Company | So |  | \$2.07 | \$2.13 | \$2.19 | \$2.26 | \$2.32 | \$2.38 | \$2.45 | \$2.53 | \$2.62 | \$2.72 | \$2.84 | \$3.00 | \$3.17 | \$3.35 | \$3.54 | \$3.74 | \$94.58 |
| TECO Energy, Inc. | TE |  | \$0.91 | \$0.91 | \$0.91 | \$0.91 | \$0.89 | \$0.94 | \$1.00 | \$1.05 | \$1.10 | \$1.15 | \$1.21 | \$1.27 | \$1.35 | \$1.42 | \$1.50 | \$1.59 | \$38.51 |
| Westar Energy, Inc. | WR |  | \$1.40 | \$1.46 | \$1.53 | \$1.60 | \$1.67 | \$1.84 | \$2.02 | \$2.21 | \$2.41 | \$2.63 | \$2.87 | \$3.03 | \$3.20 | \$3.38 | \$3.57 | \$3.77 | \$82.89 |
| Xcel Energy Inc. | XEL |  | \$1.23 | \$1.29 | \$1.36 | \$1.43 | \$1.50 | \$1.61 | \$1.73 | \$1.87 | \$2.01 | \$2.16 | \$2.32 | \$2.45 | \$2.59 | \$2.74 | \$2.89 | \$3.05 | \$70.94 |
| 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 | Outfow | 11/14/14 | 12/31/14 | 6/30/15 | 6/30/16 | 6/30/17 | 6/30/18 | 6/30/19 | 6/30/20 | 6/30/21 | 6/30/22 | 6/30/23 | 6/30/24 | 6/30/25 | 6/30/26 | 6/30/27 | 6/30/28 | 6/30/29 |
| Alliant Energy Corporation | LNT | (\$58.31) | \$0.00 | \$0.26 | \$2.12 | \$2.33 | \$2.48 | \$2.64 | \$2.86 | \$3.09 | \$3.33 | \$3.59 | \$3.86 | \$4.15 | \$4.39 | \$4.64 | \$4.90 | \$5.17 | \$136.72 |
| Ameren Corporation | AEE | (\$39.75) | \$0.00 | \$0.20 | \$1.62 | \$1.72 | \$1.81 | \$1.90 | \$2.11 | \$2.34 | \$2.57 | \$2.81 | \$3.05 | \$3.29 | \$3.48 | \$3.67 | \$3.88 | \$4.10 | \$95.31 |
| American Electric Power Company, Inc. | AEP | (\$53.81) | \$0.00 | \$0.26 | \$2.09 | \$2.28 | \$2.41 | \$2.55 | \$2.71 | \$2.88 | \$3.06 | \$3.26 | \$3.48 | \$3.71 | \$3.92 | \$4.14 | \$4.38 | \$4.62 | \$123.95 |
| CMS Energy Corporation | CMS | (\$30.47) | \$0.00 | \$0.14 | \$1.10 | \$1.19 | \$1.26 | \$1.34 | \$1.47 | \$1.60 | \$1.75 | \$1.90 | \$2.06 | \$2.23 | \$2.35 | \$2.48 | \$2.62 | \$2.77 | \$72.19 |
| DTE Energy Company | DTE | (\$77.50) | \$0.00 | \$0.29 | \$2.36 | \$2.61 | \$2.79 | \$2.99 | \$3.27 | \$3.56 | \$3.88 | \$4.21 | \$4.56 | \$4.93 | \$5.21 | \$5.50 | \$5.81 | \$6.14 | \$182.49 |
| Duke Energy Corporation | DUK | (\$75.35) | \$0.00 | \$0.38 | \$3.04 | \$3.11 | \$3.18 | \$3.25 | \$3.44 | \$3.65 | \$3.87 | \$4.11 | \$4.38 | \$4.66 | \$4.92 | \$5.20 | \$5.49 | \$5.80 | \$170.98 |
| Empire District Electric Company | EDE | (\$25.68) | \$0.00 | \$0.13 | \$1.04 | \$1.07 | \$1.10 | \$1.13 | \$1.19 | \$1.26 | \$1.33 | \$1.41 | \$1.50 | \$1.60 | \$1.70 | \$1.79 | \$1.89 | \$2.00 | \$58.27 |
| Great Plains Energy Inc. | GXP | (\$25.46) | \$0.00 | \$0.13 | \$1.03 | \$1.16 | \$1.25 | \$1.34 | \$1.44 | \$1.55 | \$1.66 | \$1.78 | \$1.91 | \$2.05 | \$2.16 | \$2.28 | \$2.41 | \$2.55 | \$59.82 |
| Hawaiian Electric Industries, Inc. | HE | (\$25.74) | \$0.00 | \$0.16 | \$1.31 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$57.54 |
| IDACORP, Inc. | IDA | (\$56.39) | \$0.00 | \$0.25 | \$1.97 | \$2.23 | \$2.40 | \$2.57 | \$2.74 | \$2.93 | \$3.15 | \$3.39 | \$3.65 | \$3.95 | \$4.17 | \$4.40 | \$4.65 | \$4.91 | \$132.06 |
| NextEra Energy, Inc. | NEE | (\$96.84) | \$0.00 | \$0.40 | \$3.24 | \$3.45 | \$3.62 | \$3.79 | \$4.16 | \$4.56 | \$4.98 | \$5.42 | \$5.89 | \$6.38 | \$6.74 | \$7.12 | \$7.52 | \$7.94 | \$228.22 |
| Northeast Utilities | NU | (\$46.03) | \$0.00 | \$0.21 | \$1.68 | \$1.85 | \$1.98 | \$2.12 | \$2.35 | \$2.59 | \$2.85 | \$3.11 | \$3.38 | \$3.65 | \$3.86 | \$4.08 | \$4.30 | \$4.55 | \$110.51 |
| OGE Energy Corp. | OGE | (\$36.65) | \$0.00 | \$0.13 | \$1.01 | \$1.20 | \$1.33 | \$1.47 | \$1.64 | \$1.82 | \$2.01 | \$2.21 | \$2.43 | \$2.65 | \$2.80 | \$2.96 | \$3.12 | \$3.30 | \$88.85 |
| Otter Tail Corporation | OTTR | (\$28.51) | \$0.00 | \$0.14 | \$1.19 | \$1.36 | \$1.51 | \$1.66 | \$1.96 | \$2.28 | \$2.60 | \$2.91 | \$3.20 | \$3.45 | \$3.64 | \$3.85 | \$4.06 | \$4.29 | \$74.12 |
| Pinnacle West Capital Corporation | PNW | (\$56.85) | \$0.00 | \$0.31 | \$2.45 | \$2.63 | \$2.76 | \$2.89 | \$3.03 | \$3.18 | \$3.34 | \$3.53 | \$3.74 | \$3.97 | \$4.19 | \$4.43 | \$4.68 | \$4.94 | \$129.05 |
| PNM Resources, Inc. | PNM | (\$26.68) | \$0.00 | \$0.10 | \$0.83 | \$0.95 | \$1.05 | \$1.16 | \$1.37 | \$1.60 | \$1.83 | \$2.08 | \$2.33 | \$2.58 | \$2.72 | \$2.88 | \$3.04 | \$3.21 | \$68.62 |
| Portland General Electric Company | POR | (\$33.78) | \$0.00 | \$0.12 | \$0.99 | \$1.15 | \$1.27 | \$1.39 | \$1.56 | \$1.75 | \$1.94 | \$2.14 | \$2.35 | \$2.56 | \$2.71 | \$2.86 | \$3.02 | \$3.19 | \$82.32 |
| Southern Company | so | (\$44.77) | \$0.00 | \$0.27 | \$2.11 | \$2.19 | \$2.26 | \$2.32 | \$2.38 | \$2.45 | \$2.53 | \$2.62 | \$2.72 | \$2.84 | \$3.00 | \$3.17 | \$3.35 | \$3.54 | \$98.31 |
| TECO Energy, Inc. | TE | (\$18.10) | \$0.00 | \$0.12 | \$0.94 | \$0.91 | \$0.91 | \$0.89 | \$0.94 | \$1.00 | \$1.05 | \$1.10 | \$1.15 | \$1.21 | \$1.27 | \$1.35 | \$1.42 | \$1.50 | \$40.09 |
| Westar Energy, Inc. | WR | (\$36.27) | \$0.00 | \$0.18 | \$1.44 | \$1.53 | \$1.60 | \$1.67 | \$1.84 | \$2.02 | \$2.21 | \$2.41 | \$2.63 | \$2.87 | \$3.03 | \$3.20 | \$3.38 | \$3.57 | \$86.66 |
| Xcel Energy Inc. | XEL | (\$31.70) | \$0.00 | \$0.16 | \$1.26 | \$1.36 | \$1.43 | \$1.50 | \$1.61 | \$1.73 | \$1.87 | \$2.01 | \$2.16 | \$2.32 | \$2.45 | \$2.59 | \$2.74 | \$2.89 | \$73.99 |



| Projected Annual Cash Flows |  |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| Alliant Energy Corporation | LNT |  | \$2.03 | \$2.14 | \$2.25 | \$2.37 | \$2.50 | \$2.67 | \$2.86 | \$3.06 | \$3.28 | \$3.53 | \$3.79 | \$4.01 | \$4.23 | \$4.47 | \$4.72 | \$4.99 | \$130.09 |
| Ameren Corporation | AEE |  | \$1.49 | \$1.51 | \$1.52 | \$1.53 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.95 | \$3.11 | \$87.93 |
| American Electric Power Company, Inc. | AEP |  | \$2.03 | \$2.14 | \$2.25 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.96 | \$3.15 | \$3.36 | \$3.58 | \$3.78 | \$4.00 | \$4.22 | \$4.46 | \$4.71 | \$118.67 |
| CMS Energy Corporation | CMS |  | \$1.06 | \$1.11 | \$1.17 | \$1.23 | \$1.29 | \$1.41 | \$1.53 | \$1.66 | \$1.80 | \$1.95 | \$2.11 | \$2.23 | \$2.36 | \$2.49 | \$2.63 | \$2.78 | \$68.88 |
| DTE Energy Company | DTE |  | \$2.27 | \$2.41 | \$2.57 | \$2.73 | \$2.90 | \$3.15 | \$3.42 | \$3.71 | \$4.02 | \$4.35 | \$4.70 | \$4.97 | \$5.25 | \$5.54 | \$5.85 | \$6.18 | \$175.22 |
| Duke Energy Corporation | DUK |  | \$2.96 | \$3.02 | \$3.08 | \$3.14 | \$3.20 | \$3.38 | \$3.58 | \$3.79 | \$4.02 | \$4.28 | \$4.55 | \$4.81 | \$5.08 | \$5.37 | \$5.67 | \$5.99 | \$164.55 |
| Empire District Electric Company | EDE |  | \$1.01 | \$1.02 | \$1.04 | \$1.06 | \$1.08 | \$1.13 | \$1.18 | \$1.24 | \$1.31 | \$1.39 | \$1.49 | \$1.57 | \$1.66 | \$1.75 | \$1.85 | \$1.95 | \$55.81 |
| Great Plains Energy Inc. | GXP |  | \$0.99 | \$1.05 | \$1.13 | \$1.20 | \$1.28 | \$1.36 | \$1.45 | \$1.55 | \$1.66 | \$1.77 | \$1.90 | \$2.00 | \$2.12 | \$2.23 | \$2.36 | \$2.49 | \$56.67 |
| Hawaiian Electric Industries, Inc. | HE |  | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$55.23 |
| IDACORP, Inc. | IDA |  | \$1.88 | \$1.98 | \$2.07 | \$2.17 | \$2.27 | \$2.37 | \$2.49 | \$2.63 | \$2.80 | \$3.01 | \$3.25 | \$3.43 | \$3.63 | \$3.83 | \$4.05 | \$4.27 | \$124.66 |
| NextEra Energy, Inc. | NEE |  | \$3.12 | \$3.26 | \$3.39 | \$3.54 | \$3.68 | \$4.02 | \$4.38 | \$4.77 | \$5.19 | \$5.63 | \$6.10 | \$6.44 | \$6.81 | \$7.19 | \$7.59 | \$8.02 | \$218.86 |
| Northeast Utilities | NU |  | \$1.59 | \$1.67 | \$1.76 | \$1.85 | \$1.95 | \$2.12 | \$2.31 | \$2.51 | \$2.72 | \$2.94 | \$3.18 | \$3.36 | \$3.55 | \$3.75 | \$3.96 | \$4.18 | \$104.11 |
| OGE Energy Corp. | OGE |  | \$0.96 | \$1.05 | \$1.15 | \$1.26 | \$1.37 | \$1.50 | \$1.65 | \$1.81 | \$1.98 | \$2.16 | \$2.36 | \$2.49 | \$2.63 | \$2.78 | \$2.94 | \$3.10 | \$84.30 |
| Otter Tail Corporation | OTTR |  | \$1.02 | \$1.04 | \$1.05 | \$1.07 | \$1.08 | \$1.17 | \$1.27 | \$1.38 | \$1.49 | \$1.60 | \$1.73 | \$1.83 | \$1.93 | \$2.04 | \$2.15 | \$2.27 | \$63.60 |
| Pinnacle West Capital Corporation | PNW |  | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.33 | \$3.52 | \$3.72 | \$3.95 | \$4.18 | \$4.41 | \$4.66 | \$4.92 | \$5.20 | \$123.79 |
| PNM Resources, Inc. | PNM |  | \$0.76 | \$0.82 | \$0.89 | \$0.96 | \$1.03 | \$1.19 | \$1.35 | \$1.53 | \$1.72 | \$1.92 | \$2.12 | \$2.24 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$63.45 |
| Portland General Electric Company | POR |  | \$0.93 | \$1.00 | \$1.07 | \$1.14 | \$1.22 | \$1.33 | \$1.46 | \$1.59 | \$1.74 | \$1.90 | \$2.07 | \$2.19 | \$2.31 | \$2.44 | \$2.58 | \$2.72 | \$77.15 |
| Southern Company | So |  | \$2.07 | \$2.13 | \$2.19 | \$2.25 | \$2.31 | \$2.36 | \$2.43 | \$2.51 | \$2.60 | \$2.70 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$3.51 | \$3.70 | \$94.51 |
| TECO Energy, Inc. | TE |  | \$0.89 | \$0.86 | \$0.84 | \$0.81 | \$0.78 | \$0.80 | \$0.82 | \$0.85 | \$0.88 | \$0.92 | \$0.96 | \$1.01 | \$1.07 | \$1.13 | \$1.20 | \$1.26 | \$37.90 |
| Westar Energy, Inc. | WR |  | \$1.36 | \$1.38 | \$1.41 | \$1.44 | \$1.46 | \$1.56 | \$1.68 | \$1.81 | \$1.96 | \$2.12 | \$2.31 | \$2.44 | \$2.58 | \$2.73 | \$2.88 | \$3.04 | \$81.03 |
| Xcel Energy Inc. | XEL |  | \$1.21 | \$1.26 | \$1.31 | \$1.36 | \$1.41 | \$1.50 | \$1.59 | \$1.70 | \$1.82 | \$1.96 | \$2.10 | \$2.22 | \$2.35 | \$2.48 | \$2.62 | \$2.77 | \$70.25 |
| 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 | Outfow | 11/14/14 | 12/31/14 | 6/30/15 | 6/30/16 | 6/30/17 | 6/30/18 | 6/30/19 | 6/30/20 | 6/30/21 | 6/30/22 | 6/30/23 | 6/30/24 | 6/30/25 | 6/30/26 | 6/30/27 | 6/30/28 | 6/30/29 |
| Alliant Energy Corporation | LNT | (\$58.31) | \$0.00 | \$0.26 | \$2.08 | \$2.25 | \$2.37 | \$2.50 | \$2.67 | \$2.86 | \$3.06 | \$3.28 | \$3.53 | \$3.79 | \$4.01 | \$4.23 | \$4.47 | \$4.72 | \$135.08 |
| Ameren Corporation | AEE | (\$39.75) | \$0.00 | \$0.19 | \$1.53 | \$1.52 | \$1.53 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.95 | \$91.04 |
| American Electric Power Company, Inc. | AEP | (\$53.81) | \$0.00 | \$0.26 | \$2.07 | \$2.25 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.96 | \$3.15 | \$3.36 | \$3.58 | \$3.78 | \$4.00 | \$4.22 | \$4.46 | \$123.39 |
| CMS Energy Corporation | CMS | (\$30.47) | \$0.00 | \$0.14 | \$1.09 | \$1.17 | \$1.23 | \$1.29 | \$1.41 | \$1.53 | \$1.66 | \$1.80 | \$1.95 | \$2.11 | \$2.23 | \$2.36 | \$2.49 | \$2.63 | \$71.65 |
| DTE Energy Company | DTE | (\$77.50) | \$0.00 | \$0.29 | \$2.34 | \$2.57 | \$2.73 | \$2.90 | \$3.15 | \$3.42 | \$3.71 | \$4.02 | \$4.35 | \$4.70 | \$4.97 | \$5.25 | \$5.54 | \$5.85 | \$181.40 |
| Duke Energy Corporation | DUK | (\$75.35) | \$0.00 | \$0.38 | \$3.03 | \$3.08 | \$3.14 | \$3.20 | \$3.38 | \$3.58 | \$3.79 | \$4.02 | \$4.28 | \$4.55 | \$4.81 | \$5.08 | \$5.37 | \$5.67 | \$170.53 |
| Empire District Electric Company | EDE | (\$25.68) | \$0.00 | \$0.13 | \$1.02 | \$1.04 | \$1.06 | \$1.08 | \$1.13 | \$1.18 | \$1.24 | \$1.31 | \$1.39 | \$1.49 | \$1.57 | \$1.66 | \$1.75 | \$1.85 | \$57.76 |
| Great Plains Energy Inc. | GXP | (\$25.46) | \$0.00 | \$0.13 | \$1.01 | \$1.13 | \$1.20 | \$1.28 | \$1.36 | \$1.45 | \$1.55 | \$1.66 | \$1.77 | \$1.90 | \$2.00 | \$2.12 | \$2.23 | \$2.36 | \$59.16 |
| Hawaiian Electric Industries, Inc. | HE | (\$25.74) | \$0.00 | \$0.16 | \$1.31 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$57.54 |
| IDACORP, Inc. | IDA | (\$56.39) | \$0.00 | \$0.24 | \$1.90 | \$2.07 | \$2.17 | \$2.27 | \$2.37 | \$2.49 | \$2.63 | \$2.80 | \$3.01 | \$3.25 | \$3.43 | \$3.63 | \$3.83 | \$4.05 | \$128.93 |
| NextEra Energy, Inc. | NEE | (\$96.84) | \$0.00 | \$0.40 | \$3.22 | \$3.39 | \$3.54 | \$3.68 | \$4.02 | \$4.38 | \$4.77 | \$5.19 | \$5.63 | \$6.10 | \$6.44 | \$6.81 | \$7.19 | \$7.59 | \$226.88 |
| Northeast Utilities | NU | (\$46.03) | \$0.00 | \$0.20 | \$1.63 | \$1.76 | \$1.85 | \$1.95 | \$2.12 | \$2.31 | \$2.51 | \$2.72 | \$2.94 | \$3.18 | \$3.36 | \$3.55 | \$3.75 | \$3.96 | \$108.29 |
| OGE Energy Corp. | OGE | (\$36.65) | \$0.00 | \$0.12 | \$0.99 | \$1.15 | \$1.26 | \$1.37 | \$1.50 | \$1.65 | \$1.81 | \$1.98 | \$2.16 | \$2.36 | \$2.49 | \$2.63 | \$2.78 | \$2.94 | \$87.40 |
| Otter Tail Corporation | OTTR | (\$28.51) | \$0.00 | \$0.13 | \$1.05 | \$1.05 | \$1.07 | \$1.08 | \$1.17 | \$1.27 | \$1.38 | \$1.49 | \$1.60 | \$1.73 | \$1.83 | \$1.93 | \$2.04 | \$2.15 | \$65.87 |
| Pinnacle West Capital Corporation | PNW | (\$56.85) | \$0.00 | \$0.31 | \$2.44 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.33 | \$3.52 | \$3.72 | \$3.95 | \$4.18 | \$4.41 | \$4.66 | \$4.92 | \$128.99 |
| PNM Resources, Inc. | PNM | (\$26.68) | \$0.00 | \$0.10 | \$0.80 | \$0.89 | \$0.96 | \$1.03 | \$1.19 | \$1.35 | \$1.53 | \$1.72 | \$1.92 | \$2.12 | \$2.24 | \$2.37 | \$2.50 | \$2.64 | \$66.23 |
| Portland General Electric Company | POR | (\$33.78) | \$0.00 | \$0.12 | \$0.95 | \$1.07 | \$1.14 | \$1.22 | \$1.33 | \$1.46 | \$1.59 | \$1.74 | \$1.90 | \$2.07 | \$2.19 | \$2.31 | \$2.44 | \$2.58 | \$79.88 |
| Southern Company | so | (\$44.77) | \$0.00 | \$0.27 | \$2.10 | \$2.19 | \$2.25 | \$2.31 | \$2.36 | \$2.43 | \$2.51 | \$2.60 | \$2.70 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$3.51 | \$98.22 |
| TECO Energy, Inc. | TE | (\$18.10) | \$0.00 | \$0.11 | \$0.90 | \$0.84 | \$0.81 | \$0.78 | \$0.80 | \$0.82 | \$0.85 | \$0.88 | \$0.92 | \$0.96 | \$1.01 | \$1.07 | \$1.13 | \$1.20 | \$39.16 |
| Westar Energy, Inc. | WR | (\$36.27) | \$0.00 | \$0.17 | \$1.38 | \$1.41 | \$1.44 | \$1.46 | \$1.56 | \$1.68 | \$1.81 | \$1.96 | \$2.12 | \$2.31 | \$2.44 | \$2.58 | \$2.73 | \$2.88 | \$84.08 |
| Xcel Energy Inc. | XEL | (\$31.70) | \$0.00 | \$0.16 | \$1.24 | \$1.31 | \$1.36 | \$1.41 | \$1.50 | \$1.59 | \$1.70 | \$1.82 | \$1.96 | \$2.10 | \$2.22 | \$2.35 | \$2.48 | \$2.62 | \$73.01 |



| Projected Annual Cash Flows |  |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| Alliant Energy Corporation | LNT |  | \$2.04 | \$2.16 | \$2.28 | \$2.41 | \$2.55 | \$2.73 | \$2.94 | \$3.15 | \$3.39 | \$3.64 | \$3.92 | \$4.14 | \$4.37 | \$4.62 | \$4.88 | \$5.15 | \$129.35 |
| Ameren Corporation | AEE |  | \$1.53 | \$1.59 | \$1.64 | \$1.70 | \$1.76 | \$1.93 | \$2.11 | \$2.30 | \$2.49 | \$2.70 | \$2.91 | \$3.07 | \$3.25 | \$3.43 | \$3.62 | \$3.83 | \$89.99 |
| American Electric Power Company, Inc. | AEP |  | \$2.03 | \$2.15 | \$2.27 | \$2.40 | \$2.53 | \$2.68 | \$2.85 | \$3.03 | \$3.22 | \$3.43 | \$3.66 | \$3.87 | \$4.09 | \$4.32 | \$4.56 | \$4.82 | \$117.08 |
| CMS Energy Corporation | CMS |  | \$1.06 | \$1.12 | \$1.18 | \$1.25 | \$1.32 | \$1.44 | \$1.57 | \$1.71 | \$1.85 | \$2.01 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$2.70 | \$2.86 | \$68.01 |
| DTE Energy Company | DTE |  | \$2.28 | \$2.43 | \$2.59 | \$2.76 | \$2.94 | \$3.21 | \$3.49 | \$3.79 | \$4.12 | \$4.46 | \$4.82 | \$5.09 | \$5.37 | \$5.68 | \$6.00 | \$6.33 | \$173.01 |
| Duke Energy Corporation | DUK |  | \$2.96 | \$3.03 | \$3.09 | \$3.16 | \$3.22 | \$3.41 | \$3.61 | \$3.82 | \$4.06 | \$4.32 | \$4.60 | \$4.85 | \$5.13 | \$5.42 | \$5.72 | \$6.04 | \$160.40 |
| Empire District Electric Company | EDE |  | \$1.01 | \$1.03 | \$1.05 | \$1.08 | \$1.10 | \$1.15 | \$1.20 | \$1.27 | \$1.34 | \$1.43 | \$1.52 | \$1.61 | \$1.70 | \$1.80 | \$1.90 | \$2.00 | \$54.29 |
| Great Plains Energy Inc. | GXP |  | \$0.99 | \$1.06 | \$1.14 | \$1.22 | \$1.30 | \$1.39 | \$1.49 | \$1.59 | \$1.70 | \$1.82 | \$1.95 | \$2.05 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$57.66 |
| Hawaiian Electric Industries, Inc. | HE |  | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$53.88 |
| IDACORP, Inc. | IDA |  | \$1.92 | \$2.04 | \$2.18 | \$2.32 | \$2.47 | \$2.61 | \$2.78 | \$2.97 | \$3.18 | \$3.42 | \$3.70 | \$3.91 | \$4.13 | \$4.36 | \$4.61 | \$4.87 | \$124.87 |
| NextEra Energy, Inc. | NEE |  | \$3.13 | \$3.28 | \$3.43 | \$3.58 | \$3.75 | \$4.10 | \$4.49 | \$4.89 | \$5.32 | \$5.78 | \$6.27 | \$6.62 | \$6.99 | \$7.38 | \$7.80 | \$8.24 | \$219.12 |
| Northeast Utilities | NU |  | \$1.60 | \$1.69 | \$1.80 | \$1.91 | \$2.02 | \$2.22 | \$2.43 | \$2.65 | \$2.88 | \$3.13 | \$3.38 | \$3.57 | \$3.77 | \$3.98 | \$4.21 | \$4.44 | \$104.22 |
| OGE Energy Corp. | OGE |  | \$0.97 | \$1.07 | \$1.18 | \$1.30 | \$1.43 | \$1.58 | \$1.74 | \$1.92 | \$2.10 | \$2.30 | \$2.52 | \$2.66 | \$2.81 | \$2.96 | \$3.13 | \$3.31 | \$84.80 |
| Otter Tail Corporation | OTTR |  | \$1.06 | \$1.13 | \$1.20 | \$1.27 | \$1.35 | \$1.53 | \$1.71 | \$1.90 | \$2.09 | \$2.28 | \$2.46 | \$2.60 | \$2.74 | \$2.90 | \$3.06 | \$3.23 | \$67.20 |
| Pinnacle West Capital Corporation | PNW |  | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.34 | \$3.52 | \$3.73 | \$3.96 | \$4.19 | \$4.42 | \$4.67 | \$4.93 | \$5.21 | \$122.04 |
| PNM Resources, Inc. | PNM |  | \$0.77 | \$0.84 | \$0.91 | \$0.99 | \$1.08 | \$1.25 | \$1.44 | \$1.63 | \$1.84 | \$2.05 | \$2.27 | \$2.40 | \$2.54 | \$2.68 | \$2.83 | \$2.99 | \$65.23 |
| Portland General Electric Company | POR |  | \$0.95 | \$1.03 | \$1.12 | \$1.22 | \$1.33 | \$1.48 | \$1.64 | \$1.81 | \$1.99 | \$2.19 | \$2.39 | \$2.52 | \$2.66 | \$2.81 | \$2.97 | \$3.14 | \$77.19 |
| Southern Company | So |  | \$2.07 | \$2.13 | \$2.19 | \$2.25 | \$2.32 | \$2.37 | \$2.44 | \$2.52 | \$2.61 | \$2.71 | \$2.83 | \$2.99 | \$3.16 | \$3.34 | \$3.53 | \$3.73 | \$93.63 |
| TECO Energy, Inc. | TE |  | \$0.90 | \$0.90 | \$0.89 | \$0.87 | \$0.85 | \$0.89 | \$0.93 | \$0.97 | \$1.02 | \$1.07 | \$1.12 | \$1.18 | \$1.25 | \$1.32 | \$1.39 | \$1.47 | \$37.53 |
| Westar Energy, Inc. | WR |  | \$1.37 | \$1.41 | \$1.46 | \$1.50 | \$1.54 | \$1.67 | \$1.81 | \$1.96 | \$2.13 | \$2.32 | \$2.53 | \$2.67 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$81.02 |
| Xcel Energy Inc. | XEL |  | \$1.22 | \$1.27 | \$1.33 | \$1.38 | \$1.44 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.31 | \$2.45 | \$2.58 | \$2.73 | \$2.88 | \$69.56 |
| 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 | Outfow | 11/14/14 | 12/31/14 | 6/30/15 | 6/30/16 | 6/30/17 | 6/30/18 | 6/30/19 | 6/30/20 | 6/30/21 | 6/30/22 | 6/30/23 | 6/30/24 | 6/30/25 | 6/30/26 | 6/30/27 | 6/30/28 | 6/30/29 |
| Alliant Energy Corporation | LNT | (\$57.79) | \$0.00 | \$0.26 | \$2.10 | \$2.28 | \$2.41 | \$2.55 | \$2.73 | \$2.94 | \$3.15 | \$3.39 | \$3.64 | \$3.92 | \$4.14 | \$4.37 | \$4.62 | \$4.88 | \$134.51 |
| Ameren Corporation | AEE | (\$39.88) | \$0.00 | \$0.20 | \$1.59 | \$1.64 | \$1.70 | \$1.76 | \$1.93 | \$2.11 | \$2.30 | \$2.49 | \$2.70 | \$2.91 | \$3.07 | \$3.25 | \$3.43 | \$3.62 | \$93.82 |
| American Electric Power Company, Inc. | AEP | (\$52.99) | \$0.00 | \$0.26 | \$2.08 | \$2.27 | \$2.40 | \$2.53 | \$2.68 | \$2.85 | \$3.03 | \$3.22 | \$3.43 | \$3.66 | \$3.87 | \$4.09 | \$4.32 | \$4.56 | \$121.90 |
| CMS Energy Corporation | CMS | (\$29.99) | \$0.00 | \$0.14 | \$1.09 | \$1.18 | \$1.25 | \$1.32 | \$1.44 | \$1.57 | \$1.71 | \$1.85 | \$2.01 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$2.70 | \$70.87 |
| DTE Energy Company | DTE | (\$76.33) | \$0.00 | \$0.29 | \$2.35 | \$2.59 | \$2.76 | \$2.94 | \$3.21 | \$3.49 | \$3.79 | \$4.12 | \$4.46 | \$4.82 | \$5.09 | \$5.37 | \$5.68 | \$6.00 | \$179.34 |
| Duke Energy Corporation | DUK | (\$73.44) | \$0.00 | \$0.38 | \$3.03 | \$3.09 | \$3.16 | \$3.22 | \$3.41 | \$3.61 | \$3.82 | \$4.06 | \$4.32 | \$4.60 | \$4.85 | \$5.13 | \$5.42 | \$5.72 | \$166.44 |
| Empire District Electric Company | EDE | (\$24.95) | \$0.00 | \$0.13 | \$1.03 | \$1.05 | \$1.08 | \$1.10 | \$1.15 | \$1.20 | \$1.27 | \$1.34 | \$1.43 | \$1.52 | \$1.61 | \$1.70 | \$1.80 | \$1.90 | \$56.30 |
| Great Plains Energy Inc. | GXP | (\$25.84) | \$0.00 | \$0.13 | \$1.02 | \$1.14 | \$1.22 | \$1.30 | \$1.39 | \$1.49 | \$1.59 | \$1.70 | \$1.82 | \$1.95 | \$2.05 | \$2.17 | \$2.29 | \$2.42 | \$60.21 |
| Hawaiian Electric Industries, Inc. | HE | (\$25.13) | \$0.00 | \$0.16 | \$1.31 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$56.19 |
| IDACORP, Inc. | IDA | (\$55.86) | \$0.00 | \$0.25 | \$1.95 | \$2.18 | \$2.32 | \$2.47 | \$2.61 | \$2.78 | \$2.97 | \$3.18 | \$3.42 | \$3.70 | \$3.91 | \$4.13 | \$4.36 | \$4.61 | \$129.74 |
| NextEra Energy, Inc. | NEE | (\$96.70) | \$0.00 | \$0.40 | \$3.23 | \$3.43 | \$3.58 | \$3.75 | \$4.10 | \$4.49 | \$4.89 | \$5.32 | \$5.78 | \$6.27 | \$6.62 | \$6.99 | \$7.38 | \$7.80 | \$227.35 |
| Northeast Utilities | NU | (\$45.79) | \$0.00 | \$0.21 | \$1.65 | \$1.80 | \$1.91 | \$2.02 | \$2.22 | \$2.43 | \$2.65 | \$2.88 | \$3.13 | \$3.38 | \$3.57 | \$3.77 | \$3.98 | \$4.21 | \$108.67 |
| OGE Energy Corp. | OGE | (\$36.62) | \$0.00 | \$0.12 | \$1.00 | \$1.18 | \$1.30 | \$1.43 | \$1.58 | \$1.74 | \$1.92 | \$2.10 | \$2.30 | \$2.52 | \$2.66 | \$2.81 | \$2.96 | \$3.13 | \$88.11 |
| Otter Tail Corporation | OTTR | (\$29.00) | \$0.00 | \$0.14 | \$1.12 | \$1.20 | \$1.27 | \$1.35 | \$1.53 | \$1.71 | \$1.90 | \$2.09 | \$2.28 | \$2.46 | \$2.60 | \$2.74 | \$2.90 | \$3.06 | \$70.43 |
| Pinnacle West Capital Corporation | PNW | (\$56.05) | \$0.00 | \$0.31 | \$2.45 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.34 | \$3.52 | \$3.73 | \$3.96 | \$4.19 | \$4.42 | \$4.67 | \$4.93 | \$127.26 |
| PNM Resources, Inc. | PNM | (\$27.21) | \$0.00 | \$0.10 | \$0.81 | \$0.91 | \$0.99 | \$1.08 | \$1.25 | \$1.44 | \$1.63 | \$1.84 | \$2.05 | \$2.27 | \$2.40 | \$2.54 | \$2.68 | \$2.83 | \$68.21 |
| Portland General Electric Company | POR | (\$33.29) | \$0.00 | \$0.12 | \$0.98 | \$1.12 | \$1.22 | \$1.33 | \$1.48 | \$1.64 | \$1.81 | \$1.99 | \$2.19 | \$2.39 | \$2.52 | \$2.66 | \$2.81 | \$2.97 | \$80.33 |
| Southern Company | so | (\$44.35) | \$0.00 | \$0.27 | \$2.11 | \$2.19 | \$2.25 | \$2.32 | \$2.37 | \$2.44 | \$2.52 | \$2.61 | \$2.71 | \$2.83 | \$2.99 | \$3.16 | \$3.34 | \$3.53 | \$97.36 |
| TECO Energy, Inc. | TE | (\$17.77) | \$0.00 | \$0.12 | \$0.93 | \$0.89 | \$0.87 | \$0.85 | \$0.89 | \$0.93 | \$0.97 | \$1.02 | \$1.07 | \$1.12 | \$1.18 | \$1.25 | \$1.32 | \$1.39 | \$38.99 |
| Westar Energy, Inc. | WR | (\$35.95) | \$0.00 | \$0.18 | \$1.40 | \$1.46 | \$1.50 | \$1.54 | \$1.67 | \$1.81 | \$1.96 | \$2.13 | \$2.32 | \$2.53 | \$2.67 | \$2.82 | \$2.98 | \$3.14 | \$84.34 |
| Xcel Energy Inc. | XEL | (\$31.26) | \$0.00 | \$0.16 | \$1.25 | \$1.33 | \$1.38 | \$1.44 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.31 | \$2.45 | \$2.58 | \$2.73 | \$72.44 |



High EPS Growth Rate Estimate in First Stage

| Projected Annual Cash Flows |  |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| Alliant Energy Corporation | LNT |  | \$2.06 | \$2.19 | \$2.33 | \$2.48 | \$2.64 | \$2.86 | \$3.09 | \$3.33 | \$3.59 | \$3.86 | \$4.15 | \$4.39 | \$4.64 | \$4.90 | \$5.17 | \$5.46 | \$130.11 |
| Ameren Corporation | AEE |  | \$1.56 | \$1.64 | \$1.72 | \$1.81 | \$1.90 | \$2.11 | \$2.34 | \$2.57 | \$2.81 | \$3.05 | \$3.29 | \$3.48 | \$3.67 | \$3.88 | \$4.10 | \$4.33 | \$91.28 |
| American Electric Power Company, Inc. | AEP |  | \$2.04 | \$2.15 | \$2.28 | \$2.41 | \$2.55 | \$2.71 | \$2.88 | \$3.06 | \$3.26 | \$3.48 | \$3.71 | \$3.92 | \$4.14 | \$4.38 | \$4.62 | \$4.88 | \$117.23 |
| CMS Energy Corporation | CMS |  | \$1.06 | \$1.13 | \$1.19 | \$1.26 | \$1.34 | \$1.47 | \$1.60 | \$1.75 | \$1.90 | \$2.06 | \$2.23 | \$2.35 | \$2.48 | \$2.62 | \$2.77 | \$2.93 | \$68.20 |
| DTE Energy Company | DTE |  | \$2.28 | \$2.44 | \$2.61 | \$2.79 | \$2.99 | \$3.27 | \$3.56 | \$3.88 | \$4.21 | \$4.56 | \$4.93 | \$5.21 | \$5.50 | \$5.81 | \$6.14 | \$6.48 | \$173.40 |
| Duke Energy Corporation | DUK |  | \$2.97 | \$3.04 | \$3.11 | \$3.18 | \$3.25 | \$3.44 | \$3.65 | \$3.87 | \$4.11 | \$4.38 | \$4.66 | \$4.92 | \$5.20 | \$5.49 | \$5.80 | \$6.13 | \$160.59 |
| Empire District Electric Company | EDE |  | \$1.02 | \$1.04 | \$1.07 | \$1.10 | \$1.13 | \$1.19 | \$1.26 | \$1.33 | \$1.41 | \$1.50 | \$1.60 | \$1.70 | \$1.79 | \$1.89 | \$2.00 | \$2.11 | \$54.52 |
| Great Plains Energy Inc. | GXP |  | \$1.00 | \$1.07 | \$1.16 | \$1.25 | \$1.34 | \$1.44 | \$1.55 | \$1.66 | \$1.78 | \$1.91 | \$2.05 | \$2.16 | \$2.28 | \$2.41 | \$2.55 | \$2.69 | \$57.97 |
| Hawaiian Electric Industries, Inc. | HE |  | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$53.88 |
| IDACORP, Inc. | IDA |  | \$1.93 | \$2.08 | \$2.23 | \$2.40 | \$2.57 | \$2.74 | \$2.93 | \$3.15 | \$3.39 | \$3.65 | \$3.95 | \$4.17 | \$4.40 | \$4.65 | \$4.91 | \$5.19 | \$125.66 |
| NextEra Energy, Inc. | NEE |  | \$3.14 | \$3.29 | \$3.45 | \$3.62 | \$3.79 | \$4.16 | \$4.56 | \$4.98 | \$5.42 | \$5.89 | \$6.38 | \$6.74 | \$7.12 | \$7.52 | \$7.94 | \$8.39 | \$219.51 |
| Northeast Utilities | NU |  | \$1.61 | \$1.73 | \$1.85 | \$1.98 | \$2.12 | \$2.35 | \$2.59 | \$2.85 | \$3.11 | \$3.38 | \$3.65 | \$3.86 | \$4.08 | \$4.30 | \$4.55 | \$4.80 | \$105.16 |
| OGE Energy Corp. | OGE |  | \$0.98 | \$1.08 | \$1.20 | \$1.33 | \$1.47 | \$1.64 | \$1.82 | \$2.01 | \$2.21 | \$2.43 | \$2.65 | \$2.80 | \$2.96 | \$3.12 | \$3.30 | \$3.49 | \$85.30 |
| Otter Tail Corporation | OTTR |  | \$1.11 | \$1.23 | \$1.36 | \$1.51 | \$1.66 | \$1.96 | \$2.28 | \$2.60 | \$2.91 | \$3.20 | \$3.45 | \$3.64 | \$3.85 | \$4.06 | \$4.29 | \$4.53 | \$70.71 |
| Pinnacle West Capital Corporation | PNW |  | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.03 | \$3.18 | \$3.34 | \$3.53 | \$3.74 | \$3.97 | \$4.19 | \$4.43 | \$4.68 | \$4.94 | \$5.22 | \$122.06 |
| PNM Resources, Inc. | PNM |  | \$0.78 | \$0.86 | \$0.95 | \$1.05 | \$1.16 | \$1.37 | \$1.60 | \$1.83 | \$2.08 | \$2.33 | \$2.58 | \$2.72 | \$2.88 | \$3.04 | \$3.21 | \$3.39 | \$66.42 |
| Portland General Electric Company | POR |  | \$0.95 | \$1.05 | \$1.15 | \$1.27 | \$1.39 | \$1.56 | \$1.75 | \$1.94 | \$2.14 | \$2.35 | \$2.56 | \$2.71 | \$2.86 | \$3.02 | \$3.19 | \$3.37 | \$77.84 |
| Southern Company | So |  | \$2.07 | \$2.13 | \$2.19 | \$2.26 | \$2.32 | \$2.38 | \$2.45 | \$2.53 | \$2.62 | \$2.72 | \$2.84 | \$3.00 | \$3.17 | \$3.35 | \$3.54 | \$3.74 | \$93.66 |
| TECO Energy, Inc. | TE |  | \$0.91 | \$0.91 | \$0.91 | \$0.91 | \$0.89 | \$0.94 | \$1.00 | \$1.05 | \$1.10 | \$1.15 | \$1.21 | \$1.27 | \$1.35 | \$1.42 | \$1.50 | \$1.59 | \$37.75 |
| Westar Energy, Inc. | WR |  | \$1.40 | \$1.46 | \$1.53 | \$1.60 | \$1.67 | \$1.84 | \$2.02 | \$2.21 | \$2.41 | \$2.63 | \$2.87 | \$3.03 | \$3.20 | \$3.38 | \$3.57 | \$3.77 | \$82.17 |
| Xcel Energy Inc. | XEL |  | \$1.23 | \$1.29 | \$1.36 | \$1.43 | \$1.50 | \$1.61 | \$1.73 | \$1.87 | \$2.01 | \$2.16 | \$2.32 | \$2.45 | \$2.59 | \$2.74 | \$2.89 | \$3.05 | \$69.97 |
| Projected Annual Data Investor Cash Flows |  | [64] | [65] | [66] | [67] | [68] | [69] | [70] | [71] | [72] | [73] | [74] | [75] | [76] | [77] | [78] | [79] | [80] | [81] |
|  |  | Initial |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Company | Ticker | Outflow | 11/14/14 | 12/31/14 | 6/30/15 | 6/30/16 | 6/30/17 | 6/30/18 | 6/30/19 | 6/30/20 | 6/30/21 | 6/30/22 | 6/30/23 | 6/30/24 | 6/30/25 | 6/30/26 | 6/30/27 | 6/30/28 | 6/30/29 |
| Alliant Energy Corporation | LNT | (\$57.79) | \$0.00 | \$0.26 | \$2.12 | \$2.33 | \$2.48 | \$2.64 | \$2.86 | \$3.09 | \$3.33 | \$3.59 | \$3.86 | \$4.15 | \$4.39 | \$4.64 | \$4.90 | \$5.17 | \$135.57 |
| Ameren Corporation | AEE | (\$39.88) | \$0.00 | \$0.20 | \$1.62 | \$1.72 | \$1.81 | \$1.90 | \$2.11 | \$2.34 | \$2.57 | \$2.81 | \$3.05 | \$3.29 | \$3.48 | \$3.67 | \$3.88 | \$4.10 | \$95.61 |
| American Electric Power Company, Inc. | AEP | (\$52.99) | \$0.00 | \$0.26 | \$2.09 | \$2.28 | \$2.41 | \$2.55 | \$2.71 | \$2.88 | \$3.06 | \$3.26 | \$3.48 | \$3.71 | \$3.92 | \$4.14 | \$4.38 | \$4.62 | \$122.11 |
| CMS Energy Corporation | CMS | (\$29.99) | \$0.00 | \$0.14 | \$1.10 | \$1.19 | \$1.26 | \$1.34 | \$1.47 | \$1.60 | \$1.75 | \$1.90 | \$2.06 | \$2.23 | \$2.35 | \$2.48 | \$2.62 | \$2.77 | \$71.12 |
| DTE Energy Company | DTE | (\$76.33) | \$0.00 | \$0.29 | \$2.36 | \$2.61 | \$2.79 | \$2.99 | \$3.27 | \$3.56 | \$3.88 | \$4.21 | \$4.56 | \$4.93 | \$5.21 | \$5.50 | \$5.81 | \$6.14 | \$179.88 |
| Duke Energy Corporation | DUK | (\$73.44) | \$0.00 | \$0.38 | \$3.04 | \$3.11 | \$3.18 | \$3.25 | \$3.44 | \$3.65 | \$3.87 | \$4.11 | \$4.38 | \$4.66 | \$4.92 | \$5.20 | \$5.49 | \$5.80 | \$166.71 |
| Empire District Electric Company | EDE | (\$24.95) | \$0.00 | \$0.13 | \$1.04 | \$1.07 | \$1.10 | \$1.13 | \$1.19 | \$1.26 | \$1.33 | \$1.41 | \$1.50 | \$1.60 | \$1.70 | \$1.79 | \$1.89 | \$2.00 | \$56.64 |
| Great Plains Energy Inc. | GXP | (\$25.84) | \$0.00 | \$0.13 | \$1.03 | \$1.16 | \$1.25 | \$1.34 | \$1.44 | \$1.55 | \$1.66 | \$1.78 | \$1.91 | \$2.05 | \$2.16 | \$2.28 | \$2.41 | \$2.55 | \$60.66 |
| Hawaiian Electric Industries, Inc. | HE | (\$25.13) | \$0.00 | \$0.16 | \$1.31 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$56.19 |
| IDACORP, Inc. | IDA | (\$55.86) | \$0.00 | \$0.25 | \$1.97 | \$2.23 | \$2.40 | \$2.57 | \$2.74 | \$2.93 | \$3.15 | \$3.39 | \$3.65 | \$3.95 | \$4.17 | \$4.40 | \$4.65 | \$4.91 | \$130.85 |
| NextEra Energy, Inc. | NEE | (\$96.70) | \$0.00 | \$0.40 | \$3.24 | \$3.45 | \$3.62 | \$3.79 | \$4.16 | \$4.56 | \$4.98 | \$5.42 | \$5.89 | \$6.38 | \$6.74 | \$7.12 | \$7.52 | \$7.94 | \$227.91 |
| Northeast Utilities | NU | (\$45.79) | \$0.00 | \$0.21 | \$1.68 | \$1.85 | \$1.98 | \$2.12 | \$2.35 | \$2.59 | \$2.85 | \$3.11 | \$3.38 | \$3.65 | \$3.86 | \$4.08 | \$4.30 | \$4.55 | \$109.96 |
| OGE Energy Corp. | OGE | (\$36.62) | \$0.00 | \$0.13 | \$1.01 | \$1.20 | \$1.33 | \$1.47 | \$1.64 | \$1.82 | \$2.01 | \$2.21 | \$2.43 | \$2.65 | \$2.80 | \$2.96 | \$3.12 | \$3.30 | \$88.79 |
| Otter Tail Corporation | OTTR | (\$29.00) | \$0.00 | \$0.14 | \$1.19 | \$1.36 | \$1.51 | \$1.66 | \$1.96 | \$2.28 | \$2.60 | \$2.91 | \$3.20 | \$3.45 | \$3.64 | \$3.85 | \$4.06 | \$4.29 | \$75.25 |
| Pinnacle West Capital Corporation | PNW | (\$56.05) | \$0.00 | \$0.31 | \$2.45 | \$2.63 | \$2.76 | \$2.89 | \$3.03 | \$3.18 | \$3.34 | \$3.53 | \$3.74 | \$3.97 | \$4.19 | \$4.43 | \$4.68 | \$4.94 | \$127.28 |
| PNM Resources, Inc. | PNM | (\$27.21) | \$0.00 | \$0.10 | \$0.83 | \$0.95 | \$1.05 | \$1.16 | \$1.37 | \$1.60 | \$1.83 | \$2.08 | \$2.33 | \$2.58 | \$2.72 | \$2.88 | \$3.04 | \$3.21 | \$69.81 |
| Portland General Electric Company | POR | (\$33.29) | \$0.00 | \$0.12 | \$0.99 | \$1.15 | \$1.27 | \$1.39 | \$1.56 | \$1.75 | \$1.94 | \$2.14 | \$2.35 | \$2.56 | \$2.71 | \$2.86 | \$3.02 | \$3.19 | \$81.21 |
| Southern Company | so | (\$44.35) | \$0.00 | \$0.27 | \$2.11 | \$2.19 | \$2.26 | \$2.32 | \$2.38 | \$2.45 | \$2.53 | \$2.62 | \$2.72 | \$2.84 | \$3.00 | \$3.17 | \$3.35 | \$3.54 | \$97.40 |
| TECO Energy, Inc. | TE | (\$17.77) | \$0.00 | \$0.12 | \$0.94 | \$0.91 | \$0.91 | \$0.89 | \$0.94 | \$1.00 | \$1.05 | \$1.10 | \$1.15 | \$1.21 | \$1.27 | \$1.35 | \$1.42 | \$1.50 | \$39.34 |
| Westar Energy, Inc. | WR | (\$35.95) | \$0.00 | \$0.18 | \$1.44 | \$1.53 | \$1.60 | \$1.67 | \$1.84 | \$2.02 | \$2.21 | \$2.41 | \$2.63 | \$2.87 | \$3.03 | \$3.20 | \$3.38 | \$3.57 | \$85.94 |
| Xcel Energy Inc. | XEL | (\$31.26) | \$0.00 | \$0.16 | \$1.26 | \$1.36 | \$1.43 | \$1.50 | \$1.61 | \$1.73 | \$1.87 | \$2.01 | \$2.16 | \$2.32 | \$2.45 | \$2.59 | \$2.74 | \$2.89 | \$73.02 |



| Projected Annual Cash Flows |  |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| Alliant Energy Corporation | LNT |  | \$2.03 | \$2.14 | \$2.25 | \$2.37 | \$2.50 | \$2.67 | \$2.86 | \$3.06 | \$3.28 | \$3.53 | \$3.79 | \$4.01 | \$4.23 | \$4.47 | \$4.72 | \$4.99 | \$128.94 |
| Ameren Corporation | AEE |  | \$1.49 | \$1.51 | \$1.52 | \$1.53 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.95 | \$3.11 | \$88.23 |
| American Electric Power Company, Inc. | AEP |  | \$2.03 | \$2.14 | \$2.25 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.96 | \$3.15 | \$3.36 | \$3.58 | \$3.78 | \$4.00 | \$4.22 | \$4.46 | \$4.71 | \$116.84 |
| CMS Energy Corporation | CMS |  | \$1.06 | \$1.11 | \$1.17 | \$1.23 | \$1.29 | \$1.41 | \$1.53 | \$1.66 | \$1.80 | \$1.95 | \$2.11 | \$2.23 | \$2.36 | \$2.49 | \$2.63 | \$2.78 | \$67.81 |
| DTE Energy Company | DTE |  | \$2.27 | \$2.41 | \$2.57 | \$2.73 | \$2.90 | \$3.15 | \$3.42 | \$3.71 | \$4.02 | \$4.35 | \$4.70 | \$4.97 | \$5.25 | \$5.54 | \$5.85 | \$6.18 | \$172.61 |
| Duke Energy Corporation | DUK |  | \$2.96 | \$3.02 | \$3.08 | \$3.14 | \$3.20 | \$3.38 | \$3.58 | \$3.79 | \$4.02 | \$4.28 | \$4.55 | \$4.81 | \$5.08 | \$5.37 | \$5.67 | \$5.99 | \$160.28 |
| Empire District Electric Company | EDE |  | \$1.01 | \$1.02 | \$1.04 | \$1.06 | \$1.08 | \$1.13 | \$1.18 | \$1.24 | \$1.31 | \$1.39 | \$1.49 | \$1.57 | \$1.66 | \$1.75 | \$1.85 | \$1.95 | \$54.18 |
| Great Plains Energy Inc. | GXP |  | \$0.99 | \$1.05 | \$1.13 | \$1.20 | \$1.28 | \$1.36 | \$1.45 | \$1.55 | \$1.66 | \$1.77 | \$1.90 | \$2.00 | \$2.12 | \$2.23 | \$2.36 | \$2.49 | \$57.51 |
| Hawaiian Electric Industries, Inc. | HE |  | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$53.88 |
| IDACORP, Inc. | IDA |  | \$1.88 | \$1.98 | \$2.07 | \$2.17 | \$2.27 | \$2.37 | \$2.49 | \$2.63 | \$2.80 | \$3.01 | \$3.25 | \$3.43 | \$3.63 | \$3.83 | \$4.05 | \$4.27 | \$123.46 |
| NextEra Energy, Inc. | NEE |  | \$3.12 | \$3.26 | \$3.39 | \$3.54 | \$3.68 | \$4.02 | \$4.38 | \$4.77 | \$5.19 | \$5.63 | \$6.10 | \$6.44 | \$6.81 | \$7.19 | \$7.59 | \$8.02 | \$218.54 |
| Northeast Utilities | NU |  | \$1.59 | \$1.67 | \$1.76 | \$1.85 | \$1.95 | \$2.12 | \$2.31 | \$2.51 | \$2.72 | \$2.94 | \$3.18 | \$3.36 | \$3.55 | \$3.75 | \$3.96 | \$4.18 | \$103.56 |
| OGE Energy Corp. | OGE |  | \$0.96 | \$1.05 | \$1.15 | \$1.26 | \$1.37 | \$1.50 | \$1.65 | \$1.81 | \$1.98 | \$2.16 | \$2.36 | \$2.49 | \$2.63 | \$2.78 | \$2.94 | \$3.10 | \$84.23 |
| Otter Tail Corporation | OTTR |  | \$1.02 | \$1.04 | \$1.05 | \$1.07 | \$1.08 | \$1.17 | \$1.27 | \$1.38 | \$1.49 | \$1.60 | \$1.73 | \$1.83 | \$1.93 | \$2.04 | \$2.15 | \$2.27 | \$64.71 |
| Pinnacle West Capital Corporation | PNW |  | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.33 | \$3.52 | \$3.72 | \$3.95 | \$4.18 | \$4.41 | \$4.66 | \$4.92 | \$5.20 | \$122.01 |
| PNM Resources, Inc. | PNM |  | \$0.76 | \$0.82 | \$0.89 | \$0.96 | \$1.03 | \$1.19 | \$1.35 | \$1.53 | \$1.72 | \$1.92 | \$2.12 | \$2.24 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$64.63 |
| Portland General Electric Company | POR |  | \$0.93 | \$1.00 | \$1.07 | \$1.14 | \$1.22 | \$1.33 | \$1.46 | \$1.59 | \$1.74 | \$1.90 | \$2.07 | \$2.19 | \$2.31 | \$2.44 | \$2.58 | \$2.72 | \$76.05 |
| Southern Company | So |  | \$2.07 | \$2.13 | \$2.19 | \$2.25 | \$2.31 | \$2.36 | \$2.43 | \$2.51 | \$2.60 | \$2.70 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$3.51 | \$3.70 | \$93.60 |
| TECO Energy, Inc. | TE |  | \$0.89 | \$0.86 | \$0.84 | \$0.81 | \$0.78 | \$0.80 | \$0.82 | \$0.85 | \$0.88 | \$0.92 | \$0.96 | \$1.01 | \$1.07 | \$1.13 | \$1.20 | \$1.26 | \$37.15 |
| Westar Energy, Inc. | WR |  | \$1.36 | \$1.38 | \$1.41 | \$1.44 | \$1.46 | \$1.56 | \$1.68 | \$1.81 | \$1.96 | \$2.12 | \$2.31 | \$2.44 | \$2.58 | \$2.73 | \$2.88 | \$3.04 | \$80.32 |
| Xcel Energy Inc. | XEL |  | \$1.21 | \$1.26 | \$1.31 | \$1.36 | \$1.41 | \$1.50 | \$1.59 | \$1.70 | \$1.82 | \$1.96 | \$2.10 | \$2.22 | \$2.35 | \$2.48 | \$2.62 | \$2.77 | \$69.28 |
| 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 | Outfow | 11/14/14 | 12/31/14 | 6/30/15 | 6/30/16 | 6/30/17 | 6/30/18 | 6/30/19 | 6/30/20 | 6/30/21 | 6/30/22 | 6/30/23 | 6/30/24 | 6/30/25 | 6/30/26 | 6/30/27 | 6/30/28 | 6/30/29 |
| Alliant Energy Corporation | LNT | (\$57.79) | \$0.00 | \$0.26 | \$2.08 | \$2.25 | \$2.37 | \$2.50 | \$2.67 | \$2.86 | \$3.06 | \$3.28 | \$3.53 | \$3.79 | \$4.01 | \$4.23 | \$4.47 | \$4.72 | \$133.93 |
| Ameren Corporation | AEE | (\$39.88) | \$0.00 | \$0.19 | \$1.53 | \$1.52 | \$1.53 | \$1.54 | \$1.65 | \$1.77 | \$1.90 | \$2.04 | \$2.19 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.95 | \$91.34 |
| American Electric Power Company, Inc. | AEP | (\$52.99) | \$0.00 | \$0.26 | \$2.07 | \$2.25 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.96 | \$3.15 | \$3.36 | \$3.58 | \$3.78 | \$4.00 | \$4.22 | \$4.46 | \$121.55 |
| CMS Energy Corporation | CMS | (\$29.99) | \$0.00 | \$0.14 | \$1.09 | \$1.17 | \$1.23 | \$1.29 | \$1.41 | \$1.53 | \$1.66 | \$1.80 | \$1.95 | \$2.11 | \$2.23 | \$2.36 | \$2.49 | \$2.63 | \$70.59 |
| DTE Energy Company | DTE | (\$76.33) | \$0.00 | \$0.29 | \$2.34 | \$2.57 | \$2.73 | \$2.90 | \$3.15 | \$3.42 | \$3.71 | \$4.02 | \$4.35 | \$4.70 | \$4.97 | \$5.25 | \$5.54 | \$5.85 | \$178.80 |
| Duke Energy Corporation | DUK | (\$73.44) | \$0.00 | \$0.38 | \$3.03 | \$3.08 | \$3.14 | \$3.20 | \$3.38 | \$3.58 | \$3.79 | \$4.02 | \$4.28 | \$4.55 | \$4.81 | \$5.08 | \$5.37 | \$5.67 | \$166.27 |
| Empire District Electric Company | EDE | (\$24.95) | \$0.00 | \$0.13 | \$1.02 | \$1.04 | \$1.06 | \$1.08 | \$1.13 | \$1.18 | \$1.24 | \$1.31 | \$1.39 | \$1.49 | \$1.57 | \$1.66 | \$1.75 | \$1.85 | \$56.14 |
| Great Plains Energy Inc. | GXP | (\$25.84) | \$0.00 | \$0.13 | \$1.01 | \$1.13 | \$1.20 | \$1.28 | \$1.36 | \$1.45 | \$1.55 | \$1.66 | \$1.77 | \$1.90 | \$2.00 | \$2.12 | \$2.23 | \$2.36 | \$60.00 |
| Hawaiian Electric Industries, Inc. | HE | (\$25.13) | \$0.00 | \$0.16 | \$1.31 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$56.19 |
| IDACORP, Inc. | IDA | (\$55.86) | \$0.00 | \$0.24 | \$1.90 | \$2.07 | \$2.17 | \$2.27 | \$2.37 | \$2.49 | \$2.63 | \$2.80 | \$3.01 | \$3.25 | \$3.43 | \$3.63 | \$3.83 | \$4.05 | \$127.73 |
| NextEra Energy, Inc. | NEE | (\$96.70) | \$0.00 | \$0.40 | \$3.22 | \$3.39 | \$3.54 | \$3.68 | \$4.02 | \$4.38 | \$4.77 | \$5.19 | \$5.63 | \$6.10 | \$6.44 | \$6.81 | \$7.19 | \$7.59 | \$226.56 |
| Northeast Utilities | NU | (\$45.79) | \$0.00 | \$0.20 | \$1.63 | \$1.76 | \$1.85 | \$1.95 | \$2.12 | \$2.31 | \$2.51 | \$2.72 | \$2.94 | \$3.18 | \$3.36 | \$3.55 | \$3.75 | \$3.96 | \$107.75 |
| OGE Energy Corp. | OGE | (\$36.62) | \$0.00 | \$0.12 | \$0.99 | \$1.15 | \$1.26 | \$1.37 | \$1.50 | \$1.65 | \$1.81 | \$1.98 | \$2.16 | \$2.36 | \$2.49 | \$2.63 | \$2.78 | \$2.94 | \$87.33 |
| Otter Tail Corporation | OTTR | (\$29.00) | \$0.00 | \$0.13 | \$1.05 | \$1.05 | \$1.07 | \$1.08 | \$1.17 | \$1.27 | \$1.38 | \$1.49 | \$1.60 | \$1.73 | \$1.83 | \$1.93 | \$2.04 | \$2.15 | \$66.98 |
| Pinnacle West Capital Corporation | PNW | (\$56.05) | \$0.00 | \$0.31 | \$2.44 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.33 | \$3.52 | \$3.72 | \$3.95 | \$4.18 | \$4.41 | \$4.66 | \$4.92 | \$127.21 |
| PNM Resources, Inc. | PNM | (\$27.21) | \$0.00 | \$0.10 | \$0.80 | \$0.89 | \$0.96 | \$1.03 | \$1.19 | \$1.35 | \$1.53 | \$1.72 | \$1.92 | \$2.12 | \$2.24 | \$2.37 | \$2.50 | \$2.64 | \$67.42 |
| Portland General Electric Company | POR | (\$33.29) | \$0.00 | \$0.12 | \$0.95 | \$1.07 | \$1.14 | \$1.22 | \$1.33 | \$1.46 | \$1.59 | \$1.74 | \$1.90 | \$2.07 | \$2.19 | \$2.31 | \$2.44 | \$2.58 | \$78.78 |
| Southern Company | so | (\$44.35) | \$0.00 | \$0.27 | \$2.10 | \$2.19 | \$2.25 | \$2.31 | \$2.36 | \$2.43 | \$2.51 | \$2.60 | \$2.70 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$3.51 | \$97.30 |
| TECO Energy, Inc. | TE | (\$17.77) | \$0.00 | \$0.11 | \$0.90 | \$0.84 | \$0.81 | \$0.78 | \$0.80 | \$0.82 | \$0.85 | \$0.88 | \$0.92 | \$0.96 | \$1.01 | \$1.07 | \$1.13 | \$1.20 | \$38.41 |
| Westar Energy, Inc. | WR | (\$35.95) | \$0.00 | \$0.17 | \$1.38 | \$1.41 | \$1.44 | \$1.46 | \$1.56 | \$1.68 | \$1.81 | \$1.96 | \$2.12 | \$2.31 | \$2.44 | \$2.58 | \$2.73 | \$2.88 | \$83.36 |
| Xcel Energy Inc. | XEL | (\$31.26) | \$0.00 | \$0.16 | \$1.24 | \$1.31 | \$1.36 | \$1.41 | \$1.50 | \$1.59 | \$1.70 | \$1.82 | \$1.96 | \$2.10 | \$2.22 | \$2.35 | \$2.48 | \$2.62 | \$72.05 |



| Projected Annual Cash Flows |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| American Electric Power Company, Inc. | AEP | \$2.03 | \$2.15 | \$2.27 | \$2.40 | \$2.53 | \$2.68 | \$2.85 | \$3.03 | \$3.22 | \$3.43 | \$3.66 | \$3.87 | \$4.09 | \$4.32 | \$4.56 | \$4.82 | \$124.00 |
| Duke Energy Corporation | DUK | \$2.96 | \$3.03 | \$3.09 | \$3.16 | \$3.22 | \$3.41 | \$3.61 | \$3.82 | \$4.06 | \$4.32 | \$4.60 | \$4.85 | \$5.13 | \$5.42 | \$5.72 | \$6.04 | \$174.45 |
| Empire District Electric Company | EDE | \$1.01 | \$1.03 | \$1.05 | \$1.08 | \$1.10 | \$1.15 | \$1.20 | \$1.27 | \$1.34 | \$1.43 | \$1.52 | \$1.61 | \$1.70 | \$1.80 | \$1.90 | \$2.00 | \$58.71 |
| Great Plains Energy Inc. | GXP | \$0.99 | \$1.06 | \$1.14 | \$1.22 | \$1.30 | \$1.39 | \$1.49 | \$1.59 | \$1.70 | \$1.82 | \$1.95 | \$2.05 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$58.02 |
| Hawaiian Electric Industries, Inc. | HE | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$58.96 |
| IDACORP, Inc. | IDA | \$1.92 | \$2.04 | \$2.18 | \$2.32 | \$2.47 | \$2.61 | \$2.78 | \$2.97 | \$3.18 | \$3.42 | \$3.70 | \$3.91 | \$4.13 | \$4.36 | \$4.61 | \$4.87 | \$133.08 |
| NextEra Energy, Inc. | NEE | \$3.13 | \$3.28 | \$3.43 | \$3.58 | \$3.75 | \$4.10 | \$4.49 | \$4.89 | \$5.32 | \$5.78 | \$6.27 | \$6.62 | \$6.99 | \$7.38 | \$7.80 | \$8.24 | \$222.55 |
| Northeast Utilities | NU | \$1.60 | \$1.69 | \$1.80 | \$1.91 | \$2.02 | \$2.22 | \$2.43 | \$2.65 | \$2.88 | \$3.13 | \$3.38 | \$3.57 | \$3.77 | \$3.98 | \$4.21 | \$4.44 | \$109.98 |
| Otter Tail Corporation | OTTR | \$1.06 | \$1.13 | \$1.20 | \$1.27 | \$1.35 | \$1.53 | \$1.71 | \$1.90 | \$2.09 | \$2.28 | \$2.46 | \$2.60 | \$2.74 | \$2.90 | \$3.06 | \$3.23 | \$68.16 |
| Pinnacle West Capital Corporation | PNW | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.34 | \$3.52 | \$3.73 | \$3.96 | \$4.19 | \$4.42 | \$4.67 | \$4.93 | \$5.21 | \$129.60 |
| PNM Resources, Inc. | PNM | \$0.77 | \$0.84 | \$0.91 | \$0.99 | \$1.08 | \$1.25 | \$1.44 | \$1.63 | \$1.84 | \$2.05 | \$2.27 | \$2.40 | \$2.54 | \$2.68 | \$2.83 | \$2.99 | \$66.41 |
| Portland General Electric Company | POR | \$0.95 | \$1.03 | \$1.12 | \$1.22 | \$1.33 | \$1.48 | \$1.64 | \$1.81 | \$1.99 | \$2.19 | \$2.39 | \$2.52 | \$2.66 | \$2.81 | \$2.97 | \$3.14 | \$81.41 |
| Southern Company | So | \$2.07 | \$2.13 | \$2.19 | \$2.25 | \$2.32 | \$2.37 | \$2.44 | \$2.52 | \$2.61 | \$2.71 | \$2.83 | \$2.99 | \$3.16 | \$3.34 | \$3.53 | \$3.73 | \$98.51 |
| Westar Energy, Inc. | WR | \$1.37 | \$1.41 | \$1.46 | \$1.50 | \$1.54 | \$1.67 | \$1.81 | \$1.96 | \$2.13 | \$2.32 | \$2.53 | \$2.67 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$83.04 |

Projected Annual Data
Investor Cash Flows

Company
Duke Energy Corporation
Empire District Electric Company Great Plains Energy Inc.
Hawaiian Electric Industries, Inc. IDACORP, Inc.
NextEra Energy, Inc.
Northeast Tail Corties
Pinnacle West Capital Corporation
PNMacle West Capita
PNM
PNM Resources, Inc.
Portland General Electric Company
Southern Company
Westar Energy, Inc.
$\left.\begin{array}{lccccccccccccccc}{[64]} & {[65]} & {[66]} & {[67]} & {[68]} & {[69]} & {[70]} & {[71]} & {[72]} & {[73]} & {[74]} & {[75]} & {[76]} & {[77]} & {[78]} & {[79]}\end{array}\right][80] \quad$ [81]


 \begin{tabular}{llllllllllllllll}
GXP \& $(\$ 26.00)$ \& $\$ 0.00$ \& $\$ 0.13$ \& $\$ 1.02$ \& $\$ 1.14$ \& $\$ 1.22$ \& $\$ 1.30$ \& $\$ 1.39$ \& $\$ 1.49$ \& $\$ 1.27$ \& $\$ 1.34$ \& $\$ 1.43$ \& $\$ 1.52$ \& $\$ 1.61$ \& $\$ 1.70$ <br>
\hline

 $\begin{array}{lllllllllllllllll}\text { HE } & (\$ 27.41) & \$ 0.00 & \$ 0.16 & \$ 1.31 & \$ 1.28 & \$ 1.28 & \$ 1.28 & \$ 1.34 & \$ 1.41 & \$ 1.48 & \$ 1.56 & \$ 1.65 & \$ 1.76 & \$ 1.86 & \$ 1.96 & \$ 2.07 \\ \text { H } & \$ 2.19 & \$ 61.27 \\ \text { IDA } & (\$ 59.53) & \$ 0.00 & \$ 0.25 & \$ 1.95 & \$ 2.18 & \$ 2.32 & \$ 2.47 & \$ 2.61 & \$ 2.78 & \$ 2.97 & \$ 3.18 & \$ 3.42 & \$ 3.70 & \$ 3.91 & \$ 4.13 & \$ 4.36 \\ \$ 4.61 & \$ 137.95\end{array}$ 

IDA \& $(\$ 59.53)$ \& $\$ 0.00$ \& $\$ 0.25$ \& $\$ 1.95$ \& $\$ 2.18$ \& $\$ 2.32$ \& $\$ 2.47$ \& $\$ 2.61$ \& $\$ 2.78$ \& $\$ 2.97$ \& $\$ 3.18$ \& $\$ 3.42$ \& $\$ 3.70$ \& $\$ 3.91$ <br>
NEE \& $(\$ 98.23)$ \& $\$ 0.00$ \& $\$ 0.40$ \& $\$ 3.23$ \& $\$ 3.43$ \& $\$ 3.58$ \& $\$ 3.75$ \& $\$ 4.10$ \& $\$ 4.49$ \& $\$ 4.89$ \& $\$ 5.32$ \& $\$ 5.78$ \& $\$ 6.27$ \& $\$ 6.62$ <br>
N \& $\$ 6.99$ \& $\$ 7.38$ \& $\$ 4.61$ \& $\$ 137.95$ <br>
\hline

 $\begin{array}{lll}\text { NU } & (\$ 98.23) & \$ 0.00 \\ & (\$ 48.36) & \$ 0.00\end{array}$ $\begin{array}{lll}\text { OTTR } & (\$ 29.36) & \$ 0.00 \\ \text { PNW } & (\$ 59.44) & \$ 0.00\end{array}$ 

PNW \& $(\$ 59.44)$ <br>
PNM \& $(\$ 27.73)$ <br>
POR \& $\$ 0.00$ <br>
\hline \& $\$ 0.00$
\end{tabular}

| POR | $(\$ 35.16)$ | $\$ 0.00$ |
| :---: | :---: | :---: |
| SO | $(\$ 46.55)$ | $\$ 0.00$ |


|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| SO | $(\$ 46.55)$ | $\$ 0.00$ | $\$ 0.12$ | $\$ 0.98$ | $\$ 1.12$ | $\$ 1.22$ | $\$ 1.33$ | $\$ 1.48$ | $\$ 1.64$ | $\$ 1.81$ | $\$ 1.99$ | $\$ 2.19$ | $\$ 2.39$ | $\$ 2.52$ | $\$ 2.66$ |
| WR | $(\$ 36.85)$ | $\$ 0.00$ | $\$ 0.18$ | $\$ 2.11$ | $\$ 2.19$ | $\$ 2.25$ | $\$ 2.32$ | $\$ 2.37$ | $\$ 2.44$ | $\$ 2.52$ | $\$ 2.61$ | $\$ 2.71$ | $\$ 2.83$ | $\$ 2.99$ | $\$ 3.16$ |



| 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 | 2014 | 2018 | 2024 | Proof | IRR | P/E Ratic | EG Ratio |
| American Electric Power Company, Inc. | AEP | \$56.09 | 4.90\% | 4.97\% | 4.50\% | 4.50\% | 5.63\% | 61.00\% | 63.00\% | 67.23\% | (\$0.00) | 9.65\% | 17.66 | 3.14 |
| Duke Energy Corporation | DUK | \$79.74 | 4.70\% | 4.76\% | 5.00\% | 4.70\% | 5.63\% | 71.00\% | 64.00\% | 67.23\% | (\$0.00) | 9.26\% | 19.57 | 3.48 |
| Empire District Electric Company | EDE | \$26.93 | 3.00\% | 3.00\% | 4.00\% | 3.00\% | 5.63\% | 66.00\% | 63.00\% | 67.23\% | \$0.00 | 9.15\% | 20.16 | 3.58 |
| Great Plains Energy Inc. | GXP | \$26.00 | 5.00\% | 5.00\% | 6.00\% | 5.00\% | 5.63\% | 58.00\% | 62.00\% | 67.23\% | \$0.00 | 10.18\% | 15.60 | 2.77 |
| Hawaiian Electric Industries, Inc. | HE | \$27.41 | 4.00\% | 4.00\% | 4.00\% | 4.00\% | 5.63\% | 76.00\% | 65.00\% | 67.23\% | \$0.00 | 9.77\% | 17.16 | 3.05 |
| IDACORP, Inc. | IDA | \$59.53 | 4.00\% | 4.00\% | 1.50\% | 1.50\% | 5.63\% | 51.00\% | 58.00\% | 67.23\% | (\$0.00) | 9.06\% | 20.71 | 3.68 |
| NextEra Energy, Inc. | NEE | \$98.23 | 6.60\% | 6.47\% | 6.00\% | 6.00\% | 5.63\% | 61.00\% | 57.00\% | 67.23\% | (\$0.00) | 9.44\% | 18.61 | 3.31 |
| Northeast Utilities | NU | \$48.36 | 6.70\% | 6.16\% | 8.00\% | 6.16\% | 5.63\% | 60.00\% | 58.00\% | 67.23\% | (\$0.00) | 9.67\% | 17.56 | 3.12 |
| Otter Tail Corporation | OTTR | \$29.43 | NA | 6.00\% | 15.50\% | 6.00\% | 5.63\% | 70.00\% | 59.00\% | 67.23\% | (\$0.00) | 9.29\% | 19.41 | 3.45 |
| Pinnacle West Capital Corporation | PNW | \$59.44 | 4.00\% | 3.95\% | 4.00\% | 3.95\% | 5.63\% | 63.00\% | 65.00\% | 67.23\% | \$0.00 | 9.87\% | 16.76 | 2.98 |
| PNM Resources, Inc. | PNM | \$27.73 | 8.50\% | 8.34\% | 11.00\% | 8.34\% | 5.63\% | 50.00\% | 49.00\% | 67.23\% | (\$0.00) | 10.10\% | 15.86 | 2.82 |
| Portland General Electric Company | POR | \$35.16 | 7.80\% | 7.83\% | 5.00\% | 5.00\% | 5.63\% | 50.00\% | 54.00\% | 67.23\% | (\$0.00) | 9.21\% | 19.81 | 3.52 |
| Southern Company | so | \$46.55 | 3.60\% | 3.62\% | 3.50\% | 3.50\% | 5.63\% | 74.00\% | 72.00\% | 67.23\% | \$0.00 | 9.60\% | 17.87 | 3.18 |
| Westar Energy, Inc. | WR | \$36.85 | 3.80\% | 3.20\% | 6.00\% | 3.20\% | 5.63\% | 58.00\% | 55.00\% | 67.23\% | (\$0.00) | 9.53\% | 18.19 | 3.23 |


| DCF Result |  |  |  |
| :---: | :---: | :---: | :---: |
| Mean | $9.56 \%$ | 18.21 | 3.24 |
| Max | $10.18 \%$ | 20.71 | 3.68 |
| Min | $9.06 \%$ | 15.60 | 2.77 |




| Projected Annual Cash Flows |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| American Electric Power Company, Inc. | AEP | \$2.03 | \$2.15 | \$2.27 | \$2.40 | \$2.53 | \$2.68 | \$2.85 | \$3.03 | \$3.22 | \$3.43 | \$3.66 | \$3.87 | \$4.09 | \$4.32 | \$4.56 | \$4.82 | \$118.92 |
| Duke Energy Corporation | DUK | \$2.96 | \$3.03 | \$3.09 | \$3.16 | \$3.22 | \$3.41 | \$3.61 | \$3.82 | \$4.06 | \$4.32 | \$4.60 | \$4.85 | \$5.13 | \$5.42 | \$5.72 | \$6.04 | \$164.67 |
| Empire District Electric Company | EDE | \$1.01 | \$1.03 | \$1.05 | \$1.08 | \$1.10 | \$1.15 | \$1.20 | \$1.27 | \$1.34 | \$1.43 | \$1.52 | \$1.61 | \$1.70 | \$1.80 | \$1.90 | \$2.00 | \$55.92 |
| Great Plains Energy Inc. | GXP | \$0.99 | \$1.06 | \$1.14 | \$1.22 | \$1.30 | \$1.39 | \$1.49 | \$1.59 | \$1.70 | \$1.82 | \$1.95 | \$2.05 | \$2.17 | \$2.29 | \$2.42 | \$2.56 | \$56.82 |
| Hawaiian Electric Industries, Inc. | HE | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$55.23 |
| IDACORP, Inc. | IDA | \$1.92 | \$2.04 | \$2.18 | \$2.32 | \$2.47 | \$2.61 | \$2.78 | \$2.97 | \$3.18 | \$3.42 | \$3.70 | \$3.91 | \$4.13 | \$4.36 | \$4.61 | \$4.87 | \$126.07 |
| NextEra Energy, Inc. | NEE | \$3.13 | \$3.28 | \$3.43 | \$3.58 | \$3.75 | \$4.10 | \$4.49 | \$4.89 | \$5.32 | \$5.78 | \$6.27 | \$6.62 | \$6.99 | \$7.38 | \$7.80 | \$8.24 | \$219.43 |
| Northeast Utilities | NU | \$1.60 | \$1.69 | \$1.80 | \$1.91 | \$2.02 | \$2.22 | \$2.43 | \$2.65 | \$2.88 | \$3.13 | \$3.38 | \$3.57 | \$3.77 | \$3.98 | \$4.21 | \$4.44 | \$104.77 |
| Otter Tail Corporation | OTTR | \$1.06 | \$1.13 | \$1.20 | \$1.27 | \$1.35 | \$1.53 | \$1.71 | \$1.90 | \$2.09 | \$2.28 | \$2.46 | \$2.60 | \$2.74 | \$2.90 | \$3.06 | \$3.23 | \$66.08 |
| Pinnacle West Capital Corporation | PNW | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.34 | \$3.52 | \$3.73 | \$3.96 | \$4.19 | \$4.42 | \$4.67 | \$4.93 | \$5.21 | \$123.82 |
| PNM Resources, Inc. | PNM | \$0.77 | \$0.84 | \$0.91 | \$0.99 | \$1.08 | \$1.25 | \$1.44 | \$1.63 | \$1.84 | \$2.05 | \$2.27 | \$2.40 | \$2.54 | \$2.68 | \$2.83 | \$2.99 | \$64.04 |
| Portland General Electric Company | POR | \$0.95 | \$1.03 | \$1.12 | \$1.22 | \$1.33 | \$1.48 | \$1.64 | \$1.81 | \$1.99 | \$2.19 | \$2.39 | \$2.52 | \$2.66 | \$2.81 | \$2.97 | \$3.14 | \$78.30 |
| Southern Company | So | \$2.07 | \$2.13 | \$2.19 | \$2.25 | \$2.32 | \$2.37 | \$2.44 | \$2.52 | \$2.61 | \$2.71 | \$2.83 | \$2.99 | \$3.16 | \$3.34 | \$3.53 | \$3.73 | \$94.55 |
| Westar Energy, Inc. | WR | \$1.37 | \$1.41 | \$1.46 | \$1.50 | \$1.54 | \$1.67 | \$1.81 | \$1.96 | \$2.13 | \$2.32 | \$2.53 | \$2.67 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$81.73 |

Projected Annual Data
Projected Annual Data
Investor Cash Flows

Company
Duke Energy Corporation
Empire District Electric Company Great Plains Energy Inc.
Hawaiian Electric Industries, Inc. IDACORP, Inc.
Noxtera Energy, Inc
Northeast Utilities
Pinnacle West Capital Corporation
PNM Resources, Inc.
PNM Resources, Inc.
Portland General Electric Company
Southern Company
Westar Energy, Inc.

| $[64]$ | $[65]$ | $[66]$ | $[67]$ | $[68]$ | $[69]$ | $[70]$ | $[71]$ | $[72]$ | $[73]$ | $[74]$ | $[75]$ | $[76]$ | $[77]$ | $[78]$ | $[79]$ | [80] |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Initial | $[81]$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | Ticker | Outflow | $11 / 14 / 14$ | $12 / 31 / 14$ | $6 / 30 / 15$ | $6 / 30 / 16$ | $6 / 30 / 17$ | $6 / 30 / 18$ | $6 / 30 / 19$ | $6 / 30 / 20$ | $6 / 30 / 21$ | $6 / 30 / 22$ | $6 / 30 / 23$ | $6 / 30 / 24$ | $6 / 30 / 25$ | $6 / 30 / 26$ | $6 / 30 / 27$ | $6 / 30 / 28$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AEP | $(\$ 53.81)$ | $\$ 0.00$ | $\$ 0.26$ | $\$ 2.08$ | $\$ 2.27$ | $\$ 2.40$ | $\$ 2.53$ | $\$ 2.68$ | $\$ 2.25$ | $\$ 3.03$ | $\$ 3.22$ | $\$ 3.43$ | $\$ 3.66$ | $\$ 3.87$ | $\$ 4.29$ | $\$ 4.32$ | $\$ 4.56$ |
| 123.73 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DUK | $(\$ 75.35)$ | $\$ 0.00$ | $\$ 0.38$ | $\$ 3.03$ | $\$ 3.09$ | $\$ 3.16$ | $\$ 3.22$ | $\$ 3.41$ | $\$ 3.61$ | $\$ 3.82$ | $\$ 4.06$ | $\$ 4.32$ | $\$ 4.60$ | $\$ 4.85$ | $\$ 5.13$ | $\$ 5.42$ | $\$ 5.72$ |
| EDE | $\$ 25.68)$ | $\$ 0.00$ | $\$ 0.13$ | $\$ 1.03$ | $\$ 1.05$ | $\$ 1.08$ | $\$ 1.10$ | $\$ 1.15$ | $\$ 1.20$ | $\$ 1.27$ | $\$ 1.34$ | $\$ 1.43$ | $\$ 1.52$ | $\$ 1.61$ | $\$ 1.70$ | $\$ 1.80$ | $\$ 1.90$ | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EDE | $(\$ 25.68)$ | $\$ 0.00$ | $\$ 0.13$ | $\$ 1.03$ | $\$ 1.05$ | $\$ 1.08$ | $\$ 3.22$ | $\$ 3.41$ | $\$ 3.61$ | $\$ 3.82$ | $\$ 4.06$ | $\$ 4.32$ | $\$ 4.60$ | $\$ 4.85$ | $\$ 5.13$ |
| GXP | $(\$ 25.46)$ | $\$ 0.00$ | $\$ 0.13$ | $\$ 1.02$ | $\$ 1.14$ | $\$ 1.22$ | $\$ 1.30$ | $\$ 1.15$ | $\$ 1.20$ | $\$ 1.27$ | $\$ 1.34$ | $\$ 1.49$ | $\$ 1.59$ | $\$ 1.70$ | $\$ 1.43$ |
| $\$ 1.82$ | $\$ 1.52$ | $\$ 1.61$ | $\$ 1.70$ | $\$ 1.80$ | $\$ 1.90$ | $\$ 2.05$ | $\$ 2.17$ | $\$ 2.29$ | $\$ 2.42$ | $\$ 57.93$ |  |  |  |  |  |
| HE | $(\$ 25.74)$ | $\$ 0.0$ | $\$ 0.38$ |  |  |  |  |  |  |  |  |  |  |  |  | | IDA | $(\$ 25.74)$ | $\$ 0.00$ | $\$ 0.16$ | $\$ 1.31$ | $\$ 1.28$ | $\$ 1.28$ | $\$ 1.28$ | $\$ 1.34$ | $\$ 1.41$ | $\$ 1.48$ | $\$ 1.56$ | $\$ 1.65$ | $\$ 1.76$ | $\$ 1.86$ | $\$ 1.96$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | NEE (\$96.84) | $\$ 0.00$ |
| :--- | :--- | $\begin{array}{lll}\text { NU } & (\$ 46.03) & \$ 0.00 \\ \text { OTTR } & (\$ 28.51) & \$ 0.00\end{array}$ | PNW | $(\$ 28.51)$ |
| :--- | :--- |
| PNM | $\$ 0.00$ |
|  | $\$ 26.68)$ | | POR | $(\$ 26.68)$ | $\$ 0.00$ |
| :--- | :--- | :--- |
|  | $\$ 0.00$ |  |


|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| SO | $(\$ 44.77)$ | $\$ 0.00$ | $\$ 0.27$ | $\$ 0.98$ | $\$ 1.12$ | $\$ 1.22$ | $\$ 1.33$ | $\$ 1.48$ | $\$ 1.64$ | $\$ 1.81$ | $\$ 1.99$ | $\$ 2.19$ | $\$ 2.39$ | $\$ 2.52$ | $\$ 2.66$ | $\$ 2.81$ |
| WR | $(\$ 36.27)$ | $\$ 0.00$ | $\$ 0.18$ | $\$ 1.40$ | $\$ 2.19$ | $\$ 2.25$ | $\$ 2.97$ | $\$ 2.32$ | $\$ 2.37$ | $\$ 2.44$ | $\$ 2.52$ | $\$ 2.61$ | $\$ 2.71$ | $\$ 2.83$ | $\$ 2.99$ | $\$ 3.16$ |







| Projected Annual Cash Flows |  | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | Terminal Value |
| American Electric Power Company, Inc. | AEP | \$2.03 | \$2.14 | \$2.25 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$2.96 | \$3.15 | \$3.36 | \$3.58 | \$3.78 | \$4.00 | \$4.22 | \$4.46 | \$4.71 | \$116.84 |
| Duke Energy Corporation | DUK | \$2.96 | \$3.02 | \$3.08 | \$3.14 | \$3.20 | \$3.38 | \$3.58 | \$3.79 | \$4.02 | \$4.28 | \$4.55 | \$4.81 | \$5.08 | \$5.37 | \$5.67 | \$5.99 | \$160.28 |
| Empire District Electric Company | EDE | \$1.01 | \$1.02 | \$1.04 | \$1.06 | \$1.08 | \$1.13 | \$1.18 | \$1.24 | \$1.31 | \$1.39 | \$1.49 | \$1.57 | \$1.66 | \$1.75 | \$1.85 | \$1.95 | \$54.18 |
| Great Plains Energy Inc. | GXP | \$0.99 | \$1.05 | \$1.13 | \$1.20 | \$1.28 | \$1.36 | \$1.45 | \$1.55 | \$1.66 | \$1.77 | \$1.90 | \$2.00 | \$2.12 | \$2.23 | \$2.36 | \$2.49 | \$57.51 |
| Hawaiian Electric Industries, Inc. | HE | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.28 | \$1.34 | \$1.41 | \$1.48 | \$1.56 | \$1.65 | \$1.76 | \$1.86 | \$1.96 | \$2.07 | \$2.19 | \$2.31 | \$53.88 |
| IDACORP, Inc. | IDA | \$1.88 | \$1.98 | \$2.07 | \$2.17 | \$2.27 | \$2.37 | \$2.49 | \$2.63 | \$2.80 | \$3.01 | \$3.25 | \$3.43 | \$3.63 | \$3.83 | \$4.05 | \$4.27 | \$123.46 |
| NextEra Energy, Inc. | NEE | \$3.12 | \$3.26 | \$3.39 | \$3.54 | \$3.68 | \$4.02 | \$4.38 | \$4.77 | \$5.19 | \$5.63 | \$6.10 | \$6.44 | \$6.81 | \$7.19 | \$7.59 | \$8.02 | \$218.54 |
| Northeast Utilities | NU | \$1.59 | \$1.67 | \$1.76 | \$1.85 | \$1.95 | \$2.12 | \$2.31 | \$2.51 | \$2.72 | \$2.94 | \$3.18 | \$3.36 | \$3.55 | \$3.75 | \$3.96 | \$4.18 | \$103.56 |
| Otter Tail Corporation | OTTR | \$1.02 | \$1.04 | \$1.05 | \$1.07 | \$1.08 | \$1.17 | \$1.27 | \$1.38 | \$1.49 | \$1.60 | \$1.73 | \$1.83 | \$1.93 | \$2.04 | \$2.15 | \$2.27 | \$64.71 |
| Pinnacle West Capital Corporation | PNW | \$2.40 | \$2.51 | \$2.63 | \$2.76 | \$2.89 | \$3.02 | \$3.17 | \$3.33 | \$3.52 | \$3.72 | \$3.95 | \$4.18 | \$4.41 | \$4.66 | \$4.92 | \$5.20 | \$122.01 |
| PNM Resources, Inc. | PNM | \$0.76 | \$0.82 | \$0.89 | \$0.96 | \$1.03 | \$1.19 | \$1.35 | \$1.53 | \$1.72 | \$1.92 | \$2.12 | \$2.24 | \$2.37 | \$2.50 | \$2.64 | \$2.79 | \$64.63 |
| Portland General Electric Company | POR | \$0.93 | \$1.00 | \$1.07 | \$1.14 | \$1.22 | \$1.33 | \$1.46 | \$1.59 | \$1.74 | \$1.90 | \$2.07 | \$2.19 | \$2.31 | \$2.44 | \$2.58 | \$2.72 | \$76.05 |
| Southern Company | So | \$2.07 | \$2.13 | \$2.19 | \$2.25 | \$2.31 | \$2.36 | \$2.43 | \$2.51 | \$2.60 | \$2.70 | \$2.82 | \$2.98 | \$3.14 | \$3.32 | \$3.51 | \$3.70 | \$93.60 |
| Westar Energy, Inc. | WR | \$1.36 | \$1.38 | \$1.41 | \$1.44 | \$1.46 | \$1.56 | \$1.68 | \$1.81 | \$1.96 | \$2.12 | \$2.31 | \$2.44 | \$2.58 | \$2.73 | \$2.88 | \$3.04 | \$80.32 |

Projected Annual Data
Investor Cash Flows

Company
Duke Energy Corporation
Empire District Electric Company Great Plains Energy Inc.
Hawaiian Electric Industries, Inc. IDACORP, Inc.
NoxtEra Energy, Inc
Northeast Utilities
Pinnacle West Capital Corporation
PNM Resources, Inc.
PNM Resources, Inc.
Portland General Electric Company
Southern Company
Westar Energy, Inc.
$\left.\begin{array}{lccccccccccccccc}{[64]} & {[65]} & {[66]} & {[67]} & {[68]} & {[69]} & {[70]} & {[71]} & {[72]} & {[73]} & {[74]} & {[75]} & {[76]} & {[77]} & {[78]} & {[79]}\end{array}\right][80] \quad[81] \quad 1$

 \begin{tabular}{llllllllllllllll}
\& <br>
AEP \& $(\$ 52.99)$ \& $\$ 0.00$ \& $\$ 0.26$ \& $\$ 2.07$ \& $\$ 2.25$ \& $\$ 2.37$ \& $\$ 2.50$ \& $\$ 2.64$ \& $\$ 2.79$ \& $\$ 2.96$ \& $\$ 3.15$ \& $\$ 3.36$ \& $\$ 3.58$ \& $\$ 3.78$ \& $\$ 4.00$ <br>
DUK \& $(\$ 73.44)$ \& $\$ 0.00$ \& $\$ 0.38$ \& $\$ 3.03$ \& $\$ 3.08$ \& $\$ 3.14$ \& $\$ 3.20$ \& $\$ 3.38$ \& $\$ 3.58$ \& $\$ 3.79$ \& $\$ 4.02$ \& $\$ 4.28$ \& $\$ 4.55$ \& $\$ 4.81$ \& $\$ 5.08$ <br>
\hline

 

EDE \& $(\$ 24.95)$ \& $\$ 0.0$ \& $\$ 0.13$ \& $\$ 1.02$ \& $\$ 1.04$ \& $\$ 1.06$ \& $\$ 1.08$ \& $\$ 1.13$ \& $\$ 1.18$ \& $\$ 1.24$ \& $\$ 1.31$ \& $\$ 4.39$ \& $\$ 4.55$ \& $\$ 4.81$ \& $\$ 1.49$ <br>
GXP \& $(\$ 25.84)$ \& $\$ 0.00$ \& $\$ 0.13$ \& $\$ 1.01$ \& $\$ 1.13$ \& $\$ 1.20$ \& $\$ 1.28$ \& $\$ 1.36$ \& $\$ 1.45$ \& $\$ 1.55$ \& $\$ 1.66$ \& $\$ 1.77$ \& $\$ 1.90$ \& $\$ 2.00$ \& $\$ 2.12$ <br>
G \& $\$ 1.12$ \& $\$ 2.23$ \& $\$ 2.36$ \& $\$ 60.00$ <br>
\hline

 

GXP \& $(\$ 25.84)$ \& $\$ 0.00$ \& $\$ 0.13$ \& $\$ 1.01$ \& $\$ 1.13$ \& $\$ 1.20$ \& $\$ 1.28$ \& $\$ 1.36$ \& $\$ 1.45$ \& $\$ 1.55$ \& $\$ 1.66$ \& $\$ 1.77$ \& $\$ 1.90$ \& $\$ 2.00$ \& $\$ 2.12$ \& $\$ 2.23$ <br>
HE \& $(\$ 25.13)$ \& $\$ 0.00$ \& $\$ 0.16$ \& $\$ 1.31$ \& $\$ 1.28$ \& $\$ 1.36$ \& $\$ 1.2$ \& $\$ 1.34$ \& $\$ 1.41$ \& $\$ 1.48$ \& $\$ 1.56$ \& $\$ 1.05$ \& $\$ 60.00$ <br>
\hline

 

\& <br>
IDA \& $(\$ 255.86)$ \& $\$ 0.00$ \& $\$ 0.16$ \& $\$ 1.31$ \& $\$ 1.28$ \& $\$ 1.28$ \& $\$ 1.28$ \& $\$ 1.34$ \& $\$ 1.41$ \& $\$ 1.48$ \& $\$ 1.56$ \& $\$ 1.65$ \& $\$ 1.76$ \& $\$ 1.86$ \& $\$ 1.96$ \& $\$ 2.07$ <br>
$\$ 0.24$ \& $\$ 2.90$ \& $\$ 2.07$ \& $\$ 2.17$ \& $\$ 2.27$ \& $\$ 2.37$ \& $\$ 2.49$ \& $\$ 2.63$ \& $\$ 2.80$ \& $\$ 3.01$ \& $\$ 3.25$ \& $\$ 3.43$ \& $\$ 3.63$ \& $\$ 3.83$ \& $\$ 4.05$ \& $\$ 127.73$ <br>
\hline

 $\begin{array}{lllllllllllllllll}\text { IDA } & (\$ 55.86) & \$ 0.00 & \$ 0.24 & \$ 1.90 & \$ 2.07 & \$ 2.17 & \$ 2.27 & \$ 2.37 & \$ 2.49 & \$ 2.63 & \$ 2.80 & \$ 3.01 & \$ 3.25 & \$ 3.43 & \$ 3.63 & \$ 3.83 \\ \text { I } & \$ 4.05 & \$ 127.73 \\ \text { NEE } & (\$ 96.70) & \$ 0.00 & \$ 0.40 & \$ 3.22 & \$ 3.39 & \$ 3.54 & \$ 3.68 & \$ 4.02 & \$ 4.38 & \$ 4.77 & \$ 5.19 & \$ 5.63 & \$ 6.10 & \$ 6.44 & \$ 6.81 & \$ 7.19 \\ \text { NU } & (\$ 45.79) & \$ 0.00 & \$ 0.20 & \$ 1.63 & \$ 1.76 & \$ 1.85 & \$ 1.95 & \$ 2.12 & \$ 2.31 & \$ 2.51 & \$ 2.72 & \$ 2.94 & \$ 3.18 & \$ 3.36 & \$ 3.55 & \$ 3.75 \\ \text { N }\end{array}$ $\begin{array}{lll} & (\$ 45.79) & \$ 0.00 \\ \text { OTTR } & (\$ 29.00) & \$ 0.00 \\ \text { PNW } & (\$ 56.05) & \end{array}$ 

PNW \& $(\$ 29.00)$ <br>
PNM \& $\$ 0.00$ <br>
$(\$ 27.21)$ \& $\$ 0.00$ <br>
\hline

 $\begin{array}{cll} & (\$ 27.21) & \$ 0.00 \\ \text { POR } & (\$ 33.29) & \$ 0.00 \\ \text { SO } & (\$ 44.35) & \$ 0.00\end{array}$ 

\& $\$ 1.22$ <br>
SO \& $(\$ 44.35)$ \& $\$ 0.00$ \& $\$ 0.27$ \& $\$ 0.95$ \& $\$ 1.07$ \& $\$ 1.14$ \& $\$ 1.22$ \& $\$ 1.33$ \& $\$ 1.46$ \& $\$ 1.59$ \& $\$ 1.74$ \& $\$ 1.90$ \& $\$ 2.27$ \& $\$ 2.19$ \& $\$ 2.31$ <br>
WR \& $(\$ 35.95)$ \& $\$ 0.00$ \& $\$ 0.17$ \& $\$ 1.38$ \& $\$ 2.19$ \& $\$ 2.25$ \& $\$ 2.31$ \& $\$ 2.36$ \& $\$ 2.43$ \& $\$ 2.51$ \& $\$ 2.60$ \& $\$ 2.70$ \& $\$ 2.82$ \& $\$ 2.58$ \& $\$ 78.78$ <br>
\hline
\end{tabular}

## uiti-Stage DCF Note

```
[1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of November 14, 2014
[2] Source: Zacks
[3] Source: Yahoo! Finan
[4] Source: Value Line
[5] Equals indicated value (average, minimum, maximum) of Columns [2], [3], [4]
Source: Federal Reserve, Bureau of Economic Analysis
Source: Value Line
Source: Value Line
Source: Bloomberg Professional
[11] Equals Cosumn [1] + Column [64] Excel Solver function; goal: Column [10] equals $0.00
12] Equals Column [63] / Column [30]
13] Equals Column [12] / (Column [6] x 100)
Source: Value Line
Equals Column [14] x (1 + Column [5])
Equals Column [15] \times (1+ Column [5])
Equals Column [16] \times (1+Column [5])
*)
19] Equals Column [18] x (1 + Column [5])
*)
Equals (1+(Column [5] + (((Column [6] - Column [5]) /(2024-2020+1)) \times(2020-2019)))) \times Column [20]
Equals (1+(Column [5] +(((Column [6]-Column [5]) / (2024-2020+1)) x(2021-2019))) }\times\mathrm{ Column [21]
Equals (1 + (Column [5] + (((Column [6] - Column [5])/ (2024-2020 + 1)) x (2022-2019)))) x Column [22]
Equals (1 + (Column [5] + (((Column [6] - Column [5])/(2024-2020+1)) x (2023-2019)))) x Column [23]
Equals Column [24] x (1+Column [6])
Equals Column [25]\times(1+Column [6])
Equals Column [26] \times(1+Column [6])
Equals Column [27] \times(1+Column [6])
Equals Column [28] \times(1+Column [6])
Equals Column [7]
Equals Column [31] + ((Column [35] - Column [31])/ 4)
Equals Column [32] + ((Column [35] - Column [31])/4)
Equals Column [33] + ((Column [35] - Column [31]) / 4)
Equals Column [8]
*)
*)
Equals Column [37] + ((Column [41] - Column [35])/6)
Equals Column [38] + ((Column [41]-Column [35])/ 6)
Equals Column [39] + ((Column [41] - Column [35])/6)
Equals Column [9]
Equals Column [9]
Equals Column [9]
Equals Column [9]
Equals Column [9]
Equals Column [9] 
Equals Column [16] x Column [32
Equals Column [17] \times Column [33
Equals Column [18] x Column [34
Equals Column [19] x Column [35]
Equals Column [20] x Column [36]
Equals Column [21] x Column [37]
Equals Column [21] \times Column [37]
Equals Column [23] \times Column [39]
Equals Column [23] x Column [39
Equals Column [24] x Column [40
*quals Column[22]\timesColum[4]
Equals Column [27]\timesColumn [43]
#
Equals Column [28] \times Column [44]
Equals Column [29] x Column [45]
Equals (Column[62] \times(1+Column [6]))/(Column [11] - Column [6])
Equals negative net present value; discount rate equals Column [11], cash flows equal Column [65] through Column [81]
Equals $0.00
Equals Column [47] x (12/31/2014 - 11/14/2014) / 365
Equals Column [47] + (0.5 x Column [47])
Equals Column [49]
Equals Column [50]
Equals Column [51]
Equals Column [51]
Equals Column [53]
Equals Column [54]
Equals Column [55]
Equals Column[56]
Equals Column [58
Equals Column [58]
Equals Column [59]
[8] Equals Column [60]
81] Equals Column [62] + [63]
```

dule RBH-

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

| $[1]$ | $[2]$ | $[3]$ |
| :---: | :---: | :---: |
| S\&P 500 | Year | Implied |
| Est. Required | Treasury (30- | Market Risk |
| Market Return | day average) | Premium |
| $13.49 \%$ | $3.04 \%$ | $10.45 \%$ |


|  |  | [4] | [5] | [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker | Market Capitalization | Weight in Index | Estimated Dividend Yield | Long-Term Growth Est. | DCF Result | Weighted DCF Result |
| AGILENT TECHNOLOGIES INC | A | 13,859.12 | 0.07\% | 1.27\% | 7.77\% | 9.09\% | 0.0066\% |
| ALCOA INC | AA | 19,963.36 | 0.10\% | 0.71\% | 10.67\% | 11.41\% | 0.0120\% |
| APPLE INC | AAPL | 669,178.24 | 3.52\% | 1.72\% | 15.97\% | 17.82\% | 0.6266\% |
| ABBVIE INC | ABBV | 101,773.77 | 0.53\% | 2.60\% | 8.83\% | 11.55\% | 0.0618\% |
| AMERISOURCEBERGEN CORP | ABC | 19,925.09 | 0.10\% | 1.12\% | 10.66\% | 11.84\% | 0.0124\% |
| ABBOTT LABORATORIES | ABT | 65,931.04 | 0.35\% | 2.01\% | 10.99\% | 13.11\% | 0.0454\% |
| ACE LTD | ACE | 36,686.85 | 0.19\% | 2.29\% | 7.13\% | 9.50\% | 0.0183\% |
| ACCENTURE PLC-CL A | ACN | 56,348.47 | 0.30\% | 2.42\% | 10.45\% | 12.99\% | 0.0385\% |
| ACTAVIS PLC | ACT | 64,629.85 | 0.34\% | 0.00\% | 18.13\% | 18.13\% | 0.0616\% |
| ADOBE SYSTEMS INC | ADBE | 35,609.96 | 0.19\% | 0.00\% | 12.50\% | 12.50\% | 0.0234\% |
| ANALOG DEVICES INC | ADI | 15,910.16 | 0.08\% | 2.85\% | 11.80\% | 14.82\% | 0.0124\% |
| ARCHER-DANIELS-MIDLAND CO | ADM | 33,042.40 | 0.17\% | 1.75\% | 10.03\% | 11.87\% | 0.0206\% |
| AUTOMATIC DATA PROCESSING | ADP | 40,791.65 | 0.21\% | 2.20\% | 10.29\% | 12.60\% | 0.0270\% |
| ALLIANCE DATA SYSTEMS CORP | ADS | 16,950.76 | 0.09\% | 0.00\% | 16.38\% | 16.38\% | 0.0146\% |
| AUTODESK INC | ADSK | 13,561.47 | 0.07\% | 0.00\% | 11.64\% | 11.64\% | 0.0083\% |
| ADT CORP/THE | ADT | 6,270.77 | 0.03\% | 2.30\% | 5.70\% | 8.06\% | 0.0027\% |
| AMEREN CORPORATION | AEE | 10,246.47 | 0.05\% | 3.84\% | 7.27\% | 11.24\% | 0.0061\% |
| AMERICAN ELECTRIC POWER | AEP | 27,417.04 | 0.14\% | 3.63\% | 5.39\% | 9.12\% | 0.0131\% |
| AES CORP | AES | 9,611.86 | 0.05\% | 1.49\% | 7.37\% | 8.91\% | 0.0045\% |
| AETNA INC | AET | 29,486.53 | 0.15\% | 1.07\% | 11.79\% | 12.93\% | 0.0200\% |
| AFLAC INC | AFL | 26,719.79 | 0.14\% | 2.54\% | 8.35\% | 10.99\% | 0.0154\% |
| ALLERGAN INC | AGN | 59,130.49 | 0.31\% | 0.10\% | 21.00\% | 21.11\% | 0.0656\% |
| AMERICAN INTERNATIONAL GROUP | AIG | 75,441.28 | 0.40\% | 0.93\% | 8.38\% | 9.35\% | 0.0371\% |
| APARTMENT INVT \& MGMT CO -A | AIV | 5,289.71 | 0.03\% | 2.88\% | 7.28\% | 10.26\% | 0.0029\% |
| ASSURANT INC | AIZ | 4,748.54 | 0.02\% | 1.57\% | 6.98\% | 8.60\% | 0.0021\% |
| AKAMAI TECHNOLOGIES INC | AKAM | 11,174.46 | 0.06\% | 0.00\% | 15.83\% | 15.83\% | 0.0093\% |
| ALLSTATE CORP | ALL | 27,917.48 | 0.15\% | 1.67\% | 8.78\% | 10.52\% | 0.0154\% |
| ALLEGION PLC | ALLE | 5,002.78 | 0.03\% | 0.63\% | 17.40\% | 18.08\% | 0.0048\% |
| ALTERA CORP | ALTR | 10,735.65 | 0.06\% | 1.84\% | 12.03\% | 13.98\% | 0.0079\% |
| ALEXION PHARMACEUTICALS INC | ALXN | 37,440.53 | 0.20\% | 0.00\% | 37.07\% | 37.07\% | 0.0729\% |
| APPLIED MATERIALS INC | AMAT | 27,738.49 | 0.15\% | 1.77\% | 12.33\% | 14.21\% | 0.0207\% |
| AMETEK INC | AME | 12,702.43 | 0.07\% | 0.60\% | 12.73\% | 13.37\% | 0.0089\% |
| AFFILIATED MANAGERS GROUP | AMG | 10,940.03 | 0.06\% | 0.00\% | 14.51\% | 14.51\% | 0.0083\% |
| AMGEN INC | AMGN | 119,881.59 | 0.63\% | 1.55\% | 8.83\% | 10.45\% | 0.0658\% |
| AMERIPRISE FINANCIAL INC | AMP | 23,865.53 | 0.13\% | 1.73\% | 18.10\% | 19.99\% | 0.0251\% |
| AMERICAN TOWER CORP | AMT | 39,452.02 | 0.21\% | 1.40\% | 20.26\% | 21.80\% | 0.0452\% |
| AMAZON.COM INC | AMZN | 151,949.46 | 0.80\% | 0.00\% | 36.58\% | 36.58\% | 0.2921\% |
| AUTONATION INC | AN | 6,488.80 | 0.03\% | 0.00\% | 12.60\% | 12.60\% | 0.0043\% |
| AON PLC | AON | 25,599.57 | 0.13\% | 1.02\% | 12.66\% | 13.74\% | 0.0185\% |
| APACHE CORP | APA | 27,630.03 | 0.15\% | 1.31\% | 4.84\% | 6.19\% | 0.0090\% |
| ANADARKO PETROLEUM CORP | APC | 45,636.25 | 0.24\% | 1.10\% | 10.75\% | 11.91\% | 0.0286\% |
| AIR PRODUCTS \& CHEMICALS INC | APD | 28,663.40 | 0.15\% | 2.34\% | 8.67\% | 11.11\% | 0.0167\% |
| AMPHENOL CORP-CL A | APH | 15,730.13 | 0.08\% | 0.89\% | 11.45\% | 12.39\% | 0.0102\% |
| AIRGAS INC | ARG | 8,527.24 | 0.04\% | 1.89\% | 11.80\% | 13.80\% | 0.0062\% |
| ALLEGHENY TECHNOLOGIES INC | ATI | 3,569.80 | 0.02\% | 2.19\% | 16.90\% | 19.28\% | 0.0036\% |
| AVALONBAY COMMUNITIES INC | AVB | 20,684.34 | 0.11\% | 2.96\% | 6.55\% | 9.61\% | 0.0104\% |
| AVAGO TECHNOLOGIES LTD | AVGO | 22,490.33 | 0.12\% | 1.23\% | 20.63\% | 21.98\% | 0.0260\% |
| AVON PRODUCTS INC | AVP | 4,370.46 | 0.02\% | 2.43\% | 6.52\% | 9.03\% | 0.0021\% |
| AVERY DENNISON CORP | AVY | 4,330.03 | 0.02\% | 2.66\% | 11.70\% | 14.51\% | 0.0033\% |
| AMERICAN EXPRESS CO | AXP | 93,772.73 | 0.49\% | 1.11\% | 9.42\% | 10.58\% | 0.0522\% |
| AUTOZONE INC | AZO | 18,170.28 | 0.10\% | 0.00\% | 13.39\% | 13.39\% | 0.0128\% |
| BOEING CO/THE | BA | 91,846.83 | 0.48\% | 2.27\% | 11.15\% | 13.54\% | 0.0654\% |
| BANK OF AMERICA CORP | BAC | 180,146.80 | 0.95\% | 0.70\% | 10.83\% | 11.56\% | 0.1095\% |
| BAXTER INTERNATIONAL INC | BAX | 38,881.51 | 0.20\% | 2.79\% | 8.96\% | 11.88\% | 0.0243\% |
| BED BATH \& BEYOND INC | BBBY | 13,247.35 | 0.07\% | 0.00\% | 7.91\% | 7.91\% | 0.0055\% |
| BB\&T CORP | BBT | 26,967.97 | 0.14\% | 2.54\% | 11.95\% | 14.63\% | 0.0207\% |
| BEST BUY CO INC | BBY | 12,400.88 | 0.07\% | 2.01\% | 13.25\% | 15.39\% | 0.0100\% |
| CR BARD INC | BCR | 12,290.88 | 0.06\% | 0.53\% | 11.00\% | 11.55\% | 0.0075\% |


|  |  | [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 |
| BECTON DICKINSON AND CO | BDX | 24,812.06 | 0.13\% | 1.78\% | 9.29\% | 11.15\% | 0.0145\% |
| FRANKLIN RESOURCES INC | BEN | 35,083.08 | 0.18\% | 0.95\% | 12.44\% | 13.45\% | 0.0248\% |
| BROWN-FORMAN CORP-CLASS B | BF/B | 19,825.49 | 0.10\% | 1.34\% | 9.60\% | 11.01\% | 0.0115\% |
| BAKER HUGHES INC | BHI | 25,986.22 | 0.14\% | 1.04\% | 30.75\% | 31.94\% | 0.0436\% |
| BIOGEN IDEC INC | BIIB | 72,051.01 | 0.38\% | 0.00\% | 21.05\% | 21.05\% | 0.0797\% |
| BANK OF NEW YORK MELLON CORF | BK | 44,645.65 | 0.23\% | 1.67\% | 9.83\% | 11.57\% | 0.0272\% |
| BLACKROCK INC | BLK | 58,162.16 | 0.31\% | 2.23\% | 12.37\% | 14.74\% | 0.0451\% |
| BALL CORP | BLL | 8,786.28 | 0.05\% | 0.82\% | 10.03\% | 10.89\% | 0.0050\% |
| BEMIS COMPANY | BMS | 3,839.42 | 0.02\% | 2.70\% | 8.85\% | 11.67\% | 0.0024\% |
| BRISTOL-MYERS SQUIBB CO | BMY | 96,209.04 | 0.51\% | 2.48\% | 13.25\% | 15.90\% | 0.0804\% |
| BROADCOM CORP-CL A | BRCM | 24,920.24 | 0.13\% | 1.14\% | 10.51\% | 11.71\% | 0.0153\% |
| BERKSHIRE HATHAWAY INC-CL B | BRK/B | 358,034.91 | 1.88\% | 0.00\% | 6.70\% | 6.70\% | 0.1261\% |
| BOSTON SCIENTIFIC CORP | BSX | 17,788.23 | 0.09\% | 0.00\% | 7.40\% | 7.40\% | 0.0069\% |
| BORGWARNER INC | BWA | 12,551.02 | 0.07\% | 0.84\% | 11.77\% | 12.66\% | 0.0084\% |
| BOSTON PROPERTIES INC | BXP | 19,324.25 | 0.10\% | 2.92\% | 5.44\% | 8.44\% | 0.0086\% |
| CITIGROUP INC | C | 162,107.92 | 0.85\% | 0.07\% | 11.05\% | 11.13\% | 0.0948\% |
| CA INC | CA | 13,298.24 | 0.07\% | 3.36\% | 4.77\% | 8.20\% | 0.0057\% |
| CONAGRA FOODS INC | CAG | 14,741.52 | 0.08\% | 2.88\% | 9.37\% | 12.38\% | 0.0096\% |
| CARDINAL HEALTH INC | CAH | 26,609.31 | 0.14\% | 1.67\% | 12.16\% | 13.93\% | 0.0195\% |
| CAMERON INTERNATIONAL CORP | CAM | 11,485.44 | 0.06\% | 0.00\% | 17.47\% | 17.47\% | 0.0105\% |
| CATERPILLAR INC | CAT | 61,314.80 | 0.32\% | 2.54\% | 11.74\% | 14.42\% | 0.0465\% |
| CHUBB CORP | CB | 23,864.35 | 0.13\% | 1.96\% | 9.00\% | 11.05\% | 0.0139\% |
| CBRE GROUP INC - A | CBG | 10,781.56 | 0.06\% | 0.00\% | 12.17\% | 12.17\% | 0.0069\% |
| CBS CORP-CLASS B NON VOTING | CBS | 27,691.63 | 0.15\% | 1.01\% | 14.47\% | 15.56\% | 0.0226\% |
| COCA-COLA ENTERPRISES | CCE | 10,227.78 | 0.05\% | 2.33\% | 9.04\% | 11.48\% | 0.0062\% |
| CROWN CASTLE INTL CORP | CCl | 26,818.80 | 0.14\% | 2.16\% | 13.33\% | 15.64\% | 0.0220\% |
| CARNIVAL CORP | CCL | 32,111.64 | 0.17\% | 2.41\% | 17.03\% | 19.64\% | 0.0331\% |
| CELGENE CORP | CELG | 83,161.08 | 0.44\% | 0.00\% | 25.66\% | 25.66\% | 0.1121\% |
| CERNER CORP | CERN | 21,943.01 | 0.12\% | 0.00\% | 17.02\% | 17.02\% | 0.0196\% |
| CF INDUSTRIES HOLDINGS INC | CF | 13,236.03 | 0.07\% | 1.85\% | 12.18\% | 14.14\% | 0.0098\% |
| CAREFUSION CORP | CFN | 11,743.65 | 0.06\% | 0.00\% | 11.91\% | 11.91\% | 0.0073\% |
| CHESAPEAKE ENERGY CORP | CHK | 15,410.61 | 0.08\% | 1.49\% | 6.83\% | 8.37\% | 0.0068\% |
| C.H. ROBINSON WORLDWIDE INC | CHRW | 10,689.06 | 0.06\% | 1.94\% | 11.57\% | 13.62\% | 0.0076\% |
| CIGNA CORP | Cl | 26,647.02 | 0.14\% | 0.04\% | 10.66\% | 10.70\% | 0.0150\% |
| CINCINNATI FINANCIAL CORP | CINF | 8,336.38 | N/A | 3.45\% | \#VALUE! | N/A | N/A |
| COLGATE-PALMOLIVE CO | CL | 61,564.96 | 0.32\% | 2.12\% | 9.07\% | 11.29\% | 0.0365\% |
| CLOROX COMPANY | CLX | 12,949.24 | 0.07\% | 2.96\% | 6.67\% | 9.73\% | 0.0066\% |
| COMERICA INC | CMA | 8,713.00 | 0.05\% | 1.63\% | 10.69\% | 12.40\% | 0.0057\% |
| COMCAST CORP-CLASS A | CMCSA | 139,074.71 | 0.73\% | 1.67\% | 13.09\% | 14.87\% | 0.1086\% |
| CME GROUP INC | CME | 28,557.42 | 0.15\% | 4.39\% | 12.15\% | 16.80\% | 0.0252\% |
| CHIPOTLE MEXICAN GRILL INC | CMG | 20,771.97 | 0.11\% | 0.00\% | 22.84\% | 22.84\% | 0.0249\% |
| CUMMINS INC | CMI | 26,488.49 | 0.14\% | 1.97\% | 14.63\% | 16.75\% | 0.0233\% |
| CMS ENERGY CORP | CMS | 8,878.19 | 0.05\% | 3.36\% | 5.83\% | 9.29\% | 0.0043\% |
| CENTERPOINT ENERGY INC | CNP | 10,321.55 | 0.05\% | 3.96\% | 5.45\% | 9.51\% | 0.0052\% |
| CONSOL ENERGY INC | CNX | 9,119.71 | 0.05\% | 0.63\% | 9.70\% | 10.36\% | 0.0050\% |
| CAPITAL ONE FINANCIAL CORP | COF | 45,447.81 | 0.24\% | 1.47\% | 6.00\% | 7.51\% | 0.0179\% |
| CABOT OIL \& GAS CORP | COG | 13,885.73 | 0.07\% | 0.22\% | 42.78\% | 43.04\% | 0.0314\% |
| COACH INC | COH | 9,700.78 | 0.05\% | 3.84\% | 8.31\% | 12.31\% | 0.0063\% |
| ROCKWELL COLLINS INC | COL | 11,351.02 | 0.06\% | 1.52\% | 9.96\% | 11.55\% | 0.0069\% |
| CONOCOPHILLIPS | COP | 87,764.09 | 0.46\% | 3.97\% | 6.33\% | 10.42\% | 0.0480\% |
| COSTCO WHOLESALE CORP | COST | 60,494.34 | 0.32\% | 1.03\% | 11.13\% | 12.22\% | 0.0388\% |
| COVIDIEN PLC | COV | 42,496.54 | 0.22\% | 1.49\% | 8.90\% | 10.45\% | 0.0233\% |
| CAMPBELL SOUP CO | CPB | 13,750.32 | 0.07\% | 3.10\% | 4.56\% | 7.73\% | 0.0056\% |
| SALESFORCE.COM INC | CRM | 39,535.53 | 0.21\% | 0.00\% | 22.26\% | 22.26\% | 0.0462\% |
| COMPUTER SCIENCES CORP | CSC | 8,672.49 | 0.05\% | 1.48\% | 9.45\% | 11.00\% | 0.0050\% |
| CISCO SYSTEMS INC | CSCO | 134,480.02 | 0.71\% | 2.78\% | 8.93\% | 11.83\% | 0.0836\% |
| CSX CORP | CSX | 36,714.29 | 0.19\% | 1.72\% | 11.88\% | 13.70\% | 0.0264\% |
| CINTAS CORP | CTAS | 8,377.46 | 0.04\% | 1.46\% | 10.68\% | 12.21\% | 0.0054\% |
| CENTURYLINK INC | CTL | 23,261.95 | 0.12\% | 5.30\% | 1.27\% | 6.60\% | 0.0081\% |
| COGNIZANT TECH SOLUTIONS-A | CTSH | 32,418.78 | 0.17\% | 0.00\% | 17.46\% | 17.46\% | 0.0297\% |
| CITRIX SYSTEMS INC | CTXS | 10,643.38 | 0.06\% | 0.00\% | 15.33\% | 15.33\% | 0.0086\% |
| CABLEVISION SYSTEMS-NY GRP-A | CVC | 5,071.73 | 0.03\% | 3.24\% | -3.57\% | -0.39\% | -0.0001\% |
| CVS HEALTH CORP | CVS | 102,177.16 | 0.54\% | 1.21\% | 14.13\% | 15.42\% | 0.0828\% |
| CHEVRON CORP | CVX | 219,459.37 | 1.15\% | 3.62\% | 6.09\% | 9.83\% | 0.1133\% |
| DOMINION RESOURCES INC/VA | D | 41,749.61 | 0.22\% | 3.35\% | 6.00\% | 9.45\% | 0.0207\% |
| DELTA AIR LINES INC | DAL | 36,591.08 | 0.19\% | 0.67\% | 11.72\% | 12.42\% | 0.0239\% |
| DU PONT (E.I.) DE NEMOURS | DD | 64,159.17 | 0.34\% | 2.64\% | 7.68\% | 10.42\% | 0.0351\% |
| DEERE \& CO | DE | 31,379.71 | 0.16\% | 2.40\% | 6.38\% | 8.86\% | 0.0146\% |
| DISCOVER FINANCIAL SERVICES | DFS | 29,462.58 | 0.15\% | 1.43\% | 9.73\% | 11.22\% | 0.0174\% |


|  |  | [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 |
| DOLLAR GENERAL CORP | DG | 19,614.62 | 0.10\% | 0.00\% | 13.34\% | 13.34\% | 0.0137\% |
| QUEST DIAGNOSTICS INC | DGX | 9,008.82 | 0.05\% | 2.08\% | 8.87\% | 11.04\% | 0.0052\% |
| DR HORTON INC | DHI | 8,887.66 | 0.05\% | 0.97\% | 11.43\% | 12.45\% | 0.0058\% |
| DANAHER CORP | DHR | 57,757.74 | 0.30\% | 0.41\% | 11.25\% | 11.69\% | 0.0355\% |
| WALT DISNEY CO/THE | DIS | 155,776.42 | 0.82\% | 1.04\% | 10.41\% | 11.50\% | 0.0941\% |
| DISCOVERY COMMUNICATIONS-A | DISCA | 22,579.41 | 0.12\% | 0.00\% | 20.53\% | 20.53\% | 0.0244\% |
| DISCOVERY COMMUNICATIONS-C | DISCK | 22,577.16 | 0.12\% | 0.00\% | 20.53\% | 20.53\% | 0.0244\% |
| DELPHI AUTOMOTIVE PLC | DLPH | 20,915.05 | 0.11\% | 1.42\% | 14.01\% | 15.52\% | 0.0171\% |
| DOLLAR TREE INC | DLTR | 12,746.73 | 0.07\% | 0.00\% | 16.00\% | 16.00\% | 0.0107\% |
| DUN \& BRADSTREET CORP | DNB | 4,488.73 | 0.02\% | 1.38\% | 10.70\% | 12.15\% | 0.0029\% |
| DENBURY RESOURCES INC | DNR | 3,945.18 | 0.02\% | 2.23\% | 6.10\% | 8.40\% | 0.0017\% |
| DIAMOND OFFSHORE DRILLING | DO | 4,908.52 | 0.03\% | 9.80\% | -6.53\% | 2.94\% | 0.0008\% |
| DOVER CORP | DOV | 13,256.27 | 0.07\% | 1.93\% | 11.88\% | 13.92\% | 0.0097\% |
| DOW CHEMICAL CO/THE | DOW | 60,542.66 | 0.32\% | 2.79\% | 6.68\% | 9.56\% | 0.0304\% |
| DR PEPPER SNAPPLE GROUP INC | DPS | 13,622.27 | 0.07\% | 2.33\% | 8.43\% | 10.86\% | 0.0078\% |
| DARDEN RESTAURANTS INC | DRI | 7,412.34 | 0.04\% | 4.04\% | 12.90\% | 17.20\% | 0.0067\% |
| DTE ENERGY COMPANY | DTE | 14,132.75 | 0.07\% | 3.39\% | 5.50\% | 8.98\% | 0.0067\% |
| DIRECTV | DTV | 43,845.26 | 0.23\% | 0.00\% | 7.40\% | 7.40\% | 0.0170\% |
| DUKE ENERGY CORP | DUK | 55,918.40 | 0.29\% | 4.00\% | 4.78\% | 8.88\% | 0.0261\% |
| DAVITA HEALTHCARE PARTNERS I | DVA | 16,261.48 | 0.09\% | 0.00\% | 8.66\% | 8.66\% | 0.0074\% |
| DEVON ENERGY CORP | DVN | 26,219.22 | 0.14\% | 1.47\% | 10.18\% | 11.73\% | 0.0162\% |
| ELECTRONIC ARTS INC | EA | 12,882.09 | 0.07\% | 0.00\% | 7.35\% | 7.35\% | 0.0050\% |
| EBAY INC | EBAY | 67,460.54 | 0.35\% | 0.00\% | 12.67\% | 12.67\% | 0.0449\% |
| ECOLAB INC | ECL | 33,703.08 | 0.18\% | 0.98\% | 13.64\% | 14.69\% | 0.0260\% |
| CONSOLIDATED EDISON INC | ED | 18,176.62 | 0.10\% | 4.05\% | 3.92\% | 8.04\% | 0.0077\% |
| EQUIFAX INC | EFX | 9,421.43 | 0.05\% | 1.28\% | 11.90\% | 13.26\% | 0.0066\% |
| EDISON INTERNATIONAL | EIX | 20,112.33 | 0.11\% | 2.32\% | 5.06\% | 7.44\% | 0.0079\% |
| ESTEE LAUDER COMPANIES-CL A | EL | 27,058.89 | 0.14\% | 1.28\% | 11.19\% | 12.54\% | 0.0178\% |
| EMC CORP/MA | EMC | 61,108.30 | 0.32\% | 1.46\% | 11.07\% | 12.61\% | 0.0405\% |
| EASTMAN CHEMICAL CO | EMN | 12,482.24 | 0.07\% | 1.66\% | 7.53\% | 9.25\% | 0.0061\% |
| EMERSON ELECTRIC CO | EMR | 44,349.02 | 0.23\% | 2.95\% | 8.73\% | 11.81\% | 0.0275\% |
| EOG RESOURCES INC | EOG | 53,666.56 | 0.28\% | 0.57\% | 10.92\% | 11.52\% | 0.0325\% |
| EQUITY RESIDENTIAL | EQR | 25,075.53 | 0.13\% | 2.90\% | 6.80\% | 9.80\% | 0.0129\% |
| EQT CORP | EQT | 14,085.51 | 0.07\% | 0.14\% | 30.00\% | 30.16\% | 0.0223\% |
| EXPRESS SCRIPTS HOLDING CO | ESRX | 57,131.22 | 0.30\% | 0.00\% | 13.50\% | 13.50\% | 0.0405\% |
| ESSEX PROPERTY TRUST INC | ESS | 12,723.20 | 0.07\% | 2.55\% | 6.16\% | 8.79\% | 0.0059\% |
| ENSCO PLC-CL A | ESV | 9,070.48 | 0.05\% | 7.76\% | 2.27\% | 10.11\% | 0.0048\% |
| E*TRADE FINANCIAL CORP | ETFC | 6,704.20 | 0.04\% | 0.00\% | 40.00\% | 40.00\% | 0.0141\% |
| EATON CORP PLC | ETN | 31,712.77 | 0.17\% | 2.94\% | 9.12\% | 12.19\% | 0.0203\% |
| ENTERGY CORP | ETR | 14,705.60 | 0.08\% | 4.07\% | 3.10\% | 7.23\% | 0.0056\% |
| EDWARDS LIFESCIENCES CORP | EW | 13,324.71 | 0.07\% | 0.00\% | 12.54\% | 12.54\% | 0.0088\% |
| EXELON CORP | EXC | 30,459.43 | 0.16\% | 3.50\% | 5.00\% | 8.59\% | 0.0137\% |
| EXPEDITORS INTL WASH INC | EXPD | 8,474.04 | 0.04\% | 1.46\% | 7.53\% | 9.05\% | 0.0040\% |
| EXPEDIA INC | EXPE | 11,112.18 | 0.06\% | 0.74\% | 18.28\% | 19.08\% | 0.0111\% |
| FORD MOTOR CO | F | 58,249.88 | 0.31\% | 3.31\% | 9.31\% | 12.77\% | 0.0391\% |
| FASTENAL CO | FAST | 13,268.69 | 0.07\% | 2.23\% | 16.38\% | 18.79\% | 0.0131\% |
| FACEBOOK INC-A | FB | 209,210.19 | 1.10\% | 0.00\% | 36.90\% | 36.90\% | 0.4057\% |
| FREEPORT-MCMORAN INC | FCX | 29,351.75 | 0.15\% | 4.43\% | 9.34\% | 13.98\% | 0.0216\% |
| FAMILY DOLLAR STORES | FDO | 8,953.66 | 0.05\% | 1.62\% | 4.13\% | 5.78\% | 0.0027\% |
| FEDEX CORP | FDX | 48,573.92 | 0.26\% | 0.46\% | 14.01\% | 14.51\% | 0.0370\% |
| FIRSTENERGY CORP | FE | 15,093.83 | 0.08\% | 4.01\% | 3.59\% | 7.68\% | 0.0061\% |
| F5 NETWORKS INC | FFIV | 9,525.74 | 0.05\% | 0.00\% | 16.95\% | 16.95\% | 0.0085\% |
| FIDELITY NATIONAL INFORMATIO | FIS | 16,786.72 | 0.09\% | 1.61\% | 12.00\% | 13.71\% | 0.0121\% |
| FISERV INC | FISV | 17,087.38 | 0.09\% | 0.00\% | 11.75\% | 11.75\% | 0.0106\% |
| FIFTH THIRD BANCORP | FITB | 16,595.50 | 0.09\% | 2.53\% | 10.46\% | 13.13\% | 0.0114\% |
| FLIR SYSTEMS INC | FLIR | 4,529.69 | 0.02\% | 1.28\% | 14.33\% | 15.71\% | 0.0037\% |
| FLUOR CORP | FLR | 10,116.84 | 0.05\% | 1.23\% | 10.10\% | 11.40\% | 0.0061\% |
| FLOWSERVE CORP | FLS | 9,014.07 | 0.05\% | 0.96\% | 12.38\% | 13.40\% | 0.0063\% |
| FMC CORP | FMC | 7,538.92 | 0.04\% | 1.14\% | 9.00\% | 10.19\% | 0.0040\% |
| FOSSIL GROUP INC | FOSL | 5,530.39 | 0.03\% | 0.00\% | 14.18\% | 14.18\% | 0.0041\% |
| TWENTY-FIRST CENTURY FOX-A | FOXA | 74,577.95 | 0.39\% | 0.75\% | 15.05\% | 15.86\% | 0.0622\% |
| FIRST SOLAR INC | FSLR | 4,862.25 | 0.03\% | 0.00\% | -4.27\% | -4.27\% | -0.0011\% |
| FMC TECHNOLOGIES INC | FTI | 12,695.52 | 0.07\% | 0.00\% | 18.15\% | 18.15\% | 0.0121\% |
| FRONTIER COMMUNICATIONS CORI | FTR | 6,819.16 | 0.04\% | 5.88\% | 9.10\% | 15.25\% | 0.0055\% |
| AGL RESOURCES INC | GAS | 6,153.23 | 0.03\% | 3.82\% | 5.53\% | 9.46\% | 0.0031\% |
| GANNETT CO | GCI | 7,012.05 | 0.04\% | 2.75\% | 9.07\% | 11.94\% | 0.0044\% |
| GENERAL DYNAMICS CORP | GD | 47,259.49 | 0.25\% | 1.73\% | 7.94\% | 9.74\% | 0.0242\% |
| GENERAL ELECTRIC CO | GE | 265,615.98 | 1.40\% | 3.35\% | 8.92\% | 12.42\% | 0.1734\% |
| GENERAL GROWTH PROPERTIES | GGP | 22,562.42 | 0.12\% | 2.38\% | 6.22\% | 8.68\% | 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 |
| GILEAD SCIENCES INC | GILD | 154,200.58 | 0.81\% | 0.00\% | 24.58\% | 24.58\% | 0.1992\% |
| GENERAL MILLS INC | GIS | 30,676.42 | 0.16\% | 3.23\% | 7.02\% | 10.37\% | 0.0167\% |
| CORNING INC | GLW | 26,175.34 | 0.14\% | 1.97\% | 8.35\% | 10.41\% | 0.0143\% |
| GENERAL MOTORS CO | GM | 51,076.87 | 0.27\% | 3.83\% | 10.55\% | 14.59\% | 0.0392\% |
| KEURIG GREEN MOUNTAIN INC | GMCR | 25,100.77 | 0.13\% | 0.65\% | 15.83\% | 16.53\% | 0.0218\% |
| GAMESTOP CORP-CLASS A | GME | 4,997.92 | 0.03\% | 2.98\% | 15.33\% | 18.53\% | 0.0049\% |
| GENWORTH FINANCIAL INC-CL A | GNW | 4,666.12 | 0.02\% | 0.00\% | 5.00\% | 5.00\% | 0.0012\% |
| GOOGLE INC-CL C | GOOG | 372,142.60 | 1.96\% | 0.00\% | 18.02\% | 18.02\% | 0.3525\% |
| GENUINE PARTS CO | GPC | 15,249.16 | 0.08\% | 2.30\% | 7.18\% | 9.57\% | 0.0077\% |
| GAP INC/THE | GPS | 17,185.89 | 0.09\% | 2.15\% | 12.50\% | 14.78\% | 0.0133\% |
| GARMIN LTD | GRMN | 11,635.69 | 0.06\% | 3.34\% | 8.22\% | 11.70\% | 0.0072\% |
| GOLDMAN SACHS GROUP INC | GS | 85,577.20 | 0.45\% | 1.20\% | 10.17\% | 11.43\% | 0.0514\% |
| GOODYEAR TIRE \& RUBBER CO | GT | 7,034.29 | 0.04\% | 0.84\% | 7.00\% | 7.86\% | 0.0029\% |
| WW GRAINGER INC | GWW | 16,765.60 | 0.09\% | 1.69\% | 13.02\% | 14.82\% | 0.0131\% |
| HALLIBURTON CO | HAL | 46,610.32 | 0.24\% | 1.14\% | 17.25\% | 18.49\% | 0.0453\% |
| HARMAN INTERNATIONAL | HAR | 7,305.83 | 0.04\% | 1.19\% | 16.95\% | 18.24\% | 0.0070\% |
| HASBRO INC | HAS | 6,781.82 | 0.04\% | 3.17\% | 11.20\% | 14.54\% | 0.0052\% |
| HUNTINGTON BANCSHARES INC | HBAN | 8,221.91 | 0.04\% | 2.13\% | 5.70\% | 7.89\% | 0.0034\% |
| HUDSON CITY BANCORP INC | HCBK | 5,187.18 | N/A | 1.63\% | \#VALUE! | N/A | N/A |
| HEALTH CARE REIT INC | HCN | 23,302.54 | 0.12\% | 4.36\% | 5.68\% | 10.16\% | 0.0124\% |
| HCP INC | HCP | 20,010.11 | 0.11\% | 5.00\% | 4.00\% | 9.11\% | 0.0096\% |
| HOME DEPOT INC | HD | 132,061.82 | 0.69\% | 1.90\% | 15.71\% | 17.76\% | 0.1233\% |
| HESS CORP | HES | 24,787.48 | 0.13\% | 1.21\% | 9.96\% | 11.23\% | 0.0146\% |
| HARTFORD FINANCIAL SVCS GRP | HIG | 17,211.79 | 0.09\% | 1.68\% | 9.00\% | 10.76\% | 0.0097\% |
| HARLEY-DAVIDSON INC | HOG | 14,651.66 | 0.08\% | 1.61\% | 11.73\% | 13.43\% | 0.0103\% |
| HONEYWELL INTERNATIONAL INC | HON | 75,713.41 | 0.40\% | 1.91\% | 10.05\% | 12.05\% | 0.0480\% |
| STARWOOD HOTELS \& RESORTS | HOT | 14,023.52 | 0.07\% | 1.77\% | 9.63\% | 11.49\% | 0.0085\% |
| HELMERICH \& PAYNE | HP | 8,536.94 | 0.04\% | 3.55\% | 13.00\% | 16.79\% | 0.0075\% |
| HEWLETT-PACKARD CO | HPQ | 68,921.55 | 0.36\% | 1.65\% | 6.63\% | 8.33\% | 0.0302\% |
| H\&R BLOCK INC | HRB | 8,943.12 | 0.05\% | 2.46\% | 11.00\% | 13.60\% | 0.0064\% |
| HORMEL FOODS CORP | HRL | 14,358.38 | 0.08\% | 1.46\% | 8.10\% | 9.62\% | 0.0073\% |
| HARRIS CORP | HRS | 7,384.18 | N/A | 2.64\% | \#VALUE! | N/A | N/A |
| HOSPIRA INC | HSP | 9,849.25 | 0.05\% | 0.00\% | 13.96\% | 13.96\% | 0.0072\% |
| HOST HOTELS \& RESORTS INC | HST | 17,160.84 | 0.09\% | 3.10\% | 6.00\% | 9.19\% | 0.0083\% |
| HERSHEY CO/THE | HSY | 21,201.26 | 0.11\% | 2.09\% | 10.05\% | 12.24\% | 0.0136\% |
| HUMANA INC | HUM | 20,806.02 | 0.11\% | 0.82\% | 9.62\% | 10.47\% | 0.0114\% |
| INTL BUSINESS MACHINES CORP | IBM | 162,393.39 | 0.85\% | 2.60\% | 8.80\% | 11.52\% | 0.0983\% |
| INTERCONTINENTAL EXCHANGE IN | ICE | 25,088.63 | 0.13\% | 1.17\% | 15.78\% | 17.04\% | 0.0225\% |
| INTL FLAVORS \& FRAGRANCES | IFF | 7,934.41 | 0.04\% | 1.77\% | 10.63\% | 12.49\% | 0.0052\% |
| INTEL CORP | INTC | 164,003.20 | 0.86\% | 2.65\% | 8.34\% | 11.10\% | 0.0957\% |
| INTUIT INC | INTU | 25,864.23 | 0.14\% | 0.99\% | 14.42\% | 15.48\% | 0.0210\% |
| INTERNATIONAL PAPER CO | IP | 23,031.88 | 0.12\% | 2.71\% | 6.80\% | 9.60\% | 0.0116\% |
| INTERPUBLIC GROUP OF COS INC | IPG | 8,134.55 | 0.04\% | 1.95\% | 9.97\% | 12.02\% | 0.0051\% |
| INGERSOLL-RAND PLC | IR | 16,615.88 | 0.09\% | 1.60\% | 13.21\% | 14.92\% | 0.0130\% |
| IRON MOUNTAIN INC | IRM | 7,304.59 | 0.04\% | 12.08\% | 11.00\% | 23.75\% | 0.0091\% |
| INTUITIVE SURGICAL INC | ISRG | 18,563.17 | 0.10\% | 0.00\% | 8.90\% | 8.90\% | 0.0087\% |
| ILLINOIS TOOL WORKS | ITW | 36,622.66 | 0.19\% | 1.90\% | 11.78\% | 13.79\% | 0.0265\% |
| INVESCO LTD | IVZ | 17,293.42 | 0.09\% | 2.48\% | 13.26\% | 15.90\% | 0.0144\% |
| JOHNSON CONTROLS INC | JCI | 32,897.46 | 0.17\% | 1.98\% | 12.86\% | 14.97\% | 0.0259\% |
| JACOBS ENGINEERING GROUP INC | JEC | 6,346.82 | 0.03\% | 0.00\% | 10.49\% | 10.49\% | 0.0035\% |
| JOHNSON \& JOHNSON | JNJ | 302,751.78 | 1.59\% | 2.56\% | 6.95\% | 9.60\% | 0.1527\% |
| JUNIPER NETWORKS INC | JNPR | 9,075.29 | 0.05\% | 0.64\% | 10.02\% | 10.70\% | 0.0051\% |
| JOY GLOBAL INC | JOY | 5,226.86 | 0.03\% | 1.40\% | 9.65\% | 11.12\% | 0.0031\% |
| JPMORGAN CHASE \& CO | JPM | 225,375.40 | 1.18\% | 2.62\% | 5.95\% | 8.65\% | 0.1024\% |
| NORDSTROM INC | JWN | 14,255.15 | 0.07\% | 1.77\% | 10.10\% | 11.96\% | 0.0090\% |
| KELLOGG CO | K | 22,640.51 | 0.12\% | 2.95\% | 6.49\% | 9.54\% | 0.0113\% |
| KEYCORP | KEY | 11,535.11 | 0.06\% | 1.91\% | 6.78\% | 8.75\% | 0.0053\% |
| KIMCO REALTY CORP | KIM | 10,057.28 | 0.05\% | 3.72\% | 3.49\% | 7.27\% | 0.0038\% |
| KLA-TENCOR CORP | KLAC | 13,207.50 | 0.07\% | 2.46\% | 5.53\% | 8.06\% | 0.0056\% |
| KIMBERLY-CLARK CORP | KMB | 41,934.73 | 0.22\% | 2.97\% | 7.49\% | 10.57\% | 0.0233\% |
| KINDER MORGAN INC | KMI | 40,440.27 | 0.21\% | 4.38\% | 9.00\% | 13.58\% | 0.0289\% |
| CARMAX INC | KMX | 11,984.58 | 0.06\% | 0.00\% | 13.76\% | 13.76\% | 0.0087\% |
| COCA-COLA CO/THE | KO | 186,943.22 | 0.98\% | 2.85\% | 5.76\% | 8.69\% | 0.0854\% |
| MICHAEL KORS HOLDINGS LTD | KORS | 14,819.41 | 0.08\% | 0.00\% | 22.03\% | 22.03\% | 0.0172\% |
| KROGER CO | KR | 28,326.12 | 0.15\% | 1.20\% | 11.07\% | 12.34\% | 0.0184\% |
| KRAFT FOODS GROUP INC | KRFT | 33,780.82 | 0.18\% | 3.73\% | 7.39\% | 11.26\% | 0.0200\% |
| KOHLS CORP | KSS | 11,682.48 | 0.06\% | 2.73\% | 5.50\% | 8.31\% | 0.0051\% |
| KANSAS CITY SOUTHERN | KSU | 13,877.82 | 0.07\% | 0.87\% | 19.42\% | 20.37\% | 0.0149\% |
| LOEWS CORP | L | 15,989.05 | N/A | 0.59\% | \#VALUE! | 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 |
| L BRANDS INC | LB | 22,663.05 | 0.12\% | 2.54\% | 11.93\% | 14.62\% | 0.0174\% |
| LEGGETT \& PLATT INC | LEG | 5,606.85 | N/A | 2.97\% | \#VALUE! | N/A | N/A |
| LENNAR CORP-A | LEN | 9,078.83 | 0.05\% | 0.35\% | 16.50\% | 16.88\% | 0.0081\% |
| LABORATORY CRP OF AMER HLDG | LH | 8,354.52 | 0.04\% | 0.00\% | 10.07\% | 10.07\% | 0.0044\% |
| L-3 COMMUNICATIONS HOLDINGS | LLL | 10,148.30 | 0.05\% | 2.02\% | 5.39\% | 7.46\% | 0.0040\% |
| LINEAR TECHNOLOGY CORP | LLTC | 10,345.12 | 0.05\% | 2.53\% | 9.51\% | 12.17\% | 0.0066\% |
| ELI LILLY \& CO | LLY | 74,967.23 | 0.39\% | 2.91\% | 9.13\% | 12.18\% | 0.0480\% |
| LEGG MASON INC | LM | 6,279.45 | 0.03\% | 1.18\% | 17.32\% | 18.60\% | 0.0061\% |
| LOCKHEED MARTIN CORP | LMT | 58,926.36 | 0.31\% | 2.93\% | 8.38\% | 11.43\% | 0.0354\% |
| LINCOLN NATIONAL CORP | LNC | 14,607.98 | 0.08\% | 1.17\% | 11.52\% | 12.75\% | 0.0098\% |
| LORILLARD INC | LO | 22,162.86 | 0.12\% | 3.98\% | 9.26\% | 13.42\% | 0.0156\% |
| LOWE'S COS INC | LOW | 57,785.44 | 0.30\% | 1.39\% | 15.95\% | 17.45\% | 0.0530\% |
| LAM RESEARCH CORP | LRCX | 12,677.10 | 0.07\% | 0.94\% | 5.24\% | 6.20\% | 0.0041\% |
| LEUCADIA NATIONAL CORP | LUK | 8,993.35 | N/A | 0.00\% | \#VALUE! | N/A | N/A |
| SOUTHWEST AIRLINES CO | LUV | 26,409.94 | 0.14\% | 0.60\% | 21.35\% | 22.01\% | 0.0305\% |
| LEVEL 3 COMMUNICATIONS INC | LVLT | 16,462.10 | 0.09\% | 0.00\% | 30.94\% | 30.94\% | 0.0268\% |
| LYONDELLBASELL INDU-CL A | LYB | 44,229.01 | 0.23\% | 3.03\% | 6.50\% | 9.63\% | 0.0224\% |
| MACY'S INC | M | 21,893.87 | 0.12\% | 1.91\% | 9.68\% | 11.69\% | 0.0134\% |
| MASTERCARD INC-CLASS A | MA | 97,148.95 | 0.51\% | 0.53\% | 17.07\% | 17.64\% | 0.0900\% |
| MACERICH CO/THE | MAC | 9,575.71 | 0.05\% | 3.66\% | 4.19\% | 7.93\% | 0.0040\% |
| MARRIOTT INTERNATIONAL -CL A | MAR | 22,102.14 | 0.12\% | 0.99\% | 10.63\% | 11.66\% | 0.0135\% |
| MASCO CORP | MAS | 8,268.80 | 0.04\% | 1.48\% | 10.93\% | 12.48\% | 0.0054\% |
| MATTEL INC | MAT | 10,483.30 | 0.06\% | 4.91\% | 7.50\% | 12.60\% | 0.0069\% |
| MCDONALD'S CORP | MCD | 93,592.99 | 0.49\% | 3.42\% | 7.49\% | 11.04\% | 0.0543\% |
| MICROCHIP TECHNOLOGY INC | MCHP | 8,705.83 | 0.05\% | 3.21\% | 10.70\% | 14.08\% | 0.0064\% |
| MCKESSON CORP | MCK | 47,579.82 | 0.25\% | 0.46\% | 15.10\% | 15.60\% | 0.0390\% |
| MOODY'S CORP | MCO | 20,958.04 | 0.11\% | 1.11\% | 13.50\% | 14.69\% | 0.0162\% |
| MONDELEZ INTERNATIONAL INC-A | MDLZ | 64,105.87 | 0.34\% | 1.51\% | 10.35\% | 11.94\% | 0.0402\% |
| MEDTRONIC INC | MDT | 67,743.26 | 0.36\% | 1.77\% | 7.78\% | 9.61\% | 0.0342\% |
| METLIFE INC | MET | 61,925.65 | 0.33\% | 2.45\% | 7.79\% | 10.33\% | 0.0336\% |
| MCGRAW HILL FINANCIAL INC | MHFI | 24,709.22 | 0.13\% | 1.32\% | 12.50\% | 13.90\% | 0.0181\% |
| MOHAWK INDUSTRIES INC | MHK | 10,453.42 | 0.05\% | 0.00\% | 9.35\% | 9.35\% | 0.0051\% |
| MEAD JOHNSON NUTRITION CO | MJN | 20,354.53 | 0.11\% | 1.49\% | 9.50\% | 11.06\% | 0.0118\% |
| MCCORMICK \& CO-NON VTG SHRS | MKC | 9,368.35 | 0.05\% | 2.03\% | 7.73\% | 9.84\% | 0.0048\% |
| MARTIN MARIETTA MATERIALS | MLM | 8,504.95 | 0.04\% | 1.27\% | 19.34\% | 20.73\% | 0.0093\% |
| MARSH \& MCLENNAN COS | MMC | 30,187.59 | 0.16\% | 1.90\% | 12.70\% | 14.72\% | 0.0233\% |
| 3M CO | MMM | 101,742.81 | 0.53\% | 2.16\% | 9.33\% | 11.58\% | 0.0619\% |
| MALLINCKRODT PLC | MNK | 9,993.67 | 0.05\% | 0.00\% | 23.36\% | 23.36\% | 0.0123\% |
| MONSTER BEVERAGE CORP | MNST | 18,078.07 | 0.09\% | 0.00\% | 21.80\% | 21.80\% | 0.0207\% |
| ALTRIA GROUP INC | MO | 96,343.03 | 0.51\% | 4.15\% | 6.01\% | 10.28\% | 0.0521\% |
| MONSANTO CO | MON | 57,551.48 | 0.30\% | 1.62\% | 11.65\% | 13.36\% | 0.0404\% |
| MOSAIC CO/THE | MOS | 16,737.13 | 0.09\% | 2.22\% | 10.60\% | 12.94\% | 0.0114\% |
| MARATHON PETROLEUM CORP | MPC | 25,901.02 | 0.14\% | 1.99\% | 12.60\% | 14.72\% | 0.0200\% |
| MERCK \& CO. INC. | MRK | 168,315.56 | 0.88\% | 2.99\% | 6.15\% | 9.23\% | 0.0816\% |
| MARATHON OIL CORP | MRO | 21,826.17 | 0.11\% | 2.46\% | 9.28\% | 11.85\% | 0.0136\% |
| MORGAN STANLEY | MS | 69,781.42 | 0.37\% | 1.02\% | 30.16\% | 31.33\% | 0.1149\% |
| MICROSOFT CORP | MSFT | 407,815.14 | 2.14\% | 2.37\% | 9.22\% | 11.69\% | 0.2506\% |
| MOTOROLA SOLUTIONS INC | MSI | 15,702.32 | 0.08\% | 1.94\% | 4.43\% | 6.41\% | 0.0053\% |
| M \& T BANK CORP | MTB | 16,507.38 | 0.09\% | 2.24\% | 5.45\% | 7.75\% | 0.0067\% |
| MICRON TECHNOLOGY INC | MU | 34,994.64 | 0.18\% | 0.10\% | 12.54\% | 12.65\% | 0.0233\% |
| MURPHY OIL CORP | MUR | 9,204.88 | 0.05\% | 2.59\% | 11.50\% | 14.24\% | 0.0069\% |
| MEADWESTVACO CORP | MWV | 7,350.54 | 0.04\% | 3.13\% | 8.15\% | 11.41\% | 0.0044\% |
| MYLAN INC | MYL | 20,180.83 | 0.11\% | 0.00\% | 13.15\% | 13.15\% | 0.0139\% |
| NAVIENT CORP | NAVI | 8,368.47 | N/A | 2.94\% | \#VALUE! | N/A | N/A |
| NOBLE ENERGY INC | NBL | 20,292.92 | 0.11\% | 1.16\% | 12.20\% | 13.43\% | 0.0143\% |
| NABORS INDUSTRIES LTD | NBR | 4,798.90 | 0.03\% | 1.13\% | 37.42\% | 38.77\% | 0.0098\% |
| NASDAQ OMX GROUP/THE | NDAQ | 7,335.36 | 0.04\% | 1.38\% | 9.91\% | 11.36\% | 0.0044\% |
| NOBLE CORP PLC | NE | 5,257.07 | 0.03\% | 7.22\% | -2.60\% | 4.53\% | 0.0013\% |
| NEXTERA ENERGY INC | NEE | 44,446.99 | 0.23\% | 2.83\% | 6.17\% | 9.09\% | 0.0212\% |
| NEWMONT MINING CORP | NEM | 9,556.92 | 0.05\% | 1.05\% | -1.25\% | -0.21\% | -0.0001\% |
| NETFLIX INC | NFLX | 23,270.77 | 0.12\% | 0.00\% | 29.05\% | 29.05\% | 0.0355\% |
| NEWFIELD EXPLORATION CO | NFX | 4,628.75 | 0.02\% | 0.00\% | 11.00\% | 11.00\% | 0.0027\% |
| NISOURCE INC | NI | 12,867.92 | 0.07\% | 2.51\% | 4.08\% | 6.64\% | 0.0045\% |
| NIKE INC -CL B | NKE | 82,239.60 | 0.43\% | 1.08\% | 13.33\% | 14.49\% | 0.0626\% |
| NIELSEN NV | NLSN | 15,856.49 | 0.08\% | 2.26\% | 16.17\% | 18.61\% | 0.0155\% |
| NORTHROP GRUMMAN CORP | NOC | 27,477.96 | 0.14\% | 1.99\% | 6.22\% | 8.27\% | 0.0119\% |
| NATIONAL OILWELL VARCO INC | NOV | 30,686.99 | 0.16\% | 2.25\% | 9.36\% | 11.71\% | 0.0189\% |
| NRG ENERGY INC | NRG | 10,572.66 | 0.06\% | 1.72\% | 40.32\% | 42.39\% | 0.0235\% |
| NORFOLK SOUTHERN CORP | NSC | 35,858.12 | 0.19\% | 1.90\% | 12.93\% | 14.96\% | 0.0282\% |


|  |  | [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 |
| NETAPP INC | NTAP | 13,491.76 | 0.07\% | 1.56\% | 12.80\% | 14.46\% | 0.0102\% |
| NORTHERN TRUST CORP | NTRS | 15,955.46 | 0.08\% | 1.92\% | 9.27\% | 11.28\% | 0.0095\% |
| NORTHEAST UTILITIES | NU | 15,450.31 | 0.08\% | 3.21\% | 6.73\% | 10.04\% | 0.0082\% |
| NUCOR CORP | NUE | 17,190.91 | 0.09\% | 2.75\% | 7.33\% | 10.18\% | 0.0092\% |
| NVIDIA CORP | NVDA | 10,705.53 | 0.06\% | 1.72\% | 10.59\% | 12.40\% | 0.0070\% |
| NEWELL RUBBERMAID INC | NWL | 9,434.28 | 0.05\% | 1.91\% | 9.90\% | 11.90\% | 0.0059\% |
| NEWS CORP - CLASS A | NWSA | 8,775.32 | 0.05\% | 0.00\% | 8.30\% | 8.30\% | 0.0038\% |
| OWENS-ILLINOIS INC | Ol | 4,193.66 | 0.02\% | 0.00\% | 4.22\% | 4.22\% | 0.0009\% |
| ONEOK INC | OKE | 11,642.44 | 0.06\% | 4.04\% | 9.00\% | 13.22\% | 0.0081\% |
| OMNICOM GROUP | OMC | 18,377.70 | 0.10\% | 2.50\% | 7.80\% | 10.40\% | 0.0100\% |
| ORACLE CORP | ORCL | 180,841.52 | 0.95\% | 1.19\% | 9.67\% | 10.91\% | 0.1037\% |
| O'REILLY AUTOMOTIVE INC | ORLY | 18,228.61 | 0.10\% | 0.00\% | 19.19\% | 19.19\% | 0.0184\% |
| OCCIDENTAL PETROLEUM CORP | OXY | 67,059.02 | 0.35\% | 3.30\% | 8.00\% | 11.43\% | 0.0403\% |
| PAYCHEX INC | PAYX | 17,121.84 | 0.09\% | 3.15\% | 9.90\% | 13.21\% | 0.0119\% |
| PEOPLE'S UNITED FINANCIAL | PBCT | 4,548.71 | 0.02\% | 4.47\% | 13.44\% | 18.20\% | 0.0044\% |
| PITNEY BOWES INC | PBI | 4,992.59 | N/A | 3.02\% | \#VALUE! | N/A | N/A |
| PACCAR INC | PCAR | 23,583.34 | 0.12\% | 1.76\% | 9.83\% | 11.68\% | 0.0145\% |
| P G \& E CORP | PCG | 23,597.62 | 0.12\% | 3.68\% | 7.50\% | 11.31\% | 0.0140\% |
| PLUM CREEK TIMBER CO | PCL | 7,118.36 | 0.04\% | 4.35\% | 7.05\% | 11.55\% | 0.0043\% |
| PRICELINE GROUP INC/THE | PCLN | 61,483.25 | 0.32\% | 0.00\% | 22.80\% | 22.80\% | 0.0737\% |
| PRECISION CASTPARTS CORP | PCP | 32,233.77 | 0.17\% | 0.05\% | 10.10\% | 10.16\% | 0.0172\% |
| PATTERSON COS INC | PDCO | 4,713.59 | 0.02\% | 1.85\% | 10.88\% | 12.83\% | 0.0032\% |
| PUBLIC SERVICE ENTERPRISE GP | PEG | 19,960.12 | 0.10\% | 3.75\% | 5.04\% | 8.88\% | 0.0093\% |
| PEPSICO INC | PEP | 146,263.31 | 0.77\% | 2.58\% | 7.83\% | 10.51\% | 0.0808\% |
| PETSMART INC | PETM | 7,227.39 | 0.04\% | 0.92\% | 11.25\% | 12.23\% | 0.0046\% |
| PFIZER INC | PFE | 191,035.93 | 1.00\% | 3.43\% | 2.30\% | 5.77\% | 0.0579\% |
| PRINCIPAL FINANCIAL GROUP | PFG | 15,521.77 | 0.08\% | 2.41\% | 13.50\% | 16.07\% | 0.0131\% |
| PROCTER \& GAMBLE CO/THE | PG | 237,962.09 | 1.25\% | 2.96\% | 8.49\% | 11.57\% | 0.1447\% |
| PROGRESSIVE CORP | PGR | 15,896.80 | 0.08\% | 3.47\% | 8.25\% | 11.86\% | 0.0099\% |
| PARKER HANNIFIN CORP | PH | 19,062.25 | 0.10\% | 1.78\% | 9.19\% | 11.05\% | 0.0111\% |
| PULTEGROUP INC | PHM | 7,752.75 | 0.04\% | 1.03\% | 6.92\% | 7.98\% | 0.0033\% |
| PERKINELMER INC | PKI | 4,934.20 | 0.03\% | 0.64\% | 11.81\% | 12.48\% | 0.0032\% |
| PROLOGIS INC | PLD | 20,379.55 | 0.11\% | 3.24\% | 7.00\% | 10.35\% | 0.0111\% |
| PALL CORP | PLL | 9,979.42 | 0.05\% | 1.23\% | 11.53\% | 12.84\% | 0.0067\% |
| PHILIP MORRIS INTERNATIONAL | PM | 133,805.95 | 0.70\% | 4.49\% | 7.25\% | 11.91\% | 0.0837\% |
| PNC FINANCIAL SERVICES GROUP | PNC | 45,985.47 | 0.24\% | 2.15\% | 5.21\% | 7.42\% | 0.0179\% |
| PENTAIR PLC | PNR | 12,791.67 | 0.07\% | 1.61\% | 14.35\% | 16.07\% | 0.0108\% |
| PINNACLE WEST CAPITAL | PNW | 6,713.15 | 0.04\% | 3.81\% | 4.64\% | 8.54\% | 0.0030\% |
| PEPCO HOLDINGS INC | POM | 6,869.51 | 0.04\% | 3.96\% | 6.96\% | 11.06\% | 0.0040\% |
| PPG INDUSTRIES INC | PPG | 27,961.64 | 0.15\% | 1.28\% | 8.13\% | 9.46\% | 0.0139\% |
| PPL CORP | PPL | 23,583.45 | 0.12\% | 4.20\% | 4.52\% | 8.82\% | 0.0109\% |
| PERRIGO CO PLC | PRGO | 20,692.18 | 0.11\% | 0.28\% | 12.64\% | 12.93\% | 0.0141\% |
| PRUDENTIAL FINANCIAL INC | PRU | 38,435.36 | 0.20\% | 2.50\% | 10.67\% | 13.30\% | 0.0269\% |
| PUBLIC STORAGE | PSA | 32,042.34 | 0.17\% | 3.03\% | 4.37\% | 7.47\% | 0.0126\% |
| PHILLIPS 66 | PSX | 39,709.05 | 0.21\% | 2.60\% | 7.73\% | 10.43\% | 0.0218\% |
| PVH CORP | PVH | 9,805.62 | 0.05\% | 0.13\% | 11.04\% | 11.18\% | 0.0058\% |
| QUANTA SERVICES INC | PWR | 7,059.64 | 0.04\% | 0.00\% | 11.45\% | 11.45\% | 0.0042\% |
| PRAXAIR INC | PX | 36,657.58 | 0.19\% | 2.06\% | 9.45\% | 11.61\% | 0.0224\% |
| PIONEER NATURAL RESOURCES CC | PXD | 25,361.78 | 0.13\% | 0.05\% | 18.00\% | 18.05\% | 0.0241\% |
| QUALCOMM INC | QCOM | 117,612.39 | 0.62\% | 2.41\% | 13.37\% | 15.94\% | 0.0985\% |
| QEP RESOURCES INC | QEP | 4,410.05 | 0.02\% | 0.33\% | 15.00\% | 15.35\% | 0.0036\% |
| RYDER SYSTEM INC | R | 4,839.33 | 0.03\% | 1.46\% | 13.20\% | 14.75\% | 0.0038\% |
| REYNOLDS AMERICAN INC | RAI | 34,214.66 | 0.18\% | 4.14\% | 6.76\% | 11.04\% | 0.0198\% |
| REGENERON PHARMACEUTICALS | REGN | 40,220.82 | 0.21\% | 0.00\% | 18.55\% | 18.55\% | 0.0392\% |
| REGIONS FINANCIAL CORP | RF | 13,978.10 | 0.07\% | 1.77\% | 4.45\% | 6.26\% | 0.0046\% |
| ROBERT HALF INTL INC | RHI | 7,802.63 | 0.04\% | 1.25\% | 16.49\% | 17.84\% | 0.0073\% |
| RED HAT INC | RHT | 11,714.48 | 0.06\% | 0.00\% | 16.72\% | 16.72\% | 0.0103\% |
| TRANSOCEAN LTD | RIG | 9,440.04 | 0.05\% | 10.97\% | -9.00\% | 1.47\% | 0.0007\% |
| RALPH LAUREN CORP | RL | 15,284.35 | 0.08\% | 1.07\% | 12.58\% | 13.71\% | 0.0110\% |
| ROCKWELL AUTOMATION INC | ROK | 15,176.99 | 0.08\% | 2.27\% | 10.72\% | 13.11\% | 0.0105\% |
| ROPER INDUSTRIES INC | ROP | 16,050.99 | 0.08\% | 0.44\% | 12.13\% | 12.60\% | 0.0106\% |
| ROSS STORES INC | ROST | 17,059.32 | 0.09\% | 0.98\% | 11.27\% | 12.30\% | 0.0110\% |
| RANGE RESOURCES CORP | RRC | 12,109.35 | 0.06\% | 0.22\% | 35.19\% | 35.45\% | 0.0226\% |
| REPUBLIC SERVICES INC | RSG | 14,132.67 | 0.07\% | 2.68\% | 4.35\% | 7.09\% | 0.0053\% |
| RAYTHEON COMPANY | RTN | 32,209.04 | 0.17\% | 2.31\% | 8.00\% | 10.41\% | 0.0176\% |
| STARBUCKS CORP | SBUX | 58,578.58 | 0.31\% | 1.63\% | 18.06\% | 19.83\% | 0.0610\% |
| SCANA CORP | SCG | 7,914.39 | 0.04\% | 3.78\% | 6.25\% | 10.15\% | 0.0042\% |
| SCHWAB (CHARLES) CORP | SCHW | 37,664.90 | 0.20\% | 0.84\% | 20.98\% | 21.90\% | 0.0434\% |
| SPECTRA ENERGY CORP | SE | 25,571.82 | 0.13\% | 3.59\% | 8.30\% | 12.04\% | 0.0162\% |


|  |  | [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 |
| SEALED AIR CORP | SEE | 8,015.54 | 0.04\% | 1.37\% | 12.27\% | 13.72\% | 0.0058\% |
| SHERWIN-WILLIAMS CO/THE | SHW | 22,988.57 | 0.12\% | 0.92\% | 10.00\% | 10.96\% | 0.0132\% |
| SIGMA-ALDRICH | SIAL | 16,140.83 | 0.08\% | 0.67\% | 8.50\% | 9.20\% | 0.0078\% |
| JM SMUCKER CO/THE | SJM | 10,208.21 | 0.05\% | 2.52\% | 6.15\% | 8.74\% | 0.0047\% |
| SCHLUMBERGER LTD | SLB | 122,464.18 | 0.64\% | 1.63\% | 14.36\% | 16.10\% | 0.1036\% |
| SNAP-ON INC | SNA | 7,860.22 | 0.04\% | 1.33\% | 4.40\% | 5.76\% | 0.0024\% |
| SANDISK CORP | SNDK | 21,197.73 | 0.11\% | 1.08\% | 20.35\% | 21.54\% | 0.0240\% |
| SCRIPPS NETWORKS INTER-CL A | SNI | 10,303.97 | 0.05\% | 1.06\% | 11.80\% | 12.92\% | 0.0070\% |
| SOUTHERN CO/THE | SO | 41,949.27 | 0.22\% | 4.47\% | 4.25\% | 8.81\% | 0.0194\% |
| SIMON PROPERTY GROUP INC | SPG | 55,895.97 | 0.29\% | 2.90\% | 5.42\% | 8.40\% | 0.0247\% |
| STAPLES INC | SPLS | 8,658.06 | 0.05\% | 3.63\% | 0.38\% | 4.02\% | 0.0018\% |
| STERICYCLE INC | SRCL | 10,816.82 | 0.06\% | 0.00\% | 14.92\% | 14.92\% | 0.0085\% |
| SEMPRA ENERGY | SRE | 26,768.85 | 0.14\% | 2.42\% | 7.12\% | 9.62\% | 0.0135\% |
| SUNTRUST BANKS INC | STI | 20,607.96 | 0.11\% | 1.77\% | 8.39\% | 10.24\% | 0.0111\% |
| ST JUDE MEDICAL INC | STJ | 18,592.91 | 0.10\% | 1.62\% | 11.61\% | 13.33\% | 0.0130\% |
| STATE STREET CORP | STT | 31,758.87 | 0.17\% | 1.53\% | 9.80\% | 11.40\% | 0.0190\% |
| SEAGATE TECHNOLOGY | STX | 20,583.33 | 0.11\% | 3.21\% | 8.88\% | 12.23\% | 0.0132\% |
| CONSTELLATION BRANDS INC-A | STZ | 17,932.19 | 0.09\% | 0.00\% | 16.35\% | 16.35\% | 0.0154\% |
| STANLEY BLACK \& DECKER INC | SWK | 14,977.51 | 0.08\% | 2.14\% | 10.33\% | 12.58\% | 0.0099\% |
| SOUTHWESTERN ENERGY CO | SWN | 11,924.69 | 0.06\% | 0.00\% | 12.61\% | 12.61\% | 0.0079\% |
| SAFEWAY INC | SWY | 8,035.23 | 0.04\% | 2.44\% | 9.33\% | 11.89\% | 0.0050\% |
| STRYKER CORP | SYK | 33,311.12 | 0.18\% | 1.37\% | 10.43\% | 11.88\% | 0.0208\% |
| SYMANTEC CORP | SYMC | 17,488.34 | 0.09\% | 2.37\% | 7.65\% | 10.11\% | 0.0093\% |
| SYSCO CORP | SYY | 22,668.80 | 0.12\% | 3.13\% | 9.84\% | 13.12\% | 0.0156\% |
| AT\&T INC | T | 186,005.82 | 0.98\% | 5.16\% | 5.45\% | 10.75\% | 0.1050\% |
| MOLSON COORS BREWING CO -B | TAP | 14,098.32 | 0.07\% | 1.94\% | 5.27\% | 7.26\% | 0.0054\% |
| TERADATA CORP | TDC | 6,774.84 | 0.04\% | 0.00\% | 10.01\% | 10.01\% | 0.0036\% |
| TECO ENERGY INC | TE | 4,513.13 | 0.02\% | 4.60\% | 5.77\% | 10.50\% | 0.0025\% |
| INTEGRYS ENERGY GROUP INC | TEG | 5,722.16 | 0.03\% | 3.80\% | 5.00\% | 8.90\% | 0.0027\% |
| TE CONNECTIVITY LTD | TEL | 24,990.23 | 0.13\% | 1.86\% | 11.20\% | 13.17\% | 0.0173\% |
| TARGET CORP | TGT | 43,111.73 | 0.23\% | 2.71\% | 10.64\% | 13.49\% | 0.0306\% |
| TENET HEALTHCARE CORP | THC | 4,570.03 | 0.02\% | 0.00\% | 14.42\% | 14.42\% | 0.0035\% |
| TIFFANY \& CO | TIF | 13,226.86 | 0.07\% | 1.48\% | 12.60\% | 14.17\% | 0.0098\% |
| TJX COMPANIES INC | TJX | 43,204.91 | 0.23\% | 1.10\% | 11.52\% | 12.68\% | 0.0288\% |
| TORCHMARK CORP | TMK | 6,847.68 | 0.04\% | 0.94\% | 8.05\% | 9.03\% | 0.0032\% |
| THERMO FISHER SCIENTIFIC INC | TMO | 47,471.02 | 0.25\% | 0.51\% | 12.09\% | 12.63\% | 0.0315\% |
| TRIPADVISOR INC | TRIP | 9,984.69 | 0.05\% | 0.00\% | 25.60\% | 25.60\% | 0.0134\% |
| T ROWE PRICE GROUP INC | TROW | 21,282.81 | 0.11\% | 2.15\% | 12.36\% | 14.64\% | 0.0164\% |
| TRAVELERS COS INC/THE | TRV | 33,925.04 | 0.18\% | 2.11\% | 6.44\% | 8.62\% | 0.0154\% |
| TRACTOR SUPPLY COMPANY | TSCO | 10,161.43 | 0.05\% | 0.81\% | 16.48\% | 17.36\% | 0.0093\% |
| TYSON FOODS INC-CL A | TSN | 14,296.54 | 0.08\% | 0.74\% | 14.95\% | 15.74\% | 0.0118\% |
| TESORO CORP | TSO | 9,079.56 | 0.05\% | 1.54\% | 18.67\% | 20.35\% | 0.0097\% |
| TOTAL SYSTEM SERVICES INC | TSS | 6,093.73 | 0.03\% | 1.22\% | 11.80\% | 13.09\% | 0.0042\% |
| TIME WARNER CABLE | TWC | 39,311.30 | 0.21\% | 2.12\% | 9.16\% | 11.37\% | 0.0235\% |
| TIME WARNER INC | TWX | 66,810.59 | 0.35\% | 1.59\% | 11.26\% | 12.94\% | 0.0454\% |
| TEXAS INSTRUMENTS INC | TXN | 54,489.23 | 0.29\% | 2.41\% | 10.58\% | 13.12\% | 0.0376\% |
| TEXTRON INC | TXT | 11,525.04 | 0.06\% | 0.19\% | 17.08\% | 17.29\% | 0.0105\% |
| TYCO INTERNATIONAL LTD | TYC | 17,722.02 | 0.09\% | 1.81\% | 12.70\% | 14.62\% | 0.0136\% |
| UNDER ARMOUR INC-CLASS A | UA | 14,775.01 | 0.08\% | 0.00\% | 23.39\% | 23.39\% | 0.0182\% |
| UNIVERSAL HEALTH SERVICES-B | UHS | 9,713.31 | 0.05\% | 0.29\% | 9.41\% | 9.72\% | 0.0050\% |
| UNITEDHEALTH GROUP INC | UNH | 91,295.33 | 0.48\% | 1.48\% | 10.42\% | 11.98\% | 0.0575\% |
| UNUM GROUP | UNM | 8,618.12 | 0.05\% | 1.81\% | 9.00\% | 10.89\% | 0.0049\% |
| UNION PACIFIC CORP | UNP | 107,296.50 | 0.56\% | 1.52\% | 13.72\% | 15.34\% | 0.0865\% |
| UNITED PARCEL SERVICE-CL B | UPS | 96,750.59 | 0.51\% | 2.51\% | 10.71\% | 13.35\% | 0.0679\% |
| URBAN OUTFITTERS INC | URBN | 4,143.60 | 0.02\% | 0.00\% | 15.64\% | 15.64\% | 0.0034\% |
| UNITED RENTALS INC | URI | 11,484.93 | 0.06\% | 0.00\% | 22.82\% | 22.82\% | 0.0138\% |
| US BANCORP | USB | 78,196.19 | 0.41\% | 2.23\% | 9.38\% | 11.71\% | 0.0481\% |
| UNITED TECHNOLOGIES CORP | UTX | 97,939.45 | 0.51\% | 2.21\% | 10.77\% | 13.10\% | 0.0674\% |
| VISA INC-CLASS A SHARES | V | 155,224.13 | 0.82\% | 0.79\% | 17.83\% | 18.69\% | 0.1524\% |
| VARIAN MEDICAL SYSTEMS INC | VAR | 9,049.73 | 0.05\% | 0.00\% | 9.90\% | 9.90\% | 0.0047\% |
| VF CORP | VFC | 30,658.61 | 0.16\% | 1.57\% | 13.20\% | 14.87\% | 0.0240\% |
| VIACOM INC-CLASS B | VIAB | 29,911.20 | 0.16\% | 1.85\% | 12.09\% | 14.05\% | 0.0221\% |
| VALERO ENERGY CORP | VLO | 25,775.57 | 0.14\% | 2.12\% | 7.65\% | 9.86\% | 0.0133\% |
| VULCAN MATERIALS CO | VMC | 8,726.65 | 0.05\% | 0.32\% | 6.67\% | 6.99\% | 0.0032\% |
| VORNADO REALTY TRUST | VNO | 20,192.80 | 0.11\% | 2.71\% | 8.93\% | 11.77\% | 0.0125\% |
| VERISIGN INC | VRSN | 7,342.90 | 0.04\% | 0.00\% | 11.00\% | 11.00\% | 0.0042\% |
| VERTEX PHARMACEUTICALS INC | VRTX | 26,796.53 | 0.14\% | 0.00\% | 22.00\% | 22.00\% | 0.0310\% |
| VENTAS INC | VTR | 20,196.13 | 0.11\% | 4.26\% | 4.08\% | 8.42\% | 0.0089\% |
| VERIZON COMMUNICATIONS INC | VZ | 213,441.04 | 1.12\% | 4.14\% | 6.45\% | 10.72\% | 0.1203\% |


|  |  | [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 |
| WALGREEN CO | WAG | 63,552.37 | 0.33\% | 2.00\% | 14.14\% | 16.29\% | 0.0544\% |
| WATERS CORP | WAT | 9,366.94 | 0.05\% | 0.00\% | 9.83\% | 9.83\% | 0.0048\% |
| WESTERN DIGITAL CORP | WDC | 22,867.71 | 0.12\% | 1.61\% | 5.00\% | 6.65\% | 0.0080\% |
| WISCONSIN ENERGY CORP | WEC | 10,781.98 | 0.06\% | 3.27\% | 5.08\% | 8.43\% | 0.0048\% |
| WELLS FARGO \& CO | WFC | 276,552.26 | 1.45\% | 2.53\% | 12.36\% | 15.05\% | 0.2187\% |
| WHOLE FOODS MARKET INC | WFM | 17,003.81 | 0.09\% | 1.12\% | 13.01\% | 14.20\% | 0.0127\% |
| WHIRLPOOL CORP | WHR | 13,491.93 | 0.07\% | 1.63\% | 23.47\% | 25.29\% | 0.0179\% |
| WINDSTREAM HOLDINGS INC | WIN | 5,885.98 | 0.03\% | 10.24\% | -2.50\% | 7.61\% | 0.0024\% |
| WELLPOINT INC | WLP | 33,829.05 | 0.18\% | 1.39\% | 9.47\% | 10.92\% | 0.0194\% |
| WASTE MANAGEMENT INC | WM | 22,483.92 | 0.12\% | 3.05\% | 7.83\% | 11.00\% | 0.0130\% |
| WILLIAMS COS INC | WMB | 40,370.46 | 0.21\% | 3.63\% | 12.00\% | 15.85\% | 0.0336\% |
| WAL-MART STORES INC | WMT | 267,146.35 | 1.40\% | 2.31\% | 7.21\% | 9.61\% | 0.1349\% |
| WESTERN UNION CO | WU | 9,464.78 | 0.05\% | 2.76\% | 8.29\% | 11.17\% | 0.0056\% |
| WEYERHAEUSER CO | WY | 17,775.92 | 0.09\% | 3.00\% | 3.00\% | 6.05\% | 0.0056\% |
| WYNDHAM WORLDWIDE CORP | WYN | 9,819.12 | 0.05\% | 1.76\% | 10.00\% | 11.85\% | 0.0061\% |
| WYNN RESORTS LTD | WYNN | 18,637.21 | 0.10\% | 2.76\% | 13.60\% | 16.55\% | 0.0162\% |
| CIMAREX ENERGY CO | XEC | 10,251.70 | 0.05\% | 0.53\% | 13.42\% | 13.99\% | 0.0075\% |
| XCEL ENERGY INC | XEL | 16,707.86 | 0.09\% | 3.61\% | 5.25\% | 8.96\% | 0.0079\% |
| XL GROUP PLC | XL | 8,910.59 | 0.05\% | 1.81\% | 1.12\% | 2.94\% | 0.0014\% |
| XILINX INC | XLNX | 11,524.96 | 0.06\% | 2.60\% | 8.66\% | 11.37\% | 0.0069\% |
| EXXON MOBIL CORP | XOM | 402,195.53 | 2.11\% | 2.85\% | 13.26\% | 16.29\% | 0.3443\% |
| DENTSPLY INTERNATIONAL INC | XRAY | 7,383.61 | 0.04\% | 0.51\% | 10.38\% | 10.92\% | 0.0042\% |
| XEROX CORP | XRX | 15,348.22 | 0.08\% | 1.91\% | 8.65\% | 10.64\% | 0.0086\% |
| XYLEM INC | XYL | 6,834.84 | 0.04\% | 1.36\% | 11.37\% | 12.80\% | 0.0046\% |
| YAHOO! INC | YHOO | 48,968.60 | 0.26\% | 0.00\% | 7.40\% | 7.40\% | 0.0190\% |
| YUM! BRANDS INC | YUM | 32,702.59 | 0.17\% | 2.02\% | 12.26\% | 14.40\% | 0.0247\% |
| ZIONS BANCORPORATION | ZION | 5,917.50 | 0.03\% | 0.55\% | 9.00\% | 9.57\% | 0.0030\% |
| ZIMMER HOLDINGS INC | ZMH | 18,652.63 | 0.10\% | 0.76\% | 9.92\% | 10.72\% | 0.0105\% |
| ZOETIS INC | ZTS | 21,602.09 | 0.11\% | 0.67\% | 11.42\% | 12.13\% | 0.0138\% |
| Total Market Capir 19,030,553.61 |  |  |  |  |  |  | 13.49\% |

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 $([6] \times(1+(0.5 \times[7])))+[7]$
[9] Equals Col. [5] x Col. [8]

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

| $[1]$ | $[2]$ | $[3]$ |
| :---: | :---: | :---: |
| S\&P 500 | Year | Implied |
| Est. Required | Treasury (30- | Market |
| Market Return | day average) | Risk Premium |
| $12.75 \%$ | $3.04 \%$ | $9.72 \%$ |


|  |  | [4] | [5] | [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker | Market Capitalization | Weight in Index | Estimated Dividend Yield | Long-Term Growth Est. | DCF Result | Weighted DCF Result |
| AGILENT TECHNOLOGIES INC | A | 13,824.11 | 0.09\% | 1.27\% | 7.50\% | 8.82\% | 0.0079\% |
| ALCOA INC | AA | 19,733.50 | 0.13\% | 0.71\% | 17.00\% | 17.77\% | 0.0228\% |
| APPLE INC | AAPL | 661,671.25 | 4.30\% | 1.69\% | 12.50\% | 14.30\% | 0.6148\% |
| ABBVIE INC | ABBV | 101,391.35 | N/A | 3.07\% | NA | N/A | N/A |
| AMERISOURCEBERGEN CORP | ABC | 19,987.95 | 0.13\% | 1.31\% | 13.50\% | 14.90\% | 0.0194\% |
| ABBOTT LABORATORIES | ABT | 67,143.22 | 0.44\% | 1.99\% | -4.00\% | -2.05\% | -0.0089\% |
| ACE LTD | ACE | N/A | N/A | 0.00\% | NA | N/A | N/A |
| ACCENTURE PLC-CL A | ACN | N/A | N/A | 0.00\% | NA | N/A | N/A |
| ACTAVIS PLC | ACT | 64,046.69 | N/A | 0.00\% | NA | N/A | N/A |
| ADOBE SYSTEMS INC | ADBE | 35,769.56 | N/A | 0.00\% | NA | N/A | N/A |
| ANALOG DEVICES INC | ADI | 15,776.63 | 0.10\% | 2.95\% | 11.00\% | 14.11\% | 0.0145\% |
| ARCHER-DANIELS-MIDLAND CO | ADM | 32,710.87 | 0.21\% | 1.89\% | 6.50\% | 8.45\% | 0.0180\% |
| AUTOMATIC DATA PROCESSING | ADP | 41,172.49 | 0.27\% | 2.30\% | 9.50\% | 11.91\% | 0.0319\% |
| ALLIANCE DATA SYSTEMS CORP | ADS | 16,886.67 | N/A | 0.00\% | NA | N/A | N/A |
| AUTODESK INC | ADSK | 13,477.37 | N/A | 0.00\% | NA | N/A | N/A |
| ADT CORP/THE | ADT | 6,111.94 | N/A | 2.18\% | NA | N/A | N/A |
| AMEREN CORPORATION | AEE | 10,285.30 | 0.07\% | 3.84\% | 2.50\% | 6.39\% | 0.0043\% |
| AMERICAN ELECTRIC POWER | AEP | 27,549.10 | 0.18\% | 3.73\% | 4.50\% | 8.31\% | 0.0149\% |
| AES CORP | AES | 9,761.60 | 0.06\% | 1.49\% | 10.50\% | 12.07\% | 0.0077\% |
| AETNA INC | AET | 29,739.75 | 0.19\% | 1.07\% | 10.50\% | 11.62\% | 0.0225\% |
| AFLAC INC | AFL | 26,647.72 | 0.17\% | 2.64\% | 7.50\% | 10.23\% | 0.0177\% |
| ALLERGAN INC | AGN | 58,450.76 | 0.38\% | 0.10\% | 13.50\% | 13.61\% | 0.0517\% |
| AMERICAN INTERNATIONAL GROUP | AIG | 76,295.20 | 0.50\% | 0.92\% | 9.50\% | 10.46\% | 0.0519\% |
| APARTMENT INVT \& MGMT CO -A | AIV | 5,368.65 | N/A | 2.88\% | NA | N/A | N/A |
| ASSURANT INC | AIZ | 4,766.10 | 0.03\% | 1.59\% | 7.50\% | 9.14\% | 0.0028\% |
| AKAMAI TECHNOLOGIES INC | AKAM | 10,759.74 | N/A | 0.00\% | NA | N/A | N/A |
| ALLSTATE CORP | ALL | 28,068.46 | 0.18\% | 1.67\% | 16.00\% | 17.80\% | 0.0325\% |
| ALLEGION PLC | ALLE | N/A | N/A | 0.00\% | NA | N/A | N/A |
| ALTERA CORP | ALTR | 10,625.92 | 0.07\% | 2.06\% | 3.00\% | 5.09\% | 0.0035\% |
| ALEXION PHARMACEUTICALS INC | ALXN | 38,386.38 | N/A | 0.00\% | NA | N/A | N/A |
| APPLIED MATERIALS INC | AMAT | 27,560.07 | 0.18\% | 1.78\% | 17.00\% | 18.93\% | 0.0339\% |
| AMETEK INC | AME | 12,375.35 | 0.08\% | 0.69\% | 10.50\% | 11.23\% | 0.0090\% |
| AFFILIATED MANAGERS GROUP | AMG | 11,059.58 | N/A | 0.00\% | NA | N/A | N/A |
| AMGEN INC | AMGN | 122,353.77 | 0.80\% | 1.51\% | 8.50\% | 10.07\% | 0.0801\% |
| AMERIPRISE FINANCIAL INC | AMP | 23,994.70 | 0.16\% | 1.78\% | 13.50\% | 15.40\% | 0.0240\% |
| AMERICAN TOWER CORP | AMT | 39,626.48 | 0.26\% | 1.44\% | 16.50\% | 18.06\% | 0.0465\% |
| AMAZON.COM INC | AMZN | 146,532.14 | N/A | 0.00\% | NA | N/A | N/A |
| AUTONATION INC | AN | 6,547.64 | N/A | 0.00\% | NA | N/A | N/A |
| AON PLC | AON | 25,636.67 | 0.17\% | 1.11\% | 15.50\% | 16.69\% | 0.0278\% |
| APACHE CORP | APA | 27,133.06 | 0.18\% | 1.36\% | 8.00\% | 9.41\% | 0.0166\% |
| ANADARKO PETROLEUM CORP | APC | 45,307.02 | 0.29\% | 1.18\% | 74.50\% | 76.12\% | 0.2242\% |
| AIR PRODUCTS \& CHEMICALS INC | APD | 28,870.06 | 0.19\% | 2.29\% | 9.00\% | 11.39\% | 0.0214\% |
| AMPHENOL CORP-CL A | APH | 15,692.97 | 0.10\% | 0.98\% | 8.00\% | 9.01\% | 0.0092\% |
| AIRGAS INC | ARG | 8,584.01 | 0.06\% | 1.92\% | 13.50\% | 15.55\% | 0.0087\% |
| ALLEGHENY TECHNOLOGIES INC | ATI | 3,443.71 | 0.02\% | 2.22\% | 17.50\% | 19.92\% | 0.0045\% |
| AVALONBAY COMMUNITIES INC | AVB | 20,903.47 | 0.14\% | 2.96\% | 129.00\% | 133.86\% | 0.1819\% |
| AVAGO TECHNOLOGIES LTD | AVGO | N/A | N/A | 0.00\% | NA | N/A | N/A |
| AVON PRODUCTS INC | AVP | 4,459.57 | 0.03\% | 2.27\% | 36.50\% | 39.18\% | 0.0114\% |
| AVERY DENNISON CORP | AVY | 4,381.05 | 0.03\% | 2.91\% | 10.00\% | 13.06\% | 0.0037\% |
| AMERICAN EXPRESS CO | AXP | 94,228.03 | 0.61\% | 1.14\% | 10.00\% | 11.19\% | 0.0685\% |
| AUTOZONE INC | AZO | 18,382.56 | N/A | 0.00\% | NA | N/A | N/A |
| BOEING CO/THE | BA | 91,632.89 | 0.60\% | 2.32\% | 11.00\% | 13.45\% | 0.0801\% |
| BANK OF AMERICA CORP | BAC | 181,093.27 | 1.18\% | 1.16\% | 31.00\% | 32.34\% | 0.3806\% |
| BAXTER INTERNATIONAL INC | BAX | 39,065.77 | 0.25\% | 2.92\% | 8.00\% | 11.03\% | 0.0280\% |
| BED BATH \& BEYOND INC | BBBY | 13,183.46 | N/A | 0.00\% | NA | N/A | N/A |
| BB\&T CORP | BBT | 27,068.80 | 0.18\% | 2.55\% | 11.50\% | 14.19\% | 0.0250\% |
| BEST BUY CO INC | BBY | 12,407.87 | 0.08\% | 2.16\% | 2.50\% | 4.69\% | 0.0038\% |
| CR BARD INC | BCR | 12,402.53 | 0.08\% | 0.53\% | 8.00\% | 8.55\% | 0.0069\% |


|  |  | [4] | [5] | [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker | Market Capitalization | Weight in Index | Estimated Dividend Yield | Long-Term Growth Est. | DCF Result | Weighted DCF Result |
| BECTON DICKINSON AND CO | BDX | 24,806.31 | 0.16\% | 1.69\% | 8.00\% | 9.75\% | 0.0157\% |
| FRANKLIN RESOURCES INC | BEN | 35,350.73 | 0.23\% | 0.84\% | 9.00\% | 9.88\% | 0.0227\% |
| BROWN-FORMAN CORP-CLASS B | BF/B | N/A | N/A | 0.00\% | NA | N/A | N/A |
| BAKER HUGHES INC | BHI | 25,415.19 | 0.17\% | 1.33\% | 13.00\% | 14.42\% | 0.0238\% |
| BIOGEN IDEC INC | BIIB | 75,092.57 | N/A | 0.00\% | NA | N/A | N/A |
| BANK OF NEW YORK MELLON CORF | BK | 44,566.86 | 0.29\% | 1.71\% | 10.00\% | 11.80\% | 0.0342\% |
| BLACKROCK INC | BLK | 57,590.30 | 0.37\% | 2.21\% | 9.00\% | 11.31\% | 0.0423\% |
| BALL CORP | BLL | 8,921.84 | 0.06\% | 0.79\% | 12.00\% | 12.84\% | 0.0074\% |
| BEMIS COMPANY | BMS | 3,899.35 | 0.03\% | 2.77\% | 8.00\% | 10.88\% | 0.0028\% |
| BRISTOL-MYERS SQUIBB CO | BMY | 95,877.25 | 0.62\% | 2.46\% | 8.50\% | 11.06\% | 0.0689\% |
| BROADCOM CORP-CL A | BRCM | 24,739.68 | 0.16\% | 1.17\% | 2.50\% | 3.68\% | 0.0059\% |
| BERKSHIRE HATHAWAY INC-CL B | BRK/B | N/A | N/A | 0.00\% | NA | N/A | N/A |
| BOSTON SCIENTIFIC CORP | BSX | 17,788.23 | N/A | 0.00\% | NA | N/A | N/A |
| BORGWARNER INC | BWA | 12,573.78 | 0.08\% | 0.94\% | 14.00\% | 15.01\% | 0.0123\% |
| BOSTON PROPERTIES INC | BXP | 19,572.30 | N/A | 2.05\% | NA | N/A | N/A |
| CITIGROUP INC | C | 161,895.84 | 1.05\% | 0.08\% | 14.00\% | 14.08\% | 0.1482\% |
| CA INC | CA | 13,262.65 | 0.09\% | 3.38\% | 5.00\% | 8.46\% | 0.0073\% |
| CONAGRA FOODS INC | CAG | 14,754.28 | 0.10\% | 2.89\% | 8.00\% | 11.00\% | 0.0105\% |
| CARDINAL HEALTH INC | CAH | 26,695.39 | 0.17\% | 1.71\% | 12.00\% | 13.81\% | 0.0240\% |
| CAMERON INTERNATIONAL CORP | CAM | 11,396.58 | N/A | 0.00\% | NA | N/A | N/A |
| CATERPILLAR INC | CAT | 61,211.89 | 0.40\% | 2.72\% | 5.50\% | 8.29\% | 0.0330\% |
| CHUBB CORP | CB | 23,928.05 | 0.16\% | 1.97\% | 8.50\% | 10.55\% | 0.0164\% |
| CBRE GROUP INC - A | CBG | 10,881.42 | N/A | 0.00\% | NA | N/A | N/A |
| CBS CORP-CLASS B NON VOTING | CBS | 24,919.59 | 0.16\% | 1.16\% | 13.00\% | 14.24\% | 0.0231\% |
| COCA-COLA ENTERPRISES | CCE | 10,329.29 | 0.07\% | 2.33\% | 10.50\% | 12.96\% | 0.0087\% |
| CROWN CASTLE INTL CORP | CCl | 26,778.75 | 0.17\% | 4.07\% | 27.00\% | 31.62\% | 0.0550\% |
| CARNIVAL CORP | CCL | N/A | N/A | 0.00\% | NA | N/A | N/A |
| CELGENE CORP | CELG | 85,804.77 | N/A | 0.00\% | NA | N/A | N/A |
| CERNER CORP | CERN | 22,035.19 | N/A | 0.00\% | NA | N/A | N/A |
| CF INDUSTRIES HOLDINGS INC | CF | 13,285.21 | 0.09\% | 2.25\% | 4.50\% | 6.80\% | 0.0059\% |
| CAREFUSION CORP | CFN | 11,737.52 | N/A | 0.00\% | NA | N/A | N/A |
| CHESAPEAKE ENERGY CORP | CHK | 15,104.67 | 0.10\% | 1.50\% | 7.00\% | 8.55\% | 0.0084\% |
| C.H. ROBINSON WORLDWIDE INC | CHRW | 10,694.16 | 0.07\% | 1.92\% | 7.00\% | 8.99\% | 0.0062\% |
| CIGNA CORP | Cl | 26,866.78 | 0.17\% | 0.04\% | 9.00\% | 9.04\% | 0.0158\% |
| CINCINNATI FINANCIAL CORP | CINF | 8,398.48 | 0.05\% | 3.43\% | 12.50\% | 16.15\% | 0.0088\% |
| COLGATE-PALMOLIVE CO | CL | 62,239.37 | 0.40\% | 2.10\% | 10.50\% | 12.71\% | 0.0514\% |
| CLOROX COMPANY | CLX | 13,187.36 | 0.09\% | 2.92\% | 8.50\% | 11.54\% | 0.0099\% |
| COMERICA INC | CMA | 8,727.40 | 0.06\% | 1.63\% | 11.00\% | 12.72\% | 0.0072\% |
| COMCAST CORP-CLASS A | CMCSA | 116,765.04 | 0.76\% | 1.68\% | 12.00\% | 13.78\% | 0.1046\% |
| CME GROUP INC | CME | 28,678.39 | 0.19\% | 2.20\% | 8.50\% | 10.79\% | 0.0201\% |
| CHIPOTLE MEXICAN GRILL INC | CMG | 20,801.97 | N/A | 0.00\% | NA | N/A | N/A |
| CUMMINS INC | CMI | 26,402.65 | 0.17\% | 2.13\% | 8.50\% | 10.72\% | 0.0184\% |
| CMS ENERGY CORP | CMS | 8,922.37 | 0.06\% | 3.33\% | 6.50\% | 9.93\% | 0.0058\% |
| CENTERPOINT ENERGY INC | CNP | 10,396.77 | 0.07\% | 3.87\% | 2.50\% | 6.42\% | 0.0043\% |
| CONSOL ENERGY INC | CNX | 8,928.68 | 0.06\% | 0.63\% | 4.00\% | 4.65\% | 0.0027\% |
| CAPITAL ONE FINANCIAL CORP | COF | 45,367.23 | 0.29\% | 1.47\% | 4.00\% | 5.50\% | 0.0162\% |
| CABOT OIL \& GAS CORP | COG | 13,505.75 | 0.09\% | 0.24\% | 33.00\% | 33.28\% | 0.0292\% |
| COACH INC | COH | 9,562.97 | 0.06\% | 3.84\% | 0.50\% | 4.35\% | 0.0027\% |
| ROCKWELL COLLINS INC | COL | 11,457.75 | 0.07\% | 1.41\% | 7.00\% | 8.46\% | 0.0063\% |
| CONOCOPHILLIPS | COP | 86,594.73 | 0.56\% | 4.10\% | 3.50\% | 7.67\% | 0.0432\% |
| COSTCO WHOLESALE CORP | COST | 60,721.97 | 0.39\% | 1.04\% | 10.50\% | 11.59\% | 0.0457\% |
| COVIDIEN PLC | COV | N/A | N/A | 0.00\% | NA | N/A | N/A |
| CAMPBELL SOUP CO | CPB | 13,781.75 | 0.09\% | 2.85\% | 3.00\% | 5.89\% | 0.0053\% |
| SALESFORCE.COM INC | CRM | 39,096.04 | N/A | 0.00\% | NA | N/A | N/A |
| COMPUTER SCIENCES CORP | CSC | 8,664.08 | 0.06\% | 1.50\% | 7.00\% | 8.55\% | 0.0048\% |
| CISCO SYSTEMS INC | CSCO | 131,484.76 | 0.85\% | 3.03\% | 5.50\% | 8.61\% | 0.0736\% |
| CSX CORP | CSX | 36,461.39 | 0.24\% | 1.74\% | 9.00\% | 10.82\% | 0.0256\% |
| CINTAS CORP | CTAS | 8,324.23 | 0.05\% | 1.19\% | 11.00\% | 12.26\% | 0.0066\% |
| CENTURYLINK INC | CTL | 23,353.25 | 0.15\% | 5.33\% | 6.50\% | 12.01\% | 0.0182\% |
| COGNIZANT TECH SOLUTIONS-A | CTSH | 32,510.13 | N/A | 0.00\% | NA | N/A | N/A |
| CITRIX SYSTEMS INC | CTXS | 10,599.94 | N/A | 0.00\% | NA | N/A | N/A |
| CABLEVISION SYSTEMS-NY GRP-A | CVC | 5,001.96 | 0.03\% | 3.31\% | 19.00\% | 22.62\% | 0.0074\% |
| CVS HEALTH CORP | CVS | 103,323.50 | 0.67\% | 1.23\% | 11.00\% | 12.30\% | 0.0826\% |
| CHEVRON CORP | CVX | 220,139.87 | 1.43\% | 3.64\% | 4.50\% | 8.22\% | 0.1176\% |
| DOMINION RESOURCES INC/VA | D | 42,193.41 | 0.27\% | 3.30\% | 5.00\% | 8.38\% | 0.0230\% |
| DELTA AIR LINES INC | DAL | 36,892.36 | 0.24\% | 0.83\% | 11.50\% | 12.38\% | 0.0297\% |
| DU PONT (E.I.) DE NEMOURS | DD | 63,914.56 | 0.42\% | 2.67\% | 8.50\% | 11.28\% | 0.0469\% |
| DEERE \& CO | DE | 31,347.41 | 0.20\% | 2.72\% | 6.00\% | 8.80\% | 0.0179\% |
| DISCOVER FINANCIAL SERVICES | DFS | 29,585.04 | 0.19\% | 1.45\% | 8.50\% | 10.02\% | 0.0193\% |


|  |  | [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 |
| DOLLAR GENERAL CORP | DG | 19,672.26 | N/A | 0.00\% | NA | N/A | N/A |
| QUEST DIAGNOSTICS INC | DGX | 9,216.93 | 0.06\% | 2.10\% | 6.50\% | 8.67\% | 0.0052\% |
| DR HORTON INC | DHI | 8,853.02 | 0.06\% | 1.04\% | 25.00\% | 26.17\% | 0.0151\% |
| DANAHER CORP | DHR | 57,901.82 | 0.38\% | 0.49\% | 12.00\% | 12.52\% | 0.0471\% |
| WALT DISNEY CO/THE | DIS | 155,330.16 | 1.01\% | 0.96\% | 13.50\% | 14.52\% | 0.1466\% |
| DISCOVERY COMMUNICATIONS-A | DISCA | 4,879.41 | N/A | 0.00\% | NA | N/A | N/A |
| DISCOVERY COMMUNICATIONS-C | DISCK | N/A | N/A | 0.00\% | NA | N/A | N/A |
| DELPHI AUTOMOTIVE PLC | DLPH | 20,935.75 | 0.14\% | 1.42\% | 12.00\% | 13.50\% | 0.0184\% |
| DOLLAR TREE INC | DLTR | 12,746.76 | N/A | 0.00\% | NA | N/A | N/A |
| DUN \& BRADSTREET CORP | DNB | 4,490.90 | 0.03\% | 1.41\% | 6.00\% | 7.45\% | 0.0022\% |
| DENBURY RESOURCES INC | DNR | 3,874.67 | 0.03\% | 2.14\% | 11.50\% | 13.76\% | 0.0035\% |
| DIAMOND OFFSHORE DRILLING | DO | 4,838.58 | 0.03\% | 1.40\% | 6.50\% | 7.94\% | 0.0025\% |
| DOVER CORP | DOV | 13,270.30 | 0.09\% | 1.97\% | 7.00\% | 9.04\% | 0.0078\% |
| DOW CHEMICAL CO/THE | DOW | 58,880.91 | 0.38\% | 3.37\% | 14.50\% | 18.11\% | 0.0693\% |
| DR PEPPER SNAPPLE GROUP INC | DPS | 13,746.66 | 0.09\% | 2.32\% | 7.50\% | 9.91\% | 0.0089\% |
| DARDEN RESTAURANTS INC | DRI | 7,468.03 | 0.05\% | 3.90\% | 8.00\% | 12.06\% | 0.0059\% |
| DTE ENERGY COMPANY | DTE | 14,120.34 | 0.09\% | 3.41\% | 5.00\% | 8.50\% | 0.0078\% |
| DIRECTV | DTV | 43,945.74 | N/A | 0.00\% | NA | N/A | N/A |
| DUKE ENERGY CORP | DUK | 55,868.92 | 0.36\% | 3.98\% | 4.00\% | 8.06\% | 0.0293\% |
| DAVITA HEALTHCARE PARTNERS I | DVA | 16,555.90 | N/A | 0.00\% | NA | N/A | N/A |
| DEVON ENERGY CORP | DVN | 25,887.85 | 0.17\% | 1.50\% | 6.50\% | 8.05\% | 0.0135\% |
| ELECTRONIC ARTS INC | EA | 12,886.74 | N/A | 0.00\% | NA | N/A | N/A |
| EBAY INC | EBAY | 67,547.49 | N/A | 0.00\% | NA | N/A | N/A |
| ECOLAB INC | ECL | 33,898.10 | 0.22\% | 0.97\% | 11.50\% | 12.53\% | 0.0276\% |
| CONSOLIDATED EDISON INC | ED | 18,159.06 | 0.12\% | 4.05\% | 1.50\% | 5.58\% | 0.0066\% |
| EQUIFAX INC | EFX | 9,445.58 | 0.06\% | 1.27\% | 10.00\% | 11.33\% | 0.0070\% |
| EDISON INTERNATIONAL | EIX | 20,096.02 | 0.13\% | 2.28\% | 2.50\% | 4.80\% | 0.0063\% |
| ESTEE LAUDER COMPANIES-CL A | EL | 27,541.00 | 0.18\% | 1.32\% | 14.00\% | 15.41\% | 0.0276\% |
| EMC CORP/MA | EMC | 59,867.02 | 0.39\% | 1.56\% | 9.00\% | 10.63\% | 0.0414\% |
| EASTMAN CHEMICAL CO | EMN | 12,412.40 | 0.08\% | 1.67\% | 13.00\% | 14.77\% | 0.0119\% |
| EMERSON ELECTRIC CO | EMR | 44,331.56 | 0.29\% | 2.94\% | 7.00\% | 10.04\% | 0.0289\% |
| EOG RESOURCES INC | EOG | 52,526.66 | 0.34\% | 0.69\% | 21.50\% | 22.26\% | 0.0760\% |
| EQUITY RESIDENTIAL | EQR | 25,358.16 | N/A | 2.89\% | NA | N/A | N/A |
| EQT CORP | EQT | 13,874.92 | 0.09\% | 0.13\% | 15.50\% | 15.64\% | 0.0141\% |
| EXPRESS SCRIPTS HOLDING CO | ESRX | 57,171.59 | N/A | 0.00\% | NA | N/A | N/A |
| ESSEX PROPERTY TRUST INC | ESS | 12,821.65 | N/A | 2.59\% | NA | N/A | N/A |
| ENSCO PLC-CL A | ESV | 9,079.84 | 0.06\% | 7.64\% | 17.00\% | 25.29\% | 0.0149\% |
| E*TRADE FINANCIAL CORP | ETFC | 6,694.08 | N/A | 0.00\% | NA | N/A | N/A |
| EATON CORP PLC | ETN | 31,560.90 | 0.21\% | 2.90\% | 9.00\% | 12.03\% | 0.0247\% |
| ENTERGY CORP | ETR | 14,741.69 | 0.10\% | 4.07\% | -2.50\% | 1.52\% | 0.0015\% |
| EDWARDS LIFESCIENCES CORP | EW | 13,323.61 | N/A | 0.00\% | NA | N/A | N/A |
| EXELON CORP | EXC | 30,390.68 | 0.20\% | 3.45\% | -5.00\% | -1.64\% | -0.0032\% |
| EXPEDITORS INTL WASH INC | EXPD | 8,474.06 | 0.06\% | 1.46\% | 6.50\% | 8.01\% | 0.0044\% |
| EXPEDIA INC | EXPE | 10,945.14 | 0.07\% | 0.83\% | 7.50\% | 8.36\% | 0.0059\% |
| FORD MOTOR CO | F | 57,460.90 | 0.37\% | 3.43\% | 8.00\% | 11.57\% | 0.0432\% |
| FASTENAL CO | FAST | 13,141.23 | 0.09\% | 2.24\% | 12.00\% | 14.37\% | 0.0123\% |
| FACEBOOK INC-A | FB | 206,997.71 | N/A | 0.00\% | NA | N/A | N/A |
| FREEPORT-MCMORAN INC | FCX | 28,991.39 | 0.19\% | 4.38\% | 6.00\% | 10.51\% | 0.0198\% |
| FAMILY DOLLAR STORES | FDO | 8,942.93 | 0.06\% | 1.58\% | 4.50\% | 6.11\% | 0.0036\% |
| FEDEX CORP | FDX | 48,596.52 | 0.32\% | 0.47\% | 15.00\% | 15.50\% | 0.0490\% |
| FIRSTENERGY CORP | FE | 15,190.63 | 0.10\% | 3.96\% | 2.00\% | 6.00\% | 0.0059\% |
| F5 NETWORKS INC | FFIV | 9,345.70 | N/A | 0.00\% | NA | N/A | N/A |
| FIDELITY NATIONAL INFORMATIO | FIS | 16,826.43 | 0.11\% | 1.63\% | 10.00\% | 11.71\% | 0.0128\% |
| FISERV INC | FISV | 17,167.89 | N/A | 0.00\% | NA | N/A | N/A |
| FIFTH THIRD BANCORP | FITB | 16,735.58 | 0.11\% | 2.55\% | 10.00\% | 12.68\% | 0.0138\% |
| FLIR SYSTEMS INC | FLIR | 4,570.54 | 0.03\% | 1.21\% | 11.00\% | 12.28\% | 0.0036\% |
| FLUOR CORP | FLR | 10,168.42 | 0.07\% | 1.27\% | 7.00\% | 8.32\% | 0.0055\% |
| FLOWSERVE CORP | FLS | 8,963.61 | 0.06\% | 0.95\% | 12.00\% | 13.01\% | 0.0076\% |
| FMC CORP | FMC | 7,514.93 | 0.05\% | 1.06\% | 12.00\% | 13.12\% | 0.0064\% |
| FOSSIL GROUP INC | FOSL | 5,809.67 | N/A | 0.00\% | NA | N/A | N/A |
| TWENTY-FIRST CENTURY FOX-A | FOXA | 47,502.49 | 0.31\% | 0.72\% | 13.50\% | 14.27\% | 0.0441\% |
| FIRST SOLAR INC | FSLR | 4,766.04 | N/A | 0.00\% | NA | N/A | N/A |
| FMC TECHNOLOGIES INC | FTI | 12,623.01 | N/A | 0.00\% | NA | N/A | N/A |
| FRONTIER COMMUNICATIONS CORI | FTR | 6,744.01 | 0.04\% | 5.90\% | 13.50\% | 19.80\% | 0.0087\% |
| AGL RESOURCES INC | GAS | 6,175.95 | 0.04\% | 3.76\% | 9.00\% | 12.93\% | 0.0052\% |
| GANNETT CO | GCI | 6,973.66 | 0.05\% | 2.59\% | 6.50\% | 9.18\% | 0.0042\% |
| GENERAL DYNAMICS CORP | GD | 47,292.67 | 0.31\% | 1.76\% | 3.00\% | 4.78\% | 0.0147\% |
| GENERAL ELECTRIC CO | GE | 265,314.71 | 1.72\% | 3.32\% | 10.50\% | 13.99\% | 0.2413\% |
| GENERAL GROWTH PROPERTIES | GGP | 22,712.71 | N/A | 2.52\% | NA | 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 |
| GILEAD SCIENCES INC | GILD | 157,202.79 | N/A | 0.00\% | NA | N/A | N/A |
| GENERAL MILLS INC | GIS | 30,791.15 | 0.20\% | 3.22\% | 7.00\% | 10.33\% | 0.0207\% |
| CORNING INC | GLW | 26,085.61 | 0.17\% | 1.93\% | 6.50\% | 8.49\% | 0.0144\% |
| GENERAL MOTORS CO | GM | 50,851.93 | 0.33\% | 3.82\% | 9.50\% | 13.50\% | 0.0446\% |
| KEURIG GREEN MOUNTAIN INC | GMCR | 24,998.37 | 0.16\% | 0.66\% | 18.00\% | 18.71\% | 0.0304\% |
| GAMESTOP CORP-CLASS A | GME | 5,009.17 | 0.03\% | 3.04\% | 11.50\% | 14.72\% | 0.0048\% |
| GENWORTH FINANCIAL INC-CL A | GNW | 4,618.94 | N/A | 0.00\% | NA | N/A | N/A |
| GOOGLE INC-CL C | GOOG | 185,068.70 | N/A | 0.00\% | NA | N/A | N/A |
| GENUINE PARTS CO | GPC | 15,368.24 | 0.10\% | 2.29\% | 9.00\% | 11.39\% | 0.0114\% |
| GAP INC/THE | GPS | 17,064.14 | 0.11\% | 2.25\% | 13.50\% | 15.90\% | 0.0176\% |
| GARMIN LTD | GRMN | 10,695.33 | 0.07\% | 3.43\% | 1.50\% | 4.95\% | 0.0034\% |
| GOLDMAN SACHS GROUP INC | GS | 82,858.27 | 0.54\% | 1.26\% | 13.00\% | 14.34\% | 0.0772\% |
| GOODYEAR TIRE \& RUBBER CO | GT | 6,980.76 | 0.05\% | 0.96\% | 11.50\% | 12.51\% | 0.0057\% |
| WW GRAINGER INC | GWW | 16,661.88 | 0.11\% | 1.75\% | 12.50\% | 14.36\% | 0.0156\% |
| HALLIBURTON CO | HAL | 45,584.87 | 0.30\% | 1.35\% | 11.50\% | 12.93\% | 0.0383\% |
| HARMAN INTERNATIONAL | HAR | 7,301.75 | 0.05\% | 1.22\% | 25.00\% | 26.38\% | 0.0125\% |
| HASBRO INC | HAS | 6,910.00 | 0.04\% | 2.99\% | 7.00\% | 10.10\% | 0.0045\% |
| HUNTINGTON BANCSHARES INC | HBAN | 8,221.91 | 0.05\% | 2.36\% | 6.00\% | 8.43\% | 0.0045\% |
| HUDSON CITY BANCORP INC | HCBK | 5,218.91 | N/A | 1.62\% | NA | N/A | N/A |
| HEALTH CARE REIT INC | HCN | 23,346.77 | 0.15\% | 4.50\% | 94.50\% | 101.12\% | 0.1534\% |
| HCP INC | HCP | 20,170.83 | N/A | 5.04\% | NA | N/A | N/A |
| HOME DEPOT INC | HD | 133,246.28 | 0.87\% | 1.91\% | 14.50\% | 16.55\% | 0.1433\% |
| HESS CORP | HES | 24,246.39 | 0.16\% | 1.21\% | -1.00\% | 0.21\% | 0.0003\% |
| HARTFORD FINANCIAL SVCS GRP | HIG | 17,211.78 | 0.11\% | 1.80\% | 11.00\% | 12.90\% | 0.0144\% |
| HARLEY-DAVIDSON INC | HOG | 14,495.23 | 0.09\% | 1.64\% | 16.00\% | 17.77\% | 0.0167\% |
| HONEYWELL INTERNATIONAL INC | HON | 75,979.54 | 0.49\% | 2.13\% | 9.50\% | 11.74\% | 0.0580\% |
| STARWOOD HOTELS \& RESORTS | HOT | 14,046.71 | 0.09\% | 1.80\% | 14.00\% | 15.92\% | 0.0145\% |
| HELMERICH \& PAYNE | HP | 8,635.43 | 0.06\% | 3.21\% | 9.50\% | 12.87\% | 0.0072\% |
| HEWLETT-PACKARD CO | HPQ | 67,857.76 | N/A | 1.75\% | NA | N/A | N/A |
| H\&R BLOCK INC | HRB | 8,871.59 | 0.06\% | 2.43\% | 9.00\% | 11.54\% | 0.0067\% |
| HORMEL FOODS CORP | HRL | 14,534.92 | 0.09\% | 1.46\% | 11.50\% | 13.05\% | 0.0123\% |
| HARRIS CORP | HRS | 7,374.78 | 0.05\% | 2.65\% | 3.00\% | 5.69\% | 0.0027\% |
| HOSPIRA INC | HSP | 9,828.94 | N/A | 0.00\% | NA | N/A | N/A |
| HOST HOTELS \& RESORTS INC | HST | 17,213.86 | N/A | 3.53\% | NA | N/A | N/A |
| HERSHEY CO/THE | HSY | 15,486.56 | 0.10\% | 2.22\% | 12.00\% | 14.35\% | 0.0144\% |
| HUMANA INC | HUM | 21,223.10 | 0.14\% | 0.82\% | 7.50\% | 8.35\% | 0.0115\% |
| INTL BUSINESS MACHINES CORP | IBM | 161,106.75 | 1.05\% | 2.72\% | 7.50\% | 10.32\% | 0.1080\% |
| INTERCONTINENTAL EXCHANGE IN | ICE | 25,157.33 | 0.16\% | 1.18\% | 18.50\% | 19.78\% | 0.0323\% |
| INTL FLAVORS \& FRAGRANCES | IFF | 8,103.68 | 0.05\% | 1.88\% | 7.00\% | 8.94\% | 0.0047\% |
| INTEL CORP | INTC | 162,842.80 | 1.06\% | 2.70\% | 6.00\% | 8.78\% | 0.0929\% |
| INTUIT INC | INTU | 25,824.24 | 0.17\% | 1.12\% | 11.00\% | 12.18\% | 0.0204\% |
| INTERNATIONAL PAPER CO | IP | 23,180.16 | 0.15\% | 2.96\% | 12.00\% | 15.14\% | 0.0228\% |
| INTERPUBLIC GROUP OF COS INC | IPG | 8,117.82 | 0.05\% | 1.96\% | 13.50\% | 15.59\% | 0.0082\% |
| INGERSOLL-RAND PLC | IR | 16,599.96 | 0.11\% | 1.59\% | 12.50\% | 14.19\% | 0.0153\% |
| IRON MOUNTAIN INC | IRM | 7,432.42 | 0.05\% | 4.66\% | 5.50\% | 10.29\% | 0.0050\% |
| INTUITIVE SURGICAL INC | ISRG | 18,709.66 | N/A | 0.00\% | NA | N/A | N/A |
| ILLINOIS TOOL WORKS | ITW | 36,223.94 | 0.24\% | 2.08\% | 10.50\% | 12.69\% | 0.0299\% |
| INVESCO LTD | IVZ | 17,530.39 | 0.11\% | 2.45\% | 17.00\% | 19.65\% | 0.0224\% |
| JABIL CIRCUIT INC | JBL | 3,968.44 | 0.03\% | 1.50\% | 4.00\% | 5.53\% | 0.0014\% |
| JOHNSON CONTROLS INC | JCI | 32,910.77 | 0.21\% | 1.78\% | 12.00\% | 13.88\% | 0.0297\% |
| JACOBS ENGINEERING GROUP INC | JEC | 6,317.55 | N/A | 0.00\% | NA | N/A | N/A |
| JOHNSON \& JOHNSON | JNJ | 305,298.93 | 1.98\% | 2.58\% | 6.50\% | 9.16\% | 0.1817\% |
| JUNIPER NETWORKS INC | JNPR | 8,846.04 | 0.06\% | 1.92\% | 16.50\% | 18.58\% | 0.0107\% |
| JOY GLOBAL INC | JOY | 5,165.04 | 0.03\% | 1.49\% | 2.00\% | 3.50\% | 0.0012\% |
| JPMORGAN CHASE \& CO | JPM | 225,151.12 | 1.46\% | 2.64\% | 8.00\% | 10.75\% | 0.1573\% |
| NORDSTROM INC | JWN | 14,108.76 | 0.09\% | 1.81\% | 10.00\% | 11.90\% | 0.0109\% |
| KELLOGG CO | K | 22,651.17 | 0.15\% | 3.08\% | 7.50\% | 10.69\% | 0.0157\% |
| KEYCORP | KEY | 11,652.07 | 0.08\% | 1.93\% | 8.50\% | 10.51\% | 0.0080\% |
| KIMCO REALTY CORP | KIM | 10,178.65 | N/A | 3.90\% | NA | N/A | N/A |
| KLA-TENCOR CORP | KLAC | 13,066.05 | 0.08\% | 2.51\% | 6.00\% | 8.58\% | 0.0073\% |
| KIMBERLY-CLARK CORP | KMB | 42,485.94 | 0.28\% | 2.96\% | 8.50\% | 11.59\% | 0.0320\% |
| KINDER MORGAN INC | KMI | 39,463.47 | 0.26\% | 4.57\% | 15.00\% | 19.91\% | 0.0511\% |
| CARMAX INC | KMX | 12,029.81 | N/A | 0.00\% | NA | N/A | N/A |
| COCA-COLA CO/THE | KO | 187,425.04 | 1.22\% | 2.86\% | 8.00\% | 10.97\% | 0.1336\% |
| MICHAEL KORS HOLDINGS LTD | KORS | N/A | N/A | 0.00\% | NA | N/A | N/A |
| KROGER CO | KR | 28,674.80 | 0.19\% | 1.27\% | 10.50\% | 11.83\% | 0.0221\% |
| KRAFT FOODS GROUP INC | KRFT | 33,933.93 | N/A | 3.83\% | NA | N/A | N/A |
| KOHLS CORP | KSS | 11,475.73 | 0.07\% | 2.69\% | 7.00\% | 9.79\% | 0.0073\% |
| KANSAS CITY SOUTHERN | KSU | 13,753.06 | 0.09\% | 0.91\% | 14.00\% | 14.97\% | 0.0134\% |


|  |  | [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 |
| LOEWS CORP | L | 16,073.23 | 0.10\% | 0.58\% | 13.00\% | 13.62\% | 0.0142\% |
| L BRANDS INC | LB | 22,525.64 | 0.15\% | 1.75\% | 9.50\% | 11.33\% | 0.0166\% |
| LEGGETT \& PLATT INC | LEG | 5,621.98 | 0.04\% | 2.99\% | 12.50\% | 15.68\% | 0.0057\% |
| LENNAR CORP-A | LEN | 7,942.19 | 0.05\% | 0.35\% | 27.00\% | 27.40\% | 0.0141\% |
| LABORATORY CRP OF AMER HLDG | LH | 8,412.82 | N/A | 0.00\% | NA | N/A | N/A |
| L-3 COMMUNICATIONS HOLDINGS | LLL | 10,192.97 | 0.07\% | 2.05\% | 4.00\% | 6.09\% | 0.0040\% |
| LINEAR TECHNOLOGY CORP | LLTC | 10,266.42 | 0.07\% | 2.51\% | 10.50\% | 13.14\% | 0.0088\% |
| ELI LILLY \& CO | LLY | 75,356.94 | 0.49\% | 2.91\% | -2.50\% | 0.37\% | 0.0018\% |
| LEGG MASON INC | LM | 6,287.46 | 0.04\% | 1.19\% | 14.50\% | 15.77\% | 0.0064\% |
| LOCKHEED MARTIN CORP | LMT | 59,384.42 | 0.39\% | 3.21\% | 7.50\% | 10.83\% | 0.0418\% |
| LINCOLN NATIONAL CORP | LNC | 14,639.17 | 0.10\% | 1.43\% | 8.00\% | 9.48\% | 0.0090\% |
| LORILLARD INC | LO | 22,357.24 | 0.15\% | 3.96\% | 12.00\% | 16.20\% | 0.0235\% |
| LOWE'S COS INC | LOW | 57,854.52 | 0.38\% | 1.58\% | 15.00\% | 16.70\% | 0.0628\% |
| LAM RESEARCH CORP | LRCX | 12,534.00 | 0.08\% | 0.91\% | 24.00\% | 25.02\% | 0.0204\% |
| LEUCADIA NATIONAL CORP | LUK | 8,974.93 | 0.06\% | 1.02\% | 4.50\% | 5.54\% | 0.0032\% |
| SOUTHWEST AIRLINES CO | LUV | 26,783.24 | 0.17\% | 0.61\% | 17.00\% | 17.66\% | 0.0307\% |
| LYONDELLBASELL INDU-CL A | LYB | N/A | N/A | 0.00\% | NA | N/A | N/A |
| MACY'S INC | M | 21,742.03 | 0.14\% | 2.03\% | 13.50\% | 15.67\% | 0.0221\% |
| MASTERCARD INC-CLASS A | MA | 97,070.39 | 0.63\% | 0.52\% | 15.00\% | 15.56\% | 0.0982\% |
| MACERICH CO/THE | MAC | 9,617.94 | N/A | 3.79\% | NA | N/A | N/A |
| MARRIOTT INTERNATIONAL -CL A | MAR | 22,127.66 | 0.14\% | 1.04\% | 14.00\% | 15.11\% | 0.0217\% |
| MASCO CORP | MAS | 8,258.11 | 0.05\% | 1.55\% | 33.50\% | 35.31\% | 0.0190\% |
| MATTEL INC | MAT | 10,559.54 | 0.07\% | 4.86\% | 9.50\% | 14.59\% | 0.0100\% |
| MCDONALD'S CORP | MCD | 92,921.52 | 0.60\% | 3.57\% | 7.00\% | 10.69\% | 0.0646\% |
| MICROCHIP TECHNOLOGY INC | MCHP | 8,619.43 | 0.06\% | 3.29\% | 9.00\% | 12.43\% | 0.0070\% |
| MCKESSON CORP | MCK | 47,494.07 | 0.31\% | 0.47\% | 14.00\% | 14.51\% | 0.0448\% |
| MOODY'S CORP | MCO | 21,047.74 | 0.14\% | 1.12\% | 12.50\% | 13.69\% | 0.0187\% |
| MONDELEZ INTERNATIONAL INC-A | MDLZ | 64,223.46 | 0.42\% | 1.58\% | 4.50\% | 6.12\% | 0.0255\% |
| MEDTRONIC INC | MDT | 68,195.41 | 0.44\% | 1.78\% | 6.50\% | 8.34\% | 0.0370\% |
| METLIFE INC | MET | 61,971.09 | 0.40\% | 2.54\% | 7.50\% | 10.14\% | 0.0408\% |
| MCGRAW HILL FINANCIAL INC | MHFI | 24,625.05 | N/A | 1.33\% | NA | N/A | N/A |
| MOHAWK INDUSTRIES INC | MHK | 10,390.01 | N/A | 0.00\% | NA | N/A | N/A |
| MEAD JOHNSON NUTRITION CO | MJN | 20,132.29 | 0.13\% | 1.51\% | 12.00\% | 13.60\% | 0.0178\% |
| MCCORMICK \& CO-NON VTG SHRS | MKC | 8,579.48 | 0.06\% | 2.02\% | 8.50\% | 10.61\% | 0.0059\% |
| MARTIN MARIETTA MATERIALS | MLM | 8,383.86 | 0.05\% | 1.27\% | 20.50\% | 21.90\% | 0.0119\% |
| MARSH \& MCLENNAN COS | MMC | 30,268.71 | 0.20\% | 2.00\% | 13.00\% | 15.13\% | 0.0298\% |
| 3M CO | MMM | 101,473.69 | 0.66\% | 2.17\% | 7.50\% | 9.75\% | 0.0643\% |
| MALLINCKRODT PLC | MNK | 9,886.83 | N/A | 0.00\% | NA | N/A | N/A |
| MONSTER BEVERAGE CORP | MNST | 18,131.73 | N/A | 0.00\% | NA | N/A | N/A |
| ALTRIA GROUP INC | MO | 97,736.44 | 0.64\% | 4.22\% | 11.00\% | 15.45\% | 0.0981\% |
| MONSANTO CO | MON | 57,832.20 | 0.38\% | 1.65\% | 12.50\% | 14.25\% | 0.0536\% |
| MOSAIC CO/THE | MOS | 16,857.79 | 0.11\% | 2.21\% | 6.00\% | 8.28\% | 0.0091\% |
| MARATHON PETROLEUM CORP | MPC | 26,212.06 | 0.17\% | 2.11\% | 10.00\% | 12.21\% | 0.0208\% |
| MERCK \& CO. INC. | MRK | 169,740.98 | 1.10\% | 2.97\% | 2.00\% | 5.00\% | 0.0551\% |
| MARATHON OIL CORP | MRO | 21,562.96 | 0.14\% | 2.57\% | 4.00\% | 6.62\% | 0.0093\% |
| MORGAN STANLEY | MS | 70,153.32 | 0.46\% | 1.11\% | 30.00\% | 31.28\% | 0.1426\% |
| MICROSOFT CORP | MSFT | 408,927.94 | 2.66\% | 2.54\% | 8.50\% | 11.15\% | 0.2963\% |
| MOTOROLA SOLUTIONS INC | MSI | 15,509.72 | 0.10\% | 2.14\% | 8.00\% | 10.22\% | 0.0103\% |
| M \& T BANK CORP | MTB | 16,561.56 | 0.11\% | 2.23\% | 7.00\% | 9.31\% | 0.0100\% |
| MICRON TECHNOLOGY INC | MU | 35,359.61 | N/A | 0.00\% | NA | N/A | N/A |
| MURPHY OIL CORP | MUR | 9,110.82 | 0.06\% | 2.67\% | 9.00\% | 11.79\% | 0.0070\% |
| MEADWESTVACO CORP | MWV | 7,425.58 | 0.05\% | 2.25\% | 11.00\% | 13.37\% | 0.0065\% |
| MYLAN INC | MYL | 20,484.02 | N/A | 0.00\% | NA | N/A | N/A |
| NAVIENT CORP | NAVI | 8,524.35 | N/A | 2.98\% | NA | N/A | N/A |
| NOBLE ENERGY INC | NBL | 19,536.66 | 0.13\% | 1.30\% | 17.00\% | 18.41\% | 0.0234\% |
| NABORS INDUSTRIES LTD | NBR | N/A | N/A | 0.00\% | NA | N/A | N/A |
| NASDAQ OMX GROUP/THE | NDAQ | 7,342.05 | 0.05\% | 1.36\% | 8.50\% | 9.92\% | 0.0047\% |
| NOBLE CORP PLC | NE | 5,321.63 | 0.03\% | 6.96\% | 19.50\% | 27.14\% | 0.0094\% |
| NEXTERA ENERGY INC | NEE | 44,639.01 | 0.29\% | 2.81\% | 4.50\% | 7.38\% | 0.0214\% |
| NEWMONT MINING CORP | NEM | 9,098.04 | 0.06\% | 0.54\% | -17.50\% | -17.01\% | -0.0101\% |
| NETFLIX INC | NFLX | 22,857.93 | N/A | 0.00\% | NA | N/A | N/A |
| NEWFIELD EXPLORATION CO | NFX | 4,514.83 | N/A | 0.00\% | NA | N/A | N/A |
| NISOURCE INC | NI | 13,019.47 | 0.08\% | 2.50\% | 10.50\% | 13.13\% | 0.0111\% |
| NIKE INC -CL B | NKE | 82,808.15 | 0.54\% | 1.00\% | 19.00\% | 20.10\% | 0.1082\% |
| NIELSEN NV | NLSN | 16,157.54 | 0.11\% | 2.32\% | 13.00\% | 15.47\% | 0.0162\% |
| NORTHROP GRUMMAN CORP | NOC | 27,714.26 | 0.18\% | 2.06\% | 5.00\% | 7.11\% | 0.0128\% |
| NATIONAL OILWELL VARCO INC | NOV | 30,794.65 | 0.20\% | 2.52\% | 11.50\% | 14.17\% | 0.0284\% |
| NRG ENERGY INC | NRG | 10,667.34 | 0.07\% | 1.73\% | 7.00\% | 8.79\% | 0.0061\% |
| NORFOLK SOUTHERN CORP | NSC | 35,725.08 | 0.23\% | 1.95\% | 8.50\% | 10.54\% | 0.0245\% |


|  |  | [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 |
| NETAPP INC | NTAP | 13,116.63 | 0.09\% | 1.56\% | 9.50\% | 11.13\% | 0.0095\% |
| NORTHERN TRUST CORP | NTRS | 15,901.30 | 0.10\% | 1.95\% | 9.50\% | 11.54\% | 0.0119\% |
| NORTHEAST UTILITIES | NU | 15,608.69 | 0.10\% | 3.17\% | 8.00\% | 11.30\% | 0.0115\% |
| NUCOR CORP | NUE | 17,021.84 | 0.11\% | 2.78\% | 22.00\% | 25.08\% | 0.0278\% |
| NVIDIA CORP | NVDA | 10,594.44 | 0.07\% | 1.73\% | 6.50\% | 8.29\% | 0.0057\% |
| NEWELL RUBBERMAID INC | NWL | 9,455.97 | 0.06\% | 1.97\% | 12.50\% | 14.59\% | 0.0090\% |
| NEWS CORP - CLASS A | NWSA | 5,702.89 | N/A | 0.00\% | NA | N/A | N/A |
| OWENS-ILLINOIS INC | Ol | 4,213.45 | N/A | 0.00\% | NA | N/A | N/A |
| ONEOK INC | OKE | 11,586.22 | 0.08\% | 4.18\% | 10.00\% | 14.39\% | 0.0108\% |
| OMNICOM GROUP | OMC | 18,275.98 | 0.12\% | 2.73\% | 11.50\% | 14.38\% | 0.0171\% |
| ORACLE CORP | ORCL | 180,442.70 | 1.17\% | 1.20\% | 9.50\% | 10.75\% | 0.1261\% |
| O'REILLY AUTOMOTIVE INC | ORLY | 18,425.46 | N/A | 0.00\% | NA | N/A | N/A |
| OCCIDENTAL PETROLEUM CORP | OXY | 66,911.68 | 0.43\% | 3.25\% | 3.50\% | 6.81\% | 0.0296\% |
| PAYCHEX INC | PAYX | 17,208.93 | 0.11\% | 3.20\% | 9.00\% | 12.35\% | 0.0138\% |
| PEOPLE'S UNITED FINANCIAL | PBCT | 4,556.42 | 0.03\% | 4.44\% | 14.00\% | 18.75\% | 0.0056\% |
| PITNEY BOWES INC | PBI | 4,990.58 | 0.03\% | 3.04\% | 2.00\% | 5.07\% | 0.0016\% |
| PACCAR INC | PCAR | 23,530.21 | 0.15\% | 1.32\% | 12.50\% | 13.90\% | 0.0213\% |
| P G \& E CORP | PCG | 23,645.13 | 0.15\% | 3.63\% | 2.50\% | 6.18\% | 0.0095\% |
| PLUM CREEK TIMBER CO | PCL | 7,172.88 | 0.05\% | 4.31\% | 12.50\% | 17.08\% | 0.0080\% |
| PRICELINE GROUP INC/THE | PCLN | 61,152.33 | N/A | 0.00\% | NA | N/A | N/A |
| PRECISION CASTPARTS CORP | PCP | 32,319.36 | 0.21\% | 0.05\% | 13.00\% | 13.06\% | 0.0274\% |
| PATTERSON COS INC | PDCO | 4,764.68 | 0.03\% | 1.77\% | 11.50\% | 13.37\% | 0.0041\% |
| PUBLIC SERVICE ENTERPRISE GP | PEG | 19,874.11 | 0.13\% | 3.73\% | -0.50\% | 3.22\% | 0.0042\% |
| PEPSICO INC | PEP | 147,475.56 | 0.96\% | 2.70\% | 8.50\% | 11.31\% | 0.1084\% |
| PETSMART INC | PETM | 7,236.34 | 0.05\% | 1.07\% | 14.00\% | 15.15\% | 0.0071\% |
| PFIZER INC | PFE | 191,665.99 | 1.25\% | 3.42\% | 10.50\% | 14.10\% | 0.1756\% |
| PRINCIPAL FINANCIAL GROUP | PFG | 15,637.77 | 0.10\% | 2.55\% | 9.50\% | 12.17\% | 0.0124\% |
| PROCTER \& GAMBLE CO/THE | PG | 239,407.74 | 1.56\% | 2.88\% | 9.00\% | 12.01\% | 0.1868\% |
| PROGRESSIVE CORP | PGR | 16,014.65 | 0.10\% | 1.83\% | 14.00\% | 15.95\% | 0.0166\% |
| PARKER HANNIFIN CORP | PH | 18,873.46 | 0.12\% | 1.96\% | 8.00\% | 10.04\% | 0.0123\% |
| PULTEGROUP INC | PHM | 7,715.68 | 0.05\% | 1.55\% | 31.50\% | 33.29\% | 0.0167\% |
| PERKINELMER INC | PKI | 4,918.41 | 0.03\% | 0.64\% | 8.50\% | 9.17\% | 0.0029\% |
| PROLOGIS INC | PLD | 20,549.55 | N/A | 3.22\% | NA | N/A | N/A |
| PALL CORP | PLL | 10,020.86 | 0.07\% | 1.31\% | 11.00\% | 12.38\% | 0.0081\% |
| PHILIP MORRIS INTERNATIONAL | PM | 136,509.40 | 0.89\% | 4.55\% | 9.00\% | 13.76\% | 0.1220\% |
| PNC FINANCIAL SERVICES GROUP | PNC | 46,217.02 | 0.30\% | 2.18\% | 7.00\% | 9.26\% | 0.0278\% |
| PENTAIR PLC | PNR | 12,789.79 | 0.08\% | 1.75\% | 16.50\% | 18.40\% | 0.0153\% |
| PINNACLE WEST CAPITAL | PNW | 6,762.85 | 0.04\% | 3.85\% | 4.00\% | 7.93\% | 0.0035\% |
| PEPCO HOLDINGS INC | POM | 6,877.06 | 0.04\% | 3.92\% | 5.50\% | 9.53\% | 0.0043\% |
| PPG INDUSTRIES INC | PPG | 28,164.74 | 0.18\% | 1.31\% | 13.00\% | 14.40\% | 0.0264\% |
| PPL CORP | PPL | 23,749.72 | 0.15\% | 4.16\% | 0.00\% | 4.16\% | 0.0064\% |
| PERRIGO CO PLC | PRGO | 20,834.18 | 0.14\% | 0.27\% | 12.00\% | 12.29\% | 0.0166\% |
| PRUDENTIAL FINANCIAL INC | PRU | 38,714.74 | 0.25\% | 2.72\% | 10.00\% | 12.86\% | 0.0324\% |
| PUBLIC STORAGE | PSA | 32,306.67 | N/A | 3.01\% | NA | N/A | N/A |
| PHILLIPS 66 | PSX | 39,205.33 | N/A | 2.74\% | NA | N/A | N/A |
| PVH CORP | PVH | 9,788.29 | 0.06\% | 0.13\% | 13.50\% | 13.63\% | 0.0087\% |
| QUANTA SERVICES INC | PWR | 7,267.19 | N/A | 0.00\% | NA | N/A | N/A |
| PRAXAIR INC | PX | 36,925.70 | 0.24\% | 2.06\% | 10.50\% | 12.67\% | 0.0304\% |
| PIONEER NATURAL RESOURCES CC | PXD | 24,593.48 | 0.16\% | 0.05\% | 23.00\% | 23.05\% | 0.0368\% |
| QUALCOMM INC | QCOM | 117,462.76 | 0.76\% | 2.39\% | 9.50\% | 12.00\% | 0.0916\% |
| QEP RESOURCES INC | QEP | 4,292.95 | 0.03\% | 0.33\% | 11.50\% | 11.85\% | 0.0033\% |
| RYDER SYSTEM INC | R | 4,843.61 | 0.03\% | 1.60\% | 14.50\% | 16.22\% | 0.0051\% |
| REYNOLDS AMERICAN INC | RAI | 34,597.21 | 0.22\% | 4.12\% | 9.50\% | 13.81\% | 0.0311\% |
| REGENERON PHARMACEUTICALS | REGN | 40,933.38 | N/A | 0.00\% | NA | N/A | N/A |
| REGIONS FINANCIAL CORP | RF | 13,998.75 | 0.09\% | 1.96\% | 72.50\% | 75.17\% | 0.0684\% |
| ROBERT HALF INTL INC | RHI | 7,814.87 | 0.05\% | 1.25\% | 12.00\% | 13.32\% | 0.0068\% |
| RED HAT INC | RHT | 11,481.56 | N/A | 0.00\% | NA | N/A | N/A |
| TRANSOCEAN LTD | RIG | 9,523.34 | 0.06\% | 11.08\% | 13.50\% | 25.33\% | 0.0157\% |
| RALPH LAUREN CORP | RL | 15,187.87 | 0.10\% | 1.04\% | 9.50\% | 10.59\% | 0.0105\% |
| ROCKWELL AUTOMATION INC | ROK | 14,912.24 | 0.10\% | 2.31\% | 8.50\% | 10.91\% | 0.0106\% |
| ROPER INDUSTRIES INC | ROP | 16,004.09 | 0.10\% | 0.51\% | 11.00\% | 11.54\% | 0.0120\% |
| ROSS STORES INC | ROST | 17,323.73 | 0.11\% | 0.97\% | 12.00\% | 13.02\% | 0.0147\% |
| RANGE RESOURCES CORP | RRC | 11,928.85 | 0.08\% | 0.22\% | 38.00\% | 38.26\% | 0.0297\% |
| REPUBLIC SERVICES INC | RSG | 14,090.01 | 0.09\% | 2.83\% | 8.50\% | 11.45\% | 0.0105\% |
| RAYTHEON COMPANY | RTN | 31,798.91 | 0.21\% | 2.34\% | 9.50\% | 11.95\% | 0.0247\% |
| STARBUCKS CORP | SBUX | 58,510.97 | 0.38\% | 1.64\% | 18.50\% | 20.30\% | 0.0772\% |
| SCANA CORP | SCG | 7,981.37 | 0.05\% | 3.73\% | 5.00\% | 8.82\% | 0.0046\% |
| SCHWAB (CHARLES) CORP | SCHW | 37,593.09 | 0.24\% | 0.83\% | 10.50\% | 11.38\% | 0.0278\% |
| SPECTRA ENERGY CORP | SE | 25,404.06 | 0.17\% | 3.80\% | 3.00\% | 6.86\% | 0.0113\% |


|  |  | [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 |
| SEALED AIR CORP | SEE | 8,104.24 | 0.05\% | 1.35\% | 19.50\% | 20.98\% | 0.0111\% |
| SHERWIN-WILLIAMS CO/THE | SHW | 23,004.00 | 0.15\% | 0.92\% | 15.50\% | 16.50\% | 0.0247\% |
| SIGMA-ALDRICH | SIAL | 16,139.59 | 0.10\% | 0.68\% | 7.50\% | 8.20\% | 0.0086\% |
| JM SMUCKER CO/THE | SJM | 10,168.46 | 0.07\% | 2.55\% | 8.50\% | 11.16\% | 0.0074\% |
| SCHLUMBERGER LTD | SLB | 122,052.41 | 0.79\% | 1.64\% | 15.00\% | 16.77\% | 0.1330\% |
| SNAP-ON INC | SNA | 7,878.28 | 0.05\% | 1.56\% | 9.00\% | 10.63\% | 0.0054\% |
| SANDISK CORP | SNDK | 20,957.24 | 0.14\% | 1.29\% | 11.50\% | 12.87\% | 0.0175\% |
| SCRIPPS NETWORKS INTER-CL A | SNI | 10,077.73 | 0.07\% | 1.09\% | 9.00\% | 10.14\% | 0.0066\% |
| SOUTHERN CO/THE | SO | 42,237.22 | 0.27\% | 4.46\% | 3.50\% | 8.04\% | 0.0221\% |
| SIMON PROPERTY GROUP INC | SPG | 56,439.84 | N/A | 2.92\% | NA | N/A | N/A |
| STAPLES INC | SPLS | 8,629.07 | 0.06\% | 3.59\% | -1.50\% | 2.06\% | 0.0012\% |
| STERICYCLE INC | SRCL | 10,865.18 | N/A | 0.00\% | NA | N/A | N/A |
| SEMPRA ENERGY | SRE | 26,963.33 | 0.18\% | 2.39\% | 4.50\% | 6.94\% | 0.0122\% |
| SUNTRUST BANKS INC | STI | 20,743.52 | 0.13\% | 2.01\% | 26.00\% | 28.27\% | 0.0381\% |
| ST JUDE MEDICAL INC | STJ | 18,787.34 | 0.12\% | 1.64\% | 8.50\% | 10.21\% | 0.0125\% |
| STATE STREET CORP | STT | 31,930.02 | 0.21\% | 1.55\% | 10.00\% | 11.63\% | 0.0241\% |
| SEAGATE TECHNOLOGY | STX | N/A | N/A | 0.00\% | NA | N/A | N/A |
| CONSTELLATION BRANDS INC-A | STZ | 15,824.81 | N/A | 0.00\% | NA | N/A | N/A |
| STANLEY BLACK \& DECKER INC | SWK | 15,016.66 | 0.10\% | 2.16\% | 10.00\% | 12.27\% | 0.0120\% |
| SOUTHWESTERN ENERGY CO | SWN | 11,850.54 | N/A | 0.00\% | NA | N/A | N/A |
| SAFEWAY INC | SWY | 8,035.23 | 0.05\% | 2.64\% | 6.50\% | 9.22\% | 0.0048\% |
| STRYKER CORP | SYK | 33,610.04 | 0.22\% | 1.38\% | 7.50\% | 8.93\% | 0.0195\% |
| SYMANTEC CORP | SYMC | 17,633.26 | 0.11\% | 2.39\% | 15.00\% | 17.57\% | 0.0201\% |
| SYSCO CORP | SYY | 22,774.63 | 0.15\% | 2.98\% | 12.00\% | 15.16\% | 0.0224\% |
| AT\&T INC | T | 184,709.07 | 1.20\% | 5.20\% | 7.00\% | 12.38\% | 0.1486\% |
| MOLSON COORS BREWING CO -B | TAP | N/A | N/A | 0.00\% | NA | N/A | N/A |
| TERADATA CORP | TDC | 6,823.80 | N/A | 0.00\% | NA | N/A | N/A |
| TECO ENERGY INC | TE | 4,531.90 | 0.03\% | 4.55\% | 2.00\% | 6.60\% | 0.0019\% |
| INTEGRYS ENERGY GROUP INC | TEG | 5,701.36 | 0.04\% | 3.79\% | 3.50\% | 7.35\% | 0.0027\% |
| TE CONNECTIVITY LTD | TEL | N/A | N/A | 0.00\% | NA | N/A | N/A |
| TARGET CORP | TGT | 42,775.83 | 0.28\% | 3.12\% | 6.00\% | 9.21\% | 0.0256\% |
| TENET HEALTHCARE CORP | THC | 4,711.54 | N/A | 0.00\% | NA | N/A | N/A |
| TIFFANY \& CO | TIF | 13,357.47 | 0.09\% | 1.48\% | 11.50\% | 13.06\% | 0.0113\% |
| TJX COMPANIES INC | TJX | 44,001.82 | 0.29\% | 1.10\% | 12.50\% | 13.67\% | 0.0391\% |
| TORCHMARK CORP | TMK | 6,854.10 | 0.04\% | 0.95\% | 5.50\% | 6.48\% | 0.0029\% |
| THERMO FISHER SCIENTIFIC INC | TMO | 47,298.96 | 0.31\% | 0.51\% | 11.00\% | 11.53\% | 0.0355\% |
| TRIPADVISOR INC | TRIP | 9,864.61 | N/A | 0.00\% | NA | N/A | N/A |
| T ROWE PRICE GROUP INC | TROW | 21,443.61 | 0.14\% | 2.13\% | 12.50\% | 14.76\% | 0.0206\% |
| TRAVELERS COS INC/THE | TRV | 34,210.01 | 0.22\% | 2.14\% | 9.50\% | 11.74\% | 0.0261\% |
| TRACTOR SUPPLY COMPANY | TSCO | 10,052.69 | 0.07\% | 0.87\% | 16.00\% | 16.94\% | 0.0111\% |
| TYSON FOODS INC-CL A | TSN | 15,465.68 | 0.10\% | 0.75\% | 13.50\% | 14.30\% | 0.0144\% |
| TESORO CORP | TSO | 8,962.13 | 0.06\% | 1.65\% | 15.50\% | 17.27\% | 0.0101\% |
| TOTAL SYSTEM SERVICES INC | TSS | 6,188.54 | 0.04\% | 1.19\% | 9.50\% | 10.74\% | 0.0043\% |
| TIME WARNER CABLE | TWC | 39,563.68 | 0.26\% | 2.20\% | 10.00\% | 12.31\% | 0.0316\% |
| TIME WARNER INC | TWX | 66,223.62 | 0.43\% | 1.64\% | 12.50\% | 14.24\% | 0.0613\% |
| TEXAS INSTRUMENTS INC | TXN | 54,061.43 | 0.35\% | 2.65\% | 8.00\% | 10.76\% | 0.0378\% |
| TEXTRON INC | TXT | 11,635.47 | 0.08\% | 0.19\% | 17.00\% | 17.21\% | 0.0130\% |
| TYCO INTERNATIONAL LTD | TYC | N/A | N/A | 0.00\% | NA | N/A | N/A |
| UNDER ARMOUR INC-CLASS A | UA | 14,755.78 | N/A | 0.00\% | NA | N/A | N/A |
| UNIVERSAL HEALTH SERVICES-B | UHS | 9,779.23 | 0.06\% | 0.40\% | 9.00\% | 9.42\% | 0.0060\% |
| UNITEDHEALTH GROUP INC | UNH | 92,043.96 | 0.60\% | 1.57\% | 10.00\% | 11.65\% | 0.0697\% |
| UNUM GROUP | UNM | 8,802.08 | 0.06\% | 1.91\% | 7.50\% | 9.48\% | 0.0054\% |
| UNION PACIFIC CORP | UNP | 106,914.15 | 0.69\% | 1.66\% | 11.00\% | 12.75\% | 0.0886\% |
| UNITED PARCEL SERVICE-CL B | UPS | 97,574.31 | 0.63\% | 2.47\% | 7.50\% | 10.06\% | 0.0638\% |
| URBAN OUTFITTERS INC | URBN | 4,251.06 | N/A | 0.00\% | NA | N/A | N/A |
| UNITED RENTALS INC | URI | 11,333.20 | N/A | 0.00\% | NA | N/A | N/A |
| US BANCORP | USB | 78,607.73 | 0.51\% | 2.23\% | 5.50\% | 7.79\% | 0.0398\% |
| UNITED TECHNOLOGIES CORP | UTX | 98,586.70 | 0.64\% | 2.18\% | 9.50\% | 11.79\% | 0.0755\% |
| VISA INC-CLASS A SHARES | V | 156,358.29 | 1.02\% | 0.76\% | 15.00\% | 15.82\% | 0.1608\% |
| VARIAN MEDICAL SYSTEMS INC | VAR | 9,151.86 | N/A | 0.00\% | NA | N/A | N/A |
| VF CORP | VFC | 30,809.75 | 0.20\% | 1.79\% | 13.50\% | 15.41\% | 0.0309\% |
| VIACOM INC-CLASS B | VIAB | 26,491.46 | 0.17\% | 1.91\% | 13.50\% | 15.53\% | 0.0267\% |
| VALERO ENERGY CORP | VLO | 25,895.45 | 0.17\% | 2.14\% | 15.00\% | 17.30\% | 0.0291\% |
| VULCAN MATERIALS CO | VMC | 8,637.08 | N/A | 0.37\% | NA | N/A | N/A |
| VORNADO REALTY TRUST | VNO | 20,303.54 | 0.13\% | 2.72\% | 6.50\% | 9.30\% | 0.0123\% |
| VERISIGN INC | VRSN | 7,288.41 | N/A | 0.00\% | NA | N/A | N/A |
| VERTEX PHARMACEUTICALS INC | VRTX | 27,111.64 | N/A | 0.00\% | NA | N/A | N/A |
| VENTAS INC | VTR | 20,458.04 | N/A | 4.24\% | NA | N/A | N/A |
| VERIZON COMMUNICATIONS INC | VZ | 212,465.87 | 1.38\% | 4.33\% | 10.50\% | 15.06\% | 0.2079\% |


|  |  | [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 |
| WALGREEN CO | WAG | 63,637.91 | 0.41\% | 2.00\% | 11.00\% | 13.11\% | 0.0542\% |
| WATERS CORP | WAT | 9,470.15 | N/A | 0.00\% | NA | N/A | N/A |
| WESTERN DIGITAL CORP | WDC | 22,716.22 | 0.15\% | 1.64\% | 6.00\% | 7.69\% | 0.0114\% |
| WISCONSIN ENERGY CORP | WEC | 10,734.61 | 0.07\% | 3.23\% | 6.00\% | 9.33\% | 0.0065\% |
| WELLS FARGO \& CO | WFC | 276,967.25 | 1.80\% | 2.62\% | 8.00\% | 10.72\% | 0.1930\% |
| WHOLE FOODS MARKET INC | WFM | 16,879.17 | 0.11\% | 1.10\% | 13.50\% | 14.67\% | 0.0161\% |
| WHIRLPOOL CORP | WHR | 13,643.78 | 0.09\% | 1.71\% | 7.50\% | 9.28\% | 0.0082\% |
| WINDSTREAM HOLDINGS INC | WIN | 5,870.91 | 0.04\% | 10.32\% | 4.00\% | 14.53\% | 0.0055\% |
| WELLPOINT INC | WLP | 34,182.63 | 0.22\% | 1.38\% | 6.50\% | 7.93\% | 0.0176\% |
| WASTE MANAGEMENT INC | WM | 22,607.56 | 0.15\% | 3.04\% | 6.50\% | 9.64\% | 0.0142\% |
| WILLIAMS COS INC | WMB | 40,273.31 | 0.26\% | 4.10\% | 8.00\% | 12.26\% | 0.0321\% |
| WAL-MART STORES INC | WMT | 267,275.23 | 1.74\% | 2.42\% | 7.50\% | 10.01\% | 0.1740\% |
| WESTERN UNION CO | WU | 9,475.23 | 0.06\% | 2.72\% | 5.00\% | 7.79\% | 0.0048\% |
| WEYERHAEUSER CO | WY | 17,802.16 | 0.12\% | 3.41\% | 17.00\% | 20.70\% | 0.0239\% |
| WYNDHAM WORLDWIDE CORP | WYN | 9,873.37 | 0.06\% | 1.75\% | 13.50\% | 15.37\% | 0.0099\% |
| WYNN RESORTS LTD | WYNN | 18,509.55 | 0.12\% | 3.33\% | 14.00\% | 17.56\% | 0.0211\% |
| CIMAREX ENERGY CO | XEC | 9,942.02 | 0.06\% | 0.56\% | 7.00\% | 7.58\% | 0.0049\% |
| XCEL ENERGY INC | XEL | 16,798.89 | 0.11\% | 3.59\% | 4.50\% | 8.17\% | 0.0089\% |
| XL GROUP PLC | XL | N/A | N/A | 0.00\% | NA | N/A | N/A |
| XILINX INC | XLNX | 11,326.61 | 0.07\% | 2.68\% | 8.50\% | 11.29\% | 0.0083\% |
| EXXON MOBIL CORP | XOM | 400,840.52 | 2.61\% | 2.89\% | 6.00\% | 8.98\% | 0.2340\% |
| DENTSPLY INTERNATIONAL INC | XRAY | 7,339.75 | 0.05\% | 0.51\% | 8.50\% | 9.03\% | 0.0043\% |
| XEROX CORP | XRX | 15,353.93 | 0.10\% | 1.85\% | 6.00\% | 7.90\% | 0.0079\% |
| XYLEM INC | XYL | 6,811.22 | 0.04\% | 1.36\% | 10.50\% | 11.94\% | 0.0053\% |
| YAHOO! INC | YHOO | 47,841.23 | N/A | 0.00\% | NA | N/A | N/A |
| YUM! BRANDS INC | YUM | 32,982.60 | 0.21\% | 2.20\% | 9.50\% | 11.80\% | 0.0253\% |
| ZIONS BANCORPORATION | ZION | 5,941.85 | 0.04\% | 0.54\% | 9.00\% | 9.56\% | 0.0037\% |
| ZIMMER HOLDINGS INC | ZMH | 18,732.25 | 0.12\% | 0.79\% | 9.50\% | 10.33\% | 0.0126\% |
| ZOETIS INC | ZTS | 21,677.29 | N/A | 0.68\% | NA | N/A | N/A |
| Total Market Capitalization: |  | 15,386,046.38 |  |  |  |  | 12.75\% |
| Notes: |  |  |  |  |  |  |  |
| [1] Equals sum of Col. [9] |  |  |  |  |  |  |  |
| [2] Source: Bloomberg Professional |  |  |  |  |  |  |  |
| [3] Equals [1] - [2] |  |  |  |  |  |  |  |
| [4] Source: Value Line |  |  |  |  |  |  |  |
| [5] Equals weight in S\&P 500 based on market capitalization |  |  |  |  |  |  |  |
| [6] Source: Value Line |  |  |  |  |  |  |  |
| [7] Source: Value Line |  |  |  |  |  |  |  |
| [8] Equals $([6] \times(1+(0.5 \times[7]))$ ) [7] |  |  |  |  |  |  |  |

Bloomberg and Value Line Beta Coefficients (Combined Proxy Group)

|  |  | [1] | [2] |
| :---: | :---: | :---: | :---: |
| Company | Ticker | Bloomberg | Value Line |
| Alliant Energy Corporation | LNT | 0.779 | 0.80 |
| Ameren Corporation | AEE | 0.725 | 0.75 |
| American Electric Power Company, Inc. | AEP | 0.754 | 0.70 |
| CMS Energy Corporation | CMS | 0.762 | 0.75 |
| DTE Energy Company | DTE | 0.741 | 0.75 |
| Duke Energy Corporation | DUK | 0.585 | 0.60 |
| Empire District Electric Company | EDE | 0.705 | 0.65 |
| Great Plains Energy Inc. | GXP | 0.828 | 0.85 |
| Hawaiian Electric Industries, Inc. | HE | 0.748 | 0.80 |
| IDACORP, Inc. | IDA | 0.868 | 0.80 |
| NextEra Energy, Inc. | NEE | 0.771 | 0.70 |
| Northeast Utilities | NU | 0.686 | 0.75 |
| OGE Energy Corp. | OGE | 0.810 | 0.85 |
| Otter Tail Corporation | OTTR | 0.945 | 0.95 |
| Pinnacle West Capital Corporation | PNW | 0.807 | 0.70 |
| PNM Resources, Inc. | PNM | 0.847 | 0.85 |
| Portland General Electric Company | POR | 0.792 | 0.80 |
| Southern Company | SO | 0.571 | 0.60 |
| TECO Energy, Inc. | TE | 0.752 | 0.85 |
| Westar Energy, Inc. | WR | 0.699 | 0.75 |
| Xcel Energy Inc. | XEL | 0.711 | 0.70 |
| Mean |  | 0.757 | 0.76 |

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

## Bloomberg and Value Line Beta Coefficients (Hevert Proxy Group)

|  |  | [1] | [2] |
| :---: | :---: | :---: | :---: |
| Company | Ticker | Bloomberg | Value Line |
| American Electric Power Company, Inc. | AEP | 0.754 | 0.70 |
| Duke Energy Corporation | DUK | 0.585 | 0.60 |
| Empire District Electric Company | EDE | 0.705 | 0.65 |
| Great Plains Energy Inc. | GXP | 0.828 | 0.85 |
| Hawaiian Electric Industries, Inc. | HE | 0.748 | 0.80 |
| IDACORP, Inc. | IDA | 0.868 | 0.80 |
| NextEra Energy, Inc. | NEE | 0.771 | 0.70 |
| Northeast Utilities | NU | 0.686 | 0.75 |
| Otter Tail Corporation | OTTR | 0.945 | 0.95 |
| Pinnacle West Capital Corporation | PNW | 0.807 | 0.70 |
| PNM Resources, Inc. | PNM | 0.847 | 0.85 |
| Portland General Electric Company | POR | 0.792 | 0.80 |
| Southern Company | SO | 0.571 | 0.60 |
| Westar Energy, Inc. | WR | 0.699 | 0.75 |
| Mean |  | 0.758 | 0.75 |

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

Capital Asset Pricing Model Results
Bloomberg and Value Line Derived Market Risk Premium (Combined Proxy Group)


Notes:
[1] See Notes [7] and [8]
[2] Source: Schedule RBH-R10
3] Source: Schedule RBH-R9
[4] Source: Schedule RBH-R9
[5] Equals Col. [1] + (Col. [2] $\times$ Col. [3])
[6] Equals Col. [1] + (Col. [2] x Col. [4])
[7] Source: Bloomberg Professional
[8] Source: Blue Chip Financial Forecasts, Vol. 33, No. 11, November 1, 2014, at 2

Capital Asset Pricing Model Results
Bloomberg and Value Line Derived Market Risk Premium (Hevert Proxy Group)


Notes:
[1] See Notes [7] and [8]
[2] Source: Schedule RBH-R10
[3] Source: Schedule RBH-R9
[4] Source: Schedule RBH-R9
[5] Equals Col. [1] + (Col. [2] x Col. [3])
[6] Equals Col. [1] + (Col. [2] x Col. [4])
[7] Source: Bloomberg Professional
[8] Source: Blue Chip Financial Forecasts, Vol. 33, No. 11, November 1, 2014, at 2


Notes:
[1] Constant of regression equation
[2] Slope of regression equation
[3] Source: Current = Bloomberg Professional,
Near Term Projected = Blue Chip Financial Forecasts, Vol. 33, No. 11, November 1, 2014, at 2,
Long Term Projected = Blue Chip Financial Forecasts, Vol. 33, No. 6, June 1, 2014, at 14
[4] Equals [1] $+\ln ([3]) \times[2]$
[5] Equals [3] + [4]
[6] Source: SNL Financial
[7] Source: SNL Financial (excludes Rate Riders)
[8] Source: Bloomberg Professional, equals 201-trading day average (i.e. lag period) as of November 14, 2014
[9] Equals [7] - [8]

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Dat |  |  |  |
| Electric | Return on | ry |  |
| Rate Case | Equity | Yield | Risk Premium |
| 01/01/1980 | 14.50\% | 9.36\% | 5.14\% |
| 01/07/1980 | 14.39\% | 9.38\% | 5.01\% |
| 01/09/1980 | 15.00\% | 9.40\% | 5.60\% |
| 01/14/1980 | 15.17\% | 9.42\% | 5.75\% |
| 01/17/1980 | 13.93\% | 9.44\% | 4.49\% |
| 01/23/1980 | 15.50\% | 9.47\% | 6.03\% |
| 01/30/1980 | 13.86\% | 9.52\% | 4.34\% |
| 01/31/1980 | 12.61\% | 9.53\% | 3.08\% |
| 02/06/1980 | 13.71\% | 9.58\% | 4.13\% |
| 02/13/1980 | 12.80\% | 9.63\% | 3.17\% |
| 02/14/1980 | 13.00\% | 9.65\% | 3.35\% |
| 02/19/1980 | 13.50\% | 9.68\% | 3.82\% |
| 02/27/1980 | 13.75\% | 9.78\% | 3.97\% |
| 02/29/1980 | 13.75\% | 9.81\% | 3.94\% |
| 02/29/1980 | 14.00\% | 9.81\% | 4.19\% |
| 02/29/1980 | 14.77\% | 9.81\% | 4.96\% |
| 03/07/1980 | 12.70\% | 9.89\% | 2.81\% |
| 03/14/1980 | 13.50\% | 9.97\% | 3.53\% |
| 03/26/1980 | 14.16\% | 10.10\% | 4.06\% |
| 03/27/1980 | 14.24\% | 10.12\% | 4.12\% |
| 03/28/1980 | 14.50\% | 10.13\% | 4.37\% |
| 04/11/1980 | 12.75\% | 10.27\% | 2.48\% |
| 04/14/1980 | 13.85\% | 10.29\% | 3.56\% |
| 04/16/1980 | 15.50\% | 10.31\% | 5.19\% |
| 04/22/1980 | 13.25\% | 10.35\% | 2.90\% |
| 04/22/1980 | 13.90\% | 10.35\% | 3.55\% |
| 04/24/1980 | 16.80\% | 10.38\% | 6.43\% |
| 04/29/1980 | 15.50\% | 10.41\% | 5.09\% |
| 05/06/1980 | 13.70\% | 10.45\% | 3.25\% |
| 05/07/1980 | 15.00\% | 10.45\% | 4.55\% |
| 05/08/1980 | 13.75\% | 10.46\% | 3.29\% |
| 05/09/1980 | 14.35\% | 10.47\% | 3.88\% |
| 05/13/1980 | 13.60\% | 10.48\% | 3.12\% |
| 05/15/1980 | 13.25\% | 10.49\% | 2.76\% |
| 05/19/1980 | 13.75\% | 10.51\% | 3.24\% |
| 05/27/1980 | 13.62\% | 10.54\% | 3.08\% |
| 05/27/1980 | 14.60\% | 10.54\% | 4.06\% |
| 05/29/1980 | 16.00\% | 10.56\% | 5.44\% |
| 05/30/1980 | 13.80\% | 10.56\% | 3.24\% |
| 06/02/1980 | 15.63\% | 10.57\% | 5.06\% |
| 06/09/1980 | 15.90\% | 10.60\% | 5.30\% |
| 06/10/1980 | 13.78\% | 10.60\% | 3.18\% |
| 06/12/1980 | 14.25\% | 10.61\% | 3.64\% |
| 06/19/1980 | 13.40\% | 10.62\% | 2.78\% |
| 06/30/1980 | 13.00\% | 10.65\% | 2.35\% |
| 06/30/1980 | 13.40\% | 10.65\% | 2.75\% |
| 07/09/1980 | 14.75\% | 10.67\% | 4.08\% |
| 07/10/1980 | 15.00\% | 10.68\% | 4.32\% |
| 07/15/1980 | 15.80\% | 10.70\% | 5.10\% |
| 07/18/1980 | 13.80\% | 10.71\% | 3.09\% |
| 07/22/1980 | 14.10\% | 10.72\% | 3.38\% |
| 07/24/1980 | 15.00\% | 10.73\% | 4.27\% |
| 07/25/1980 | 13.48\% | 10.73\% | 2.75\% |
| 07/31/1980 | 14.58\% | 10.75\% | 3.83\% |
| 08/08/1980 | 13.50\% | 10.78\% | 2.72\% |
| 08/08/1980 | 14.00\% | 10.78\% | 3.22\% |
| 08/08/1980 | 15.45\% | 10.78\% | 4.67\% |
| 08/11/1980 | 14.85\% | 10.78\% | 4.07\% |
| 08/14/1980 | 14.00\% | 10.79\% | 3.21\% |
| 08/14/1980 | 16.25\% | 10.79\% | 5.46\% |
| 08/25/1980 | 13.75\% | 10.82\% | 2.93\% |
| 08/27/1980 | 13.80\% | 10.83\% | 2.97\% |
| 08/29/1980 | 12.50\% | 10.84\% | 1.66\% |
| 09/15/1980 | 13.50\% | 10.88\% | 2.62\% |
| 09/15/1980 | 13.93\% | 10.88\% | 3.05\% |
| 09/15/1980 | 15.80\% | 10.88\% | 4.92\% |
| 09/24/1980 | 12.50\% | 10.93\% | 1.57\% |
| 09/24/1980 | 15.00\% | 10.93\% | 4.07\% |
| 09/26/1980 | 13.75\% | 10.94\% | 2.81\% |
| 09/30/1980 | 14.10\% | 10.96\% | 3.14\% |
| 09/30/1980 | 14.20\% | 10.96\% | 3.24\% |
| 10/01/1980 | 13.90\% | 10.97\% | 2.93\% |
| 10/03/1980 | 15.50\% | 10.98\% | 4.52\% |
| 10/07/1980 | 12.50\% | 10.99\% | 1.51\% |
| 10/09/1980 | 13.25\% | 11.00\% | 2.25\% |
| 10/09/1980 | 14.50\% | 11.00\% | 3.50\% |
| 10/09/1980 | 14.50\% | 11.00\% | 3.50\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Year |  |
| Electric | Return on | Treasury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 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\% |
| 11/04/1980 | 15.00\% | 11.12\% | 3.88\% |
| 11/05/1980 | 13.75\% | 11.12\% | 2.63\% |
| 11/05/1980 | 14.00\% | 11.12\% | 2.88\% |
| 11/08/1980 | 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\% |
| 12/08/1980 | 14.15\% | 11.22\% | 2.93\% |
| 12/08/1980 | 15.10\% | 11.22\% | 3.88\% |
| 12/09/1980 | 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\% |
| 01/02/1981 | 15.25\% | 11.22\% | 4.03\% |
| 01/07/1981 | 14.30\% | 11.21\% | 3.09\% |
| 01/19/1981 | 15.25\% | 11.20\% | 4.05\% |
| 01/23/1981 | 13.10\% | 11.20\% | 1.90\% |
| 01/23/1981 | 14.40\% | 11.20\% | 3.20\% |
| 01/26/1981 | 15.25\% | 11.20\% | 4.05\% |
| 01/27/1981 | 15.00\% | 11.21\% | 3.79\% |
| 01/31/1981 | 13.47\% | 11.22\% | 2.25\% |
| 02/03/1981 | 15.25\% | 11.23\% | 4.02\% |
| 02/05/1981 | 15.75\% | 11.25\% | 4.50\% |
| 02/11/1981 | 15.60\% | 11.28\% | 4.32\% |
| 02/20/1981 | 15.25\% | 11.33\% | 3.92\% |
| 03/11/1981 | 15.40\% | 11.49\% | 3.91\% |
| 03/12/1981 | 14.51\% | 11.50\% | 3.01\% |
| 03/12/1981 | 16.00\% | 11.50\% | 4.50\% |
| 03/13/1981 | 13.02\% | 11.52\% | 1.50\% |
| 03/18/1981 | 16.19\% | 11.55\% | 4.64\% |
| 03/19/1981 | 13.75\% | 11.56\% | 2.19\% |
| 03/23/1981 | 14.30\% | 11.58\% | 2.72\% |
| 03/25/1981 | 15.30\% | 11.60\% | 3.70\% |
| 04/01/1981 | 14.53\% | 11.68\% | 2.85\% |
| 04/03/1981 | 19.10\% | 11.71\% | 7.39\% |
| 04/09/1981 | 15.00\% | 11.78\% | 3.22\% |
| 04/09/1981 | 15.30\% | 11.78\% | 3.52\% |
| 04/09/1981 | 16.50\% | 11.78\% | 4.72\% |
| 04/09/1981 | 17.00\% | 11.78\% | 5.22\% |
| 04/10/1981 | 13.75\% | 11.80\% | 1.95\% |
| 04/13/1981 | 13.57\% | 11.82\% | 1.75\% |
| 04/15/1981 | 15.30\% | 11.85\% | 3.45\% |
| 04/16/1981 | 13.50\% | 11.87\% | 1.63\% |
| 04/17/1981 | 14.10\% | 11.87\% | 2.23\% |
| 04/21/1981 | 14.00\% | 11.90\% | 2.10\% |
| 04/21/1981 | 16.80\% | 11.90\% | 4.90\% |
| 04/24/1981 | 16.00\% | 11.95\% | 4.05\% |
| 04/27/1981 | 12.50\% | 11.97\% | 0.53\% |
| 04/27/1981 | 13.61\% | 11.97\% | 1.64\% |
| 04/29/1981 | 13.65\% | 12.00\% | 1.65\% |
| 04/30/1981 | 13.50\% | 12.02\% | 1.48\% |
| 05/04/1981 | 16.22\% | 12.05\% | 4.17\% |
| 05/05/1981 | 14.40\% | 12.07\% | 2.33\% |
| 05/07/1981 | 16.25\% | 12.11\% | 4.14\% |
| 05/07/1981 | 16.27\% | 12.11\% | 4.16\% |
| 05/08/1981 | 13.00\% | 12.13\% | 0.87\% |
| 05/08/1981 | 16.00\% | 12.13\% | 3.87\% |
| 05/12/1981 | 13.50\% | 12.16\% | 1.34\% |
| 05/15/1981 | 15.75\% | 12.22\% | 3.53\% |
| 05/18/1981 | 14.88\% | 12.23\% | 2.65\% |
| 05/20/1981 | 16.00\% | 12.26\% | 3.74\% |
| 05/21/1981 | 14.00\% | 12.27\% | 1.73\% |
| 05/26/1981 | 14.90\% | 12.30\% | 2.60\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Year |  |
| Electric | Return on | Treasury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 05/27/1981 | 15.00\% | 12.31\% | 2.69\% |
| 05/29/1981 | 15.50\% | 12.34\% | 3.16\% |
| 06/01/1981 | 16.50\% | 12.35\% | 4.15\% |
| 06/03/1981 | 14.67\% | 12.37\% | 2.30\% |
| 06/05/1981 | 13.00\% | 12.39\% | 0.61\% |
| 06/10/1981 | 16.75\% | 12.42\% | 4.33\% |
| 06/17/1981 | 14.40\% | 12.46\% | 1.94\% |
| 06/18/1981 | 16.33\% | 12.47\% | 3.86\% |
| 06/25/1981 | 14.75\% | 12.51\% | 2.24\% |
| 06/26/1981 | 16.00\% | 12.52\% | 3.48\% |
| 06/30/1981 | 15.25\% | 12.54\% | 2.71\% |
| 07/01/1981 | 15.50\% | 12.56\% | 2.94\% |
| 07/01/1981 | 17.50\% | 12.56\% | 4.94\% |
| 07/10/1981 | 16.00\% | 12.62\% | 3.38\% |
| 07/14/1981 | 16.90\% | 12.64\% | 4.26\% |
| 07/15/1981 | 16.00\% | 12.65\% | 3.35\% |
| 07/17/1981 | 15.00\% | 12.67\% | 2.33\% |
| 07/20/1981 | 15.00\% | 12.68\% | 2.32\% |
| 07/21/1981 | 14.00\% | 12.69\% | 1.31\% |
| 07/28/1981 | 13.48\% | 12.74\% | 0.74\% |
| 07/31/1981 | 13.50\% | 12.78\% | 0.72\% |
| 07/31/1981 | 15.00\% | 12.78\% | 2.22\% |
| 07/31/1981 | 16.00\% | 12.78\% | 3.22\% |
| 08/05/1981 | 15.71\% | 12.83\% | 2.88\% |
| 08/10/1981 | 14.50\% | 12.87\% | 1.63\% |
| 08/11/1981 | 15.00\% | 12.88\% | 2.12\% |
| 08/20/1981 | 13.50\% | 12.95\% | 0.55\% |
| 08/20/1981 | 16.50\% | 12.95\% | 3.55\% |
| 08/24/1981 | 15.00\% | 12.97\% | 2.03\% |
| 08/28/1981 | 15.00\% | 13.01\% | 1.99\% |
| 09/03/1981 | 14.50\% | 13.05\% | 1.45\% |
| 09/10/1981 | 14.50\% | 13.11\% | 1.39\% |
| 09/11/1981 | 16.00\% | 13.12\% | 2.88\% |
| 09/16/1981 | 16.00\% | 13.15\% | 2.85\% |
| 09/17/1981 | 16.50\% | 13.16\% | 3.34\% |
| 09/23/1981 | 15.85\% | 13.20\% | 2.65\% |
| 09/28/1981 | 15.50\% | 13.23\% | 2.27\% |
| 10/09/1981 | 15.75\% | 13.33\% | 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\% |
| 11/03/1981 | 15.17\% | 13.53\% | 1.64\% |
| 11/05/1981 | 16.60\% | 13.55\% | 3.05\% |
| 11/06/1981 | 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\% |
| 12/01/1981 | 15.70\% | 13.61\% | 2.09\% |
| 12/01/1981 | 16.00\% | 13.61\% | 2.39\% |
| 12/01/1981 | 16.49\% | 13.61\% | 2.88\% |
| 12/01/1981 | 16.50\% | 13.61\% | 2.89\% |
| 12/04/1981 | 16.00\% | 13.61\% | 2.39\% |
| 12/11/1981 | 16.25\% | 13.63\% | 2.62\% |
| 12/14/1981 | 14.00\% | 13.63\% | 0.37\% |
| 12/15/1981 | 15.81\% | 13.63\% | 2.18\% |
| 12/15/1981 | 16.00\% | 13.63\% | 2.37\% |
| 12/16/1981 | 15.25\% | 13.63\% | 1.62\% |
| 12/17/1981 | 16.50\% | 13.63\% | 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\% |
| 01/04/1982 | 15.50\% | 13.67\% | 1.83\% |
| 01/11/1982 | 14.50\% | 13.72\% | 0.78\% |
| 01/11/1982 | 17.00\% | 13.72\% | 3.28\% |
| 01/13/1982 | 14.75\% | 13.74\% | 1.01\% |
| 01/14/1982 | 15.75\% | 13.75\% | 2.00\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Year |  |
| Electric | Return on | Treasury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 01/15/1982 | 15.00\% | 13.76\% | 1.24\% |
| 01/15/1982 | 16.50\% | 13.76\% | 2.74\% |
| 01/22/1982 | 16.25\% | 13.79\% | 2.46\% |
| 01/27/1982 | 16.84\% | 13.81\% | 3.03\% |
| 01/28/1982 | 13.00\% | 13.81\% | -0.81\% |
| 01/29/1982 | 15.50\% | 13.82\% | 1.68\% |
| 02/01/1982 | 15.85\% | 13.82\% | 2.03\% |
| 02/03/1982 | 16.44\% | 13.84\% | 2.60\% |
| 02/08/1982 | 15.50\% | 13.86\% | 1.64\% |
| 02/11/1982 | 16.00\% | 13.88\% | 2.12\% |
| 02/11/1982 | 16.20\% | 13.88\% | 2.32\% |
| 02/17/1982 | 15.00\% | 13.89\% | 1.11\% |
| 02/19/1982 | 15.17\% | 13.89\% | 1.28\% |
| 02/26/1982 | 15.25\% | 13.89\% | 1.36\% |
| 03/01/1982 | 15.03\% | 13.89\% | 1.14\% |
| 03/01/1982 | 16.00\% | 13.89\% | 2.11\% |
| 03/03/1982 | 15.00\% | 13.88\% | 1.12\% |
| 03/08/1982 | 17.10\% | 13.88\% | 3.22\% |
| 03/12/1982 | 16.25\% | 13.88\% | 2.37\% |
| 03/17/1982 | 17.30\% | 13.88\% | 3.42\% |
| 03/22/1982 | 15.10\% | 13.89\% | 1.21\% |
| 03/27/1982 | 15.40\% | 13.89\% | 1.51\% |
| 03/30/1982 | 15.50\% | 13.90\% | 1.60\% |
| 03/31/1982 | 17.00\% | 13.91\% | 3.09\% |
| 04/01/1982 | 14.70\% | 13.91\% | 0.79\% |
| 04/01/1982 | 16.50\% | 13.91\% | 2.59\% |
| 04/02/1982 | 15.50\% | 13.91\% | 1.59\% |
| 04/05/1982 | 15.50\% | 13.92\% | 1.58\% |
| 04/08/1982 | 16.40\% | 13.93\% | 2.47\% |
| 04/13/1982 | 14.50\% | 13.94\% | 0.56\% |
| 04/23/1982 | 15.75\% | 13.94\% | 1.81\% |
| 04/27/1982 | 15.00\% | 13.94\% | 1.06\% |
| 04/28/1982 | 15.75\% | 13.94\% | 1.81\% |
| 04/30/1982 | 14.70\% | 13.94\% | 0.76\% |
| 04/30/1982 | 15.50\% | 13.94\% | 1.56\% |
| 05/03/1982 | 16.60\% | 13.94\% | 2.66\% |
| 05/04/1982 | 16.00\% | 13.94\% | 2.06\% |
| 05/14/1982 | 15.50\% | 13.92\% | 1.58\% |
| 05/18/1982 | 15.42\% | 13.92\% | 1.50\% |
| 05/19/1982 | 14.69\% | 13.92\% | 0.77\% |
| 05/20/1982 | 15.00\% | 13.91\% | 1.09\% |
| 05/20/1982 | 15.10\% | 13.91\% | 1.19\% |
| 05/20/1982 | 15.50\% | 13.91\% | 1.59\% |
| 05/20/1982 | 16.30\% | 13.91\% | 2.39\% |
| 05/21/1982 | 17.75\% | 13.91\% | 3.84\% |
| 05/27/1982 | 15.00\% | 13.89\% | 1.11\% |
| 05/28/1982 | 15.50\% | 13.89\% | 1.61\% |
| 05/28/1982 | 17.00\% | 13.89\% | 3.11\% |
| 06/01/1982 | 13.75\% | 13.89\% | -0.14\% |
| 06/01/1982 | 16.60\% | 13.89\% | 2.71\% |
| 06/09/1982 | 17.86\% | 13.88\% | 3.98\% |
| 06/14/1982 | 15.75\% | 13.88\% | 1.87\% |
| 06/15/1982 | 14.85\% | 13.88\% | 0.97\% |
| 06/18/1982 | 15.50\% | 13.87\% | 1.63\% |
| 06/21/1982 | 14.90\% | 13.87\% | 1.03\% |
| 06/23/1982 | 16.00\% | 13.86\% | 2.14\% |
| 06/23/1982 | 16.17\% | 13.86\% | 2.31\% |
| 06/24/1982 | 14.85\% | 13.86\% | 0.99\% |
| 06/25/1982 | 14.70\% | 13.86\% | 0.84\% |
| 07/01/1982 | 16.00\% | 13.84\% | 2.16\% |
| 07/02/1982 | 15.62\% | 13.84\% | 1.78\% |
| 07/02/1982 | 17.00\% | 13.84\% | 3.16\% |
| 07/13/1982 | 14.00\% | 13.82\% | 0.18\% |
| 07/13/1982 | 16.80\% | 13.82\% | 2.98\% |
| 07/14/1982 | 15.76\% | 13.82\% | 1.94\% |
| 07/14/1982 | 16.02\% | 13.82\% | 2.20\% |
| 07/19/1982 | 16.50\% | 13.80\% | 2.70\% |
| 07/22/1982 | 14.50\% | 13.77\% | 0.73\% |
| 07/22/1982 | 17.00\% | 13.77\% | 3.23\% |
| 07/27/1982 | 16.75\% | 13.75\% | 3.00\% |
| 07/29/1982 | 16.50\% | 13.74\% | 2.76\% |
| 08/11/1982 | 17.50\% | 13.68\% | 3.82\% |
| 08/18/1982 | 17.07\% | 13.63\% | 3.44\% |
| 08/20/1982 | 15.73\% | 13.60\% | 2.13\% |
| 08/25/1982 | 16.00\% | 13.57\% | 2.43\% |
| 08/26/1982 | 15.50\% | 13.56\% | 1.94\% |
| 08/30/1982 | 15.00\% | 13.55\% | 1.45\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Year |  |
| Electric | Return on | Treasury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 09/03/1982 | 16.20\% | 13.53\% | 2.67\% |
| 09/08/1982 | 15.00\% | 13.52\% | 1.48\% |
| 09/15/1982 | 13.08\% | 13.50\% | -0.42\% |
| 09/15/1982 | 16.25\% | 13.50\% | 2.75\% |
| 09/16/1982 | 16.00\% | 13.50\% | 2.50\% |
| 09/17/1982 | 15.25\% | 13.50\% | 1.75\% |
| 09/23/1982 | 17.17\% | 13.47\% | 3.70\% |
| 09/24/1982 | 14.50\% | 13.46\% | 1.04\% |
| 09/27/1982 | 15.25\% | 13.46\% | 1.79\% |
| 10/01/1982 | 15.50\% | 13.42\% | 2.08\% |
| 10/15/1982 | 15.90\% | 13.32\% | 2.58\% |
| 10/22/1982 | 15.75\% | 13.24\% | 2.51\% |
| 10/22/1982 | 17.15\% | 13.24\% | 3.91\% |
| 10/29/1982 | 15.54\% | 13.16\% | 2.38\% |
| 11/01/1982 | 15.50\% | 13.15\% | 2.35\% |
| 11/03/1982 | 17.20\% | 13.13\% | 4.07\% |
| 11/04/1982 | 16.25\% | 13.11\% | 3.14\% |
| 11/05/1982 | 16.20\% | 13.09\% | 3.11\% |
| 11/09/1982 | 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\% |
| 12/01/1982 | 17.04\% | 12.79\% | 4.25\% |
| 12/06/1982 | 15.00\% | 12.73\% | 2.27\% |
| 12/06/1982 | 16.35\% | 12.73\% | 3.62\% |
| 12/10/1982 | 15.50\% | 12.66\% | 2.84\% |
| 12/13/1982 | 16.00\% | 12.65\% | 3.35\% |
| 12/14/1982 | 15.30\% | 12.63\% | 2.67\% |
| 12/14/1982 | 16.40\% | 12.63\% | 3.77\% |
| 12/20/1982 | 16.00\% | 12.57\% | 3.43\% |
| 12/21/1982 | 14.75\% | 12.56\% | 2.19\% |
| 12/21/1982 | 15.85\% | 12.56\% | 3.29\% |
| 12/22/1982 | 16.25\% | 12.54\% | 3.71\% |
| 12/22/1982 | 16.58\% | 12.54\% | 4.04\% |
| 12/22/1982 | 16.75\% | 12.54\% | 4.21\% |
| 12/29/1982 | 14.90\% | 12.48\% | 2.42\% |
| 12/29/1982 | 16.25\% | 12.48\% | 3.77\% |
| 12/30/1982 | 16.00\% | 12.47\% | 3.53\% |
| 12/30/1982 | 16.35\% | 12.47\% | 3.88\% |
| 12/30/1982 | 16.77\% | 12.47\% | 4.30\% |
| 01/05/1983 | 17.33\% | 12.40\% | 4.93\% |
| 01/11/1983 | 15.90\% | 12.34\% | 3.56\% |
| 01/12/1983 | 14.63\% | 12.33\% | 2.30\% |
| 01/12/1983 | 15.50\% | 12.33\% | 3.17\% |
| 01/20/1983 | 17.75\% | 12.24\% | 5.51\% |
| 01/21/1983 | 15.00\% | 12.22\% | 2.78\% |
| 01/24/1983 | 14.50\% | 12.21\% | 2.29\% |
| 01/24/1983 | 15.50\% | 12.21\% | 3.29\% |
| 01/25/1983 | 15.85\% | 12.19\% | 3.66\% |
| 01/27/1983 | 16.14\% | 12.17\% | 3.97\% |
| 02/01/1983 | 18.50\% | 12.13\% | 6.37\% |
| 02/04/1983 | 14.00\% | 12.10\% | 1.90\% |
| 02/10/1983 | 15.00\% | 12.06\% | 2.94\% |
| 02/21/1983 | 15.50\% | 11.98\% | 3.52\% |
| 02/22/1983 | 15.50\% | 11.97\% | 3.53\% |
| 02/23/1983 | 15.10\% | 11.96\% | 3.14\% |
| 02/23/1983 | 16.00\% | 11.96\% | 4.04\% |
| 03/02/1983 | 15.25\% | 11.89\% | 3.36\% |
| 03/09/1983 | 15.20\% | 11.82\% | 3.38\% |
| 03/15/1983 | 13.00\% | 11.77\% | 1.23\% |
| 03/18/1983 | 15.25\% | 11.73\% | 3.52\% |
| 03/23/1983 | 15.40\% | 11.69\% | 3.71\% |
| 03/24/1983 | 15.00\% | 11.67\% | 3.33\% |
| 03/29/1983 | 15.50\% | 11.63\% | 3.87\% |
| 03/30/1983 | 16.71\% | 11.61\% | 5.10\% |
| 03/31/1983 | 15.00\% | 11.59\% | 3.41\% |
| 04/04/1983 | 15.20\% | 11.58\% | 3.62\% |
| 04/08/1983 | 15.50\% | 11.51\% | 3.99\% |
| 04/11/1983 | 14.81\% | 11.49\% | 3.32\% |
| 04/19/1983 | 14.50\% | 11.38\% | 3.12\% |
| 04/20/1983 | 16.00\% | 11.36\% | 4.64\% |
| 04/29/1983 | 16.00\% | 11.24\% | 4.76\% |
| 05/01/1983 | 14.50\% | 11.24\% | 3.26\% |
| 05/09/1983 | 15.50\% | 11.15\% | 4.35\% |
| 05/11/1983 | 16.46\% | 11.12\% | 5.34\% |
| 05/12/1983 | 14.14\% | 11.11\% | 3.03\% |
| 05/18/1983 | 15.00\% | 11.05\% | 3.95\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
|  | Average 30- |  |  |
| Date of |  | Year |  |
| Electric | on |  |  |
| Rate Case | Equity | Yield | Risk Premium |
| 05/23/1983 | 14.90\% | 11.01\% | 3.89\% |
| 05/23/1983 | 15.50\% | 11.01\% | 4.49\% |
| 05/25/1983 | 15.50\% | 10.98\% | 4.52\% |
| 05/27/1983 | 15.00\% | 10.96\% | 4.04\% |
| 05/31/1983 | 14.00\% | 10.95\% | 3.05\% |
| 05/31/1983 | 15.50\% | 10.95\% | 4.55\% |
| 06/02/1983 | 14.50\% | 10.93\% | 3.57\% |
| 06/17/1983 | 15.03\% | 10.84\% | 4.19\% |
| 07/01/1983 | 14.80\% | 10.78\% | 4.02\% |
| 07/01/1983 | 14.90\% | 10.78\% | 4.12\% |
| 07/08/1983 | 16.25\% | 10.76\% | 5.49\% |
| 07/13/1983 | 13.20\% | 10.75\% | 2.45\% |
| 07/19/1983 | 15.00\% | 10.74\% | 4.26\% |
| 07/19/1983 | 15.10\% | 10.74\% | 4.36\% |
| 07/25/1983 | 16.25\% | 10.73\% | 5.52\% |
| 07/28/1983 | 15.90\% | 10.74\% | 5.16\% |
| 08/03/1983 | 16.34\% | 10.75\% | 5.59\% |
| 08/03/1983 | 16.50\% | 10.75\% | 5.75\% |
| 08/19/1983 | 15.00\% | 10.80\% | 4.20\% |
| 08/22/1983 | 15.50\% | 10.80\% | 4.70\% |
| 08/22/1983 | 16.40\% | 10.80\% | 5.60\% |
| 08/31/1983 | 14.75\% | 10.84\% | 3.91\% |
| 09/07/1983 | 15.00\% | 10.86\% | 4.14\% |
| 09/14/1983 | 15.78\% | 10.89\% | 4.89\% |
| 09/16/1983 | 15.00\% | 10.90\% | 4.10\% |
| 09/19/1983 | 14.50\% | 10.91\% | 3.59\% |
| 09/20/1983 | 16.50\% | 10.91\% | 5.59\% |
| 09/28/1983 | 14.50\% | 10.94\% | 3.56\% |
| 09/29/1983 | 15.50\% | 10.95\% | 4.55\% |
| 09/30/1983 | 15.25\% | 10.95\% | 4.30\% |
| 09/30/1983 | 16.15\% | 10.95\% | 5.20\% |
| 10/04/1983 | 14.80\% | 10.96\% | 3.84\% |
| 10/07/1983 | 16.00\% | 10.97\% | 5.03\% |
| 10/13/1983 | 15.52\% | 10.99\% | 4.53\% |
| 10/17/1983 | 15.50\% | 11.00\% | 4.50\% |
| 10/18/1983 | 14.50\% | 11.00\% | 3.50\% |
| 10/19/1983 | 16.25\% | 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\% |
| 11/01/1983 | 16.00\% | 11.06\% | 4.94\% |
| 11/09/1983 | 14.90\% | 11.09\% | 3.81\% |
| 11/10/1983 | 14.35\% | 11.10\% | 3.25\% |
| 11/23/1983 | 16.00\% | 11.13\% | 4.87\% |
| 11/23/1983 | 16.15\% | 11.13\% | 5.02\% |
| 11/30/1983 | 15.00\% | 11.14\% | 3.86\% |
| 12/05/1983 | 15.25\% | 11.15\% | 4.10\% |
| 12/06/1983 | 15.07\% | 11.15\% | 3.92\% |
| 12/08/1983 | 15.90\% | 11.16\% | 4.74\% |
| 12/09/1983 | 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\% |
| 01/03/1984 | 14.75\% | 11.27\% | 3.48\% |
| 01/10/1984 | 15.90\% | 11.30\% | 4.60\% |
| 01/12/1984 | 15.60\% | 11.31\% | 4.29\% |
| 01/18/1984 | 13.75\% | 11.33\% | 2.42\% |
| 01/19/1984 | 15.90\% | 11.33\% | 4.57\% |
| 01/30/1984 | 16.10\% | 11.37\% | 4.73\% |
| 01/31/1984 | 15.25\% | 11.37\% | 3.88\% |
| 02/01/1984 | 14.80\% | 11.38\% | 3.42\% |
| 02/06/1984 | 13.75\% | 11.40\% | 2.35\% |
| 02/06/1984 | 14.75\% | 11.40\% | 3.35\% |
| 02/09/1984 | 15.25\% | 11.42\% | 3.83\% |
| 02/15/1984 | 15.70\% | 11.44\% | 4.26\% |
| 02/20/1984 | 15.00\% | 11.46\% | 3.54\% |
| 02/20/1984 | 15.00\% | 11.46\% | 3.54\% |
| 02/22/1984 | 14.75\% | 11.47\% | 3.28\% |
| 02/28/1984 | 14.50\% | 11.51\% | 2.99\% |
| 03/02/1984 | 14.25\% | 11.54\% | 2.71\% |
| 03/20/1984 | 16.00\% | 11.64\% | 4.36\% |
| 03/23/1984 | 15.50\% | 11.67\% | 3.83\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Year |  |
| Electric | Return on | Treasury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 03/26/1984 | 14.71\% | 11.68\% | 3.03\% |
| 04/02/1984 | 15.50\% | 11.71\% | 3.79\% |
| 04/06/1984 | 14.74\% | 11.75\% | 2.99\% |
| 04/11/1984 | 15.72\% | 11.78\% | 3.94\% |
| 04/17/1984 | 15.00\% | 11.81\% | 3.19\% |
| 04/18/1984 | 16.20\% | 11.82\% | 4.38\% |
| 04/25/1984 | 14.64\% | 11.85\% | 2.79\% |
| 04/30/1984 | 14.40\% | 11.87\% | 2.53\% |
| 05/16/1984 | 14.69\% | 11.98\% | 2.71\% |
| 05/16/1984 | 15.00\% | 11.98\% | 3.02\% |
| 05/22/1984 | 14.40\% | 12.02\% | 2.38\% |
| 05/29/1984 | 15.10\% | 12.06\% | 3.04\% |
| 06/13/1984 | 15.25\% | 12.15\% | 3.10\% |
| 06/15/1984 | 15.60\% | 12.17\% | 3.43\% |
| 06/22/1984 | 16.25\% | 12.21\% | 4.04\% |
| 06/29/1984 | 15.25\% | 12.26\% | 2.99\% |
| 07/02/1984 | 13.35\% | 12.27\% | 1.08\% |
| 07/10/1984 | 16.00\% | 12.31\% | 3.69\% |
| 07/12/1984 | 16.50\% | 12.32\% | 4.18\% |
| 07/13/1984 | 16.25\% | 12.33\% | 3.92\% |
| 07/17/1984 | 14.14\% | 12.35\% | 1.79\% |
| 07/18/1984 | 15.30\% | 12.36\% | 2.94\% |
| 07/18/1984 | 15.50\% | 12.36\% | 3.14\% |
| 07/19/1984 | 14.30\% | 12.37\% | 1.93\% |
| 07/24/1984 | 16.79\% | 12.39\% | 4.40\% |
| 07/31/1984 | 16.00\% | 12.43\% | 3.57\% |
| 08/03/1984 | 14.25\% | 12.44\% | 1.81\% |
| 08/17/1984 | 14.30\% | 12.49\% | 1.81\% |
| 08/20/1984 | 15.00\% | 12.49\% | 2.51\% |
| 08/27/1984 | 16.30\% | 12.51\% | 3.79\% |
| 08/31/1984 | 15.55\% | 12.52\% | 3.03\% |
| 09/06/1984 | 16.00\% | 12.53\% | 3.47\% |
| 09/10/1984 | 14.75\% | 12.54\% | 2.21\% |
| 09/13/1984 | 15.00\% | 12.55\% | 2.45\% |
| 09/17/1984 | 17.38\% | 12.56\% | 4.82\% |
| 09/26/1984 | 14.50\% | 12.57\% | 1.93\% |
| 09/28/1984 | 15.00\% | 12.57\% | 2.43\% |
| 09/28/1984 | 16.25\% | 12.57\% | 3.68\% |
| 10/09/1984 | 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\% |
| 11/07/1984 | 15.60\% | 12.58\% | 3.02\% |
| 11/09/1984 | 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\% |
| 12/03/1984 | 15.80\% | 12.56\% | 3.24\% |
| 12/04/1984 | 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\% |
| 01/03/1985 | 14.75\% | 12.49\% | 2.26\% |
| 01/10/1985 | 15.75\% | 12.47\% | 3.28\% |
| 01/11/1985 | 16.30\% | 12.46\% | 3.84\% |
| 01/23/1985 | 15.80\% | 12.43\% | 3.37\% |
| 01/24/1985 | 15.82\% | 12.43\% | 3.39\% |
| 01/25/1985 | 16.75\% | 12.42\% | 4.33\% |
| 01/30/1985 | 14.90\% | 12.40\% | 2.50\% |
| 01/31/1985 | 14.75\% | 12.39\% | 2.36\% |
| 02/08/1985 | 14.47\% | 12.35\% | 2.12\% |
| 03/01/1985 | 13.84\% | 12.31\% | 1.53\% |
| 03/08/1985 | 16.85\% | 12.28\% | 4.57\% |
| 03/14/1985 | 15.50\% | 12.25\% | 3.25\% |
| 03/15/1985 | 15.62\% | 12.25\% | 3.37\% |
| 03/29/1985 | 15.62\% | 12.17\% | 3.45\% |
| 04/03/1985 | 14.60\% | 12.14\% | 2.46\% |
| 04/09/1985 | 15.50\% | 12.11\% | 3.39\% |
| 04/16/1985 | 15.70\% | 12.06\% | 3.64\% |
| 04/22/1985 | 14.00\% | 12.02\% | 1.98\% |
| 04/26/1985 | 15.50\% | 11.98\% | 3.52\% |
| 04/29/1985 | 15.00\% | 11.97\% | 3.03\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Year |  |
| Electric | Return on | Treasury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 05/02/1985 | 14.68\% | 11.94\% | 2.74\% |
| 05/08/1985 | 15.62\% | 11.89\% | 3.73\% |
| 05/10/1985 | 16.50\% | 11.87\% | 4.63\% |
| 05/29/1985 | 14.61\% | 11.73\% | 2.88\% |
| 05/31/1985 | 16.00\% | 11.71\% | 4.29\% |
| 06/14/1985 | 15.50\% | 11.61\% | 3.89\% |
| 07/09/1985 | 15.00\% | 11.45\% | 3.55\% |
| 07/16/1985 | 14.50\% | 11.39\% | 3.11\% |
| 07/26/1985 | 14.50\% | 11.33\% | 3.17\% |
| 08/02/1985 | 14.80\% | 11.29\% | 3.51\% |
| 08/07/1985 | 15.00\% | 11.27\% | 3.73\% |
| 08/28/1985 | 14.25\% | 11.15\% | 3.10\% |
| 08/28/1985 | 15.50\% | 11.15\% | 4.35\% |
| 08/29/1985 | 14.50\% | 11.15\% | 3.35\% |
| 09/09/1985 | 14.60\% | 11.11\% | 3.49\% |
| 09/09/1985 | 14.90\% | 11.11\% | 3.79\% |
| 09/17/1985 | 14.90\% | 11.08\% | 3.82\% |
| 09/23/1985 | 15.00\% | 11.06\% | 3.94\% |
| 09/27/1985 | 15.50\% | 11.05\% | 4.45\% |
| 09/27/1985 | 15.80\% | 11.05\% | 4.75\% |
| 10/02/1985 | 14.00\% | 11.03\% | 2.97\% |
| 10/02/1985 | 14.75\% | 11.03\% | 3.72\% |
| 10/03/1985 | 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\% |
| 11/04/1985 | 14.50\% | 10.92\% | 3.58\% |
| 11/07/1985 | 15.50\% | 10.90\% | 4.60\% |
| 11/08/1985 | 14.30\% | 10.89\% | 3.41\% |
| 12/12/1985 | 14.75\% | 10.73\% | 4.02\% |
| 12/18/1985 | 15.00\% | 10.69\% | 4.31\% |
| 12/20/1985 | 14.50\% | 10.67\% | 3.83\% |
| 12/20/1985 | 14.50\% | 10.67\% | 3.83\% |
| 12/20/1985 | 15.00\% | 10.67\% | 4.33\% |
| 01/24/1986 | 15.40\% | 10.41\% | 4.99\% |
| 01/31/1986 | 15.00\% | 10.35\% | 4.65\% |
| 02/05/1986 | 15.00\% | 10.32\% | 4.68\% |
| 02/05/1986 | 15.75\% | 10.32\% | 5.43\% |
| 02/10/1986 | 13.30\% | 10.29\% | 3.01\% |
| 02/11/1986 | 12.50\% | 10.28\% | 2.22\% |
| 02/14/1986 | 14.40\% | 10.24\% | 4.16\% |
| 02/18/1986 | 16.00\% | 10.23\% | 5.77\% |
| 02/24/1986 | 14.50\% | 10.18\% | 4.32\% |
| 02/26/1986 | 14.00\% | 10.15\% | 3.85\% |
| 03/05/1986 | 14.90\% | 10.08\% | 4.82\% |
| 03/11/1986 | 14.50\% | 10.02\% | 4.48\% |
| 03/12/1986 | 13.50\% | 10.00\% | 3.50\% |
| 03/27/1986 | 14.10\% | 9.86\% | 4.24\% |
| 03/31/1986 | 13.50\% | 9.84\% | 3.66\% |
| 04/01/1986 | 14.00\% | 9.83\% | 4.17\% |
| 04/02/1986 | 15.50\% | 9.81\% | 5.69\% |
| 04/04/1986 | 15.00\% | 9.78\% | 5.22\% |
| 04/14/1986 | 13.40\% | 9.69\% | 3.71\% |
| 04/23/1986 | 15.00\% | 9.57\% | 5.43\% |
| 05/16/1986 | 14.50\% | 9.32\% | 5.18\% |
| 05/16/1986 | 14.50\% | 9.32\% | 5.18\% |
| 05/29/1986 | 13.90\% | 9.19\% | 4.71\% |
| 05/30/1986 | 15.10\% | 9.18\% | 5.92\% |
| 06/02/1986 | 12.81\% | 9.17\% | 3.64\% |
| 06/11/1986 | 14.00\% | 9.07\% | 4.93\% |
| 06/24/1986 | 16.63\% | 8.94\% | 7.69\% |
| 06/26/1986 | 12.00\% | 8.91\% | 3.09\% |
| 06/26/1986 | 14.75\% | 8.91\% | 5.84\% |
| 06/30/1986 | 13.00\% | 8.87\% | 4.13\% |
| 07/10/1986 | 14.34\% | 8.75\% | 5.59\% |
| 07/11/1986 | 12.75\% | 8.73\% | 4.02\% |
| 07/14/1986 | 12.60\% | 8.71\% | 3.89\% |
| 07/17/1986 | 12.40\% | 8.66\% | 3.74\% |
| 07/25/1986 | 14.25\% | 8.57\% | 5.68\% |
| 08/06/1986 | 13.50\% | 8.44\% | 5.06\% |
| 08/14/1986 | 13.50\% | 8.35\% | 5.15\% |
| 09/16/1986 | 12.75\% | 8.06\% | 4.69\% |
| 09/19/1986 | 13.25\% | 8.03\% | 5.22\% |
| 10/01/1986 | 14.00\% | 7.95\% | 6.05\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Year |  |
| Electric | Return on | Treasury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 10/03/1986 | 13.40\% | 7.93\% | 5.47\% |
| 10/31/1986 | 13.50\% | 7.77\% | 5.73\% |
| 11/05/1986 | 13.00\% | 7.75\% | 5.25\% |
| 12/03/1986 | 12.90\% | 7.58\% | 5.32\% |
| 12/04/1986 | 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\% |
| 01/02/1987 | 13.00\% | 7.49\% | 5.51\% |
| 01/12/1987 | 12.40\% | 7.47\% | 4.93\% |
| 01/27/1987 | 12.71\% | 7.46\% | 5.25\% |
| 03/02/1987 | 12.47\% | 7.47\% | 5.00\% |
| 03/03/1987 | 13.60\% | 7.47\% | 6.13\% |
| 03/04/1987 | 12.38\% | 7.47\% | 4.91\% |
| 03/10/1987 | 13.50\% | 7.47\% | 6.03\% |
| 03/13/1987 | 13.00\% | 7.47\% | 5.53\% |
| 03/31/1987 | 13.00\% | 7.46\% | 5.54\% |
| 04/06/1987 | 13.00\% | 7.47\% | 5.53\% |
| 04/14/1987 | 12.50\% | 7.49\% | 5.01\% |
| 04/16/1987 | 14.50\% | 7.50\% | 7.00\% |
| 04/27/1987 | 12.00\% | 7.54\% | 4.46\% |
| 05/05/1987 | 12.85\% | 7.58\% | 5.27\% |
| 05/12/1987 | 12.65\% | 7.62\% | 5.03\% |
| 05/28/1987 | 13.50\% | 7.70\% | 5.80\% |
| 06/15/1987 | 13.20\% | 7.78\% | 5.42\% |
| 06/29/1987 | 15.00\% | 7.83\% | 7.17\% |
| 06/30/1987 | 12.50\% | 7.84\% | 4.66\% |
| 07/08/1987 | 12.00\% | 7.86\% | 4.14\% |
| 07/10/1987 | 12.90\% | 7.86\% | 5.04\% |
| 07/15/1987 | 13.50\% | 7.88\% | 5.62\% |
| 07/16/1987 | 13.50\% | 7.88\% | 5.62\% |
| 07/16/1987 | 15.00\% | 7.88\% | 7.12\% |
| 07/27/1987 | 13.00\% | 7.92\% | 5.08\% |
| 07/27/1987 | 13.40\% | 7.92\% | 5.48\% |
| 07/27/1987 | 13.50\% | 7.92\% | 5.58\% |
| 07/31/1987 | 12.98\% | 7.95\% | 5.03\% |
| 08/26/1987 | 12.63\% | 8.06\% | 4.57\% |
| 08/26/1987 | 12.75\% | 8.06\% | 4.69\% |
| 08/27/1987 | 13.25\% | 8.06\% | 5.19\% |
| 09/09/1987 | 13.00\% | 8.14\% | 4.86\% |
| 09/30/1987 | 12.75\% | 8.31\% | 4.44\% |
| 09/30/1987 | 13.00\% | 8.31\% | 4.69\% |
| 10/02/1987 | 11.50\% | 8.33\% | 3.17\% |
| 10/15/1987 | 13.00\% | 8.43\% | 4.57\% |
| 11/02/1987 | 13.00\% | 8.55\% | 4.45\% |
| 11/19/1987 | 13.00\% | 8.64\% | 4.36\% |
| 11/30/1987 | 12.00\% | 8.68\% | 3.32\% |
| 12/03/1987 | 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\% |
| 01/20/1988 | 13.80\% | 8.94\% | 4.86\% |
| 01/26/1988 | 13.90\% | 8.95\% | 4.95\% |
| 01/29/1988 | 13.20\% | 8.96\% | 4.24\% |
| 02/04/1988 | 12.60\% | 8.96\% | 3.64\% |
| 03/01/1988 | 11.56\% | 8.94\% | 2.62\% |
| 03/23/1988 | 12.87\% | 8.92\% | 3.95\% |
| 03/24/1988 | 11.24\% | 8.92\% | 2.32\% |
| 03/30/1988 | 12.72\% | 8.92\% | 3.80\% |
| 04/01/1988 | 12.50\% | 8.92\% | 3.58\% |
| 04/07/1988 | 13.25\% | 8.93\% | 4.32\% |
| 04/25/1988 | 10.96\% | 8.96\% | 2.00\% |
| 05/03/1988 | 12.91\% | 8.97\% | 3.94\% |
| 05/11/1988 | 13.50\% | 8.99\% | 4.51\% |
| 05/16/1988 | 13.00\% | 8.99\% | 4.01\% |
| 06/30/1988 | 12.75\% | 9.00\% | 3.75\% |
| 07/01/1988 | 12.75\% | 8.99\% | 3.76\% |
| 07/20/1988 | 13.40\% | 8.96\% | 4.44\% |
| 08/05/1988 | 12.75\% | 8.92\% | 3.83\% |
| 08/23/1988 | 11.70\% | 8.93\% | 2.77\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Electric | Average 30- |  |  |
|  | Return on | Year | Risk Premium |
|  |  | Treasury |  |
| Rate Case | Equity | Yield |  |
| 08/29/1988 | 12.75\% | 8.94\% | 3.81\% |
| 08/30/1988 | 13.50\% | 8.94\% | 4.56\% |
| 09/08/1988 | 12.60\% | 8.95\% | 3.65\% |
| 10/13/1988 | 13.10\% | 8.93\% | 4.17\% |
| 12/19/1988 | 13.00\% | 9.02\% | 3.98\% |
| 12/20/1988 | 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\% |
| 01/27/1989 | 13.00\% | 9.05\% | 3.95\% |
| 01/31/1989 | 13.00\% | 9.05\% | 3.95\% |
| 02/17/1989 | 13.00\% | 9.05\% | 3.95\% |
| 02/20/1989 | 12.40\% | 9.05\% | 3.35\% |
| 03/01/1989 | 12.76\% | 9.05\% | 3.71\% |
| 03/08/1989 | 13.00\% | 9.05\% | 3.95\% |
| 03/30/1989 | 14.00\% | 9.05\% | 4.95\% |
| 04/05/1989 | 14.20\% | 9.05\% | 5.15\% |
| 04/18/1989 | 13.00\% | 9.05\% | 3.95\% |
| 05/05/1989 | 12.40\% | 9.05\% | 3.35\% |
| 06/02/1989 | 13.20\% | 9.00\% | 4.20\% |
| 06/08/1989 | 13.50\% | 8.98\% | 4.52\% |
| 06/27/1989 | 13.25\% | 8.91\% | 4.34\% |
| 06/30/1989 | 13.00\% | 8.90\% | 4.10\% |
| 08/14/1989 | 12.50\% | 8.77\% | 3.73\% |
| 09/28/1989 | 12.25\% | 8.63\% | 3.62\% |
| 10/24/1989 | 12.50\% | 8.54\% | 3.96\% |
| 11/09/1989 | 13.00\% | 8.49\% | 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\% |
| 01/10/1990 | 12.80\% | 8.24\% | 4.56\% |
| 01/11/1990 | 12.90\% | 8.24\% | 4.66\% |
| 01/17/1990 | 12.80\% | 8.22\% | 4.58\% |
| 01/26/1990 | 12.00\% | 8.20\% | 3.80\% |
| 02/09/1990 | 12.10\% | 8.17\% | 3.93\% |
| 02/24/1990 | 12.86\% | 8.15\% | 4.71\% |
| 03/30/1990 | 12.90\% | 8.16\% | 4.74\% |
| 04/04/1990 | 15.76\% | 8.17\% | 7.59\% |
| 04/12/1990 | 12.52\% | 8.18\% | 4.34\% |
| 04/19/1990 | 12.75\% | 8.20\% | 4.55\% |
| 05/21/1990 | 12.10\% | 8.28\% | 3.82\% |
| 05/29/1990 | 12.40\% | 8.30\% | 4.10\% |
| 05/31/1990 | 12.00\% | 8.30\% | 3.70\% |
| 06/04/1990 | 12.90\% | 8.30\% | 4.60\% |
| 06/06/1990 | 12.25\% | 8.31\% | 3.94\% |
| 06/15/1990 | 13.20\% | 8.32\% | 4.88\% |
| 06/20/1990 | 12.92\% | 8.32\% | 4.60\% |
| 06/27/1990 | 12.90\% | 8.33\% | 4.57\% |
| 06/29/1990 | 12.50\% | 8.33\% | 4.17\% |
| 07/06/1990 | 12.10\% | 8.34\% | 3.76\% |
| 07/06/1990 | 12.35\% | 8.34\% | 4.01\% |
| 08/10/1990 | 12.55\% | 8.41\% | 4.14\% |
| 08/16/1990 | 13.21\% | 8.43\% | 4.78\% |
| 08/22/1990 | 13.10\% | 8.45\% | 4.65\% |
| 08/24/1990 | 13.00\% | 8.46\% | 4.54\% |
| 09/26/1990 | 11.45\% | 8.59\% | 2.86\% |
| 10/02/1990 | 13.00\% | 8.61\% | 4.39\% |
| 10/05/1990 | 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\% |
| 01/02/1991 | 13.10\% | 8.65\% | 4.45\% |
| 01/04/1991 | 12.50\% | 8.65\% | 3.85\% |
| 01/15/1991 | 12.75\% | 8.64\% | 4.11\% |
| 01/25/1991 | 11.70\% | 8.63\% | 3.07\% |
| 02/04/1991 | 12.50\% | 8.60\% | 3.90\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
|  | Average 30- |  |  |
| Date of |  |  |  |
| Electric | Return on | Treasury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 02/07/1991 | 12.50\% | 8.59\% | 3.91\% |
| 02/12/1991 | 13.00\% | 8.58\% | 4.43\% |
| 02/14/1991 | 12.72\% | 8.57\% | 4.15\% |
| 02/22/1991 | 12.80\% | 8.55\% | 4.25\% |
| 03/06/1991 | 13.10\% | 8.53\% | 4.57\% |
| 03/08/1991 | 12.30\% | 8.52\% | 3.78\% |
| 03/08/1991 | 13.00\% | 8.52\% | 4.48\% |
| 04/22/1991 | 13.00\% | 8.49\% | 4.51\% |
| 05/07/1991 | 13.50\% | 8.47\% | 5.03\% |
| 05/13/1991 | 13.25\% | 8.47\% | 4.78\% |
| 05/30/1991 | 12.75\% | 8.44\% | 4.31\% |
| 06/12/1991 | 12.00\% | 8.41\% | 3.59\% |
| 06/25/1991 | 11.70\% | 8.39\% | 3.31\% |
| 06/28/1991 | 12.50\% | 8.38\% | 4.12\% |
| 07/01/1991 | 12.00\% | 8.38\% | 3.62\% |
| 07/03/1991 | 12.50\% | 8.37\% | 4.13\% |
| 07/19/1991 | 12.10\% | 8.34\% | 3.76\% |
| 08/01/1991 | 12.90\% | 8.32\% | 4.58\% |
| 08/16/1991 | 13.20\% | 8.29\% | 4.91\% |
| 09/27/1991 | 12.50\% | 8.23\% | 4.27\% |
| 09/30/1991 | 12.25\% | 8.23\% | 4.02\% |
| 10/17/1991 | 13.00\% | 8.20\% | 4.80\% |
| 10/23/1991 | 12.50\% | 8.20\% | 4.30\% |
| 10/23/1991 | 12.55\% | 8.20\% | 4.35\% |
| 10/31/1991 | 11.80\% | 8.19\% | 3.61\% |
| 11/01/1991 | 12.00\% | 8.19\% | 3.81\% |
| 11/05/1991 | 12.25\% | 8.19\% | 4.06\% |
| 11/12/1991 | 12.50\% | 8.18\% | 4.32\% |
| 11/12/1991 | 13.25\% | 8.18\% | 5.07\% |
| 11/25/1991 | 12.40\% | 8.18\% | 4.22\% |
| 11/26/1991 | 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\% |
| 01/09/1992 | 12.80\% | 8.09\% | 4.71\% |
| 01/16/1992 | 12.75\% | 8.07\% | 4.68\% |
| 01/21/1992 | 12.00\% | 8.06\% | 3.94\% |
| 01/22/1992 | 13.00\% | 8.06\% | 4.94\% |
| 01/27/1992 | 12.65\% | 8.05\% | 4.60\% |
| 01/31/1992 | 12.00\% | 8.04\% | 3.96\% |
| 02/11/1992 | 12.40\% | 8.03\% | 4.37\% |
| 02/25/1992 | 12.50\% | 8.01\% | 4.49\% |
| 03/16/1992 | 11.43\% | 7.98\% | 3.45\% |
| 03/18/1992 | 12.28\% | 7.98\% | 4.30\% |
| 04/02/1992 | 12.10\% | 7.95\% | 4.15\% |
| 04/09/1992 | 11.45\% | 7.94\% | 3.51\% |
| 04/10/1992 | 11.50\% | 7.93\% | 3.57\% |
| 04/14/1992 | 11.50\% | 7.93\% | 3.57\% |
| 05/05/1992 | 11.50\% | 7.89\% | 3.61\% |
| 05/12/1992 | 11.87\% | 7.88\% | 3.99\% |
| 05/12/1992 | 12.46\% | 7.88\% | 4.58\% |
| 06/01/1992 | 12.30\% | 7.87\% | 4.43\% |
| 06/12/1992 | 10.90\% | 7.86\% | 3.04\% |
| 06/26/1992 | 12.35\% | 7.85\% | 4.50\% |
| 06/29/1992 | 11.00\% | 7.85\% | 3.15\% |
| 06/30/1992 | 13.00\% | 7.85\% | 5.15\% |
| 07/13/1992 | 11.90\% | 7.84\% | 4.06\% |
| 07/13/1992 | 13.50\% | 7.84\% | 5.66\% |
| 07/22/1992 | 11.20\% | 7.83\% | 3.37\% |
| 08/03/1992 | 12.00\% | 7.81\% | 4.19\% |
| 08/06/1992 | 12.50\% | 7.80\% | 4.70\% |
| 09/22/1992 | 12.00\% | 7.71\% | 4.29\% |
| 09/28/1992 | 11.40\% | 7.71\% | 3.69\% |
| 09/30/1992 | 11.75\% | 7.70\% | 4.05\% |
| 10/02/1992 | 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\% |
| 11/03/1992 | 12.00\% | 7.71\% | 4.29\% |
| 12/03/1992 | 11.85\% | 7.68\% | 4.17\% |
| 12/15/1992 | 11.00\% | 7.66\% | 3.34\% |
| 12/16/1992 | 11.90\% | 7.66\% | 4.24\% |
| 12/16/1992 | 12.40\% | 7.66\% | 4.74\% |
| 12/17/1992 | 12.00\% | 7.66\% | 4.34\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
|  | Average 30- |  |  |
| of | Year |  |  |
| Electric | Return on | TreasuryYield |  |
| Rate Case | Equity |  | Risk Premium |
| 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\% |
| 01/12/1993 | 12.00\% | 7.61\% | 4.39\% |
| 01/21/1993 | 11.25\% | 7.59\% | 3.66\% |
| 02/02/1993 | 11.40\% | 7.56\% | 3.84\% |
| 02/15/1993 | 12.30\% | 7.52\% | 4.78\% |
| 02/24/1993 | 11.90\% | 7.49\% | 4.41\% |
| 02/26/1993 | 11.80\% | 7.48\% | 4.32\% |
| 02/26/1993 | 12.20\% | 7.48\% | 4.72\% |
| 04/23/1993 | 11.75\% | 7.29\% | 4.46\% |
| 05/11/1993 | 11.75\% | 7.25\% | 4.50\% |
| 05/14/1993 | 11.50\% | 7.24\% | 4.26\% |
| 05/25/1993 | 11.50\% | 7.23\% | 4.27\% |
| 05/28/1993 | 11.00\% | 7.22\% | 3.78\% |
| 06/03/1993 | 12.00\% | 7.21\% | 4.79\% |
| 06/16/1993 | 11.50\% | 7.19\% | 4.31\% |
| 06/18/1993 | 12.10\% | 7.18\% | 4.92\% |
| 06/25/1993 | 11.67\% | 7.17\% | 4.50\% |
| 07/21/1993 | 11.38\% | 7.10\% | 4.28\% |
| 07/23/1993 | 10.46\% | 7.09\% | 3.37\% |
| 08/24/1993 | 11.50\% | 6.96\% | 4.54\% |
| 09/21/1993 | 10.50\% | 6.81\% | 3.69\% |
| 09/29/1993 | 11.47\% | 6.77\% | 4.70\% |
| 09/30/1993 | 11.60\% | 6.76\% | 4.84\% |
| 11/02/1993 | 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\% |
| 01/04/1994 | 10.07\% | 6.44\% | 3.63\% |
| 01/13/1994 | 11.00\% | 6.42\% | 4.58\% |
| 01/21/1994 | 11.00\% | 6.40\% | 4.60\% |
| 01/28/1994 | 11.35\% | 6.39\% | 4.96\% |
| 02/03/1994 | 11.40\% | 6.38\% | 5.02\% |
| 02/17/1994 | 10.60\% | 6.36\% | 4.24\% |
| 02/25/1994 | 11.25\% | 6.35\% | 4.90\% |
| 02/25/1994 | 12.00\% | 6.35\% | 5.65\% |
| 03/01/1994 | 11.00\% | 6.35\% | 4.65\% |
| 03/04/1994 | 11.00\% | 6.35\% | 4.65\% |
| 04/25/1994 | 11.00\% | 6.41\% | 4.59\% |
| 05/10/1994 | 11.75\% | 6.45\% | 5.30\% |
| 05/13/1994 | 10.50\% | 6.46\% | 4.04\% |
| 06/03/1994 | 11.00\% | 6.54\% | 4.46\% |
| 06/27/1994 | 11.40\% | 6.65\% | 4.75\% |
| 08/05/1994 | 12.75\% | 6.88\% | 5.87\% |
| 10/31/1994 | 10.00\% | 7.33\% | 2.67\% |
| 11/09/1994 | 10.85\% | 7.39\% | 3.46\% |
| 11/09/1994 | 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\% |
| 12/08/1994 | 11.50\% | 7.54\% | 3.96\% |
| 12/08/1994 | 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\% |
| 01/09/1995 | 12.28\% | 7.64\% | 4.64\% |
| 01/31/1995 | 11.00\% | 7.69\% | 3.31\% |
| 02/10/1995 | 12.60\% | 7.70\% | 4.90\% |
| 02/17/1995 | 11.90\% | 7.70\% | 4.20\% |
| 03/09/1995 | 11.50\% | 7.71\% | 3.79\% |
| 03/20/1995 | 12.00\% | 7.72\% | 4.28\% |
| 03/23/1995 | 12.81\% | 7.72\% | 5.09\% |
| 03/29/1995 | 11.60\% | 7.72\% | 3.88\% |
| 04/06/1995 | 11.10\% | 7.71\% | 3.39\% |
| 04/07/1995 | 11.00\% | 7.71\% | 3.29\% |
| 04/19/1995 | 11.00\% | 7.70\% | 3.30\% |
| 05/12/1995 | 11.63\% | 7.68\% | 3.95\% |
| 05/25/1995 | 11.20\% | 7.65\% | 3.55\% |
| 06/09/1995 | 11.25\% | 7.60\% | 3.65\% |
| 06/21/1995 | 12.25\% | 7.56\% | 4.69\% |
| 06/30/1995 | 11.10\% | 7.52\% | 3.58\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Yea |  |
| Electric | Return on | easury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 09/11/1995 | 11.30\% | 7.20\% | 4.10\% |
| 09/27/1995 | 11.30\% | 7.12\% | 4.18\% |
| 09/27/1995 | 11.50\% | 7.12\% | 4.38\% |
| 09/27/1995 | 11.75\% | 7.12\% | 4.63\% |
| 09/29/1995 | 11.00\% | 7.11\% | 3.89\% |
| 11/09/1995 | 11.38\% | 6.90\% | 4.48\% |
| 11/09/1995 | 12.36\% | 6.90\% | 5.46\% |
| 11/17/1995 | 11.00\% | 6.86\% | 4.14\% |
| 12/04/1995 | 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\% |
| 02/05/1996 | 12.25\% | 6.48\% | 5.77\% |
| 03/29/1996 | 10.67\% | 6.42\% | 4.25\% |
| 04/08/1996 | 11.00\% | 6.42\% | 4.58\% |
| 04/11/1996 | 12.59\% | 6.43\% | 6.16\% |
| 04/11/1996 | 12.59\% | 6.43\% | 6.16\% |
| 04/24/1996 | 11.25\% | 6.43\% | 4.82\% |
| 04/30/1996 | 11.00\% | 6.43\% | 4.57\% |
| 05/13/1996 | 11.00\% | 6.44\% | 4.56\% |
| 05/23/1996 | 11.25\% | 6.43\% | 4.82\% |
| 06/25/1996 | 11.25\% | 6.48\% | 4.77\% |
| 06/27/1996 | 11.20\% | 6.48\% | 4.72\% |
| 08/12/1996 | 10.40\% | 6.57\% | 3.83\% |
| 09/27/1996 | 11.00\% | 6.71\% | 4.29\% |
| 10/16/1996 | 12.25\% | 6.76\% | 5.49\% |
| 11/05/1996 | 11.00\% | 6.81\% | 4.19\% |
| 11/26/1996 | 11.30\% | 6.83\% | 4.47\% |
| 12/18/1996 | 11.75\% | 6.83\% | 4.92\% |
| 12/31/1996 | 11.50\% | 6.83\% | 4.67\% |
| 01/03/1997 | 10.70\% | 6.83\% | 3.87\% |
| 02/13/1997 | 11.80\% | 6.82\% | 4.98\% |
| 02/20/1997 | 11.80\% | 6.82\% | 4.98\% |
| 03/31/1997 | 10.02\% | 6.80\% | 3.22\% |
| 04/02/1997 | 11.65\% | 6.80\% | 4.85\% |
| 04/28/1997 | 11.50\% | 6.81\% | 4.69\% |
| 04/29/1997 | 11.70\% | 6.81\% | 4.89\% |
| 07/17/1997 | 12.00\% | 6.77\% | 5.23\% |
| 12/12/1997 | 11.00\% | 6.60\% | 4.40\% |
| 12/23/1997 | 11.12\% | 6.57\% | 4.55\% |
| 02/02/1998 | 12.75\% | 6.39\% | 6.36\% |
| 03/02/1998 | 11.25\% | 6.29\% | 4.96\% |
| 03/06/1998 | 10.75\% | 6.27\% | 4.48\% |
| 03/20/1998 | 10.50\% | 6.22\% | 4.28\% |
| 04/30/1998 | 12.20\% | 6.12\% | 6.08\% |
| 07/10/1998 | 11.40\% | 5.94\% | 5.46\% |
| 09/15/1998 | 11.90\% | 5.78\% | 6.12\% |
| 11/30/1998 | 12.60\% | 5.58\% | 7.02\% |
| 12/10/1998 | 12.20\% | 5.54\% | 6.66\% |
| 12/17/1998 | 12.10\% | 5.52\% | 6.58\% |
| 02/05/1999 | 10.30\% | 5.38\% | 4.92\% |
| 03/04/1999 | 10.50\% | 5.34\% | 5.16\% |
| 04/06/1999 | 10.94\% | 5.32\% | 5.62\% |
| 07/29/1999 | 10.75\% | 5.52\% | 5.23\% |
| 09/23/1999 | 10.75\% | 5.70\% | 5.05\% |
| 11/17/1999 | 11.10\% | 5.90\% | 5.20\% |
| 01/07/2000 | 11.50\% | 6.05\% | 5.45\% |
| 01/07/2000 | 11.50\% | 6.05\% | 5.45\% |
| 02/17/2000 | 10.60\% | 6.17\% | 4.43\% |
| 03/28/2000 | 11.25\% | 6.20\% | 5.05\% |
| 05/24/2000 | 11.00\% | 6.18\% | 4.82\% |
| 07/18/2000 | 12.20\% | 6.16\% | 6.04\% |
| 09/29/2000 | 11.16\% | 6.03\% | 5.13\% |
| 11/28/2000 | 12.90\% | 5.89\% | 7.01\% |
| 11/30/2000 | 12.10\% | 5.88\% | 6.22\% |
| 01/23/2001 | 11.25\% | 5.79\% | 5.46\% |
| 02/08/2001 | 11.50\% | 5.77\% | 5.73\% |
| 05/08/2001 | 10.75\% | 5.62\% | 5.13\% |
| 06/26/2001 | 11.00\% | 5.62\% | 5.38\% |
| 07/25/2001 | 11.02\% | 5.60\% | 5.42\% |
| 07/25/2001 | 11.02\% | 5.60\% | 5.42\% |
| 07/31/2001 | 11.00\% | 5.59\% | 5.41\% |
| 08/31/2001 | 10.50\% | 5.56\% | 4.94\% |
| 09/07/2001 | 10.75\% | 5.55\% | 5.20\% |
| 09/10/2001 | 11.00\% | 5.55\% | 5.45\% |
| 09/20/2001 | 10.00\% | 5.55\% | 4.45\% |
| 10/24/2001 | 10.30\% | 5.54\% | 4.76\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
|  | Average 30- |  |  |
| Date of |  | Year |  |
| Electric | Return on |  |  |
| Rate Case | Equity | Yield | Risk Premium |
| 11/28/2001 | 10.60\% | 5.49\% | 5.11\% |
| 12/03/2001 | 12.88\% | 5.49\% | 7.39\% |
| 12/20/2001 | 12.50\% | 5.50\% | 7.00\% |
| 01/22/2002 | 10.00\% | 5.50\% | 4.50\% |
| 03/27/2002 | 10.10\% | 5.45\% | 4.65\% |
| 04/22/2002 | 11.80\% | 5.45\% | 6.35\% |
| 05/28/2002 | 10.17\% | 5.46\% | 4.71\% |
| 06/10/2002 | 12.00\% | 5.47\% | 6.53\% |
| 06/18/2002 | 11.16\% | 5.48\% | 5.68\% |
| 06/20/2002 | 11.00\% | 5.48\% | 5.52\% |
| 06/20/2002 | 12.30\% | 5.48\% | 6.82\% |
| 07/15/2002 | 11.00\% | 5.48\% | 5.52\% |
| 09/12/2002 | 12.30\% | 5.45\% | 6.85\% |
| 09/26/2002 | 10.45\% | 5.41\% | 5.04\% |
| 12/04/2002 | 11.55\% | 5.29\% | 6.26\% |
| 12/13/2002 | 11.75\% | 5.27\% | 6.48\% |
| 12/20/2002 | 11.40\% | 5.25\% | 6.15\% |
| 01/08/2003 | 11.10\% | 5.19\% | 5.91\% |
| 01/31/2003 | 12.45\% | 5.13\% | 7.32\% |
| 02/28/2003 | 12.30\% | 5.05\% | 7.25\% |
| 03/06/2003 | 10.75\% | 5.03\% | 5.72\% |
| 03/07/2003 | 9.96\% | 5.02\% | 4.94\% |
| 03/20/2003 | 12.00\% | 4.98\% | 7.02\% |
| 04/03/2003 | 12.00\% | 4.96\% | 7.04\% |
| 04/15/2003 | 11.15\% | 4.94\% | 6.21\% |
| 06/25/2003 | 10.75\% | 4.79\% | 5.96\% |
| 06/26/2003 | 10.75\% | 4.79\% | 5.96\% |
| 07/09/2003 | 9.75\% | 4.79\% | 4.96\% |
| 07/16/2003 | 9.75\% | 4.79\% | 4.96\% |
| 07/25/2003 | 9.50\% | 4.80\% | 4.70\% |
| 08/26/2003 | 10.50\% | 4.83\% | 5.67\% |
| 12/17/2003 | 9.85\% | 4.94\% | 4.91\% |
| 12/17/2003 | 10.70\% | 4.94\% | 5.76\% |
| 12/18/2003 | 11.50\% | 4.94\% | 6.56\% |
| 12/19/2003 | 12.00\% | 4.94\% | 7.06\% |
| 12/19/2003 | 12.00\% | 4.94\% | 7.06\% |
| 12/23/2003 | 10.50\% | 4.94\% | 5.56\% |
| 01/13/2004 | 12.00\% | 4.95\% | 7.05\% |
| 03/02/2004 | 10.75\% | 4.99\% | 5.76\% |
| 03/26/2004 | 10.25\% | 5.02\% | 5.23\% |
| 04/05/2004 | 11.25\% | 5.03\% | 6.22\% |
| 05/18/2004 | 10.50\% | 5.07\% | 5.43\% |
| 05/25/2004 | 10.25\% | 5.08\% | 5.17\% |
| 05/27/2004 | 10.25\% | 5.08\% | 5.17\% |
| 06/02/2004 | 11.22\% | 5.08\% | 6.14\% |
| 06/30/2004 | 10.50\% | 5.10\% | 5.40\% |
| 06/30/2004 | 10.50\% | 5.10\% | 5.40\% |
| 07/16/2004 | 11.60\% | 5.11\% | 6.49\% |
| 08/25/2004 | 10.25\% | 5.10\% | 5.15\% |
| 09/09/2004 | 10.40\% | 5.10\% | 5.30\% |
| 11/09/2004 | 10.50\% | 5.07\% | 5.43\% |
| 11/23/2004 | 11.00\% | 5.06\% | 5.94\% |
| 12/14/2004 | 10.97\% | 5.07\% | 5.90\% |
| 12/21/2004 | 11.25\% | 5.07\% | 6.18\% |
| 12/21/2004 | 11.50\% | 5.07\% | 6.43\% |
| 12/22/2004 | 10.70\% | 5.07\% | 5.63\% |
| 12/22/2004 | 11.50\% | 5.07\% | 6.43\% |
| 12/29/2004 | 9.85\% | 5.07\% | 4.78\% |
| 01/06/2005 | 10.70\% | 5.08\% | 5.62\% |
| 02/18/2005 | 10.30\% | 4.98\% | 5.32\% |
| 02/25/2005 | 10.50\% | 4.96\% | 5.54\% |
| 03/10/2005 | 11.00\% | 4.93\% | 6.07\% |
| 03/24/2005 | 10.30\% | 4.90\% | 5.40\% |
| 04/04/2005 | 10.00\% | 4.88\% | 5.12\% |
| 04/07/2005 | 10.25\% | 4.87\% | 5.38\% |
| 05/18/2005 | 10.25\% | 4.78\% | 5.47\% |
| 05/25/2005 | 10.75\% | 4.76\% | 5.99\% |
| 05/26/2005 | 9.75\% | 4.76\% | 4.99\% |
| 06/01/2005 | 9.75\% | 4.75\% | 5.00\% |
| 07/19/2005 | 11.50\% | 4.64\% | 6.86\% |
| 08/05/2005 | 11.75\% | 4.62\% | 7.13\% |
| 08/15/2005 | 10.13\% | 4.61\% | 5.52\% |
| 09/28/2005 | 10.00\% | 4.54\% | 5.46\% |
| 10/04/2005 | 10.75\% | 4.54\% | 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\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Yea |  |
| Electric | Return on | reasury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 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\% |
| 01/05/2006 | 11.00\% | 4.53\% | 6.47\% |
| 01/27/2006 | 9.75\% | 4.52\% | 5.23\% |
| 03/03/2006 | 10.39\% | 4.53\% | 5.86\% |
| 04/17/2006 | 10.20\% | 4.61\% | 5.59\% |
| 04/26/2006 | 10.60\% | 4.64\% | 5.96\% |
| 05/17/2006 | 11.60\% | 4.69\% | 6.91\% |
| 06/06/2006 | 10.00\% | 4.74\% | 5.26\% |
| 06/27/2006 | 10.75\% | 4.80\% | 5.95\% |
| 07/06/2006 | 10.20\% | 4.83\% | 5.37\% |
| 07/24/2006 | 9.60\% | 4.86\% | 4.74\% |
| 07/26/2006 | 10.50\% | 4.86\% | 5.64\% |
| 07/28/2006 | 10.05\% | 4.86\% | 5.19\% |
| 08/23/2006 | 9.55\% | 4.89\% | 4.66\% |
| 09/01/2006 | 10.54\% | 4.90\% | 5.64\% |
| 09/14/2006 | 10.00\% | 4.91\% | 5.09\% |
| 10/06/2006 | 9.67\% | 4.92\% | 4.75\% |
| 11/21/2006 | 10.08\% | 4.95\% | 5.13\% |
| 11/21/2006 | 10.08\% | 4.95\% | 5.13\% |
| 11/21/2006 | 10.12\% | 4.95\% | 5.17\% |
| 12/01/2006 | 10.25\% | 4.95\% | 5.30\% |
| 12/01/2006 | 10.50\% | 4.95\% | 5.55\% |
| 12/07/2006 | 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\% |
| 01/05/2007 | 10.00\% | 4.95\% | 5.05\% |
| 01/11/2007 | 10.10\% | 4.95\% | 5.15\% |
| 01/11/2007 | 10.10\% | 4.95\% | 5.15\% |
| 01/11/2007 | 10.90\% | 4.95\% | 5.95\% |
| 01/12/2007 | 10.10\% | 4.95\% | 5.15\% |
| 01/13/2007 | 10.40\% | 4.95\% | 5.45\% |
| 01/19/2007 | 10.80\% | 4.94\% | 5.86\% |
| 03/21/2007 | 11.35\% | 4.87\% | 6.48\% |
| 03/22/2007 | 9.75\% | 4.86\% | 4.89\% |
| 05/15/2007 | 10.00\% | 4.81\% | 5.19\% |
| 05/17/2007 | 10.25\% | 4.81\% | 5.44\% |
| 05/17/2007 | 10.25\% | 4.81\% | 5.44\% |
| 05/22/2007 | 10.20\% | 4.80\% | 5.40\% |
| 05/22/2007 | 10.50\% | 4.80\% | 5.70\% |
| 05/23/2007 | 10.70\% | 4.80\% | 5.90\% |
| 05/25/2007 | 9.67\% | 4.80\% | 4.87\% |
| 06/15/2007 | 9.90\% | 4.82\% | 5.08\% |
| 06/21/2007 | 10.20\% | 4.83\% | 5.37\% |
| 06/22/2007 | 10.50\% | 4.83\% | 5.67\% |
| 06/28/2007 | 10.75\% | 4.84\% | 5.91\% |
| 07/12/2007 | 9.67\% | 4.86\% | 4.81\% |
| 07/19/2007 | 10.00\% | 4.87\% | 5.13\% |
| 07/19/2007 | 10.00\% | 4.87\% | 5.13\% |
| 08/15/2007 | 10.40\% | 4.88\% | 5.52\% |
| 10/09/2007 | 10.00\% | 4.91\% | 5.09\% |
| 10/17/2007 | 9.10\% | 4.91\% | 4.19\% |
| 10/31/2007 | 9.96\% | 4.90\% | 5.06\% |
| 11/29/2007 | 10.90\% | 4.87\% | 6.03\% |
| 12/06/2007 | 10.75\% | 4.86\% | 5.89\% |
| 12/13/2007 | 9.96\% | 4.86\% | 5.10\% |
| 12/14/2007 | 10.70\% | 4.86\% | 5.84\% |
| 12/14/2007 | 10.80\% | 4.86\% | 5.94\% |
| 12/19/2007 | 10.20\% | 4.86\% | 5.34\% |
| 12/20/2007 | 10.20\% | 4.85\% | 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\% |
| 01/08/2008 | 10.75\% | 4.83\% | 5.92\% |
| 01/17/2008 | 10.75\% | 4.81\% | 5.94\% |
| 01/28/2008 | 9.40\% | 4.80\% | 4.60\% |
| 01/30/2008 | 10.00\% | 4.79\% | 5.21\% |
| 01/31/2008 | 10.71\% | 4.79\% | 5.92\% |
| 02/29/2008 | 10.25\% | 4.75\% | 5.50\% |
| 03/12/2008 | 10.25\% | 4.73\% | 5.52\% |
| 03/25/2008 | 9.10\% | 4.68\% | 4.42\% |
| 04/22/2008 | 10.25\% | 4.60\% | 5.65\% |
| 04/24/2008 | 10.10\% | 4.60\% | 5.50\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
|  | Average 30- |  |  |
| Date of | Return on Equity | Yea | Risk Premium |
| Electric |  | asury |  |
| Rate Case |  | Yield |  |
| 05/01/2008 | 10.70\% | 4.59\% | 6.11\% |
| 05/19/2008 | 11.00\% | 4.56\% | 6.44\% |
| 05/27/2008 | 10.00\% | 4.55\% | 5.45\% |
| 06/10/2008 | 10.70\% | 4.54\% | 6.16\% |
| 06/27/2008 | 10.50\% | 4.54\% | 5.96\% |
| 06/27/2008 | 11.04\% | 4.54\% | 6.50\% |
| 07/10/2008 | 10.43\% | 4.52\% | 5.91\% |
| 07/16/2008 | 9.40\% | 4.52\% | 4.88\% |
| 07/30/2008 | 10.80\% | 4.51\% | 6.29\% |
| 07/31/2008 | 10.70\% | 4.51\% | 6.19\% |
| 08/11/2008 | 10.25\% | 4.51\% | 5.74\% |
| 08/26/2008 | 10.18\% | 4.50\% | 5.68\% |
| 09/10/2008 | 10.30\% | 4.50\% | 5.80\% |
| 09/24/2008 | 10.65\% | 4.48\% | 6.17\% |
| 09/24/2008 | 10.65\% | 4.48\% | 6.17\% |
| 09/24/2008 | 10.65\% | 4.48\% | 6.17\% |
| 09/30/2008 | 10.20\% | 4.48\% | 5.72\% |
| 10/08/2008 | 10.15\% | 4.46\% | 5.69\% |
| 11/13/2008 | 10.55\% | 4.45\% | 6.10\% |
| 11/17/2008 | 10.20\% | 4.44\% | 5.76\% |
| 12/01/2008 | 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\% |
| 01/14/2009 | 10.50\% | 4.15\% | 6.35\% |
| 01/21/2009 | 10.50\% | 4.12\% | 6.38\% |
| 01/21/2009 | 10.50\% | 4.12\% | 6.38\% |
| 01/21/2009 | 10.50\% | 4.12\% | 6.38\% |
| 01/27/2009 | 10.76\% | 4.09\% | 6.67\% |
| 01/30/2009 | 10.50\% | 4.08\% | 6.42\% |
| 02/04/2009 | 8.75\% | 4.06\% | 4.69\% |
| 03/04/2009 | 10.50\% | 3.96\% | 6.54\% |
| 03/12/2009 | 11.50\% | 3.93\% | 7.57\% |
| 04/02/2009 | 11.10\% | 3.85\% | 7.25\% |
| 04/21/2009 | 10.61\% | 3.80\% | 6.81\% |
| 04/24/2009 | 10.00\% | 3.79\% | 6.21\% |
| 04/30/2009 | 11.25\% | 3.78\% | 7.47\% |
| 05/04/2009 | 10.74\% | 3.77\% | 6.97\% |
| 05/20/2009 | 10.25\% | 3.74\% | 6.51\% |
| 05/28/2009 | 10.50\% | 3.74\% | 6.76\% |
| 06/22/2009 | 10.00\% | 3.76\% | 6.24\% |
| 06/24/2009 | 10.80\% | 3.77\% | 7.03\% |
| 07/08/2009 | 10.63\% | 3.77\% | 6.86\% |
| 07/17/2009 | 10.50\% | 3.78\% | 6.72\% |
| 08/31/2009 | 10.25\% | 3.82\% | 6.43\% |
| 10/14/2009 | 10.70\% | 4.01\% | 6.69\% |
| 10/23/2009 | 10.88\% | 4.06\% | 6.82\% |
| 11/02/2009 | 10.70\% | 4.09\% | 6.61\% |
| 11/03/2009 | 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\% |
| 12/03/2009 | 10.50\% | 4.18\% | 6.32\% |
| 12/07/2009 | 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\% |
| 01/04/2010 | 10.80\% | 4.28\% | 6.52\% |
| 01/11/2010 | 11.00\% | 4.30\% | 6.70\% |
| 01/26/2010 | 10.13\% | 4.35\% | 5.78\% |
| 01/27/2010 | 10.40\% | 4.35\% | 6.05\% |
| 01/27/2010 | 10.40\% | 4.35\% | 6.05\% |
| 01/27/2010 | 10.70\% | 4.35\% | 6.35\% |
| 02/09/2010 | 9.80\% | 4.38\% | 5.42\% |
| 02/18/2010 | 10.60\% | 4.40\% | 6.20\% |
| 02/24/2010 | 10.18\% | 4.41\% | 5.77\% |
| 03/02/2010 | 9.63\% | 4.41\% | 5.22\% |
| 03/04/2010 | 10.50\% | 4.41\% | 6.09\% |
| 03/05/2010 | 10.50\% | 4.41\% | 6.09\% |
| 03/11/2010 | 11.90\% | 4.42\% | 7.48\% |
| 03/17/2010 | 10.00\% | 4.41\% | 5.59\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Date of Electric | Average 30- |  |  |
|  | Return on | Year | Risk Premium |
|  |  | reasury |  |
| Rate Case | Equity | Yield |  |
| 03/25/2010 | 10.15\% | 4.42\% | 5.73\% |
| 04/02/2010 | 10.10\% | 4.43\% | 5.67\% |
| 04/27/2010 | 10.00\% | 4.46\% | 5.54\% |
| 04/29/2010 | 9.90\% | 4.46\% | 5.44\% |
| 04/29/2010 | 10.06\% | 4.46\% | 5.60\% |
| 04/29/2010 | 10.26\% | 4.46\% | 5.80\% |
| 05/12/2010 | 10.30\% | 4.45\% | 5.85\% |
| 05/12/2010 | 10.30\% | 4.45\% | 5.85\% |
| 05/28/2010 | 10.10\% | 4.44\% | 5.66\% |
| 05/28/2010 | 10.20\% | 4.44\% | 5.76\% |
| 06/07/2010 | 10.30\% | 4.44\% | 5.86\% |
| 06/16/2010 | 10.00\% | 4.44\% | 5.56\% |
| 06/28/2010 | 9.67\% | 4.43\% | 5.24\% |
| 06/28/2010 | 10.50\% | 4.43\% | 6.07\% |
| 06/30/2010 | 9.40\% | 4.43\% | 4.97\% |
| 07/01/2010 | 10.25\% | 4.43\% | 5.82\% |
| 07/15/2010 | 10.53\% | 4.43\% | 6.10\% |
| 07/15/2010 | 10.70\% | 4.43\% | 6.27\% |
| 07/30/2010 | 10.70\% | 4.41\% | 6.29\% |
| 08/04/2010 | 10.50\% | 4.41\% | 6.09\% |
| 08/06/2010 | 9.83\% | 4.41\% | 5.42\% |
| 08/25/2010 | 9.90\% | 4.37\% | 5.53\% |
| 09/03/2010 | 10.60\% | 4.35\% | 6.25\% |
| 09/14/2010 | 10.70\% | 4.33\% | 6.37\% |
| 09/16/2010 | 10.00\% | 4.33\% | 5.67\% |
| 09/16/2010 | 10.00\% | 4.33\% | 5.67\% |
| 09/30/2010 | 9.75\% | 4.29\% | 5.46\% |
| 10/14/2010 | 10.35\% | 4.24\% | 6.11\% |
| 10/28/2010 | 10.70\% | 4.21\% | 6.49\% |
| 11/02/2010 | 10.38\% | 4.20\% | 6.18\% |
| 11/04/2010 | 10.70\% | 4.20\% | 6.50\% |
| 11/19/2010 | 10.20\% | 4.18\% | 6.02\% |
| 11/22/2010 | 10.00\% | 4.18\% | 5.82\% |
| 12/01/2010 | 10.13\% | 4.16\% | 5.97\% |
| 12/06/2010 | 9.86\% | 4.15\% | 5.71\% |
| 12/09/2010 | 10.25\% | 4.15\% | 6.10\% |
| 12/13/2010 | 10.70\% | 4.15\% | 6.55\% |
| 12/14/2010 | 10.13\% | 4.15\% | 5.98\% |
| 12/15/2010 | 10.44\% | 4.15\% | 6.29\% |
| 12/17/2010 | 10.00\% | 4.15\% | 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\% |
| 01/05/2011 | 10.15\% | 4.13\% | 6.02\% |
| 01/12/2011 | 10.30\% | 4.12\% | 6.18\% |
| 01/13/2011 | 10.30\% | 4.12\% | 6.18\% |
| 01/18/2011 | 10.00\% | 4.12\% | 5.88\% |
| 01/20/2011 | 9.30\% | 4.12\% | 5.18\% |
| 01/20/2011 | 10.13\% | 4.12\% | 6.01\% |
| 01/31/2011 | 9.60\% | 4.12\% | 5.48\% |
| 02/03/2011 | 10.00\% | 4.12\% | 5.88\% |
| 02/25/2011 | 10.00\% | 4.14\% | 5.86\% |
| 03/25/2011 | 9.80\% | 4.18\% | 5.62\% |
| 03/30/2011 | 10.00\% | 4.18\% | 5.82\% |
| 04/12/2011 | 10.00\% | 4.21\% | 5.79\% |
| 04/25/2011 | 10.74\% | 4.23\% | 6.51\% |
| 04/26/2011 | 9.67\% | 4.23\% | 5.44\% |
| 04/27/2011 | 10.40\% | 4.24\% | 6.16\% |
| 05/04/2011 | 10.00\% | 4.24\% | 5.76\% |
| 05/04/2011 | 10.00\% | 4.24\% | 5.76\% |
| 05/24/2011 | 10.50\% | 4.27\% | 6.23\% |
| 06/08/2011 | 10.75\% | 4.30\% | 6.45\% |
| 06/16/2011 | 9.20\% | 4.32\% | 4.88\% |
| 06/17/2011 | 9.95\% | 4.32\% | 5.63\% |
| 07/13/2011 | 10.20\% | 4.36\% | 5.84\% |
| 08/01/2011 | 9.20\% | 4.39\% | 4.81\% |
| 08/08/2011 | 10.00\% | 4.38\% | 5.62\% |
| 08/11/2011 | 10.00\% | 4.38\% | 5.62\% |
| 08/12/2011 | 10.35\% | 4.37\% | 5.98\% |
| 08/19/2011 | 10.25\% | 4.36\% | 5.89\% |
| 09/02/2011 | 12.88\% | 4.32\% | 8.56\% |
| 09/22/2011 | 10.00\% | 4.24\% | 5.76\% |
| 10/12/2011 | 10.30\% | 4.14\% | 6.16\% |
| 10/20/2011 | 10.50\% | 4.10\% | 6.40\% |
| 11/30/2011 | 10.90\% | 3.87\% | 7.03\% |
| 11/30/2011 | 10.90\% | 3.87\% | 7.03\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Yea |  |
| Electric | Return on | sury |  |
| Rate Case | Equity | Yield | Risk Premium |
| 12/14/2011 | 10.00\% | 3.80\% | 6.20\% |
| 12/14/2011 | 10.30\% | 3.80\% | 6.50\% |
| 12/20/2011 | 10.20\% | 3.76\% | 6.44\% |
| 12/21/2011 | 10.20\% | 3.76\% | 6.44\% |
| 12/22/2011 | 9.90\% | 3.75\% | $6.15 \%$ |
| 12/22/2011 | 10.40\% | 3.75\% | 6.65\% |
| 12/23/2011 | 10.19\% | 3.74\% | 6.45\% |
| 01/25/2012 | 10.50\% | 3.57\% | $6.93 \%$ |
| 01/27/2012 | 10.50\% | 3.56\% | 6.94\% |
| 02/15/2012 | 10.20\% | 3.47\% | 6.73\% |
| 02/23/2012 | 9.90\% | 3.44\% | 6.46\% |
| 02/27/2012 | 10.25\% | 3.43\% | 6.82\% |
| 02/29/2012 | 10.40\% | 3.41\% | 6.99\% |
| 03/29/2012 | 10.37\% | 3.32\% | 7.05\% |
| 04/04/2012 | 10.00\% | 3.30\% | 6.70\% |
| 04/26/2012 | 10.00\% | 3.21\% | 6.79\% |
| 05/02/2012 | 10.00\% | 3.18\% | 6.82\% |
| 05/07/2012 | 9.80\% | 3.17\% | 6.63\% |
| 05/15/2012 | 10.00\% | 3.14\% | 6.86\% |
| 05/29/2012 | 10.05\% | 3.11\% | 6.94\% |
| 06/07/2012 | 10.30\% | 3.08\% | 7.22\% |
| 06/14/2012 | 9.40\% | 3.06\% | 6.34\% |
| 06/15/2012 | 10.40\% | 3.06\% | 7.34\% |
| 06/18/2012 | 9.60\% | 3.06\% | 6.54\% |
| 06/19/2012 | 9.25\% | 3.05\% | 6.20\% |
| 06/26/2012 | 10.10\% | 3.04\% | 7.06\% |
| 06/29/2012 | 10.00\% | 3.04\% | 6.96\% |
| 07/09/2012 | 10.20\% | 3.03\% | 7.17\% |
| 07/16/2012 | 9.80\% | 3.02\% | 6.78\% |
| 07/20/2012 | 9.31\% | 3.01\% | 6.30\% |
| 07/20/2012 | 9.81\% | 3.01\% | 6.80\% |
| 09/13/2012 | 9.80\% | 2.94\% | 6.86\% |
| 09/19/2012 | 9.80\% | 2.94\% | 6.86\% |
| 09/19/2012 | 10.05\% | 2.94\% | 7.11\% |
| 09/26/2012 | 9.50\% | 2.94\% | 6.56\% |
| 10/12/2012 | 9.60\% | 2.93\% | 6.67\% |
| 10/23/2012 | 9.75\% | 2.93\% | 6.82\% |
| 10/24/2012 | 10.30\% | 2.93\% | 7.37\% |
| 11/09/2012 | 10.30\% | 2.92\% | 7.38\% |
| 11/28/2012 | 10.40\% | 2.90\% | 7.50\% |
| 11/29/2012 | 9.75\% | 2.90\% | 6.85\% |
| 11/29/2012 | 9.88\% | 2.90\% | 6.98\% |
| 12/05/2012 | 9.71\% | 2.89\% | 6.82\% |
| 12/05/2012 | 10.40\% | 2.89\% | 7.51\% |
| 12/12/2012 | 9.80\% | 2.88\% | 6.92\% |
| 12/13/2012 | 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\% | 2.88\% | 6.83\% |
| 12/19/2012 | 10.25\% | 2.88\% | 7.37\% |
| 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\% |
| 01/09/2013 | 9.70\% | 2.85\% | 6.85\% |
| 01/09/2013 | 9.70\% | 2.85\% | 6.85\% |
| 01/09/2013 | 9.70\% | 2.85\% | 6.85\% |
| 01/16/2013 | 9.60\% | 2.84\% | 6.76\% |
| 01/16/2013 | 9.60\% | 2.84\% | 6.76\% |
| 02/13/2013 | 10.20\% | 2.84\% | 7.36\% |
| 02/22/2013 | 9.75\% | 2.85\% | 6.90\% |
| 02/27/2013 | 10.00\% | 2.86\% | 7.14\% |
| 03/14/2013 | 9.30\% | 2.88\% | 6.42\% |
| 03/27/2013 | 9.80\% | 2.90\% | 6.90\% |
| 05/01/2013 | 9.84\% | 2.94\% | 6.90\% |
| 05/15/2013 | 10.30\% | 2.96\% | 7.34\% |
| 05/30/2013 | 10.20\% | 2.98\% | 7.22\% |
| 05/31/2013 | 9.00\% | 2.98\% | 6.02\% |
| 06/11/2013 | 10.00\% | 3.00\% | 7.00\% |
| 06/21/2013 | 9.75\% | 3.02\% | 6.73\% |
| 06/25/2013 | 9.80\% | 3.03\% | 6.77\% |
| 07/12/2013 | 9.36\% | 3.08\% | 6.28\% |

Bond Yield Plus Risk Premium

| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Average 30- |  |  |  |
| Date of |  | Year | Risk Premium |
| Electric | Return on | Treasury |  |
| Rate Case | Equity | Yield |  |
| 08/08/2013 | 9.83\% | 3.14\% | 6.69\% |
| 08/14/2013 | 9.15\% | 3.16\% | 5.99\% |
| 09/11/2013 | 10.20\% | 3.26\% | 6.94\% |
| 09/11/2013 | 10.25\% | 3.26\% | 6.99\% |
| 09/24/2013 | 10.20\% | 3.31\% | 6.89\% |
| 10/03/2013 | 9.65\% | 3.33\% | 6.32\% |
| 11/06/2013 | 10.20\% | 3.41\% | 6.79\% |
| 11/21/2013 | 10.00\% | 3.44\% | 6.56\% |
| 11/26/2013 | 10.00\% | 3.45\% | 6.55\% |
| 12/03/2013 | 10.25\% | 3.47\% | 6.78\% |
| 12/04/2013 | 9.50\% | 3.47\% | 6.03\% |
| 12/05/2013 | 10.20\% | 3.48\% | 6.72\% |
| 12/09/2013 | 8.72\% | 3.48\% | 5.24\% |
| 12/09/2013 | 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\% |
| 02/20/2014 | 9.20\% | 3.68\% | 5.52\% |
| 02/26/2014 | 9.75\% | 3.69\% | 6.06\% |
| 03/17/2014 | 9.55\% | 3.72\% | 5.83\% |
| 03/26/2014 | 9.40\% | 3.73\% | 5.67\% |
| 03/26/2014 | 9.96\% | 3.73\% | 6.23\% |
| 04/02/2014 | 9.70\% | 3.73\% | 5.97\% |
| 05/16/2014 | 9.80\% | 3.70\% | 6.10\% |
| 05/30/2014 | 9.70\% | 3.68\% | 6.02\% |
| 06/06/2014 | 10.40\% | 3.67\% | 6.73\% |
| 06/30/2014 | 9.55\% | 3.64\% | 5.91\% |
| 07/02/2014 | 9.62\% | 3.64\% | 5.98\% |
| 07/10/2014 | 9.95\% | 3.63\% | 6.32\% |
| 07/23/2014 | 9.75\% | 3.61\% | 6.14\% |
| 07/29/2014 | 9.45\% | 3.60\% | 5.85\% |
| 07/31/2014 | 9.90\% | 3.60\% | 6.30\% |
| 08/20/2014 | 9.75\% | 3.57\% | 6.18\% |
| 08/25/2014 | 9.60\% | 3.56\% | 6.04\% |
| 08/29/2014 | 9.80\% | 3.54\% | 6.26\% |
| 09/15/2014 | 10.25\% | 3.51\% | 6.74\% |
| 10/09/2014 | 9.80\% | 3.45\% | 6.35\% |
| 11/06/2014 | 9.56\% | 3.37\% | 6.19\% |
| 11/06/2014 | 10.20\% | 3.37\% | 6.83\% |
| 11/14/2014 | 10.20\% | 3.35\% | 6.85\% |
| Number of Rate Cases: |  |  | 1,433 |
| Average: |  |  | 4.45\% |

Twelve Months Ending November 14, 2014

|  |  |  | Authorized | Decision |
| :--- | :---: | :--- | :---: | :---: |
| State | Docket | Utility | ROE | Date |
| Kansas | D-13-WSEE-629-RTS | Westar Energy Inc. | $10.00 \%$ | $11 / 21 / 2013$ |
| Virginia | C-PUE-2013-00020 | Virginia Electric \& Power Co. | $10.00 \%$ | $11 / 26 / 2013$ |
| Florida | D-130140-EI | Gulf Power Co. | $10.25 \%$ | $12 / 03 / 2013$ |
| Washington | D-UE-130043 | PacifiCorp | $9.50 \%$ | $12 / 04 / 2013$ |
| Wisconsin | D-4220-UR-119 (Elec) | Northern States Power Co - WI | $10.20 \%$ | $12 / 05 / 2013$ |
| Oregon | D-UE-262 | Portland General Electric Co. | $9.75 \%$ | $12 / 09 / 2013$ |
| Louisiana | D-U-32707 | Entergy Gulf States LA LLC | $9.95 \%$ | $12 / 16 / 2013$ |
| Louisiana | D-U-32708 | Entergy Louisiana LLC | $9.95 \%$ | $12 / 16 / 2013$ |
| Nevada | D-13-06002 | Sierra Pacific Power Co. | $10.12 \%$ | $12 / 16 / 2013$ |
| Arizona | D-E-04204A-12-0504 | UNS Electric Inc. | $9.50 \%$ | $12 / 17 / 2013$ |
| Georgia | D-36989 | Georgia Power Co. | $10.95 \%$ | $12 / 17 / 2013$ |
| Oregon | D-UE-263 | PacifiCorp | $12 / 18 / 2013$ |  |
| Michigan | C-U-17274 | Upper Peninsula Power Co. | $10.80 \%$ | $15 / 19 / 2013$ |
| Arkansas | D-13-028-U | Entergy Arkansas Inc. | $12 / 30 / 2013$ |  |
| North Dakota | C-PU-12-813 | Northern States Power Co. - MN | $9.50 \%$ | $9.75 \%$ |
| New Mexico | C-12-00350-UT | Southwestern Public Service Co | $9.96 \%$ | $03 / 26 / 2014$ |
| Texas | D-41791 | Entergy Texas Inc. | $9.80 \%$ | $05 / 16 / 2014$ |
| Wisconsin | D-668-UR-119 (Elec) | Wisconsin Power and Light Co | $10.40 \%$ | $06 / 06 / 2014$ |
| Louisiana | D-UD-13-01 | Entergy Louisiana LLC | $9.95 \%$ | $07 / 10 / 2014$ |
| Wyoming | D-20003-132-ER-13 | Cheyenne Light Fuel Power Co. | $9.90 \%$ | $07 / 31 / 2014$ |
| Vermont | D-8190, 8191 | Green Mountain Power Corp | $9.60 \%$ | $08 / 25 / 2014$ |
| Utah | D-13-035-184 | PacifiCorp | $9.80 \%$ | $08 / 29 / 2014$ |
| Florida | D-140025-El | Florida Public Utilities Co. | $09 / 15 / 2014$ |  |
| Nevada | D-14-05004 | Nevada Power Co. | $10.25 \%$ | $10 / 09 / 2014$ |
| Illinois | D-14-0066 | MidAmerican Energy Co. | $9.80 \%$ | $11 / 06 / 2014$ |
| Wisconsin | D-6690-UR-123 (Elec) | Wisconsin Public Service Corp. | $9.56 \%$ |  |
| Wisconsin | D-05-UR-107 (WEP-Elec) | Wisconsin Electric Power Co. | $10.20 \%$ | $11 / 06 / 2014$ |


| Mean: | $9.96 \%$ |
| ---: | :---: |
| Median: | $9.95 \%$ |
| Minimum: | $9.50 \%$ |
| Maximum | $10.95 \%$ |

Source: Regulatory Research Associates

Capital Asset Pricing Model
Murray Case No. ER-2012-0166 Results Compared to Updated 2014 Results



Notes:
[1] Source: Case No. ER-2014-0258, Schedule 16 and Case No. ER-2012-0166, Schedule 22.
[2] Source: Case No. ER-2014-0258, Schedule 16 and Value Line. 2014 analysis relies on Value Line betas for consistency with 2012 analysis.
[3] Source: Case No. ER-2014-0258, Schedule 16 and Case No. ER-2012-0166, Schedule 22.
4] Source: Case No. ER-2014-0258, Schedule 16 and Case No. ER-2012-0166, Schedule 22.
[5] Equals Col. [1] + (Col. [2] x Col. [3])
[6] Equals Col. [1] $+($ Col. [2] $\times$ Col. [4] $)$

## Price Change and EPS Growth

| Company | Ticker | Proj. <br> Stock Price <br> Growth | Proj. <br> Erowth Rate <br> Growings |
| :--- | :---: | ---: | ---: |
| Alliant Energy Corporation | LNT | $-3.54 \%$ | $4.50 \%$ |
| Ameren Corporation | AEE | $-6.06 \%$ | $4.50 \%$ |
| American Electric Power Company, Inc. | AEP | $-2.93 \%$ | $4.50 \%$ |
| CMS Energy Corporation | CMS | $-8.26 \%$ | $6.50 \%$ |
| DTE Energy Company | DTE | $-10.13 \%$ | $6.50 \%$ |
| Great Plains Energy Inc. | GXP | $-3.66 \%$ | $6.00 \%$ |
| OGE Energy Corp. | OGE | $24.38 \%$ | $5.50 \%$ |
| Pinnacle West Capital Corporation | PNW | $-7.81 \%$ | $4.00 \%$ |
| PNM Resources, Inc. | PNM | $21.19 \%$ | $11.00 \%$ |
| Portland General Electric Company | POR | $-18.28 \%$ | $5.00 \%$ |
| Southern Company | SO | $-3.89 \%$ | $3.50 \%$ |
| TECO Energy, Inc. | TE | $6.71 \%$ | $4.00 \%$ |
| Westar Energy, Inc. | WR | $9.96 \%$ | $6.00 \%$ |
| Xcel Energy Inc. | XEL | $-10.45 \%$ | $5.50 \%$ |
|  | Mean: | $-0.91 \%$ | $5.50 \%$ |
|  | Median: | $-3.78 \%$ | $5.25 \%$ |

Notes:
Source: Value Line Screener

Growth Rate Regression Analysis

| Company | Ticker | Median P/E | Proj. Earnings Growth Rate | Proj. Div Growth Rate | Proj. BV Growth Rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ALLETE | ALE | NMF | 6.00\% | 4.00\% | 4.50\% |
| Alliant Energy | LNT | 14.00 | 6.00\% | 4.50\% | 4.00\% |
| Amer. Elec. Power | AEP | 13.00 | 4.50\% | 4.50\% | 4.00\% |
| Ameren Corp. | AEE | 15.00 | 4.50\% | 2.00\% | 1.50\% |
| Avista Corp. | AVA | 16.00 | 5.50\% | 4.50\% | 4.00\% |
| Black Hills | BKH | 17.00 | 9.50\% | 4.00\% | 4.00\% |
| CenterPoint Energy | CNP | 15.00 | 3.50\% | 8.00\% | 2.00\% |
| Cleco Corp. | CNL | 14.00 | 3.50\% | 8.00\% | 4.00\% |
| CMS Energy Corp. | CMS | 14.00 | 6.50\% | 6.00\% | 6.00\% |
| Consol. Edison | ED | 15.00 | 2.00\% | 2.00\% | 3.50\% |
| Dominion Resources | D | 17.00 | 5.50\% | 5.00\% | 6.00\% |
| DTE Energy | DTE | 15.00 | 6.50\% | 5.00\% | 4.50\% |
| Duke Energy | DUK | NMF | 5.00\% | 2.00\% | 2.50\% |
| Edison Int'l | EIX | 12.00 | 2.50\% | 7.50\% | 6.00\% |
| El Paso Electric | EE | 15.00 | 3.00\% | 7.00\% | 5.50\% |
| Empire Dist. Elec. | EDE | 16.00 | 4.00\% | 4.50\% | 3.00\% |
| Entergy Corp. | ETR | 14.00 | 1.00\% | 2.50\% | 4.00\% |
| Exelon Corp. | EXC | 15.00 | 2.00\% | -3.50\% | 5.00\% |
| FirstEnergy Corp. | FE | 15.00 | 4.50\% | -4.00\% | 2.50\% |
| G't Plains Energy | GXP | 15.00 | 6.00\% | 6.00\% | 3.00\% |
| Hawaiian Elec. | HE | 19.00 | 4.00\% | 1.00\% | 4.00\% |
| IDACORP, Inc. | IDA | 14.00 | 1.50\% | 8.00\% | 4.00\% |
| Integrys Energy | TEG | 15.00 | 3.50\% | 1.50\% | 3.50\% |
| ITC Holdings | ITC | NMF | 15.50\% | 12.50\% | 11.50\% |
| MGE Energy | MGEE | 16.00 | 9.00\% | 4.00\% | 6.00\% |
| NextEra Energy | NEE | 14.00 | 6.00\% | 8.50\% | 7.00\% |
| Northeast Utilities | NU | 18.00 | 8.00\% | 7.50\% | 5.00\% |
| NorthWestern Corp. | NWE | NMF | 3.50\% | 4.50\% | 4.00\% |
| OGE Energy | OGE | 14.00 | 5.50\% | 9.00\% | 6.50\% |
| Otter Tail Corp. | OTTR | 23.00 | 15.50\% | 1.50\% | 3.00\% |
| Pepco Holdings | POM | 15.00 | 7.00\% | 0.00\% | 3.00\% |
| PG\&E Corp. | PCG | 15.00 | 5.00\% | 2.50\% | 3.00\% |
| Pinnacle West Capital | PNW | 15.00 | 4.00\% | 3.00\% | 3.50\% |
| PNM Resources | PNM | 16.00 | 11.00\% | 12.00\% | 3.50\% |
| Portland General | POR | NMF | 5.00\% | 4.50\% | 4.00\% |
| PPL Corp. | PPL | 14.00 | 0.00\% | 2.00\% | 4.00\% |
| Public Serv. Enterprise | PEG | 14.00 | 2.00\% | 2.50\% | 5.00\% |
| SCANA Corp. | SCG | 14.00 | 5.00\% | 3.00\% | 5.50\% |
| Sempra Energy | SRE | 12.00 | 7.00\% | 7.00\% | 4.50\% |
| Southern Co. | SO | 16.00 | 3.50\% | 3.50\% | 4.00\% |
| TECO Energy | TE | 15.00 | 3.50\% | 1.50\% | 2.50\% |
| UIL Holdings | UIL | 17.00 | 4.50\% | 0.00\% | 4.50\% |
| Vectren Corp. | VVC | 16.00 | 9.00\% | 1.50\% | 2.50\% |
| Westar Energy | WR | 14.00 | 6.00\% | 3.00\% | 5.00\% |
| Wisconsin Energy | WEC | 15.00 | 5.50\% | 9.50\% | 3.00\% |
| Xcel Energy Inc. | XEL | 14.00 | 5.50\% | 5.00\% | 4.50\% |

Notes:
Source: Value Line Reports as of November 14, 2014
NMF and NA data excluded from regressions

## SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.571907666 |
| R Square | 0.327078379 |
| Adjusted R Square | 0.309823978 |
| Standard Error | 1.553141772 |
| Observations | 41 |

## ANOVA

|  | $d f$ |  | SS | $M S$ | $F$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Regression | 1 | 45.72715286 | 45.7271529 | 18.9562296 | $9.37451 \mathrm{E}-05$ |
| Residual | 39 | 94.07772519 | 2.41224936 |  |  |
| Total | 40 | 139.804878 |  |  |  |


|  | Coefficients | Standard Error | $t$ Stat | P-value | Lower 95\% | Upper 95\% |
| :--- | :---: | ---: | :---: | :---: | :---: | :---: |
| Intercept | 13.2453779 | 0.504371336 | 26.2611631 | $2.0971 \mathrm{E}-26$ | 12.22519058 | 14.26556522 |
| Proj. EPS Growth Rate | 37.23561603 | 8.552292833 | 4.35387524 | $9.3745 \mathrm{E}-05$ | 19.93697097 | 54.53426109 |

## SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.22788715 |
| R Square | 0.051932553 |
| Adjusted R Square | 0.027623131 |
| Standard Error | 1.843522644 |
| Observations | 41 |

## ANOVA

|  | $d f$ |  | SS | MS | $F$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Regression | 1 | 7.260424254 | 7.26042425 | 2.1363138 | 0.151858496 |
| Residual | 39 | 132.5444538 | 3.39857574 |  |  |
| Total | 40 | 139.804878 |  |  |  |


|  | Coefficients | Standard Error | $t$ Stat | P-value | Lower 95\% | Upper 95\% |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Intercept | 15.6994109 | 0.462304793 | 33.9590052 | $1.4039 \mathrm{E}-30$ | 14.76431119 | 16.63451061 |
| Proj. DPS Growth Rate | -12.71310674 | 8.697995335 | -1.46161342 | 0.1518585 | -30.30646293 | 4.880249444 |

## SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.221342046 |
| R Square | 0.048992301 |
| Adjusted R Square | 0.024607489 |
| Standard Error | 1.846379099 |
| Observations | 41 |

ANOVA

|  | $d f$ |  | SS | MS | $F$ | Significance $F$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Regression | 1 | 6.849362713 | 6.84936271 | 2.00913174 | 0.164294954 |  |
| Residual | 39 | 132.9555153 | 3.40911578 |  |  |  |
| Total | 40 | 139.804878 |  |  |  |  |


|  | Coefficients | Standard Error | $t$ Stat | P-value | Lower 95\% | Upper 95\% |
| :--- | ---: | ---: | ---: | :---: | ---: | :---: |
| Intercept | 16.52305201 | 0.99668364 | 16.5780307 | $2.9589 \mathrm{E}-19$ | 14.50706906 | 18.53903496 |
| Proj. BVPS Growth Rate | -32.71099257 | 23.07754015 | -1.41743844 | 0.16429495 | -79.38972348 | 13.96773834 |

## SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.666828784 |
| R Square | 0.444660627 |
| Adjusted R Square | 0.399633111 |
| Standard Error | 1.448570155 |
| Observations | 41 |

ANOVA

|  | $d f$ |  | SS | $M S$ | $F$ |
| :--- | ---: | ---: | ---: | :---: | ---: |
| Regression | 3 | 62.16572477 | 20.7219083 | 9.8753087 | $6.40243 \mathrm{E}-05$ |
| Residual | 37 | 77.63915328 | 2.09835549 |  |  |
| Total | 40 | 139.804878 |  |  |  |


|  | Coefficients | Standard Error | $t$ Stat | P-value | Lower 95\% | Upper 95\% |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Intercept | 14.46926021 | 0.896455172 | 16.1405285 | $2.4771 \mathrm{E}-18$ | 12.6528695 | 16.28565092 |
| Proj. EPS Growth Rate | 40.12533476 | 8.116336855 | 4.94377396 | $1.6781 \mathrm{E}-05$ | 23.6800742 | 56.57059532 |
| Proj. DPS Growth Rate | -16.4623725 | 7.279014956 | -2.26162092 | 0.02968709 | -31.21105774 | -1.71368726 |
| Proj. BVPS Growth Rate | -16.65901669 | 19.03468972 | -0.87519245 | 0.38711535 | -55.22696154 | 21.90892815 |

S\&P 500 EARNINGS PER SHARE GROWTH / NOMINAL GDP GROWTH

|  | [1] | [2] | [3] | [4] | [5] |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year | $\begin{gathered} \text { S\&P } 500 \\ \text { Index } \end{gathered}$ | $\begin{gathered} \text { S\&P } 500 \\ \text { EPS } \end{gathered}$ | $\begin{gathered} \hline \text { S\&P } 500 \\ \text { EPS } \\ \text { Growth } \\ \hline \end{gathered}$ | Nominal GDP | Nominal GDP Growth |
| 1968 | 106.50 | 5.76 | - | 942.5 | - |
| 1969 | 91.11 | 5.78 | 0.35\% | 1,019.9 | 8.21\% |
| 1970 | 90.05 | 5.13 | -11.25\% | 1,075.9 | 5.49\% |
| 1971 | 99.17 | 5.70 | 11.11\% | 1,167.8 | 8.54\% |
| 1972 | 117.50 | 6.42 | 12.63\% | 1,282.4 | 9.81\% |
| 1973 | 94.78 | 8.16 | 27.10\% | 1,428.5 | 11.39\% |
| 1974 | 67.07 | 8.89 | 8.95\% | 1,548.8 | 8.42\% |
| 1975 | 88.70 | 7.96 | -10.46\% | 1,688.9 | 9.05\% |
| 1976 | 104.70 | 9.91 | 24.50\% | 1,877.6 | 11.17\% |
| 1977 | 93.82 | 10.89 | 9.89\% | 2,086.0 | 11.10\% |
| 1978 | 96.11 | 12.33 | 13.22\% | 2,356.6 | 12.97\% |
| 1979 | 107.80 | 14.86 | 20.52\% | 2,632.1 | 11.69\% |
| 1980 | 133.50 | 14.82 | -0.27\% | 2,862.5 | 8.75\% |
| 1981 | 123.80 | 15.36 | 3.64\% | 3,211.0 | 12.17\% |
| 1982 | 139.40 | 12.64 | -17.71\% | 3,345.0 | 4.17\% |
| 1983 | 164.40 | 14.03 | 11.00\% | 3,638.1 | 8.76\% |
| 1984 | 164.50 | 16.64 | 18.60\% | 4,040.7 | 11.07\% |
| 1985 | 207.30 | 14.61 | -12.20\% | 4,346.7 | 7.57\% |
| 1986 | 248.60 | 14.48 | -0.89\% | 4,590.2 | 5.60\% |
| 1987 | 241.00 | 17.50 | 20.86\% | 4,870.2 | 6.10\% |
| 1988 | 276.50 | 23.76 | 35.77\% | 5,252.6 | 7.85\% |
| 1989 | 348.60 | 22.90 | -3.62\% | 5,657.7 | 7.71\% |
| 1990 | 328.75 | 21.34 | -6.81\% | 5,979.6 | 5.69\% |
| 1991 | 388.51 | 15.97 | -25.16\% | 6,174.0 | 3.25\% |
| 1992 | 435.64 | 19.09 | 19.54\% | 6,539.3 | 5.92\% |
| 1993 | 465.95 | 21.88 | 14.61\% | 6,878.7 | 5.19\% |
| 1994 | 455.19 | 30.60 | 39.85\% | 7,308.8 | 6.25\% |
| 1995 | 614.57 | 33.96 | 10.98\% | 7,664.1 | 4.86\% |
| 1996 | 743.25 | 38.73 | 14.05\% | 8,100.2 | 5.69\% |
| 1997 | 962.37 | 39.72 | 2.56\% | 8,608.5 | 6.28\% |
| 1998 | 1,190.05 | 37.71 | -5.06\% | 9,089.2 | 5.58\% |
| 1999 | 1,428.68 | 48.17 | 27.74\% | 9,660.6 | 6.29\% |
| 2000 | 1,330.93 | 50.00 | 3.80\% | 10,284.8 | 6.46\% |
| 2001 | 1,144.93 | 24.69 | -50.62\% | 10,621.8 | 3.28\% |
| 2002 | 899.18 | 27.59 | 11.75\% | 10,977.5 | 3.35\% |
| 2003 | 1,080.64 | 48.74 | 76.66\% | 11,510.7 | 4.86\% |
| 2004 | 1,199.21 | 58.55 | 20.13\% | 12,274.9 | 6.64\% |
| 2005 | 1,262.07 | 69.93 | 19.44\% | 13,093.7 | 6.67\% |
| 2006 | 1,416.42 | 81.51 | 16.56\% | 13,855.9 | 5.82\% |
| 2007 | 1,479.22 | 66.18 | -18.81\% | 14,477.6 | 4.49\% |
| 2008 | 877.56 | 14.88 | -77.52\% | 14,718.6 | 1.66\% |
| 2009 | 1,110.38 | 50.97 | 242.54\% | 14,418.7 | -2.04\% |
| 2010 | 1,241.53 | 77.35 | 51.76\% | 14,964.4 | 3.78\% |
| 2011 | 1,243.32 | 86.95 | 12.41\% | 15,517.9 | 3.70\% |
| 2012 | 1,422.29 | 86.51 | -0.51\% | 16,163.2 | 4.16\% |
| 2013 | 1,807.78 | 100.20 | 15.82\% | 16,768.1 | 3.74\% |
| CAGR |  | 6.55\% |  | 6.61\% |  |

Notes:
[1] Source: http://www.econ.yale.edu/~shiller/data.htm.
[2] Source: http://www.econ.yale.edu/~shiller/data.htm.
[3] Equals annual percent change of Column [2]
[4] Source: Bureau of Economic Analysis, Current-Dollar and Real GDP (Nov. 14, 2014)
[5] Equals annual percent change of Column [4]

## Re-creation of Staff Revenue Requirement Cost of Service Report, Schedule 12-4 <br> Multi-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity for the Comparable Electric Utility Companies <br> Long-Term Growth at 50.00 Percent of Staff's Estimate of Gross Domestic Product

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Annualized Quarterly Dividend | Growth Years 1-5 | Growth Years 6 | 7 | 8 | 9 | 10 | Grow h in Perpetuity | Cost of Equity |
| Alliant Energy | \$2.04 | 4.90\% | 4.45\% | 4.00\% | 3.55\% | 3.10\% | 2.65\% | 2.20\% | 6.50\% |
| Ameren Corp. | \$1.64 | 8.43\% | 7.39\% | 6.35\% | 5.32\% | 4.28\% | 3.24\% | 2.20\% | 8.41\% |
| American Electric Power | \$2.12 | 5.18\% | 4.68\% | 4.19\% | 3.69\% | 3.19\% | 2.70\% | 2.20\% | 7.11\% |
| CMS Energy Corp. | \$1 08 | 5.98\% | 5.35\% | 4.72\% | 4.09\% | 3.46\% | 2.83\% | 2.20\% | 6.84\% |
| DTE Energy Company | \$2.76 | 6.29\% | 5.61\% | 4.93\% | 4.25\% | 3.56\% | 2.88\% | 2.20\% | 6.94\% |
| Great Plains Energy | \$0.98 | 4.78\% | 4.35\% | 3.92\% | 3.49\% | 3.06\% | 2.63\% | 2.20\% | 6.89\% |
| OGE Energy Corp. | \$1.00 | 6.47\% | 5.76\% | 5.05\% | 4.34\% | 3.62\% | 2.91\% | 2.20\% | 5.94\% |
| Pinnacle West Capital | \$2.38 | 3 95\% | 3.66\% | 3.37\% | 3.08\% | 2.78\% | 2.49\% | 2.20\% | 7.03\% |
| PNM Resources, Inc. | \$0.74 | $780 \%$ | 6.87\% | 5.93\% | 5.00\% | 4.07\% | 3.13\% | 2.20\% | 6.34\% |
| Portland General Electric | \$1.12 | $784 \%$ | 6.90\% | 5.96\% | 5.02\% | 4.08\% | 3.14\% | 2.20\% | 7.06\% |
| Southern Company | \$2.10 | 3.71\% | 3.46\% | 3.21\% | 2.96\% | 2.70\% | 2.45\% | 2.20\% | 7.53\% |
| TECO Energy, Inc. | \$0.88 | 6.65\% | 5.91\% | 5.17\% | 4.43\% | 3.68\% | 2.94\% | 2.20\% | 8.76\% |
| Westar Energy, Inc. | \$1.40 | 3.38\% | 3.18\% | 2.99\% | 2.79\% | 2.59\% | 2.40\% | 2.20\% | 6.52\% |
| Xcel Energy | \$1 20 | 4.97\% | 4.51\% | 4.05\% | 3.59\% | 3.12\% | 2.66\% | 2.20\% | 6.86\% |
| Mean without OGE and TECO: |  |  |  |  |  |  |  |  | 7.05\% |
|  |  |  |  |  |  |  |  |  | 7.00\% |

Sources: Columns 1-7 = Staff Revenue Requirement Cost of Service Report, Schedule 12.
Column $8=50.00 \%$ of Staff's $4.40 \%$ GDP estimate (see Revenue Requirement Cost of Service Report, at 41.)

## Re-creation of Staff Revenue Requirement Cost of Service Report, Schedule 12-4 Multi-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity for the Comparable Electric Utility Companies <br> Long-Term Growth at Staff's 2.00 Percent Estimate of Inflation

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Annualized Quarterly Dividend | Growth Years 1-5 | Growth Years 6 | 7 | 8 | 9 | 10 | Grow h in Perpetuity | Cost of Equity |
| Alliant Energy | \$2.04 | 4.90\% | 4.42\% | 3.93\% | 3.45\% | 2.97\% | 2.48\% | 2.00\% | 6.48\% |
| Ameren Corp. | \$1.64 | 8.43\% | 7.36\% | 6.29\% | 5.22\% | 4.14\% | 3.07\% | 2.00\% | 8.51\% |
| American Electric Power | \$2.12 | 5.18\% | 4.65\% | 4.12\% | 3.59\% | 3.06\% | 2.53\% | 2.00\% | 7.13\% |
| CMS Energy Corp. | \$1 08 | 5.98\% | 5.32\% | 4.65\% | 3.99\% | 3.33\% | 2.66\% | 2.00\% | 6.84\% |
| DTE Energy Company | \$2.76 | 6.29\% | 5.58\% | 4.86\% | 4.15\% | 3.43\% | 2.72\% | 2.00\% | 6.94\% |
| Great Plains Energy | \$0.98 | 4.78\% | 4.32\% | 3.85\% | 3.39\% | 2.93\% | 2.46\% | 2.00\% | 6.89\% |
| OGE Energy Corp. | \$1.00 | 6.47\% | 5.73\% | 4.98\% | 4.24\% | 3.49\% | 2.75\% | 2.00\% | 5.88\% |
| Pinnacle West Capital | \$2.38 | 3 95\% | 3.63\% | 3.30\% | 2.98\% | 2.65\% | 2.33\% | 2.00\% | 7.04\% |
| PNM Resources, Inc. | \$0.74 | $780 \%$ | 6.83\% | 5.87\% | 4.90\% | 3.93\% | 2.97\% | 2.00\% | 6.31\% |
| Portland General Electric | \$1.12 | $784 \%$ | 6.87\% | 5.89\% | 4.92\% | 3.95\% | 2.97\% | 2.00\% | 7.06\% |
| Southern Company | \$2.10 | 3.71\% | 3.43\% | 3.14\% | 2.86\% | 2.57\% | 2.29\% | 2.00\% | 7.58\% |
| TECO Energy, Inc. | \$0.88 | 6.65\% | 5.88\% | 5.10\% | 4.33\% | 3.55\% | 2.78\% | 2.00\% | 8.89\% |
| Westar Energy, Inc. | \$1.40 | 3.38\% | 3.15\% | 2.92\% | 2.69\% | 2.46\% | 2.23\% | 2.00\% | 6.50\% |
| Xcel Energy | \$1 20 | 4.97\% | 4.48\% | 3.98\% | 3.49\% | 2.99\% | 2.50\% | 2.00\% | 6.86\% |
| Mean without OGE and TECO: |  |  |  |  |  |  |  |  | 7.07\% |
|  |  |  |  |  |  |  |  |  | 7.01\% |

Sources: Columns 1-7 = Staff Revenue Requirement Cost of Service Report, Schedule 12.
Column 8 = Staff's $2.00 \%$ inflation estimate (see Revenue Requirement Cost of Service Report, at 41.)

## Step-by-Step Analysis of Staff Revenue Requirement Cost of Service Report, Schedule 12-4 As Filed (4.40 Percent Growth Rate Scenario) <br> Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity for the Comparable Electric Utility Companies

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Annualized Quarterly Dividend | Growth Years 1-5 | Growth Years 6 | 7 | 8 | 9 | 10 | Grow h in Perpetuity | Cost of Equity |
| Alliant Energy | \$2.04 | 4.90\% | 4.82\% | 4.73\% | 4.65\% | 4.57\% | 4.48\% | 4.40\% | 8.22\% |
| Ameren Corp. | \$1.64 | 8.43\% | 7.76\% | 7.09\% | 6.42\% | 5.74\% | 5.07\% | 4.40\% | 9.96\% |
| American Electric Power | \$2.12 | 5.18\% | 5.05\% | 4.92\% | 4.79\% | 4.66\% | 4.53\% | 4.40\% | 8.77\% |
| CMS Energy Corp. | \$1 08 | 5.98\% | 5.72\% | 5.45\% | 5.19\% | 4.93\% | 4.66\% | 4.40\% | 8.53\% |
| DTE Energy Company | \$2.76 | 6.29\% | 5.98\% | 5.66\% | 5.35\% | 5.03\% | 4.72\% | 4.40\% | 8.62\% |
| Great Plains Energy | \$0.98 | 4.78\% | 4.72\% | 4.65\% | 4.59\% | 4.53\% | 4.46\% | 4.40\% | 8.57\% |
| OGE Energy Corp. | \$1.00 | 6.47\% | 6.13\% | 5.78\% | 5.44\% | 5.09\% | 4.75\% | 4.40\% | 7.71\% |
| Pinnacle West Capital | \$2.38 | $395 \%$ | 4.03\% | 4.10\% | 4.18\% | 4.25\% | 4.33\% | 4.40\% | 8.70\% |
| PNM Resources, Inc. | \$0.74 | $780 \%$ | 7.23\% | 6.67\% | 6.10\% | 5.53\% | 4.97\% | 4.40\% | 8.08\% |
| Portland General Electric | \$1.12 | $784 \%$ | 7.27\% | 6.69\% | 6.12\% | 5.55\% | 4.97\% | 4.40\% | 8.72\% |
| Southern Company | \$2.10 | 3.71\% | $383 \%$ | 3.94\% | 4.06\% | 4.17\% | 4.29\% | 4.40\% | 9.15\% |
| TECO Energy, Inc. | \$0.88 | 6.65\% | 6.28\% | 5.90\% | 5.53\% | 5.15\% | 4.78\% | 4.40\% | 10.28\% |
| Westar Energy, Inc. | \$1.40 | 3.38\% | 3.55\% | 3.72\% | 3.89\% | 4.06\% | 4.23\% | 4.40\% | 8.24\% |
| Xcel Energy | \$1 20 | 4.97\% | 4.88\% | 4.78\% | 4.69\% | 4.59\% | 4.50\% | 4.40\% | 8.54\% |
|  |  |  |  |  |  |  |  | Mean: | 8.72\% |
|  |  |  |  |  |  | Mean without OGE and TECO: Median without OGE and TECO: |  |  | 8.59\% |
|  |  |  |  |  |  |  |  |  | 8.67\% |
|  |  |  |  |  |  |  |  |  | 8.59\% |

Sources: Columns 1-7 = Staff Revenue Requirement Cost of Service Report, Schedule 12.
Column 8 = Staff Revenue Requirement Cost of Service Report, at 41 and Schedule 12-4.
Step-by-Step Analysis of Staff Revenue Requirement Cost of Service Report, Schedule 13-4 Update to Mid-year Convention
Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity for the Comparable Electric Utility Companies


Sources: Columns 1-7= Staff Revenue Requirement Cost of Service Report, Schedule 12.
Sources: Column 8 = Staff Revenue Requirement Cost of Service Report, Schedules 13-1 through 13-4.

Update to Mid-year Convention and Long-Term Payout Ratio $=\mathbf{6 5 . 0 0 \%}$

## Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity

for the Comparable Electric Utility Companies

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Annualized Quarterly Dividend | Growth Years 1-5 | Growth Years 6 | 7 | 8 | 9 | 10 | Grow h in Perpetuity | Cost of Equity |
| Alliant Energy | \$2.04 | 4.90\% | 4.82\% | 4.73\% | 4.65\% | 4.57\% | 4.48\% | 4.40\% | 8.56\% |
| Ameren Corp. | \$1.64 | 8.43\% | 7.76\% | 7.09\% | 6.42\% | 5.74\% | 5.07\% | 4.40\% | 10.20\% |
| American Electric Power | \$2.12 | 5.18\% | 5.05\% | 4.92\% | 4.79\% | 4.66\% | 4.53\% | 4.40\% | 9.00\% |
| CMS Energy Corp. | \$1 08 | 5.98\% | 5.72\% | 5.45\% | 5.19\% | 4.93\% | 4.66\% | 4.40\% | 8.95\% |
| DTE Energy Company | \$2.76 | 6.29\% | 5.98\% | 5.66\% | 5.35\% | 5.03\% | 4.72\% | 4.40\% | 9.19\% |
| Great Plains Energy | \$0.98 | 4.78\% | 4.72\% | 4.65\% | 4.59\% | 4.53\% | 4.46\% | 4.40\% | 9.11\% |
| OGE Energy Corp. | \$1.00 | 6.47\% | 6.13\% | 5.78\% | 5.44\% | 5.09\% | 4.75\% | 4.40\% | 8.75\% |
| Pinnacle West Capital | \$2.38 | $395 \%$ | 4.03\% | 4.10\% | 4.18\% | 4.25\% | 4.33\% | 4.40\% | 9.01\% |
| PNM Resources, Inc. | \$0.74 | $780 \%$ | 7.23\% | 6.67\% | 6.10\% | 5.53\% | 4.97\% | 4.40\% | 8.99\% |
| Portland General Electric | \$1.12 | $784 \%$ | 7.27\% | 6.69\% | 6.12\% | 5.55\% | 4.97\% | 4.40\% | 10.15\% |
| Southern Company | \$2.10 | 3.71\% | $383 \%$ | 3.94\% | 4.06\% | 4.17\% | 4.29\% | 4.40\% | 8.88\% |
| TECO Energy, Inc. | \$0.88 | 6.65\% | 6.28\% | 5.90\% | 5.53\% | 5.15\% | 4.78\% | 4.40\% | 9.04\% |
| Westar Energy, Inc. | \$1.40 | 3.38\% | 3.55\% | 3.72\% | 3.89\% | 4.06\% | 4.23\% | 4.40\% | 8.66\% |
| Xcel Energy | \$1 20 | 4.97\% | 4.88\% | 4.78\% | 4.69\% | 4.59\% | 4.50\% | 4.40\% | 8.91\% |
|  |  |  |  |  |  |  |  | Mean: | 9.10\% |
|  |  |  |  |  |  | Mean without OGE and TECO: Median without OGE and TECO: |  |  | 8.99\% |
|  |  |  |  |  |  |  |  |  | 9.13\% |
|  |  |  |  |  |  |  |  |  | 8.99\% |

Sources: Columns 1-7 = Staff Revenue Requirement Cost of Service Report, Schedule 12.
Column 8 = Staff Revenue Requirement Cost of Service Report, at 41 and Schedule 12-4.
Column 9 = Adjusted to reflect the assumption that starting and mid-term payout ratios will converge to $65.00 \%$ in year 11 .

Step-by-Step Analysis of Staff Revenue Requirement Cost of Service Report, Schedule 13-4
Update to Mid-year Convention, Long-Term Payout Ratio $=65.00 \%$, and Long-Term Growth $=5.63 \%$ Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity
for the Comparable Electric Utility Companies

| Company Name | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Annualized Quarterly Dividend | Growth Years 1-5 | Growth Years 6 | 7 | 8 | 9 | 10 | Grow h in Perpetuity | Cost of Equity |
| Alliant Energy | \$2.04 | 4.90\% | 5.02\% | 5.14\% | 5.26\% | 5.38\% | 5.51\% | 5.63\% | 9.54\% |
| Ameren Corp. | \$1.64 | 8.43\% | 7.96\% | 7.50\% | 7.03\% | 6.56\% | 6.09\% | 5.63\% | 11.10\% |
| American Electric Power | \$2.12 | 5.18\% | 5.25\% | 5.33\% | 5.40\% | 5.48\% | 5.55\% | 5.63\% | 9.96\% |
| CMS Energy Corp. | \$1 08 | 5.98\% | 5.92\% | 5.86\% | 5.80\% | 5.74\% | 5.69\% | 5.63\% | 9.91\% |
| DTE Energy Company | \$2.76 | 6.29\% | 6.18\% | 6.07\% | 5.96\% | 5.85\% | 5.74\% | 5.63\% | 10.14\% |
| Great Plains Energy | \$0.98 | 4.78\% | 4.92\% | 5.06\% | 5.20\% | 5.34\% | 5.49\% | 5.63\% | 10.07\% |
| OGE Energy Corp. | \$1.00 | 6.47\% | 6.33\% | 6.19\% | 6.05\% | 5.91\% | 5.77\% | 5.63\% | 9.73\% |
| Pinnacle West Capital | \$2.38 | 3 95\% | 4.23\% | 4.51\% | 4.79\% | 5.07\% | 5.35\% | 5.63\% | 9.97\% |
| PNM Resources, Inc. | \$0.74 | $780 \%$ | 7.44\% | 7.08\% | 6.71\% | 6.35\% | 5.99\% | 5.63\% | 9.95\% |
| Portland General Electric | \$1.12 | $784 \%$ | 7.47\% | 7.10\% | 6.73\% | 6.36\% | 6.00\% | 5.63\% | 11.06\% |
| Southern Company | \$2.10 | 3.71\% | 4 03\% | 4.35\% | 4.67\% | 4.99\% | 5.31\% | 5.63\% | 9.83\% |
| TECO Energy, Inc. | \$0.88 | 6.65\% | 6.48\% | 6.31\% | 6.14\% | 5.97\% | 5.80\% | 5.63\% | 9.99\% |
| Westar Energy, Inc. | \$1.40 | 3.38\% | 3.75\% | 4.13\% | 4.50\% | 4.88\% | 5.25\% | 5.63\% | 9.63\% |
| Xcel Energy | \$1 20 | 4.97\% | 5.08\% | 5.19\% | 5.30\% | 5.41\% | 5.52\% | 5.63\% | 9.88\% |
|  |  |  |  |  |  |  |  | Mean: | 10.05\% |
|  |  |  |  |  |  | Median <br> Mean without OGE and TECO: Median without OGE and TECO: |  |  | 9.96\% |
|  |  |  |  |  |  |  |  |  | 10.09\% |
|  |  |  |  |  |  |  |  |  | 9.96\% |

[^101]Column 8 = Federal Reserve, Bureau of Economic Analysis.
Column 9 = Adjusted to reflect the assumption that starting and mid-term payout ratios will converge to $65.00 \%$ in year 11 .


Notes:
[1] Constant of regression equation
[2] Slope of regression equation
[3] Source: Staff Cost of Service Report, at 44
[4] Equals [1] + [2] x $\ln ([3])$
[5] Equals [3] + [4]
[6] Source: SNL Financial
[7] Source: SNL Financial
[8] Source: Bloomberg Professional; Note, Moody's Baa Index Yield data is only available back to 1992 Equals 201-trading day average (i.e. lag period) as of November 14, 2014
[9] Equals [7] - [8]

| [6] <br> Date of <br> Electric <br> Rate Case | [8] <br> Moody's |  | [9] |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  | Return on | Utility Baa | Risk |
|  | Equity | Yield | Premium |
| 11/02/1993 | 10.80\% | 7.90\% | 2.90\% |
| 11/12/1993 | 12.00\% | 7.87\% | 4.13\% |
| 11/26/1993 | 11.00\% | 7.84\% | 3.16\% |
| 12/14/1993 | 10.55\% | 7.80\% | 2.75\% |
| 12/16/1993 | 10.60\% | 7.80\% | 2.80\% |
| 12/21/1993 | 11.30\% | 7.80\% | 3.50\% |
| 01/04/1994 | 10.07\% | 7.78\% | 2.29\% |
| 01/13/1994 | 11.00\% | 7.77\% | 3.23\% |
| 01/21/1994 | 11.00\% | 7.75\% | 3.25\% |
| 01/28/1994 | 11.35\% | 7.74\% | 3.61\% |
| 02/03/1994 | 11.40\% | 7.73\% | 3.67\% |
| 02/17/1994 | 10.60\% | 7.71\% | 2.89\% |
| 02/25/1994 | 11.25\% | 7.71\% | 3.54\% |
| 02/25/1994 | 12.00\% | 7.71\% | 4.29\% |
| 03/01/1994 | 11.00\% | 7.70\% | 3.30\% |
| 03/04/1994 | 11.00\% | 7.70\% | 3.30\% |
| 04/25/1994 | 11.00\% | 7.74\% | 3.26\% |
| 05/10/1994 | 11.75\% | 7.77\% | 3.98\% |
| 05/13/1994 | 10.50\% | 7.78\% | 2.72\% |
| 06/03/1994 | 11.00\% | 7.84\% | 3.16\% |
| 06/27/1994 | 11.40\% | 7.94\% | 3.46\% |
| 08/05/1994 | 12.75\% | 8.14\% | 4.61\% |
| 10/31/1994 | 10.00\% | 8.53\% | 1.47\% |
| 11/09/1994 | 10.85\% | 8.60\% | 2.25\% |
| 11/09/1994 | 10.85\% | 8.60\% | 2.25\% |
| 11/18/1994 | 11.20\% | 8.65\% | 2.55\% |
| 11/22/1994 | 11.60\% | 8.67\% | 2.93\% |
| 11/28/1994 | 11.06\% | 8.69\% | 2.37\% |


| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Date of |  | oody's |  |
| Electric | Return on | Utility Baa | Risk |
| Rate Case | Equity | Yield | Premium |
| 12/08/1994 | 11.50\% | 8.75\% | 2.75\% |
| 12/08/1994 | 11.70\% | 8.75\% | 2.95\% |
| 12/14/1994 | 10.95\% | 8.77\% | 2.18\% |
| 12/15/1994 | 11.50\% | 8.78\% | 2.72\% |
| 12/19/1994 | 11.50\% | 8.79\% | 2.71\% |
| 12/28/1994 | 12.15\% | 8.82\% | 3.33\% |
| 01/09/1995 | 12.28\% | 8.86\% | 3.42\% |
| 01/31/1995 | 11.00\% | 8.93\% | 2.07\% |
| 02/10/1995 | 12.60\% | 8.95\% | 3.65\% |
| 02/17/1995 | 11.90\% | 8.96\% | 2.94\% |
| 03/09/1995 | 11.50\% | 8.98\% | 2.52\% |
| 03/20/1995 | 12.00\% | 8.98\% | 3.02\% |
| 03/23/1995 | 12.81\% | 8.98\% | 3.83\% |
| 03/29/1995 | 11.60\% | 8.99\% | 2.61\% |
| 04/06/1995 | 11.10\% | 8.99\% | 2.11\% |
| 04/07/1995 | 11.00\% | 8.99\% | 2.01\% |
| 04/19/1995 | 11.00\% | 8.99\% | 2.01\% |
| 05/12/1995 | 11.63\% | 8.96\% | 2.67\% |
| 05/25/1995 | 11.20\% | 8.94\% | 2.26\% |
| 06/09/1995 | 11.25\% | 8.91\% | 2.34\% |
| 06/21/1995 | 12.25\% | 8.88\% | 3.37\% |
| 06/30/1995 | 11.10\% | 8.85\% | 2.25\% |
| 09/11/1995 | 11.30\% | 8.58\% | 2.72\% |
| 09/27/1995 | 11.30\% | 8.51\% | 2.79\% |
| 09/27/1995 | 11.50\% | 8.51\% | 2.99\% |
| 09/27/1995 | 11.75\% | 8.51\% | 3.24\% |
| 09/29/1995 | 11.00\% | 8.49\% | 2.51\% |
| 11/09/1995 | 11.38\% | 8.30\% | 3.08\% |
| 11/09/1995 | 12.36\% | 8.30\% | 4.06\% |
| 11/17/1995 | 11.00\% | 8.26\% | 2.74\% |
| 12/04/1995 | 11.35\% | 8.21\% | 3.14\% |
| 12/11/1995 | 11.40\% | 8.18\% | 3.22\% |
| 12/20/1995 | 11.60\% | 8.14\% | 3.46\% |
| 12/27/1995 | 12.00\% | 8.11\% | 3.89\% |
| 02/05/1996 | 12.25\% | 7.98\% | 4.27\% |
| 03/29/1996 | 10.67\% | 7.92\% | 2.75\% |
| 04/08/1996 | 11.00\% | 7.92\% | 3.08\% |
| 04/11/1996 | 12.59\% | 7.93\% | 4.66\% |
| 04/11/1996 | 12.59\% | 7.93\% | 4.66\% |
| 04/24/1996 | 11.25\% | 7.95\% | 3.30\% |
| 04/30/1996 | 11.00\% | 7.95\% | 3.05\% |
| 05/13/1996 | 11.00\% | 7.97\% | 3.03\% |
| 05/23/1996 | 11.25\% | 7.98\% | 3.27\% |
| 06/25/1996 | 11.25\% | 8.01\% | 3.24\% |
| 06/27/1996 | 11.20\% | 8.01\% | 3.19\% |
| 08/12/1996 | 10.40\% | 8.09\% | 2.31\% |
| 09/27/1996 | 11.00\% | 8.18\% | 2.82\% |
| 10/16/1996 | 12.25\% | 8.22\% | 4.03\% |
| 11/05/1996 | 11.00\% | 8.25\% | 2.75\% |
| 11/26/1996 | 11.30\% | 8.26\% | 3.04\% |
| 12/18/1996 | 11.75\% | 8.27\% | 3.48\% |
| 12/31/1996 | 11.50\% | 8.27\% | 3.23\% |
| 01/03/1997 | 10.70\% | 8.27\% | 2.43\% |
| 02/13/1997 | 11.80\% | 8.24\% | 3.56\% |
| 02/20/1997 | 11.80\% | 8.24\% | 3.56\% |
| 03/31/1997 | 10.02\% | 8.21\% | 1.81\% |
| 04/02/1997 | 11.65\% | 8.21\% | 3.44\% |
| 04/28/1997 | 11.50\% | 8.20\% | 3.30\% |
| 04/29/1997 | 11.70\% | 8.20\% | 3.50\% |
| 07/17/1997 | 12.00\% | 8.14\% | 3.86\% |
| 12/12/1997 | 11.00\% | 7.96\% | 3.04\% |
| 12/23/1997 | 11.12\% | 7.94\% | 3.18\% |
| 02/02/1998 | 12.75\% | 7.81\% | 4.94\% |
| 03/02/1998 | 11.25\% | 7.71\% | 3.54\% |
| 03/06/1998 | 10.75\% | 7.70\% | 3.05\% |
| 03/20/1998 | 10.50\% | 7.65\% | 2.85\% |
| 04/30/1998 | 12.20\% | 7.55\% | 4.65\% |
| 07/10/1998 | 11.40\% | 7.40\% | 4.00\% |
| 09/15/1998 | 11.90\% | 7.30\% | 4.60\% |


| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Date of |  | Moody's |  |
| Electric | Return on | Utility Baa | Risk |
| Rate Case | Equity | Yield | Premium |
| 11/30/1998 | 12.60\% | 7.26\% | 5.34\% |
| 12/10/1998 | 12.20\% | 7.25\% | 4.95\% |
| 12/17/1998 | 12.10\% | 7.25\% | 4.85\% |
| 02/05/1999 | 10.30\% | 7.24\% | 3.06\% |
| 03/04/1999 | 10.50\% | 7.25\% | 3.25\% |
| 04/06/1999 | 10.94\% | 7.28\% | 3.66\% |
| 07/29/1999 | 10.75\% | 7.54\% | 3.21\% |
| 09/23/1999 | 10.75\% | 7.72\% | 3.03\% |
| 11/17/1999 | 11.10\% | 7.90\% | 3.20\% |
| 01/07/2000 | 11.50\% | 8.03\% | 3.47\% |
| 01/07/2000 | 11.50\% | 8.03\% | 3.47\% |
| 02/17/2000 | 10.60\% | 8.15\% | 2.45\% |
| 03/28/2000 | 11.25\% | 8.23\% | 3.02\% |
| 05/24/2000 | 11.00\% | 8.34\% | 2.66\% |
| 07/18/2000 | 12.20\% | 8.40\% | 3.80\% |
| 09/29/2000 | 11.16\% | 8.42\% | 2.74\% |
| 11/28/2000 | 12.90\% | 8.40\% | 4.50\% |
| 11/30/2000 | 12.10\% | 8.40\% | 3.70\% |
| 01/23/2001 | 11.25\% | 8.33\% | 2.92\% |
| 02/08/2001 | 11.50\% | 8.31\% | 3.19\% |
| 05/08/2001 | 10.75\% | 8.12\% | 2.63\% |
| 06/26/2001 | 11.00\% | 8.09\% | 2.91\% |
| 07/25/2001 | 11.02\% | 8.06\% | 2.96\% |
| 07/25/2001 | 11.02\% | 8.06\% | 2.96\% |
| 07/31/2001 | 11.00\% | 8.05\% | 2.95\% |
| 08/31/2001 | 10.50\% | 8.01\% | 2.49\% |
| 09/07/2001 | 10.75\% | 8.01\% | 2.74\% |
| 09/10/2001 | 11.00\% | 8.01\% | 2.99\% |
| 09/20/2001 | 10.00\% | 8.00\% | 2.00\% |
| 10/24/2001 | 10.30\% | 8.01\% | 2.29\% |
| 11/28/2001 | 10.60\% | 8.01\% | 2.59\% |
| 12/03/2001 | 12.88\% | 8.01\% | 4.87\% |
| 12/20/2001 | 12.50\% | 8.03\% | 4.47\% |
| 01/22/2002 | 10.00\% | 8.06\% | 1.94\% |
| 03/27/2002 | 10.10\% | 8.09\% | 2.01\% |
| 04/22/2002 | 11.80\% | 8.12\% | 3.68\% |
| 05/28/2002 | 10.17\% | 8.15\% | 2.02\% |
| 06/10/2002 | 12.00\% | 8.16\% | 3.84\% |
| 06/18/2002 | 11.16\% | 8.17\% | 2.99\% |
| 06/20/2002 | 11.00\% | 8.18\% | 2.82\% |
| 06/20/2002 | 12.30\% | 8.18\% | 4.12\% |
| 07/15/2002 | 11.00\% | 8.19\% | 2.81\% |
| 09/12/2002 | 12.30\% | 8.14\% | 4.16\% |
| 09/26/2002 | 10.45\% | 8.12\% | 2.33\% |
| 12/04/2002 | 11.55\% | 8.04\% | 3.51\% |
| 12/13/2002 | 11.75\% | 8.02\% | 3.73\% |
| 12/20/2002 | 11.40\% | 8.01\% | 3.39\% |
| 01/08/2003 | 11.10\% | 7.96\% | 3.14\% |
| 01/31/2003 | 12.45\% | 7.89\% | 4.56\% |
| 02/28/2003 | 12.30\% | 7.79\% | 4.51\% |
| 03/06/2003 | 10.75\% | 7.77\% | 2.98\% |
| 03/07/2003 | 9.96\% | 7.76\% | 2.20\% |
| 03/20/2003 | 12.00\% | 7.70\% | 4.30\% |
| 04/03/2003 | 12.00\% | 7.64\% | 4.36\% |
| 04/15/2003 | 11.15\% | 7.59\% | 3.56\% |
| 06/25/2003 | 10.75\% | 7.24\% | 3.51\% |
| 06/26/2003 | 10.75\% | 7.23\% | 3.52\% |
| 07/09/2003 | 9.75\% | 7.19\% | 2.56\% |
| 07/16/2003 | 9.75\% | 7.16\% | 2.59\% |
| 07/25/2003 | 9.50\% | 7.13\% | 2.37\% |
| 08/26/2003 | 10.50\% | 7.02\% | 3.48\% |
| 12/17/2003 | 9.85\% | 6.75\% | 3.10\% |
| 12/17/2003 | 10.70\% | 6.75\% | 3.95\% |
| 12/18/2003 | 11.50\% | 6.75\% | 4.75\% |
| 12/19/2003 | 12.00\% | 6.75\% | 5.25\% |
| 12/19/2003 | 12.00\% | 6.75\% | 5.25\% |
| 12/23/2003 | 10.50\% | 6.75\% | 3.75\% |
| 01/13/2004 | 12.00\% | 6.71\% | 5.29\% |
| 03/02/2004 | 10.75\% | 6.62\% | 4.13\% |


| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Date of |  | Moody's |  |
| Electric | Return on | Utility Baa | Risk |
| Rate Case | Equity | Yield | Premium |
| 03/26/2004 | 10.25\% | 6.60\% | 3.65\% |
| 04/05/2004 | 11.25\% | 6.60\% | 4.65\% |
| 05/18/2004 | 10.50\% | 6.61\% | 3.89\% |
| 05/25/2004 | 10.25\% | 6.60\% | 3.65\% |
| 05/27/2004 | 10.25\% | 6.60\% | 3.65\% |
| 06/02/2004 | 11.22\% | 6.60\% | 4.62\% |
| 06/30/2004 | 10.50\% | 6.57\% | 3.93\% |
| 06/30/2004 | 10.50\% | 6.57\% | 3.93\% |
| 07/16/2004 | 11.60\% | 6.56\% | 5.04\% |
| 08/25/2004 | 10.25\% | 6.53\% | 3.72\% |
| 09/09/2004 | 10.40\% | 6.51\% | 3.89\% |
| 11/09/2004 | 10.50\% | 6.43\% | 4.07\% |
| 11/23/2004 | 11.00\% | 6.42\% | 4.58\% |
| 12/14/2004 | 10.97\% | 6.41\% | 4.56\% |
| 12/21/2004 | 11.25\% | 6.41\% | 4.84\% |
| 12/21/2004 | 11.50\% | 6.41\% | 5.09\% |
| 12/22/2004 | 10.70\% | 6.41\% | 4.29\% |
| 12/22/2004 | 11.50\% | 6.41\% | 5.09\% |
| 12/29/2004 | 9.85\% | 6.41\% | 3.44\% |
| 01/06/2005 | 10.70\% | 6.41\% | 4.29\% |
| 02/18/2005 | 10.30\% | 6.33\% | 3.97\% |
| 02/25/2005 | 10.50\% | 6.31\% | 4.19\% |
| 03/10/2005 | 11.00\% | 6.27\% | 4.73\% |
| 03/24/2005 | 10.30\% | 6.23\% | 4.07\% |
| 04/04/2005 | 10.00\% | 6.21\% | 3.79\% |
| 04/07/2005 | 10.25\% | 6.20\% | 4.05\% |
| 05/18/2005 | 10.25\% | 6.08\% | 4.17\% |
| 05/25/2005 | 10.75\% | 6.07\% | 4.68\% |
| 05/26/2005 | 9.75\% | 6.06\% | 3.69\% |
| 06/01/2005 | 9.75\% | 6.05\% | 3.70\% |
| 07/19/2005 | 11.50\% | 5.95\% | 5.55\% |
| 08/05/2005 | 11.75\% | 5.93\% | 5.82\% |
| 08/15/2005 | 10.13\% | 5.92\% | 4.21\% |
| 09/28/2005 | 10.00\% | 5.87\% | 4.13\% |
| 10/04/2005 | 10.75\% | 5.87\% | 4.88\% |
| 12/12/2005 | 11.00\% | 5.93\% | 5.07\% |
| 12/13/2005 | 10.75\% | 5.93\% | 4.82\% |
| 12/21/2005 | 10.29\% | 5.93\% | 4.36\% |
| 12/21/2005 | 10.40\% | 5.93\% | 4.47\% |
| 12/22/2005 | 11.00\% | 5.94\% | 5.06\% |
| 12/22/2005 | 11.15\% | 5.94\% | 5.21\% |
| 12/28/2005 | 10.00\% | 5.94\% | 4.06\% |
| 12/28/2005 | 10.00\% | 5.94\% | 4.06\% |
| 01/05/2006 | 11.00\% | 5.94\% | 5.06\% |
| 01/27/2006 | 9.75\% | 5.94\% | 3.81\% |
| 03/03/2006 | 10.39\% | 5.96\% | 4.43\% |
| 04/17/2006 | 10.20\% | 6.05\% | 4.15\% |
| 04/26/2006 | 10.60\% | 6.08\% | 4.52\% |
| 05/17/2006 | 11.60\% | 6.14\% | 5.46\% |
| 06/06/2006 | 10.00\% | 6.19\% | 3.81\% |
| 06/27/2006 | 10.75\% | 6.25\% | 4.50\% |
| 07/06/2006 | 10.20\% | 6.28\% | 3.92\% |
| 07/24/2006 | 9.60\% | 6.32\% | 3.28\% |
| 07/26/2006 | 10.50\% | 6.33\% | 4.17\% |
| 07/28/2006 | 10.05\% | 6.33\% | 3.72\% |
| 08/23/2006 | 9.55\% | 6.36\% | 3.19\% |
| 09/01/2006 | 10.54\% | 6.36\% | 4.18\% |
| 09/14/2006 | 10.00\% | 6.37\% | 3.63\% |
| 10/06/2006 | 9.67\% | 6.37\% | 3.30\% |
| 11/21/2006 | 10.08\% | 6.39\% | 3.69\% |
| 11/21/2006 | 10.08\% | 6.39\% | 3.69\% |
| 11/21/2006 | 10.12\% | 6.39\% | 3.73\% |
| 12/01/2006 | 10.25\% | 6.38\% | 3.87\% |
| 12/01/2006 | 10.50\% | 6.38\% | 4.12\% |
| 12/07/2006 | 10.75\% | 6.38\% | 4.37\% |
| 12/21/2006 | 10.90\% | 6.38\% | 4.52\% |
| 12/21/2006 | 11.25\% | 6.38\% | 4.87\% |
| 12/22/2006 | 10.25\% | 6.37\% | 3.88\% |
| 01/05/2007 | 10.00\% | 6.37\% | 3.63\% |


| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Date of |  | Moody's |  |
| Electric | Return on | Utility Baa | Risk |
| Rate Case | Equity | Yield | Premium |
| 01/11/2007 | 10.10\% | 6.37\% | 3.73\% |
| 01/11/2007 | 10.10\% | 6.37\% | 3.73\% |
| 01/11/2007 | 10.90\% | 6.37\% | 4.53\% |
| 01/12/2007 | 10.10\% | 6.37\% | 3.73\% |
| 01/13/2007 | 10.40\% | 6.37\% | 4.03\% |
| 01/19/2007 | 10.80\% | 6.36\% | 4.44\% |
| 03/21/2007 | 11.35\% | 6.26\% | 5.09\% |
| 03/22/2007 | 9.75\% | 6.26\% | 3.49\% |
| 05/15/2007 | 10.00\% | 6.19\% | 3.81\% |
| 05/17/2007 | 10.25\% | 6.18\% | 4.07\% |
| 05/17/2007 | 10.25\% | 6.18\% | 4.07\% |
| 05/22/2007 | 10.20\% | 6.18\% | 4.02\% |
| 05/22/2007 | 10.50\% | 6.18\% | 4.32\% |
| 05/23/2007 | 10.70\% | 6.18\% | 4.52\% |
| 05/25/2007 | 9.67\% | 6.18\% | 3.49\% |
| 06/15/2007 | 9.90\% | 6.18\% | 3.72\% |
| 06/21/2007 | 10.20\% | 6.19\% | 4.01\% |
| 06/22/2007 | 10.50\% | 6.19\% | 4.31\% |
| 06/28/2007 | 10.75\% | 6.19\% | 4.56\% |
| 07/12/2007 | 9.67\% | 6.21\% | 3.46\% |
| 07/19/2007 | 10.00\% | 6.21\% | 3.79\% |
| 07/19/2007 | 10.00\% | 6.21\% | 3.79\% |
| 08/15/2007 | 10.40\% | 6.23\% | 4.17\% |
| 10/09/2007 | 10.00\% | 6.31\% | 3.69\% |
| 10/17/2007 | 9.10\% | 6.32\% | 2.78\% |
| 10/31/2007 | 9.96\% | 6.33\% | 3.63\% |
| 11/29/2007 | 10.90\% | 6.34\% | 4.56\% |
| 12/06/2007 | 10.75\% | 6.35\% | 4.40\% |
| 12/13/2007 | 9.96\% | 6.36\% | 3.60\% |
| 12/14/2007 | 10.70\% | 6.36\% | 4.34\% |
| 12/14/2007 | 10.80\% | 6.36\% | 4.44\% |
| 12/19/2007 | 10.20\% | 6.37\% | 3.83\% |
| 12/20/2007 | 10.20\% | 6.37\% | 3.83\% |
| 12/20/2007 | 11.00\% | 6.37\% | 4.63\% |
| 12/28/2007 | 10.25\% | 6.39\% | 3.86\% |
| 12/31/2007 | 11.25\% | 6.39\% | 4.86\% |
| 01/08/2008 | 10.75\% | 6.39\% | 4.36\% |
| 01/17/2008 | 10.75\% | 6.40\% | 4.35\% |
| 01/28/2008 | 9.40\% | 6.40\% | 3.00\% |
| 01/30/2008 | 10.00\% | 6.40\% | 3.60\% |
| 01/31/2008 | 10.71\% | 6.40\% | 4.31\% |
| 02/29/2008 | 10.25\% | 6.44\% | 3.81\% |
| 03/12/2008 | 10.25\% | 6.46\% | 3.79\% |
| 03/25/2008 | 9.10\% | 6.47\% | 2.63\% |
| 04/22/2008 | 10.25\% | 6.49\% | 3.76\% |
| 04/24/2008 | 10.10\% | 6.50\% | 3.60\% |
| 05/01/2008 | 10.70\% | 6.50\% | 4.20\% |
| 05/19/2008 | 11.00\% | 6.52\% | 4.48\% |
| 05/27/2008 | 10.00\% | 6.53\% | 3.47\% |
| 06/10/2008 | 10.70\% | 6.55\% | 4.15\% |
| 06/27/2008 | 10.50\% | 6.58\% | 3.92\% |
| 06/27/2008 | 11.04\% | 6.58\% | 4.46\% |
| 07/10/2008 | 10.43\% | 6.60\% | 3.83\% |
| 07/16/2008 | 9.40\% | 6.60\% | 2.80\% |
| 07/30/2008 | 10.80\% | 6.64\% | 4.16\% |
| 07/31/2008 | 10.70\% | 6.64\% | 4.06\% |
| 08/11/2008 | 10.25\% | 6.66\% | 3.59\% |
| 08/26/2008 | 10.18\% | 6.70\% | 3.48\% |
| 09/10/2008 | 10.30\% | 6.73\% | 3.57\% |
| 09/24/2008 | 10.65\% | 6.77\% | 3.88\% |
| 09/24/2008 | 10.65\% | 6.77\% | 3.88\% |
| 09/24/2008 | 10.65\% | 6.77\% | 3.88\% |
| 09/30/2008 | 10.20\% | 6.79\% | 3.41\% |
| 10/08/2008 | 10.15\% | 6.83\% | 3.32\% |
| 11/13/2008 | 10.55\% | 7.14\% | 3.41\% |
| 11/17/2008 | 10.20\% | 7.16\% | 3.04\% |
| 12/01/2008 | 10.25\% | 7.27\% | 2.98\% |
| 12/23/2008 | 11.00\% | 7.39\% | 3.61\% |
| 12/29/2008 | 10.00\% | 7.41\% | 2.59\% |


| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Date of |  | Moody's |  |
| Electric | Return on | Utility Baa | Risk |
| Rate Case | Equity | Yield | Premium |
| 12/29/2008 | 10.20\% | 7.41\% | 2.79\% |
| 12/31/2008 | 10.75\% | 7.42\% | 3.33\% |
| 01/14/2009 | 10.50\% | 7.47\% | 3.03\% |
| 01/21/2009 | 10.50\% | 7.49\% | 3.01\% |
| 01/21/2009 | 10.50\% | 7.49\% | 3.01\% |
| 01/21/2009 | 10.50\% | 7.49\% | 3.01\% |
| 01/27/2009 | 10.76\% | 7.52\% | 3.24\% |
| 01/30/2009 | 10.50\% | 7.53\% | 2.97\% |
| 02/04/2009 | 8.75\% | 7.55\% | 1.20\% |
| 03/04/2009 | 10.50\% | 7.64\% | 2.86\% |
| 03/12/2009 | 11.50\% | 7.67\% | 3.83\% |
| 04/02/2009 | 11.10\% | 7.76\% | 3.34\% |
| 04/21/2009 | 10.61\% | 7.83\% | 2.78\% |
| 04/24/2009 | 10.00\% | 7.85\% | 2.15\% |
| 04/30/2009 | 11.25\% | 7.87\% | 3.38\% |
| 05/04/2009 | 10.74\% | 7.88\% | 2.86\% |
| 05/20/2009 | 10.25\% | 7.92\% | 2.33\% |
| 05/28/2009 | 10.50\% | 7.94\% | 2.56\% |
| 06/22/2009 | 10.00\% | 7.98\% | 2.02\% |
| 06/24/2009 | 10.80\% | 7.98\% | 2.82\% |
| 07/08/2009 | 10.63\% | 7.98\% | 2.65\% |
| 07/17/2009 | 10.50\% | 7.96\% | 2.54\% |
| 08/31/2009 | 10.25\% | 7.63\% | 2.62\% |
| 10/14/2009 | 10.70\% | 7.28\% | 3.42\% |
| 10/23/2009 | 10.88\% | 7.22\% | 3.66\% |
| 11/02/2009 | 10.70\% | 7.17\% | 3.53\% |
| 11/03/2009 | 10.70\% | 7.17\% | 3.53\% |
| 11/24/2009 | 10.25\% | 7.05\% | 3.20\% |
| 11/25/2009 | 10.75\% | 7.04\% | 3.71\% |
| 11/30/2009 | 10.35\% | 7.02\% | 3.33\% |
| 12/03/2009 | 10.50\% | 7.00\% | 3.50\% |
| 12/07/2009 | 10.70\% | 6.98\% | 3.72\% |
| 12/16/2009 | 10.90\% | 6.93\% | 3.97\% |
| 12/16/2009 | 11.00\% | 6.93\% | 4.07\% |
| 12/18/2009 | 10.40\% | 6.92\% | 3.48\% |
| 12/18/2009 | 10.40\% | 6.92\% | 3.48\% |
| 12/22/2009 | 10.20\% | 6.90\% | 3.30\% |
| 12/22/2009 | 10.40\% | 6.90\% | 3.50\% |
| 12/22/2009 | 10.40\% | 6.90\% | 3.50\% |
| 12/30/2009 | 10.00\% | 6.86\% | 3.14\% |
| 01/04/2010 | 10.80\% | 6.84\% | 3.96\% |
| 01/11/2010 | 11.00\% | 6.80\% | 4.20\% |
| 01/26/2010 | 10.13\% | 6.70\% | 3.43\% |
| 01/27/2010 | 10.40\% | 6.69\% | 3.71\% |
| 01/27/2010 | 10.40\% | 6.69\% | 3.71\% |
| 01/27/2010 | 10.70\% | 6.69\% | 4.01\% |
| 02/09/2010 | 9.80\% | 6.60\% | 3.20\% |
| 02/18/2010 | 10.60\% | 6.55\% | 4.05\% |
| 02/24/2010 | 10.18\% | 6.52\% | 3.66\% |
| 03/02/2010 | 9.63\% | 6.49\% | 3.14\% |
| 03/04/2010 | 10.50\% | 6.48\% | 4.02\% |
| 03/05/2010 | 10.50\% | 6.47\% | 4.03\% |
| 03/11/2010 | 11.90\% | 6.44\% | 5.46\% |
| 03/17/2010 | 10.00\% | 6.41\% | 3.59\% |
| 03/25/2010 | 10.15\% | 6.37\% | 3.78\% |
| 04/02/2010 | 10.10\% | 6.33\% | 3.77\% |
| 04/27/2010 | 10.00\% | 6.26\% | 3.74\% |
| 04/29/2010 | 9.90\% | 6.25\% | 3.65\% |
| 04/29/2010 | 10.06\% | 6.25\% | 3.81\% |
| 04/29/2010 | 10.26\% | 6.25\% | 4.01\% |
| 05/12/2010 | 10.30\% | 6.21\% | 4.09\% |
| 05/12/2010 | 10.30\% | 6.21\% | 4.09\% |
| 05/28/2010 | 10.10\% | 6.17\% | 3.93\% |
| 05/28/2010 | 10.20\% | 6.17\% | 4.03\% |
| 06/07/2010 | 10.30\% | 6.17\% | 4.13\% |
| 06/16/2010 | 10.00\% | 6.17\% | 3.83\% |
| 06/28/2010 | 9.67\% | 6.17\% | 3.50\% |
| 06/28/2010 | 10.50\% | 6.17\% | 4.33\% |
| 06/30/2010 | 9.40\% | 6.17\% | 3.23\% |


| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Date of |  | Moody's |  |
| Electric | Return on | Utility Baa | Risk |
| Rate Case | Equity | Yield | Premium |
| 07/01/2010 | 10.25\% | 6.17\% | 4.08\% |
| 07/15/2010 | 10.53\% | 6.16\% | 4.37\% |
| 07/15/2010 | 10.70\% | 6.16\% | 4.54\% |
| 07/30/2010 | 10.70\% | 6.16\% | 4.54\% |
| 08/04/2010 | 10.50\% | 6.15\% | 4.35\% |
| 08/06/2010 | 9.83\% | 6.15\% | 3.68\% |
| 08/25/2010 | 9.90\% | 6.10\% | 3.80\% |
| 09/03/2010 | 10.60\% | 6.07\% | 4.53\% |
| 09/14/2010 | 10.70\% | 6.06\% | 4.64\% |
| 09/16/2010 | 10.00\% | 6.05\% | 3.95\% |
| 09/16/2010 | 10.00\% | 6.05\% | 3.95\% |
| 09/30/2010 | 9.75\% | 6.02\% | 3.73\% |
| 10/14/2010 | 10.35\% | 5.98\% | 4.37\% |
| 10/28/2010 | 10.70\% | 5.95\% | 4.75\% |
| 11/02/2010 | 10.38\% | 5.95\% | 4.43\% |
| 11/04/2010 | 10.70\% | 5.94\% | 4.76\% |
| 11/19/2010 | 10.20\% | 5.93\% | 4.27\% |
| 11/22/2010 | 10.00\% | 5.93\% | 4.07\% |
| 12/01/2010 | 10.13\% | 5.92\% | 4.21\% |
| 12/06/2010 | 9.86\% | 5.91\% | 3.95\% |
| 12/09/2010 | 10.25\% | 5.91\% | 4.34\% |
| 12/13/2010 | 10.70\% | 5.91\% | 4.79\% |
| 12/14/2010 | 10.13\% | 5.91\% | 4.22\% |
| 12/15/2010 | 10.44\% | 5.91\% | 4.53\% |
| 12/17/2010 | 10.00\% | 5.91\% | 4.09\% |
| 12/20/2010 | 10.60\% | 5.91\% | 4.69\% |
| 12/21/2010 | 10.30\% | 5.90\% | 4.40\% |
| 12/27/2010 | 9.90\% | 5.90\% | 4.00\% |
| 12/29/2010 | 11.15\% | 5.90\% | 5.25\% |
| 01/05/2011 | 10.15\% | 5.90\% | 4.25\% |
| 01/12/2011 | 10.30\% | 5.89\% | 4.41\% |
| 01/13/2011 | 10.30\% | 5.89\% | 4.41\% |
| 01/18/2011 | 10.00\% | 5.89\% | 4.11\% |
| 01/20/2011 | 9.30\% | 5.88\% | 3.42\% |
| 01/20/2011 | 10.13\% | 5.88\% | 4.25\% |
| 01/31/2011 | 9.60\% | 5.88\% | 3.72\% |
| 02/03/2011 | 10.00\% | 5.88\% | 4.12\% |
| 02/25/2011 | 10.00\% | 5.89\% | 4.11\% |
| 03/25/2011 | 9.80\% | 5.88\% | 3.92\% |
| 03/30/2011 | 10.00\% | 5.87\% | 4.13\% |
| 04/12/2011 | 10.00\% | 5.86\% | 4.14\% |
| 04/25/2011 | 10.74\% | 5.86\% | 4.88\% |
| 04/26/2011 | 9.67\% | 5.86\% | 3.81\% |
| 04/27/2011 | 10.40\% | 5.86\% | 4.54\% |
| 05/04/2011 | 10.00\% | 5.85\% | 4.15\% |
| 05/04/2011 | 10.00\% | 5.85\% | 4.15\% |
| 05/24/2011 | 10.50\% | 5.85\% | 4.65\% |
| 06/08/2011 | 10.75\% | 5.85\% | 4.90\% |
| 06/16/2011 | 9.20\% | 5.86\% | 3.34\% |
| 06/17/2011 | 9.95\% | 5.86\% | 4.09\% |
| 07/13/2011 | 10.20\% | 5.88\% | 4.32\% |
| 08/01/2011 | 9.20\% | 5.89\% | 3.31\% |
| 08/08/2011 | 10.00\% | 5.88\% | 4.12\% |
| 08/11/2011 | 10.00\% | 5.87\% | 4.13\% |
| 08/12/2011 | 10.35\% | 5.87\% | 4.48\% |
| 08/19/2011 | 10.25\% | 5.85\% | 4.40\% |
| 09/02/2011 | 12.88\% | 5.82\% | 7.06\% |
| 09/22/2011 | 10.00\% | 5.77\% | 4.23\% |
| 10/12/2011 | 10.30\% | 5.71\% | 4.59\% |
| 10/20/2011 | 10.50\% | 5.68\% | 4.82\% |
| 11/30/2011 | 10.90\% | 5.54\% | 5.36\% |
| 11/30/2011 | 10.90\% | 5.54\% | 5.36\% |
| 12/14/2011 | 10.00\% | 5.49\% | 4.51\% |
| 12/14/2011 | 10.30\% | 5.49\% | 4.81\% |
| 12/20/2011 | 10.20\% | 5.47\% | 4.73\% |
| 12/21/2011 | 10.20\% | 5.47\% | 4.73\% |
| 12/22/2011 | 9.90\% | 5.46\% | 4.44\% |
| 12/22/2011 | 10.40\% | 5.46\% | 4.94\% |
| 12/23/2011 | 10.19\% | 5.46\% | 4.73\% |


| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Date of |  | Moody's |  |
| Electric | Return on | Utility Baa | Risk |
| Rate Case | Equity | Yield | Premium |
| 01/25/2012 | 10.50\% | 5.37\% | 5.13\% |
| 01/27/2012 | 10.50\% | 5.36\% | 5.14\% |
| 02/15/2012 | 10.20\% | 5.30\% | 4.90\% |
| 02/23/2012 | 9.90\% | 5.28\% | 4.62\% |
| 02/27/2012 | 10.25\% | 5.27\% | 4.98\% |
| 02/29/2012 | 10.40\% | 5.26\% | 5.14\% |
| 03/29/2012 | 10.37\% | 5.20\% | 5.17\% |
| 04/04/2012 | 10.00\% | 5.19\% | 4.81\% |
| 04/26/2012 | 10.00\% | 5.14\% | 4.86\% |
| 05/02/2012 | 10.00\% | 5.13\% | 4.87\% |
| 05/07/2012 | 9.80\% | 5.12\% | 4.68\% |
| 05/15/2012 | 10.00\% | 5.10\% | 4.90\% |
| 05/29/2012 | 10.05\% | 5.08\% | 4.97\% |
| 06/07/2012 | 10.30\% | 5.07\% | 5.23\% |
| 06/14/2012 | 9.40\% | 5.07\% | 4.33\% |
| 06/15/2012 | 10.40\% | 5.06\% | 5.34\% |
| 06/18/2012 | 9.60\% | 5.06\% | 4.54\% |
| 06/19/2012 | 9.25\% | 5.06\% | 4.19\% |
| 06/26/2012 | 10.10\% | 5.06\% | 5.04\% |
| 06/29/2012 | 10.00\% | 5.05\% | 4.95\% |
| 07/09/2012 | 10.20\% | 5.05\% | 5.15\% |
| 07/16/2012 | 9.80\% | 5.04\% | 4.76\% |
| 07/20/2012 | 9.31\% | 5.04\% | 4.27\% |
| 07/20/2012 | 9.81\% | 5.04\% | 4.77\% |
| 09/13/2012 | 9.80\% | 4.99\% | 4.81\% |
| 09/19/2012 | 9.80\% | 4.99\% | 4.81\% |
| 09/19/2012 | 10.05\% | 4.99\% | 5.06\% |
| 09/26/2012 | 9.50\% | 4.98\% | 4.52\% |
| 10/12/2012 | 9.60\% | 4.96\% | 4.64\% |
| 10/23/2012 | 9.75\% | 4.94\% | 4.82\% |
| 10/24/2012 | 10.30\% | 4.93\% | 5.37\% |
| 11/09/2012 | 10.30\% | 4.90\% | 5.40\% |
| 11/28/2012 | 10.40\% | 4.86\% | 5.54\% |
| 11/29/2012 | 9.75\% | 4.86\% | 4.89\% |
| 11/29/2012 | 9.88\% | 4.86\% | 5.02\% |
| 12/05/2012 | 9.71\% | 4.85\% | 4.86\% |
| 12/05/2012 | 10.40\% | 4.85\% | 5.55\% |
| 12/12/2012 | 9.80\% | 4.84\% | 4.96\% |
| 12/13/2012 | 9.50\% | 4.84\% | 4.66\% |
| 12/13/2012 | 10.50\% | 4.84\% | 5.66\% |
| 12/14/2012 | 10.40\% | 4.83\% | 5.57\% |
| 12/19/2012 | 9.71\% | 4.83\% | 4.88\% |
| 12/19/2012 | 10.25\% | 4.83\% | 5.42\% |
| 12/20/2012 | 9.50\% | 4.83\% | 4.67\% |
| 12/20/2012 | 9.80\% | 4.83\% | 4.97\% |
| 12/20/2012 | 10.25\% | 4.83\% | 5.42\% |
| 12/20/2012 | 10.25\% | 4.83\% | 5.42\% |
| 12/20/2012 | 10.30\% | 4.83\% | 5.47\% |
| 12/20/2012 | 10.40\% | 4.83\% | 5.57\% |
| 12/20/2012 | 10.45\% | 4.83\% | 5.62\% |
| 12/21/2012 | 10.20\% | 4.82\% | 5.38\% |
| 12/26/2012 | 9.80\% | 4.82\% | 4.98\% |
| 01/09/2013 | 9.70\% | 4.79\% | 4.91\% |
| 01/09/2013 | 9.70\% | 4.79\% | 4.91\% |
| 01/09/2013 | 9.70\% | 4.79\% | 4.91\% |
| 01/16/2013 | 9.60\% | 4.78\% | 4.82\% |
| 01/16/2013 | 9.60\% | 4.78\% | 4.82\% |
| 02/13/2013 | 10.20\% | 4.74\% | 5.46\% |
| 02/22/2013 | 9.75\% | 4.73\% | 5.02\% |
| 02/27/2013 | 10.00\% | 4.73\% | 5.27\% |
| 03/14/2013 | 9.30\% | 4.72\% | 4.58\% |
| 03/27/2013 | 9.80\% | 4.71\% | 5.09\% |
| 05/01/2013 | 9.84\% | 4.66\% | 5.18\% |
| 05/15/2013 | 10.30\% | 4.64\% | 5.66\% |
| 05/30/2013 | 10.20\% | 4.64\% | 5.56\% |
| 05/31/2013 | 9.00\% | 4.64\% | 4.36\% |
| 06/11/2013 | 10.00\% | 4.64\% | 5.36\% |
| 06/21/2013 | 9.75\% | 4.65\% | 5.10\% |
| 06/25/2013 | 9.80\% | 4.65\% | 5.15\% |


| [6] | [7] | [8] | [9] |
| :---: | :---: | :---: | :---: |
| Date of |  | Moody's |  |
| Electric | Return on | Utility Baa | Risk |
| Rate Case | Equity | Yield | Premium |
| 07/12/2013 | 9.36\% | 4.68\% | 4.68\% |
| 08/08/2013 | 9.83\% | 4.73\% | 5.10\% |
| 08/14/2013 | 9.15\% | 4.75\% | 4.40\% |
| 09/11/2013 | 10.20\% | 4.83\% | 5.37\% |
| 09/11/2013 | 10.25\% | 4.83\% | 5.42\% |
| 09/24/2013 | 10.20\% | 4.87\% | 5.33\% |
| 10/03/2013 | 9.65\% | 4.89\% | 4.76\% |
| 11/06/2013 | 10.20\% | 4.96\% | 5.24\% |
| 11/21/2013 | 10.00\% | 4.98\% | 5.02\% |
| 11/26/2013 | 10.00\% | 4.99\% | 5.01\% |
| 12/03/2013 | 10.25\% | 5.00\% | 5.25\% |
| 12/04/2013 | 9.50\% | 5.00\% | 4.50\% |
| 12/05/2013 | 10.20\% | 5.01\% | 5.19\% |
| 12/09/2013 | 8.72\% | 5.01\% | 3.71\% |
| 12/09/2013 | 9.75\% | 5.01\% | 4.74\% |
| 12/13/2013 | 9.75\% | 5.02\% | 4.73\% |
| 12/16/2013 | 9.95\% | 5.03\% | 4.92\% |
| 12/16/2013 | 9.95\% | 5.03\% | 4.92\% |
| 12/16/2013 | 10.12\% | 5.03\% | 5.09\% |
| 12/17/2013 | 9.50\% | 5.03\% | 4.47\% |
| 12/17/2013 | 10.95\% | 5.03\% | 5.92\% |
| 12/18/2013 | 8.72\% | 5.03\% | 3.69\% |
| 12/18/2013 | 9.80\% | 5.03\% | 4.77\% |
| 12/19/2013 | 10.15\% | 5.04\% | 5.11\% |
| 12/30/2013 | 9.50\% | 5.05\% | 4.45\% |
| 02/20/2014 | 9.20\% | 5.14\% | 4.06\% |
| 02/26/2014 | 9.75\% | 5.15\% | 4.60\% |
| 03/17/2014 | 9.55\% | 5.17\% | 4.38\% |
| 03/26/2014 | 9.40\% | 5.17\% | 4.23\% |
| 03/26/2014 | 9.96\% | 5.17\% | 4.79\% |
| 04/02/2014 | 9.70\% | 5.17\% | 4.53\% |
| 05/16/2014 | 9.80\% | 5.11\% | 4.69\% |
| 05/30/2014 | 9.70\% | 5.08\% | 4.62\% |
| 06/06/2014 | 10.40\% | 5.07\% | 5.33\% |
| 06/30/2014 | 9.55\% | 5.02\% | 4.53\% |
| 07/02/2014 | 9.62\% | 5.02\% | 4.60\% |
| 07/10/2014 | 9.95\% | 5.00\% | 4.95\% |
| 07/23/2014 | 9.75\% | 4.97\% | 4.78\% |
| 07/29/2014 | 9.45\% | 4.96\% | 4.49\% |
| 07/31/2014 | 9.90\% | 4.95\% | 4.95\% |
| 08/20/2014 | 9.75\% | 4.92\% | 4.83\% |
| 08/25/2014 | 9.60\% | 4.91\% | 4.69\% |
| 08/29/2014 | 9.80\% | 4.90\% | 4.90\% |
| 09/15/2014 | 10.25\% | 4.88\% | 5.37\% |
| 10/09/2014 | 9.80\% | 4.83\% | 4.97\% |
| 11/06/2014 | 9.56\% | 4.79\% | 4.78\% |
| 11/06/2014 | 10.20\% | 4.79\% | 5.42\% |
| 11/14/2014 | 10.20\% | 4.78\% | 5.42\% |
|  | Average:Count: |  | 3.97\% |
|  |  |  | 559 |



| Equity Duration Calulation | Price |  | D(0) |  | Growth Rate | Period | 1 |  | 2 |  | 3 |  | 4 |  | 5 |  | 60 | 200 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LNT Stated Price | \$ | 5887 | \$ | 2.04 | 4.73\% | Dividend | \$ | 2.09 | \$ | 2.19 | \$ | 229 | \$ | 2.40 | \$ | 251 | \$ 31.97 | \$ | 20,734 |
| LNT Implied Price | \$ | 5880 |  |  |  | PV Factor |  | 0.9235 |  | 08529 |  | 0.7877 |  | 0.7274 |  | 0.6718 | 0.0085 |  | 0.0000 |
|  |  |  |  |  |  | V Cash Flow |  | 1.9286 |  | 18654 |  | 1.8043 |  | 1.7452 |  | 1.6880 | 0.2703 |  | 0.0026 |
|  |  |  |  |  |  | Cumulative |  | 1.9286 |  | 3.7940 |  | 5.5983 |  | 7.3435 |  | 9.0315 | 50.8921 |  | 58.80 |
|  |  |  |  |  |  |  |  | 3.00\% |  | $600 \%$ |  | 10.00\% |  | 12.00\% |  | 15.00\% | 87.00\% |  | 100.00\% |
| AEP Stated Price | \$ | 5464 | \$ | 2.12 | 4.80\% | Dividend | \$ | 2.17 | \$ | 2.27 | \$ | 238 | \$ | 2.50 | \$ | 262 | \$ 34.45 | \$ | 24,309 |
| AEP Implied Price | \$ | 5461 |  |  |  | PV Factor |  | 0.9194 |  | 08453 |  | 0.7771 |  | 0.7144 |  | 0.6568 | 0.0065 |  | 0.0000 |
|  |  |  |  |  |  | V Cash Flow |  | 1.9958 |  | 19229 |  | 1.8527 |  | 1.7850 |  | 1.7198 | 0.2222 |  | 0.0012 |
|  |  |  |  |  |  | Cumulative |  | 1.9958 |  | 39187 |  | 5.7714 |  | 7.5564 |  | 9.2763 | 48.7813 |  | 54.61 |
|  |  |  |  |  |  |  |  | 4.00\% |  | $700 \%$ |  | 11.00\% |  | 14.00\% |  | 17.00\% | 89.00\% |  | 100.00\% |
| GXP Stated Price | \$ | 2553 | \$ | 0.92 | 5.32\% | Dividend | \$ | 0.94 | \$ | 0.99 | \$ | 105 | \$ | 1.10 | \$ | 1.16 | \$ 20.07 | \$ | 28,321 |
| GXP Implied Price | \$ | 2551 |  |  |  | PV Factor |  | 0.9173 |  | 08414 |  | 0.7719 |  | 0.7080 |  | 0.6495 | 0.0056 |  | 0.0000 |
|  |  |  |  |  |  | $V$ Cash Flow |  | 0.8663 |  | 08370 |  | 0.8086 |  | 0.7811 |  | 0.7546 | 0.1130 |  | 0.0009 |
|  |  |  |  |  |  | Cumulative |  | 0.8663 |  | 1.7033 |  | 2.5119 |  | 3.2930 |  | 4.0476 | 22.3149 |  | 25.51 |
|  |  |  |  |  |  |  |  | 3.00\% |  | $700 \%$ |  | 10.00\% |  | 13.00\% |  | 16.00\% | 87.00\% |  | 100.00\% |
| IDA Stated Price | \$ | 5766 | \$ | 1.88 | 3.33\% | Dividend | \$ | 1.91 | \$ | 1.98 | \$ | 204 | \$ | 2.11 | \$ | 2.18 | \$ 13.23 | \$ | 1,304 |
| IDA Implied Price | \$ | 5756 |  |  |  | PV Factor |  | 0.9377 |  | 08792 |  | 0.8244 |  | 0.7730 |  | 0.7248 | 0.0210 |  | 0.0000 |
|  |  |  |  |  |  | V Cash Flow |  | 1.7922 |  | 1.7365 |  | 1.6825 |  | 1.6302 |  | 1.5795 | 0.2782 |  | 0.0033 |
|  |  |  |  |  |  | Cumulative |  | 1.7922 |  | 35287 |  | 5.2112 |  | 6.8414 |  | 8.4209 | 48.9884 |  | 57.56 |
|  |  |  |  |  |  |  |  | 3.00\% |  | $600 \%$ |  | 9.00\% |  | 12.00\% |  | 15.00\% | 85.00\% |  | 100.00\% |
| PNW Stated Price | \$ | 5803 | \$ | 2.38 | 3.97\% | Dividend | \$ | 2.43 | \$ | 2.52 | \$ | 262 | \$ | 2.73 | \$ | 284 | \$ 24.09 | \$ | 5,585 |
| PNW Implied Price | \$ | 5801 |  |  |  | PV Factor |  | 0.9246 |  | 08550 |  | 0.7905 |  | 0.7310 |  | 0.6759 | 0.0091 |  | 0.0000 |
|  |  |  |  |  |  | V Cash Flow |  | 2.2443 |  | 2.1575 |  | 2.0741 |  | 1.9939 |  | 1.9167 | 0.2190 |  | 0.0009 |
|  |  |  |  |  |  | Cumulative |  | 2.2443 |  | 4.4018 |  | 6.4759 |  | 8.4697 |  | 10.3865 | 52.5864 |  | 58.01 |
|  |  |  |  |  |  |  |  | 4.00\% |  | $800 \%$ |  | 11.00\% |  | 15.00\% |  | 18.00\% | 91.00\% |  | 100.00\% |
| PNM Stated Price | \$ | 2695 | \$ | 0.74 | 9.61\% | Dividend | \$ | 0.78 | \$ | 0.85 | \$ | 093 | \$ | 1.02 | \$ | 1.12 | \$ 174.41 |  | ,440,701 |
| PNM Implied Price | \$ | 2680 |  |  |  | PV Factor |  | 0.8890 |  | 0.7902 |  | 0.7025 |  | 0.6245 |  | 0.5551 | 0.0009 |  | 0.0000 |
|  |  |  |  |  |  | V Cash Flow |  | 0.6894 |  | 06718 |  | 0.6546 |  | 0.6379 |  | 0.6216 | 0.1494 |  | 0.0040 |
|  |  |  |  |  |  | Cumulative |  | 0.6894 |  | 13613 |  | $2.0159$ |  | 2.6538 |  | 3.2753 | 21.2577 |  | 26.80 |
|  |  |  |  |  |  |  |  | 3.00\% |  | $500 \%$ |  | 8.00\% |  | 10.00\% |  | 12.00\% | 79.00\% |  | 100.00\% |
| POR Stated Price | \$ | 3438 | \$ | 1.12 | 6.39\% | Dividend | \$ | 1.16 | \$ | 1.23 | \$ | 131 | \$ | 1.39 | \$ | 1.48 | \$ 44.67 | \$ | 260,698 |
| POR Implied Price | \$ | 3431 |  |  |  | PV Factor |  | 0.9111 |  | 08302 |  | 0.7564 |  | 0.6892 |  | 0.6280 | 0.0038 |  | 0.0000 |
|  |  |  |  |  |  | $V$ Cash Flow |  | 1.0531 |  | 10208 |  | 0.9895 |  | 0.9592 |  | 0.9298 | 0.1680 |  | 0.0022 |
|  |  |  |  |  |  | Cumulative |  | 1.0531 |  | 20739 |  | 3.0635 |  | 4.0227 |  | 4.9525 | 29.0603 |  | 34.31 |
|  |  |  |  |  |  |  |  | 3.00\% |  | $600 \%$ |  | 9.00\% |  | 12.00\% |  | 14.00\% | 85.00\% |  | 100.00\% |
| So Stated Price | \$ | 4529 | \$ | 2.10 | 3.56\% | Dividend | \$ | 2.14 | \$ | 2.21 | \$ | 229 | \$ | 2.37 | \$ | 2.46 | \$ 16.80 | \$ | 2,240 |
| SO Implied Price | \$ | 4528 |  |  |  | PV Factor |  | 0.9236 |  | 08530 |  | 0.7878 |  | 0.7276 |  | 0.6720 | 0.0085 |  | 0.0000 |
|  |  |  |  |  |  | V Cash Flow |  | 1.9740 |  | 18879 |  | 1.8057 |  | 1.7269 |  | 1.6517 | 0.1424 |  | 0.0003 |
|  |  |  |  |  |  | Cumulative |  | 1.9740 |  | 38619 |  | 5.6676 |  | 7.3945 |  | 9.0462 | 42.1647 |  | 45.28 |
|  |  |  |  |  |  |  |  | 4.00\% |  | $900 \%$ |  | 13.00\% |  | 16.00\% |  | 20.00\% | 93.00\% |  | 100.00\% |
| WR Stated Price | \$ | 3632 | \$ | 1.40 | 4.17\% | Dividend | \$ | 1.43 | \$ | 1.49 | \$ | 155 | \$ | 1.62 | \$ | 168 | \$ 15.89 | \$ | 4,821 |
| WR Implied Price | \$ | 3630 |  |  |  | PV Factor |  | 0.9251 |  | 08557 |  | 0.7916 |  | 0.7323 |  | 0.6774 | 0.0093 |  | 0.0000 |
|  |  |  |  |  |  | V Cash Flow |  | 1.3221 |  | 12739 |  | 1.2276 |  | 1.1829 |  | 1.1398 | 0.1483 |  | 0.0008 |
|  |  |  |  |  |  | Cumulative |  | 1.3221 |  | 25960 |  | 3.8236 |  | 5.0064 |  | 6.1463 | 32.3945 |  | 36.30 |
|  |  |  |  |  |  |  |  | 4.00\% |  | $700 \%$ |  | 11.00\% |  | 14.00\% |  | 17.00\% | 89.00\% |  | 100.00\% |
| XEL Stated Price | \$ | 3206 | \$ | 1.20 | 4.39\% | Dividend | \$ | 1.23 | \$ | 1.28 | \$ | 134 | \$ | 1.40 | \$ | 1.46 | \$ 15.47 | \$ | 6,335 |
| XEL Implied Price | \$ | 3204 |  |  |  | PV Factor |  | 0.9241 |  | 08539 |  | 0.7891 |  | 0.7292 |  | 0.6739 | 0.0088 |  | 0.0000 |
|  |  |  |  |  |  | V Cash Flow |  | 1.1332 |  | 10932 |  | 1.0546 |  | 1.0173 |  | 0.9813 | 0.1356 |  | 0.0009 |
|  |  |  |  |  |  | Cumulative |  | 1.1332 |  | 22264 |  | 3.2810 |  | 4.2983 |  | 5.2796 | 28.3621 |  | 32.04 |
|  |  |  |  |  |  |  |  | 4.00\% |  | $700 \%$ |  | 10.00\% |  | 13.00\% |  | 16.00\% | 89.00\% |  | 100.00\% |

Comparison of Mr. Gorman's DCF Results Using Analysts' Growth Rates vs. Mr. Gorman's Long Term Sustainable Growth Rate

|  |  | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker | 13-Week <br> Avg Stock Price | Annualized Divided | Adjusted Yield | Analysts' Growth | MPG Long Term <br> Sustainable <br> Growth Rate | $\begin{gathered} \text { Dividend } \\ \text { Yield } \\ \hline \end{gathered}$ | Adjusted Yield Check | Constant Growth DCF Check | MPG <br> Constant Growth DCF | Constant Growth DCF with Sustainable Growth |
| American Electric Power Company, Inc. | AEP | \$53.81 | \$2.00 | 3.90\% | 5.02\% | 4.60\% | 3.72\% | 3.90\% | 8.93\% | 8.93\% | 8.50\% |
| Empire District Electric Company | EDE | \$25.71 | \$1.02 | 4.09\% | 3.00\% | 4.60\% | 3.97\% | 4.09\% | 7.09\% | 7.09\% | 8.69\% |
| Great Plains Energy Inc. | GXP | \$25.33 | \$0.92 | 3.81\% | 5.00\% | 4.60\% | 3.63\% | 3.81\% | 8.81\% | 8.81\% | 8.41\% |
| Hawaiian Electric Industries, Inc. | HE | \$26.09 | \$1.24 | 4.94\% | 4.00\% | 4.60\% | 4.75\% | 4.94\% | 8.94\% | 8.94\% | 9.54\% |
| IDACORP, Inc. | IDA | \$56.59 | \$1.88 | 3.45\% | 4.00\% | 4.60\% | 3.32\% | 3.45\% | 7.45\% | 7.45\% | 8.05\% |
| NextEra Energy, Inc. | NEE | \$96.32 | \$2.90 | 3.21\% | 6.46\% | 4.60\% | 3.01\% | 3.21\% | 9.66\% | 9.66\% | 7.81\% |
| Northeast Utilities | NU | \$46.18 | \$1.57 | 3.62\% | 6.44\% | 4.60\% | 3.40\% | 3.62\% | 10.06\% | 10.06\% | 8.22\% |
| Otter Tail Corporation | OTTR | \$28.39 | \$1.21 | N/A | N/A | 4.60\% | N/A | N/A | N/A | N/A | N/A |
| Pinnacle West Capital Corporation | PNW | \$56.95 | \$2.38 | 4.35\% | 3.98\% | 4.60\% | 4.18\% | 4.35\% | 8.33\% | 8.33\% | 8.95\% |
| PNM Resources, Inc. | PNM | \$26.46 | \$0.74 | 3.03\% | 8.21\% | 4.60\% | 2.80\% | 3.03\% | 11.24\% | 11.24\% | 7.63\% |
| Portland General Electric Company | POR | \$33.93 | \$1.12 | 3.56\% | 7.81\% | 4.60\% | 3.30\% | 3.56\% | 11.37\% | 11.37\% | 8.16\% |
| Southern Company | SO | \$44.75 | \$2.10 | 4.86\% | 3.61\% | 4.60\% | 4.69\% | 4.86\% | 8.47\% | 8.47\% | 9.46\% |
| Westar Energy, Inc. | WR | \$35.96 | \$1.40 | 4.01\% | 3.03\% | 4.60\% | 3.89\% | 4.01\% | 7.04\% | 7.04\% | 8.61\% |
| Mean |  |  |  |  | 5.05\% |  |  |  | 8.95\% | 8.95\% | 8.50\% |
| Median |  |  |  |  | 4.50\% |  |  |  | 8.87\% | 8.87\% | 8.46\% |
| Notes: |  |  |  |  |  |  |  |  |  |  |  |
| [1] Source: Schedule MPG-4 |  |  |  |  |  |  |  |  |  |  |  |
| [2] Source: Schedule MPG-4 |  |  |  |  |  |  |  |  |  |  |  |
| [3] Source: Schedule MPG-4 |  |  |  |  |  |  |  |  |  |  |  |
| [4] Source: Schedule MPG-4 |  |  |  |  |  |  |  |  |  |  |  |
| [5] Source: Schedule MPG-9 |  |  |  |  |  |  |  |  |  |  |  |
| [6] Equals [2] / [1] |  |  |  |  |  |  |  |  |  |  |  |
| [7] Equals [6] $\times$ (1+ [4]) |  |  |  |  |  |  |  |  |  |  |  |
| [8] Equals [4] + [7] |  |  |  |  |  |  |  |  |  |  |  |
| [9] Source: Schedule MPG-4 |  |  |  |  |  |  |  |  |  |  |  |
| [10] Equals [5] + [7] |  |  |  |  |  |  |  |  |  |  |  |

DuPont Analysis

| Year | Profit <br> Margin | Asset <br> Turnover | Equity <br> Multiplier | Return <br> on Equity |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 2007 | $7.41 \%$ | $6235 \%$ | $226.26 \%$ | $9.05 \%$ | Annual <br> Increase in <br> Net Plant |
| 2008 | $668 \%$ | $5534 \%$ | $236.21 \%$ | $7.55 \%$ |  |
| 2009 | $761 \%$ | $46.49 \%$ | $234.47 \%$ | $7.49 \%$ | $15.34 \%$ |
| 2010 | $8.75 \%$ | 46 | $60 \%$ | $235.46 \%$ | $8.39 \%$ |
| 2011 | $933 \%$ | $4602 \%$ | $236.32 \%$ | $8.72 \%$ | $5.47 \%$ |
| 2012 | $1002 \%$ | $4133 \%$ | $232.79 \%$ | $8.63 \%$ | $496 \%$ |
| 2013 | $10.45 \%$ | $40.77 \%$ | $234.60 \%$ | $9.06 \%$ | $13.42 \%$ |
| $2017-2019$ | $11.77 \%$ | $4083 \%$ | $226.41 \%$ | $9.81 \%$ | $6.13 \%$ |


|  |  | DuPont Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Net Profit |  | Revenue |  | Net Plant |  | Total Capital |  | Common Equity Ratio | $\begin{gathered} \text { Book } \\ \text { Value per } \\ \text { Share } \\ \hline \end{gathered}$ |  | Shares Outstanding | Reported Return on Com Equity | Profit Margin | $\begin{gathered} \text { Asset } \\ \text { Turnover } \end{gathered}$ | Equity Multiplier | $\begin{gathered} \hline \text { Calculated } \\ \text { Return } \\ \text { on Equity } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Common } \\ \text { Equity } \\ \text { Check } \\ \hline \end{gathered}$ | ROE Check | $\qquad$ |
| AEP | 2007 | \$ | 1,147.00 | \$ | 13,380.00 | \$ | 29,870 00 | \$ | 24,342.00 | 41.40\% | \$ | 25.17 | 400.43 | 11.40\% | 857\% | 44.79\% | 296.40\% | 11.38\% | 100.01\% | 99.84\% |  |
|  | 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\% | 10.4\% |
|  | 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\% | $966 \%$ | 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 | $4890 \%$ | \$ | 32.98 | 487.78 | 9.60\% | 1009\% | 37.46\% | 254.73\% | 9.62\% | 99.95\% | 100.25\% | 5.8\% |
|  | 2017-2019 |  | 1,975.00 |  | 19,650.00 |  | 51,000 00 |  | 41,900.00 | 48 00\% | \$ | 40.50 | 498.00 | 10.00\% | 10 05\% | 38.53\% | 253.58\% | 9.82\% | 100.28\% | 98.20\% | 24.4\% |
| DUK | 2007 | \$ | 1,522.00 | \$ | 12,720.00 | \$ | 31,110 00 | \$ | 30,697.00 | 69.10\% | \$ | 50.40 | 420.62 | 7.20\% | 11 97\% | 40.89\% | 146.66\% | 7.18\% | 99.94\% | 99.66\% |  |
|  | 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\% | 9.4\% |
|  | 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\% |
|  | 2017-2019 |  | 3,765.00 |  | 28,300.00 |  | 88,400 00 |  | 96,600.00 | 48 00\% | \$ | 65.00 | 711.00 | 8.00\% | 13 30\% | 32.01\% | 190.65\% | 8.12\% | 99.67\% | 101.50\% | 27.2\% |
| EDE | 2007 | \$ | 33.20 | \$ | 490.20 | \$ | 1,178 90 | \$ | 1,081.10 | 49 90\% | \$ | 16.04 | 33.61 | 6.20\% | 6.77\% | 41.58\% | 218.53\% | 6.15\% | 99.93\% | 99.26\% |  |
|  | 2008 |  | 39.70 |  | 518.20 |  | 1,342 80 |  | 1,140.40 | 46.40\% | \$ | 15.56 | 33.98 | 7.50\% | 7 66\% | 38.59\% | 253.77\% | 7.50\% | 99.92\% | 100.04\% | 13.9\% |
|  | 2009 |  | 41.30 |  | 497.20 |  | 1,459 00 |  | 1,240.30 | 48.40\% | \$ | 15.75 | 38.11 | 6.90\% | $831 \%$ | 34.08\% | 243.04\% | 6.88\% | 99.99\% | 99.71\% | 8.7\% |
|  | 2010 |  | 47.40 |  | 541.30 |  | 1,519.10 |  | 1,350.70 | 48.70\% | \$ | 15.82 | 41.58 | 7.20\% | 8.76\% | 35.63\% | 230.94\% | 7.21\% | 100.00\% | 100.08\% | 4.1\% |
|  | 2011 |  | 55.00 |  | 576.90 |  | 1,563.70 |  | 1,386.20 | 50.10\% | \$ | 16.53 | 41.98 | 7.90\% | $953 \%$ | 36.89\% | 225.16\% | 7.92\% | 99.92\% | 100.25\% | 2.9\% |
|  | 2012 |  | 55.70 |  | 557.10 |  | 1,657 60 |  | 1,409.40 | 50 90\% | \$ | 16.90 | 42.48 | 7.80\% | 1000\% | 33.61\% | 231.06\% | 7.76\% | 100.07\% | 99.54\% | 6.0\% |
|  | 2013 |  | 63.40 |  | 594.30 |  | 1,751 90 |  | 1,493.60 | 50 20\% | \$ | 17.43 | 43.04 | 8.50\% | 10 67\% | 33.92\% | 233.65\% | 8.46\% | 100.05\% | 99.48\% | 5.7\% |
|  | 2017-2019 |  | 85.00 |  | 790.00 |  | 2,000 00 |  | 1,900.00 | 50 00\% | \$ | 20.25 | 47.00 | 9.00\% | 10.76\% | 39.50\% | 210.53\% | 8.95\% | 100.18\% | 99.42\% | 14.2\% |
| GXP | 2007 | \$ | 159.20 | \$ | 3,267.10 | \$ | 3,444 50 | \$ | 2,709.80 | 57 90\% |  | 18.18 | 86.23 | 10.10\% | 4 87\% | 94.85\% | 219.54\% | 10.15\% | 99.92\% | 100.46\% |  |
|  | 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\% | 76.6\% |
|  | 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\% |
|  | 2017-2019 |  | 305.00 |  | 3,050.00 |  | 8,650 00 |  | 7,275.00 | 56 00\% | + | 26.00 | 156.50 | 7.50\% | 1000\% | 35.26\% | 212.32\% | 7.49\% | 99.88\% | 99.82\% | 11.7\% |


|  |  | DuPont Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Annual Increase in Net Plant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Net Profit |  |  | Revenue |  | Net Plant |  | Total Capital | $\begin{gathered} \hline \text { Common } \\ \text { Equity } \\ \text { Ratio } \\ \hline \end{gathered}$ |  | 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 |  |
| HE | 2007 |  | 93.60 |  | 2,536.40 |  | 2,743.40 |  | 2,501.80 | 5100\% | \$ | 15.29 | 83.43 | 7.20\% | 369\% | 92.45\% | 215.01\% | 7.34\% | 99.98\% | 101.89\% |  |
|  | 2008 |  | 92.20 |  | 3,218.90 |  | 2,907.40 |  | 2,635.20 | 52.70\% | \$ | 15.35 | 90.52 | 6.50\% | $286 \%$ | 110.71\% | 209.35\% | 6.64\% | 100.05\% | 102.14\% | 6.0\% |
|  | 2009 |  | 84.90 |  | 2,309.60 |  | 3,088 60 |  | 2,840.80 | 50.70\% | \$ | 15.58 | 92.52 | 5.80\% | $368 \%$ | 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\% | $433 \%$ | 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\% | $432 \%$ | 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\% | $489 \%$ | 93.89\% | 225.59\% | 10.35\% | 100.05\% | 101.45\% | 7.8\% |
|  | 2013 |  | 163.40 |  | 3,238.50 |  | 3,85890 |  | 3,142.90 | 55 00\% | \$ | 17.06 | 101.26 | 9.40\% | $505 \%$ | 83.92\% | 223.24\% | 9.45\% | 99.94\% | 100.56\% | 7.3\% |
|  | 2017-2019 |  | 225.00 |  | 4,150.00 |  | 4,950 00 |  | 4,600.00 | 49 50\% | \$ | 20.50 | 111.00 | 10.00\% | 5.42\% | 83.84\% | 217.39\% | 9.88\% | 99.93\% | 98.81\% | 28.3\% |
| DA | 2007 | \$ | 82.30 | \$ | 879.40 | \$ | 2,616 60 | \$ | 2,364.20 | 51.10\% | \$ | 26.79 | 45.06 | 6.80\% | 9 36\% | 33.61\% | 216.59\% | 6.81\% | 99.92\% | 100.18\% |  |
|  | 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\% | 5.4\% |
|  | 2009 |  | 124.40 |  | 1,049.80 |  | 2,917 00 |  | 2,807.10 | 49 80\% | \$ | 29.17 | 47.90 | 8.90\% | $1185 \%$ | 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\% | $1625 \%$ | 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\% |
|  | 2017-2019 |  | 190.00 |  | 1,360.00 |  | 4,740 00 |  | 4,415.00 | 51 50\% | \$ | 44.90 | 50.20 | 8.50\% | $1397 \%$ | 28.69\% | 208.47\% | 8.36\% | 99.13\% | 98.31\% | 29.3\% |
| NEE | 2007 |  | 1,312.00 | \$ | 15,263.00 | \$ | 28,652 00 | \$ | 22,015.00 | 48 80\% | \$ | 26.35 | 407.35 | 12.20\% | 8 60\% | 53.27\% | 266.70\% | 12.21\% | 99.91\% | 100.10\% |  |
|  | 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\% | 13.1\% |
|  | 2009 |  | 1,615.00 |  | 15,643.00 |  | 36,078 00 |  | 29,267.00 | 44 30\% | \$ | 31.35 | 413.62 | 12.50\% | $1032 \%$ | 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 | $4180 \%$ | \$ | 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 | $4090 \%$ | \$ | 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\% |
|  | 2017-2019 |  | 3230 |  | 18,000.00 |  | 62,100 00 |  | 52,400.00 | 51 50\% | \$ | 57.25 | 470.00 | 12.00\% | 1794\% | 28.99\% | 230.12\% | 11.97\% | 99.71\% | 99.74\% | 17.8\% |
| NU | 2007 | \$ | 251.50 | \$ | 5,822.20 | \$ | 7,229 90 | \$ | 7,431.10 | 39 20\% | \$ | 18.65 | 156.22 | 8.40\% | $432 \%$ | 80.53\% | 248.20\% | 8.63\% | 100.02\% | 102.78\% |  |
|  | 2008 |  | 296.20 |  | 5,800.10 |  | 8,20790 |  | 7,926.20 | 38.10\% |  | 19.38 | 155.83 | 9.60\% | 5.11\% | 70.66\% | 271.80\% | 9.81\% | 100.00\% | 102.17\% | 13.5\% |
|  | 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\% | $896 \%$ | 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\% | $850 \%$ | 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\% |
|  | 2017-2019 |  | 1,120.00 |  | 8,650.00 |  | 23,900 00 |  | 21,800.00 | 53 50\% |  | 36.50 | 325.00 | 9.50\% | 12 95\% | 36.19\% | 204.92\% | 9.60\% | 101.71\% | 101.08\% | 36.0\% |
| OTTR | 2007 | \$ | 54.00 | \$ | 1,238.90 | \$ | 85400 | \$ | 882.10 | 59.40\% | \$ | 17.55 | 29.85 | 10.20\% | $436 \%$ | 145.07\% | 162.99\% | 10.31\% | 99.98\% | 101.04\% |  |
|  | 2008 |  | 35.10 |  | 1,311.20 |  | 1,037 60 |  | 1,032.50 | 65 60\% | \$ | 19.14 | 35.38 | 5.10\% | $268 \%$ | 126.37\% | 153.19\% | 5.18\% | 99.98\% | 101.61\% | 21.5\% |
|  | 2009 |  | 26.00 |  | 1,039.50 |  | 1,098 60 |  | 1,124.40 | 59 80\% | \$ | 18.78 | 35.81 | 3.80\% | 250\% | 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\% | 122\% | 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\% | 152\% | 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\% | $454 \%$ | 81.87\% | 201.13\% | 7.47\% | 100.02\% | 102.38\% | -2.6\% |
|  | 2013 |  | 50.20 |  | 893.30 |  | 1,167 00 |  | 924.40 | 57 90\% | \$ | 14.74 | 36.27 | 9.40\% | $562 \%$ | 76.55\% | 218.04\% | 9.38\% | 99.89\% | 99.78\% | 11.2\% |
|  | 2017-2019 |  | 90.00 |  | 1,325.00 |  | 1,550 00 |  | 1,425.00 | 51 00\% | \$ | 18.15 | 40.00 | 12.50\% | 6.79\% | 85.48\% | 213.28\% | 12.38\% | 99.90\% | 99.07\% | 32.8\% |
| PNW | 2007 | \$ | 298.80 | \$ | 3,523.60 | \$ | 8,436.40 | \$ | 6,658.70 | 53 00\% | \$ | 35.15 | 100.49 | 8.50\% | 8.48\% | 41.77\% | 239.05\% | 8.47\% | 100.09\% | 99.61\% |  |
|  | 2008 |  | 213.60 |  | 3,367.10 |  | 8,916.70 |  | 6,477.60 | 53 20\% | \$ | 34.16 | 100.89 | 6.20\% | $634 \%$ | 37.76\% | 258.75\% | 6.20\% | 100.01\% | 99.97\% | 5.7\% |
|  | 2009 |  | 229.20 |  | 3,297.10 |  | 9,257 80 |  | 6,686.60 | 49 60\% | \$ | 32.69 | 101.43 | 6.90\% | $695 \%$ | 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 | $5590 \%$ | \$ | 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\% |
|  | 2017-2019 |  | 505.00 |  | 4,200.00 |  | 13,600 00 |  | 8,800.00 | 60 50\% | \$ | 45.25 | 117.50 | 9.50\% | 12 02\% | 30.88\% | 255.45\% | 9.49\% | 99.87\% | 99.85\% | 24.9\% |


| DuPont Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Annual Increase in Net Plant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Net Profit |  |  | Revenue |  | Net Plant |  | Total Capital | $\begin{gathered} \hline \text { Common } \\ \text { Equity } \\ \text { Ratio } \\ \hline \end{gathered}$ |  | Book Value per Share | Shares Outstanding | Reported Return on Com Equity | Profit Margin | Asset Turnover | Equity Multiplier | Calculated Return on Equity | $\begin{gathered} \hline \text { Common } \\ \text { Equity } \\ \text { Check } \\ \hline \end{gathered}$ | ROE Check |  |
| PNM | 2007 |  | 59.90 |  | 1,914.00 |  | 2,935.40 |  | 2,935.80 | 5760\% | \$ | 22.03 | 76.81 | 3.50\% | 3.13\% | 65.20\% | 173.59\% | 3.54\% | 100.07\% | 101.21\% |  |
|  | 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\% | 8.7\% |
|  | 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\% | $787 \%$ | 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\% |
|  | 2017-2019 |  | 190.00 |  | 1,585.00 |  | 5,020 00 |  | 4,195.00 | $4650 \%$ | \$ | 24.50 | 80.00 | 9.50\% | 11 99\% | 31.57\% | 257.35\% | 9.74\% | 100.48\% | 102.53\% | 27.6\% |
| POR | 2007 | \$ | 145.00 | \$ | 1,743.00 | \$ | 3,066 00 | \$ | 2,629.00 | 50.10\% | \$ | 21.05 | 62.53 | 11.00\% | 8 32\% | 56.85\% | 232.78\% | 11.01\% | 99.93\% | 100.08\% |  |
|  | 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\% | 7.7\% |
|  | 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\% | 781\% | 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\% |
|  | 2017-2019 |  | 235.00 |  | 2,175.00 |  | 5,700 00 |  | 4,700.00 | 55 50\% | \$ | 29.00 | 90.00 | 9.00\% | 10 80\% | 38.16\% | 218.52\% | 9.01\% | 100.06\% | 100.10\% | 16.8\% |
| so | 2007 | \$ | 1,782.00 | , | 15,353.00 | \$ | 33,327 00 | \$ | 27,608.00 | 44 90\% | \$ | 16.23 | 763.10 | 14.00\% | 11 61\% | 46.07\% | 268.85\% | 14.38\% | 99.91\% | 102.68\% |  |
|  | 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\% | 7.7\% |
|  | 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\% |
|  | 2017-2019 |  | 3,160.00 |  | 21,250.00 |  | 66,200 00 |  | 58,300.00 | 42 50\% | \$ | 26.25 | 940.00 | 12.50\% | 14 87\% | 32.10\% | 267.18\% | 12.75\% | 99.59\% | 102.03\% | 29.3\% |
| WR | 2007 | \$ | 168.40 | \$ | 1,726.80 | \$ | 4,803.70 | \$ | 3,738.30 | $4890 \%$ | \$ | 19.14 | 95.46 | 9.20\% | 9.75\% | 35.95\% | 262.78\% | 9.21\% | 99.95\% | 100.13\% |  |
|  | 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\% | 15.2\% |
|  | 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\% | \$ | 22.30 | 125.70 | 7.70\% | $986 \%$ | 32.18\% | 243.43\% | 7.72\% | 101.16\% | 100.30\% | 6.9\% |
|  | 2012 |  | 275.10 |  | 2,261.50 |  | 7,335.70 |  | 5,938.20 | 4880\% | \$ | 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\% |
|  | 2017-2019 |  | 390.00 |  | 2,800.00 |  | 9,200 00 |  | 8,000.00 | 50 00\% | \$ | 29.65 | 135.00 | 9.50\% | 13 93\% | 30.43\% | 230.00\% | 9.75\% | 100.07\% | 102.63\% | 17.2\% |

Retention Ratio and Earnings Growth

| Company |  | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| American Electric Power Company, Inc. | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | N/A | -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\% |
|  | Average Earnings Growth [5] | 24.95\% | 26.43\% | 38.93\% | -2.29\% | 0.22\% | 3.44\% | 2.67\% | -0.05\% | 2.36\% | 1.40\% | 1.84\% | N/A | N/A | N/A | N/A | N/A |
| Duke Energy Corporation | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | 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\% |
|  | Average Earnings Growth [5] | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 9.61\% | 1.45\% | 6.07\% | N/A | N/A | N/A | N/A | N/A |
| Empire District Electric | Earnings per Share [1] | 1.53 | 1.13 | 1.35 | 0.59 | 1.19 | 1.29 | 0.86 | 0.92 | 1.41 | 1.09 | 1.17 | 1.18 | 1.17 | 1.31 | 1.32 | 1.48 |
|  | Dividends per Share [2] | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 | 1.28 | 0.64 | 1.00 | 1.01 |
|  | Payout Ratio [3] | 83.66\% | 113.27\% | 94.81\% | 216.95\% | 107.56\% | 99.22\% | 148.84\% | 139.13\% | 90.78\% | 117.43\% | 109.40\% | 108.47\% | 109.40\% | 48.85\% | 75.76\% | 68.24\% |
|  | Earnings Growth [4] | N/A | -26.14\% | 19.47\% | -56.30\% | 101.69\% | 8.40\% | -33.33\% | 6.98\% | 53.26\% | -22.70\% | 7.34\% | 0.85\% | -0.85\% | 11.97\% | 0.76\% | 12.12\% |
|  | Average Earnings Growth [5] | 9.43\% | 7.99\% | 5.49\% | 27.40\% | 2.52\% | 2.31\% | 9.15\% | 7.58\% | -0.68\% | 4.02\% | 4.97\% | N/A | N/A | N/A | N/A | N/A |
| Great Plains Energy Inc. | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | N/A | -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\% |
|  | Average Earnings Growth [5] | 9.30\% | 17.64\% | 2.83\% | 2.18\% | -0.52\% | -10.30\% | -14.22\% | -2.23\% | -0.76\% | -2.12\% | 9.41\% | N/A | N/A | N/A | N/A | N/A |
| Hawaiian Electric Industries, Inc. | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 [3] | 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\% |
|  | Earnings Growth [4] | N/A | -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\% |
|  | Average Earnings Growth [5] | 2.06\% | -0.31\% | 3.64\% | -3.34\% | -6.90\% | -7.12\% | -7.33\% | -2.21\% | 3.38\% | 9.88\% | 10.00\% | N/A | N/A | N/A | N/A | N/A |
| IDACORP, Inc. | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | N/A | 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\% |
|  | Average Earnings Growth [5] | -10.03\% | 9.04\% | -1.34\% | 6.37\% | 12.47\% | 24.13\% | 8.77\% | 12.70\% | 8.62\% | 12.85\% | 11.01\% | N/A | N/A | N/A | N/A | N/A |
| $\overline{\text { NextEra Energy, Inc. }}$ | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 51.81\% | 50.98\% | 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\% |
|  | Earnings Growth [4] | N/A | 5.70\% | 1.47\% | 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\% |
|  | Average Earnings Growth [5] | 5.53\% | 4.48\% | 3.04\% | 8.57\% | 11.41\% | 11.93\% | 11.36\% | 16.37\% | 8.87\% | 7.54\% | 3.83\% | N/A | N/A | N/A | N/A | N/A |
| Northeast Utilities | Earnings per Share [1] | N/A | N/A | N/A | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | 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\% |
|  | Average Earnings Growt [5] | N/A | N/A | N/A | -8.32\% | 14.69\% | 15.13\% | 20.99\% | 21.44\% | 25.85\% | 4.09\% | 7.05\% | N/A | N/A | N/A | N/A | N/A |
| Otter Tail Corporation | Earrings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | N/A | 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\% |
|  | Average Earnings Growth [5] | 3.73\% | 1.12\% | 2.78\% | 0.77\% | 0.53\% | -4.10\% | -10.94\% | -23.97\% | -19.27\% | 6.33\% | 20.18\% | N/A | N/A | N/A | N/A | N/A |
| Pinnacle West Capital Corp. | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | N/A | 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\% |
|  | Average Earnings Growth [5] | -0.97\% | -2.81\% | -6.52\% | -0.18\% | 4.74\% | -0.86\% | -0.01\% | 9.88\% | 0.99\% | 5.73\% | 12.32\% | N/A | N/A | N/A | N/A | N/A |

Retention Ratio and Earnings Growth

| Company |  | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PNM Resources, Inc. | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | N/A | -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\% |
|  | Average Earnings Growth [5] | 4.60\% | 12.27\% | 10.06\% | -1.57\% | -0.93\% | -19.53\% | 61.06\% | 69.24\% | 72.01\% | 87.44\% | 106.07\% | N/A | N/A | N/A | N/A | N/A |
| Portland General Electric Company | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | 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\% |
|  | Average Earnings Growth [5] | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 19.35\% | 20.49\% | -1.20\% | 5.80\% | N/A | N/A | N/A | N/A | N/A |
| Southern Company | Earnings per Share [1] | 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 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | N/A | 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\% |
|  | Average Earnings Growth [5] | 3.42\% | 3.18\% | 1.89\% | 5.59\% | 4.32\% | 2.76\% | 2.47\% | 2.14\% | 4.03\% | 3.26\% | 3.74\% | N/A | N/A | N/A | N/A | N/A |
| Westar Energy, Inc. | Earnings per Share [1] | 2.13 | 1.48 | 0.89 | N/A | 1.00 | 1.48 | 1.17 | 1.55 | 1.88 | 1.84 | 1.31 | 1.28 | 1.80 | 1.79 | 2.15 | 2.27 |
|  | Dividends per Share [2] | 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 |
|  | Payout Ratio [3] | 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\% |
|  | Earnings Growth [4] | 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\% |
|  | Average Earnings Growth [5] | N/A | N/A | N/A | N/A | 15.74\% | 0.38\% | 4.11\% | 5.74\% | 1.37\% | 5.82\% | 12.69\% | \#REF! | \#REF! | \#REF! | \#REF! | \#REF! |

Notes:
[1] Source: Value Line, negative earnings have been excluded (shown as N/A)
${ }^{[2]}$ Source: Value Line
[31] Equals ([1] / [1]
[5] Equals Average of $\left([4]_{n},[4]_{n},[4]_{n},[4]_{n},[4]_{n} 5\right)$

|  | SUMMARY OUT |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Regression | Statistics |  |  |  |  |  |  |  |
|  | Multiple R | 0.540426732 |  |  |  |  |  |  |  |
|  | R Square | 0.292061053 |  |  |  |  |  |  |  |
|  | Adjusted R Squ | 0.286656939 |  |  |  |  |  |  |  |
|  | Standard Error | 0.186195923 |  |  |  |  |  |  |  |
|  | Observations | 133 |  |  |  |  |  |  |  |
|  | ANOVA |  |  |  |  |  |  |  |  |
|  |  | df | SS | MS | F | Significance $F$ |  |  |  |
|  | Regression | 1 | 1.873654327 | 1.873654327 | 54.04420541 | $1.8918 \mathrm{E}-11$ |  |  |  |
|  | Residual | 131 | 4.541628745 | 0.034668922 |  |  |  |  |  |
|  | Total | 132 | 6.415283072 |  |  |  |  |  |  |
|  |  | Coefficients | Standard Error | $t$ Stat | $P$-value | Lower 95\% | Upper 95\% | ower 95.00 |  |
| $\mathrm{X}=$ Retention ratio | Intercept | 0.137046479 | 0.016850958 | 8.132859715 | $2.79518 \mathrm{E}-13$ | 0.103711264 | 0.170382 | 0.103711 | 0.170382 |
| $Y=5$-year average growth rate | $x$ Variable 1 | -0.181957739 | 0.024751183 | -7.35147641 | 1.8918E-11 | -0.230921484 | -0.132994 | -0.230921 | -0.132994 |

Step-By-Step Adjustment of Mr. Gorman's Multi-Stage DCF Model Re-Creation of Schedule MPG-9

|  |  | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker | Stock Price | Annualized Dividend | First-Stage Growth | Second-Stage Growth |  |  |  |  | Third-Stage Growth | Multi-Stage |
|  |  |  |  |  | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |  | Growth DCF |
| Electric Group |  |  |  |  |  |  |  |  |  |  |  |
| American Electric Power Company, Inc. | AEP | \$53.81 | \$2.00 | 5.02\% | 4.95\% | 4.88\% | 4.81\% | 4.74\% | 4.67\% | 4.60\% | 8.59\% |
| Empire District Electric Company | EDE | \$25.71 | \$1.02 | 3.00\% | 3.27\% | 3.53\% | 3.80\% | 4.07\% | 4.33\% | 4.60\% | 8.34\% |
| Great Plains Energy Inc. | GXP | \$25.33 | \$0.92 | 5.00\% | 4.93\% | 4.87\% | 4.80\% | 4.73\% | 4.67\% | 4.60\% | 8.49\% |
| Hawaiian Electric Industries, Inc. | HE | \$26.09 | \$1.24 | 4.00\% | 4.10\% | 4.20\% | 4.30\% | 4.40\% | 4.50\% | 4.60\% | 9.39\% |
| IDACORP, Inc. | IDA | \$56.59 | \$1.88 | 4.00\% | 4.10\% | 4.20\% | 4.30\% | 4.40\% | 4.50\% | 4.60\% | 7.94\% |
| NextEra Energy, Inc. | NEE | \$96.32 | \$2.90 | 6.46\% | 6.15\% | 5.84\% | 5.53\% | 5.22\% | 4.91\% | 4.60\% | 8.14\% |
| Northeast Utilities | NU | \$46.18 | \$1.57 | 6.44\% | 6.13\% | 5.82\% | 5.52\% | 5.21\% | 4.91\% | 4.60\% | 8.59\% |
| Otter Tail Corporation | OTTR | \$28.39 | \$1.21 | N/A | n/a | n/a | n/a | n/a | n/a | 4.60\% | n/a |
| Pinnacle West Capital Corporation | PNW | \$56.95 | \$2.38 | 3.98\% | 4.09\% | 4.19\% | 4.29\% | 4.39\% | 4.50\% | 4.60\% | 8.80\% |
| PNM Resources, Inc. | PNM | \$26.46 | \$0.74 | 8.21\% | 7.61\% | 7.01\% | 6.41\% | 5.80\% | 5.20\% | 4.60\% | 8.28\% |
| Portland General Electric Company | POR | \$33.93 | \$1.12 | 7.81\% | 7.28\% | 6.74\% | 6.21\% | 5.67\% | 5.14\% | 4.60\% | 8.82\% |
| Southern Company | SO | \$44.75 | \$2.10 | 3.61\% | 3.77\% | 3.94\% | 4.10\% | 4.27\% | 4.43\% | 4.60\% | 9.21\% |
| Westar Energy, Inc. | WR | \$35.96 | \$1.40 | 3.03\% | 3.29\% | 3.56\% | 3.82\% | 4.08\% | 4.34\% | 4.60\% | 8.28\% |
|  |  | Mean |  | 5.05\% | 4.97\% | 4.90\% | 4.82\% | 4.75\% | 4.67\% | 4.60\% | 8.57\% |
|  |  | Median |  | 4.50\% | 4.52\% | 4.53\% | 4.55\% | 4.57\% | 4.58\% | 4.60\% | 8.54\% |

Notes:
[1] 13-week average stock price; Source: Schedule MPG-9
[2] Source: Attachment MPG-9
[3] Source: Attachment MPG-9
[4] Equals [3] + ([9] - [3])/6
[5] Equals [4] + ([9] - [3])/6
[6] Equals [5] + ([9] - [3])/6
[7] Equals [6] + ([9] - [3])/6
[8] Equals [7] + ([9] - [3])/6
[9] Source: Schedule MPG-9
[10] IRR based on stock price ([1]) and 200 years of projected dividends

Step-By-Step Adjustment of Mr. Gorman's Multi-Stage DCF Mode
Step 1: Adjust The IRR Calculation To Reflect The Mid-Year Convention


Notes:
[1] 13-week average stock price; Source: Schedule MPG-9
[2] Source: Schedule MPG-9
[3] Source: Schedule MPG-9
[4] Equals [3] + ([9] - [3])/6
[5] Equals [4] + ([9] - [3])/6
[6] Equals [5] + ([9] - [3])/6
[7] Equals [6] + ([9] - [3])/6
[8] Equals [7] + ([9] - [3])/6
[9] Source: Schedule MPG-9
[10] IRR based on stock price ([1]) and 200 years of projected dividends using the mid-year convention

Step-By-Step Adjustment of Mr. Gorman's Multi-Stage DCF Model
Step 2: Correct Long-Term Growth Estimate

[1] 13-week average stock price; Source: Attachment MPG-9
[2] Source: Schedule MPG-9
[3] Source: Schedule MPG-9
[4] Equals [3] + ([9] - [3])/6
[5] Equals [4] + ([9] - [3])/6
[6] Equals [5] + ([9] - [3])/6
[7] Equals [6] + ([9] - [3])/6
[8] Equals [7] + ([9] - [3])/6
[9] Source: Schedule RBH-R8
[10] IRR based on stock price ([1]) and 200 years of projected dividends using the mid-year convention

Mr. Gorman's Multi-Stage DCF Growth Model
Implied Growth Rate to Produce Average Authorized ROE as DCF Result

|  |  | [1] | [2] | [3] | [4] [5] |  | [6] | [7] | [8] | [9] | [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Ticker | Stock Price | Annualized Dividend | First-Stage Growth | Second-Stage Growth |  |  |  |  | Third-Stage Growth | Multi-Stage Growth DCF |
|  |  |  |  |  | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |  |  |
| Combined Group |  |  |  |  |  |  |  |  |  |  |  |
| American Electric Power Company, Inc. | AEP | \$53.81 | \$2.00 | 5.02\% | 5.24\% | 5.46\% | 5.68\% | 5.90\% | 6.12\% | 6.35\% | 9.98\% |
| Empire District Electric Company | EDE | \$25.71 | \$1.02 | 3.00\% | 3.56\% | 4.12\% | 4.67\% | 5.23\% | 5.79\% | 6.35\% | 9.75\% |
| Great Plains Energy Inc. | GXP | \$25.33 | \$0.92 | 5.00\% | 5.22\% | 5.45\% | 5.67\% | 5.90\% | 6.12\% | 6.35\% | 9.89\% |
| Hawaiian Electric Industries, Inc. | HE | \$26.09 | \$1.24 | 4.00\% | 4.39\% | 4.78\% | 5.17\% | 5.56\% | 5.95\% | 6.35\% | 10.71\% |
| IDACORP, Inc. | IDA | \$56.59 | \$1.88 | 4.00\% | 4.39\% | 4.78\% | 5.17\% | 5.56\% | 5.95\% | 6.35\% | 9.37\% |
| NextEra Energy, Inc. | NEE | \$96.32 | \$2.90 | 6.46\% | 6.44\% | 6.42\% | 6.40\% | 6.38\% | 6.36\% | 6.35\% | 9.56\% |
| Northeast Utilities | NU | \$46.18 | \$1.57 | 6.44\% | 6.42\% | 6.41\% | 6.39\% | 6.38\% | 6.36\% | 6.35\% | 9.98\% |
| Otter Tail Corporation | OTTR | \$28.39 | \$1.21 | N/A | n/a | n/a | n/a | n/a | n/a | 6.35\% | n/a |
| Pinnacle West Capital Corporation | PNW | \$56.95 | \$2.38 | 3.98\% | 4.38\% | 4.77\% | 5.16\% | 5.56\% | 5.95\% | 6.35\% | 10.17\% |
| PNM Resources, Inc. | PNM | \$26.46 | \$0.74 | 8.21\% | 7.90\% | 7.59\% | 7.28\% | 6.97\% | 6.66\% | 6.35\% | 9.69\% |
| Portland General Electric Company | POR | \$33.93 | \$1.12 | 7.81\% | 7.57\% | 7.32\% | 7.08\% | 6.83\% | 6.59\% | 6.35\% | 10.19\% |
| Southern Company | SO | \$44.75 | \$2.10 | 3.61\% | 4.06\% | 4.52\% | 4.98\% | 5.43\% | 5.89\% | 6.35\% | 10.55\% |
| Westar Energy, Inc. | WR | \$35.96 | \$1.40 | 3.03\% | 3.59\% | 4.14\% | 4.69\% | 5.24\% | 5.79\% | 6.35\% | 9.69\% |
|  |  |  | Mean Median | 5.05\% | 5.26\% | 5.48\% | 5.70\% | 5.91\% | 6.13\% | 6.35\% | 9.96\% |
|  |  |  |  | 4.50\% | 4.81\% | 5.12\% | 5.42\% | 5.73\% | 6.04\% | 6.35\% | 9.93\% |

Notes:
[1] 13-week average stock price; Source: Schedule MPG-9
[2] Source: Schedule MPG-9
[3] Source: Schedule MPG-9
[4] Equals [3] + ([9] - [3])/6
[5] Equals [4] + ([9] - [3])/6
[6] Equals [5] + ([9] - [3])/6
[7] Equals [6] + ([9] - [3])/6
[8] Equals [7] + ([9] - [3])/6
[9] Implicit Growth Rate
[10] IRR based on stock price ([1]) and 200 years of projected dividends

## Frequency Distribution of Observed Market Returns, 1926-2013



Source: Morningstar, Inc., bbotson Stocks, Bonds, Bills and Inflation 2014 Classic Yearbook, at 196-197

Source: Morningstar, Inc., bbotson Stocks, Bonds, Bills and Inflation 2014 Classic Yearbook, at 196-197.


Cumulative Probability of Market Risk Premia, 1926-2013


Frequency Distribution of Market Risk Premium, 1926-2013


Source: Morningstar, Inc., Ibbotson Stocks, Bonds, Bills and Inflation 2014 Classic Yearbook, at 196-197, 208-209.


Analysis Using Mr. Gorman's Equity Risk Premium Data

| Year | Authorized Electric Returns | 30-Year <br> Treasury Yield | Indicated Risk Premium |
| :---: | :---: | :---: | :---: |
| 1986 | 13 93\% | 7.80\% | 6.13\% |
| 1987 | 12 99\% | 8.58\% | 4.41\% |
| 1988 | 12.79\% | 8.96\% | 3.83\% |
| 1989 | 12 97\% | 8.45\% | 4.52\% |
| 1990 | 12.70\% | 8.61\% | 4.09\% |
| 1991 | 12 55\% | 8.14\% | 4.41\% |
| 1992 | 12 09\% | 7.67\% | 4.42\% |
| 1993 | 11.41\% | 6.60\% | 4.81\% |
| 1994 | 11 34\% | 7.37\% | 3.97\% |
| 1995 | 11 55\% | 6.88\% | 4.67\% |
| 1996 | 11 39\% | 6.70\% | 4.69\% |
| 1997 | 11.40\% | 6.61\% | 4.79\% |
| 1998 | 11 66\% | 5.58\% | 6.08\% |
| 1999 | 10.77\% | 5.87\% | 4.90\% |
| 2000 | 11.43\% | 5.94\% | 5.49\% |
| 2001 | 11 09\% | 5.49\% | 5.60\% |
| 2002 | 11.16\% | 5.43\% | 5.73\% |
| 2003 | 10 97\% | 4.96\% | 6.01\% |
| 2004 | 10.75\% | 5.05\% | 5.70\% |
| 2005 | 10 54\% | 4.65\% | 5.89\% |
| 2006 | 10 36\% | 4.99\% | 5.37\% |
| 2007 | 10 36\% | 4.83\% | 5.53\% |
| 2008 | 10.46\% | 4.28\% | 6.18\% |
| 2009 | 10.48\% | 4.07\% | 6.41\% |
| 2010 | 10 24\% | 4.25\% | 5.99\% |
| 2011 | 10 07\% | 3.91\% | 6.16\% |
| 2012 | 10 01\% | 2.92\% | 7.09\% |
| 2013 | 9.79\% | 3.45\% | 6.34\% |
| 2014 | 9.74\% | 3.46\% | 6.28\% |
| Average | 11 28\% | 5.91\% | 5.36\% |
| 2005-2014 Minimum |  |  | 5.37\% |
| 2005-2014 Maximum |  |  | 7.09\% |
| Expected Treasury Yield |  |  | 4.10\% |
| 2005-2014 Min ROE |  |  | 9.47\% |
| 2005-2014 Max ROE |  |  | 11.19\% |
| Weighted ROE |  |  | 10.76\% |
| Source: Schedule MPG-11 |  |  |  |



SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.8763942 |
| R Square | 0.7680667 |
| Adjusted R Square | 0.7594766 |
| Standard Error | 0.0042277 |
| Observations | 29 |



Analysis Using Mr. Gorman's Equity Risk Premium Data

| Year | Authorized Electric Returns | Average A Rated Utility Bond Yield | Indicated Risk Premium |
| :---: | :---: | :---: | :---: |
| 1986 | 13 93\% | 9.58\% | 4.35\% |
| 1987 | 12 99\% | 10.10\% | 2.89\% |
| 1988 | 12.79\% | 10.49\% | 2.30\% |
| 1989 | 12 97\% | 9.77\% | 3.20\% |
| 1990 | 12.70\% | 9.86\% | 2.84\% |
| 1991 | 12 55\% | 9.36\% | 3.19\% |
| 1992 | 12 09\% | 8.69\% | 3.40\% |
| 1993 | 11.41\% | 7.59\% | 3.82\% |
| 1994 | 11 34\% | 8.31\% | 3.03\% |
| 1995 | 11 55\% | 7.89\% | 3.66\% |
| 1996 | 11 39\% | 7.75\% | 3.64\% |
| 1997 | 11.40\% | 7.60\% | 3.80\% |
| 1998 | 11 66\% | 7.04\% | 4.62\% |
| 1999 | 10.77\% | 7.62\% | 3.15\% |
| 2000 | 11.43\% | 8.24\% | 3.19\% |
| 2001 | 11 09\% | 7.76\% | 3.33\% |
| 2002 | 11.16\% | 7.37\% | 3.79\% |
| 2003 | 10 97\% | 6.58\% | 4.39\% |
| 2004 | 10.75\% | 6.16\% | 4.59\% |
| 2005 | 10 54\% | 5.65\% | 4.89\% |
| 2006 | 10 36\% | 6.07\% | 4.29\% |
| 2007 | 10 36\% | 6.07\% | 4.29\% |
| 2008 | 10.46\% | 6.53\% | 3.93\% |
| 2009 | 10.48\% | 6.04\% | 4.44\% |
| 2010 | 10 24\% | 5.46\% | 4.78\% |
| 2011 | 10 07\% | 5.04\% | 5.03\% |
| 2012 | 10 01\% | 4.13\% | 5.88\% |
| 2013 | 9.79\% | 4.48\% | 5.31\% |
| 2014 | 9.74\% | 4.36\% | 5.38\% |
| Average | 11 28\% | 7.30\% | 3.98\% |
| 2005-2014 Minimum |  |  | 3.93\% |
| 2005-2014 Maximum |  |  | 5.88\% |
| Expected Treasury Yield |  |  | 4.71\% |
| 2005-2014 Min ROE |  |  | 8.64\% |
| 2005-2014 Max ROE |  |  | 10 59\% |
| Weighted ROE |  |  | 10.10\% |

Source: Schedule MPG-12

Correlation: $\quad-08985$


SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.8985491 |
| R Square | 0.8073906 |
| Adjusted R Square | 0.8002569 |
| Standard Error | 0.0038936 |
| Observations | 29 |

ANOVA

|  | df | SS | MS | $F$ | Significance F |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Regression | 1 | 0.00171584 | 0001715844 | 113.1800406 | 3.70115E-11 |  |  |  |
| Residual | 27 | 0.00040933 | $1.51603 \mathrm{E}-05$ |  |  |  |  |  |
| Total | 28 | 0.00212517 |  |  |  |  |  |  |
|  | Coefficients | tandard Erroı | t Stat | $P$-value | Lower 95\% | Upper 95\% | Lower 95.0\% | Upper 95.0\% |
| Intercept | 0071654 | 0003081 | 23.25672403 | $2.15312 \mathrm{E}-19$ | 0065332296 | 0.0779757 | 0.0653323 | 0.07797568 |
| A Rated Util Bond Yield | -0.4366878 | 0.04104745 | -10.63861084 | 3.70115E-11 | -0 5209102 | -0.352465 | -0.5209102 | -03524654 |

Analysis Using Mr. Gorman's Equity Risk Premium Data

|  | Authorized <br> Electric <br> Returns | Average <br> A Rated Utility <br> Bond Yield | $30-$ Year <br> Treasury <br> Yield | Credit <br> Spread | Indicated <br> Risk <br> Premium |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1986 | $13.93 \%$ | $958 \%$ | $7.80 \%$ | $1.78 \%$ | $6.13 \%$ |
| 1987 | $12.99 \%$ | $10.10 \%$ | $8.58 \%$ | $1.52 \%$ | $4.41 \%$ |
| 1988 | $12.79 \%$ | $10.49 \%$ | $8.96 \%$ | $1.53 \%$ | $383 \%$ |
| 1989 | $12.97 \%$ | $9.77 \%$ | $8.45 \%$ | $1.32 \%$ | $452 \%$ |
| 1990 | $12.70 \%$ | $986 \%$ | $8.61 \%$ | $1.25 \%$ | $409 \%$ |
| 1991 | $12.55 \%$ | $936 \%$ | $8.14 \%$ | $1.22 \%$ | $4.41 \%$ |
| 1992 | $12.09 \%$ | $869 \%$ | $7.67 \%$ | $1.02 \%$ | $4.42 \%$ |
| 1993 | $11.41 \%$ | $759 \%$ | $6.60 \%$ | $0.99 \%$ | $481 \%$ |
| 1994 | $11.34 \%$ | $831 \%$ | $7.37 \%$ | $0.94 \%$ | $397 \%$ |
| 1995 | $11.55 \%$ | $789 \%$ | $6.88 \%$ | $1.01 \%$ | $467 \%$ |
| 1996 | $11.39 \%$ | $7.75 \%$ | $6.70 \%$ | $1.05 \%$ | $469 \%$ |
| 1997 | $11.40 \%$ | $760 \%$ | $6.61 \%$ | $0.99 \%$ | $4.79 \%$ |
| 1998 | $11.66 \%$ | $704 \%$ | $5.58 \%$ | $1.46 \%$ | $608 \%$ |
| 1999 | $10.77 \%$ | $762 \%$ | $5.87 \%$ | $1.75 \%$ | $490 \%$ |
| 2000 | $11.43 \%$ | $824 \%$ | $5.94 \%$ | $2.30 \%$ | $5.49 \%$ |
| 2001 | $11.09 \%$ | $7.76 \%$ | $5.49 \%$ | $2.27 \%$ | $560 \%$ |
| 2002 | $11.16 \%$ | $737 \%$ | $5.43 \%$ | $1.94 \%$ | $5.73 \%$ |
| 2003 | $10.97 \%$ | $658 \%$ | $4.96 \%$ | $1.62 \%$ | $601 \%$ |
| 2004 | $10.75 \%$ | $6.16 \%$ | $5.05 \%$ | $1.11 \%$ | $5.70 \%$ |
| 2005 | $10.54 \%$ | $565 \%$ | $4.65 \%$ | $1.00 \%$ | $589 \%$ |
| 2006 | $10.36 \%$ | $607 \%$ | $4.99 \%$ | $1.08 \%$ | $537 \%$ |
| 2007 | $10.36 \%$ | $607 \%$ | $4.83 \%$ | $1.24 \%$ | $553 \%$ |
| 2008 | $10.46 \%$ | $653 \%$ | $4.28 \%$ | $2.25 \%$ | $6.18 \%$ |
| 2009 | $10.48 \%$ | $604 \%$ | $4.07 \%$ | $1.97 \%$ | $6.41 \%$ |
| 2010 | $10.24 \%$ | $5.46 \%$ | $4.25 \%$ | $1.21 \%$ | $599 \%$ |
| 2011 | $10.07 \%$ | $504 \%$ | $3.91 \%$ | $1.13 \%$ | $6.16 \%$ |
| 2012 | $10.01 \%$ | $4.13 \%$ | $2.92 \%$ | $1.21 \%$ | $709 \%$ |
| 2013 | $9.79 \%$ | $4.48 \%$ | $3.45 \%$ | $1.03 \%$ | $634 \%$ |
| 2014 | $9.74 \%$ | $436 \%$ | $3.46 \%$ | $0.90 \%$ | $628 \%$ |
| Average | $11.28 \%$ | $7.30 \%$ | $5.91 \%$ | $1.38 \%$ | $536 \%$ |
|  |  |  |  |  |  |

Source: Schedules MPG-11 \& MPG-12

SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.8997817 |
| R Square | 0.8096071 |
| Adjusted R Square | 0.7949615 |
| Standard Error | 0.0039034 |
| Observations | 29 |



## Analysis Using Mr. Gorman's Equity Risk Premium Data

```
Mr. Gorman's Projected Treasury Yield: 4.10%
Mr. Gorman's Current Utility Bond Yield: 4.71%
```



DATASET NAME DataSet2 WINDOW=FRONT
DATASET ACTIVATE DataSet1.
dATASET CLOSE DataSet2
NEW FILE.
DATASET NAME DataSet3 WINDOW=FRONT
REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT VAR00002
/METHOD=ENTER VAR00001
/RESIDUALS DURBIN.

Regression

[DataSet3]

| Variables Entered/Removed $^{\text {a }}$ |  |  |  |
| :--- | :--- | :--- | :--- |
| Model | Variables Entered | Variables Removed | Method |
| 1 | 30yrTrYield |  | Enter |
| a. Dependent Variable RiskPremium |  |  |  |

b. All requested variables entered

| Model Summary ${ }^{\text {b }}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | . $876^{\text {a }}$ | .768 | .759 | . 0042276809 | 1.303 |

b. Dependent Variable RiskPremium

| ANOVA ${ }^{\text {a }}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model |  | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression <br> Residual <br> Total | $\begin{aligned} & \hline .002 \\ & .000 \\ & .002 \\ & \hline \end{aligned}$ | 1 27 28 | . 002 | 89.413 | . $000{ }^{5}$ |

b. Predictors (Constant), 30yrTrYield


Residuals Statistics ${ }^{\text {a }}$

| Residuals Statistics ${ }^{\text {a }}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Minimum | Maximum | Mean | Std. Deviation | N |
| Predicted Value | . 040489804 | . 066524349 | . 053622207 | . 0075548248 | 29 |
| Residual | -. 0076416344 | . 0158219803 | . 0000000000 | . 0041515002 | 29 |
| Std. Predicted Value | -1.738 | 1.708 | . 000 | 1.000 | 29 |
| Std. Residual | -1.808 | 3.742 | 000 | . 982 | 29 |

areg var00002 with var00001 /method=PW.

## Autoregression

| Notes |  |  |
| :---: | :---: | :---: |
| Output Created |  | 09-DEC-2014 125849 |
| Comments |  |  |
| Input | Active Dataset | DataSet3 |
|  | Filter | <none> |
|  | Weight | <none> |
|  | Split File | <none> |
|  | $N$ of Rows in Working Data File | 29 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
|  | Cases Used |  |
|  |  | Cases with missing values that successively occur at the beginning or end of the series are skipped. All other cases may not contain any missing value. |
| Syntax |  | areg var00002 with var00001 /method PW. |
| Resources | Processor Time | 000000.02 |
|  | Elapsed Time | 000000.01 |
| Use | From | First observation |
|  | To | Last observation |
| Predict | From | First observation following the use period |
|  | To | Last observation |
| Time Series Settings (TSET) | Amount of Output | PRINT DEFAULT |
|  | Saving New Variables | newvar current |
|  | Maximum Number of Lags in Autocorrelation or Partial | MXAUTO 16 |
|  | Autocorrelation Plots | MXAUTO 16 |
|  | Maximum Number of Lags in Cross-Correlation Plots | MXCROSS 7 |
|  | Maximum Number of New Variables Generated Per Procedure | MXNEWVAR 60 |
|  | Maximum Number of New Cases Per Procedure |  |
|  |  | MXPREDICT 1000 |
|  | Treatment of User-Missing Values | MISSING EXCLUDE |
|  | Confidence Interval Percentage Value | CIN 95 |
|  | Tolerance for Entering Variables in Regression Equations | TOLER . 0001 |
|  | Maximum Iterative Parameter Change | CNVERGE . 001 |
|  | Method of Calculating Std. Errors for Autocorrelations | ACFSE IND |
|  | Length of Seasonal Period | Unspecified |
|  | Variable Whose Values Label |  |
|  |  | Unspecified |
|  | Equations Include | CONSTANT |
| Variables Created or Modified | FIT\#1 | Fit for VAR00002 from AREG, MOD_1 |
|  | ERR\#1 | Error for VAR00002 from AREG, MOD 1 |
|  | LCL\#1 | 95\% LCL for VAR00002 from AREG, MOD_1 |
|  | UCL\#1 | 95\% UCL for VAR00002 from AREG, MOD_1 |
|  | SEP\#1 | SE of Fit for VAR00002 from AREG, MOD 1 |

Model Description

| Model Description |
| :--- | :--- | :--- |
| Model Name MOD_1  <br> Dependent Series   <br> Independent Series 1 RiskPremium <br> 30yrTrYield <br> Constant Included  <br> AR 1  |

Applying the model specifications from MOD_1
Iteration Termination Criteria

| Maximum Parameter Change <br> Less Than | .001 |
| :--- | ---: |
| Number of Iterations Equal to | 10 |


| Case Processing Summary |  |  |
| :---: | :---: | :---: |
| Series Length |  | 29 |
| Number of Cases Skipped Due to Missing Values | At the Beginning of the Series | 0 |
|  | At the End of the Series | 0 |
| Number of Cases with Missing Values within the Series |  |  |
| Number of Forecasted Cases |  |  |
| Number of New Cases Add | to the Current Working Fle |  |

Requested Initial Configuration

| Requested Initial Configuration |  |  |
| :--- | :--- | :--- |
| Rho (AR1) <br> Regression Coefficients <br> Constant | 30yrTrYield | AUTO <br> AUTO <br> AUTO |
| a. The prior parameter value is invalid and is reset to 0.1. |  |  |

a. The prior parameter value is invalid and is reset to 0.1 .

Iteration 0

| Autocorrelation Coefficient |
| :--- |
| Rho (AR1) Std. Error  <br> 0   |



| ANOVA |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |
|  | Sum of Squares |  | df | Mean Square |  |
| Regression | .002 |  | 1 | .002 |  |
| Residual | .000 |  | 27 | .000 |  |

The Prais-Winsten estimation method is used.
Regression Coefficients

|  | Unstandardized Coefficients |  | Standardized Coefficients | t | Sig |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | B | Std. Error | Beta |  |  |
| 30yrTrYield (Constant) | -.431 .079 | .046 .003 | -. 876 | -9.456 28.174 | .000 .000 |


a. The estimation terminated at this iteration, because all the parameter estimates changed by less than .001 .

Final Iteration 2


| ANOVA |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |
|  | Sum of Squares |  | df |  |  |
| Regression | .001 |  | 1 | Mean Square |  |
| Residual | .000 |  | .001 |  |  |

The Prais-Winsten estimation method is used.
Regression Coefficients


DATASET ACTIVATE DataSet4.
REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT (.10)
/noorigin
/DEPENDENT VAR00002
/METHOD=ENTER VAR00001
/RESIDUALS DURBIN.

Regression

[DataSet4]

| Variables Entered/Removed $^{\mathrm{a}}$ |  |  |  |
| :--- | :--- | :---: | :---: |
| Model | Variables Entered | Variables Removed | Method |
| 1 | A_UtilityBondYield ${ }^{\mathrm{b}}$ |  | Enter |

b. All requested variables entered.

| Model Summary ${ }^{b}$ |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Model | R | R Square | Adjusted R <br> Square | Std. Error of the <br> Estimate | Durbin-Watson <br> 1 |
| a. Predictors (Constant), A_UtilityBondYield |  |  |  |  |  |

b. Dependent Variable RiskPremium

a. Dependent Variable RiskPremium

Coefficients ${ }^{\text {a }}$


|  | Minimum | Maximum | Mean | Std. Deviation | N |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Predicted Value | . 025845459 | . 053615276 | . 039791759 | . 0078281510 | 29 |
| Residual | -. 0068783825 | . 0136806872 | . 0000000000 | . 0038234456 | 29 |
| Std. Predicted Value | -1.782 | 1.766 | . 000 | 1.000 | 29 |
| Std. Residual | -1.767 | 3.514 | . 000 | 982 | 29 |

areg var00002 with var00001
/method=PW.

Autoregression

| Notes |  |  |
| :---: | :---: | :---: |
| Output Created |  | 09-DEC-2014 130549 |
| Comments |  |  |
| Input | Active Dataset | DataSet4 |
|  | Filter | <none> |
|  | Weight | <none> |
|  | Split File | <none> |
|  | $N$ of Rows in Working Data File | 29 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
|  | Cases Used |  |
|  |  | Cases with missing values that successively occur at the beginning or end of the series are skipped. All other cases may not contain any missing value. |
| Syntax |  | areg var00002 with var00001 /method PW. |
| Resources | Processor Time | 000000.03 |
|  | Elapsed Time | 000000.03 |
| Use | From | First observation |
|  | To | Last observation |
| Predict | From | First observation following the use period |
|  | To | Last observation |
| Time Series Settings (TSET) | Amount of Output | PRINT DEFAULT |
|  | Saving New Variables | NEWVAR CURRENT |
|  | Maximum Number of Lags in Autocorrelation or Partial Autocorrelation Plots | MXAUTO 16 |
|  |  | Mxauto 16 |
|  | Maximum Number of Lags in |  |
|  | Cross-Correlation Plots | MxCROSS 7 |
|  | Maximum Number of New |  |
|  | Variables Generated Per Procedure | MXNEWVAR 60 |
|  | Maximum Number of New |  |
|  | Cases Per Procedure | MXPREDICT 1000 |
|  | Treatment of User-Missing Values | MISSING EXCLUDE |
|  | Confidence Interval Percentage Value | CIN 95 |
|  | Tolerance for Entering |  |
|  | Variables in Regression Equations | TOLER . 0001 |
|  | Maximum Iterative Parameter Change | CNVERGE . 001 |
|  | Method of Calculating Std. |  |
|  | Errors for Autocorrelations | ACFSE IND |
|  | Length of Seasonal Period | Unspecified |
|  | Variable Whose Values Label |  |
|  | Observations in Plots | Unspecified |
|  | Equations Include | CONSTANT |
| Variables Created or Modified | FIT\#1 | Fit for VAR00002 from AREG, MOD_4 |
|  | ERR\#1 | Error for VAR00002 from AREG, MOD_4 |
|  | LCL\#1 | 95\% LCL for VAR00002 from AREG, MOD_4 |
|  | UCL\#1 | 95\% UCL for VAR00002 from AREG, MOD 4 |
|  | SEP\#1 | SE of Fit for VAR00002 from AREG, MOD 4 |

Model Description

| Model Description |  |  |
| :--- | :--- | :--- |
| Model Name <br> Dependent Series <br> Independent Series <br> Constant | 1 | MOD_4 <br> RiskPremium <br> A_Util tyBondYield <br> Included |
| AR | 1 |  |
| Applying the model specifications from MOD 4 |  |  |

Applying the model specifications from MOD_4

| Iteration Termination Criteria |  |
| :--- | ---: |
| Maximum Parameter Change <br> Less Than <br> Number of Iterations Equal to | .001 |


| Case Processing Summary |  |  |
| :---: | :---: | :---: |
| Series Length |  | 29 |
| Number of Cases Skipped Due to Missing Values | At the Beginning of the Series | 0 |
|  | At the End of the Series | 0 |
| Number of Cases with Missing Values within the Series |  |  |
| Number of Forecasted Cases |  |  |
| Number of New Cases Add | to the Current Working Fle |  |

Requested Initial Configuration

| Requested Initial Configuration |  |  |
| :--- | :--- | :--- |
| Rho (AR1) <br> Regression Coefficients <br> Constant | A_UtilityBondYield | AUTO <br> AUTO <br> AUTO |

a. The prior parameter value is invalid and is reset to 0.1 .

Iteration 0

| Autocorrelation Coefficient |
| :--- |
| Rho (AR1) Std. Error  <br> 0   |



| ANOVA |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |
|  | Sum of Squares | .002 | df | Mean Square |  |
| Regression | .000 |  | 1 | .002 |  |
| Residual |  | 27 | .000 |  |  |


| Regression Coefficients |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Unstandardized Coefficients |  | Standardized Coefficients | t | Sig |
|  | B | Std. Error | Beta |  |  |
| $\begin{aligned} & \text { A_UtilityBondYield } \\ & \text { (Constant) } \\ & \hline \end{aligned}$ | -.437 .072 | .041 .003 | -. 899 | $\begin{array}{r} -10.639 \\ 23.257 \\ \hline \end{array}$ | .000 .000 |


| Iteration History |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Rho (AR1) |  | Durbin-Watson | Mean SquaredErrors |
|  | Value | Std. Error |  |  |
| 0 | . 116 | . 195 | 1.524 | . 000 |
| 1 | . 119 | . 195 | 1.531 | . 000 |
| $2^{\text {a }}$ | 119 | 195 | 1.531 | . 000 |

a. The estimation terminated at this iteration, because all the parameter estimates changed by less than .001.

Final Iteration 2

| Autocorrelation Coefficient |
| :--- |
| Rho (AR1)  Std. Error <br> .119   |



| ANOVA |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |
|  | Sum of Squares |  | df | Mean Square |  |
| Regression | .001 |  | 1 | .001 |  |
| Residual | .000 |  | 26 | .000 |  |

Regression Coefficients

| Regression Coefficients |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Unstandardized Coefficients |  | Standardized Coefficients | t | Sig |
|  | B | Std. Error | Beta |  |  |
| A_UtilityBondYield (Constant) | -.439 .072 | .046 .003 | -. 881 | -9.502 20.721 | . 000 |

DATASET ACTIVATE DataSet5.
REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT VAR00003
/METHOD=ENTER VAR00001 VAR00002
/RESIDUALS DURBIN.

## Regression


[DataSet5]

| Variables Entered/Removed $^{\text {a }}$ |  |  |  |
| :--- | :---: | :---: | :---: |
| Model | Variables Entered | Variables Removed | Method |
| 1 | CreditSpread, 30yrTrYield ${ }^{\text {b }}$ |  | Enter |

b. All requested variables entered.

| Model Summary ${ }^{b}$ |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Model | R | R Square | Adjusted R <br> Square | Std. Error of the <br> Estimate | Durbin-Watson |
| 1 | $.900^{a}$ | .810 | .795 | .0039033927 | 1.381 |

b. Dependent Variable RiskPremium

| ANOVA ${ }^{\text {a }}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model |  | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | . 002 | 2 | . 001 | 55.280 | . $000{ }^{\text {b }}$ |
|  | Residual | . 000 | 26 | . 000 |  |  |
|  | Total | . 002 | 28 |  |  |  |

b. Predictors (Constant), CreditSpread, 30yrTrYield

Coefficients ${ }^{\text {a }}$

| Coefficients ${ }^{\text {a }}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model |  | Unstandardized Coefficients |  | Standardized Coefficients | t | Sig. |
|  |  | B | Std. Error | Beta |  |  |
| 1 | (Constant) | . 073 | . 004 |  | 20.584 | . 000 |
|  | 30 yrTrYield | -. 428 | . 042 | -. 871 | -10.171 | . 000 |
|  | CreditSpread | . 408 | . 171 | . 204 | 2.382 | . 025 |


|  | Minimum | Maximum | Mean | Std. Deviation | N |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Predicted Value | . 041178476 | . 065733872 | . 053622207 | . 0077564281 | 29 |
| Residual | -. 0062995735 | . 0141410222 | . 0000000000 | . 0037614033 | 29 |
| Std. Predicted Value | -1.604 | 1.562 | . 000 | 1.000 | 29 |
| Std. Residual | -1.614 | 3.623 | . 000 | . 964 | 29 |

[^102]
## Autoregression

| Notes |  |  |
| :---: | :---: | :---: |
| Output Created |  | 09-DEC-2014 131012 |
| Comments |  |  |
| Input | Active Dataset | DataSet5 |
|  | Fitter | <none> |
|  | Weight | <none> |
|  | Split File | <none> |
|  | N of Rows in Working Data File | 29 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
|  | Cases Used |  |
|  |  | Cases with missing values that successively occur at the beginning or end of the series are skipped. All other cases may not contain any missing value. |
| Syntax |  |  |
|  |  | areg var00003 with var00001 var00002 /method PW. |
| Resources | Processor Time | 000000.02 |
|  | Elapsed Time | 000000.02 |
| Use | From | First observation |
|  | To | Last observation |
| Predict | From | First observation following the use period |
|  | To | Last observation |
| Time Series Settings (TSET) | Amount of Output | PRINT DEFAULT |
|  | Saving New Variables | newvar current |
|  | Maximum Number of Lags in Autocorrelation or Partial Autocorrelation Plots |  |
|  |  | MXAUTO 16 |
|  | Maximum Number of Lags in Cross-Correlation Plots |  |
|  |  | MXCROSS 7 |
|  | Maximum Number of New | MXNEWVAR 60 |
|  | Variables Generated Per Procedure |  |
|  | Maximum Number of New Cases Per Procedure |  |
|  |  | MXPREDICT 1000 |
|  | Treatment of User-Missing Values | MISSING EXCLUDE |
|  | Confidence Interval Percentage Value | CIN 95 |
|  | Tolerance for Entering Variables in Regression Equations | TOLER . 0001 |
|  | Maximum Iterative Parameter Change | CNVERGE 001 |
|  | Method of Calculating Std. Errors for Autocorrelations | ACFSE IND |
|  |  | ACFSE ND |
|  | Length of Seasonal Period | Unspecified |
|  | Variable Whose Values Label Observations in Plots |  |
|  |  | Unspecified |
|  | Equations Include | CONSTANT |
| Variables Created or Modified | FIT\#1 | Fit for VAR00003 from AREG, MOD_5 |
|  | ERR\#1 | Error for VAR00003 from AREG, MOD_5 |
|  | LCL\#1 | 95\% LCL for VAR00003 from AREG, MOD_5 |
|  | UCL\#1 | 95\% UCL for VAR00003 from AREG, MOD_5 |
|  | SEP\#1 | SE of Fit for VAR00003 from AREG, MOD 5 |

Model Description

| Model Description |  |  |
| :--- | :--- | :--- |
| Model Name | MOD_5 <br> Dependent Series <br> Independent Series | 1 |
|  | 2 | RiskPremium <br> 30yrTrYield <br> Cred SSpread |
| Constant | Included |  |
| AR | 1 |  |
| Applying the model specifications from MOD_5 |  |  |



Case Processing Summary

| Series Length | 29 |
| :---: | :---: |
| Number of Cases Skipped At the Beginning of the Series Due to Missing Values | 0 |
| At the End of the Series | 0 |
| Number of Cases with Missing Values within the Series | 0 |
| Number of Forecasted Cases | 0 |
| Number of New Cases Added to the Current Working Fle | 0 |


| Requested Initial Configuration |  |  |
| :--- | :--- | :--- |
| Rho (AR1) | AUTO |  |
| Regression Coefficients | 30yrTrYield <br> CreditSpread | AUTO $^{a}$ <br> AUTO <br> Constant |
| AUTO |  |  |

Iteration 0


| ANOVA |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |
|  | Sum of Squares |  | df | Mean Square |  |
| Regression | .002 |  | 2 | .001 |  |
| Residual |  | .000 |  | 26 |  |


| Regression Coefficients |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: |


| Iteration History |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Rho (AR1) |  | Durbin-Watson | Mean Squared Errors |
|  | Value | Std. Error |  |  |
| 0 | . 056 | . 200 | 1.485 | . 000 |
| 1 | . 061 | . 200 | 1.493 | . 000 |
| $2^{\text {a }}$ | . 061 | . 200 | 1.493 | . 000 |

a. The estimation terminated at this iteration, because all the parameter estimates changed by less than . 001.

Final Iteration 2


| ANOVA |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |
|  | Sum of Squares |  | df | Mean Square |  |
| Regression | .002 |  | 2 | .001 |  |
| Residual | .000 |  | 25 | .000 |  |

The Prais-Winsten estimation method is used. $\quad$ Regression Coefficients

|  | Regression Coefficients |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: | :---: | :---: |

# BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI 

In the Matter of Union Electric Company $\mathrm{d} / \mathrm{b} / \mathrm{a}$ )
Ameren Missouri's Tariffs to Increase Its Revenues )
for Electric Service.
Case No. ER-2014-0258

## AFFIDAVIT OF ROBERT B. HEVERT

## COMMONWEALTH OF MASSACHUSETTS ) <br> COUNTY OF MIDDLESEX

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

1. My name is Robert B. Hevert and my office is located in Framingham, Massachusetts and I am Managing Partner of Sussex Economic Advisors, LLC.
2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Union Electric Company d/b/a Ameren Missouri consisting of 125 pages and Schedule (s) $\quad$ RBH-7 to RBH-28_, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.


Robert B. Hevert
Subscribed and sworn to before me this $\qquad$
$\qquad$ , 2015.

My commission expires:


[^0]:    1 See Schedules RBH-R7 through RBH-R12.

[^1]:    2 See Schedule RBH-R13.
    3 The Commission authorized an ROE of 10.00 percent for Liberty Utilities in December 2014, and an ROE of 10.80 percent for Summit Natural Gas in October 2014.

[^2]:    4 Source: Regulatory Research Associates, see Schedule RBH-R13.

[^3]:    5 Source: Regulatory Research Associates. 9.78 percent represents the national average.
    6 Public Service Commission of the State of Missouri, Case No. ER-2011-0028, Report and Order Dated July 13, 2011, at 67.
    7 This issue is discussed in more detail in my responses to Messrs. Schafer and Gorman.

[^4]:    8 I recognize that Mr. Schafer attempted to address the DCF model results through an out-of-model adjustment. As discussed later in my Rebuttal Testimony, however, that adjustment is incomplete and inadequate.
    9 Source: Federal Reserve Schedule H.15.
    10 Source: Blue Chip Financial Forecast, December 2014, at 2; Bloomberg.

[^5]:    11 Staff Revenue Requirement Cost of Service Report, at 10-11.
    ${ }^{12}$ Staff Revenue Requirement Cost of Service Report, at 13.
    13 Staff Revenue Requirement Cost of Service Report, at 39-40.

[^6]:    Staff Revenue Requirement Cost of Service Report, at 40.
    Staff Revenue Requirement Cost of Service Report, at 8.
    Ibid., at 42, 44.
    Ibid., at 26-29.
    Ibid., at 33, 41-42.
    Ibid., at 43.
    Ibid., at 44.
    Ibid., at 45-46.

[^7]:    Ibid., at 43, and Schedule 16.
    Ibid., at 44.
    Ibid., at 45.
    See, Appendix 2 to Staff Revenue Requirement Cost of Service Report, Schedules 12-1, 12-2, 12-3, and 12-4.

[^8]:    33 Source: Regulatory Research Associates.

[^9]:    Staff Revenue Requirement Cost of Service Report, at 11.
    Ibid., at 39.
    Ibid., at 39-40.
    Ibid., at 40.
    Ibid.
    Ibid., at 44.

[^10]:    40 As noted by the Commission in Case No. ER-2011-0028 regarding DCF, Risk Premium and CAPM analyses: "No one method is any more 'correct' than any other method in all circumstances. Analysts balance their use of all three methods to reach a recommended return on equity." See, Report and Order in Case No. ER-2011-0028, July 13, 2011, at 67.
    41 It is for that reason that I applied multiple models in my Direct Testimony in order to estimate Ameren Missouri's ROE. See Direct Testimony of Robert B. Hevert, at 3 .
    ${ }^{42}$ Eugene Brigham and Michael Ehrhardt, Financial Management: Theory and Practice, 12th Ed. (Mason, OH: South-Western Cengage Learning, 2008), at 346.

[^11]:    ${ }^{43}$ See Staff Revenue Requirement Cost of Service Report, at 43; and Case No. ER-2012-0166, Staff Revenue Requirement Cost of Service Report, at 47.
    44 That is, Mr. Murray's "rule of thumb" results have decreased because the spread between long-term utility debt and long-term Treasury yields has declined, not because the yield on long-term Treasuries (i.e., the risk-free rate) is lower.

[^12]:    ${ }^{45}$ Source: Value Line Stock Screener
    Source: Josh Peters, CFA Equity Research and Valuation Conference Presentation: Finding Value and Sustainability in Dividend Stocks, November 2014.
    47 Source: Bloomberg. Represents two-month rolling average.

[^13]:    48 Cleco Corporation, SEC Form 8-K, October 20, 2014, Exhibit 99.1, at 3.
    49 See, Direct Testimony of Robert B. Hevert, at 9-10.
    ${ }^{50}$ See, Staff Revenue Requirement Cost of Service Report, at 27-30.

[^14]:    51 Ibid

[^15]:    52 I also exclude Ameren Corporation to avoid the circular logic that would otherwise occur. See, Direct Testimony of Robert B. Hevert, at 10.
    53 LNT $=88.74 \%$, Ameren Corporation $=88.16 \%, \mathrm{CMS}=72.68 \%$, $\mathrm{DTE}=76.30 \%$, $\mathrm{TE}=85.25 \%$, and XEL $=88.52 \%$ of total regulated operating income from regulated electric utility service from 20112013.

[^16]:    54 Source: SEC Form 10-K data as reported by SNL Financial.

[^17]:    55 Edison Electric Institute, 2013 Financial Review, Annual Report of the U.S. Shareholder-Owned Electric Utility Industry, at v.

[^18]:    ${ }^{56}$ Midstream operations include assets related to gathering, processing, transporting and storing natural gas.
    See http://www.enablemidstream.com/html/pages/p001-homepage.html
    Value Line Company Report, OGE Energy Corporation, September 19, 2014.

[^19]:    59 See, Direct Testimony of Robert B. Hevert, at 18.

[^20]:    ${ }^{60}$ Staff Revenue Requirement Cost of Service Report, at 31-32.
    Ibid., at 32.
    Ibid. As shown on Schedule 11, Mr. Murray relies on long-term growth rates of 3.50 percent to 4.50 percent to derive his Constant Growth DCF range of 7.40 percent to 8.40 percent.
    Staff Revenue Requirement Cost of Service Report, at 32.
    Ibid.
    Ibid., at 33.

[^21]:    66 Ibid. It is interesting to note that in the Company's last rate case (Case No. ER-2012-0166), Staff had concluded that its review of historical growth in the electric industry could marginally support a more aggressive $5.00 \%$ to $5.50 \%$ growth rate range. See Case No. ER-2012-0166, Staff Revenue Requirement Cost of Service Report, at 29.
    67 See, Direct Testimony of Robert B. Hevert, at 14.
    68 Ibid., at 24.

[^22]:    69 See, for example, Harris, Robert, Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return, Financial Management, Spring 1986.

[^23]:    70 Charles F. Phillips, Jr., The Economics of Regulation, Revised Edition, 1969, Richard D. Irwin, Inc., at 285.
    ${ }^{71}$ See, for example, Christofi, Christofi, Lori and Moliver, Evaluating Common Stocks Using Value Line's Projected Cash Flows and Implied Growth Rate, Journal of Investing (Spring 1999); Harris and Marston, Estimating Shareholder Risk Premia Using Analysts Growth Forecasts, Financial Management, 21 (Summer 1992); and Vander Weide and Carleton, Investor Growth Expectations: Analysts vs. History, The Journal of Portfolio Management, Spring 1988, at 81.
    72 Vander Weide and Carleton, Investor Growth Expectations: Analysts vs. History, The Journal of Portfolio Management, Spring 1988.
    73 Robert S. Harris, Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return, Financial Management, Spring 1986.
    74 Ibid.

[^24]:    75 As discussed later in my Rebuttal Testimony, that finding applies specifically to electric utility companies.
    76 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.

[^25]:    ${ }^{77}$ Staff Revenue Requirement Cost of Service Report, at 34-35.

[^26]:    ${ }^{86}$ Ibid

[^27]:    87 I recognize that companies such as XEL are the successor companies to certain of the utilities contained in Schedule 13-1 through 13-4.
    88 Staff Revenue Requirement Cost of Service Report, at 41. It is also interesting to note Mr. Murray's 2.00 percent to 3.00 percent growth rate estimate is well below the 3.21 percent geometric average inflation rate over the past century ( 3.32 percent arithmetic average); See: Bureau of Labor Statistics, Series ID CUUR0000SA0 (Consumer Price Index - All Urban Consumers) for the years 1913 to 2013.
    89 Mr. Murray's concerns appear misplaced considering his Constant Growth DCF analysis did not rely on individual company growth rates, but rather the $3.50 \%$ to $4.50 \%$ growth rate range he selected.

[^28]:    ${ }^{90}$ Mr. Murray's work papers indicate the final stage of his Multi-Stage DCF model includes cash flows for a 200 year period.
    91 Ibid., at 33. Please also note that, as discussed in my Direct Testimony at page 21, my Multi-Stage model assumes varying payout ratios over time, while Mr. Murray's model implicitly assumes a constant payout ratio.

[^29]:    92 Staff Revenue Requirement Cost of Service Report, Schedule 12-1 to 12-3.
    Ibid., at 40.
    Ibid., Schedule 12-4.
    Ibid., at 40.
    Ibid., at 41.
    Ibid.

[^30]:    100 Morningstar, Ibbotson SBBI 2014 Classic Yearbook, Market Results for Stocks, Bonds, Bill and Inflation 1926-2013, at 91.
    101 Mr. Gorman is similarly inconsistent in his assumptions, and I explain this issue in more detail in my discussion of Mr. Gorman below.
    102 Staff Revenue Requirement Cost of Service Report, at 34. [emphasis included]
    103 See, Direct Testimony of Robert B. Hevert, at 19-20.
    104 Staff Revenue Requirement Cost of Service Report, Schedule 12.
    105 Ibid., at 34-37.

[^31]:    106 Source: Bureau of Economic Analysis

[^32]:    107 Source: Bureau of Economic Analysis.
    108 Source: Regulatory Research Associates. See Schedule RBH-R13.
    1099.96 percent -3.92 percent $=6.04$ percent.

[^33]:    110 See, Direct Testimony of Robert B. Hevert, at 22-23.

[^34]:    111 Source: Bureau of Economic Analysis.
    112 Staff Revenue Requirement Cost of Service Report, at 41.

[^35]:    ${ }^{113}$ Ibid., at 40.
    114 Ibid., at 35.

[^36]:    115 Morningstar, Ibbotson SBBI 2014 Classic Yearbook, Market Results for Stocks, Bonds, Bill and Inflation 1926-2013, at 91.
    116 Source: Bureau of Economic Analysis, National Economic Accounts, November 14, 2014.
    117 See, for example, Report and Order in ER-2008-0036, May 28, 2010, at 18-19; Report and Order in Case No. ER-2008-0318, January 27, 2009, at 21-22; and Report and Order in Case No. ER-2012-0174 and ER-2012-0175, January 9, 2013, at 18.

[^37]:    ${ }^{118}$ Roger A. Morin, New Regulatory Finance, Public Utilities Report, Inc., 2006, at 308.
    119 Eugene Brigham and Michael Ehrhardt, Financial Management: Theory and Practice, 12th Ed. (Mason, OH: South-Western Cengage Learning, 2008), at 291.
    ${ }^{120}$ Morningstar, Ibbotson SBBI 2012 Valuation Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926-2011, at 64.
    ${ }^{121}$ Roger G Ibbotson and Peng Chen, Long-Run Stock Returns: Participating in the Real Economy, Financial Analysts Journal, January/February 2003, at 93.
    122 See, Staff Revenue Requirement Cost of Service Report, at 40.

[^38]:    ${ }^{123}$ Ibid., at 32.
    124 Ibid.
    ${ }^{125}$ See, Ping Zhou, William Ruland, Dividend Payout and Future Earnings Growth, Financial Analysts Journal, Vol. 62, No. 3, 2006. See also Owain ap Gwilym, James Seaton, Karina Suddason, Stephen Thomas, International Evidence on the Payout Ratio, Earnings, Dividends and Returns, Financial Analysts Journal, Vol. 62, No. 1, 2006.
    ${ }^{126}$ See, Robert Arnott, Clifford Asness, Surprise: Higher Dividends $=$ Higher Earnings Growth, Financial Analysts Journal, Vol. 59, No. 1, 2003.

[^39]:    127 Assuming the simple form of the sustainable growth model, growth equals the return on equity multiplied by the retention ratio (and, the retention ratio equals one minus the payout ratio). $3.59 \%=$ $(1-65 \%) \times 10.26 \%$.

[^40]:    128 See Decoupling Mechanisms/Straight-Fixed-Variable Rate Design, Regulatory Research Associates, December 26, 2013 at 2.
    129 See Capital Expenditure Update: Capital Spending at All-Time High in 2014, Regulatory Research Associates, November 10, 2014, at 1.

[^41]:    130 Sources: Value Line and EIA.
    131 EIA, Annual Energy Outlook 2014 Reference Case, April 2014, Table A8. Annual data accessed at: http://www.eia.gov/oiaf/aeo/tablebrowser.
    132 Ibid., at 38-39.

[^42]:    133 Mr. Murray notes electric utilities have had retention ratios less than half of the S\&P 500's 65.00\% $70.00 \%$ range, which implies retention ratios less than $32.50 \%$ to $35.00 \%$; see, Staff Revenue Requirement Cost of Service Report, at 32. Because the payout ratio equals one minus the retention rate, Mr. Murray's statement implies electric utilities have payout ratios of $65.00 \%-67.50 \%$ or greater.

[^43]:    134 Staff Revenue Requirement Cost of Service Report, at 42-43.
    135 See, Direct Testimony of Robert B. Hevert, at 25.

[^44]:    136 Staff Revenue Requirement Cost of Service Report, at 43.
    137 Duff \& Phelps, 2014 Valuation Handbook, at 3-19.
    138 Morningstar, Ibbotson SBBI 2013 Valuation Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926-2012, at 53.

[^45]:    139 See Direct Testimony of Robert B. Hevert, at 26.
    140 Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills, and Inflation Valuation Yearbook, at 56.
    141 Ian Cooper, Arithmetic versus geometric mean estimators: Setting discount rates for capital budgeting, European Financial Management 2.2, (1996): 158.

[^46]:    142 Morningstar, Ibbotson SBBI 2013 Valuation Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926-2012, at 55.
    143 Morningstar, Ibbotson SBBI 2014 Classic Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926-2013, at 91.
    144 See, Staff Revenue Requirement Cost of Service Report, at 17.

[^47]:    145 See, Direct Testimony of Robert B. Hevert, at 25.

[^48]:    146 Richard Brealey, Stewart Myers, Principles of Corporate Finance, $2^{\text {nd }}$ Ed., 1984, McGraw-Hill, at 175.
    147 Stephen Ross, Randolph Westerfield, Jeffery Jaffe, Corporate Finance, $8^{\text {th }}$ Ed., 2008, McGrawHill/Irwin, at 351.
    148 Staff Revenue Requirement Cost of Service Report, at 42, 44.

[^49]:    149 Ibid., at 44.
    150 Ibid.
    151 See, Direct Testimony of Robert B. Hevert, at 29-30.

[^50]:    152 Robert S. Harris and Felicia C. Marston, Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts, Financial Management, Summer 1992, at 63-70; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, The Risk Premium Approach to Measuring a Utility's Cost of Equity, Financial Management, Spring 1985, at 33-45; and Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry, Financial Management, Autumn 1995, at 89-95.
    ${ }^{153}$ In my response to Mr. Gorman, I provide more detail regarding the strongly supported inverse relationship between the equity risk premium and interest rates.

[^51]:    154 Moody's Investors Service, Rating Methodology; Regulated Gas and Electric Utilities, December 23, 2013 at 6.
    155 Moody's Investors Service, Regulatory Frameworks - Ratings and Credit Quality for Investor-Owned Utilities, June 18, 2010, at 2.

[^52]:    156 Source: Regulatory Research Associates. The average authorized ROE for natural gas utilities, electric distribution utilities, and vertically integrated utilities over the twelve months ended November 14, 2014 was $9.76 \%, 9.58 \%$, and $9.96 \%$, respectively. Excludes limited-issue riders and Illinois formula ROEs.
    See, Staff Revenue Requirement Cost of Service Report, at 13. Ibid.

[^53]:    163
    Ibid., at 43.
    Ibid., at 18. See, also, Direct Testimony of Robert B. Hevert, at 13.

[^54]:    165 The two companies not included in my proxy group are Alliant Energy Corporation, and Xcel Energy, Inc.

[^55]:    166 Direct Testimony of Lance C. Schafer, at 39-43.

[^56]:    ${ }^{167}$ As discussed elsewhere in my Rebuttal Testimony, I also have excluded CNL from my updated analyses.

[^57]:    168 The Empire District Electric Company, First Quarter 2014 Analyst Presentation, May 9, 2014, at 9.
    169 Source: Regulatory Research Associates; differences calculated on an average annual basis.

[^58]:    170 Direct Testimony of Lance C. Schafer, at 13-14.
    Ibid. at 14; Schedule LCS-5.
    Ibid., at 14.
    Ibid., at 15.
    See, Schedule LCS-4.

[^59]:    175 See, Minutes of the Federal Open Market Committee, December 16-17, 2014, at 1, 10.
    176 Market measured by the S\&P 500 Index.
    177 At several times during 2014 the proxy group average P/E ratio exceeded the market P/E ratio. Over the course of 2014, the proxy group average P/E ratio was approximately 97.00 percent of the market P/E. As noted above, the long-term average relative P/E ratio was approximately 78.00 percent. Source: Bloomberg.

[^60]:    178 Measured as an index.

[^61]:    179 Direct Testimony of Lance C. Schafer, at 22.

[^62]:    180 Ibid., at $25-26$.

[^63]:    ${ }^{182}$ As Mr. Schafer explains, his sources of growth rate estimates include the Energy Information Administration, the Congressional Budget Office, and the Organisation for Economic Co-operation and Development ("OECD"). See, Direct Testimony of Lance C. Schafer, at 25-26.
    ${ }^{183}$ See Schedule LCS-6.

[^64]:    184 Direct Testimony of Lance C. Schafer, at 25-26.
    185 Aaron Rotkowski and Evan Clough, How to Estimate the Long-Term Growth Rate in the Discounted Cash Flow Model, www.willamette.com, Insights, Spring 2013, at 11; see Figure 2.

[^65]:    186 See, Schedules LCS-9 and LCS-10.

[^66]:    ${ }^{187}$ See, Morningstar, Inc., Ibbotson SBBI 2104 Classic Yearbook, Market Results for Stocks, Bonds, Bills and Inflation 1926-2013, at 153.

[^67]:    190 Direct Testimony of Lance C. Schafer, at 39.
    191 Ibid., at 39. [clarification added]
    192 Ibid., at 43.

[^68]:    ${ }^{193}$ See Standard \& Poor's Ratings Services, Ratings Direct Corporate Methodology, November 2013, at 35. EBITDA to Interest is considered a "supplementary" coverage ratio.

[^69]:    194 Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, December 23, 2013, at 6.
    195 Standard \& Poor’s Ratings Services, Key Credit Factors for the Regulated Utilities Industry, November 19, 2013 at 6.
    196 Ibid.

[^70]:    197 See Direct Testimony of Michael P. Gorman, at 38.
    198 Ibid., at 26, 32, 37.
    199 Direct Testimony of Michael P. Gorman, at 18.

[^71]:    ${ }^{200}$ See Direct Testimony of Michael P. Gorman, at 38, Table 3.

[^72]:    201 Ibid., at 18.
    202 Ibid., at 19.
    203 Schedule RBH-R21.
    204 Calculated as an index. Source: SNL Financial.

[^73]:    205 Sources: SNL Financial and Bloomberg Professional. Proxy Group P/E ratio calculated as an index.

[^74]:    206 See Direct Testimony of Robert B. Hevert at 14-19.
    207 Mr. Gorman adjusts the dividend yield by the full growth rate, whereas I adjust the dividend yield by one-half of the growth rate.
    208 See, Schedules MPG-4, MPG-7.
    209 As reported by Regulatory Research Associates. See, Schedule RBH-R12.

[^75]:    ${ }^{211}$ See Direct Testimony of Robert B. Hevert at 16-18.

[^76]:    212 Schedule RBH-R23.
    ${ }^{213}$ See Direct Testimony of Michael P. Gorman, at 25 and Schedule MPG-9; see also and Blue Chip Economic Indicators, October 1, 2014 at 14.

[^77]:    214 Direct Testimony of Michael P. Gorman, at 16.
    215 See Schedule RBH-R24.

[^78]:    ${ }^{216}$ See Direct Testimony of Michael P. Gorman, at 21-22.
    ${ }^{217}$ Ibid., at 24-25 and Schedule MPG-9. Mr. Gorman calculates his nominal GDP growth rates based on separate Blue Chip consensus forecasts for real GDP growth and growth in the GDP Chained Price Index for the periods 2016-2020 and 2021-2025. At pages 24-25 of his Direct Testimony, Mr. Gorman points to the EIA Annual Energy Outlook, which projects real GDP growth in the range of 1.90 percent to 2.80 percent for the years through 2040, and Congressional Budget Office projections of real GDP growth from 2.10 percent to 2.80 percent over the coming five to ten years.

[^79]:    218 See Direct Testimony of Michael P. Gorman, at 28.

[^80]:    ${ }^{222}$ See, Schedules MPG-5 and Schedule RBH-R8.

[^81]:    ${ }^{223}$ Consequently, the adjusted 9.53 percent result noted above understates the Company's Cost of Equity.
    224 See Direct Testimony of Michael P. Gorman, at 32-37 and Schedule MPG-16.
    225 See Direct Testimony of Michael P. Gorman, at 36-37.

[^82]:    226 See Schedule RBH-R9.
    227 Schedule RBH-R26; See Morningstar, Inc., 2014 Ibbotson Stocks, Bonds, Bills and Inflation Classic Yearbook, at 196-197.

[^83]:    228 Direct Testimony of Michael P. Gorman, at 19.

[^84]:    229 Source: http://www.econ.yale.edu/~shiller/data htm.

[^85]:    230 Schedule RBH-R27. See Morningstar, Inc., 2014 Ibbotson Stocks, Bonds, Bills and Inflation Classic Yearbook at 196-197, 208-209.

[^86]:    231 Ibid.
    232 Direct Testimony of Michael P. Gorman, at 27.
    ${ }^{233}$ See Direct Testimony of Michael P. Gorman, Schedules MPG-11 and MPG-12.

[^87]:    234 Ibid., at 32.
    Ibid., at 28.
    Ibid., at 29.
    Ibid., at 30-32.
    See Direct Testimony of Michael P. Gorman, at 38.

[^88]:    239 Source: Direct Testimony of Michael P. Gorman, Schedule MPG-11. See also Schedule RBH-R28.

[^89]:    ${ }^{240}$ See Federal Reserve Press Release dated June 19, 2013. Although the Federal Reserve’s Quantitative Easing Policy ended in October 2014, other policies intended to maintain low interest rates remain in effect (e.g., maintaining the federal funds rate). See also, Federal Reserve Press Release dated October 29, 2014.
    ${ }^{241}$ See, for example, Direct Testimony of Michael P. Gorman, at 31-32 and 37-38.
    ${ }^{242} 0.75 \times(4.10 \%+7.09 \%)+0.25 \times(4.10 \%+3.83 \%)=10.37 \%$.
    243 Schedule RBH-R28.

[^90]:    ${ }^{244}$ Assumes the same 25.00 percent and 75.00 percent weighting factors (low and high, respectively) used in Mr. Gorman's analysis. Reflects Treasury and Utility Bond Risk Premium analyses.
    ${ }^{245}$ Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc. (2006), at 128 [clarification added].

[^91]:    ${ }^{246}$ Adjusting for serial correlation does not materially affect the results; see Schedule RBH-R28.
    ${ }^{247}$ See Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry, Financial Management, Vol. 24, No. 3, Autumn 1995, at 93.
    248 Ibid.

[^92]:    249 See Schedule RBH-R28.
    250 Source: Regulatory Research Associates; see, also, Schedule RBH-R12.

[^93]:    ${ }^{251}$ Source: Standard \& Poor's, U.S. Regulated Electric, Gas and Water Utilities; Strongest to Weakest, July 30, 2013.
    252 All of the natural gas utilities ranked by S\&P had "excellent" business risk profiles.

[^94]:    253 See Direct Testimony of Michael P. Gorman, at 40.
    254 Ibid., at 41-42.

[^95]:    255 Direct Testimony of Steve W. Chriss at 9-10.

[^96]:    256 Moody's Investors Service, Rating Methodology, Regulated Gas and Electric Utilities, December 23, 2013 at 6.
    ${ }^{257}$ Moody's Investors Service, Rating Methodology, Regulated Electric and Gas Utilities, December 23, 2013, at 6.

[^97]:    258 See Schedules RBH-R7 and RBH-R8.

[^98]:    259 See Schedules RBH-R7 and RBH-R8.

[^99]:    260
    261
    See Schedule RBH-R11.
    See Schedule RBH-R11.

[^100]:    262
    263
    See Schedule RBH-R12.
    See, Direct Testimony of Robert B. Hevert, at 6.

[^101]:    Sources: Columns 1-7 = Staff Revenue Requirement Cost of Service Report, Schedule 12.

[^102]:    areg var00003 with var00001 var00002
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