

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **REBUTTAL TESTIMONY OF ROBERT B. HEVERT**

4 **DOCKET NO. 160021-EI**

5 **AUGUST 1, 2016**

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**I. INTRODUCTION AND PURPOSE**

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

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

**Q. Are you the same Robert B. Hevert who previously provided Direct Testimony in this proceeding?**

A. Yes. At the time my Direct Testimony was filed, I was Managing Partner of Sussex Economic Advisors, LLC (“Sussex”). Effective June 1, 2016 Sussex became part of ScottMadden, and I assumed my current position as Partner.

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

A. The purpose of my Rebuttal Testimony is to respond to the direct testimonies of: (1) Dr. J. Randall Woolridge on behalf of Florida Office of Public Counsel (“OPC”); (2) Mr. Michael Gorman on behalf of the Federal Executive Agencies (“FEA”); (3) Mr. Richard A. Baudino on behalf of the South Florida Hospital and Health Care Association (“SFHHA”); (4) Mr. Steve Chriss on behalf of Wal-Mart Stores East, LP and Sam’s East, Inc. (“Wal-Mart”); (5) Mr. Michael Brosch on behalf of AARP; (6) Mr. Jeffrey Pollock on behalf of the Florida Industrial Power Users Group (“FIPUG”) (referred to herein, collectively, as the “opposing ROE witnesses”); (7) Mr. Kevin W. O’Donnell on behalf of OPC; and (8) Mr. Daniel Lawton on behalf of OPC, as their testimonies relate to the Company’s Return on Equity (“ROE”) or capital structure.

1

2 **Q. Have you prepared any Rebuttal Exhibits?**

3 A. Yes. My analyses and conclusions are supported by the data presented in Exhibits  
4 RBH-11 through RBH-44, which have been prepared by me or under my direct  
5 supervision.

6 **Q. What are your conclusions regarding the appropriate Cost of Equity and**  
7 **capital structure for FPL?**

8 A. In my Direct Testimony I recommended an ROE of 11.00 percent, within a range  
9 of 10.50 percent to 11.50 percent. As my Direct Testimony discussed, my ROE  
10 recommendation and the analytical results on which it is based consider a variety  
11 of factors, including certain risks faced by FPL such as vulnerability to severe  
12 weather conditions, exposure to new regulatory requirements associated with  
13 nuclear generation, and the risk of adverse capital market changes during the  
14 pendency of the Company's proposed four-year rate plan.

15

16 Because the application of financial models and the interpretation of their results  
17 are often sources of disagreement among analysts in regulatory proceedings, I  
18 believe it is important to review and consider a variety of data points; doing so  
19 enables us to put in context both quantitative analyses and the associated  
20 recommendations. As such, I have updated many of the analyses contained in my  
21 Direct Testimony, and I have provided several new analyses in response to issues  
22 raised by the opposing ROE witnesses. As discussed throughout the balance of

1 my Rebuttal Testimony, those analyses continue to support my ROE range and  
2 recommendation.

3

4 As to the capital structure, I continue to recommend the Company's existing  
5 capital structure of 40.40 percent long-term debt and 59.60 percent common  
6 equity. I further conclude that the Company's capital structure is within the range  
7 of equity ratios used by its peers, is consistent with rating agency criteria, and  
8 therefore, is reasonable.

9 **Q. Please now provide an overview of your response to the ROE**  
10 **recommendations made by the opposing ROE witnesses.**

11 A. It is important to keep in mind that no one financial model is more reliable than  
12 others at all times and under all market conditions; at times, certain model results  
13 simply do not make sense. Determining the Cost of Equity therefore is not  
14 always a strict mathematical exercise. Rather, it requires reasoned judgment in  
15 vetting the models and assumptions used by various analysts, and in assessing the  
16 reasonableness of their recommendations. That judgment may lead to the  
17 conclusion that the emphasis applied to a particular method in a prior proceeding  
18 or under prior market conditions is not appropriate in the current instance.

19

20 The opposing ROE witnesses have given considerable weight to a single method -  
21 the Discounted Cash Flow ("DCF") approach - even though their models produce  
22 ROE estimates that are 100 basis points, and more, below the returns authorized

1 for other electric utilities.<sup>1</sup> Given their dependence on a method that produces  
2 unduly low estimates, it is not surprising that their recommendations fall within a  
3 range that is far below the returns authorized for electric utilities in other  
4 jurisdictions.

5  
6 The fact that the opposing ROE witnesses' recommendations are similar does not  
7 mean that their approaches are appropriate or that their conclusions are sound.  
8 For the reasons discussed throughout the balance of my Rebuttal Testimony, it is  
9 my view that, if adopted, the opposing ROE witnesses' recommendations would  
10 increase the Company's regulatory and financial risk, diminish its ability to  
11 compete for capital, and have the counter-productive effect of increasing FPL's  
12 overall cost of capital, ultimately to the detriment of its customers.

13 **Q. Please now provide an overview of your response to the ROE**  
14 **recommendations made by the opposing ROE witnesses.**

15 A. Although there are many areas in which I disagree with their methods and  
16 conclusions, there are certain issues that commonly serve to reduce the opposing  
17 ROE witnesses' recommendations:

- 18 • *Application of Discounted Cash Flow methods.* As a general matter, DCF  
19 based methods define the Cost of Equity as the discount rate that sets the  
20 current market price of a stock equal to the present value of the cash flows  
21 expected from owning that stock. In calculating expected cash flows, the

<sup>1</sup> Direct Testimony of J. Randall Woolridge, at 53 and Exhibit JRW-10, at 1. Direct Testimony of Michael P. Gorman, at 31, 33, Exhibit MPG-6 and Exhibit MPG-9. Direct Testimony of Richard A. Baudino, at 33 and Exhibit No.\_\_(RAB-7).

1 opposing ROE witnesses rely on growth rates that are inappropriately low, or  
2 that are constrained by what they may consider to be “sustainable” levels of  
3 perpetual growth. Regardless of how they develop their models, DCF  
4 estimates as low as 8.15 percent<sup>2</sup> fail to meet the *Hope* and *Bluefield* “end  
5 result” standard, and should be given no weight in determining the Company’s  
6 ROE.

7 • *Application of Risk Premium Models.* Risk Premium methods are based on  
8 the financial principle that equity investors assume greater risk than do debt  
9 investors and, therefore, require higher returns. The measure of that  
10 incremental return is the “Equity Risk Premium,” or the difference between  
11 the required return on debt and the required Return on Equity. It is important  
12 to recognize that the Equity Risk Premium is not constant over time. Rather,  
13 as interest rates fall, the Equity Risk Premium increases, even when we  
14 consider additional measures of market risk. By not properly reflecting that  
15 well-documented relationship, certain of the opposing ROE witnesses have  
16 under-estimated FPL’s Cost of Equity.

17 • *Application of the Capital Asset Pricing Model (“CAPM”).* The CAPM,  
18 which also is a risk premium-based method, assumes that investors must be  
19 compensated for the time value of money, and for taking on additional risk.  
20 The time value of money is measured by long-term Treasury yields;  
21 compensation for additional risk is measured by the stock’s Beta coefficient  
22 and the expected Market Risk Premium (“MRP”). The Market Risk Premium,

<sup>2</sup> Direct Testimony of Richard A. Baudino, at 41, and Exhibit RAB-7.



1 which weighs heavily in CAPM estimates, reflects the additional return that  
2 investors expect to receive by investing in the market as a whole over the  
3 return they would receive by investing only in long-term Treasury bonds.  
4 Certain of the opposing ROE witnesses have developed MRP estimates based  
5 on historical market returns and interest rates, and have assumed relationships  
6 between those two variables that do not reasonably reflect current or expected  
7 market conditions. As a result, their ROE estimates are unreasonably low.

- 8 • *Assessment of the Company's relative risk.* Determination of required ROE is  
9 a risk-comparable exercise. The opposing ROE witnesses do not fully  
10 consider the range of business risks and other factors when determining where  
11 FPL's required ROE falls within the range of analytical results.<sup>3</sup>

12  
13 On balance, and after considering the issues summarized above, I have  
14 maintained the recommendations contained in my Direct Testimony.

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

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

- 17 • Section II – Contains my response to OPC witness Woolridge;
- 18 • Section III – Contains my response to FEA witness Gorman;
- 19 • Section IV – Contains my response to SFHHA witness Baudino;
- 20 • Section V – Contains my response to Wal-Mart witness Chriss;

<sup>3</sup> See, Direct Testimony and Exhibits of Robert B. Hevert, at 37-50.

- 1 • Section VI – Contains my response to AARP witness Brosch and FIPUG  
2 witness Pollock;
- 3 • Section VII – Contains my response to OPC witness O'Donnell regarding  
4 the Company's capital structure;
- 5 • Section VIII – Contains my response to OPC witness Lawton regarding  
6 the Company's financial integrity;
- 7 • Section IX – Summarizes my updated analyses; and
- 8 • Section X – Summarizes my conclusions and recommendations.

9 **II. RESPONSE TO THE TESTIMONY OF OPC WITNESS WOOLRIDGE**

10 **Q. Please provide a brief summary of Dr. Woolridge's testimony and ROE**  
11 **recommendation.**

12 A. Dr. Woolridge recommends an ROE of 8.75 percent, which is near the upper end  
13 of his DCF and CAPM results. Dr. Woolridge makes clear, however, that his  
14 recommendation relies primarily on his Constant Growth DCF model results.<sup>4</sup>

15 **Q. What are the principal areas of disagreement between you and Dr.**  
16 **Woolridge?**

17 A. There are several areas in which I disagree with Dr. Woolridge. In general, those  
18 areas include: (1) the composition and selection of the proxy group companies;  
19 (2) the growth rates applied in the Constant Growth DCF model; (3) the  
20 application of the Multi-Stage DCF model; (4) the application of the CAPM; (5)

<sup>4</sup> Direct Testimony of J. Randall Woolridge, at 63.

1 the reasonableness of the Bond Yield Plus Risk Premium analysis; (6) the  
2 relevance of Market-to-Book (“M/B”) ratios in excess of unity; (7) the relevance  
3 of flotation costs in determining the Company’s Cost of Equity; and (8) the  
4 business risk of FPL relative to the proxy group. In addition, I disagree with Dr.  
5 Woolridge’s presentation and interpretation of certain data relating to capital  
6 market conditions.

7  
8 Regardless of how he arrived at his recommendation, it is very difficult to  
9 reconcile an ROE of 8.75 percent with past, current, and expected market  
10 environments.

11 ***A. Proxy Group Selection***

12 **Q. Please describe the screening criteria by which Dr. Woolridge developed his**  
13 **Proxy Group.**

14 A. Dr. Woolridge relied on six screening criteria to develop his sample of 29  
15 companies:

- 16 1. Proxy companies must derive at least 50.00 percent of revenues from  
17 regulated electric operations;
- 18 2. Each company selected must be listed as an Electric Utility by Value Line  
19 and as an Electric Utility or Combination Electric and Gas company by  
20 AUS Utilities Reports;
- 21 3. Selected companies must have an investment grade bond rating;
- 22 4. Companies must have a consistent dividend record with no cuts or  
23 omissions for the past six months;

- 1           5. Each company must not be involved in an acquisition, or be the target of  
2           an acquisition in the past six months; and
- 3           6. Proxy companies must have long-term Earnings Per Share (“EPS”) growth  
4           forecasts available from Yahoo!, Reuters, or Zacks.<sup>5</sup>

5   **Q. Do you agree with Dr. Woolridge’s screening criteria?**

6   A. Not entirely. Although we do have certain criteria in common (for example we  
7   both exclude companies that are party to a significant corporate transaction<sup>6</sup> or  
8   that do not consistently pay dividends), I do not believe that Dr. Woolridge’s  
9   screens render a group of companies that is sufficiently comparable to FPL.

10 **Q. Do any of Dr. Woolridge’s proxy companies fail his proxy group screening  
11 criteria?**

12 A. I believe so. Dr. Woolridge included in his proxy group Dominion Resources,  
13 Inc. (“Dominion”), Black Hills Corporation (“Black Hills”), Duke Energy  
14 Corporation (“Duke”), and Southern Company (“Southern”), all of which are  
15 party to significant acquisitions: Dominion announced its proposed acquisition of  
16 Questar Corporation on February 1, 2016;<sup>7</sup> Black Hills acquired SourceGas  
17 Holdings LLC on February 12, 2016;<sup>8</sup> Duke announced its proposed acquisition  
18 of Piedmont Natural Gas Company, Inc. on October 26, 2015;<sup>9</sup> and Southern

<sup>5</sup> Direct Testimony of J. Randall Woolridge, at 28.

<sup>6</sup> Subsequent to the filing of my Direct Testimony, Dominion Resources, Inc. entered into an agreement to acquire Questar Corp. on February 1, 2015 and Great Plains Energy Inc. entered into an agreement to acquire Westar Energy Inc. on May 29, 2016.

<sup>7</sup> Dominion Resources, Inc., SEC Form 8-K, January 31, 2016.

<sup>8</sup> Black Hills Corporation, SEC Form 8-K, July 12, 2015.

<sup>9</sup> Duke Energy Corporation, SEC Form 8-K, October 24, 2015.

1 completed its acquisition of AGL Resources Inc. on July 1, 2016.<sup>10</sup> As such,  
2 those companies should be removed from the proxy group.

3 **Q. What is your concern with Dr. Woolridge's use of revenue, rather than**  
4 **income, as a screening criterion?**

5 A. Measures of income are far more likely to be considered by the financial  
6 community in making credit assessments and investment decisions than are  
7 measures of revenue. From the perspective of credit markets, measures of  
8 financial strength and liquidity are focused on cash from operations, which is  
9 directly derivative of earnings, as opposed to revenue. For example, Moody's  
10 assigns a 40.00 percent weight to measures of financial strength and liquidity, of  
11 which 32.50 percent specifically relates to the ability to cover debt obligations  
12 with cash from operations.<sup>11</sup>

13  
14 Just as rating agencies focus on measures of cash from operations, equity  
15 investors prefer measures of income in assessing equity valuation levels; common  
16 measures of relative equity valuation include the Price/Earnings ratio, and the  
17 ratio of Enterprise Value/EBITDA (Earnings Before Interest, Taxes,  
18 Depreciation, and Amortization). Revenue, however, may be several steps  
19 removed from the earnings and cash flows that that are the basis of equity  
20 valuations. Energy trading and marketing units, for example, often represent high

<sup>10</sup> Southern Company, SEC Form 8-K, August 23, 2015.

<sup>11</sup> See, Moody's Investors Service, Rating Methodology, *Regulated Electric and Gas Utilities*, December 23, 2013, at 10-14. I address the ratings process in more detail in my response to Mr. Lawton.

1 revenue but low margin operations. Those operations may generate a  
2 comparatively large proportion of the combined entity's revenue, but only a small  
3 percentage of its income. In such cases, focusing on revenue may mislead the  
4 analyst into assuming that a given operating unit is the primary driver of expected  
5 growth, when other business segments create the majority of earnings and cash  
6 flows. Here, we are considering whether the underlying utility is the principal  
7 source of long-term growth and as such, it could be misleading to focus on  
8 revenue rather than earnings for the purpose of identifying proxy companies.

9 **Q. Have you made any changes to the proxy group used in your ROE analyses?**

10 A. Yes, I have. Although I believe my proxy group reasonably reflects FPL's risk, I  
11 also recognize that in certain circumstances it is possible to have reasonable  
12 disagreements as to the definition and application of screening criteria.  
13 Consequently, I have developed a proxy group that contains all the companies  
14 used by Dr. Woolridge, Mr. Gorman, Mr. Baudino, and me in this proceeding, but  
15 for companies that: (1) have recently been party to mergers or significant  
16 transactions; (2) that do not have regulated generation assets; or (3) are affected  
17 by significant ongoing uncertainties that may be affecting their market data and  
18 investors' expectations of their future performance (I refer to that group as the  
19 "Combined Proxy Group"). Exhibit RBH-19 provides a comparison of the  
20 various proxy groups used by ROE witnesses in this proceeding and explains the  
21 reason certain companies were excluded from the Combined Proxy Group. As  
22 discussed in Section IX, the Cost of Equity estimates derived from the Combined  
23 Proxy Group support my ROE recommendation.

1 ***B. Application of the Constant Growth DCF Approach***

2 **Q. Please summarize your concerns with the Constant Growth DCF model and**  
3 **Dr. Woolridge’s application of the model.**

4 A. There are several aspects of Dr. Woolridge’s DCF analyses and conclusions that  
5 are incompatible with market conditions, and inconsistent with the practical  
6 interpretation of the models’ results. For example, the market data used in Dr.  
7 Woolridge’s DCF analyses conflict with the models’ underlying assumptions. In  
8 particular, the market prices used to calculate the dividend yield were taken from  
9 a period during which utilities in general, and the proxy companies in particular,  
10 traded at unusually high, and likely unsustainable, levels. In fact, during Dr.  
11 Woolridge’s study period, utility Price/Earnings (“P/E”) ratios exceeded their  
12 long-term average, and were similar to the market P/E ratio (as measured by the  
13 S&P 500).<sup>12</sup> The elevated P/E ratios are an important factor simply because the  
14 Constant Growth DCF model assumes constant P/E ratios in perpetuity.  
15 Consequently, the basis of Dr. Woolridge’s recommendation – the Constant  
16 Growth DCF model – assumes data that are inconsistent with the model’s  
17 fundamental assumptions.

18  
19 Lastly, Dr. Woolridge’s application of the Constant Growth DCF model includes  
20 a degree of subjectivity that prevents us from replicating his results. It is quite  
21 likely that analysts looking at the same data would come to different conclusions.  
22 For example, based on his review of historical and projected dividend, book

<sup>12</sup> Source: SNL Financial, Bloomberg Professional.

1 value, earnings and “sustainable” growth rates, Dr. Woolridge assumes a growth  
2 rate of 4.88 percent for the companies in his proxy group, although it is unclear  
3 how he calculates that estimate. Moreover, Dr. Woolridge’s judgment is to give  
4 “primary weight”<sup>13</sup> to growth rate projections produced by equity analysts, despite  
5 his position that those analysts knowingly and persistently produce biased  
6 forecasts.

7 **Q. What growth rates did Dr. Woolridge review in his Constant Growth DCF**  
8 **analysis?**

9 A. Dr. Woolridge reviewed a number of growth rates, including historical and  
10 projected Dividends Per Share (“DPS”), Book Value Per Share (“BVPS”), and  
11 EPS growth rates as reported by Value Line; analysts’ consensus EPS growth rate  
12 projections from Yahoo!, Reuters, and Zacks; and an estimate of “sustainable  
13 growth” derived from data provided by Value Line. Dr. Woolridge states that in  
14 arriving at his 8.75 percent DCF estimate, he gave more weight to projected EPS  
15 growth rates.<sup>14</sup>

<sup>13</sup> Direct Testimony of J. Randall Woolridge, at 52.

<sup>14</sup> See, Direct Testimony of J. Randall Woolridge, at 52.



1

**Table 1: Summary of Dr. Woolridge’s Growth Rate Estimates<sup>15</sup>**

	<b>Dr. Woolridge’s Proxy Group</b>
Value Line Historical Growth Rates (DPS, BVPS, EPS)	4.30%
Value Line Projected Growth Rates (DPS, BVPS, EPS)	4.80%
Sustainable Growth	3.90%
Analyst Projected EPS Growth Rates (excl. Value Line) – Mean/Median	4.80%/5.00%
Dr. Woolridge’s Assumed DCF Growth Rate	4.88%

2

3 **Q. Do you agree with Dr. Woolridge’s sustainable growth rate estimate?**

4 A. No, I do not. As discussed in more detail in my response to Mr. Baudino, the  
5 “sustainable growth” rate does not account for externally generated funds  
6 associated with issuances of new equity.

7 **Q. Are there reasons to doubt the results of a DCF analysis that uses the**  
8 **sustainable growth rate for electric utilities in particular?**

9 A. Yes. As noted below, the projected realized Return on Common Equity for many  
10 of the proxy companies is significantly diluted by recent or projected additions to  
11 net plant. The assumption that the Cost of Equity would materially decrease as  
12 capital investments increase, however, is contrary to market evidence.

<sup>15</sup> See, Direct Testimony of J. Randall Woolridge, Exhibit JRW-10, at 1 and 6.

1 **Q. Have you conducted any analyses to demonstrate how the proxy companies’**  
2 **earned ROE projections are diluted by ongoing capital expenditures?**

3 A. Yes, I have. As discussed in my Direct Testimony, I analyzed Value Line's  
4 earned ROE projections using the “DuPont” formula, which decomposes the  
5 Return on Common Equity into three components: (1) the Profit Margin (net  
6 income/revenues); (2) Asset Turnover (revenues/net plant); and (3) the Equity  
7 Multiplier (net plant/equity).<sup>16</sup> That analysis (see Exhibit RBH-8) showed that  
8 because the utility industry is going through a period of increased capital  
9 investment, the lag between the addition of net plant and revenue generated by  
10 those investments dilute the Asset Turnover ratio, at least in the near term. In the  
11 context of the sustainable growth model, the pressure on earned ROE would lead  
12 to the counter-intuitive conclusion that increased capital investments lead to  
13 decreased return requirements.

14 **Q. Do Dr. Woolridge’s analyses account for abnormally elevated P/E ratios?**

15 A. Not on a consistent basis. As discussed throughout my Rebuttal Testimony, DCF-  
16 based methods, such as the Constant Growth model on which Dr. Woolridge (and  
17 the other opposing witnesses) relies, depend on recent stock prices as a principal  
18 input, and (in the case of the Constant Growth model) assume that Price/Earnings  
19 ratios, and resulting Cost of Equity will remain constant in perpetuity. As noted

<sup>16</sup> Direct Testimony of Robert B. Hevert, at 40.

1 above, an important analytical issue is that utility sector P/E ratios recently have  
2 been unstable and recently have been moved well above their historical levels.<sup>17</sup>

3  
4 To support his Capital Asset Pricing Model analysis, Dr. Woolridge refers to  
5 “Building Block” approaches as part of the studies he uses to estimate the Market  
6 Risk Premium (*see* Exhibit JRW-11, pages 5 and 6). Among the “Building  
7 Block” studies included in that review are those produced by Ibbotson and Chen.  
8 The Morningstar 2015 Classic Yearbook also discusses the “Building Block”  
9 model.<sup>18</sup> In that discussion, Morningstar reviews the effect of increasing P/E ratios  
10 on the market return, and concludes that “reported earnings are affected not only  
11 by the long-term productivity, but also by ‘one-time’ items that do not necessarily  
12 have the same consistent impact year after year.”<sup>19</sup> Morningstar therefore uses  
13 three-year average P/E ratios to develop its Supply-Side market return estimate.

14  
15 Dr. Woolridge therefore recognized and adjusted his analyses to reflect the  
16 abnormal expansion in P/E ratios in his Building Blocks calculation, but did not  
17 acknowledge the same principle in his DCF analysis. That is, Dr. Woolridge  
18 relies on an analysis that adjusts abnormally high P/E ratios in a manner that  
19 reduces his CAPM estimate (the Building Blocks approach to developing the

<sup>17</sup> Since the beginning of 2000, the long-term average P/E ratio for Dr. Woolridge’s proxy group was 17.08. The 30-day average P/E ratio for the period ending June 2016 was 21.63 for Dr. Woolridge’s proxy group. Source: SNL Financial. Looking forward, indicators suggest that the industry’s current valuation levels may not persist. Value Line, for example, expects a decline in the P/E ratio for all of the companies in Dr. Woolridge’s proxy group over the coming three to five years (*see*, Exhibit RBH-20).

<sup>18</sup> Morningstar refers to the method as the “Supply Side” approach.

<sup>19</sup> Morningstar, Inc., 2015 Classic Yearbook, at 157.

1 Equity Risk Premium),<sup>20</sup> and at the same time relies on DCF estimates that do not  
2 recognize or adjust for the abnormal expansion in P/E ratios for his proxy  
3 companies.

4 **Q. Please summarize Dr. Woolridge’s reference to a March 2015 report by**  
5 **Moody’s regarding the effect of ROEs on utilities’ near-term credit profiles.**

6 A. Dr. Woolridge points to the article and concludes (among other things) that lower  
7 authorized ROEs are not impairing utilities’ credit profiles, and are not “detering  
8 them from raising record amounts of capital.”<sup>21</sup> Dr. Woolridge further states that  
9 the Moody’s article “supports the prevailing/emerging belief that lower  
10 authorized ROEs are unlikely to hurt the financial integrity of utilities or their  
11 ability to attract capital.”<sup>22</sup>

12 **Q. What is your response to Dr. Woolridge in that regard?**

13 A. The Moody’s article makes clear that utilities’ cash flow have benefited from  
14 increased deferred taxes, which are due to bonus depreciation. As Moody’s  
15 noted, the rise in deferred taxes eventually will reverse.<sup>23</sup> That may be one reason  
16 that the Moody’s study refers to “near-term credit profiles”; in the longer-term,  
17 utilities will not have the benefits of bonus depreciation to offset lower authorized  
18 returns.

19

<sup>20</sup> See, Direct Testimony of J. Randall Woolridge, Exhibit JRW-11, at 5-6 and Morningstar, Inc.,  
2015 Classic Yearbook, at 157.

<sup>21</sup> Direct Testimony of J. Randall Woolridge, at 66.

<sup>22</sup> *Ibid.*

<sup>23</sup> Moody’s Investors Service, *Lower Authorized Returns Will Not Hurt Near-Term Credit Profiles*,  
March 10, 2015, at 4.

1 Moody's also observed that although interest rates remain at relatively low levels,  
2 they "will go up, eventually." When they do, Moody's warns, "this could spell  
3 trouble for utilities." Moody's concludes, "[f]or now, utilities can enjoy their  
4 (historically) high equity valuations in terms of dividend yield and price-earnings  
5 ratios."<sup>24</sup> That is, in March 2015, Moody's observed that the then-current  
6 valuations were unusual, and that some degree of reversion toward long-term  
7 means was likely. For the electric utility sector, that was the case, as the S&P  
8 Electric Utility Index P/E ratio fell from 18.09 on February 1, 2015 to 15.40 on  
9 July 1, 2015.<sup>25</sup> That observation is consistent with a point made earlier in my  
10 Rebuttal Testimony: unusually high P/E ratios are unlikely to persist and,  
11 therefore, Dr. Woolridge's approach of giving primary weight to his Constant  
12 Growth DCF estimates should be viewed with considerable caution.

13  
14 Dr. Woolridge further argues that the Moody's article supports the notion that  
15 elevated P/E ratios are a result of cost recovery mechanisms reducing utilities'  
16 risk.<sup>26</sup> As a preliminary matter, neither the article nor Dr. Woolridge provides any  
17 evidence or analysis to support the basis for the claim that cost recovery  
18 mechanisms have led to higher P/E multiples. To be clear, Moody's does not  
19 state that the cause of higher P/E multiples is cost recovery mechanisms. As  
20 stated in my Direct Testimony, the Federal Reserve's monetary policy actions  
21 intentionally lowered long-term interest rates (another of the factors cited in the

<sup>24</sup> Moody's Investors Service, *Lower Authorized Returns Will Not Hurt Near-Term Credit Profiles*, March 10, 2015, at 5.

<sup>25</sup> Source: Bloomberg Professional. Represents 30-day moving average.

<sup>26</sup> Direct Testimony of J. Randall Woolridge, at 75-76.

1 Moody's article) and have affected utility P/E ratios.<sup>27</sup> In any case, as noted  
2 above, electric utility P/E ratios declined by nearly 15.00 percent shortly after the  
3 Moody's article was published.

4  
5 Nonetheless, if Dr. Woolridge is concerned that recovery mechanisms have  
6 supported, and will continue to support, elevated P/E ratios, one method of  
7 addressing that position is to assume that the terminal value in the Multi-Stage  
8 DCF analysis is calculated on the basis of current P/E ratios. As discussed later in  
9 my Rebuttal Testimony, I therefore included the current 30-day average proxy  
10 group P/E ratio in the updated Multi-Stage DCF results.<sup>28</sup>

11 **Q. Do you have any concerns with Dr. Woolridge's belief that analysts'**  
12 **projections are consistently biased?**

13 A. Yes, I do. Dr. Woolridge asserts that there is an upward bias in analysts' growth  
14 estimates and as such, "the DCF growth rate needs to be adjusted downward from  
15 the projected EPS growth rate."<sup>29</sup> Dr. Woolridge argues that analysts' earnings  
16 growth estimates are "overly optimistic and upwardly biased," and that relying on  
17 such estimates is a methodological error.<sup>30</sup> His position, however, is based on  
18 observations with respect to the broad market; Dr. Woolridge has provided no  
19 evidence that any of the growth rates used in our respective DCF analyses are the  
20 result of a consistent and pervasive bias on the part of the analysts providing those

<sup>27</sup> Direct Testimony of Robert B. Hevert, at 55.

<sup>28</sup> Exhibit RBH-14.

<sup>29</sup> Direct Testimony of J. Randall Woolridge, at 50.

<sup>30</sup> *Ibid.*, at 49.

1 projections. Despite his view that they are biased, Dr. Woolridge states that it  
2 was by “giving primary weight to the projected EPS growth rate of Wall Street  
3 analysts” that he arrived at his assumed growth rates.<sup>31</sup>

4 **Q. What is your response to Dr. Woolridge in that regard?**

5 A. There is no reason to believe that the analyst growth rates used in our respective  
6 DCF analyses are biased. As a practical matter, the October 2003 Global  
7 Research Analyst Settlement required financial institutions to insulate investment  
8 banking from analysis, prohibited analysts from participating in “road shows,”  
9 and required the settling financial institutions to fund independent third-party  
10 research.<sup>32</sup> I have reviewed the Letters of Acceptance, Waiver and Consent  
11 signed by financial institutions that were party to the Global Settlement, and  
12 found no reference to misconduct by analysts following the utility sector.

13  
14 Pursuant to Regulation AC, which became effective in April 2003, analysts must  
15 certify that “...the views expressed in the report accurately reflect his or her  
16 personal views, and disclose whether or not the analyst received compensation or  
17 other payments in connection with his or her specific recommendations or  
18 views.”<sup>33</sup> I understand that industry practice is to avoid conflicts of interest by  
19 ensuring that compensation is not directly or indirectly linked to the opinions

<sup>31</sup> *Ibid.*, at 52.

<sup>32</sup> The 2002 Global Financial Settlement resolved an investigation by the U.S. Securities and Exchange Commission and the New York Attorney General’s Office of a number of investment banks related to concerns about conflicts of interest that might influence the independence of investment research provided by equity analysts.

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

1 contained in those reports. Dr. Woolridge has not explained why any of the  
2 analysts covering our respective proxy companies would bias their projections in  
3 light of those certification requirements, or why investors would be more inclined  
4 to rely on his growth rate estimates than those of the analysts that base their  
5 projections on fundamental company-specific research.

6 **Q. Is the use of analysts' earnings growth projections in the DCF model**  
7 **supported by financial literature?**

8 A. Yes, it is. The relationship between various growth rates and stock valuation  
9 metrics has been the subject of much academic research.<sup>34</sup> As noted over 40 years  
10 ago by Charles Phillips in The Economics of Regulation:

11 For many years, it was thought that investors bought utility stocks  
12 largely on the basis of dividends. More recently, however, studies  
13 indicate that the market is valuing utility stocks with reference to  
14 total per share earnings, so that the earnings-price ratio has  
15 assumed increased emphasis in rate cases.<sup>35</sup>

16 Subsequent academic research has clearly and consistently indicated that  
17 measures of earnings and cash flow are strongly related to returns, and that  
18 analysts' forecasts of growth are superior to other measures of growth in  
19 predicting stock prices.<sup>36</sup> For example, Vander Weide and Carleton state that,  
20 "[our] results ... are consistent with the hypothesis that investors use analysts'  
21 forecasts, rather than historically oriented growth calculations, in making stock

<sup>34</sup> See, Harris, Robert, Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return, Financial Management (Spring 1986).

<sup>35</sup> Charles F. Phillips, Jr., The Economics of Regulation, at 285 (Rev. ed. 1969).

<sup>36</sup> See, e.g., 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).



1 buy-and-sell decisions.”<sup>37</sup> Other research specifically notes the importance of  
2 analysts’ growth estimates in determining the Cost of Equity, and in the valuation  
3 of equity securities. Dr. Robert Harris noted that “a growing body of knowledge  
4 shows that analysts’ earnings forecast are indeed reflected in stock prices.”<sup>38</sup>  
5 Citing Cragg and Malkiel, Dr. Harris notes that those authors “found that the  
6 evaluations of companies that analysts make are the sorts of ones on which  
7 market valuation is based.”<sup>39</sup> Similarly, Brigham, Shome, and Vinson noted that  
8 “evidence in the current literature indicates that (i) analysts’ forecasts are superior  
9 to forecasts based solely on time series data; and (ii) investors do rely on analysts’  
10 forecasts.”<sup>40</sup>

11  
12 In addition to the studies presented above, there have been other peer reviewed,  
13 published articles that specifically support the use of analysts’ earnings growth  
14 projections in the DCF model.<sup>41</sup>

<sup>37</sup> Vander Weide and Carleton, Investor Growth Expectations: Analysts vs. History, The Journal of Portfolio Management (Spring 1988).

<sup>38</sup> Robert S. Harris, Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rate of Return, Financial Management (Spring 1986).

<sup>39</sup> Robert S. Harris, Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rate of Return, Financial Management (Spring 1986).

<sup>40</sup> 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).

<sup>41</sup> See, for example, Robert S. Harris, *Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rates of Return*, Financial Management, 1986; Robert S. Harris, Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts’ Growth Forecasts*, Financial Management, Summer 1992, at 63; and Advanced Research Center, *Investor Growth Expectations*, Summer, 2004.

1 **Q. Do you agree with Dr. Woolridge’s assertion that “the DCF growth rate**  
2 **needs to be adjusted downward from the projected EPS growth rate to**  
3 **reflect the upward bias”?**<sup>42</sup>

4 A. No, I do not. First, if current stock prices (and therefore the dividend yield)  
5 already reflect analysts’ bias, it is unclear why it is necessary to adjust the growth  
6 rate. In addition, although Dr. Woolridge asserts that “...long-term EPS growth  
7 rate forecasts of Wall Street securities analysts are overly optimistic and upwardly  
8 biased”<sup>43</sup> in general, he has not demonstrated that to be true for the electric  
9 companies in our proxy groups, in particular. To that point, I reviewed quarterly  
10 earnings presentations for several of the companies in Dr. Woolridge’s proxy  
11 group and found that if anything, the analysts’ growth rate projections were  
12 toward the lower end of the long-term growth rate ranges provided by the  
13 companies’ management teams (*see* Table 2, below). I therefore disagree that the  
14 earnings projections included in our respective analyses are likely to be  
15 systemically biased.

<sup>42</sup> Direct Testimony of J. Randall Woolridge, at 50.

<sup>43</sup> *Ibid.*, at 76-77.

1 **Table 2: Analysts' Earnings Growth Projections Relative to Management**  
 2 **Presentations<sup>44</sup>**

Company	Ticker	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Investor Presentation Earnings Growth
Alliant Energy Corporation	LNT	6.10%	6.60%	6.00%	5.00% - 7.00%
Ameren Corporation	AEE	6.10%	5.20%	6.00%	5.00% - 8.00%
American Electric Power Company, Inc.	AEP	4.90%	4.10%	4.00%	4.00% - 6.00%
Avista Corporation	AVA	5.00%	5.00%	5.00%	4.00% - 5.00%
CMS Energy Corporation	CMS	6.40%	7.24%	6.00%	6.00% - 8.00%
Eversource Energy	ES	6.30%	5.49%	6.00%	5.00% - 7.00%
PNM Resources, Inc.	PNM	7.60%	8.76%	9.00%	7.00% - 9.00%
SCANA Corporation	SCG	5.30%	5.40%	4.50%	4.00% - 6.00%
Xcel Energy Inc.	XEL	5.30%	5.27%	5.50%	4.00% - 6.00%

3  
 4 **Q. Do you agree with Dr. Woolridge that dividend and book value growth rates**  
 5 **are appropriate measures of expected growth for the Constant Growth DCF**  
 6 **model?<sup>45</sup>**

7 **A.** No, I do not. Earnings growth is the fundamental driver of the ability to pay  
 8 dividends. As noted in my Direct Testimony, to reduce growth to a single  
 9 measure we assume a fixed payout ratio, and a constant growth rate for EPS,  
 10 DPS, and BVPS.<sup>46</sup> Exhibit RBH-21 illustrates that under the strict assumptions of  
 11 the Constant Growth DCF model, earnings, dividends, book value, and stock

<sup>44</sup> Source: Zacks, Yahoo Finance, Value Line, and individual company first quarter 2016 earnings presentations and investor presentations. See, also, Anup Agrawal and Mark A. Chen, *Do Analysts Conflicts Matter? Evidence from Stock Recommendations*, Journal of Law and Economics, August 2008, at 503-537.

<sup>45</sup> See, Direct Testimony of J. Randall Woolridge, at 45.

<sup>46</sup> See Direct Testimony of Robert B. Hevert, at 27-28.

1 prices all grow at the same, constant rate in perpetuity. Because earnings are the  
2 fundamental driver of dividends, and knowing that investors tend to value  
3 common equity on the basis of Price/Earnings ratios, the Cost of Equity is a  
4 function of the expected growth in earnings, not dividends. That is, earnings  
5 growth enables both dividend and book value growth. Book value can increase  
6 over time only through the addition of retained earnings, or with the issuance of  
7 new equity. Both of those factors are derivative of earnings: retained earnings  
8 increases with the amount of earnings not distributed as dividends; and the price  
9 at which new equity is issued is a function of the EPS and the then-current P/E  
10 ratio. Similarly, earnings are the fundamental driver of a company's ability to pay  
11 dividends.<sup>47</sup>

12  
13 In addition, Value Line is the only service on which Dr. Woolridge relies that  
14 provides DPS, BVPS, or sustainable growth projections. To the extent that the  
15 earnings projections services such as Zacks and First Call represent consensus  
16 estimates, the results are less likely to be skewed in one direction or another as a  
17 result of an individual analyst.

<sup>47</sup> See, Direct Testimony of Robert B. Hevert, at 27-28; and Jing Liu, Doron Nissim, and Jacob Thomas, *Is Cash Flow King in Valuations?*, Financial Analysts Journal, Volume 63, Number 2, 2007.

1 **Q. Do you agree with Dr. Woolridge that historical growth rates are**  
2 **appropriate measures of expected growth for the Constant Growth DCF**  
3 **model?**<sup>48</sup>

4 A. No, I do not. The growth component of the Constant Growth DCF model is a  
5 *forward-looking* measure. To the extent historical growth influences investors'  
6 expectations of future growth, it already will be reflected in analysts' consensus  
7 earnings estimates. Carleton and Vander Weide, for example, found  
8 "overwhelming evidence that consensus analysts' forecast of future growth is  
9 superior to historically oriented growth measures in predicting the firm's stock  
10 price."<sup>49</sup> Consequently, I do not believe that historical growth rates are  
11 appropriate for the Constant Growth DCF model.

12 **Q. Have you conducted any analyses to determine which measures of growth**  
13 **are statistically related to the proxy companies' stock valuation levels?**

14 A. Yes, I have. My analysis is based on the methodological approach used by  
15 Professors Carleton and Vander Weide, who compared the predictive capability  
16 of historical growth estimates and analysts' forecasts on the valuation levels of  
17 sixty-five utility companies.<sup>50</sup> I structured the analysis to assess whether earnings,  
18 dividend, book value, or sustainable growth rates best explain utility stock  
19 valuations. In particular, my analysis examined the statistical relationship  
20 between the P/E ratios of the companies included in Dr. Woolridge's proxy group,

<sup>48</sup> See, Direct Testimony of J. Randall Woolridge, at 45.

<sup>49</sup> Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, *The Journal of Portfolio Management* (Spring 1988).

<sup>50</sup> James H. Vander Weide and Willard T. Carleton, *Investor Growth Expectations: Analysts vs. history*, *The Journal of Portfolio Management*, Spring 1988.

1 and the projected EPS, DPS, and BVPS reported by Value Line, and sustainable  
 2 growth rate calculated using Value Line data. To determine which, if any, of  
 3 those growth rates are statistically related to utility stock valuations, I performed a  
 4 series of regression analyses in which the projected growth rates were explanatory  
 5 variables and the P/E ratio was the dependent variable. The results of those  
 6 analyses are presented in Table 3, below.

7 **Table 3: Regression Results- Price to Earnings and Growth Rates<sup>51</sup>**

	<b>Intercept</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>T-Statistic</b>	<b>F-Statistic</b>
Scenario 1- Projected EPS	13.736	34.462	15.108	2.281	5.203
Scenario 2- Projected DPS	16.778	-21.296	14.886	-1.431	2.047
Scenario 3- Projected BVPS	14.629	22.832	39.329	0.581	0.337
Scenario 4- BR+SV Sustainable Growth	15.138	11.442	40.453	0.283	0.080
Scenario 5- Projected EPS Projected DPS Projected BVPS BR+SV Sustainable Growth	15.283	41.198 -26.857 37.759 -50.037	17.400 14.974 42.387 44.299	2.368 -1.794 0.891 -1.130	2.454

8 In the first set of analyses (Scenarios 1-4), I considered each growth rate  
 9 separately (*i.e.*, I performed four separate regressions with P/E as the dependent  
 10 variable and projected EPS, DPS, BVPS and the sustainable growth rate,  
 11 respectively, as the independent variable). I also performed a single regression  
 12 analysis that included all five variables as potential explanatory variables

<sup>51</sup> See, Exhibit RBH-22.

1 (Scenario 5). I then reviewed the T- and F-Statistics to determine whether the  
2 variables and equations were statistically significant.<sup>52</sup>

3 **Q. What did those analyses reveal?**

4 A. The only growth rate that was statistically significant was Earnings Per Share.  
5 Because the DCF Model assumes that the current market value is a function of  
6 expected growth and, given that EPS growth is the only growth rate that is  
7 statistically related to electric utility valuation, earnings, not dividends or book  
8 value, is the proper measure of growth in the Constant Growth DCF Model.

9 **Q. Is it possible to replicate Dr. Woolridge's DCF analysis?**

10 A. No. As noted above, Dr. Woolridge's analysis is based on his personal view as to  
11 what constitutes a reasonable long-term growth rate. Because different analysts  
12 may well come to different conclusions based on their review of his growth rate  
13 data, we cannot replicate Dr. Woolridge's analyses.

14 **Q. Do you have any concerns with the projected analysts' EPS growth rates  
15 relied on by Dr. Woolridge?**

16 A. Yes. In determining his projected analysts' EPS growth rate, Dr. Woolridge  
17 includes negative growth projections. In doing so, Dr. Woolridge has implicitly  
18 assumed that investors would consider committing capital to a company that is  
19 expected to have negative growth, in perpetuity. As Exhibit RBH-23  
20 demonstrates, eliminating negative growth rates from Dr. Woolridge's DCF

<sup>52</sup> 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.

1 analysis increases the mean projected EPS growth rate by 52 basis points.  
2 However, given that Dr. Woolridge's 4.88 percent growth rate is based on his  
3 personal judgment, it is difficult to say how removing negative growth rates  
4 would affect his analyses and recommendation.

5 ***C. Application of Multi-Stage DCF Approach***

6 **Q. Please briefly summarize Dr. Woolridge's observations regarding your**  
7 **Multi-Stage DCF analysis.**

8 A. First, Dr. Woolridge does not appear to disagree with the structure of the model  
9 itself. For example, in his Exhibit JRW-9, page 1 of 2, Dr. Woolridge describes  
10 the "dividend discount model", which takes the same structure as my Multi-Stage  
11 DCF model. At page 41 of his Testimony, Dr. Woolridge explains that in the  
12 second, or "Transition" stage, the dividend payout ratio increases because there  
13 are fewer investment opportunities. The assumption of increasing payout ratios as  
14 capital investments decline also is consistent with my Multi-Stage analysis.  
15 Although the dividend discount model is consistent in structure with my model,  
16 Dr. Woolridge argues that the terminal growth rate (that is, the long-term growth  
17 rate in the third, or "terminal period") applied in my model is overstated.<sup>53</sup>

18 **Q. Before responding to those points, please describe the Multi-Stage DCF**  
19 **model, and explain how the terminal growth rate is derived and applied.**

20 A. As discussed in my Direct Testimony, the Multi-Stage DCF model enables  
21 analysts to model growth in three stages, rather than a single growth rate in

<sup>53</sup> See, Direct Testimony of J. Randall Woolridge, at 77-82.



1 perpetuity (as the Constant Growth DCF model assumes).<sup>54</sup> The terminal, or third  
2 stage growth rate, represents investors' expectations for long-term (that is,  
3 perpetual) growth beginning in the third stage. Because the model assumes five-  
4 year periods for the first and second stage, the terminal stage (and, therefore, the  
5 terminal growth rate) begins in the eleventh year.

6 **Q. What is the basis of Dr. Woolridge's concern with your assumed long-term**  
7 **growth rate based on expected GDP growth?**

8 A. Dr. Woolridge states that "nominal GDP growth in recent decades has slowed and  
9 that a figure in the range of 4.0% to 5.0% is more appropriate today for the U.S.  
10 economy."<sup>55</sup> To support his position, Dr. Woolridge reviews average nominal  
11 GDP growth over periods of ten to 50 years, and concludes, "economic growth in  
12 the U.S. has slowed considerably in recent decades."<sup>56</sup> As shown on Chart 1  
13 (below), however, since 1990 (*i.e.*, in "recent decades") the annual nominal  
14 growth rate in GDP has remained relatively stable, but for the period 2008 to  
15 2012, which included the recent recession. Over that time, annual nominal GDP  
16 growth rates greater than 5.00 percent (the high end of Dr. Woolridge's suggested  
17 range) occurred in twelve of 26 years; growth rates of at least 5.35 percent  
18 occurred in eleven of 26 years.

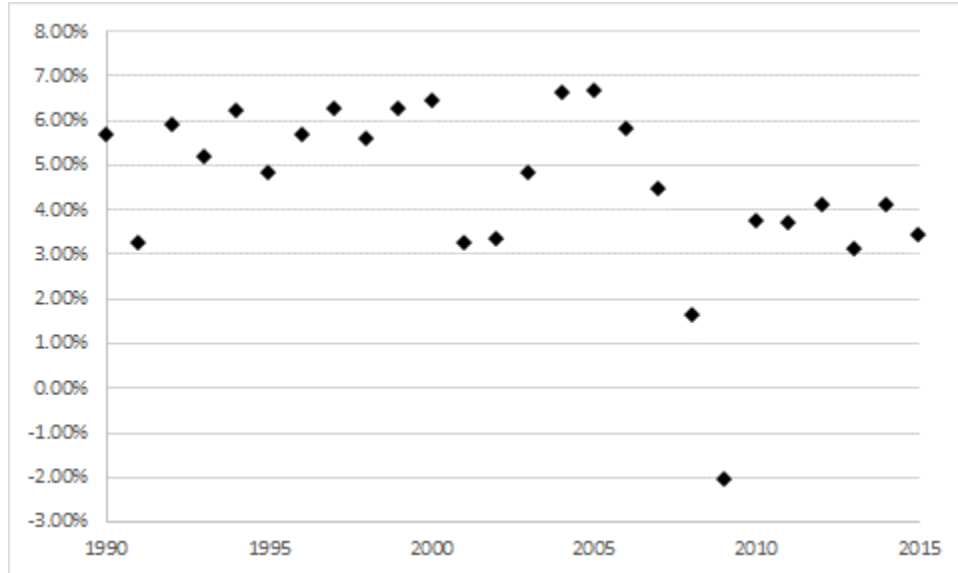
<sup>54</sup> See, Direct Testimony of Robert B. Hevert, at 31-32.

<sup>55</sup> Direct Testimony of J. Randall Woolridge, at 80.

<sup>56</sup> *Ibid.*, at 79.

1

**Chart 1: Annual Nominal GDP Growth Rates<sup>57</sup>**



2 Moreover, historical nominal GDP growth rates since 1960 reflect periods of  
3 differing inflation rates. For example, the real GDP growth rates in 1980 and  
4 2008 were nearly identical at negative 0.24 percent and negative 0.29 percent,  
5 respectively. On a nominal basis, however, the growth rates were vastly different,  
6 at 8.75 percent and 1.66 percent. Knowing that inflation was significantly higher  
7 in the 1970s and early 1980s than it was in 2008, it is not surprising that nominal  
8 GDP rates are lower when viewed within the context of shorter term averages  
9 (*i.e.*, over the last ten or twenty years as Dr. Woolridge has done).

10

11 In addition, as shown in Table 4 (below), the recent economic downturn has had a  
12 significant effect on the real GDP growth rate calculated over shorter periods.

<sup>57</sup>

Source: Bureau of Economic Analysis, June 28, 2016 update.

1

**Table 4: Average Real GDP Growth Rates<sup>58</sup>**

<b>Average Length</b>	<b>As Of 2015</b>	<b>As Of 2007</b>
10-Year Average	1.41%	3.04%
20-Year Average	2.41%	3.07%
30-Year Average	2.60%	3.12%
40-Year Average	2.83%	3.14%
50-Year Average	2.89%	3.38%

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As Table 4 demonstrates, prior to the recent recession the difference between the average GDP growth rates measured over varying time periods was minimal. Subsequent to the recession the differences have been quite large. Because I apply the long-term growth rate beginning ten years in the future, it would be inappropriate to give undue weight to short-term trends in the time series, as Dr. Woolridge suggests.

As to the inflation portion of the expected nominal growth rate, Dr. Woolridge does not seem to disagree with my expected inflation rate of 2.00 percent, as he noted that the current inflation is “in the 2% to 3% range.”<sup>59</sup> I also note that on page 85 of Dr. Woolridge’s Direct Testimony, he provides the average growth rates (since 1960) for nominal GDP, the S&P 500 Index, the S&P 500 earnings per share, and the S&P 500 dividends per share. The average of those measures is 6.42 percent, which is 107 basis points above the 5.35 percent long-term GDP growth rate estimate included in my Direct Testimony. The 6.42 percent average

<sup>58</sup>

<sup>59</sup>

Source: Bureau of Economic Analysis, June 28, 2016 update.  
Direct Testimony of J. Randall Woolridge, at 87. Note, the expected inflation rate has been updated to 2.02 percent in my Rebuttal Testimony Multi-Stage DCF analysis.

1 growth rate noted above also is 22 basis points greater than the approximately  
2 6.20 percent long-term nominal GDP growth rate reported by the Bureau of  
3 Economic Analysis.<sup>60</sup> I therefore disagree with Dr. Woolridge’s view that my  
4 assumed terminal growth rates are excessive.

5 **Q. Are there examples in financial literature that support your calculation of**  
6 **the long-term growth rate based on GDP?**

7 A. Yes. The use of expected long-term GDP growth in the terminal period is  
8 consistent with practice and financial literature.<sup>61</sup> Morningstar, a source on which  
9 Dr. Woolridge relies for Market Risk Premium estimates, describes an approach  
10 for calculating the long-term growth estimate that is similar to that which is  
11 included in my model.<sup>62</sup> As with my approach, Morningstar’s method combines  
12 the historical average real GDP growth rate with a measure of inflation calculated  
13 using the TIPS spread.<sup>63</sup>

14 **Q. Does Dr. Woolridge provide any other data that supports your terminal**  
15 **growth rate assumption?**

16 A. Yes, Dr. Woolridge cites to certain research to support his view that analysts’  
17 earnings estimates are “overly optimistic and upwardly biased,”<sup>64</sup> including a

<sup>60</sup> Source: Bureau of Economic Analysis, June 28, 2016 update. Compound annual return from 1929 – 2015.

<sup>61</sup> Dr. Roger Morin, for example, writes “[i]t is useful to remember that eventually all company growth rates, especially utility services growth rates, converge to a level consistent with the growth rate of the aggregate economy.” See, Roger A. Morin, New Regulatory Finance, Public Utilities Report, Inc., 2006, at 308.

<sup>62</sup> See, Ibbotson SBBI 2013 Valuation Yearbook, Morningstar, Inc., at 50-52.

<sup>63</sup> Implied Expected Nominal GDP = ((1 + Historical Real GDP Growth) x (1 + Implied Forward Inflation)) – 1, or 5.32 percent = ((1 + 3.24 percent) x (1 + 2.02 percent)) - 1.

<sup>64</sup> Testimony and Exhibits of J. Randall Woolridge, at 49.

1 2010 report by McKinsey & Company (“McKinsey”).<sup>65</sup> The McKinsey report  
2 observes that “...long-term earnings growth for the market as a whole is unlikely  
3 to differ significantly from growth in GDP, as prior McKinsey research has  
4 shown.”<sup>66</sup> In a footnote to that sentence, McKinsey further states that “[r]eal  
5 GDP has averaged 3 to 4 percent over past (*sic*) seven or eight decades, which  
6 would indeed be consistent with nominal growth of 5 to 7 percent given current  
7 inflation of 2 to 3 percent.”<sup>67</sup> The McKinsey report therefore supports the  
8 terminal growth rate used in my Multi-Stage DCF model based on expected GDP;  
9 it represents the combination of historical real GDP growth and expected  
10 inflation, and is toward the lower end of the 5.00 percent to 7.00 percent range  
11 noted by McKinsey.<sup>68</sup>

12 **Q. What is your response to Dr. Woolridge’s reference to GDP forecasts**  
13 **provided by the *Survey of Professional Forecasters*, the Energy Information**  
14 **Administration (“EIA”), and the Congressional Budget Office (“CBO”)?”<sup>69</sup>**

15 A. In the case of the *Survey of Professional Forecasters*, as Dr. Woolridge points  
16 out, it relates to the 2016 to 2026 period. That is, it does not apply to the terminal  
17 period, which begins in 2026. As to the CBO and EIA forecast, those projections  
18 cover only fifteen years of a perpetual period, and represent forecasts from single

<sup>65</sup> *Equity Analysts: Still too bullish*, McKinsey & Company, McKinsey on Finance, Number 35, Spring 2010.

<sup>66</sup> *Ibid.*, at 16-17.

<sup>67</sup> *Ibid.*, at 17.

<sup>68</sup> Please also note that consistent with the McKinsey approach, the terminal growth rate used in my Multi-Stage DCF model (*see* Exhibit RBH-14) is the product of real GDP growth (3.24 percent) and expected inflation (2.02 percent).

<sup>69</sup> *See*, Direct Testimony of J. Randall Woolridge, at 80-81.

1 entities. As such, I do not agree that those sources invalidate the growth rate used  
2 in my analysis.

3  
4 In addition, the CBO provides updates regarding its forecasting record. In that  
5 context, the CBO discusses comparisons to other forecasts, and notes that  
6 “[d]espite their value, comparisons of forecasting errors can be misleading when  
7 forecasts are made for different purposes.”<sup>70</sup> In essence, the CBO notes that  
8 comparisons to other forecasts are not always apt, at least in part because they  
9 may be based on different assumptions and used for different purposes.  
10 Moreover, the CBO states that it is required to assume that future fiscal policy  
11 will reflect current law, so that it may “provide a benchmark” against which  
12 proposed changes in law may be assessed.<sup>71</sup> Given that purpose and structure, I  
13 disagree that the CBO’s forecast invalidates the growth rate used in my Multi-  
14 Stage DCF analysis.

15  
16 The CBO also notes that among its two-year forecasts (since the early 1980’s), the  
17 forecast error for “real output growth” and inflation (measured by the Consumer  
18 Price Index) has been 1.40 percentage points, and 0.80 percentage points,

<sup>70</sup> *CBO’s Economic Forecasting Record: 2015 Update*, February 2015, at 4-5.

<sup>71</sup> “In particular, forecasters in the private sector attempt to predict the future stance of federal fiscal policy, and the Administration’s forecasts assume the adoption of the fiscal policy reflected in the President’s proposed budget. CBO, however, is required to assume that fiscal policy in the future will generally reflect the provisions in current law, an approach that derives from the agency’s responsibility to provide a benchmark for lawmakers as they consider proposed changes in law. Forecasting errors may be driven by those different assumptions, particularly when policymakers are considering major changes in the fiscal policy embedded in current law.”

1           respectively.<sup>72</sup> That range of error, if applied to the 4.30 percent long-term CBO  
2           forecast noted by Dr. Woolridge, suggests that the 5.35 percent rate applied in my  
3           Direct Testimony is within the range of the CBO’s projections.<sup>73</sup>

4   **Q.   Do you have any other observations regarding Dr. Woolridge’s position that**  
5   **you should rely on economists’ forecasts of real GDP growth beginning ten**  
6   **years in the future?**

7   A.   Yes, I do. Dr. Woolridge is quite critical of economists’ projections of interest  
8           rates, noting that in hindsight, they often are incorrect.<sup>74</sup> At the same time, he is  
9           critical of the fact that I do not rely on economists’ real GDP growth rate  
10          projections.<sup>75</sup> Putting aside the fact that the Multi-Stage DCF model requires  
11          forecasts beginning ten years from now, not as of the present, Dr. Woolridge does  
12          not explain why economists’ near-term interest rate projections are improper, but  
13          their long-term real GDP growth rate projections are sound.

14   **Q.   Did you perform any analyses in response to Dr. Woolridge’s contention that**  
15   **the currently elevated P/E ratios are expected to continue?**

16   A.   In response to Dr. Woolridge’s assumption that current P/E ratios will persist in  
17          perpetuity, I also have included a series of Multi-Stage DCF analyses that assume

<sup>72</sup> *CBO’s Economic Forecasting Record: 2015 Update*, February 2015, at 1.

<sup>73</sup> As to the use of expected inflation, I note that the TIPS spread has been affected by low levels of inflation, which likely are affected by recently low oil prices. As noted at page 30 of the Federal Reserve’s February 2016 *Monetary Policy Report*, “Inflation is expected to remain low in the near term, in part because of recent further declines in energy prices, but to rise to 2 percent over the medium term as the transitory effects of declines in energy and import prices dissipate and the labor market strengthens further.”

<sup>74</sup> See, Direct Testimony of J. Randall Woolridge, at 16-18.

<sup>75</sup> The Philadelphia Federal Reserve publishes the list of economists that provide forecasts with attribution. See <http://www.frbsf.org/economic-research/publications>.

1 that the current P/E ratio will remain in place by calculating the terminal value in  
2 the Multi-Stage DCF analysis on the basis of the Combined Proxy Group's  
3 current 30-day average P/E ratio. The results of my Multi-Stage DCF analyses  
4 are shown on Table 10 in Section IX (*see also*, Exhibit RBH-14).

5 ***D. Application of the CAPM***

6 **Q. Please briefly describe Dr. Woolridge's CAPM analysis and results.**

7 A. Dr. Woolridge's CAPM analyses produce an estimated Cost of Equity of 7.90  
8 percent to 8.10 percent.<sup>76</sup> Although Dr. Woolridge relies primarily on his DCF  
9 analysis, he also considers his CAPM results in determining what he considers an  
10 appropriate range of the Company's Cost of Equity.<sup>77</sup> As with Dr. Woolridge's  
11 DCF results, I strongly disagree that a CAPM result of 7.90 percent to 8.10  
12 percent is a reasonable estimate of the Company's ROE. As discussed below, Dr.  
13 Woolridge's unduly low CAPM estimates primarily are the result of his estimated  
14 Market Risk Premium.

15 **Q. Please describe how Dr. Woolridge calculates his Market Risk Premium**  
16 **estimate.**

17 A. Dr. Woolridge reviews a series of studies that calculate the MRP using different  
18 methodologies; he also considers the results of his "Building Blocks" approach.

<sup>76</sup> *See*, Direct Testimony of J. Randall Woolridge, Exhibit JRW-11, at 1.

<sup>77</sup> *See*, Direct Testimony of J. Randall Woolridge, at 63.



1 Based on those reviews, Dr. Woolridge concludes that the MRP ranges from 4.00  
2 percent to 6.00 percent and, within that range, 5.50 percent is reasonable.<sup>78</sup>

3 **Q. Does Dr. Woolridge express any concerns regarding your CAPM analysis?**

4 A. Dr. Woolridge’s principal disagreement with my CAPM analysis involves the  
5 Market Risk Premium component of the model. As to my use of expected market  
6 returns, Dr. Woolridge states that the result is “inflated due to errors and bias in  
7 [my] study.”<sup>79</sup> Dr. Woolridge also points to the long-term EPS growth rates for  
8 the S&P 500 based on the data from Bloomberg and Value Line, respectively,<sup>80</sup>  
9 and notes that they “are not consistent with historic or projected economic and  
10 earnings growth.”<sup>81</sup> In support of his position that the expected market return  
11 included in my CAPM analysis is overstated, Dr. Woolridge cites two surveys:  
12 the Duke Chief Financial Officers (“CFO”) survey, and the Philadelphia Federal  
13 Reserve Survey of Professional Forecasters.<sup>82</sup>

14 **Q. What is your response to Dr. Woolridge on those points?**

15 A. First, by referring to the survey by the Federal Reserve Bank of Philadelphia, Dr.  
16 Woolridge suggests that my estimated market return is inconsistent with those  
17 used by professional forecasters.<sup>83</sup> On reviewing that survey, I note that only 18  
18 of 40 survey participants responded to the question regarding the expected return

<sup>78</sup> *Ibid.*, at 61; Exhibit JRW-11, at 1, 5-6.

<sup>79</sup> *Ibid.*, at 88. [Clarification added]

<sup>80</sup> *Ibid.*, at 84.

<sup>81</sup> *Ibid.*, at 85.

<sup>82</sup> *Ibid.*, at 88.

<sup>83</sup> *Ibid.*

1 for the S&P 500 over the next ten years.<sup>84</sup> Similarly, 26 of 40 responded to the  
2 question regarding expected return on ten-year Treasury bonds. Because a  
3 considerable portion of the survey respondents did not answer those questions, it  
4 is difficult to have confidence that the estimates represent the market's expected  
5 total return.

6  
7 Even if all 40 economists provided expected market returns and Treasury yields,  
8 as noted earlier Dr. Woolridge gives economists' interest rate projections little  
9 weight, going so far as to note that in a Bloomberg survey, "100% of the  
10 economists were wrong."<sup>85</sup> Yet, Dr. Woolridge gives economists' forecasts of  
11 market returns and interest rates considerable weight in supporting his expected  
12 Market Risk Premium.

13  
14 As to the Duke CFO survey, Dr. Woolridge's 8.75 percent ROE recommendation,  
15 which applies to a company that is less risky than the overall market,<sup>86</sup> is 245  
16 basis points above the expected market return suggested by the survey results. If  
17 the survey were a reasonable method of determining the expected market return,  
18 Dr. Woolridge's ROE recommendation would be no higher than 6.30 percent.<sup>87</sup>  
19 Moreover, as shown in Table 5 below, the survey respondents have provided  
20 estimates that, on average, significantly underestimated actual market returns.

<sup>84</sup> See, Federal Reserve Bank of Philadelphia, Survey of Professional Forecasters, First Quarter of 2016, at 17.

<sup>85</sup> Direct Testimony of J. Randall Woolridge, at 16. [emphasis included]

<sup>86</sup> Dr. Woolridge and I agree that Beta coefficients for our proxy companies are less than 1.0.

<sup>87</sup> 6.30 percent equals the expected market return suggested by the Duke CFO survey.

1

**Table 5: S&P 500 Market Return: Accuracy of Survey Estimates<sup>88</sup>**

	Actual	Graham Harvey Estimate
2015	1.38%	6.07%
2014	13.69%	5.00%
2013	32.39%	3.40%
2012	16.00%	4.00%
2011	2.11%	5.30%
2010	15.06%	6.28%
Average	13.44%	5.01%

2

3 Further, the Duke CFO Survey authors have noted a distinction between the  
4 expected market return on one hand, and the hurdle rate on the other. In prior  
5 surveys, the hurdle rate was significantly higher than the expected market return.  
6 For example, the authors’ survey showed that the reported average hurdle rate,  
7 which is the return required for capital investments, was above 13.00 percent.<sup>89</sup>  
8 The author further reported that the Weighted Average Cost of Capital  
9 (“WACC”) exceeded the expected market return, even though the WACC  
10 includes the cost of debt. For example, in 2012 the reported WACC was 9.30  
11 percent even though the expected market return was 6.00 percent.<sup>90</sup> Dr.  
12 Woolridge’s reference to the 4.55 percent expected Market Risk Premium, which  
13 relies on the survey’s expected market return, therefore should be given little  
14 weight.

<sup>88</sup> Source: Morningstar, Inc., 2016 SBBI Appendix A, at 3-5, 21-23; <http://www.cfosurvey.org> (1-year return estimates as of fourth quarter of the previous year).

<sup>89</sup> Graham, John R. and Harvey, Campbell R., *The Equity Risk Premium* in 2015 (June 25, 2015), at 8, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2611793](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2611793). At page 9, the authors note that hurdle rates are “used for actual investment decisions.”

<sup>90</sup> Duke/CFO Magazine Global Business Outlook survey – U.S., Second Quarter 2012 at 139, 159.

1 **Q. Do any of the authors cited in Woolridge’s Equity Risk Premium survey**  
2 **provide support for your approach to estimating the current MRP?**

3 A. Yes. A study by Pablo Fernandez titled “Market Risk Premium used in 71  
4 countries in 2016: a survey with 6,932 answers” discusses how the required  
5 Equity Risk Premium is commonly calculated using a Constant Growth DCF  
6 approach.<sup>91</sup> That study states:

7 [t]he [implied equity premium] is the implicit [required equity  
8 premium] used in the valuation of a stock (or market index)  
9 that matches the current market price. The most widely used  
10 model to calculate the [implied equity premium] is the  
11 dividend discount model: the current price (P<sub>0</sub>) is the present  
12 value of expected dividends discounted at the required rate of  
13 return (K<sub>e</sub>). If d<sub>1</sub> is the dividend per share expected to be  
14 received in year 1, and g the expected long term growth rate in  
15 dividends per share:

16  $P_0 = d_1 / (K_e - g)$ , which implies:

17 [implied equity premium] =  $d_1/P_0 + g - R_f$ <sup>92</sup>

18  
19 As discussed in my Direct Testimony, I calculated the *ex-ante* MRP in a similar  
20 manner using a market capitalization weighted Constant Growth DCF calculation  
21 on the individual companies in the S&P 500 Index.

<sup>91</sup> Dr. Woolridge cites Pablo Fernandez’s research; *see* Direct Testimony of J. Randall Woolridge, Exhibit JRW-11, at 5.

<sup>92</sup> Pablo Fernandez, Alberto Ortiz, and Isabel Fernandez Acín, *Market Risk Premium used in 71 countries in 2016: a survey with 6,932 answers*, IESE Business School, at 10.

1 **Q. Do you have any other observations regarding Dr. Woolridge’s Equity Risk**  
2 **Premium estimates?**

3 A. Yes. Many of Dr. Woolridge’s Equity Risk Premium estimates assume market  
4 returns nearly equal to, or below the Company’s required return and as such, do  
5 not make either theoretical or practical sense. For example, Exhibit JRW-11,  
6 page 5 of 6 indicates that the average estimated Equity Risk Premium over all the  
7 articles included in the survey is 4.64 percent. Combining that estimate with Dr.  
8 Woolridge’s 4.00 percent estimated Risk-Free Rate (Exhibit JRW-11, page 1 of 6)  
9 produces an estimated market return of 8.64 percent, which is 11 basis points  
10 below Dr. Woolridge’s 8.75 percent recommendation.

11  
12 Dr. Woolridge observes that “...a regulated public utility is less risky than the  
13 market,” and should have a Beta coefficient less than 1.0.<sup>93</sup> Because his implied  
14 8.64 percent market return is below his 8.75 percent ROE recommendation, its  
15 relevance to investors’ actual required returns is questionable. Even focusing on  
16 studies from the 2010 to 2015 period (Exhibit JRW-11, page 6 of 6), the expected  
17 market return would be approximately 8.92 percent, which is only 17 basis points  
18 above Dr. Woolridge’s 8.75 recommendation for FPL. Because such important  
19 elements of his CAPM analyses contradict each other, Dr. Woolridge’s CAPM  
20 results are not reliable.

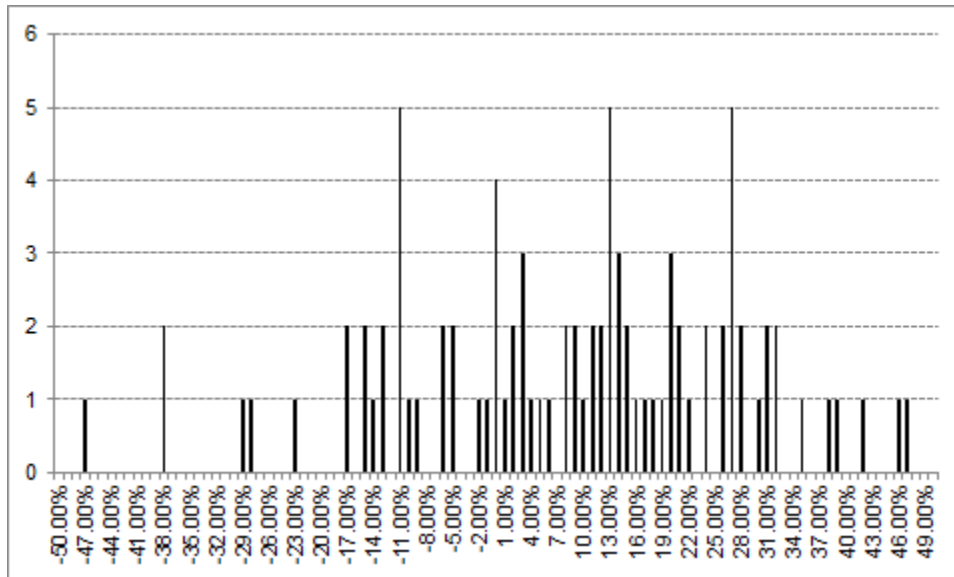
<sup>93</sup> Direct Testimony of J. Randall Woolridge, at 56.

1 **Q. Turning to Dr. Woolridge’s position that the EPS growth rates used to**  
2 **develop your estimated market return are too high, did you consider where**  
3 **your estimates fall within the range of historical observations?**

4 A. Yes, I gathered the annual capital appreciation return on Large Company Stocks  
5 reported by Morningstar for the years 1926 through 2015, produced a histogram  
6 of those observations, and calculated the probability that a given capital  
7 appreciation return estimate would be observed. The results of that analysis,  
8 which are presented in Chart 2 (below), demonstrate that capital appreciation rates  
9 of 9.87 percent to 10.68 percent and higher actually occurred quite often.<sup>94</sup>

10 **Chart 2: Frequency Distribution of Observed Capital Appreciation Rates**

11 **1926 – 2015<sup>95</sup>**



<sup>94</sup> Under the Constant Growth DCF model’s assumptions, the growth rate equals the rate of capital appreciation.

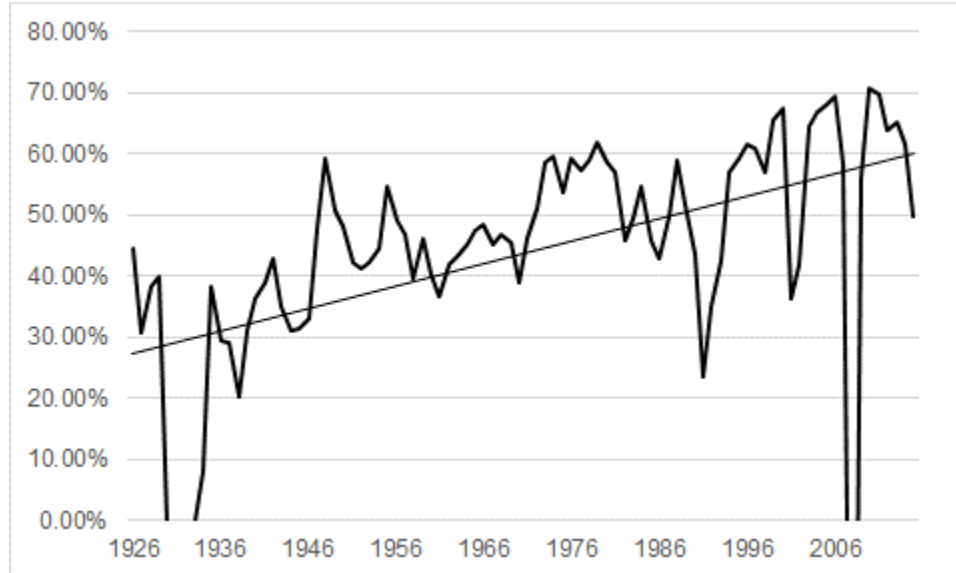
<sup>95</sup> Source: Morningstar, Inc., 2016 Morningstar Stocks, Bonds, Bills and Inflation, Table A-3.

1 In fact, the growth rates Dr. Woolridge asserts are “overstated” by historical  
2 standards represent approximately the 49<sup>th</sup> to 51<sup>st</sup> percentile of the actual capital  
3 appreciation rates observed from 1926 to 2015.

4  
5 Lastly, under the sustainable growth model, if the retention ratio is higher now  
6 than it historically has been, there would be reason to believe that expected  
7 growth rates would be higher than historical growth rates. To determine whether  
8 that has been the case, I calculated the annual retention ratio from 1926 to 2015  
9 using earnings and dividends data published by Dr. Robert J. Shiller. As shown  
10 in Chart 3 (below), that data indicates the S&P 500 earnings retention has trended  
11 upward over time, and is currently well above its historical average.  
12 Consequently, the sustainable growth model included in Dr. Woolridge’s DCF  
13 analysis suggests that the future growth of the S&P 500 could outpace its  
14 historical growth.

1

**Chart 3: S&P 500 Annual Earnings Retention Ratio, 1926 - 2015<sup>96</sup>**



2 ***E. Bond Yield Plus Risk Premium Analysis***

3 **Q. Please summarize Dr. Woolridge’s response to your Bond Yield Plus Risk**  
4 **Premium analysis.**

5 A. Dr. Woolridge believes that the Risk Premium derived from the analysis is  
6 “inflated” and “is a gauge of *commission* behavior and not *investor* behavior.”<sup>97</sup>

7 Dr. Woolridge further observes that my Risk Premium approach and results  
8 “reflect other factors used by utility commissions in authorizing ROEs in addition

9 to capital costs.”<sup>98</sup> In particular, Dr. Woolridge points to a potential discrepancy

10 between settled and litigated cases.<sup>99</sup> In addition, Dr. Woolridge reasons that the

11 analysis overstates the actual ROE, because the estimated risk premium is based

<sup>96</sup> Source: <http://www.econ.yale.edu/~shiller/data.htm>.

<sup>97</sup> Direct Testimony of J. Randall Woolridge, at 90. [emphasis included]

<sup>98</sup> *Ibid.*, at 14.

<sup>99</sup> *Ibid.*



1 on historical Treasury yields, whereas the model is applied to current and  
2 expected yields.<sup>100</sup>

3 **Q. What is your response to Dr. Woolridge's position that the Risk Premium**  
4 **analysis is a study of utility commissions' behavior, rather than investor**  
5 **behavior?**

6 A. Those cases, and their associated decisions, reflect the same type of market-based  
7 analyses at issue in this proceeding. Moreover, given that authorized returns are  
8 publicly available, it is difficult to imagine that such data is not reflected, at least  
9 to some degree, in investors' return expectations and requirements (American  
10 Electric Power, one of Dr. Woolridge's proxy companies, discloses authorized  
11 returns, by jurisdiction, in its 2015 SEC Form 10-K). Consequently, it is  
12 reasonable to assume that authorized returns are a reasonable (although not the  
13 only) measure of investor-required returns.

14 **Q. What is your response to Dr. Woolridge's statement that your analysis**  
15 **applies an historical risk premium to projected rates and as such, overstates**  
16 **the Cost of Equity?**<sup>101</sup>

17 A. I applied both historical and projected interest rates to the regression coefficients  
18 developed in my Risk Premium analysis, not to an average historical risk  
19 premium. As discussed in my Direct Testimony, the regression coefficients  
20 specifically recognize that as interest rates increase the Equity Risk Premium

<sup>100</sup> *Ibid.*

<sup>101</sup> Direct Testimony of J. Randall Woolridge, at 89-91.

1 decreases.<sup>102</sup> A consequence of that relationship is that interest rates and the Cost  
2 of Equity generally move in the same direction, although not on a one-to-one  
3 basis. As projected interest rates increase, the Cost of Equity also will increase,  
4 but not to the same degree. Dr. Woolridge's concern that I have applied projected  
5 interest rates to an historical risk premium is misplaced in that (1) my analysis  
6 does not rely on an historical risk premium; and (2) because the estimated risk  
7 premium does not increase in lock step with interest rates, the resulting ROE  
8 estimate does not overstate the Cost of Equity.

9 **Q. What is your response to Dr. Woolridge's position that your Risk Premium**  
10 **analysis must take into consideration the specific aspects of this proceeding**  
11 **relative to all others?**<sup>103</sup>

12 A. First, every case has its unique set of issues and circumstances; there is no  
13 disagreement on that point. Looking at over 1,000 cases over many economic  
14 cycles, and using that data to quantify the relationship between the Equity Risk  
15 Premium and interest rates, mitigates that concern. I do agree, however, that the  
16 Risk Premium model results should be considered an industry average ROE  
17 estimate. To the extent FPL equity investors face incremental risks, its ROE  
18 should be adjusted.

<sup>102</sup> See, Direct Testimony of Robert B. Hevert, Exhibit RBH-3.

<sup>103</sup> Direct Testimony of J. Randall Woolridge, at 90-91.

1 **Q. Do you believe that it is a concern, as Dr. Woolridge states, to include both**  
2 **fully litigated and settled rate cases in your Risk Premium analysis?**<sup>104</sup>

3 A. No, I do not. Of the rate cases in my Risk Premium analysis, 373 were settled and  
4 1,102 were fully litigated. More recently (from 2012 through June 2016), 75  
5 cases were litigated and 84 were settled. The difference in average authorized  
6 returns between the two, however, was only three basis points. Equally  
7 importantly, and as illustrated on Exhibit RBH-24, the same inverse relationship  
8 between interest rates and the Equity Risk Premium is present whether the  
9 analysis includes fully litigated rate cases, settled rate cases, or both. I therefore  
10 disagree with Dr. Woolridge's concern that the distinction between settled and  
11 litigated cases is meaningful.

12 **Q. Are authorized returns in other jurisdictions a relevant benchmark in**  
13 **assessing the reasonableness of ROE estimates and recommendations?**

14 A. Yes, they are. It is important to recognize that in establishing their return  
15 requirements, investors consider a broad range of data, including returns  
16 authorized in other jurisdictions. Equity investors have many options available to  
17 them, and allocate their capital based on the expected risks and returns associated  
18 with those alternatives. Given that investors consider such data in framing their  
19 investment decisions, return recommendations that materially depart from  
20 observed industry norms – such as such as Dr. Woolridge's 8.75 percent  
21 recommendation – should be supported by clear and unambiguous reasons.

22

<sup>104</sup> *Ibid.*

1 I also disagree with Dr. Woolridge’s position that authorized returns are not  
2 meaningful because they are measures of “commission behavior” as opposed to  
3 measures of investors’ return expectations.<sup>105</sup> There is no reason to believe that  
4 other regulatory commissions do not consider the same type of market-related  
5 factors at issue in this proceeding. Nor is there reason to assume that investors  
6 dismiss authorized returns in establishing their return expectations. Rather, the  
7 fact that companies such as American Electric Power – one of Dr. Woolridge’s  
8 proxy companies – report authorized returns in their annual Securities Exchange  
9 Commission Form 10-K indicates that they are quite relevant to investors.

10

11 The implications of not reconciling his ROE recommendation with authorized  
12 returns are particularly acute given that Dr. Woolridge’s conclusion is based  
13 principally on his application of a single model for which his inputs are quite  
14 subjective, his results cannot be replicated, and whose underlying assumptions are  
15 incompatible with prevailing market conditions.

16 **Q. What is your response to Dr. Woolridge’s statement that the current norm is**  
17 **for utility commissions to authorize ROEs below 10.00 percent?**

18 A. First, from January 2014 through June 2016, utility commissions have authorized  
19 ROEs of 10.00 percent or higher for 12 vertically integrated electric utilities.  
20 None, however, has authorized a return as low as 8.75 percent.<sup>106</sup> Second,  
21 although Dr. Woolridge acknowledges that his recommendation is “below the

<sup>105</sup> Direct Testimony of J. Randall Woolridge, at 90.

<sup>106</sup> Source: SNL Financial, excluding formula-based rate plans and limited issue riders.

1 average authorized ROEs for electric companies,”<sup>107</sup> the lowest authorized ROE  
2 for a vertically integrated electric utility since January 2014 was 55 basis points  
3 *above* Dr. Woolridge’s 8.75 percent recommendation. Here again, Dr.  
4 Woolridge’s conclusions are incompatible with observable market data.

5 ***F. Market-To-Book Ratios and the Cost of Equity***

6 **Q. Please briefly summarize Dr. Woolridge’s position regarding the relationship**  
7 **between Market/Book ratios and the Cost of Equity.**

8 A. Dr. Woolridge suggests that M/B ratios in excess of unity indicate that the subject  
9 company’s earned Return on Equity exceeds its Cost of Equity.<sup>108</sup> In support of  
10 that position, Dr. Woolridge provides a series of three regression analyses  
11 reflecting the relationship between the Return on Equity and M/B ratios for  
12 electric, natural gas, and water utilities, respectively. Because the Coefficient of  
13 Determination (sometimes referred to as the “R<sup>2</sup>”) ranges from 77.00 percent in  
14 the case of electric utilities, to 56.00 percent in the case of natural gas utilities, Dr.  
15 Woolridge concludes that “there is a strong positive relationship” between M/B  
16 ratios and the ROE for utilities.<sup>109</sup>

17 **Q. What is your response to Dr. Woolridge on those points?**

18 A. First, it is important to note that the M/B ratio equals the market value (or stock  
19 price) per share, divided by the total common equity (or the book equity) per  
20 share. Book value per share is an accounting construct, which reflects historical

<sup>107</sup> Direct Testimony of J. Randall Woolridge, at 67.

<sup>108</sup> *Ibid.*, at 33.

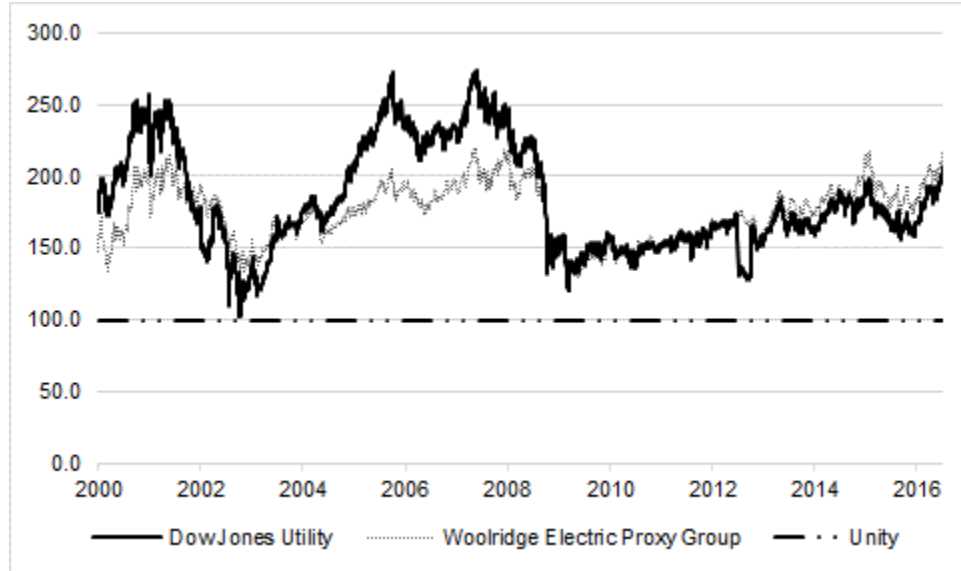
<sup>109</sup> *See*, Direct Testimony of J. Randall Woolridge, at 35 and Exhibit JRW-6. Please note that there were only nine observations for the water group and twelve for the gas company group.

1 costs. In contrast, market value per share (*i.e.*, the stock price) is forward-  
2 looking, and a function of many variables, including (but not limited to) expected  
3 earnings and cash flow growth, expected payout ratios, measures of “earnings  
4 quality”, the regulatory climate, the equity ratio, expected capital expenditures,  
5 and the earned return on common equity.<sup>110</sup> As discussed below, because the  
6 numerator (market value per share) and the denominator (book value per share)  
7 are a function of different variables, M/B ratios over 100.00 percent do not  
8 demonstrate that regulatory commissions have consistently authorized returns in  
9 excess of the true Cost of Equity. To put the issue in context, the M/B ratio for  
10 the companies in the Dow Jones Utility Index, as well as Dr. Woolridge’s proxy  
11 group have been well in excess of 1.00 since at least 2000 (*see* Chart 4, below).

<sup>110</sup> *See*, for example, Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at 366. Please note that Dr. Morin cites several academic articles that address the various factors that affect the M/B ratio for utilities. In addition, the notion that book values should be set at a value approaching unity by regulatory commissions has been refuted for many years. As noted by Stewart Myers in 1972: “In short, a straightforward application of the cost of capital to a book value rate base does not automatically imply that market and book values will be equal. This is an obvious but important point. If straightforward approaches did imply equality of market and book values, then there would be no need to estimate the cost of capital. It would suffice to lower (raise) allowed earnings whenever markets were above (below) book.” Stewart C. Myers, The Application of Finance Theory to Public Utility Rate Cases, The Bell Journal of Economics and Management Science, Vol. 3, No. 1 (Spring 1972), at 76.

1

**Chart 4: Market/Book Ratios Over Time<sup>111</sup>**



2

In the context of rate-setting, the M/B ratio often is discussed relative to the

3

Constant Growth DCF model. Under certain restrictive assumptions, that model

4

can be rewritten to express the M/B ratio as follows:

5

$$\frac{M}{B} = \frac{ROE - G}{k_e - G} \text{ Equation [1]}$$

6

where  $ROE$  is the return on book equity,  $k_e$  is the risk-adjusted discount rate, and

7

$G$  is the long-term growth rate in dividends per share. Taking Equation [1] at face

8

value, if M/B exceeds unity, then  $ROE$  exceeds  $k_e$ . Branch *et al.* point out that

9

M/B is generally greater than or equal to one because the value of the firm as a

10

going concern (price per share) generally exceeds the liquidation value (book

11

value per share) and "...firms having going concern values greater than their

<sup>111</sup>

Source: SNL Financial and Bloomberg Professional.

1 liquidation values (most firms) and firms having finite prices (all firms) should  
2 have  $ROE > k_e > G$ .”<sup>112</sup>

3  
4 Any inferences drawn as to the relationship among M/B,  $ROE$ , and  $k_e$  from  
5 Equation [1] rely on the acceptance of all assumptions of the Constant Growth  
6 DCF model. Equally important, Equation [1] only can be solved from the  
7 Constant Growth DCF model if we further assume: (1) a constant dividend payout  
8 ratio in perpetuity; (2) no stock issuances or repurchases; and (3) that the firm is  
9 in a steady state, in which the book equity growth rate equals the dividend growth  
10 rate. Taken together, those assumptions are quite restrictive, and call into  
11 question a definitive linkage between M/B,  $ROE$ , and  $k_e$ .

12  
13 As Dr. Morin states, it is rarely the case in cost of service-based regulation that  
14 M/B ratios equal 1.00:

15 The third and perhaps most important reason for caution and  
16 skepticism is that application of the DCF model produces  
17 estimates of common equity cost that are consistent with  
18 investors’ expected return only when stock price and book  
19 value are reasonably similar, that is, when the M/B is close to  
20 unity. As shown below, application of the standard DCF  
21 model to utility stocks understates the investor’s expected  
22 return when the market-to-book (M/B) ratio of a given stock

<sup>112</sup> Ben Branch, Anurag Sharma, Chetan Chawla, and Feng Tu; *An Updated Model of Price-to-Book*, Journal of Applied Finance, November 1, 2014, at 78.



1 exceeds unity. This was particularly relevant in the capital  
2 market environment of the 1990s and 2000s where utility  
3 stocks were trading at M/B ratios well above unity and have  
4 been for nearly two decades. The converse is also true, that is,  
5 the DCF model overstates the investor's return when the  
6 stock's M/B ratio is less than unity. The reason for the  
7 distortion is that the DCF market return is applied to a book  
8 value rate base by the regulator, that is, a utility's earnings are  
9 limited to earnings on a book value rate base.<sup>113</sup>

10 Because the Constant Growth DCF model traditionally used in rate regulation  
11 assumes a M/B of unity, it would understate investors' required return rate when  
12 market value exceeds book value. It would do so because investors evaluate and  
13 receive their returns on the market value of a utility's equity, whereas regulators  
14 authorize returns on book common equity. Consequently, the market-based DCF  
15 model will result in a total annual dollar return on book common equity equal to  
16 the total annual dollar return expected by investors only when market and book  
17 values are equal, a rare and unlikely situation.

18  
19 In essence, M/B ratios in excess of unity simply means that the firm is worth more  
20 as a going concern than the book value of its assets. If Dr. Woolridge is of the  
21 view that M/B ratios in excess of unity reflect earned returns in excess of the Cost  
22 of Equity, it would follow that he also is of the view that utility commissions have

<sup>113</sup> Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 434. [emphasis added]

1           been consistently authorizing returns in excess of the Cost of Equity for at least  
2           the last fifteen years. Since Dr. Woolridge does not provide any additional  
3           support for his position beyond the general observation that M/B ratios for electric  
4           utilities have been greater than 100.00 percent, I disagree with that conclusion.

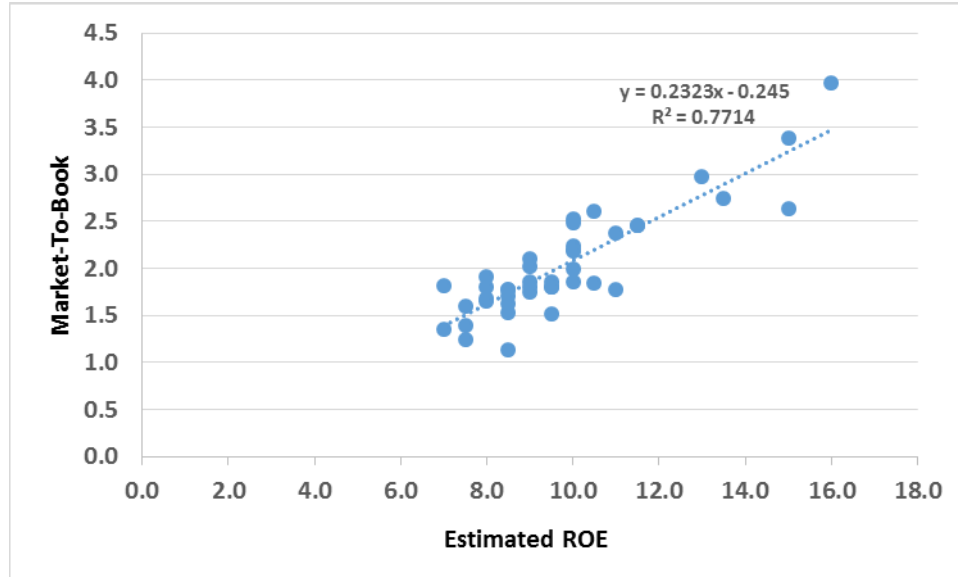
5  
6           Lastly, although the earned Return on Equity may be one factor explaining M/B  
7           ratios, it is not the only factor. If it were, the regression equations presented in  
8           Exhibit JRW-6 would produce reasonable ROE estimates when the M/B ratio  
9           equals unity.

10   **Q.    In that regard, have you reviewed the ROE and M/B ratio data provided in**  
11       **Exhibit JRW-6?**

12    A.    Yes, I have reproduced the chart contained in Exhibit JRW-6, Panel A (Electric  
13       Companies), including the regression coefficients, in Chart 5 (below).

1

**Chart 5: Exhibit JRW-6, Panel A, With Regression Coefficients<sup>114</sup>**



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Based on that data, an M/B ratio of 1.00 is associated with an ROE of 5.36 percent.<sup>115</sup> That estimate is only about 75 basis points above the Company's cost of debt (*i.e.*, 4.62 percent). In other words, for the M/B ratio to equal 1.00, the Cost of Equity would be nearly equal to the cost of debt, a condition that is highly improbable. Dr. Woolridge's own data therefore do not support his theory that ROEs in excess of unity indicate that the subject company's return exceeds investors' required returns.

<sup>114</sup> Source: Value Line. Note that as with Dr. Woolridge's Exhibit JRW-6, Panel A, my analyses include 42 observations and produce an  $R^2$  of approximately 0.77.

<sup>115</sup>  $1.00 = -0.245 + (5.36 \text{ percent} \times 0.232)$ .

1 **Q. Have you analyzed whether the actual earned Return on Equity explains the**  
2 **M/B ratios for Dr. Woolridge’s proxy group?**

3 A. Yes, I have. Based on data from SNL Financial, I performed a regression analysis  
4 in which the M/B ratio was the dependent variable, and the most recent twelve-  
5 month Return on Average Common Equity (“ROACE”) was the explanatory  
6 variable. As shown in Exhibit RBH-25, the R<sup>2</sup> was approximately 48.00 percent  
7 (the coefficients and equation were statistically significant). Thus, other factors  
8 explain up to 52.00 percent of M/B ratios for Dr. Woolridge’s proxy group.<sup>116</sup>  
9 Those results support the position that although the earned return on equity is a  
10 factor that explains M/B ratios, it is not the only factor. In any case, the  
11 regression equation indicates that a M/B ratio of 1.00 is associated with a Return  
12 on Common Equity of 2.29 percent; an M/B ratio of 1.10 relates to an ROACE of  
13 3.27 percent. Because those estimates are far below the Company’s 4.62 percent  
14 cost of debt, I do not agree that M/B ratios in excess of unity demonstrate  
15 earnings in excess of investors’ requirements.

16 **Q. Do you have any other points regarding this issue?**

17 A. Yes. It is important to keep in mind that, like P/E multiples, M/B ratios tend to be  
18 used in practice as measures of relative, rather than absolute valuation. That is,  
19 investors often use M/B ratios to value an individual company based on the  
20 average M/B ratio of its peers. Such “market comparable” approaches to  
21 valuation are useful because no one financial model is accepted as the true  
22 measure of value at all times and under all conditions.

<sup>116</sup> 0.52 = (1 - 0.48).

1 **G. Relative Risk**

2 **Q. Do you believe that credit ratings are an appropriate measure to determine**  
3 **the equity risk of FPL relative to the proxy group?**

4 A. Although I agree that in general, credit ratings, and by extension credit spreads,  
5 are directionally related to the Cost of Equity,<sup>117</sup> I do not agree that changes in  
6 one is a direct measure of changes in the other. Debt and equity are different  
7 securities with different risk/return characteristics, different lives, and different  
8 investors. To that point, debt investors have a contractual, priority claim on cash  
9 flows not available to equity investors and as such, equity investors bear the  
10 residual risk of ownership. Moreover, because the life of debt is finite, debt  
11 investors' exposure to business and financial risk likewise is finite. Equity, on the  
12 other hand is perpetual and as such, equity investors are exposed to residual risk  
13 in perpetuity. Because debt and equity are distinct securities with different risk  
14 and return profiles, debt and equity investors themselves have different risk and  
15 return requirements. As such, any inferences drawn from credit ratings for the  
16 Company's Cost of Equity should be drawn with caution.

17

18 A visible measure of the distinction of the risks to which debt and equity investors  
19 are exposed is the difference in their respective Beta coefficients. Although I  
20 disagree with his application of the CAPM, Dr. Woolridge recommends average

<sup>117</sup> As noted by Robert S. Harris and Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, Summer 1992, at 68, "equity risk premia... increased with the increases in the spread between corporate and government bond yields".

1 Beta coefficients of 0.70 and 0.75 for our respective proxy groups.<sup>118</sup> Duff &  
2 Phelps notes that as of December 2015, Beta coefficients for A-rated debt was  
3 negative .07<sup>119</sup>. That is, the Beta coefficients of A-rated debt are well below those  
4 of the equity Beta coefficients assumed by Dr. Woolridge. In fact, debt Beta  
5 coefficients in the range of .31 to .61 are associated with Ba and B rated debt,  
6 both of which are considered to be below investment grade.<sup>120</sup> Those differences  
7 are a clear indication that the risks assumed by debt investors are far different than  
8 those assumed by equity investors.

9 **Q. Did you perform any analyses to determine whether Dr. Woolridge's data**  
10 **supports the assumption that there is a quantifiable difference in the Cost of**  
11 **Equity for companies with different bond credit ratings?**

12 A. Yes, I did. I first produced Constant Growth DCF results for each of the  
13 comparison companies using the growth rates and dividend yields reported by Dr.  
14 Woolridge. I then applied "credit scores" to Dr. Woolridge's comparison  
15 companies by converting the S&P bond ratings reported in his Direct Testimony  
16 to a numerical value. If there is a quantifiable relationship between the proxy  
17 companies' credit ratings and Cost of Equity, there should be a positive,  
18 statistically significant relationship between the credit score and the DCF results.  
19 That is, as credit quality deteriorates (resulting in a higher score), the Cost of  
20 Equity should increase. I therefore performed a regression analysis, in which the

<sup>118</sup> Exhibit JRW-11, at 3.

<sup>119</sup> Duff & Phelps 2016 Valuation Handbook, John Wiley & Sons, Inc., 2016, at Appendix 3b.

<sup>120</sup> Duff & Phelps 2016 Valuation Handbook, John Wiley & Sons, Inc., 2016, at Appendix 3b. Debt Beta coefficients for BBB-rated companies were .08.

1 dependent variable was the DCF result, and the explanatory variable was the  
2 credit score. As shown in Exhibit RBH-26, the regression analysis showed no  
3 statistically significant statistical relationship between the two. In fact, the R-  
4 squared of the regression was only about 2.20 percent, which indicates that credit  
5 ratings accounted for only 2.20 percent of the change in the DCF-estimated Cost  
6 of Equity.

7 ***H. Flotation Costs***

8 **Q. Did Dr. Woolridge address the issue of flotation costs in his direct testimony?**

9 A. Yes, Dr. Woolridge devotes several pages of his testimony discussing various  
10 reasons why he believes such an adjustment is not necessary.<sup>121</sup> Dr. Woolridge  
11 does not account for flotation costs, reasoning that flotation costs for stock  
12 issuances are not out-of-pocket costs and, even if they were, current market  
13 conditions suggest that a *reduction* to the Cost of Equity is required to account for  
14 flotation costs.<sup>122</sup>

15 **Q. Please respond to Dr. Woolridge in that regard.**

16 A. First, I disagree with Dr. Woolridge's position that flotation costs for stock  
17 issuances are different than issuance costs associated with long-term debt.  
18 Companies pay the same types of fees (both direct and indirect) regardless of  
19 whether they are issuing equity or debt. As to Dr. Woolridge's observation that

<sup>121</sup> See, Direct Testimony of J. Randall Woolridge, at 91-93.

<sup>122</sup> *Ibid.*

1 underwriter fees are not “out-of-pocket” expenses,<sup>123</sup> I view that to be a distinction  
2 without a meaningful difference. Whether paid directly or via an underwriting  
3 discount, the cost results in net proceeds that are less than the gross proceeds.

4  
5 I also disagree with Dr. Woolridge’s position that flotation costs could represent a  
6 *reduction* in Cost of Equity. Flotation costs are true and necessary costs to the  
7 issuer, and represent funds that otherwise would be invested in long-lived assets.  
8 As explained in my Direct Testimony, to the extent flotation costs are not  
9 recovered, the issuing company is denied a portion of the opportunity to earn its  
10 expected (or required) return.<sup>124</sup>

11  
12 I have provided an illustrative example of the effect of flotation costs on the ROE  
13 in Exhibit RBH-27.<sup>125</sup> As shown in that schedule, due to the effect of flotation  
14 costs, an authorized return of 11.15 percent would be required to realize an ROE  
15 of 11.00 percent (*i.e.*, a 15 basis point flotation cost adjustment). If flotation costs  
16 are not recovered, the growth rate falls and the ROE decreases to 10.85 percent  
17 (*i.e.*, below the required return).<sup>126</sup>

<sup>123</sup> *Ibid.*, at 92.

<sup>124</sup> *See*, Direct Testimony of Robert B. Hevert, at 47.

<sup>125</sup> This example is based on an analysis performed by Dr. Roger Morin. *See*, Roger A. Morin, *New Regulatory Finance*, Public Utility Reports, Inc., 2006, at 330-332.

<sup>126</sup> Exhibit RBH-27 is provided for illustrative purposes only. I have not relied on the results of the analysis in determining my recommended ROE and range.



1 **I. Capital Structure**

2 **Q. Please summarize Dr. Woolridge's position on the Company's capital**  
3 **structure.**

4 A. I disagree with Dr. Woolridge's conclusion that the Company's capital structure  
5 suggests less financial risk than the proxy companies.<sup>127</sup> To support his  
6 conclusion, Dr. Woolridge compares the Company's capital structure to the  
7 capital structures in place at the holding company level. As discussed in my  
8 Direct Testimony, I analyzed the actual capital structures in place at the operating  
9 companies held within my proxy group. Doing so reflects the nature of assets  
10 financed by vertically integrated utilities such as FPL. Based on that review, it is  
11 apparent that the Company's capital structure is generally consistent with the  
12 capital structures of the proxy companies.

13 **Q. Is there a specific example that demonstrates the varied nature of a utility**  
14 **holding company's unregulated operations and capital structures?**

15 A. Yes, there is. NextEra Energy Resources, ("NEER"), a wholly owned, indirect  
16 subsidiary of NEE, owns approximately 21,100MW of generating capacity across  
17 the U.S. and Canada.<sup>128</sup> As of 2015, approximately 66.00 percent of NEER's  
18 generating capacity was fully committed under long-term contracts, with a  
19 weighted average life of approximately fifteen years.<sup>129</sup> NEER's generating  
20 portfolio is diverse, with wind, natural gas and nuclear assets representing 91.00

<sup>127</sup> See, Direct Testimony of J. Randall Woolridge, at 31.

<sup>128</sup> NextEra Energy, Inc., SEC Form 10-K for the Fiscal Year Ended December 31, 2015, at 4.

<sup>129</sup> *Ibid.*, at 16.

1 percent of the capacity.<sup>130</sup> In fact, NEER owns 2,721 MW of nuclear generating  
2 capacity, of which 1,621 MW is contracted.<sup>131</sup> NEER is responsible for the  
3 ultimate decommissioning of those plants.<sup>132</sup> Although Dr. Woolridge suggests  
4 that parent company capital structures are the better comparator of FPL's  
5 operating capital structure, he does not seem to have considered the effect of non-  
6 utility, project-financed assets at the consolidated parent level.

7  
8 Lastly, and as discussed in my response to Mr. O'Donnell, my updated capital  
9 structure analysis continues to support the reasonableness of the Company's  
10 current capital structure.

### 11 **III. RESPONSE TO THE TESTIMONY OF FEA WITNESS GORMAN**

12 **Q. Please briefly summarize Mr. Gorman's recommendation regarding the**  
13 **Company's Cost of Equity.**

14 **A.** Mr. Gorman recommends an ROE of 9.25 percent, within a recommended range  
15 of 8.90 to 9.60 percent.<sup>133</sup> Mr. Gorman establishes his recommended ROE by  
16 reference to: (1) his constant growth DCF model using both consensus analyst  
17 growth rates and a sustainable growth rate (with median and average results  
18 ranging from 7.34 percent to 8.89 percent);<sup>134</sup> (2) his Multi-Stage DCF method  
19 (with mean and median results of 8.00 percent and 8.01 percent, respectively);<sup>135</sup>

<sup>130</sup> *Ibid.*

<sup>131</sup> *Ibid.*, at 16, 18.

<sup>132</sup> *Ibid.*, at 18.

<sup>133</sup> *See* Direct Testimony of Michael P. Gorman, at 2.

<sup>134</sup> *Ibid.*, at 24, 41.

<sup>135</sup> *Ibid.*

1 (3) his Risk Premium estimates (ranging 9.50 percent to 9.60 percent, with a point  
2 estimate of 9.55 percent);<sup>136</sup> and (4) his Capital Asset Pricing Model analyses  
3 (ranging from 7.90 percent to 9.25 percent).<sup>137</sup> In particular, Mr. Gorman's 9.25  
4 percent recommendation represents the midpoint of his DCF (8.90 percent) and  
5 Risk Premium (9.60 percent) analyses.<sup>138</sup>

6 **Q. What are the principal analytical areas in which you disagree with Mr.**  
7 **Gorman?**

8 **A.** The principal analytical areas in which I disagree with Mr. Gorman include:

- 9 1. Proxy group composition;
- 10 2. The application of the Constant Growth DCF model, and interpretation of  
11 its results;
- 12 3. The Market Risk Premium component of his CAPM analysis, in  
13 particular the expected market return from which the MRP is calculated;
- 14 4. The assumptions and methods underlying Mr. Gorman's Risk Premium  
15 analyses;
- 16 5. The need for a flotation cost adjustment; and
- 17 6. Mr. Gorman's assessment of the Company's relative risk.

<sup>136</sup> *Ibid.*, at 47.

<sup>137</sup> *Ibid.*, at 53.

<sup>138</sup> *Ibid.*, at 54.

1           **A. Proxy Group Composition**

2           **Q. Do you agree with Mr. Gorman’s exclusion of Dominion Resources, Great**  
3           **Plains Energy, Westar Energy, and Otter Tail Corporation from the proxy**  
4           **group?**<sup>139</sup>

5           A. I agree with the exclusion of Dominion Resource, Great Plains Energy, and  
6           Westar Energy; as discussed in my response to Dr. Woolridge, I also have  
7           excluded those companies due to their recent merger and acquisition activity.  
8           However, I continue to include Otter Tail Corporation (“OTTR”) in my analyses.  
9           Mr. Gorman excluded OTTR from his proxy group because analyst earnings  
10          growth rates estimates were not available from any of the data sources he relies on  
11          (Zacks, SNL Financial and Reuters). Because two of the data sources I rely on  
12          for earnings growth estimates (Yahoo and Value Line) report earnings growth  
13          rates for OTTR, I continue to include the company in my proxy group.

14          **B. Constant Growth DCF Model**

15          **Q. As a preliminary matter, does Mr. Gorman give his Constant Growth DCF**  
16          **results any weight in arriving at his 9.25 percent ROE recommendation?**

17          A. Yes, as noted earlier, Mr. Gorman’s 9.25 percent recommendation represents the  
18          midpoint of his 8.90 percent to 9.60 percent recommended range. The bottom end  
19          of that range (8.90 percent) is based on Mr. Gorman’s Constant Growth DCF

<sup>139</sup> *Ibid.*, at 25.

1 median result of 8.89 percent,<sup>140</sup> and the upper bound (9.60 percent) represents the  
2 point estimate of his Risk Premium results.<sup>141</sup>

3

4 To arrive at his median DCF estimate, Mr. Gorman discards his Multi-Stage DCF  
5 results (8.01 percent), and his Constant Growth DCF model results based on the  
6 “sustainable growth” method (7.34 percent) in favor of his Constant Growth DCF  
7 results based on analysts’ growth rate projections (8.89 percent).<sup>142</sup> Because Mr.  
8 Gorman does not rely on his Multi-Stage or sustainable growth DCF methods, I  
9 will not comment on his application of those approaches in my Rebuttal  
10 Testimony.

11 **Q. Do you have any concerns with the Constant Growth DCF model in general,**  
12 **and the weight that Mr. Gorman applies to those results in particular?**

13 A. Yes, I do. The Constant Growth DCF model is based on several underlying  
14 assumptions that combine to establish an inverse relationship between expected  
15 growth and the dividend yield. That is, as expected growth increases, the price  
16 would increase and the dividend yield would decrease. Conversely, as expected  
17 growth decreases, the price would decrease and the dividend yield would  
18 increase. Mr. Gorman’s Constant Growth DCF analysis (as do Dr. Woolridge’s  
19 and Mr. Baudino’s), however, assumes P/E ratios that are high by historical  
20 standards, (*see* Chart 6, below), but growth rates that are relatively low.

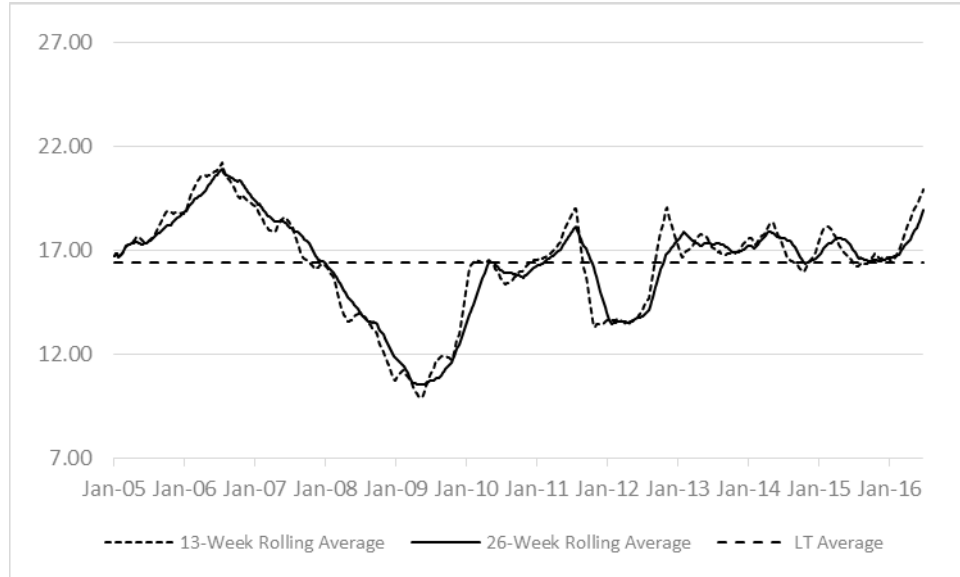
<sup>140</sup> *Ibid.*, at 41, Table 4.

<sup>141</sup> *Ibid.*, at 47.

<sup>142</sup> *Ibid.*, at 41.

1

**Chart 6: Proxy Group Rolling Average P/E Ratio<sup>143</sup>**



2 **Q. Are the growth rates assumed in Mr. Gorman’s analysis consistent with**  
3 **historically high valuation levels?**

4 A. No, they are not. Mr. Gorman’s analysis assumes an average growth rate of 5.38  
5 percent (*see* Exhibit MPG-5) which, he notes, is well below the long-term  
6 compound average growth rate for the economy as a whole (6.20 percent), and the  
7 long-term rate of stock market capital appreciation (on geometric average basis,  
8 5.80 percent).<sup>144</sup> As discussed earlier, the Constant Growth DCF model assumes  
9 that low growth rates would be associated with low prices (and high dividend  
10 yields), yet the proxy group average P/E ratio is well above its long-term average.  
11 In the context of the Constant Growth DCF model, the two are not compatible.

12

<sup>143</sup> Sources: SNL Financial. Proxy Group P/E ratio calculated as an index.  
<sup>144</sup> Direct Testimony of Michael P. Gorman at 37.

1 Mr. Gorman acknowledges that unsustainable expansions in P/E ratios create  
2 analytical concerns that should be addressed in determining the Cost of Equity.  
3 At page 52 of his direct testimony, Mr. Gorman discusses the Market Risk  
4 Premium component of his Capital Asset Pricing Model, and explains that  
5 Ibbotson & Chen found an “abnormal expansion” of P/E ratios relative to  
6 earnings and dividend growth. That is, Ibbotson & Chen found that because  
7 higher P/E ratios during the 1980 to 2001 period were not explained by higher  
8 growth in earnings or dividends, their analyses required adjustment.<sup>145</sup> Duff &  
9 Phelps, the source referenced by Mr. Gorman, calculates an adjustment using  
10 three-year average P/E ratios, rather than relying on the current year, because “the  
11 three-year average allows the adjustment to smooth out the volatility of  
12 extraordinary events and allows earnings to better reflect a normalized trend.”<sup>146</sup>  
13 As did Ibbotson, Duff & Phelps recognized that abnormally high P/E ratios will  
14 produce questionable analytical results, and the long-term trend is important.

15  
16 The same conditions hold here. The utility sector has undergone an “abnormal  
17 expansion” in P/E ratios; there is no dispute on that point. Whereas Duff &  
18 Phelps recognized and adjusted its analyses to reflect the abnormal expansion in  
19 P/E ratios, Mr. Gorman’s DCF analyses, and his interpretation of their results, do  
20 not.

21

<sup>145</sup> See Direct Testimony of Michael P. Gorman at 52; Morningstar Inc., Ibbotson SBBI 2014 Classic Yearbook at 156 - 157. I also have addressed this issue in response to Dr. Woolridge’s “Building Blocks” analysis.

<sup>146</sup> Duff & Phelps, 2016 Valuation Handbook: Guide to Cost of Capital, at 3-30.

1 Lastly, if Mr. Gorman’s position is that the current P/E ratio will sustain itself  
2 over the long-run, as noted in my response to Dr. Woolridge, I have addressed  
3 that concern by calculating the terminal value portion of the Multi-Stage DCF  
4 model by reference to current P/E ratios.<sup>147</sup>

5 **Q. Please summarize your concerns with Mr. Gorman’s use of a sustainable**  
6 **long-term growth in his DCF analysis.**

7 A. Although we agree that it is appropriate to rely on analyst earnings growth  
8 estimates in applying the Constant Growth DCF model, Mr. Gorman asserts that  
9 those estimates should be limited to what he considers to be a reasonable estimate  
10 of long-term “sustainable” growth. In that regard, because they are higher than  
11 the five- and ten-year nominal GDP growth estimates from Blue Chip *Financial*  
12 *Forecasts*, Mr. Gorman concludes that the mean analyst consensus earnings  
13 growth estimates in my Constant Growth DCF analysis produce elevated  
14 estimates of the Cost of Equity.<sup>148</sup>

15  
16 As noted in my response to Dr. Woolridge, prior academic research (as well as the  
17 analyses presented in my response to Dr. Woolridge) indicates that investors rely  
18 on analysts’ earnings growth projections. Those analyses demonstrate Value  
19 Line’s “Retained to Common Equity”, which is the product of the expected  
20 Return on Common Equity and the expected Retention Ratio (which are the two  
21 variables included in Mr. Gorman’s assessment of what may constitute

<sup>147</sup> See Exhibit RBH-14.

<sup>148</sup> See Direct Testimony of Michael P. Gorman at 37-38.



1 “sustainable growth” on page 32 of his direct testimony) have no statistically  
2 significant ability to explain valuation levels (as measured by the P/E ratio, which  
3 Mr. Gorman presents in his Exhibit MPG-2).

4  
5 Although Mr. Gorman may be of the view that analyst growth rates are not  
6 sustainable, the relevant issue is whether investors rely on those projections in  
7 making their investment decisions. That is, what matters is that analysts’  
8 projections reflect widely held expectations influencing investors at the time they  
9 make their pricing decisions, *i.e.*, the market prices investors are willing to pay. I  
10 am not aware of empirical evidence supporting the position that investors would  
11 disregard analysts’ estimates of growth in Earnings Per Share for the companies  
12 in our respective proxy groups, nor has Mr. Gorman provided any such evidence.  
13 Rather, the empirical evidence discussed in my response to Dr. Woolridge  
14 supports the use of analysts’ earnings growth projections. I therefore disagree  
15 with Mr. Gorman’s conclusion that *his* view of sustainable growth, rather than  
16 analysts’ projections, is the more relevant measure of investor expectations.

17 ***C. Application of Capital Asset Pricing Model***

18 **Q. Please briefly summarize Mr. Gorman’s CAPM analysis and results.**

19 A. Mr. Gorman’s two CAPM estimates (9.25 and 7.90 percent) are based on two  
20 measures of principally historical Market Risk Premium estimates, Blue Chip’s  
21 projected 30-year Treasury yield of 3.40 percent as the risk-free rate, and an

1 average Beta coefficient of 0.75, as reported by Value Line.<sup>149</sup> Based on his  
2 assessment of risk premiums in the current market, Mr. Gorman relies on the  
3 high-end 9.25 percent CAPM when estimating FPL's Cost of Equity.<sup>150</sup> Mr.  
4 Gorman's analyses assume Market Risk Premium estimates of 7.80 percent  
5 (based on the long-term historical arithmetic average real market return from  
6 1926 through 2015 as reported by Duff & Phelps, adjusted for current inflation  
7 forecasts), and 6.00 percent (based on the historical difference between the  
8 average return on the S&P 500 and the average total return on long-term  
9 government bonds).<sup>151</sup> Combining those Market Risk Premium estimates with his  
10 projected long-term risk-free rate, Mr. Gorman develops expected market returns  
11 in the range of 9.40 to 11.20 percent.<sup>152</sup>

12 **Q. Turning first to the expected total market return, do you agree with Mr.**  
13 **Gorman's 9.40 and 11.20 percent estimates?**

14 A. No, I do not. As a practical matter, Mr. Gorman's 9.40 percent estimate, which is  
15 more than 250 basis points below the long-term average market return, falls in the  
16 bottom 10<sup>th</sup> percentile of the 90 annual returns reported by Morningstar.<sup>153</sup> His  
17 11.20 percent estimate, which I believe is more reasonable, still falls in the bottom  
18 24<sup>th</sup> percentile.

19

<sup>149</sup> *Ibid.*, at 53 and Exhibit MPG-18.

<sup>150</sup> *Ibid.*, at 53.

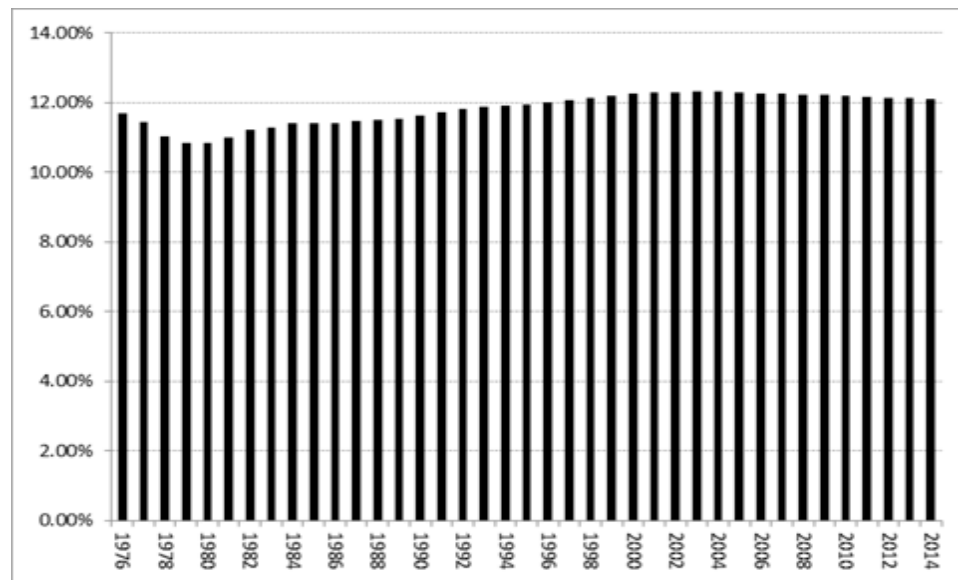
<sup>151</sup> *Ibid.*, at 51 and Exhibit MPG-18.

<sup>152</sup> Mr. Gorman's low Market risk premium of 6.00 percent plus his projected risk-free rate of 3.40 percent equals an estimated market return of 9.40 percent. *See* Direct Testimony of Michael P. Gorman, 51; Exhibit MPG-18.

<sup>153</sup> On a rolling average basis.

1 A helpful perspective on the historical market return is the rolling 50-year average  
2 annual market return. As Mr. Gorman points out, from 1926 through 2015 the  
3 arithmetic average market return was 12.00 percent.<sup>154</sup> Over the 50 years ended  
4 2015, the average return was 12.10 percent, only ten basis points removed from  
5 the longer-term average that Mr. Gorman reports. Over time, the fifty-year  
6 average return has been quite consistent, in the range of approximately 12.00  
7 percent (*see* Chart 7, below).

8 **Chart 7: 50-Year Rolling Average Market Return (1976 – 2015)**<sup>155</sup>



9 Taken from that perspective, Mr. Gorman’s 9.40 percent expected market return  
10 is well below the long-term market experience, and, therefore, is not reasonable.

<sup>154</sup> Direct Testimony of Michael P. Gorman, at 51.  
<sup>155</sup> Source: Morningstar, Inc., 2016 SBBI Appendix A Tables.

1 ***D. Application of the Risk Premium Model***

2 **Q. Please briefly describe Mr. Gorman’s Risk Premium analyses.**

3 A. Mr. Gorman defines the “Risk Premium” as the difference between average  
4 annual authorized equity returns for electric utilities, and a measure of long-term  
5 interest rates each year from 1986 through March 2016.<sup>156</sup> Mr. Gorman’s first  
6 approach calculates the annual risk premium by reference to the 30-year Treasury  
7 yield, and his second approach considers the average A-rated utility bond yield.<sup>157</sup>  
8 In each case, Mr. Gorman establishes his risk premium estimate by reference to  
9 five-year and ten-year year rolling averages. The lower and upper bounds of Mr.  
10 Gorman’s Risk Premium range are defined by the lowest and highest rolling  
11 average, respectively, regardless of the year in which those observations  
12 occurred.<sup>158</sup>

13  
14 Regarding the period over which he gathers and analyzes his data, Mr. Gorman  
15 suggests that his 31-year horizon is a “generally accepted period to develop a risk  
16 premium study using ‘expectational’ data.”<sup>159</sup> On page 44 of his direct testimony  
17 Mr. Gorman further states that “it is reasonable to assume that averages of annual  
18 achieved returns over long time periods will generally converge on the investors’  
19 expected returns,” and concludes that his “risk premium study is based on  
20 expectational data, not actual investment returns, and, thus, need not encompass a

<sup>156</sup> Direct Testimony of Michael P. Gorman, at 41-42.

<sup>157</sup> See Direct Testimony of Michael P. Gorman, 42, Exhibit MPG-13 and MPG-14.

<sup>158</sup> Direct Testimony of Michael P. Gorman at 41-42; Exhibit MPG-13 and MPG-14.

<sup>159</sup> *Ibid.*, at 43.

1 very long historical time period.”<sup>160</sup> Based on those assumptions, Mr. Gorman  
2 calculates a range of risk premium estimates of 4.25 percent to 6.71 percent using  
3 his Treasury bond analysis, and 2.88 percent to 5.53 percent using his A-rated  
4 utility bond analysis. Combined with a 3.40 percent projected Treasury yield and  
5 a 4.69 percent Baa-rated utility bond yield estimate, Mr. Gorman’s Risk Premium  
6 analysis produces results ranging from 7.57 percent to 10.22 percent.<sup>161</sup> To  
7 calculate his Risk Premium-based ROE estimate, Mr. Gorman gives 75.00 percent  
8 weight to the high end of his risk premium estimates, and 25.00 percent to the low  
9 end, producing a range of 9.50 percent to 9.60 percent with a midpoint of 9.55  
10 percent.<sup>162</sup>

11 **Q. Do you have any general observations regarding Mr. Gorman’s Risk**  
12 **Premium estimates and how they weigh in his overall ROE**  
13 **recommendation?**

14 A. Yes, I do. In assessing his DCF analyses, Mr. Gorman decided to rely on his  
15 highest result and essentially discarded five of his six results, which ranged from  
16 7.34 to 8.83 percent.<sup>163</sup> In his Risk Premium analysis, however, Mr. Gorman  
17 retained risk premiums that produced ROE estimates that were more than 100  
18 basis points *below* the DCF estimates that he chose not to rely on. Despite their  
19 low levels, Mr. Gorman gave those risk premium estimates (producing ROE  
20 results of 7.57 and 7.65 percent) weights of 25.00 percent in aggregate. Mr.

<sup>160</sup> *Ibid.*, at 44.

<sup>161</sup>  $4.69\% + 2.88\% = 7.57\%$ ;  $4.69\% + 5.53\% = 10.22\%$ ;  $3.40\% + 4.25\% = 7.65\%$ ;  $3.40\% + 6.71\% = 10.11\%$ .

<sup>162</sup> *Ibid.*, at 47.

<sup>163</sup> *Ibid.*, at 41.

1 Gorman offers no explanation as to why he would exclude DCF results of 8.83  
2 percent and lower, yet include Risk Premium results of 7.57 percent and 7.65  
3 percent.

4 **Q. What are your specific concerns with Mr. Gorman's Risk Premium analysis?**

5 A. I have three concerns with his analysis: (1) Mr. Gorman's method understates the  
6 required risk premium in the current market because it ignores an important  
7 relationship confirmed by his own data, *i.e.*, that the risk premium is inversely  
8 related to the level of interest rates (whether measured by Treasury or utility bond  
9 yields); (2) the low end of Mr. Gorman's Risk Premium results is far lower than  
10 any ROE authorized since at least 1986 and as such, has no relevance in  
11 estimating the Company's Cost of Equity; and (3) Mr. Gorman suggests that a  
12 Market/Book of 1.00 is a relevant benchmark for assessing authorized ROEs.<sup>164</sup>

13 **Q. Turning first to the issue of Market/Book ratios, as discussed on page 42 of**  
14 **his direct testimony, do you agree with Mr. Gorman that M/B ratios should**  
15 **be used to assess the reasonableness of ROE recommendations?**

16 A. No, for the reasons discussed in my response to Dr. Woolridge, I do not.

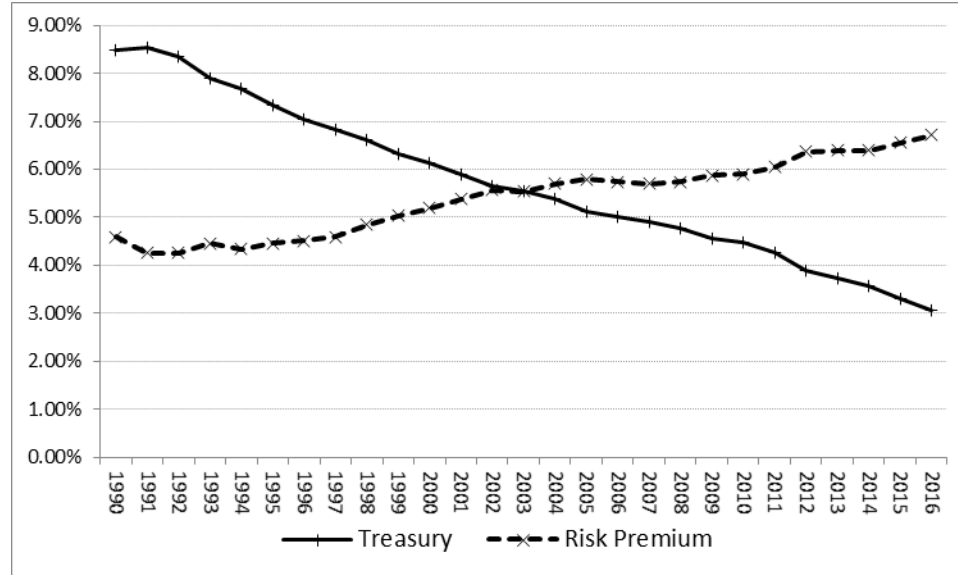
17 **Q. Have you reviewed Mr. Gorman's Risk Premium analyses?**

18 A. Yes, I have. Considering first the Treasury yield-based analysis, I plotted the  
19 yields and Risk Premia over the 1986 to 2016 period included in Mr. Gorman's  
20 analysis. That graph, which is presented in Chart 8 (below), clearly indicates the  
21 inverse relationship between interest rates and the Equity Risk Premium.

<sup>164</sup> *Ibid.*, at 42.

1

**Chart 8: Mr. Gorman's Treasury Yield-Based Risk Premium Data**<sup>165</sup>



2 There are several other points made clear in Chart 8. First, the low end of Mr.  
3 Gorman's Risk Premium range, 4.25 percent, was observed in the five-year period  
4 ending 1991. There is little question that Risk Premium estimates associated with  
5 economic environments 25 years ago have little to do with current market  
6 conditions. A very visible measure of such differences is the fact that before  
7 2002, Treasury yields exceeded the Risk Premium (on a five-year average basis).  
8 As Chart 8 (*see also* Exhibit RBH-28) demonstrates, however, since then the  
9 opposite has been true – the Risk Premium has consistently exceeded Treasury  
10 yields. By that measure alone, it is clear that the low end of Mr. Gorman's range  
11 has little, if any, relevance to the current market environment.  
12

<sup>165</sup>

Source: Direct Testimony of Michael P. Gorman, Exhibit MPG-13; based on five-year rolling average.

1 The high end of Mr. Gorman's range, 6.71 percent, occurred more recently (for  
2 the five year period ending March 2016). In fact, Exhibit MPG-13 indicates that  
3 his Equity Risk Premium averaged approximately 6.85 percent over the more  
4 recent period from 2015 through March 2016.<sup>166</sup> Adding that 6.85 percent Equity  
5 Risk Premium to Mr. Gorman's projected Treasury yield of 3.40 percent produces  
6 an ROE estimate of 10.25 percent.

7 **Q. Has the Risk Premium increased as Treasury yields have decreased?**

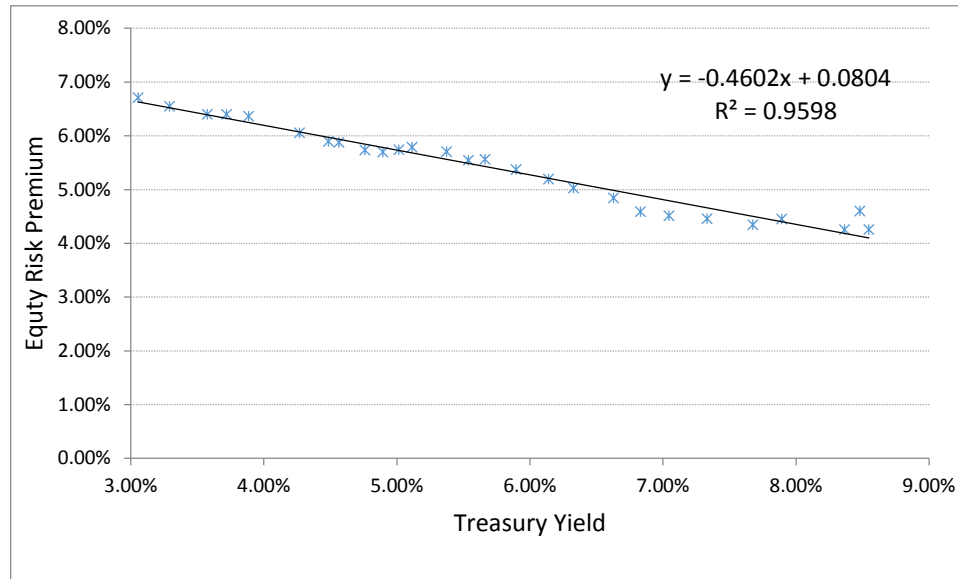
8 A. Yes. The relationship between the five-year average Equity Risk Premium and  
9 Treasury yields is very clear. A simple linear regression demonstrates that the  
10 two are highly related, with a Coefficient of Determination (R-Square) of  
11 approximately 96.00 percent. That is, Mr. Gorman's data demonstrate that  
12 changes in Treasury yields account for 96.00 percent of the change in the Equity  
13 Risk Premium (*see* Chart 9, below).<sup>167</sup>

<sup>166</sup> Based on Indicated Risk Premium.

<sup>167</sup> 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." Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc. 2006, at 128 [clarification added]



1 **Chart 9: Treasury Yield vs. Equity Risk Premium (Five-Year Rolling**  
 2 **Average)<sup>168</sup>**



3 Turning back to Mr. Gorman’s data, a simple linear regression analysis using  
 4 annual (rather than the rolling average data) demonstrates that for every 100 basis  
 5 point decrease in Treasury yields, the Equity Risk Premium increases by  
 6 approximately 44 basis points (*see* Exhibit RBH-29).<sup>169</sup> Similarly, the Equity  
 7 Risk Premium increases approximately 45 basis points for every 100 basis point  
 8 decrease in utility bond yields. Those results are consistent with those reported by  
 9 Maddox, Pippert, and Sullivan, who determined that the Risk Premium would  
 10 increase by 37 basis points for every 100 basis point change in the 30-year  
 11 Treasury yield.<sup>170</sup>

168 See Exhibit RBH-28. Source: Exhibit MPG-13.

169 Serial correlation is not present or is inconclusive.

170 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.

1 I also have found that accounting for additional factors by incorporating the credit  
2 spread (taken from Mr. Gorman's exhibits) does not change the sign, statistical  
3 significance, or the magnitude of the slope coefficient.<sup>171</sup> In short, including Mr.  
4 Gorman's credit spreads do not change the finding that interest rates and the  
5 Equity Risk Premium are inversely related.

6 **Q. What are your conclusions regarding Mr. Gorman's Risk Premium analysis?**

7 A. Although Mr. Gorman includes rolling average estimates in his Risk Premium  
8 analysis, doing so does not negate the finding that his approach relies on data  
9 from markets that are so disconnected in time and substance from the current  
10 environment that there is no reasonable basis for his conclusion that 9.60 percent  
11 represents a proper Risk Premium-based estimate of the Company's Cost of  
12 Equity. Consequently, it is appropriate to apply methods that have been accepted  
13 in published literature, and which reflect the finding that interest rates and the  
14 Equity Risk Premium move in opposite directions.

15 ***E. Risk Factors and Market Sentiment***

16 **Q. Mr. Gorman suggests the market is placing a high value on utility stocks.<sup>172</sup>**  
17 **Have you considered the utility sector's recent equity market performance**  
18 **relative to the debt market?**

19 A. Yes, I have. Because credit spreads, which represent the difference between the  
20 yields on debt and Treasury yields, can be directly observed, we can review the

<sup>171</sup> See Exhibit RBH-29.

<sup>172</sup> Direct Testimony of Michael P. Gorman, at 78.

1 change in spreads over time, and relative to other market sectors. Although credit  
2 spreads are not a full measure of equity risk, they reasonably can be seen to  
3 reflect, to some extent, investors' assessment of risk at a given point in time. As  
4 Chart 10 below indicates, but for the credit contraction that ended in 2003 and the  
5 financial crisis during 2008 and 2009, current credit spreads (for A-rated utilities)  
6 are near their highest level since the year 2000.

7 **Chart 10: A-Rated Utility Credit Spreads<sup>173</sup>**



8  
9 Even considering the 2002 – 2003, and 2008 – 2009 market dislocations, the  
10 current utility credit spread (on a spot basis) is in the top 63<sup>rd</sup> percentile of spreads  
11 since January 2000; the thirty-day average is in the top 55<sup>th</sup> percentile. Looking  
12 to the period subsequent to the financial crisis (that is, since January 2010), the  
13 30-day average credit spread is in the top 80<sup>th</sup> percentile (the spot spread is in the  
14 top 91<sup>st</sup> percentile). Taken from that perspective, it is apparent that investors

<sup>173</sup> Source: Bloomberg Professional

1 currently see the utility sector as relatively risky, and require higher returns as  
2 compensation for that risk.

3

4 As to the relationship between the level of Treasury yields and credit spreads, the  
5 level of explanatory value is rather low; Treasury yields explain only about 12.00  
6 percent of the change in credit spreads.<sup>174</sup> Equity market volatility (as measured  
7 by the VIX), on the other hand, explains about 60.00 percent of the change in  
8 credit spreads.<sup>175</sup> That is, investors are concerned with market uncertainty, and  
9 require higher returns as uncertainty increases.

10 **Q. Does any data presented by Mr. Gorman support the conclusion that credit**  
11 **spreads on A-rated utility debt are at historically elevated levels?**

12 A. Yes. Mr. Gorman's Exhibit MPG-15 provides the spread between A-rated utility  
13 debt and Treasury bond yields. As shown in that exhibit, credit spreads on A-  
14 rated utility debt are higher than they have been in eight of the previous ten years.  
15 Credit spreads were only higher during the 2008-2009 financial crisis.

16 **Q. Have you also reviewed the relationship between credit spreads for A-rated**  
17 **utility debt relative to A-rated corporate debt?**

18 A. Yes, I have. Although Mr. Gorman suggests that utility debt is trading at a  
19 premium to corporate debt<sup>176</sup>, I find the difference in yields to be only about two  
20 basis points. Given the historical volatility in the spread between corporate and

<sup>174</sup> Source: Bloomberg Professional.

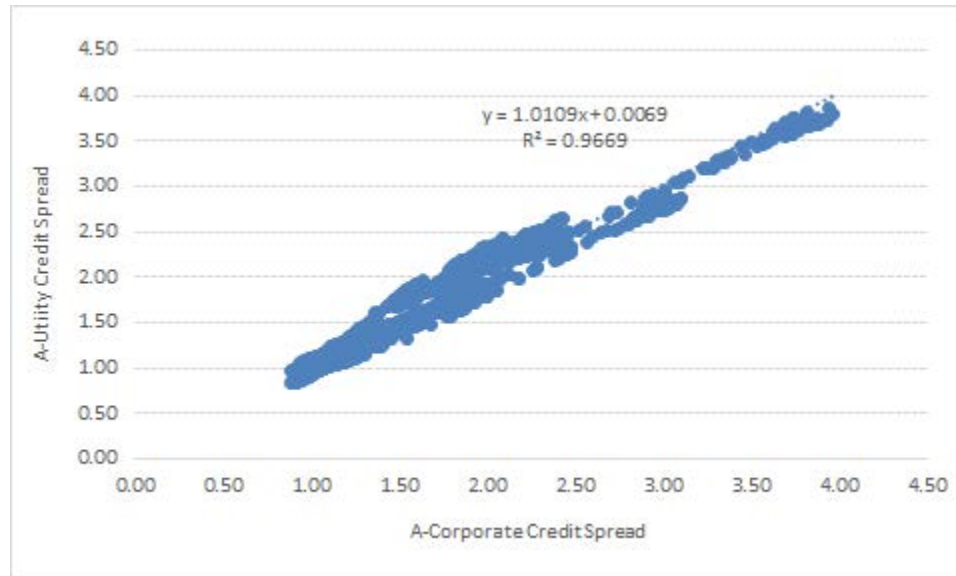
<sup>175</sup> Source: Bloomberg Professional.

<sup>176</sup> Direct Testimony and Exhibits of Michael P. Gorman, at 78.

1 utility A-rated debt, there is no reason to conclude that utility yields are different  
2 than those of their corporate counterparts. That conclusion is consistent with the  
3 finding that over time, there has been a nearly one-to-one relationship between  
4 credit spreads on A-rated corporate and utility bonds. In fact, a regression  
5 analysis in which corporate credit spreads are the explanatory variable and utility  
6 credit spreads are the dependent variable shows that slope is approximately 1.00  
7 and highly significant (*see* Chart 11, below). Because the intercept term is  
8 statistically insignificant, we can conclude that there has been no material  
9 difference between the two, and there certainly is no meaningful difference in the  
10 current market.

1

**Chart 11: Corporate and Utility Credit Spreads (A-Rated)<sup>177</sup>**



2

3 **Q. What do you conclude from those analyses?**

4 A. First, it is clear that A-rated utility credit spreads are at historically elevated  
5 levels. Second, the utility credit spreads are not measurably different than their  
6 corporate counterparts. Based on those two observations, we can conclude that  
7 investors do not consider utilities to be less risky than historical levels, nor are  
8 they requiring lower returns for utilities relative to similarly rated corporate  
9 bonds. Consequently, I do not believe we can conclude that the current level of  
10 utility equity valuation levels is due to lower levels of perceived risk. Rather, it is  
11 my view that the valuation levels are related to the “reach for yield” that  
12 sometimes occurs during periods of low Treasury yields.

<sup>177</sup>

Source: Bloomberg Professional. Please note that for a univariate regression, the correlation coefficient equals the square root of the R-square. In this case, the square root of 0.9669 is approximately 0.98 (98.00 percent).

1 **Q. Have there been other recent periods when utility equity valuation levels**  
2 **were high relative to both their long-term average and the market?**

3 A. Yes. In early 2015, the utility sector (as measured by the S&P Electric Utility  
4 Index) traded at a Price/Earnings ratio of approximately 18.00. During the same  
5 period, the overall market (as measured by the S&P 500) traded at a P/E of  
6 approximately 18.00. Those levels were quite similar to the current market. In  
7 late January 2015, the utility sector began to lose value, and by the end of June  
8 2015 it had lost approximately 15.50 percent of its value.<sup>178</sup> The point simply is  
9 that as investors see an increasing likelihood of higher interest rates, they will  
10 move out of sectors that provided relatively high current yields. As they do,  
11 valuations and P/E ratios fall. As discussed elsewhere in my Rebuttal Testimony,  
12 that degree of instability in P/E ratios is incompatible with the assumptions  
13 underlying the Constant Growth DCF model, rendering estimates from that model  
14 highly questionable.

15 **Q. Have you also considered the effect of the United Kingdom's decision to exit**  
16 **the European Union (sometimes referred to as the "Brexit") on Treasury**  
17 **yields?**

18 A. Yes, I have. What is clear is that in the one week following the Brexit vote (that  
19 is, from June 23 to June 30) Treasury yields fell by 25 basis points. As Treasury  
20 yields fell, utility valuations increased, as investors sought the relatively high  
21 dividend yields offered by the sector. Subsequent to June 30, the market appeared

<sup>178</sup> The Combined Proxy Group lost approximately 13.00 of its value between January 31, 2015 and the end of June 2015.

1 to have become more comfortable with the implications of the Brexit vote,  
2 interest rates began to increase, utility valuations fell, and the overall market  
3 increased to record levels.<sup>179</sup> The volatility observed during that two-week period  
4 demonstrates the importance of understanding the factors underlying market  
5 conditions, and how those factors and conditions comport, or not, with the  
6 methods used to estimate the Cost of Equity.

7 **Q. What conclusions do you draw from those analyses?**

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

15 **Q. Please briefly summarize Mr. Gorman's assessment of the Company's**  
16 **overall business risk.**

17 A. Mr. Gorman summarizes certain rating agency reports and concludes that utilities  
18 in general are seen as a low-risk sector, which has provided utilities "strong  
19 access to capital."<sup>180</sup> Mr. Gorman also notes that 85.00 to 90.00 percent of  
20 regulated utilities have bond ratings in the range of A- to BBB, and FPL falls at

<sup>179</sup> Source: Bloomberg Professional  
<sup>180</sup> Direct Testimony of Michael P. Gorman, at 11.



1 approximately the high-end of this range.<sup>181</sup> Lastly, Mr. Gorman suggests the  
2 implementation of a four year rate plan would not increase the Company's Cost of  
3 Equity.<sup>182</sup>

4 **Q. Do the Company's current credit ratings distinguish it from other utilities?**

5 A. No, they do not. As S&P notes, the vast majority of utility ratings fall within the  
6 BBB to A- range.<sup>183</sup> The Company's current credit rating falls within that range.  
7 In any event, as discussed in my response to Dr. Woolridge, credit ratings are not  
8 full measures of equity risk. And as discussed in my response to Mr. Chriss,  
9 investors' perceptions of regulatory supportiveness tend to be positively related to  
10 authorized equity returns.<sup>184</sup> Lastly, as Mr. Dewhurst explains, the Company's  
11 authorized capital structure and return have enabled it to access capital, maintain  
12 operating liquidity, and still have among the lowest retail rates in the region. In  
13 that important sense, Mr. Gorman's conclusion that the Company's credit rating  
14 somehow justifies an ROE that would be among the lowest authorized in the last  
15 35 years for a vertically integrated electric utility is misplaced.

<sup>181</sup> *Ibid.*, at 19.

<sup>182</sup> *Ibid.*, at 61-62.

<sup>183</sup> Standard & Poor's RatingsDirect, *Industry Report Card: The Outlook For U.S. Regulated Utilities Remains Stable On Increasing Capital Spending And Robust Financial Performance*, December 16, 2014, at 6.

<sup>184</sup> As noted in my response to Mr. O'Donnell, both Standard & Poors and Moody's consider the assessment of the regulatory environment a significant factor in determination of credit ratings.

1 **Q. Mr. Gorman suggests there is insufficient evidence that interest rates will rise**  
2 **to conclude that a four year rate plan will increase risks for shareholders.**<sup>185</sup>

3 **What is your response?**

4 A. The principal issue is uncertainty, which represents risk to investors. As  
5 discussed in my Direct Testimony, with a multi-year rate plan FPL forgoes the  
6 option to seek rate relief as capital costs increase.<sup>186</sup> Should interest rates rise over  
7 the course of the proposed four year rate period, the Company would be exposed  
8 to increases in the costs of both debt and equity.<sup>187</sup> As reported by Blue Chip, the  
9 average consensus forecast is for the 30-year Treasury yield to rise to 3.40 percent  
10 (approximately 100 basis points) in 2017 and 4.40 percent (approximately 200  
11 basis point) by the end of proposed four year rate period.<sup>188</sup> In addition, market  
12 expectations for increased long-term Treasury yields are apparent in the market  
13 prices to buy or sell at-the-money options in long-term Government bond funds.  
14 That is, the value of the option to sell the TLT (an exchange-traded fund of long-  
15 term Government bonds) in January 2018 at today's price is approximately one  
16 and a half times the value of the option to buy that fund.<sup>189</sup> Because bond prices  
17 fall as interest rates increase, investors see a greater likelihood of increases in  
18 long-term interest rates than decreases. As such, investors may require a premium  
19 to the allowed ROE for compensation for the additional risk associated with

<sup>185</sup> Direct Testimony of Michael P. Gorman, at 61-62.

<sup>186</sup> Direct Testimony of Robert B. Hevert, at 50-51.

<sup>187</sup> See Direct Testimony of Robert B. Hevert, at 20 and 63.

<sup>188</sup> See, Blue Chip Financial Forecast, Vol. 35 No. 6, June 1, 2016, at 2, 14.

<sup>189</sup> <http://www.nasdaq.com/symbol/tlt/option-chain?dateindex=7>

1 foregoing the opportunity to seek rate relief in the event of increasing capital  
2 costs.

3 **Q. Do you agree with Mr. Gorman’s position that relying on projected Treasury**  
4 **yields is “problematic”?**<sup>190</sup>

5 A. No, I do not. Mr. Gorman asserts that relying on projected yields does not  
6 consider “the highly likely outcome that current observable interest rates will  
7 prevail during the period rates determined in this proceeding will be in effect.”  
8 Mr. Gorman then goes on to suggest that relative to projected interest rates,  
9 “current observable rates are just as likely to accurately predict future interest  
10 rates as are economists’ projections.”<sup>191</sup> He concludes that the accuracy of those  
11 projections are “highly problematic.”<sup>192</sup>

12 **Q. What is your general response to Mr. Gorman’s position?**

13 A. First, the relevant question is whether investors view consensus forecasts as  
14 important information as they make their investment decisions. Mr. Gorman has  
15 provided no information to conclude that they do not. As to his position that it is  
16 highly likely that observable interest rates will prevail during the period in which  
17 rates will be in effect, that has not been the case historically; as Chart 12 below  
18 demonstrates, 30-year Treasury yields two, three and four yields lagged have not  
19 been very accurate predictors of spot yields. That is especially the case for the  
20 longer lag periods (three and four years), which would more closely reflect the

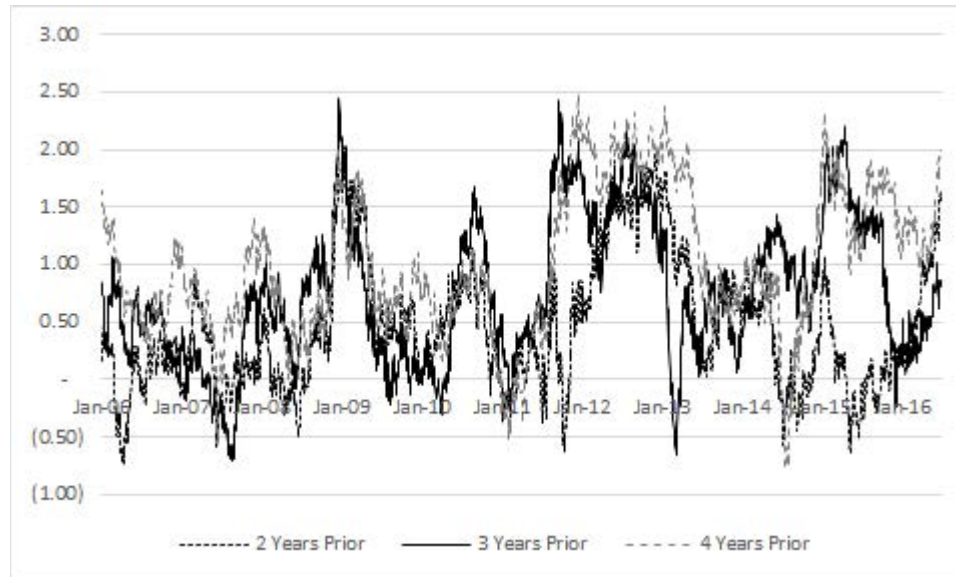
<sup>190</sup> Direct Testimony of Michael P. Gorman, at 79 – 80.

<sup>191</sup> *Ibid.*, at 79.

<sup>192</sup> *Ibid.*, at 80.

1 term of the Company's proposed rate plan than does the roughly one-year lag  
2 reflected in Mr. Gorman's analysis (Exhibit MPG-21).

3 **Chart 12: Difference in Spot vs. Lagged Treasury Yields<sup>193</sup>**



4  
5 In large measure, the inability of lagged yields to explain current yields relates to  
6 the decline in rates over time. As a practical matter, a simple trend variable has  
7 considerably greater explanatory value than do the lagged yields that Mr. Gorman  
8 favors. As shown in Exhibit RBH-30, the R-Square (which measures explanatory  
9 value of a given variable) increases from approximately 55.00 percent to  
10 approximately 82.00 percent. That is, a simple trend has a greater ability to  
11 explain current Treasury yields than do lagged observed Treasury yields.<sup>194</sup>

12  
13 In my view, the relevant question becomes whether investors see that trend  
14 continuing over time. Simply extrapolating the trend, or even relying on prior

<sup>193</sup> Source: Bloomberg Professional

<sup>194</sup> It is interesting to note that including the Trend variable also changes the sign of the lagged Treasury yield variable from positive to negative.

1 Treasury yields as an estimate of future yields would assume that to be the case,  
2 even though central bank policy, which is a significant factor influencing interest  
3 rates, is changing. To that point, Mr. Gorman’s observations include a highly  
4 unusual period in capital markets in which a number of central banks pursued a  
5 significant level of unconventional monetary stimulus (e.g., holding short-term  
6 rates near zero while also purchasing large quantities of long-term bonds), which  
7 led to long-term bond rates far below market estimates of normal rates. He has  
8 not explained, however, why such conditions will prevail two, three or four years  
9 in the future.

10

11 Regarding Mr. Gorman’s observation that in the past, projected yields indicated  
12 interest rate increases even though actual yields did not increase, it is important to  
13 recognize that implied forward Treasury yields (which are based on observed  
14 interest rates) also indicated expectations of rate increases. Implied forward  
15 yields are based on the “Expectations” theory, which states that (for example) the  
16 current 30-year Treasury yield equals the combination of the current one-year  
17 Treasury yield, and the 29-year Treasury yield expected in one year. That is, an  
18 investor would be indifferent to (1) holding a 30-year Treasury to maturity, or (2)  
19 holding a one-year Treasury to maturity, then a 29-year Treasury bond, also to  
20 maturity.<sup>195</sup>

<sup>195</sup> In addition to the Expectations theory, there are other theories regarding the term structure of interest rates, including: the Liquidity Premium Theory, which asserts that investors require a premium for holding long term bonds; the Market Segmentation Theory, which states that securities of different terms are not substitutable and, as such, the supply of and demand for short-term and long-term instruments is developed independently; and the Preferred Habitat Theory,

1

2

As Chart 13 demonstrates, since 2006 the implied forward 29- and 28- year yields

3

(one and two years hence, respectively) consistently exceeded the (interpolated)

4

spot yields. That is, just as economists' projections implied increased interest

5

rates, so did observable Treasury yields.

6

**Chart 13: Forward vs. Interpolated Treasury Yields<sup>196</sup>**



7

8 **Q. What do you conclude from those analyses?**

9 A.

First, Mr. Gorman's assertion that spot yields are a reasonable measure of

10

expected yields is inconsistent with observable data; there has been a considerable

11

amount of dispersion between the two. Moreover, the ability of lagged yields to

12

estimate current yields decreases as the lag period increases. In that regard, there

which states that in addition to interest rate expectations, certain investors have distinct investment horizons and will require a return premium for bonds with maturities outside of that preference.

Source: Federal Reserve Schedule H.15

<sup>196</sup>

1 is no reason to conclude that current Treasury yields are a reasonable estimate of  
2 the yields that will prevail two, three or four years in the future.

3  
4 Second, a simple trend variable provides more explanatory value than do  
5 observed Treasury yields. But if we simply extrapolate that trend, by December  
6 2018 the 30-year Treasury yield would be 0.58 percent (58 basis points; *see*  
7 Exhibit RBH-30). On the other hand, if we were to assume that the current 30-  
8 year Treasury yield will prevail for the next two to four years, we would have to  
9 assume no change in central bank policies, macroeconomic growth, or any of the  
10 other factors that recently have influenced Treasury yields.

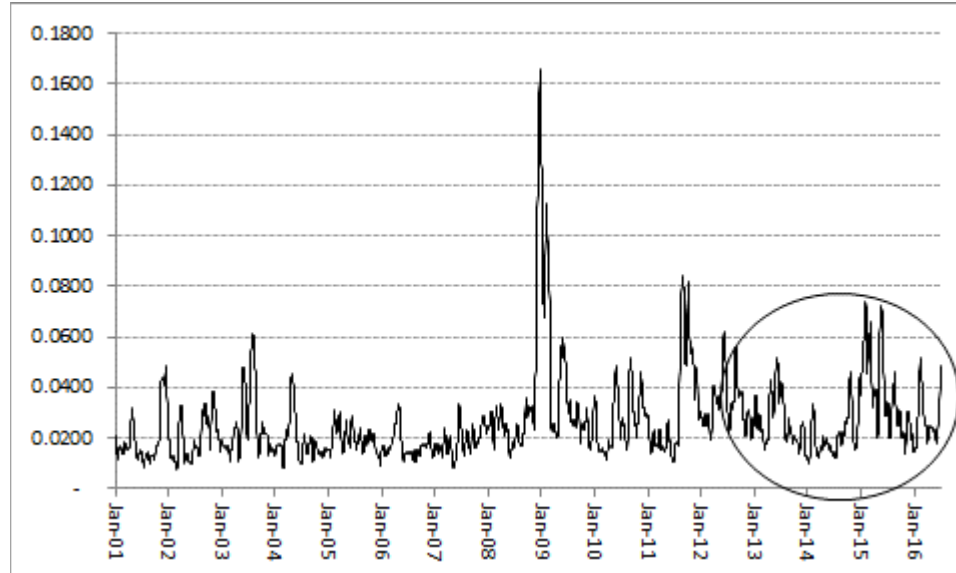
11  
12 Lastly, Mr. Gorman's conclusion that consensus projections exceeded observed  
13 yields does not seem to take into account the fact that implied forward yields also  
14 indicated interest rate increases. Because forward yields have been directionally  
15 consistent with economists' projections, and given that Mr. Gorman puts  
16 considerable weight on observed yields, there is no reason to believe that  
17 economists' projections are "highly problematic".

18 **Q. Do you have any further observations regarding interest rates, and their**  
19 **effect on the Company's ROE?**

20 A. Yes. Since 2012, the 30-year Treasury yield has been quite volatile, especially  
21 relative to its historical levels (*see* Chart 14, below).

1

**Chart 14: 30-Year Treasury Yield Coefficient of Variation<sup>197</sup>**



2

3

4

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That variability represents an element of uncertainty for investors; uncertainty and risk increase investors' required returns. Further, as rates become more variable, the option to seek rate relief in future periods becomes more valuable. Foregoing that option, therefore, comes at a greater cost. Consequently, the increased variability of Treasury yields provides further support for my ROE range and recommendation.

10

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

11

12

A. Mr. Gorman evaluates the reasonableness of his ROE recommendation by calculating the *pro forma* effect that his recommended ROE would have on two of

13

<sup>197</sup>

Source: Bloomberg Professional. The Coefficient of Variation is calculated as the Standard Deviation divided by the Average. Calculations are based on 30-day moving periods.



1 the Company’s key financial ratios with the goal of assessing whether those ratios  
2 would still fall within S&P’s guideline ranges sufficient for an investment grade  
3 rating.<sup>198</sup> In that regard, Mr. Gorman develops the following *pro forma* ratios: (1)  
4 Debt to EBITDA; and (2) Funds From Operations (“FFO”) to Total Debt. An  
5 important point is that Mr. Gorman’s analysis assumes that the Company actually  
6 will earn the entirety of its authorized ROE on a going-forward basis.

7  
8 In his Exhibit MPG-19, Mr. Gorman develops the *pro forma* financial ratios noted  
9 above based on the Company’s retail cost of service, and his recommended ROE  
10 of 9.25 percent. Mr. Gorman notes that his *pro forma* financial analysis suggests  
11 that his recommended ROE of 9.25 percent would be sufficient to maintain  
12 “credit metrics at an investment grade utility level.”<sup>199</sup>

13 **Q. Do you agree with Mr. Gorman’s analysis and conclusion?**

14 A. No, I do not. First, simply maintaining an “investment grade” rating is an  
15 inappropriate standard. According to Standard & Poor’s, only 6 of 221 utilities  
16 have had below investment grade ratings.<sup>200</sup> As Mr. Dewhurst explains, FPL must  
17 compete for capital within the utility sector in the first instance, and with  
18 companies beyond utilities, overall. If Mr. Gorman is of the view that simply  
19 maintaining an investment grade rating is sufficient for that purpose, I disagree.  
20 In my practical experience raising capital for a regulated utility, I can say

<sup>198</sup> See Direct Testimony of Michael P. Gorman, at 56-57.

<sup>199</sup> *Ibid.*, at 57.

<sup>200</sup> See Standard & Poor’s RatingsDirect, *The Outlook for U.S. Regulated Utilities Remains Stable on Increasing Capital Spending and Robust Financial Performance*, December 16, 2014, at 7-20.

1 firsthand that the competition for capital can be acute. Based on that practical  
2 experience, I also can say that Mr. Gorman’s “investment grade” standard would  
3 frustrate the ability of FPL, or any other regulated utility, to raise capital under a  
4 variety of market conditions, and at reasonable costs and terms.

5  
6 That fundamental concern aside, a wide range of ROE outcomes create *pro forma*  
7 coverage ratios that fall within S&P’s guidelines for the Company’s current  
8 rating. As shown in Exhibit RBH-31, using Mr. Gorman’s analysis, an ROE of  
9 6.55 percent creates coverage ratios that also fall within FPL’s current range.  
10 There is little question that 6.55 percent is an unrealistic estimate of the  
11 Company’s Cost of Equity.

12  
13 Mr. Gorman concludes that his 9.25 percent recommendation produces *pro forma*  
14 ratios within S&P’s “Intermediate” guideline and therefore supports an  
15 investment grade credit rating.<sup>201</sup> Again, using Mr. Gorman’s analysis, an ROE of  
16 6.55 percent produces coverage ratios that also fall within the “Intermediate”  
17 range. Again, I do not believe that 6.55 percent is a realistic estimate of the  
18 Company’s Cost of Equity. My 11.00 percent ROE recommendation also  
19 produces coverage ratios that fall within the “Intermediate” range.<sup>202</sup>

20  
21 In my view, the observation that that Mr. Gorman’s 9.25 percent ROE produces  
22 *pro forma* ratios that fall within the same ratings band as the 6.55 percent ROE

<sup>201</sup> Direct Testimony of Michael P. Gorman, at 57.  
<sup>202</sup> Exhibit RBH-31.

1 noted above does not support the conclusion that his recommendation would  
2 support the Company's financial integrity. As noted earlier, there are factors well  
3 beyond *pro forma* coverage ratios that weigh in rating determinations.

4  
5 As noted above, Mr. Gorman's analysis also assumes that the Company actually  
6 will be able to earn its authorized return, and its Funds From Operations will not  
7 be diluted by regulatory lag, additional capital spending, or any of the other  
8 factors that may dilute earnings and cash flow.

9  
10 Lastly, as Mr. Gorman recognizes, credit rating agencies consider a number of  
11 factors beyond coverage ratios. As noted in my response to Mr. O'Donnell, 50.00  
12 percent of Moody's ratings factors relate to the regulatory environment. Mr.  
13 Gorman's ROE recommendation, which is far below the national average return  
14 for vertically integrated electric utilities, would introduce an element of regulatory  
15 risk that could put pressure on FPL's credit profile, potentially increasing its cost  
16 of capital. Because Mr. Gorman's analysis appears to be overly simplified,  
17 relying on its results may well lead to incorrect conclusions.

18 ***G. Flotation Costs***

19 **Q. What is Mr. Gorman's position with regard to flotation costs.**

20 A. Mr. Gorman acknowledges that flotation costs are a legitimate cost of doing  
21 business, but suggests that the Commission only allow recovery if the actual costs

1 are demonstrated and proven to be reasonable. Mr. Gorman further asserts that  
2 because FPL does not issue common stock, it does not incur flotation costs.<sup>203</sup>

3 **Q. What is your response to Mr. Gorman’s position?**

4 A. As explained in my direct testimony, flotation costs are part of the invested costs  
5 of the utility, which are properly reflected on the balance sheet under “paid in  
6 capital.” They are not current expenses, and therefore are not reflected on the  
7 income statement. Rather, like investments in rate base or issuance costs of long-  
8 term debt, flotation costs are incurred over time, but remain part of the cost  
9 structure that exists during the test year and beyond.<sup>204</sup> Although FPL does not  
10 issue common stock, it still must compete for equity capital with other NextEra  
11 Energy affiliates and investment opportunities. The common stock that which has  
12 been issued by NextEra Energy, the parent holding company, includes flotation  
13 costs, which are passed through to FPL. As such, I continue to believe it is  
14 appropriate to consider flotation costs in the determination of where the  
15 Company’s ROE falls within the range of results.

16 ***H. Response to Mr. Gorman’s Criticisms***

17 **Q. Please summarize Mr. Gorman’s criticisms of your Cost of Equity analyses.**

18 A. Mr. Gorman asserts my estimated ROE is overstated and should be rejected  
19 because (1) my CAPM is based on inflated estimates of the Market Risk

<sup>203</sup> Direct Testimony of Michael P. Gorman, at 60-61.

<sup>204</sup> Roger A. Morin, New Regulatory Finance, (Public Utilities Reports, Inc. 2006), at 321-322; Shannon P. Pratt, Cost of Capital Estimation and Applications, Second Edition, at 220-221; and Cleveland S. Patterson, Flotation Cost Allowance in Rate of Return Regulation: Comment, The Journal of Finance Vol. XXXVIII, No. 4. September 1983, at 1337.

1 Premiums; (2) my Bond Yield Plus Risk Premium is based on inflated utility  
2 Equity Risk Premium; (3) my Risk Premium analyses rely on “stale” Treasury  
3 yields; (4) my Constant Growth DCF results are based on excessive,  
4 unsustainable growth rates; and (5) my Multi-Stage DCF is based on an  
5 unrealistic GDP growth estimate and unsustainable payout ratio assumptions.<sup>205</sup> I  
6 respond to each of those criticisms in turn, below.

7 **Q. Please summarize Mr. Gorman’s criticisms of your CAPM analysis.**

8 A. Mr. Gorman’s concern with my CAPM analysis lies primarily with my Market  
9 Risk Premium estimates.<sup>206</sup> In particular, Mr. Gorman states that my 12.82  
10 percent and 13.63 percent projected returns on the market are “inflated.”<sup>207</sup> To  
11 determine the reasonableness of my derived expected market returns, it is  
12 instructive to understand how often various ranges of total returns actually have  
13 occurred over the 1926 to 2015 period. In fact, the 12.82 percent and 13.63  
14 percent estimates presented in my Direct Testimony, which Mr. Gorman asserts  
15 are “inflated,”<sup>208</sup> represent the approximately 49<sup>th</sup> percentile of the actual returns  
16 observed from 1926 to 2015. In other words, of the 90 annual observations, 46  
17 were 13.63 percent or higher. Moreover, given the historical volatility in market  
18 returns (as noted by Morningstar, the long-term standard deviation is 19.99  
19 percent), my total return estimates of 12.82 percent and 13.63 percent are

<sup>205</sup> Direct Testimony of Michael P. Gorman, at 58.

<sup>206</sup> *Ibid.*, at 63.

<sup>207</sup> *Ibid.*, at 64.

<sup>208</sup> *Ibid.*

1 statistically indistinguishable from the long-term arithmetic average of 11.95  
2 percent.<sup>209</sup>

3

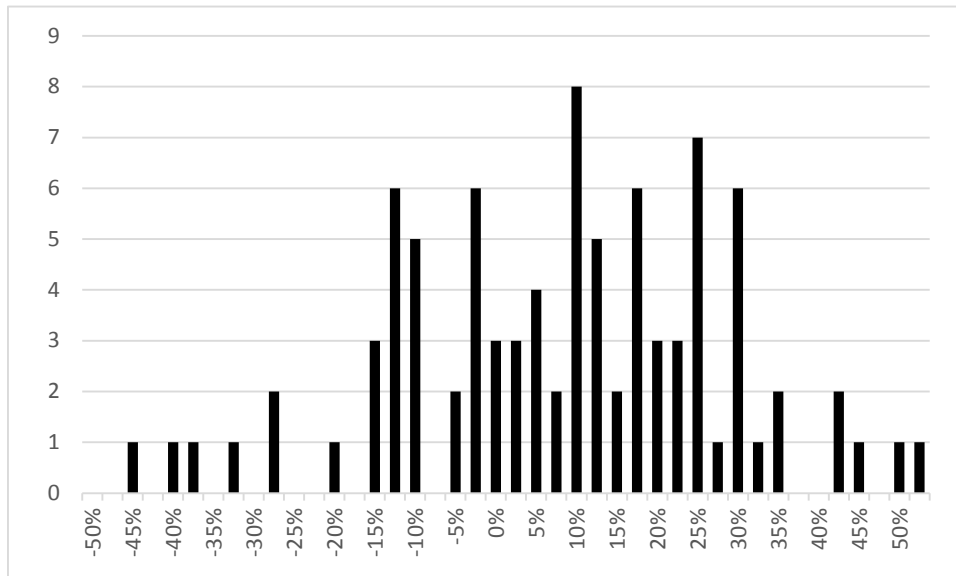
4 Mr. Gorman further asserts that the Market Risk Premia estimated from my  
5 projected market returns are “inflated and not reliable.”<sup>210</sup> I therefore performed a  
6 similar analysis using historical Market Risk Premia. I first gathered the annual  
7 Market Risk Premia reported by Morningstar, and produced a histogram of the  
8 observations (recall that Mr. Gorman includes historical data among the methods  
9 he uses to estimate the Market Risk Premium). The results of that analysis, which  
10 are presented in Chart 15 demonstrate that MRPs of at least 10.68 percent (the  
11 high end of the range of the MRP estimates in my Direct Testimony) will occur  
12 approximately half of the time.

<sup>209</sup> See Morningstar, Inc., 2016 Ibbotson Stocks, Bonds, Bills and Inflation Classic Yearbook,  
Appendix A, at 3-5; Exhibit RBH-32. Even if we were to look at the standard error, my estimate  
is well within one standard error of the long-term average.

<sup>210</sup> Direct Testimony of Michael P. Gorman, at 63.

1  
2

**Chart 15: Frequency Distribution of Observed Market Risk Premia, 1926 - 2015<sup>211</sup>**



3 **Q. Please summarize Mr. Gorman’s criticisms of your Bond Yield Plus Risk**  
4 **Premium analysis.**

5 A. Mr. Gorman’s concern with my Bond Yield Plus Risk Premium analysis is my  
6 “contention” of a “simplistic inverse relationship” between the Equity Risk  
7 Premium and interest rates is not supported by academic research.<sup>212</sup> Mr. Gorman  
8 further argues that the relevant factor explaining changes in the Equity Risk  
9 Premiums is the change to equity risk relative to debt risk, not changes in interest  
10 rates, alone. He concludes that my analysis ignores such investment risk  
11 differentials.

<sup>211</sup> Exhibit RBH-32.  
<sup>212</sup> Direct Testimony of Michael P. Gorman, at 66.

1 **Q. What is your response to Mr. Gorman's critiques?**

2 A. First, regarding the inverse relationship between the Equity Risk Premium and  
3 interest rates, I cited several academic studies in my Direct Testimony that  
4 support my findings.<sup>213</sup> Moreover, as explained above, Mr. Gorman's own data  
5 clearly demonstrate that the Equity Risk Premium moves inversely to interest  
6 rates (both Treasury Yields and Utility Bond Yields). Mr. Gorman may disagree  
7 with the premise, but empirical results based on his data support my position (*see*  
8 Exhibit RBH-29).

9 **Q. Did you perform any additional analyses to address Mr. Gorman's concern**  
10 **regarding the effect of expected market volatility and other interest rate**  
11 **environments on your results?**

12 A. Yes, I did. Although for the reasons discussed above I continue to believe the  
13 model is properly specified, I performed an additional analysis to specifically  
14 include the effect of equity market volatility, and credit spreads (*see* Exhibit  
15 RBH-33). As with my original Bond Yield Plus Risk Premium analysis, I defined  
16 the Risk Premium as the dependent variable, and the prevailing 30-year Treasury  
17 yield as an independent variable. I then included two additional explanatory  
18 variables: (1) the VIX (the Chicago Board Options Exchange's one-month  
19 volatility index, which is a common measure of volatility); and (2) the credit  
20 spread between the 30-year Treasury yield and the Moody's Baa Utility Index (as

<sup>213</sup> Direct Testimony of Robert B. Hevert, at 24-25.



1 a measure of incremental risk).<sup>214</sup> In both instances, the statistically significant  
2 inverse relationship between Treasury yields and the Risk Premium remains, and  
3 the resulting ROE estimates are generally consistent with those of my original  
4 Bond Yield Plus Risk Premium analysis.<sup>215</sup>

5  
6 Lastly, I note that applying Mr. Gorman's projected 3.40 percent 30-year  
7 Treasury yield to the alternative Bond Yield Plus Risk Premium Analysis  
8 produces a more reasonable (although still low) ROE estimate of 9.95 percent  
9 relative to Mr. Gorman's 9.25 percent recommendation (*see*, Exhibit RBH-33).<sup>216</sup>

10 **Q. What is your response to Mr. Gorman's concern that your CAPM and Bond**  
11 **Yield Plus Risk Premium analyses rely on "stale" Treasury yields?**

12 A. The Treasury yield estimates used in my Direct Testimony corresponded with the  
13 timing of the data used in my ROE analysis. Updated Treasury yield estimates as  
14 of June 30, 2016 have been used in the analyses accompanying my Rebuttal  
15 Testimony. Consequently, my analyses do not rely on "stale" Treasury yields, as  
16 Mr. Gorman suggests.

<sup>214</sup> Mr. Gorman notes on page 27 of his testimony that his proxy group has an average Moody's credit rating of Baa1.

<sup>215</sup> *See* Exhibit RBH-3.

<sup>216</sup> Mr. Gorman uses a 3.40 percent projected Treasury yield in his risk premium analysis. *See*, Direct Testimony of Michael P. Gorman, at 47.

1 **Q. Turning to your DCF analysis, do you agree with Mr. Gorman’s assertion**  
2 **that the growth rates used in your constant growth DCF analysis are**  
3 **“excessive” and “unsustainable”?**

4 A. No, I do not. Although Mr. Gorman argues that the consensus growth rates in my  
5 constant growth DCF model (averaging 5.39 percent) are high relative to his  
6 estimate of projected GDP growth and retention growth, he also notes that my  
7 mean results are similar to his own. Even though Mr. Gorman believes that my  
8 mean high Constant Growth DCF results of 10.08 percent, which are based on an  
9 average growth rate of 6.22 percent, are “not reasonable” estimates of the  
10 Company’s Cost of Equity, those estimates are well within the prevailing range of  
11 authorized returns, a benchmark that Mr. Gorman appears to believe is relevant  
12 given that his Risk Premium method is predicated on authorized ROEs.<sup>217</sup>

13 **Q. Please respond to Mr. Gorman’s assertion your long-term growth rate is**  
14 **inconsistent with other consensus estimates of long-term GDP growth.**

15 A. As noted in my response to Dr. Woolridge, the long-term growth rate in my multi-  
16 stage DCF analysis reflects growth expectations beginning ten years in the future,  
17 whereas Mr. Gorman’s consensus GDP projections are only five or ten year  
18 projections. Because there are no consensus forecasts that begin in ten years, it is  
19 reasonable to assume that real growth will revert to its long-term average over  
20 time. Moreover, the terminal growth rate is intended to reflect expected growth in  
21 perpetuity and as such, the term of even the longest GDP forecast considered by

<sup>217</sup> Direct Testimony of Michael P. Gorman, at 68-69.

1 Mr. Gorman does not reflect the expected, perpetual nature of the terminal growth  
2 assumed in the DCF model.

3  
4 In his Multi-Stage DCF analysis, Mr. Gorman cites to projections from the  
5 Energy Information Administration (“EIA”), Congressional Budget Office  
6 (“CBO”), and other sources including the Social Security Administration  
7 (“SSA”), and suggests that the terminal growth rate in my Multi-Stage DCF  
8 analysis is too high.<sup>218</sup> I address the EIA and CBO forecasts in my response to Dr.  
9 Woolridge. In the case of the SSA forecast, my long-term growth estimate falls  
10 well within the range of the “cases” that the SSA considers.<sup>219</sup> Moreover, Mr.  
11 Gorman’s 4.35 percent long-term sustainable growth rate conflicts with market  
12 measures cited elsewhere in his testimony. For example, Mr. Gorman does not  
13 consider the use of long-term historical data for the purpose of developing his  
14 terminal growth rate, yet he relies on long-term historical data for the purposes of  
15 his CAPM analyses. According to Duff & Phelps (which provides the data Mr.  
16 Gorman relies on to estimate the historical Market Risk Premia), the arithmetic  
17 average historical capital appreciation rate is 7.70 percent, which is substantially  
18 higher than Mr. Gorman’s 4.35 percent estimate of long-term GDP growth.<sup>220</sup>

<sup>218</sup> *Ibid.*, at 39, 69.

<sup>219</sup> Tables V.B1 and V.B2 of the 2016 *Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* includes “Low Cost” scenario assumptions of 2.90 percent and 2.70 percent for the GDP Price Index, and Real GDP Growth, respectively, over the period 2025 through 2085. Combined, those projections indicate nominal GDP growth of approximately 5.70 percent.

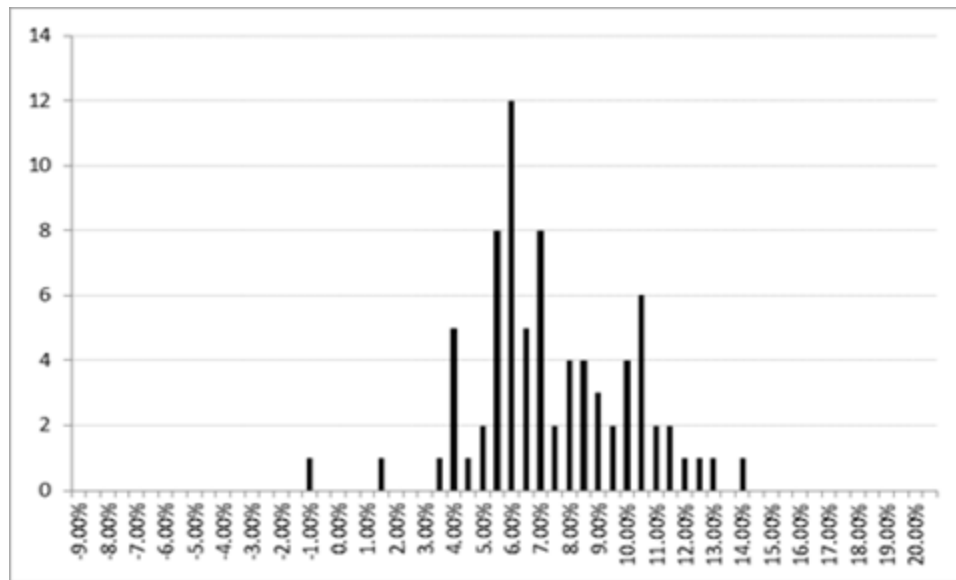
<sup>220</sup> Duff & Phelps, 2016 Valuation Handbook: Guide to Cost of Capital at 2-4. Even if we were to consider the geometric mean, the historical capital appreciation rate exceeds Mr. Gorman’s 4.35 percent estimate; Mr. Gorman notes on page 37 of his testimony that the long-term geometric average growth rate is 5.80 percent.

1           Aside from the inconsistency with his other analyses, Mr. Gorman’s low growth  
2           rate has the effect of producing unduly low DCF estimates.

3

4           To assess whether my 5.35 percent nominal GDP growth estimate is reasonable  
5           within the context of historical observations, consistent with Mr. Gorman’s  
6           approach to his risk premium study, I calculated the average five- and ten-year  
7           annual GDP growth rates from 1929 to 2015, an 87-year period. I then arranged  
8           that data in histograms to provide a perspective of how frequently various levels  
9           of growth have occurred. As Chart 16 demonstrates, average annual growth as  
10          low as 4.35 percent has been observed very infrequently. In fact, average annual  
11          growth *exceeded* 4.35 percent in 68 of 77 ten-year periods.

12           **Chart 16: Average Annual GDP Growth Measured over Ten-Year Periods**<sup>221</sup>

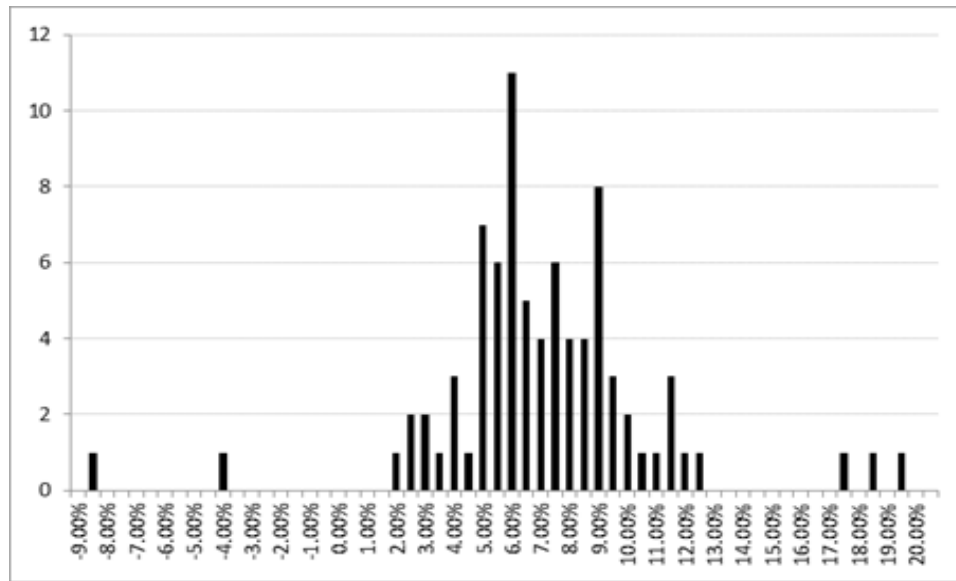


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<sup>221</sup> Source: Bureau of Economic Analysis.

1 I also calculated average GDP growth over five year periods. In that case,  
2 average annual GDP growth rate was greater than 4.35 percent in 70 of 82 periods  
3 (see Chart 17).

4 **Chart 17: Average Annual GDP Growth Measured over Five-Year Periods**<sup>222</sup>



5

6 **Q. What is your response to Mr. Gorman’s assertion that your payout ratio**  
7 **assumption is “unreasonable”?**

8 **A.** Mr. Gorman argues that there is “no reason” to expect the dividend payout ratio  
9 of the proxy group to increase or change between growth stages of the model.<sup>223</sup>

10 However, as noted in my Direct Testimony there are several reasons why  
11 management may adjust dividend payments in the near term, such as increases or  
12 decreases in expected capital spending.<sup>224</sup> Over the long term, it is reasonable to  
13 assume that payout ratios will converge to the industry average; that is, the

222

223

224

*Ibid.*

Direct Testimony of Michael P. Gorman, at 72.

Direct Testimony of Robert B. Hevert, at 33.

1 analysis assumes that short-term trends in the payout ratio will not continue in  
2 perpetuity.

3

4 I also note that several of Mr. Gorman's proxy companies recently have discussed  
5 target payout ratios that are highly consistent with my 67.30 percent assumption.  
6 For example, in first and second quarter 2016 investor relations presentations,  
7 Alliant Energy, NorthWestern Corporation, and Xcel Energy all noted target  
8 payout ratios in the range of 60.00 percent to 70.00 percent.<sup>225</sup> Consequently, I  
9 disagree with Mr. Gorman's position that a long-term payout ratio of  
10 approximately 67.00 percent is unreasonable.

11

#### **IV. RESPONSE TO SFHHA WITNESS BAUDINO**

12 **Q. Please summarize Mr. Baudino's ROE analyses and ROE recommendation**  
13 **in this proceeding.**

14 A. Mr. Baudino recommends an ROE of 9.00 percent, which is based on the results  
15 of his Constant Growth DCF analyses.<sup>226</sup> Mr. Baudino also performs several  
16 CAPM analyses, but does not rely on them to set his recommended ROE.<sup>227</sup>

17

18 Mr. Baudino notes that interest rates declined from January 2008 through May  
19 2016, and suggests that the required Return on Equity also is lower.<sup>228</sup> As to the

20 Company's capital structure, Mr. Baudino proposes a hypothetical 55.00 percent

<sup>225</sup> In its June 2016 Investor Presentation at page 39, NextEra Energy noted its 2018 target payout ratio of 65.00 percent.

<sup>226</sup> Direct Testimony of Richard A. Baudino, at 2-3.

<sup>227</sup> *Ibid.*, at 41-42.

<sup>228</sup> *Ibid.*, at 6.

1 equity ratio.<sup>229</sup> Lastly, because he believes they are accounted for in the stock  
2 prices used in DCF analyses, Mr. Baudino suggests it is unnecessary to reflect  
3 flotation costs in his ROE estimate.<sup>230</sup>

4 **Q. What are the principal areas in which you disagree with Mr. Baudino’s ROE**  
5 **analyses?**

6 A. The principal areas in which I disagree with Mr. Baudino include: (1) the  
7 composition and selection of the proxy group companies; (2) his reliance on the  
8 Constant Growth DCF model to determine the Company’s Cost of Equity; (3) the  
9 growth rates applied in the Constant Growth DCF model; (4) the risk-free rate and  
10 Market Risk Premium used in the CAPM; (5) whether the Bond Yield Plus Risk  
11 Premium analysis provides reasonable estimates of the Company’s Cost of  
12 Equity; (6) the recovery of flotation costs; (7) our respective assessments of the  
13 Company’s level of business and financial risk; and (8) the reasonableness of the  
14 Company’s capital structure.

15 **A. *Proxy Group Composition***

16 **Q. Please summarize the criteria by which Mr. Baudino selected his proxy**  
17 **group.**

18 A. Mr. Baudino began with the electric utilities included in the June 2016 issue of AUS  
19 Utility Reports, and arrived at his proxy group by excluding companies that:

20 1. Were not rated at least “A” by Standard and Poor’s or Moody’s Investor Service;

<sup>229</sup> *Ibid.*, at 50.

<sup>230</sup> *Ibid.*, at 66-67.

- 1           2. Have less than 50.00 percent of their revenues from electric operations;
- 2           3. Do not have growth rates from Value Line and either Zacks or Thomson Financial;
- 3           4. Have recently cut or eliminated dividends; or
- 4           5. Were recently, or currently are involved in merger activities or significant
- 5           restructuring.<sup>231</sup>

6

7           Based on those criteria, Mr. Baudino developed a group of twelve companies.

8           Exhibit RBH-19 provides a comparison of the companies included in our

9           respective proxy groups.

10       **Q.    Are the scope and definition of the screens applied by Mr. Baudino generally**

11       **consistent with those used in your Direct Testimony?**

12       A.    Although certain of the screening criteria are common to our analyses, there are

13       certain differences between our approaches.

14       **Q.    What are the primary differences between you and Mr. Baudino with respect**

15       **to screening criteria?**

16       A.    The majority of the difference in our approaches relate to Mr. Baudino's use of

17       proxy companies that: (1) receive less than 60.00 percent of their regulated net

18       income from electric operations; (2) do not have meaningful amounts of regulated

19       generating assets. In addition, seven companies included in my proxy group were

20       excluded by Mr. Baudino because their bond credit ratings were below A from

21       S&P or Moody's.

<sup>231</sup> *Ibid.*, at 28.



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I also excluded Edison International (“EIX”) from my proxy group based on recent financial information. EIX’s merchant generation business unit was placed into Chapter 11 bankruptcy and subsequently sold to NRG Energy.<sup>232</sup> Although the sale of that segment was completed in April 2014,<sup>233</sup> there are continuing effects on the company’s near-term financial outlook associated with a settlement agreement related to the business units’ bankruptcy, including required payments of \$204 million in 2015, and \$214 million in 2016. Consequently, I excluded EIX from my proxy group.

Despite those differences, the composition of our respective proxy groups has little effect on the differences in our analytical results.<sup>234</sup> Consequently, the analyses accompanying my Rebuttal Testimony include results for a Combined Proxy Group that contains most of the proxy companies relied on by the ROE witnesses in this case.<sup>235</sup>

<sup>232</sup> See, Edison International, SEC Form 10-K, for the Fiscal Year Ended December 31, 2013, at 35-36.  
<sup>233</sup> See, Edison International, SEC Form 10-K, for the Fiscal Year Ended December 31, 2014, at 104.  
<sup>234</sup> For example, Mr. Baudino reports an average Value Line Beta coefficient of 0.73 (see Exhibit No.\_\_(RAB-9), while the average Value Line Beta coefficient for my proxy group, excluding recent mergers, is 0.75 as of June 30, 2016.  
<sup>235</sup> As discussed in my response to Dr. Woolridge, I continue to exclude companies that have been party to a merger or significant transaction, or that do not own generation assets.

1 **B. Application of the Constant Growth DCF Analysis**

2 **Q. Please briefly describe Mr. Baudino’s Constant Growth DCF analysis and**  
3 **results.**

4 A. Mr. Baudino calculates an average dividend yield of 3.44 percent by dividing  
5 each proxy company’s annualized dividend by its average monthly stock price for  
6 the six-month period ending May 2016.<sup>236</sup> For the expected growth rate, Mr.  
7 Baudino relies on Earnings Per Share growth rate projections from Value Line,  
8 Zacks, and Thomson Financial, as well as Dividend Per Share growth rate  
9 projections from Value Line.<sup>237</sup> Mr. Baudino then calculates DCF results based  
10 on the mean and median growth rate of the four sources noted above, producing  
11 eight ROE estimates, ranging from 8.15 percent to 9.54 percent.<sup>238</sup>

12  
13 Mr. Baudino refers to the DCF results produced using mean growth rates as  
14 “Method 1”, and DCF results produced using median growth rates as “Method 2”.  
15 The mean DCF results of his Methods 1 and 2 were 8.64 percent and 8.87 percent,  
16 respectively.<sup>239</sup>

17  
18 Lastly, Mr. Baudino considers a form of “sustainable growth”, although he does  
19 not appear to include that estimate in his final DCF analyses.

<sup>236</sup> Direct Testimony of Richard A. Baudino, at 29.

<sup>237</sup> *Ibid.*, at 29.

<sup>238</sup> *Ibid.*, at 33, Exhibit No.\_\_\_\_(RAB-7).

<sup>239</sup> *Ibid.*

1 **Q. What are your concerns with Mr. Baudino’s selection of growth rates for the**  
2 **DCF models.**

3 A. I disagree with Mr. Baudino’s use of projected dividend growth rates in  
4 estimating the Cost of Equity and the form of “sustainable growth” described in  
5 Mr. Baudino’s Direct Testimony. As discussed in my response to Dr. Woolridge,  
6 academic literature supports the use of earnings growth rates in the DCF model.  
7 As also discussed in my response to Dr. Woolridge, my analyses demonstrate that  
8 only earnings growth rates have a statistically significant ability to explain  
9 valuation levels.

10 **Q. Please describe the sustainable growth rate estimate used by Mr. Baudino.**

11 A. Mr. Baudino states that he “utilized the sustainable growth formula”, which he  
12 appears to have taken from Value Line’s projected “Retained to Common Equity”  
13 rate.<sup>240</sup> As Mr. Baudino explains, the estimate is calculated as the product of the  
14 expected earned return on common equity (“R”), and the retention ratio (i.e., the  
15 portion of earnings not paid out in dividends, or “B”).

16 **Q. Do you agree with Mr. Baudino’s sustainable growth rate estimate?**

17 A. No, I do not. As discussed in my response to Dr. Woolridge, the sustainable  
18 growth model assumes that growth is a function of expected earnings, and the  
19 extent to which those earnings are retained (that is, not paid out in dividends).  
20 Mr. Baudino relies on the simplest form of the sustainable growth model, which  
21 sometimes is referred to as the “B x R” approach (where “B” is the earnings

<sup>240</sup> *Ibid.*, at 31.

1 retention rate, and “R” is the expected Return on Common Equity). As Exhibit  
2 RBH-34 demonstrates, the B x R method is essentially equal to Value Line’s  
3 “Retained to Common Equity” rate (differences are due to rounding).

4

5 If Mr. Baudino is going to consider a form of sustainable growth, he should use  
6 the “BR + SV” form of the model, which reflects growth from both internally  
7 generated funds (i.e., the “BR” term) and from issuances of equity (i.e., the “SV”  
8 term). As noted above, the first term is the product of the retention ratio (i.e.,  
9 “B”, or the portion of net income not paid in dividends) and the expected return  
10 on equity (i.e., “R”). The “SV” term can be represented as:

$$\left(\frac{m}{b} - 1\right) \times \text{Growth Rate in Common Shares}$$

11

12

Where:

$$\frac{m}{b} = \text{The Market to Book Ratio}$$

13

14

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In this form, the “SV” term reflects an element of growth as the product of (1) the  
growth in shares outstanding and (2) that portion of the market-to-book ratio that  
exceeds unity.

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In addition, it is important to realize that for the purpose of setting utility rates,  
sustainable growth requires an estimate of the expected earned Return on  
Common Equity. Since the “R” in the “B x R” approach refers to the equity  
return, Mr. Baudino effectively has pre-supposed the Return on Common Equity  
projected by Value Line for his proxy group companies. Notwithstanding that  
Mr. Baudino has assumed the reasonableness of Value Line’s projections for the

1 purpose of his sustainable growth calculation, as demonstrated in Exhibit RBH-  
2 34, his recommended Cost of Equity of 9.00 percent is 108 basis points below the  
3 mean Return on Common Equity estimate (for his proxy group) of 10.08 percent.

4 **Q. Putting aside those concerns, did Mr. Baudino use the sustainable growth**  
5 **estimate in arriving at his DCF estimate?**

6 A. No, he did not. Exhibit No.\_\_(RAB-7), page 2 provides the DCF calculations  
7 that support Mr. Baudino’s ROE recommendation; that page does not reference  
8 the sustainable growth estimate. In addition, I have replicated Mr. Baudino’s  
9 Exhibit No.\_\_(RAB-7), page 2 (see Exhibit RBH-35), and confirmed that Mr.  
10 Baudino’s DCF estimates do not include his sustainable growth estimate.

11 **C. Multi-Stage DCF Analysis**

12 **Q. What are Mr. Baudino’s concerns with your Multi-Stage DCF analysis?**

13 A. Mr. Baudino considers it “highly unlikely” that investors consider Multi-Stage  
14 DCF analyses, and he is concerned I have provided no evidence that investors (1)  
15 use GDP growth in their evaluation, or (2) rely on payout ratio assumptions  
16 similar to those included in my Multi-Stage DCF analysis.<sup>241</sup>

17 **Q. Do you agree with Mr. Baudino’s suggestion that it is “highly unlikely” that**  
18 **investors use Multi-Stage DCF models?**

19 A. No, I do not. As discussed in my Direct Testimony, the Constant Growth DCF  
20 Model requires a set of assumptions that can be quite limiting, and inconsistent

<sup>241</sup> Direct Testimony of Richard A. Baudino, at 68.

1 with prevailing and expected conditions. Mr. Baudino has provided no basis to  
2 assume that investors would prefer the limited structure of the Constant Growth  
3 DCF Model to the more flexible Multi-Stage form. As to the use of Multi-Stage  
4 models, D. Roger Morin notes that it is “consistent with current valuation  
5 practices of institutional investors and is a common estimation technique used by  
6 financial analysts.”<sup>242</sup> For example, Morningstar describes a three-stage DCF  
7 approach (generally consistent with the model included in my Direct Testimony)  
8 in which the final stage assumes that long-run growth moves toward that of the  
9 overall economy.<sup>243</sup> In addition, while we disagree on certain aspects of the  
10 application of the Multi-Stage DCF model, I note both Dr. Woolridge and Mr.  
11 Gorman also consider Multi-Stage DCF analyses.

12 **Q. Is GDP commonly used as a long-term growth rate assumption?**

13 A. Yes, it is. As noted in my response to Dr. Woolridge, the use of expected long-  
14 term GDP growth in the terminal period is consistent with practice and financial  
15 literature. Morningstar’s Multi-Stage DCF approach (noted above), for example,  
16 is similar to my methodology, including the use of GDP in the terminal growth  
17 period.<sup>244</sup> Nonetheless, if Mr. Baudino is of the view that (1) the Constant Growth  
18 DCF model is the better alternative, and (2) expected GDP growth is not a  
19 relevant measure of terminal growth, I have addressed those concerns by

<sup>242</sup> Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 266.

<sup>243</sup> See, Ibbotson SBBI 2013 Valuation Yearbook, Morningstar, Inc., at 50-52.

<sup>244</sup> *Ibid.*

1 calculating the terminal value by reference to the proxy companies' recent P/E  
2 ratios.<sup>245</sup>

3 **Q. What is your response to Mr. Baudino's concern with your assumption**  
4 **regarding payout ratios?**<sup>246</sup>

5 A. I believe it is reasonable to assume that near-term payout ratios likely reflect  
6 downward pressure due to increased utility capital requirements, but will revert to  
7 the long-term industry average over the horizon of the DCF analysis. I note that  
8 assumption is consistent with the Value Line data presented in Mr. Baudino's  
9 Exhibit No.\_\_(RAB-7), which indicates near-term dividend growth is expected  
10 to outpace earnings growth by approximately 130 basis points, on average, for  
11 Mr. Baudino's proxy group. In that regard, it is the Constant Growth DCF model  
12 relied on by Mr. Baudino (which assumes that payout ratios will remain  
13 unchanged in perpetuity) that is inconsistent with investor expectations.

14  
15 Moreover, as discussed in more detail in my response to Mr. Gorman, a number  
16 of electric utility companies have indicated that their payout ratios likely will  
17 increase, and that they are targeting payout ratio ranges highly consistent with the  
18 long-term industry average used in my Multi-Stage DCF analysis.

<sup>245</sup> As noted earlier, the Constant Growth DCF model assumes a constant P/E ratio, in perpetuity.  
<sup>246</sup> Direct Testimony of Richard A. Baudino, at 68.

1 ***D. Capital Asset Pricing Model***

2 **Q. Please summarize Mr. Baudino's CAPM analyses.**

3 A. As noted earlier, Mr. Baudino performs two sets of CAPM analyses. His first set  
4 calculates two Market Risk Premium measures, which rely on the forecasted  
5 market total return as determined using Value Line projections, and five and 20-  
6 year Treasury security yields (i.e., 1.40 percent and 2.34 percent, respectively).  
7 Mr. Baudino calculates a total growth rate for the market of 10.44 percent, using  
8 the average of the book value and earnings growth forecasts (7.00 percent and  
9 11.00 percent, respectively) for all companies covered by Value Line. Mr.  
10 Baudino combines that average growth rate with Value Line's average expected  
11 dividend yield of 0.84 percent for the same group of companies, and calculates an  
12 expected market return of 10.44 percent.<sup>247</sup>

13

14 Mr. Baudino's two Market Risk Premium measures represent the difference between (1)  
15 his calculated expected market total return, and (2) the current yield on five and 20-year  
16 Treasury securities. Mr. Baudino arrives at his CAPM results using the average Value  
17 Line Beta coefficient of 0.73 for his proxy companies.<sup>248</sup>

18

19 Mr. Baudino's second set of CAPM analyses calculate the geometric and  
20 arithmetic mean long-term annual returns on stocks, and long-term annual income  
21 returns on long-term government bonds, resulting in two historical measures of

<sup>247</sup> Exhibit No.\_\_(RAB-8).

<sup>248</sup> Exhibit No.\_\_(RAB-8).



1 the Market Risk Premium.<sup>249</sup> Mr. Baudino uses those two Market Risk Premium  
2 measures in combination with the current 20-year Treasury bond yield and the  
3 average Value Line Beta coefficient to calculate two additional CAPM results.

4  
5 Although Mr. Baudino advises the Commission to consider only his DCF results  
6 in establishing the Company's ROE, he does report CAPM results ranging from  
7 6.02 percent to 8.28 percent, reasoning that those results indicate that his 9.00  
8 percent ROE recommendation is "generous".<sup>250</sup>

9 **Q. Do you agree with Mr. Baudino's application of the CAPM and his**  
10 **interpretation of its results?**

11 A. No, there are two areas in which I disagree with Mr. Baudino: (1) the term of the  
12 Treasury security used as the risk-free rate component of the model; and (2) the  
13 calculation of the Market Risk Premium. In addition, for the reasons discussed  
14 throughout my Rebuttal Testimony, I disagree that Mr. Baudino's 9.00 percent  
15 ROE recommendation is "generous".

16 **Q. Turning first to the risk-free rate component, why do you disagree with Mr.**  
17 **Baudino's use of five and 20-year Treasury securities as the measure of the**  
18 **risk-free rate?**

19 A. As discussed below, the tenor of the risk-free rate used in the CAPM should  
20 match the life (or duration) of the underlying investment. As noted by  
21 Morningstar:

<sup>249</sup> Direct Testimony of Richard A. Baudino, at 38 and Exhibit No.\_\_\_\_(RAB-9).  
<sup>250</sup> *Ibid.*, at 41-42.

1           The traditional thinking regarding the time horizon of the  
2           chosen Treasury security is that it should match the time  
3           horizon of whatever is being valued. When valuing a business  
4           that is being treated as a going concern, the appropriate  
5           Treasury yield should be that of a long-term Treasury bond.  
6           Note that the horizon is a function of the investment, not the  
7           investor. If an investor plans to hold stock in a company for  
8           only five years, the yield on a five-year Treasury note would  
9           not be appropriate since the company will continue to exist  
10          beyond those five years.<sup>251</sup>

11  
12          Pratt and Grabowski recommend a similar approach to selecting the risk-free rate:  
13          “In theory, when determining the risk-free rate and the matching ERP you should  
14          be matching the risk-free security and the ERP with the period in which the  
15          investment cash flows are expected.”<sup>252</sup> To that point, a 2004 paper titled  
16          *Applying The Capital Asset Pricing Model* by Robert Harris reviews current  
17          practices for application of the CAPM and, when summarizing best current  
18          practices, concludes “[t]he risk-free rate should match the tenor of the cash flows  
19          being valued.”<sup>253</sup> As a practical matter, equity securities represent a perpetual  
20          claim on cash flows; 30-year Treasury bonds are the longest-maturity securities  
21          available to match that perpetual claim.

<sup>251</sup> Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 44.  
<sup>252</sup> Shannon Pratt and Roger Gabrowski, Cost of Capital: Applications and Examples, 3rd Ed. (Hoboken, NJ: John Wiley & Sons, Inc., 2008), at 92. “ERP” is the Equity Risk Premium.  
<sup>253</sup> Paper cited with permission of author.

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One measure of the term of expected cash flows is Equity Duration. In finance, “duration” (whether for bonds or equity) typically refers to the present value weighted time to receive the security’s cash flows. In terms of its practical application, duration is a measure of the percentage change in the market price of a given stock in response to a change in the implied long-term return of that stock. A common investment strategy is to “immunize” the portfolio by matching the duration of investments with the term of the underlying asset in which the funds are invested, or the term of a liability being funded.

As demonstrated in Exhibit RBH-36, the average Equity Duration of the companies in Mr. Baudino’s proxy group is approximately 30.47 years. Given that relatively long Equity Duration, and knowing that utility assets are comparatively long-lived, I continue to believe that it is appropriate to use the long-term Treasury yield as the measure of the risk-free rate.

**Q. Is Mr. Baudino’s assumption that five and 20-year Treasury yields are equally valid measures of the risk-free rate supported by his data?**

A. No, it is not. As discussed above, the mean Equity Duration of the companies in Mr. Baudino’s proxy group is 30.47 years. In comparison, the current duration of five-year, 20-year and 30-year Treasuries are 4.88, 16.57, and 21.46 years respectively.<sup>254</sup> Although the duration of even the longest-term Treasury security falls short of the average Equity Duration for Mr. Baudino’s proxy group, the 30-

<sup>254</sup> See Exhibit RBH-37.

1 year Treasury yield provides the longest available duration and, therefore, is the  
2 best available security for that purpose. The principle of duration is relevant to  
3 the electric utility stocks that comprise Mr. Baudino's proxy group, given that  
4 institutional investors own (on average) 75.75 percent of those companies'  
5 shares.<sup>255</sup>

6 **Q. Putting aside the issue of Equity Duration, does Mr. Baudino's DCF model**  
7 **recognize the perpetual nature of equity?**

8 A. Yes, it does. As Mr. Baudino correctly observes, the Constant-Growth DCF  
9 model assumes growth in perpetuity: "the stream of income from the equity share  
10 is assumed to be perpetual; that is, there is no salvage or residual value at the end  
11 of some maturity date (as is the case with a bond)."<sup>256</sup>

12 **Q. What would be the effect of assuming the companies in Mr. Baudino's proxy**  
13 **group only provided cash flows to equity investors over five or 20 years?**

14 A. As shown in Exhibit RBH-38, assuming a 20-year holding period, the mean and  
15 median DCF would be 1.44 percent, and 1.69 percent, respectively. Interestingly,  
16 both of those ROE estimates are below Mr. Baudino's assumed 2.34 percent risk-  
17 free rate (*i.e.*, six month average of the 20-year Treasury yield). Assuming a  
18 holding period of five years produces mean and median ROE estimates of  
19 negative 36.93 percent and negative 36.50 percent, respectively. The only way  
20 Mr. Baudino's DCF results could be realized is if the shares were sold at the end  
21 of the five and 20-year holding periods, and the prices at which they are sold

<sup>255</sup>

Source: SNL Financial.

<sup>256</sup>

Direct Testimony of Richard A. Baudino, at 26.

1 reflect cash flows in perpetuity. Those results support the point made earlier in  
2 my testimony: The risk-free rate should reflect the perpetual nature of equity.  
3 Because the longest-dated Treasury security is 30 years, that is the appropriate  
4 term for this purpose.

5 **Q. What is your response to Mr. Baudino's suggestion that "the risk-free rate**  
6 **should have no interest rate risk?"<sup>257</sup>**

7 A. The process of duration matching mitigates interest rate risk. In any event, if Mr.  
8 Baudino is concerned with interest rate risk, he should focus exclusively on short-  
9 term Treasury Bills as the risk-free rate. Doing so, of course, would further  
10 decrease his already-low CAPM estimates. Consequently, I disagree with Mr.  
11 Baudino's position that interest rate risk disqualifies the 30-year Treasury yield as  
12 the appropriate measure of the risk-free rate.

13 **Q. What concerns do you have with Mr. Baudino's *ex-ante* Market Risk**  
14 **Premium calculations?**

15 A. In arriving at his *ex-ante* Market Risk Premium estimates, Mr. Baudino calculates  
16 the expected market return using an average of earnings growth projections (11.00  
17 percent) and book value growth projections (7.00 percent). As noted above,  
18 academic research indicates investors rely on estimates of earnings growth in  
19 arriving at their investment decisions. The analysis presented in Exhibit RBH-22  
20 (discussed in more detail in my response to Dr. Woolridge) also demonstrates  
21 book value growth rates are not a statistically significant indicator of electric

<sup>257</sup> *Ibid.*, at 62.

1 utility company valuations. In that regard, Mr. Baudino did not include book  
2 value growth projections in his proxy group-based DCF analysis. He has not  
3 explained, however, why it is reasonable to include those growth rates in his MRP  
4 analysis but exclude them from his proxy company DCF analyses. Excluding  
5 book value growth estimates from Mr. Baudino's market return calculation would  
6 increase his MRP estimate by 1.00 percentage points (100 basis points).

7 **Q. Do you agree with Mr. Baudino's use of historical estimates of the MRP?**

8 A. No, I do not. The MRP represents the additional return required by equity  
9 investors to assume the risks of owning the "market portfolio" of equity relative  
10 to long-term Treasury securities. As with other elements of Cost of Equity  
11 analyses, the MRP is meant to be a forward-looking parameter. As Morningstar  
12 observes:

13 It is important to note that the expected equity risk premium, as it  
14 is used in discount rates and cost of capital analysis, is a forward  
15 looking concept. That is, the equity risk premium that is used in  
16 the discount rate should be reflective of what investors think the  
17 risk premium will be going forward.<sup>258</sup>

18 That is why the MRP estimates used in my CAPM analyses specifically rely on  
19 forward-looking, market-based estimates of the expected market return.

<sup>258</sup> Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills, and Inflation Valuation Yearbook, at 53.

1 **Q. Please briefly summarize Mr. Baudino’s comments regarding your *ex-ante***  
2 **CAPM analyses.**

3 A. Mr. Baudino disagrees with my *ex-ante* Market Risk Premium, noting that the  
4 underlying growth rates “are by no means long-run sustainable growth rates.”<sup>259</sup>  
5 Mr. Baudino further suggests that the forecasted Treasury bond yields relied upon  
6 in my CAPM analyses are “speculative at best and may or may not come to  
7 pass.”<sup>260</sup>

8 **Q. Do you agree with Mr. Baudino’s concerns in that regard?**

9 A. No, I do not. As discussed in my response to Mr. Gorman, my estimates of the  
10 Market Risk Premium and the growth rates underlying them are consistent with  
11 historical measures.

12  
13 Regarding the use of projected interest rates, it is important to remember that, as  
14 Mr. Baudino states, “[r]eturn on equity analysis is a forward-looking process.”<sup>261</sup>  
15 In that regard, Mr. Gorman, Dr. Woolridge, and I consider forward-looking  
16 estimates of the risk-free rate. Even if Mr. Baudino is concerned that the  
17 projections may not come to pass, the increases in forward long-term Treasury  
18 yields demonstrate that investors believe interest rates are likely to rise.<sup>262</sup>  
19 Because our analyses are predicated on market expectations, the expected

<sup>259</sup> Direct Testimony of Richard A. Baudino, at 63.

<sup>260</sup> *Ibid.*, at 62.

<sup>261</sup> *Ibid.*, at 30.

<sup>262</sup> *See*, Chart 13.

1 increase in Treasury yields (as reflected in increasing forward rates) is a  
2 measurable and relevant data point.

3 ***E. Bond Yield Plus Risk Premium Approach***

4 **Q. What concerns does Mr. Baudino express regarding your Bond Yield Plus  
5 Risk Premium analyses?**

6 A. Mr. Baudino suggests that the Bond Yield Plus Risk Premium method is  
7 “imprecise and can only provide very general guidance,” and notes that “[r]isk  
8 premiums can change substantially over time.”<sup>263</sup> In summary, Mr. Baudino likens  
9 the approach to a “blunt instrument”.<sup>264</sup> As to its application, Mr. Baudino  
10 disagrees with the use of projected Treasury yields in calculating the range of  
11 Risk Premium-based results.

12 **Q. What is your response to Mr. Baudino’s observations?**

13 A. As to Mr. Baudino’s point that the Risk Premium can change over time, I agree.  
14 As noted in my Direct Testimony (and as discussed in my response to Mr.  
15 Gorman), there is a statistically significant negative relationship between long-  
16 term Treasury yields and the Equity Risk Premium. Given Mr. Baudino’s  
17 observation that interest rates have declined since 2008, the Bond Yield Plus Risk  
18 Premium analysis provides an empirically and theoretically sound method of  
19 quantifying the relationship between the Cost of Equity and interest rates. That is,  
20 it provides a method to quantify the change that Mr. Baudino has observed.

<sup>263</sup> Direct Testimony of Richard A. Baudino, at 65.

<sup>264</sup> *Ibid.*



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As to Mr. Baudino’s notion that the approach is a “blunt instrument,” I disagree. As shown in Exhibit RBH-12, the R-squared of the Bond Yield Plus Risk Premium regression analysis is 0.71, indicating a rather high degree of explanatory value. In comparison, Beta coefficients calculated based on the Value Line methodology have a mean R-squared of only 0.19 (see Exhibit RBH-39).

As Exhibit RBH-40 demonstrates, using the 95.00 percent confidence interval of the Bond Yield Plus Risk Premium regression’s equation coefficient estimates, the ROE results range from 9.47 percent to 10.89 percent. That 142 basis point range is approximately equal to the range of DCF model results reported by Mr. Baudino (8.15 percent to 9.54 percent, or 139 basis points).<sup>265</sup> It also is considerably less than the range of CAPM results reported by Mr. Baudino (6.02 percent to 8.28 percent, or 226 basis points). Consequently, the Bond Yield Plus Risk Premium approach provides empirically and theoretically sound results that can be used, at minimum, to assess the wide range of ROE results produced by Mr. Baudino’s analyses in general, and his 9.00 percent recommendation in particular.

<sup>265</sup> *Ibid.*, at 41.

1 **F. Flotation Costs**

2 **Q. Please now summarize Mr. Baudino’s response to your proposed flotation**  
3 **cost adjustment.**

4 A. Mr. Baudino believes it is “likely that flotation costs are already accounted for in  
5 current stock prices” and that an adjustment to the DCF result would amount to  
6 “double counting.”<sup>266</sup>

7 **Q. Do you agree with Mr. Baudino’s concerns?**

8 A. No, I do not. Mr. Baudino states that “[m]ultiplying the dividend yield by a 4%  
9 flotation cost adjustment, for example, essentially assumes that the current stock  
10 price is wrong and that it must be adjusted downward to increase the dividend  
11 yield and the resulting cost of equity.”<sup>267</sup>

12  
13 The flotation cost estimate used in my Direct Testimony, however, is well below  
14 4.00 percent. Moreover, the adjustment is not calculated by “[m]ultiplying the  
15 dividend yield by a 4% flotation cost adjustment”, as Mr. Baudino suggests.  
16 Rather, it is calculated by dividing the dividend yield by a factor of (1 – flotation  
17 costs).<sup>268</sup> Further, Mr. Baudino’s suggestion that current prices “likely” account  
18 for flotation costs is misplaced. Because of direct issuance costs (such as those  
19 provided in Exhibit RBH-9 to my Direct Testimony), the net proceeds received by  
20 the Company were less than the market price of the offerings. Absent a direct

<sup>266</sup> Direct Testimony of Richard A. Baudino, at 66.

<sup>267</sup> *Ibid.*, at 67.

<sup>268</sup> *See*, Exhibit RBH-18.

1 recovery of those costs, the ROE should be adjusted to reflect that deficiency  
2 (which will persist in perpetuity).

3

4 I also note that although Mr. Baudino suggests that current prices “likely” account  
5 for flotation costs, he has provided no analyses as to what costs are reflected in  
6 prices, or how prices have adjusted in response to those costs. Conversely, my  
7 Direct Testimony provided a summary of direct costs incurred by the proxy  
8 companies to acquire the equity capital needed to fund the Company’s rate base.

9 ***G. Relative Risk and Financial Integrity***

10 **Q. Has Mr. Baudino expressed any concerns with your consideration of the**  
11 **business risks associated with FPL?**

12 A. Yes. Mr. Baudino suggests that the Company’s credit rating already accounts for  
13 the risks discussed in my Direct Testimony.

14 **Q. Do you believe that credit ratings are an appropriate measure to determine**  
15 **the relative risk of FPL relative to the proxy group?**

16 A. Not entirely. As discussed in my response to Dr. Woolridge, credit ratings are  
17 directed toward the interests of debt investors. The view that differences in credit  
18 ratings “notches” among investment grade utilities can be used as a proxy for  
19 differences in the Cost of Equity fails to recognize the senior position that debt  
20 holders have relative to equity holders, and the investment horizon considered by  
21 equity holders. Moreover, Exhibit RBH-26 shows that there is not a quantifiable  
22 relationship between the proxy companies’ credit ratings and Cost of Equity.

1 **Q. Does the fact that Standard & Poor’s ranks FPL as having an “Excellent”**  
2 **Business Risk Profile indicate they have less risk than other electric utilities?**

3 A. No, it does not. A review of recent regulated electric utilities credit ratings from  
4 S&P Ratings Direct highlighted the prevalence of “Excellent” business risk  
5 profiles among electric utilities. Of 107 electric utility operating companies,  
6 S&P reported that 79 companies (i.e., approximately 75.00 percent) had  
7 “Excellent” business risk profiles (*see* Exhibit RBH-41). Among those with  
8 “Excellent” business risk profiles, S&P’s credit ratings ranged from as high as  
9 AA- to as low as BB+ (i.e., below investment grade). As such, FPL’s “Excellent”  
10 business risk profile from S&P does not distinguish the Company as being less  
11 risky than other electric utilities, nor does it insulate the Company from the  
12 detrimental effects of Mr. Baudino’s ROE recommendation.

13 ***H. Capital Structure***

14 **Q. What is Mr. Baudino’s position with regard to the Company’s capital**  
15 **structure?**

16 A. Mr. Baudino recommends an equity ratio of 55.00 percent if the Commission  
17 authorizes an ROE of 9.00 ROE, but an equity ratio of 53.00 percent if the  
18 allowed ROE is higher than 9.00 percent.<sup>269</sup> In support of his recommendation,  
19 Mr. Baudino notes the single highest equity ratio, at the holding company level,  
20 for his proxy group is approximately 55.00 percent and that the average equity

<sup>269</sup> Direct Testimony of Richard A. Baudino, at 4 and 53.

1 ratio for the proxy group used in my Direct Testimony was approximately 53.00  
2 percent.

3  
4 As discussed in my response to Dr. Woolridge, I believe the appropriate  
5 comparison is to the range of equity ratios in place at similar operating electric  
6 utilities. Reviewing the capital structures in place at the electric utility operating  
7 companies held within the Combined Proxy Group, it is apparent FPL's equity  
8 ratio is consistent with the proxy group's financing practices. I further discuss the  
9 Company's capital structure in response to Mr. O'Donnell.

10 **V. RESPONSE TO WAL-MART WITNESS CHRISS**

11 **Q. Please summarize Mr. Chriss' testimony regarding the Company's ROE.**

12 A. Mr. Chriss opposes my recommendation because it is higher than the average of  
13 authorized ROEs from regulatory commissions, both nationally and in Florida,  
14 since 2013.<sup>270</sup> Mr. Chriss also argues that the Commission should consider the  
15 Company's future test year and the percentage of revenues recovered through  
16 base rates versus cost recovery mechanisms.<sup>271</sup> Lastly, Mr. Chriss suggests that  
17 the Commission consider the effect of increases in rates on retailers. Chriss did  
18 not, however, undertake an independent, market-based analysis of the Company's  
19 Cost of Equity.

<sup>270</sup> See, Direct Testimony of Steve W. Chriss, at 10-11.

<sup>271</sup> *Ibid.*, at 9-10.

1 **Q. Have you reviewed and updated the information contained in Mr. Chriss’**  
2 **Exhibit SWC-4?**

3 A. Yes. As shown in Exhibit RBH-42, I have updated Mr. Chriss’ Exhibit SWC-4  
4 and added jurisdictional rankings from Regulatory Research Associates (“RRA”).  
5 RRA, which is the source of Mr. Chriss’ rate case data, provides an assessment of  
6 the extent to which regulatory jurisdictions are constructive from investors’  
7 perspectives, or not. As RRA explains, less constructive environments are  
8 associated with higher levels of risk:

9 RRA maintains three principal rating categories, Above  
10 Average, Average, and Below Average, with Above Average  
11 indicating a relatively more constructive, lower-risk regulatory  
12 environment from an investor viewpoint, and Below Average  
13 indicating a less constructive, higher-risk regulatory climate  
14 from an investor viewpoint. Within the three principal rating  
15 categories, the numbers 1, 2, and 3 indicate relative position.  
16 The designation 1 indicates a stronger (more constructive)  
17 rating; 2, a mid range rating; and, 3, a weaker (less  
18 constructive) rating. We endeavor to maintain an  
19 approximately equal number of ratings above the average and  
20 below the average.<sup>272</sup>

21 Sorting the data relating to Mr. Chriss’ Exhibit SWC-4 by RRA’s ranking, two  
22 points become apparent. First, looking at all cases there is an approximately 45

<sup>272</sup> Source: Regulatory Research Associates, accessed May 18, 2015.

1 basis point difference between the average return for “Above Average” and  
2 “Average” jurisdictions (the higher-ranked jurisdictions providing the higher  
3 authorized returns), and a 25 basis point difference between “Average” and  
4 “Below Average” jurisdictions (see Table 6, below). As Table 6 indicates, ROEs  
5 for Vertically Integrated electric utilities in “Above Average” jurisdictions range  
6 from 9.70 percent to 10.95 percent, with a median of 10.20 percent.

7 **Table 6: Average Authorized ROE by RRA Ranking**

	AUTHORIZED ROE: VERTICALLY INTEGRATED		
RRA Ranking	Above Avg.	Avg.	Below Avg.
Total Cases	18	46	7
Minimum	9.70	9.00	9.48
Mean	10.17	9.79	9.70
Median	10.20	9.80	9.70
Maximum	10.95	10.30	9.96

8  
9 Those observations are important since (as discussed in my response to Mr.  
10 O’Donnell, below) the authorized ROE is a very visible measure of the regulatory  
11 environment in which utilities operate. The regulatory environment, in turn, is  
12 important to utility analysts and investors.

13 **Q. Please now summarize Mr. Chriss’ concerns regarding the effect of a rate  
14 increase on retailers.**

15 A. Mr. Chriss states that “electricity is a significant operating cost for retailers”, and  
16 that “[w]hen electric rates increase, that increased cost to retailers can put  
17 pressure on consumer prices and on the other expenses required by a business to

1 operate.”<sup>273</sup> Mr. Chriss suggests that the Commission “should thoroughly and  
2 carefully consider the impact to customers in examining the requested revenue  
3 requirement and ROE, in addition to all other facets of this case, to ensure that  
4 any increase in the Company's rates is only the minimum amount necessary to  
5 provide adequate and reliable service, while also providing an opportunity to earn  
6 a reasonable return.”<sup>274</sup>

7  
8 Although Mr. Chriss points out certain pressures that apply to retail businesses  
9 such as Wal-Mart, those companies have options not available to regulated  
10 utilities such as FPL. Wal-Mart has the option to choose whether, where, and  
11 when to open retail stores; what services or products will be offered; whether to  
12 invest in expansions, or whether to cease operations in a given location. Further,  
13 retail businesses may choose to increase their prices without gaining the approval  
14 of regulatory commissions. Quite simply, the options available to retailers such  
15 as Wal-Mart are not available to regulated utilities. Such options have value;  
16 forgoing those options comes at a cost.

17  
18 Lastly, despite the pressures that Mr. Chriss discusses, since 200 Wal-Mart’s  
19 Return on Shareholders’ Equity has averaged over 20.00 percent.<sup>275</sup> Value Line  
20 currently estimates Wal-Mart’s Beta coefficient to be 0.65, and assesses Wal-  
21 Mart’s Financial Strength as A++. NextEra Energy, on the other hand, has a Beta

<sup>273</sup> Direct Testimony of Steve Chriss, at 7.

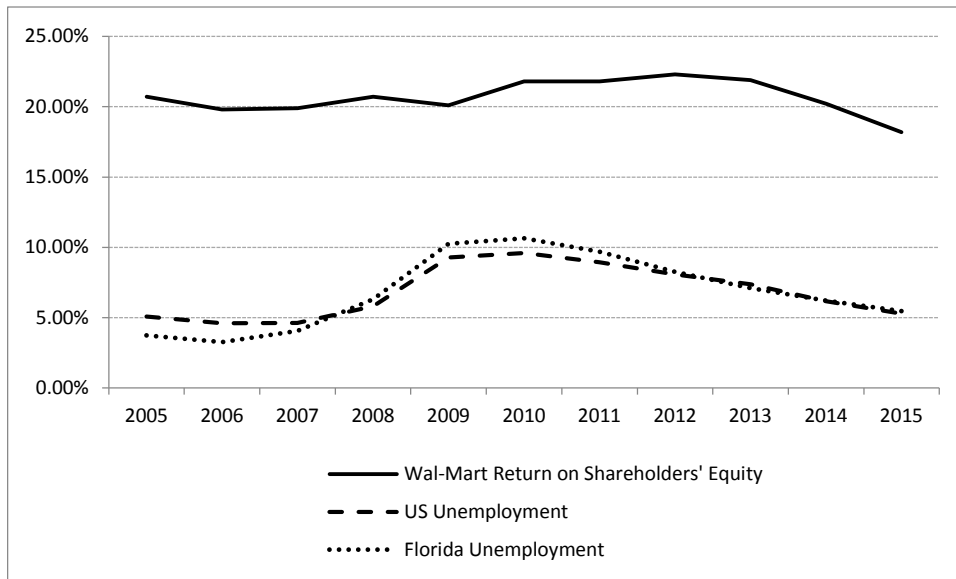
<sup>274</sup> Direct Testimony of Steve Chriss, at 7.

<sup>275</sup> Source: Value Line, as of April 29, 2016.



1 coefficient of 0.70, and a Financial Strength rating of A. By those measures, Wal-  
2 Mart is measurably less risky than NextEra Energy.<sup>276</sup>

3 **Chart 18: Wal-Mart Return on Shareholders' Equity and Unemployment**  
4 **rates (2005-2015)<sup>277</sup>**



5  
6 **Q. What is your response to Mr. Chriss' recommendation that the commission**  
7 **“examine” the proposed ROE in light of the company’s future test year and**  
8 **cost recovery mechanisms?**

9 **A.** Mr. Chriss asks the Commission to “examine” the proposed ROE in light of the  
10 company’s future test year and percentage of revenue derived from cost recovery  
11 mechanisms, however he does not provide any explanation or analysis to support  
12 how these factors would affect FPL’s ROE.<sup>278</sup>

13

<sup>276</sup> Source: Value Line, as of May 20, 2016. Please note that Value Line does not separately rate FPL.

<sup>277</sup> Sources: Value Line; Bureau of Labor Statistic (www.bls.gov).

<sup>278</sup> Direct Testimony of Steve Chriss, at 13-14.

1 In that regard, the position that a reduction in revenue volatility necessarily  
2 requires a reduction in the Cost of Equity runs counter to Modern Portfolio  
3 Theory, which is the fundamental basis of the Capital Asset Pricing  
4 Model. Under Modern Portfolio Theory, total risk is separated into two distinct  
5 components: non-diversifiable risk, which is that portion of risk that can be  
6 attributed to the market as a whole; and non-systematic (or diversifiable) risk,  
7 which is attributable to the idiosyncratic nature of the subject company itself and,  
8 therefore, can be diversified away. Any reduction in the Cost of Equity depends  
9 on the type of risk that is reduced. If the risk assumed to be mitigated by rate  
10 mechanisms is diversifiable, there would be no reduction in the Cost of Equity  
11 because investors could otherwise mitigate the risk through portfolio  
12 diversification. If, on the other hand, the risk is non-diversifiable (that is,  
13 systematic), it may be that the factors that drove the need to implement the  
14 mechanisms also are systematic. That is, if the factors that drove the  
15 implementation of rate structures reflected increased systematic risk, those  
16 structures would offset that incremental risk and there would be no reduction in  
17 the Cost of Equity. Either way, Mr. Chriss has not addressed that crucial issue.

18 **Q. How common are revenue stabilization and cost recovery mechanisms?**

19 A. There is little question that revenue stabilization and cost recovery structures are  
20 becoming increasingly common. The increased use of such mechanisms has  
21 generally resulted from the growing cost of maintaining system reliability,  
22 coupled with the flat or declining sales volume. Adjustment mechanisms to  
23 recover fuel costs, purchased power expenses, energy efficiency and demand-side

1 program costs, new plant investment, and other expenses are common.<sup>279</sup> In  
2 addition, decoupling has been implemented by electric utilities in 27  
3 jurisdictions.<sup>280</sup> Consequently, the implementation of alternative regulation  
4 mechanisms has become an increasingly visible issue to investors.

5 **Q. Are revenue stabilization mechanisms common among the proxy companies?**

6 A. Yes, they are. Exhibit RBH-43 provides a summary of revenue stabilization  
7 mechanisms and cost trackers currently in effect at each electric utility subsidiary  
8 of the Combined Proxy Group companies. As Exhibit RBH-43 demonstrates,  
9 there are a substantial number of cost recovery mechanisms in place at the proxy  
10 companies. Although those mechanisms are diverse, they each address issues  
11 related to the timing or certainty of cost recovery. Exhibit RBH-43 also includes  
12 a summary of the alternative regulation and incentive plans currently in effect at  
13 the proxy companies. Those regulatory constructs include formula-based rate  
14 plans, which provide comprehensive adjustment mechanisms that automatically  
15 adjust rates in the event that the earned return is above or below an authorized  
16 range. Since revenue stabilization and cost recovery mechanisms are common  
17 among the proxy companies, I do not believe FPL is materially less risky than its  
18 peers by virtue of its recovery mechanisms.

<sup>279</sup>

See Exhibit RBH-43.

<sup>280</sup>

See, for example, *Alternative Regulation for Emerging Utility Challenges: 2015 Update*, Edison Electric Institute, November 2015, at 4-5. Includes true-up plans, lost revenue adjustment mechanisms, and fixed/variable pricing.

1 **Q. Has Mr. Chriss considered the effect of his recommendation on the**  
2 **Company’s financial profile?**

3 A. No, he has not. As discussed in my response to Mr. O’Donnell (below), it is  
4 important to recognize that both Moody’s and Standard & Poor’s put considerable  
5 weight on the nature of regulation. Here, Mr. Chriss suggests that the  
6 Commission should reduce the Company’s ROE by some unspecified amount  
7 without the benefit of market-based, comparative analyses to support that  
8 recommendation. The consequence of such an action likely would indicate an  
9 increased degree of regulatory risk. In my view, therefore, Mr. Chriss has not  
10 reasonably considered the effect of his recommendation on the Company’s  
11 financial profile and, therefore, its ability to attract capital on reasonable terms.

12 **VI. RESPONSE TO OTHER ROE WITNESSES**

13 **Q. Please summarize Messrs. Brosch’s and Pollock’s testimony as they relate to**  
14 **the Company’s Cost of Capital.**

15 A. While they review recently authorized ROEs, neither Messrs. Brosch nor Pollock  
16 perform an independent analysis of the Company’s cost of capital.

17  
18 Based on his review of average authorized ROEs as well as changes in long-term  
19 Treasury yields, Mr. Brosch concludes capital market conditions are “very  
20 favorable” and recommends that the Commission therefore allow an ROE “that is  
21 significantly lower than the authorized ROE levels approved in recent FPL rate

1 orders.”<sup>281</sup> With regard to capital structure, Mr. Brosch recommends an equity  
2 ratio of no more than 47.00 percent based on his review of the average equity  
3 ratio used by large electric utility holding companies, as reported by AUS, EEI  
4 and Y Charts.<sup>282</sup>

5  
6 Mr. Pollock performs a similar review of authorized ROEs for vertically  
7 integrated electric utilities and concludes that average authorized ROEs have  
8 declined and notes that the most recent authorized ROEs in Florida ranged from  
9 10.25 percent to 10.50 percent.<sup>283</sup> Based on that analysis Mr. Pollock concludes  
10 an 11.00 percent ROE is “excessive,” and recommends the Commission authorize  
11 FPL an ROE below the average ROE allowed by other state regulatory  
12 commissions to reflect the lower risk associated with a 60.00 percent equity  
13 ratio.<sup>284</sup> With regard to capital structure, Mr. Pollock recommends an equity ratio  
14 of 51.10 percent based on the average authorized electric utility equity ratio since  
15 2012.<sup>285</sup>

16 **Q. What is your response to Messrs. Brosch and Pollock regarding the**  
17 **appropriate ROE for FPL in relation to recently authorized ROEs?**

18 A. First, although both witnesses argue the average authorized ROE has recently  
19 been below 10.00 percent, as discussed in my response to Mr. Chriss, the median  
20 authorized ROE for vertically integrated utilities in credit supportive jurisdictions

<sup>281</sup> See, Direct Testimony of Michael L. Brosch, at 38-39.

<sup>282</sup> See, Direct Testimony of Michael L. Brosch, at 48, 50-51.

<sup>283</sup> Direct Testimony of Jeffrey Pollock, at 30.

<sup>284</sup> *Ibid.*, at 30-31.

<sup>285</sup> *Ibid.*, at 32.

1 has been 10.20 percent since January 2013. Of the 18 ROEs authorized for  
2 vertically integrated electric utilities by credit supportive jurisdictions since the  
3 beginning of 2013, 16 have been 10.00 percent or higher.<sup>286</sup>

4  
5 Second, neither Mr. Brosch nor Mr. Pollock took in to consideration the  
6 Company's specific business risks when determining their ROE  
7 recommendations. As discussed in my Direct Testimony and discussed above, I  
8 believe the estimation of the Cost of Equity should take into consideration FPL's  
9 risk factors, including: (1) the Company's geographic risk, including its  
10 vulnerability to severe weather conditions; (2) the Company's need to access  
11 external capital; (3) the potential for new regulatory requirements associated with  
12 nuclear generation; and (4) the potential for an increase in the Cost of Equity over  
13 the Company's proposed four year rate period. Messrs. Brosch and Pollock's  
14 simple review of average authorized ROEs does not take into account those  
15 considerations.

16 **Q. What is your response to Mr. Brosch's suggestion that the Company's ROE**  
17 **should be lowered to reflect the general decline in 30-year Treasury yields?**

18 A. While the current 30-day average of the 30-year Treasury yield (2.50 percent as of  
19 June 30, 2016) is somewhat below the level seen at the time of the order in the  
20 Company's last rate case (2.81 percent as of December 13, 2012), Treasury yields  
21 have been rather volatile over the intervening period and spent much of the past  
22 few years at higher levels.

<sup>286</sup> See Exhibit RBH-42.

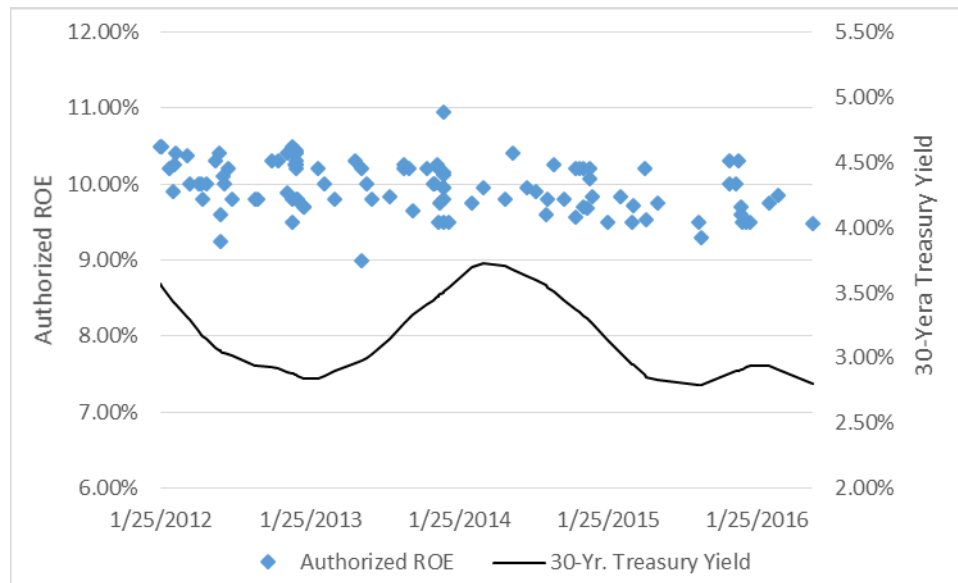
1

2 As discussed above, the recent lows in Treasury yields have been associated with  
3 a capital flight to safety associated with the “Brexit” and have recently begun to  
4 rise off the lows seen during that period. As discussed in my response to Mr.  
5 Gorman, consensus forecasts reported by Blue Chip continue to suggest investors  
6 expect rates to rise. Similarly, recent prices for options on the TLT index  
7 continue to show that investors are willing to pay a significant premium for  
8 protection against rising interest rates relative to declining interest rates.  
9 Importantly, the potential for rising rates represents risk for utility investors. For  
10 example, (as discussed above) the S&P Electric Utility Index lost approximately  
11 15.00 percent of its value in the first half of 2015 as Treasury yields rose 86 basis  
12 points to 3.11 percent (from the end of January to the end of June).

13 **Q. Have authorized ROEs changed in tandem with recent fluctuations in**  
14 **Treasury yields?**

15 A. No, they have not. As shown in Chart 19 below, since January 2012 there has  
16 been no discernible relationship between the level of authorized ROEs for electric  
17 utilities and changes in long-term interest rates. The fact that authorized returns  
18 remained relatively stable over that period reflects the inverse relationship  
19 between interest rates and the Equity Risk Premium; it also may reflect the  
20 observation that utility commissions recognize that Federal policy – including  
21 “Quantitative Easing” – created unusual market conditions.

1 **Chart 19: Authorized ROEs for Vertically Integrated Electric Utilities**  
 2 **(January 2012 - June 2016) and 30-Year Treasury Yields<sup>287</sup>**



3  
 4 **Q. What is your response to Messrs. Brosch’s and Pollock’s recommendations**  
 5 **regarding the Company’s capital structure?**

6 A. Mr. Brosch suggests higher debt leverage would be beneficial to ratepayers and  
 7 recommends an equity ratio of 47.00 percent (or lower) based on his estimate of  
 8 the industry average equity ratio.<sup>288</sup> To support his conclusion, Mr. Brosch  
 9 compares the Company’s existing capital structure to the reported investor owned  
 10 holding company equity ratios reported by AUS, Edison Electric Institute and Y  
 11 Charts.<sup>289</sup> As discussed in my response to Dr. Woolridge (above), my review of  
 12 the actual capital structures in place at the operating companies held within my  
 13 proxy group reflects the nature of assets financed by vertically integrated utilities

<sup>287</sup> Source: Regulatory Research Associates and Federal Reserve Schedule H.15. Average 30-year Treasury over average lag period (200 days). Limited-issue riders are excluded.

<sup>288</sup> See, Direct Testimony of Michael L. Brosch, at 51.

<sup>289</sup> *Ibid.*



1 such as FPL. Based on that review, it is apparent that the Company's current  
2 capital structure is generally consistent with the capital structures of the proxy  
3 companies. As discussed in my response to Mr. O'Donnell (below), my updated  
4 capital structure analysis continues to support the reasonableness of the  
5 Company's capital structure.

6  
7 Mr. Pollock recommends an equity ratio of 51.10 percent based on the average  
8 authorized equity ratio since 2012.<sup>290</sup> A review of the authorized equity ratios  
9 reported in Mr. Pollock's Exhibit\_\_\_(JP-4), however, shows that the Company's  
10 59.60 percent equity ratio is within the range of equity ratios authorized to other  
11 vertically integrated electric utilities and is consistent with the Company's most  
12 recently authorized equity ratio. Given FPL's specific operating risks and capital  
13 needs, I believe the Company's current capital structure is reasonable and Mr.  
14 Pollock's suggestion to rely on the average authorized equity ratio is misplaced.

## 15 VII. RESPONSE TO OPC WITNESS O'DONNELL

16 **Q. Please summarize Mr. O'Donnell's recommendation regarding the**  
17 **Company's capital structure**

18 A. Mr. O'Donnell recommends a capital structure of 46.93 percent long-term debt,  
19 3.07 percent short-term debt, and 50.00 percent common equity. Mr. O'Donnell's  
20 recommendation is based on his review of other electric utility capital structures,

<sup>290</sup> Direct Testimony of Jeffrey Pollock, at 32 and Exhibit\_\_\_(JP-4).

1 authorized equity ratios reported by RRA, and the capital structure of NextEra  
2 Energy and its unregulated subsidiaries.<sup>291</sup>

3 **Q. Do you agree with Mr. O'Donnell's recommended capital structure?**

4 A. No I do not. As noted in my Direct Testimony, FPL is a separate corporate entity  
5 with its own capital structure and the Company's current capital structure is  
6 consistent with the range of capital structures in place at the operating utilities  
7 held by the proxy companies.<sup>292</sup> As discussed by Company witness Dewhurst,  
8 FPL has maintained a stable equity ratio over time, which has provided the  
9 financial support necessary to maintain FPL's credit rating and access to capital  
10 following severe storm damage and during turbulent economic conditions. As  
11 discussed below, adding debt to the capital structure (as Mr. O'Donnell  
12 recommends) increases financial risk and, therefore, the Cost of Equity.

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

14 A. In the practice of finance, we often speak of two general categories of risk:  
15 business risk and financial risk. Business risk generally includes operating,  
16 market, regulatory, and competitive uncertainties, whereas financial risk is  
17 associated with additional levels of debt in the capital structure (often referred to  
18 as "financial leverage"). As the degree of financial leverage increases, the risk of  
19 financial distress (*i.e.*, the risk of not meeting financial obligations as they become  
20 due) also increases. In essence, even if two firms face the same business risks, the

<sup>291</sup> Direct Testimony of Kevin W. O'Donnell, at 15, 21.

<sup>292</sup> Direct Testimony of Robert B. Hevert, at 67.

1 company with higher levels of debt in its capital structure is likely to have higher  
2 total risk and, therefore, higher costs of both debt and equity.

3

4 Business and financial risk are related in that financial leverage has the effect of  
5 concentrating business risk on equity investors. By way of example, if a firm  
6 were capitalized with 100.00 percent common equity, there would be no financial  
7 risk and individual equity holders would hold *pro rata* shares of business risk. If  
8 the firm were capitalized with 60.00 percent equity and 40.00 percent debt, the  
9 equity investors would continue to bear residual business risk, even though they  
10 represent only 60.00 percent of the capital structure. As Brigham and Gapenski  
11 point out, "...the use of debt, or financial leverage, concentrates the firm's  
12 business risk on its stockholders."<sup>293</sup>

13

14 It is also important to recognize both the complexity and the dynamic nature of  
15 the relationship between capital structure, financial integrity, cost of capital and  
16 maintaining ongoing access to capital at reasonable costs. In particular, financing  
17 costs go beyond coupon rates, and any measure of an "optimal" capital structure  
18 must consider the numerous objectives and constraints associated with financing  
19 decisions. In my practical experience raising capital for a publicly traded utility, I  
20 can say firsthand that capital structure "optimization" is an extremely complex  
21 notion. Simply reviewing holding company or authorized equity ratios without

<sup>293</sup>

Eugene F. Brigham, Louis C. Gapenski, Financial Management, Theory and Practice, 1994, The Dryden Press, at 528.

1 considering differences in situations, constraints, or objectives is an overly  
2 simplistic approach that is likely to lead to flawed conclusions.

3 **Q. Please describe your review of FPL's capital structure relative to industry  
4 practice.**

5 A. In Exhibit RBH-10, I calculated the average capital structure for each of the utility  
6 operating companies held by the proxy companies over the most recent eight  
7 fiscal quarters (ending in the third calendar quarter of 2015). I have updated that  
8 analysis in Exhibit RBH-17 using the Combined Proxy Group. As that Exhibit  
9 demonstrates, for the period ending in the first quarter of 2016 the proxy group  
10 companies' average common equity ratios ranged from 45.95 percent to 61.00  
11 percent. Based on that updated review, FPL's equity ratio remains within the  
12 range of those in place at the operating utilities of the proxy companies. Although  
13 this comparison is not specific to FPL, it does recognize that utility operating  
14 companies must finance long-lived assets, and must access capital regardless of  
15 market conditions. It also indicates that the Company's equity ratio is within the  
16 range of those in place at other vertically integrated electric utilities.

17 **Q. Are there implications of increasing the debt component and reducing the  
18 common equity component of FPL's capital structure?**

19 A. Yes, there are. Based on criteria established by Standard and Poor's ("S&P"), a  
20 credit rating reflects the combination of the company's "Business Risk" rating  
21 and its "Financial Risk" rating. With regard to business risk, Standard & Poor's  
22 ("S&P") has noted that:

1 The assessment of regulatory risk is perhaps the most  
2 important factor in Standard & Poor's Ratings Services'  
3 analysis of a U.S. regulated, investor-owned utility's business  
4 risk. Each of the other four factors we examine--markets,  
5 operations, competitiveness, and management--can affect the  
6 quality of the regulation a utility experiences, but we believe  
7 the fundamental regulatory environment in the jurisdictions in  
8 which a utility operates often influences credit quality the  
9 most.<sup>294</sup>

10 Similarly, Moody's considers the regulatory structure to be so important that  
11 50.00 percent of the factors that weigh in a ratings determination are related to the  
12 nature of regulation.<sup>295</sup> Among the factors considered by Moody's in assessing  
13 the regulatory framework are the predictability and consistency of regulatory  
14 actions:

15 As the revenues set by the regulator are a primary component of a  
16 utility's cash flow, the utility's ability to obtain predictable and  
17 supportive treatment within its regulatory framework is one of the  
18 most significant factors in assessing a utility's credit quality. The  
19 regulatory framework generally provides more certainty around a  
20 utility's cash flow and typically allows the company to operate

<sup>294</sup> Standard & Poor's, *Utilities: Assessing U.S. Utility Regulatory Environments*, updated November 15, 2011.

<sup>295</sup> Moody's Investors Service, *Rating Methodology; Regulated Gas and Electric Utilities*, at 6 (Dec. 23, 2013).

1 with significantly less cushion in its cash flow metrics than  
2 comparably rated companies in other industrial sectors.

3 \*\*\*

4 In situations where the regulatory framework is less supportive,  
5 or is more contentious, a utility's credit quality can deteriorate  
6 rapidly.<sup>296</sup>

7 A decision by the Commission to increase FPL's debt ratio (*i.e.*, increase FPL's  
8 financial leverage) therefore could adversely affect investors' perception of the  
9 regulatory environment in Florida.

10 **Q. Please explain your concern with Mr. O'Donnell's recommendation relative**  
11 **to the financial community's view of Florida regulation.**

12 A. As discussed in my response to Mr. Chriss, Florida is considered to be a credit-  
13 supportive jurisdiction. Any decrease in the perception of regulatory  
14 supportiveness in Florida may increase investors' assessment of FPL's regulatory  
15 risk (and therefore its business risk and Business Risk rating), increasing FPL's  
16 cost of capital. As noted earlier, Moody's considers the regulatory structure to be  
17 so important that 50.00 percent of the factors that weigh in a ratings determination  
18 are related to the nature of regulation.

19  
20 As also discussed in Mr. Dewhurt's rebuttal testimony, if the Commission were to  
21 adopt Mr. O'Donnell's recommendation, it would represent a departure from

<sup>296</sup> Moody's Investors Service, Regulatory Frameworks – Ratings and Credit Quality for Investor-Owned Utilities, at 2 (June 18, 2010).

1 recent precedent. In light of Moody’s focus on “predictable and supportive  
2 treatment,” I strongly disagree with Mr. O’Donnell that his recommendation  
3 somehow would not have any impact on how credit rating agencies view FPL.<sup>297</sup>  
4 Such a dramatic change by the Commission from previous decisions would create  
5 an immediate and lasting concern for investors of the supportiveness of the  
6 regulation in Florida.

7 **Q. What is your conclusion regarding the appropriate capital structure for**  
8 **FPL?**

9 A. It is important for FPL’s capital structure to reflect the Company’s risks, and to  
10 provide sufficient financial support to maintain liquidity and access to capital.  
11 Considering that the proxy company average equity ratios range from 45.95  
12 percent to 61.00 percent, I believe that FPL’s 59.60 percent common equity ratio  
13 is reasonable. Increasing FPL’s debt leverage would increase its Cost of Equity,  
14 and potentially reduce investor confidence in the regulatory support for its  
15 operations and increase its financial risk. I believe it is likely the increased  
16 financial and regulatory risk would increase investors’ required returns.

<sup>297</sup> See, Direct Testimony of Kevin W. O’Donnell, at 25-26.

1                                   **VIII.     RESPONSE TO OPC WITNESS LAWTON**

2     **Q.     Please summarize Mr. Lawton’s testimony regarding the supportiveness of**  
3     **Dr. Woolridge’s ROE recommendation and Mr. O’Donnell’s capital**  
4     **structure recommendation for FPL’s financial integrity.**

5     A.     Mr. Lawton suggests that Dr. Woolridge’s 8.75 percent ROE recommendation  
6     and Mr. O’Donnell’s 50.00 equity / 50.00 percent debt capitalization  
7     recommendation are sufficient to maintain FPL’s financial integrity.<sup>298</sup> To  
8     support his position, Mr. Lawton notes that he reviewed credit rating agency  
9     commentary, and determined that FPL’s credit quality is considered “strong,” and  
10    “not threatened or under significant pressure of a downgrade.”<sup>299</sup> Mr. Lawton also  
11    performs a *pro forma* analysis of certain financial metrics (including Cash From  
12    Operations to Interest, Cash From Operations to Debt, and Debt to Capital) to  
13    support his position and concludes that the results “indicate strong financial  
14    metrics, supporting FPL’s current bond rating.”<sup>300</sup>

15    **Q.     How do ratings agencies’ view the use of credit metrics in ratings**  
16    **determinations?**

17    A.     Ratings agencies provide benchmark guidelines that associate credit metric ranges  
18    with different credit ratings, but credit ratings are not determined by mechanical  
19    application of financial ratios to a rating matrix. For example, On November 30,  
20    2007, S&P released a statement announcing that electric, gas, and water utility

<sup>298</sup> Direct Testimony of Daniel J. Lawton, at 30.

<sup>299</sup> *Ibid.*, at 24.

<sup>300</sup> *Ibid.*, at 26.



1 ratings would be “categorized under the business risk/financial risk matrix used  
2 by the Corporate Ratings group.”<sup>301</sup> S&P also provided matrices of business and  
3 financial risk, based on “Financial Risk Indicative Ratios”: FFO/Debt;  
4 FFO/Interest; and Total Debt/Capital. In that announcement, S&P noted that:

5           ...even after we assign a company business risk and  
6           financial risk, the committee does not arrive by rote at  
7           a rating based on the matrix. The matrix is a guide - -  
8           it is not intended to convey precision in the ratings  
9           process or reduce the decision to plotting intersections  
10          on a graph. Many small positives and negatives that  
11          affect credit quality can lead a committee to a different  
12          conclusion than what is indicated in the matrix.<sup>302</sup>

13

14          On May 27, 2009, S&P expanded its matrix, and noted the relative significance of  
15          credit metrics to the rating process:

16                 The rating matrix indicative outcomes are what we  
17                 typically observe – but are not meant to be precise  
18                 indications of guarantees of future rating opinions.  
19                 Positive and negative nuances in our analysis may lead  
20                 to a notch higher or lower than the outcomes indicated  
21                 in the various cells of the matrix.

<sup>301</sup> Standard & Poor’s Ratings Services, *U.S. Utilities Ratings Analysis Now Portrayed In The S&P Corporate Ratings Matrix*, Nov. 30, 2007, at 2 – 3.

<sup>302</sup> *Ibid.*, at 3.

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Moreover, our assessment of financial risk is not as  
simplistic as looking at a few ratios.<sup>303</sup>

Later, on September 18, 2012, S&P further expanded its matrix, confirming that  
“[s]till, it is essential to realize that the financial benchmarks are guidelines,  
neither gospel nor guarantees.”<sup>304</sup>

It is clear, therefore, that credit metrics are not relied on in a rote fashion, nor are  
individual metrics viewed in isolation, to the exclusion of other information.  
Rather, those reviews encompass broad assessments of business and financial  
risk, including factors that are extraneous to the standalone, mathematically  
derived financial metrics of the regulated utility, and which are often based on  
qualitative, not entirely quantitative, discussions with management.

It also should be remembered that metrics used by Mr. Lawton, (*i.e.*, Cash Flow  
to Interest, Cash Flow to Debt, and Debt to Capital ratios) are derived from  
financial statements, including the Income Statement, Balance Sheet and Cash  
Flow Statement. For regulated utilities, all three are influenced by the overall rate  
of return allowed by regulatory commissions, which is reflected in the revenue  
requirement. The metrics therefore are a result of the regulatory process, *i.e.*, the  
overall rate of return, which in turn is a function of the capital structure (debt and

<sup>303</sup> Standard & Poor’s Ratings Services, *Criteria Methodology: Business Risk/Financial Risk Matrix Expanded*, May 27, 2009, at 4-5.

<sup>304</sup> Standard & Poor’s Ratings Services, *Methodology: Business Risk/Financial Risk Matrix Expanded*, September 18, 2012, at 4.

1 equity ratios), debt cost rate and the allowed ROE. It is not the other way around.  
2 To set a component of the overall rate of return, such as the ROE and equity ratio,  
3 based on *pro forma* credit metrics therefore is a circular exercise, and one that in  
4 my experience is atypical of the regulatory process.

5  
6 Assessing recommended equity ratios and ROEs on the basis of *pro forma* credit  
7 metrics therefore should be done with the explicit understanding that other, often  
8 qualitative factors weigh heavily in ratings determinations. Like so many other  
9 aspects of corporate finance, ratings determinations are an empirical, but not an  
10 entirely mathematical exercise. Because so many other factors are considered, a  
11 focused review of *pro forma* metrics is the type of partial analysis that  
12 practitioners avoid.

13 **Q. Please describe Mr. Lawton's *pro forma* financial metric analysis.**

14 A. Alternately assuming FPL and OPC's proposed ROE and capital structures, Mr.  
15 Lawton calculates the following ratios: Cash From Operation to Debt  
16 (CFO/Debt), Cash From Operations to Interest (CFO/Interest), and Debt to Total  
17 Capital (Debt/Capital).<sup>305</sup> Mr. Lawton then compares the results of those ratios to  
18 Moody's benchmark guidelines for "A" and "Baa" rated bonds.

<sup>305</sup> Direct Testimony of Daniel J. Lawton, Exhibit\_\_\_(DJL-5). Mr. Lawton also varied certain revenue requirement assumptions based on the Company's and OPC's position, including rate base and depreciation & amortization.

1 **Q. Does Mr. Lawton’s analysis support his position that OPC’s recommended**  
2 **8.75 percent ROE and 50.00 equity / 50.00 percent debt capital structure**  
3 **would continue to support the Company’s current bond rating?**

4 A. No, I do not believe so. As Mr. Lawton notes, Mr. O’Donnell’s proposed 50.00  
5 percent equity ratio falls below Moody’s benchmark for an A rating (55.00  
6 percent to 65.00 percent equity).<sup>306</sup> In addition, Mr. Lawton’s *pro forma* financial  
7 metric analysis shows OPC’s ROE and capital structure recommendations would  
8 result in a 22.52 percent CFO/Debt ratio, which is at the bottom end of the 22.00  
9 percent to 30.00 percent benchmark guideline for an “A” rating.<sup>307</sup> As noted  
10 above, although a given financial metric may be within a given benchmark range,  
11 other factors may affect the rating agency’s actual rating assessment.

12  
13 With regard to the CFO/Interest financial metric, I believe relying on Mr.  
14 Lawton’s *pro forma* results to assess the credit supportiveness of any specific  
15 ROE or equity ratio is misplaced. In particular, I examined the robustness of  
16 using that measure as a threshold benchmark by recreating the analysis provided  
17 in Schedule (DJL-5) and testing variations in the assumed ROE. As shown in  
18 Table 7 (below) relying on the assumptions in the scenario in column “A” of Mr.  
19 Lawton’s Schedule (DJL-5), including the Company’s existing equity ratio of  
20 59.60 percent, but adjusting the ROE to 0.00 percent (i.e., no return on equity)  
21 still produces a CFO/Interest in the “A” rating category. The assumption that the

<sup>306</sup> Direct Testimony of Daniel J. Lawton, at 30. A 35.00 percent to 45.00 percent Debt/Capital ratio implies a 55.00 percent to 65.00 percent equity ratio.

<sup>307</sup> *Ibid.*, Exhibit\_\_\_(DJL-5).

1 Company could maintain an A-rating with a 0.00 percent allowed return on equity  
 2 is clearly misplaced, and certainly does not provide a reasonable benchmark for  
 3 determining an equity ratio that satisfies the *Hope & Bluefield* standards  
 4 acknowledged by Mr. Lawton.<sup>308</sup> Assuming the scenario in column “B” of Mr.  
 5 Lawton’s schedule, including a 50.00 percent equity ratio, but adjusting the ROE  
 6 to 6.25 percent also produces a CFO/Interest ratio in the A-rating category.  
 7 Consequently, the CFO/Interest metric does not appear to be a good measure for  
 8 assessing the reasonableness of ROE or capital structure proposals.

9 **Table 7: CFO/Interest – Variations in Mr. Lawton’s Analysis<sup>309</sup>**

Scenario	Assumptions		Moody’s Guideline (4.5x – 6.0x = A rating)	
	ROE	Equity Ratio	CFO/Interest	Implied Rating
Scenario A – Original	11.50%	59.60%	8.6x	Aaa
Scenario A – with 0.00% ROE	<b>0.00%</b>	59.60%	4.8x	A
Scenario B – Original	8.75%	50.00%	5.1x	A
Scenario B – with 6.25% ROE	<b>6.25%</b>	50.00%	4.5x	A

10

11 I also note a similar test of the robustness of Mr. Lawton’s CFO/Debt analysis  
 12 produces similarly unlikely results. For example, assuming OPC’s  
 13 recommendations as provided in Schedule (DJL-5), but adjusting the ROE to  
 14 negative 0.76 percent would still achieve a CFO/Debt ratio sufficient for a Baa  
 15 rating (13.00 percent).

16

<sup>308</sup> *Ibid.*, at 24.

<sup>309</sup> See also, Exhibit RBH-44.

1 Lastly, I note that Moody’s April 2015 Credit Opinion of FPL stated that a  
2 downgrade of the Company’s rating would be considered “if there are significant  
3 cost disallowances or other changes to Florida's credit-supportive regulatory and  
4 cost recovery framework, or if there is a sustained decline in cash flow coverage  
5 metrics, including CFO Pre-WC-to-debt below 25%, or an increase in debt-to-  
6 capitalization above the 40% range.” Mr. Lawton’s *pro forma* analysis indicates  
7 OPC’s recommendations result in financial metrics below the thresholds Moody’s  
8 notes would trigger consideration of a downgrade.

9 **Q. Are there other considerations that should be taken in to account when**  
10 **determining the credit supportiveness of OPC’s ROE and capital structure**  
11 **recommendations?**

12 A. Yes. As noted above, financial metrics are only one factor rating agencies take  
13 into consideration when assessing a company’s credit rating. The assessment of  
14 the regulatory environment is another important factor. In that regard, Moody’s  
15 notes that the regulatory “framework in which a regulated utility operates is  
16 typically one of its most significant credit considerations. The regulatory structure  
17 and its general framework is a primary consideration that differentiates the  
18 industry from most other corporate sectors.”<sup>310</sup> Moody’s further explains:

19 As the revenues set by the regulator are a primary  
20 component of a utility’s cash flow, the utility’s ability  
21 to obtain predictable and supportive treatment within its

<sup>310</sup> See Moody’s Investors Service, *Special Comment: Regulatory Frameworks – Ratings and Credit Quality for Investor-Owned Utilities*, June 18, 2010, at 1.

1 regulatory framework is one of the most significant  
2 factors in assessing a utility's credit quality. The  
3 regulatory framework generally provides more certainty  
4 around a utility's cash flow and typically allows the  
5 company to operate with significantly less cushion in its  
6 cash flow metrics than comparably rated companies in  
7 other industrial sectors. In situations where the  
8 regulatory framework is less supportive, or is more  
9 contentious, a utility's credit quality can deteriorate  
10 rapidly.<sup>311</sup>

11 I believe the effect of (1) authorizing an equity ratio significantly below the ratio  
12 long used by FPL to successfully finance its operations (through a range of  
13 market and operating conditions); and (2) authorizing an ROE that is not only  
14 175 basis points below the Company's currently authorized ROE, but is also  
15 below the lowest ROE authorized for a vertically integrated electric utility in at  
16 least the last 30-years, would be to reduce investors' assessment of the regulatory  
17 supportiveness for FPL. A perception of unsupportiveness, or regulatory  
18 inconsistency, could linger long into the future and affect FPL's ability to access  
19 the capital markets on favorable terms, especially during times of market unrest or  
20 operational strain from extensive weather related damage.

<sup>311</sup> *Ibid.*, at 2.

1 **IX. UPDATED AND REVISED ANALYSES**

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

3 A. Yes. I have updated the Constant Growth DCF, Multi-Stage DCF, CAPM, and  
4 Risk Premium analyses presented in my Direct Testimony with data as of June 30,  
5 2016. As noted in my response to Dr. Woolridge, I performed the analyses for a  
6 Combined Proxy Group comprised of the companies included by the opposing  
7 ROE witnesses and me in our respective proxy groups.

8 **Q. Please summarize your updated CAPM analysis.**

9 A. I have continued to use the same inputs used in my Direct Testimony, updated  
10 through June 30, 2016. For the risk-free rate, I continue to refer alternately to (1)  
11 the 30-day average of the 30-year Treasury yield; and (2) a consensus forecast of  
12 the average 30-year Treasury yield for 2017 and 2020. Likewise, I continue to  
13 rely on published Beta coefficients from Bloomberg and Value Line, and the *ex-*  
14 *ante* market risk premia described in my Direct Testimony (*i.e.*, the expected  
15 return on the S&P 500 Index less the current 30-year Treasury yield).

16 **Q. What are your updated CAPM results?**

17 A. As shown in Table 8 (below; see also, Exhibit RBH-11), based upon updated  
18 market information, my CAPM analyses produce a range of ROE estimates from  
19 8.97 percent to 12.64 percent.



1

**Table 8: CAPM Results**

	<b>Bloomberg Derived Market Risk Premium</b>	<b>Value Line Derived Market Risk Premium</b>
<i>Bloomberg Beta Coefficient</i>		
Current 30-Year Treasury (2.50%)	8.97%	9.29%
Blue Chip Forecast 2017 (3.40%)	9.86%	10.19%
Blue Chip Forecast 2020 (4.40%)	10.86%	11.19%
<i>Value Line Beta Coefficient</i>		
Current 30-Year Treasury (2.50%)	10.35%	10.75%
Blue Chip Forecast 2017 (3.40%)	11.25%	11.64%
Blue Chip Forecast 2020 (4.40%)	12.25%	12.64%

2

3 **Q. Please summarize your updated Risk Premium analysis.**

4 A. My updated Risk Premium analysis includes authorized ROEs as reported by  
5 Regulatory Research Associates through June 30, 2016. For the purpose of  
6 calculating the expected risk premium and ROE, I have used the current and  
7 projected 30-year Treasury yield. As shown in Table 9 (below; see also, Exhibit  
8 RBH-12), my updated results range from 10.04 percent to 10.37 percent.

9

10

**Table 9: Bond Yield Plus Risk Premium Results**

<b>Assumed Treasury Yield</b>	<b>Implied ROE</b>
Current 30-Year Treasury (2.50%)	10.04%
Blue Chip Forecast 2017 (3.40%)	10.08%
Blue Chip Forecast 2020 (4.40%)	10.37%

11

1 **Q. Please summarize your updated Constant Growth DCF and Multi-Stage**  
 2 **DCF analyses.**

3 A. I have continued to use projected earnings growth rates from Zacks, First Call,  
 4 and Value Line in developing my Constant Growth and Multi-Stage DCF models.  
 5 The results are shown in Table 10 (below); *see also*, Exhibit RBH-13 to Exhibit  
 6 RBH-14.

7 **Table 10: Discounted Cash Flow Model Results**

	<b>Low Growth Rate</b>	<b>Mean Growth Rate</b>	<b>High Growth Rate</b>
<i>Mean Constant Growth DCF Results</i>			
30-Day Average	8.32%	8.91%	9.41%
90-Day Average	8.41%	8.99%	9.49%
180-Day Average	8.60%	9.19%	9.69%
<i>Mean Multi-Stage DCF Results</i>			
	<b>Low Growth Rate</b>	<b>Mean Growth Rate</b>	<b>High Growth Rate</b>
30-Day Average	9.03%	9.16%	9.28%
90-Day Average	9.12%	9.26%	9.38%
180-Day Average	9.33%	9.48%	9.61%
<i>Mean Multi-Stage DCF Results – Terminal P/E at 20.86</i>			
	<b>Low Growth Rate</b>	<b>Mean Growth Rate</b>	<b>High Growth Rate</b>
30-Day Average	9.44%	9.79%	10.09%
90-Day Average	9.67%	10.03%	10.32%
180-Day Average	10.18%	10.54%	10.84%

8

1

## X. SUMMARY AND CONCLUSION

2 **Q. What are your overall conclusions and recommendations?**

3 A. Based on the analyses discussed throughout my Rebuttal Testimony, I conclude  
4 that my recommended range of 10.50 percent to 11.50 percent, and within that  
5 range, 11.00 percent, remains a reasonable and appropriate estimate of FPL's Cost  
6 of Equity. The results of the updated DCF, CAPM, and Bond Yield Plus Risk  
7 Premium analyses, along with my analyses of capital market data, authorized  
8 returns in other regulatory jurisdictions, and assessment of rating agency concerns  
9 and criteria support the reasonableness of my range of ROE estimates and my  
10 recommendation. Furthermore, I do not support certain intervenors'  
11 recommendation to authorize a hypothetical capital structure below the  
12 Company's actual capital structure.

13

14 As discussed above, the period over which my analyses were performed included  
15 market data that were highly unusual and inconsistent with the DCF model's  
16 fundamental assumptions. In my view, therefore, Risk Premium-based methods  
17 should be given more weight than the DCF-based approaches. Doing so supports  
18 my recommended range of 10.50 percent to 11.50 percent, and my ROE  
19 recommendation of 11.00 percent.

20 **Q. Does this conclude your rebuttal testimony?**

21 A. Yes, it does.

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

	[1]	[2]	[3]	[4]	[5] [6]	
			Ex-Ante Market Risk Premium		CAPM Result	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg Market DCF Derived	Value Line Market DCF Derived
<b>PROXY GROUP BLOOMBERG BETA COEFFICIENT</b>						
Current 30-Year Treasury (30-day average) [7]	2.50%	0.610	10.59%	11.13%	8.97%	9.29%
Blue Chip Financial Forecast 2017 Projection [8]	3.40%	0.610	10.59%	11.13%	9.86%	10.19%
Blue Chip Financial Forecast 2020 Projection [9]	4.40%	0.610	10.59%	11.13%	10.86%	11.19%
Mean					9.90%	10.23%
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg Market DCF Derived	Value Line Market DCF Derived
<b>PROXY GROUP VALUE LINE AVERAGE BETA COEFFICIENT</b>						
Current 30-Year Treasury (30-day average) [7]	2.50%	0.741	10.59%	11.13%	10.35%	10.75%
Blue Chip Financial Forecast 2017 Projection [8]	3.40%	0.741	10.59%	11.13%	11.25%	11.64%
Blue Chip Financial Forecast 2020 Projection [9]	4.40%	0.741	10.59%	11.13%	12.25%	12.64%
Mean					11.28%	11.68%

Notes:

[1] See Notes [7] and [8]

[2] Source: Schedule (RBH)-16

[3] Source: Schedule (RBH)-15

[4] Source: Schedule (RBH)-15

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

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

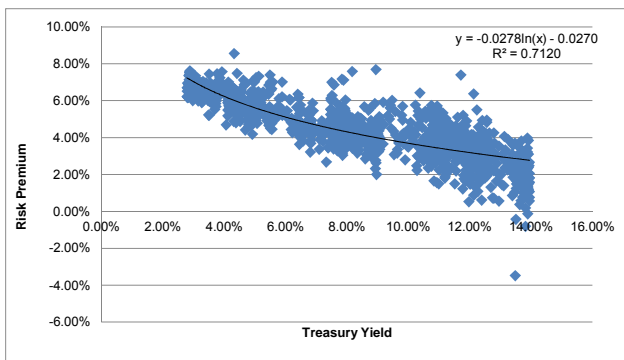
[7] Source: Bloomberg Professional

[8] Source: Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 2. Forecast for Q3 2017.

[9] Source: Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 14.

Bond Yield Plus Risk Premium

	[1]	[2]	[3]	[4]	[5]
	Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
	-2.70%	-2.78%			
Current 30-Year Treasury			2.50%	7.53%	10.04%
Blue Chip Financial Forecast 2017 Projection			3.40%	6.68%	10.08%
Blue Chip Financial Forecast 2020 Projection			4.40%	5.97%	10.37%



Notes:

- [1] Constant of regression equation
- [2] Slope of regression equation
- [3] Source: Current = Bloomberg Professional, Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 2. Forecast for Q3 2017. Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 14.
- [4] Equals [1] + ln([3]) x [2]
- [5] Equals [3] + [4]
- [6] Source: SNL Financial
- [7] Source: SNL Financial
- [8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
- [9] Equals [7] - [8]

Bond Yield Plus Risk Premium

	[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium	
1/1/1980	14.50%	9.36%	5.14%	
1/7/1980	14.39%	9.38%	5.01%	
1/9/1980	15.00%	9.40%	5.60%	
1/14/1980	15.17%	9.42%	5.75%	
1/17/1980	13.93%	9.44%	4.49%	
1/23/1980	15.50%	9.47%	6.03%	
1/30/1980	13.86%	9.52%	4.34%	
1/31/1980	12.61%	9.53%	3.08%	
2/6/1980	13.71%	9.58%	4.13%	
2/13/1980	12.80%	9.63%	3.17%	
2/14/1980	13.00%	9.65%	3.35%	
2/19/1980	13.50%	9.68%	3.82%	
2/27/1980	13.75%	9.78%	3.97%	
2/29/1980	13.75%	9.81%	3.94%	
2/29/1980	14.00%	9.81%	4.19%	
2/29/1980	14.77%	9.81%	4.96%	
3/7/1980	12.70%	9.89%	2.81%	
3/14/1980	13.50%	9.97%	3.53%	
3/26/1980	14.16%	10.10%	4.06%	
3/27/1980	14.24%	10.12%	4.12%	
3/28/1980	14.50%	10.13%	4.37%	
4/11/1980	12.75%	10.27%	2.48%	
4/14/1980	13.85%	10.29%	3.56%	
4/16/1980	15.50%	10.31%	5.19%	
4/22/1980	13.25%	10.35%	2.90%	
4/22/1980	13.90%	10.35%	3.55%	
4/24/1980	16.80%	10.38%	6.43%	
4/29/1980	15.50%	10.41%	5.09%	
5/6/1980	13.70%	10.45%	3.25%	
5/7/1980	15.00%	10.45%	4.55%	
5/8/1980	13.75%	10.46%	3.29%	
5/9/1980	14.35%	10.47%	3.88%	
5/13/1980	13.60%	10.48%	3.12%	

5/15/1980	13.25%	10.49%	2.76%
5/19/1980	13.75%	10.51%	3.24%
5/27/1980	13.62%	10.54%	3.08%
5/27/1980	14.60%	10.54%	4.06%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980	13.80%	10.56%	3.24%
6/2/1980	15.63%	10.57%	5.06%
6/9/1980	15.90%	10.60%	5.30%
6/10/1980	13.78%	10.60%	3.18%
6/12/1980	14.25%	10.61%	3.64%
6/19/1980	13.40%	10.62%	2.78%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980	14.75%	10.67%	4.08%
7/10/1980	15.00%	10.68%	4.32%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.71%	3.09%
7/22/1980	14.10%	10.72%	3.38%
7/24/1980	15.00%	10.73%	4.27%
7/25/1980	13.48%	10.73%	2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980	13.50%	10.88%	2.62%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.94%	2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.98%	4.52%
10/7/1980	12.50%	10.99%	1.51%
10/9/1980	13.25%	11.00%	2.25%
10/9/1980	14.50%	11.00%	3.50%
10/9/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	13.75%	11.12%	2.63%
11/5/1980	14.00%	11.12%	2.88%
11/8/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/8/1980	14.15%	11.22%	2.93%
12/8/1980	15.10%	11.22%	3.88%
12/9/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%
1/2/1981	15.25%	11.22%	4.03%
1/7/1981	14.30%	11.21%	3.09%
1/19/1981	15.25%	11.20%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.21%	3.79%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.33%	3.92%

3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981	16.00%	11.50%	4.50%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.60%	3.70%
4/1/1981	14.53%	11.68%	2.85%
4/3/1981	19.10%	11.71%	7.39%
4/9/1981	15.00%	11.78%	3.22%
4/9/1981	15.30%	11.78%	3.52%
4/9/1981	16.50%	11.78%	4.72%
4/9/1981	17.00%	11.78%	5.22%
4/10/1981	13.75%	11.80%	1.95%
4/13/1981	13.57%	11.82%	1.75%
4/15/1981	15.30%	11.85%	3.45%
4/16/1981	13.50%	11.87%	1.63%
4/17/1981	14.10%	11.87%	2.23%
4/21/1981	14.00%	11.90%	2.10%
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%
5/15/1981	15.75%	12.22%	3.53%
5/18/1981	14.88%	12.23%	2.65%
5/20/1981	16.00%	12.26%	3.74%
5/21/1981	14.00%	12.27%	1.73%
5/26/1981	14.90%	12.30%	2.60%
5/27/1981	15.00%	12.31%	2.69%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.37%	2.30%
6/5/1981	13.00%	12.39%	0.61%
6/10/1981	16.75%	12.42%	4.33%
6/17/1981	14.40%	12.46%	1.94%
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.51%	2.24%
6/26/1981	16.00%	12.52%	3.48%
6/30/1981	15.25%	12.54%	2.71%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.74%	0.74%
7/31/1981	13.50%	12.78%	0.72%
7/31/1981	15.00%	12.78%	2.22%
7/31/1981	16.00%	12.78%	3.22%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981	13.50%	12.95%	0.55%
8/20/1981	16.50%	12.95%	3.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.05%	1.45%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%

10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%
3/12/1982	16.25%	13.88%	2.37%
3/17/1982	17.30%	13.88%	3.42%
3/22/1982	15.10%	13.89%	1.21%
3/27/1982	15.40%	13.89%	1.51%
3/30/1982	15.50%	13.90%	1.60%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982	15.50%	13.91%	1.59%
4/5/1982	15.50%	13.92%	1.58%
4/8/1982	16.40%	13.93%	2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%
4/27/1982	15.00%	13.94%	1.06%
4/28/1982	15.75%	13.94%	1.81%
4/30/1982	14.70%	13.94%	0.76%
4/30/1982	15.50%	13.94%	1.56%
5/3/1982	16.60%	13.94%	2.66%
5/4/1982	16.00%	13.94%	2.06%
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982	15.00%	13.91%	1.09%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%



6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/1/1982	15.50%	13.15%	2.35%
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	14.63%	12.33%	2.30%
1/12/1983	15.50%	12.33%	3.17%
1/20/1983	17.75%	12.24%	5.51%
1/21/1983	15.00%	12.22%	2.78%
1/24/1983	14.50%	12.21%	2.29%
1/24/1983	15.50%	12.21%	3.29%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.17%	3.97%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.10%	1.90%
2/10/1983	15.00%	12.06%	2.94%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.97%	3.53%
2/23/1983	15.10%	11.96%	3.14%
2/23/1983	16.00%	11.96%	4.04%

3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.77%	1.23%
3/18/1983	15.25%	11.73%	3.52%
3/23/1983	15.40%	11.69%	3.71%
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983	16.71%	11.61%	5.10%
3/31/1983	15.00%	11.59%	3.41%
4/4/1983	15.20%	11.58%	3.62%
4/8/1983	15.50%	11.51%	3.99%
4/11/1983	14.81%	11.49%	3.32%
4/19/1983	14.50%	11.38%	3.12%
4/20/1983	16.00%	11.36%	4.64%
4/29/1983	16.00%	11.24%	4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983	16.46%	11.12%	5.34%
5/12/1983	14.14%	11.11%	3.03%
5/18/1983	15.00%	11.05%	3.95%
5/23/1983	14.90%	11.01%	3.89%
5/23/1983	15.50%	11.01%	4.49%
5/25/1983	15.50%	10.98%	4.52%
5/27/1983	15.00%	10.96%	4.04%
5/31/1983	14.00%	10.95%	3.05%
5/31/1983	15.50%	10.95%	4.55%
6/2/1983	14.50%	10.93%	3.57%
6/17/1983	15.03%	10.84%	4.19%
7/1/1983	14.80%	10.78%	4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.00%	10.74%	4.26%
7/19/1983	15.10%	10.74%	4.36%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%
9/7/1983	15.00%	10.86%	4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983	16.15%	10.95%	5.20%
10/4/1983	14.80%	10.96%	3.84%
10/7/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.25%	11.01%	5.24%
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/1/1983	16.00%	11.06%	4.94%
11/9/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	14.69%	11.22%	3.47%
12/20/1983	16.00%	11.22%	4.78%
12/20/1983	16.25%	11.22%	5.03%
12/22/1983	14.75%	11.23%	3.52%
12/22/1983	15.75%	11.23%	4.52%
1/3/1984	14.75%	11.27%	3.48%
1/10/1984	15.90%	11.30%	4.60%
1/12/1984	15.60%	11.31%	4.29%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984	15.90%	11.33%	4.57%

1/30/1984	16.10%	11.37%	4.73%
1/31/1984	15.25%	11.37%	3.88%
2/1/1984	14.80%	11.38%	3.42%
2/6/1984	13.75%	11.40%	2.35%
2/6/1984	14.75%	11.40%	3.35%
2/9/1984	15.25%	11.42%	3.83%
2/15/1984	15.70%	11.44%	4.26%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984	14.75%	11.47%	3.28%
2/28/1984	14.50%	11.51%	2.99%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.64%	4.36%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
4/2/1984	15.50%	11.71%	3.79%
4/6/1984	14.74%	11.75%	2.99%
4/11/1984	15.72%	11.78%	3.94%
4/17/1984	15.00%	11.81%	3.19%
4/18/1984	16.20%	11.82%	4.38%
4/25/1984	14.64%	11.85%	2.79%
4/30/1984	14.40%	11.87%	2.53%
5/16/1984	14.69%	11.98%	2.71%
5/16/1984	15.00%	11.98%	3.02%
5/22/1984	14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.15%	3.10%
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984	16.00%	12.31%	3.69%
7/12/1984	16.50%	12.32%	4.18%
7/13/1984	16.25%	12.33%	3.92%
7/17/1984	14.14%	12.35%	1.79%
7/18/1984	15.30%	12.36%	2.94%
7/18/1984	15.50%	12.36%	3.14%
7/19/1984	14.30%	12.37%	1.93%
7/24/1984	16.79%	12.39%	4.40%
7/31/1984	16.00%	12.43%	3.57%
8/3/1984	14.25%	12.44%	1.81%
8/17/1984	14.30%	12.49%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984	16.30%	12.51%	3.79%
8/31/1984	15.55%	12.52%	3.03%
9/6/1984	16.00%	12.53%	3.47%
9/10/1984	14.75%	12.54%	2.21%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984	14.50%	12.57%	1.93%
9/28/1984	15.00%	12.57%	2.43%
9/28/1984	16.25%	12.57%	3.68%
10/9/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.58%	3.82%
10/31/1984	16.25%	12.58%	3.67%
11/7/1984	15.60%	12.58%	3.02%
11/9/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.58%	3.17%
11/20/1984	15.25%	12.58%	2.67%
11/20/1984	15.92%	12.58%	3.34%
11/23/1984	15.00%	12.58%	2.42%
11/28/1984	16.15%	12.57%	3.58%
12/3/1984	15.80%	12.56%	3.24%
12/4/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.53%	2.22%
12/19/1984	15.00%	12.53%	2.47%
12/20/1984	16.00%	12.53%	3.47%
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985	15.75%	12.47%	3.28%
1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.35%	2.12%
3/1/1985	13.84%	12.31%	1.53%
3/8/1985	16.85%	12.28%	4.57%
3/14/1985	15.50%	12.25%	3.25%

3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.17%	3.45%
4/3/1985	14.60%	12.14%	2.46%
4/9/1985	15.50%	12.11%	3.39%
4/16/1985	15.70%	12.06%	3.64%
4/22/1985	14.00%	12.02%	1.98%
4/26/1985	15.50%	11.98%	3.52%
4/29/1985	15.00%	11.97%	3.03%
5/2/1985	14.68%	11.94%	2.74%
5/8/1985	15.62%	11.89%	3.73%
5/10/1985	16.50%	11.87%	4.63%
5/29/1985	14.61%	11.73%	2.88%
5/31/1985	16.00%	11.71%	4.29%
6/14/1985	15.50%	11.61%	3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.33%	3.17%
8/2/1985	14.80%	11.29%	3.51%
8/7/1985	15.00%	11.27%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.15%	3.35%
9/9/1985	14.60%	11.11%	3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.50%	11.05%	4.45%
9/27/1985	15.80%	11.05%	4.75%
10/2/1985	14.00%	11.03%	2.97%
10/2/1985	14.75%	11.03%	3.72%
10/3/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985	15.50%	10.90%	4.60%
11/8/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.23%	5.77%
2/24/1986	14.50%	10.18%	4.32%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986	13.40%	9.69%	3.71%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.32%	5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986	15.10%	9.18%	5.92%
6/2/1986	12.81%	9.17%	3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986	12.00%	8.91%	3.09%
6/26/1986	14.75%	8.91%	5.84%
6/30/1986	13.00%	8.87%	4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.66%	3.74%
7/25/1986	14.25%	8.57%	5.68%
8/6/1986	13.50%	8.44%	5.06%
8/14/1986	13.50%	8.35%	5.15%
9/16/1986	12.75%	8.06%	4.69%

9/19/1986	13.25%	8.03%	5.22%
10/1/1986	14.00%	7.95%	6.05%
10/3/1986	13.40%	7.93%	5.47%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986	13.00%	7.75%	5.25%
12/3/1986	12.90%	7.58%	5.32%
12/4/1986	14.44%	7.58%	6.86%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.51%	6.29%
12/30/1986	13.00%	7.49%	5.51%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.47%	4.93%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.54%	4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987	13.50%	7.70%	5.80%
6/15/1987	13.20%	7.78%	5.42%
6/29/1987	15.00%	7.83%	7.17%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987	12.90%	7.86%	5.04%
7/15/1987	13.50%	7.88%	5.62%
7/16/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%
7/27/1987	13.00%	7.92%	5.08%
7/27/1987	13.40%	7.92%	5.48%
7/27/1987	13.50%	7.92%	5.58%
7/31/1987	12.98%	7.95%	5.03%
8/26/1987	12.63%	8.06%	4.57%
8/26/1987	12.75%	8.06%	4.69%
8/27/1987	13.25%	8.06%	5.19%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	12.75%	8.31%	4.44%
9/30/1987	13.00%	8.31%	4.69%
10/2/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.43%	4.57%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.68%	3.32%
12/3/1987	14.20%	8.70%	5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%
12/16/1987	13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987	13.00%	8.81%	4.19%
1/20/1988	13.80%	8.94%	4.86%
1/26/1988	13.90%	8.95%	4.95%
1/29/1988	13.20%	8.96%	4.24%
2/4/1988	12.60%	8.96%	3.64%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%
3/24/1988	11.24%	8.92%	2.32%
3/30/1988	12.72%	8.92%	3.80%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.93%	4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.99%	4.51%
5/16/1988	13.00%	8.99%	4.01%
6/30/1988	12.75%	9.00%	3.75%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.92%	3.83%
8/23/1988	11.70%	8.93%	2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%

12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989	13.00%	9.05%	3.95%
3/30/1989	14.00%	9.05%	4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.00%	4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
1/10/1990	12.80%	8.24%	4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.20%	3.80%
2/9/1990	12.10%	8.17%	3.93%
2/24/1990	12.86%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%
4/12/1990	12.52%	8.18%	4.34%
4/19/1990	12.75%	8.20%	4.55%
5/21/1990	12.10%	8.28%	3.82%
5/29/1990	12.40%	8.30%	4.10%
5/31/1990	12.00%	8.30%	3.70%
6/4/1990	12.90%	8.30%	4.60%
6/6/1990	12.25%	8.31%	3.94%
6/15/1990	13.20%	8.32%	4.88%
6/20/1990	12.92%	8.32%	4.60%
6/27/1990	12.90%	8.33%	4.57%
6/29/1990	12.50%	8.33%	4.17%
7/6/1990	12.10%	8.34%	3.76%
7/6/1990	12.35%	8.34%	4.01%
8/10/1990	12.55%	8.41%	4.14%
8/16/1990	13.21%	8.43%	4.78%
8/22/1990	13.10%	8.45%	4.65%
8/24/1990	13.00%	8.46%	4.54%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%
10/5/1990	12.84%	8.62%	4.22%
10/19/1990	13.00%	8.67%	4.33%
10/25/1990	12.30%	8.68%	3.62%
11/21/1990	12.70%	8.69%	4.01%
12/13/1990	12.30%	8.67%	3.63%
12/17/1990	12.87%	8.67%	4.20%
12/18/1990	13.10%	8.67%	4.43%
12/19/1990	12.00%	8.66%	3.34%
12/20/1990	12.75%	8.66%	4.09%
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12/27/1990	12.79%	8.66%	4.13%
1/2/1991	13.10%	8.65%	4.45%
1/4/1991	12.50%	8.65%	3.85%
1/15/1991	12.75%	8.64%	4.11%
1/25/1991	11.70%	8.63%	3.07%
2/4/1991	12.50%	8.60%	3.90%
2/7/1991	12.50%	8.59%	3.91%
2/12/1991	13.00%	8.58%	4.43%
2/14/1991	12.72%	8.57%	4.15%
2/22/1991	12.80%	8.55%	4.25%
3/6/1991	13.10%	8.53%	4.57%
3/8/1991	12.30%	8.52%	3.78%
3/8/1991	13.00%	8.52%	4.48%
4/22/1991	13.00%	8.49%	4.51%
5/7/1991	13.50%	8.47%	5.03%
5/13/1991	13.25%	8.47%	4.78%

5/30/1991	12.75%	8.44%	4.31%
6/12/1991	12.00%	8.41%	3.59%
6/25/1991	11.70%	8.39%	3.31%
6/28/1991	12.50%	8.38%	4.12%
7/1/1991	12.00%	8.38%	3.62%
7/3/1991	12.50%	8.37%	4.13%
7/19/1991	12.10%	8.34%	3.76%
8/1/1991	12.90%	8.32%	4.58%
8/16/1991	13.20%	8.29%	4.91%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.25%	8.23%	4.02%
10/17/1991	13.00%	8.20%	4.80%
10/23/1991	12.50%	8.20%	4.30%
10/23/1991	12.55%	8.20%	4.35%
10/31/1991	11.80%	8.19%	3.61%
11/1/1991	12.00%	8.19%	3.81%
11/5/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.50%	8.18%	4.32%
11/27/1991	12.10%	8.18%	3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
1/9/1992	12.80%	8.09%	4.71%
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.06%	4.94%
1/27/1992	12.65%	8.05%	4.60%
1/31/1992	12.00%	8.04%	3.96%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.01%	4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.94%	3.51%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.93%	3.57%
5/5/1992	11.50%	7.89%	3.61%
5/12/1992	11.87%	7.88%	3.99%
5/12/1992	12.46%	7.88%	4.58%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/13/1992	13.50%	7.84%	5.66%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992	11.40%	7.71%	3.69%
9/30/1992	11.75%	7.70%	4.05%
10/2/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992	11.85%	7.68%	4.17%
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992	12.40%	7.66%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.63%	4.27%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993	11.90%	7.49%	4.41%
2/26/1993	11.80%	7.48%	4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.25%	4.50%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.23%	4.27%

5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.10%	4.28%
7/23/1993	10.46%	7.09%	3.37%
8/24/1993	11.50%	6.96%	4.54%
9/21/1993	10.50%	6.81%	3.69%
9/29/1993	11.47%	6.77%	4.70%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.57%	5.43%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993	10.55%	6.48%	4.07%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.47%	4.83%
1/4/1994	10.07%	6.44%	3.63%
1/13/1994	11.00%	6.42%	4.58%
1/21/1994	11.00%	6.40%	4.60%
1/28/1994	11.35%	6.39%	4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.39%	3.46%
11/9/1994	10.85%	7.39%	3.46%
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.49%	3.57%
12/8/1994	11.50%	7.54%	3.96%
12/8/1994	11.70%	7.54%	4.16%
12/14/1994	10.95%	7.56%	3.39%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%
1/9/1995	12.28%	7.64%	4.64%
1/31/1995	11.00%	7.69%	3.31%
2/10/1995	12.60%	7.70%	4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.71%	3.79%
3/20/1995	12.00%	7.72%	4.28%
3/23/1995	12.81%	7.72%	5.09%
3/29/1995	11.60%	7.72%	3.88%
4/6/1995	11.10%	7.71%	3.39%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995	11.63%	7.68%	3.95%
5/25/1995	11.20%	7.65%	3.55%
6/9/1995	11.25%	7.60%	3.65%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.52%	3.58%
9/11/1995	11.30%	7.20%	4.10%
9/27/1995	11.30%	7.12%	4.18%
9/27/1995	11.50%	7.12%	4.38%
9/27/1995	11.75%	7.12%	4.63%
9/29/1995	11.00%	7.11%	3.89%
11/9/1995	11.38%	6.90%	4.48%
11/9/1995	12.36%	6.90%	5.46%
11/17/1995	11.00%	6.86%	4.14%
12/4/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.70%	4.90%
12/27/1995	12.00%	6.66%	5.34%
2/5/1996	12.25%	6.48%	5.77%
3/29/1996	10.67%	6.42%	4.25%
4/8/1996	11.00%	6.42%	4.58%
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
4/24/1996	11.25%	6.43%	4.82%
4/30/1996	11.00%	6.43%	4.57%
5/13/1996	11.00%	6.44%	4.56%
5/23/1996	11.25%	6.43%	4.82%
6/25/1996	11.25%	6.48%	4.77%



6/27/1996	11.20%	6.48%	4.72%
8/12/1996	10.40%	6.57%	3.83%
9/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%
12/18/1996	11.75%	6.83%	4.92%
12/31/1996	11.50%	6.83%	4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.80%	3.22%
4/2/1997	11.65%	6.80%	4.85%
4/28/1997	11.50%	6.81%	4.69%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
2/2/1998	12.75%	6.39%	6.36%
3/2/1998	11.25%	6.29%	4.96%
3/6/1998	10.75%	6.27%	4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998	11.40%	5.94%	5.46%
9/15/1998	11.90%	5.78%	6.12%
11/30/1998	12.60%	5.58%	7.02%
12/10/1998	12.20%	5.54%	6.66%
12/17/1998	12.10%	5.52%	6.58%
2/5/1999	10.30%	5.38%	4.92%
3/4/1999	10.50%	5.34%	5.16%
4/6/1999	10.94%	5.32%	5.62%
7/29/1999	10.75%	5.52%	5.23%
9/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
1/7/2000	11.50%	6.05%	5.45%
1/7/2000	11.50%	6.05%	5.45%
2/17/2000	10.60%	6.17%	4.43%
3/28/2000	11.25%	6.20%	5.05%
5/24/2000	11.00%	6.18%	4.82%
7/18/2000	12.20%	6.16%	6.04%
9/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
1/23/2001	11.25%	5.79%	5.46%
2/8/2001	11.50%	5.77%	5.73%
5/8/2001	10.75%	5.62%	5.13%
6/26/2001	11.00%	5.62%	5.38%
7/25/2001	11.02%	5.60%	5.42%
7/25/2001	11.02%	5.60%	5.42%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001	10.50%	5.56%	4.94%
9/7/2001	10.75%	5.55%	5.20%
9/10/2001	11.00%	5.55%	5.45%
9/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/3/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
1/22/2002	10.00%	5.50%	4.50%
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002	10.17%	5.46%	4.71%
6/10/2002	12.00%	5.47%	6.53%
6/18/2002	11.16%	5.48%	5.68%
6/20/2002	11.00%	5.48%	5.52%
6/20/2002	12.30%	5.48%	6.82%
7/15/2002	11.00%	5.48%	5.52%
9/12/2002	12.30%	5.45%	6.85%
9/26/2002	10.45%	5.41%	5.04%
12/4/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
1/8/2003	11.10%	5.19%	5.91%
1/31/2003	12.45%	5.13%	7.32%
2/28/2003	12.30%	5.05%	7.25%
3/6/2003	10.75%	5.03%	5.72%
3/7/2003	9.96%	5.02%	4.94%
3/20/2003	12.00%	4.98%	7.02%
4/3/2003	12.00%	4.96%	7.04%
4/15/2003	11.15%	4.94%	6.21%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003	9.75%	4.79%	4.96%

7/16/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.80%	4.70%
8/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
1/13/2004	12.00%	4.95%	7.05%
3/2/2004	10.75%	4.99%	5.76%
3/26/2004	10.25%	5.02%	5.23%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.08%	5.17%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
7/16/2004	11.60%	5.11%	6.49%
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%
12/29/2004	9.85%	5.07%	4.78%
1/6/2005	10.70%	5.08%	5.62%
2/18/2005	10.30%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005	10.25%	4.87%	5.38%
5/18/2005	10.25%	4.78%	5.47%
5/25/2005	10.75%	4.76%	5.99%
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005	11.50%	4.64%	6.86%
8/5/2005	11.75%	4.62%	7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%
12/22/2005	11.15%	4.54%	6.61%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.53%	6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006	10.20%	4.83%	5.37%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.89%	4.66%
9/1/2006	10.54%	4.90%	5.64%
9/14/2006	10.00%	4.91%	5.09%
10/6/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/1/2006	10.25%	4.95%	5.30%
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
1/5/2007	10.00%	4.95%	5.05%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.90%	4.95%	5.95%

1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.87%	6.48%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007	9.67%	4.80%	4.87%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/22/2007	10.50%	4.83%	5.67%
6/28/2007	10.75%	4.84%	5.91%
7/12/2007	9.67%	4.86%	4.81%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
8/15/2007	10.40%	4.88%	5.52%
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/28/2008	9.40%	4.80%	4.60%
1/30/2008	10.00%	4.79%	5.21%
1/31/2008	10.71%	4.79%	5.92%
2/29/2008	10.25%	4.75%	5.50%
3/12/2008	10.25%	4.73%	5.52%
3/25/2008	9.10%	4.68%	4.42%
4/22/2008	10.25%	4.60%	5.65%
4/24/2008	10.10%	4.60%	5.50%
5/1/2008	10.70%	4.59%	6.11%
5/19/2008	11.00%	4.56%	6.44%
5/27/2008	10.00%	4.55%	5.45%
6/10/2008	10.70%	4.54%	6.16%
6/27/2008	10.50%	4.54%	5.96%
6/27/2008	11.04%	4.54%	6.50%
7/10/2008	10.43%	4.52%	5.91%
7/16/2008	9.40%	4.52%	4.88%
7/30/2008	10.80%	4.51%	6.29%
7/31/2008	10.70%	4.51%	6.19%
8/11/2008	10.25%	4.51%	5.74%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008	10.30%	4.50%	5.80%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.48%	5.72%
10/8/2008	10.15%	4.46%	5.69%
11/13/2008	10.55%	4.45%	6.10%
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.79%	6.21%
4/30/2009	11.25%	3.78%	7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%

5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%
7/17/2009	10.50%	3.78%	6.72%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.30%	6.70%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.70%	4.35%	6.35%
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41%	5.77%
3/2/2010	9.63%	4.41%	5.22%
3/4/2010	10.50%	4.41%	6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.10%	4.44%	5.66%
5/28/2010	10.20%	4.44%	5.76%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010	9.67%	4.43%	5.24%
6/28/2010	10.50%	4.43%	6.07%
6/30/2010	9.40%	4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.53%	4.43%	6.10%
7/15/2010	10.70%	4.43%	6.27%
7/30/2010	10.70%	4.41%	6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010	9.90%	4.37%	5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.33%	5.67%
9/16/2010	10.00%	4.33%	5.67%
9/30/2010	9.75%	4.29%	5.46%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010	10.70%	4.20%	6.50%
11/19/2010	10.20%	4.18%	6.02%
11/22/2010	10.00%	4.18%	5.82%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010	10.25%	4.15%	6.10%
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.15%	5.85%
12/20/2010	10.60%	4.15%	6.45%
12/21/2010	10.30%	4.14%	6.16%
12/27/2010	9.90%	4.14%	5.76%
12/29/2010	11.15%	4.14%	7.01%
1/5/2011	10.15%	4.13%	6.02%
1/12/2011	10.30%	4.12%	6.18%

1/13/2011	10.30%	4.12%	6.18%
1/18/2011	10.00%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.12%	5.48%
2/3/2011	10.00%	4.12%	5.88%
2/25/2011	10.00%	4.14%	5.86%
3/25/2011	9.80%	4.18%	5.62%
3/30/2011	10.00%	4.18%	5.82%
4/12/2011	10.00%	4.21%	5.79%
4/25/2011	10.74%	4.23%	6.51%
4/26/2011	9.67%	4.23%	5.44%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.24%	5.76%
5/4/2011	10.00%	4.24%	5.76%
5/24/2011	10.50%	4.27%	6.23%
6/8/2011	10.75%	4.30%	6.45%
6/16/2011	9.20%	4.32%	4.88%
6/17/2011	9.95%	4.32%	5.63%
7/13/2011	10.20%	4.36%	5.84%
8/1/2011	9.20%	4.39%	4.81%
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011	10.35%	4.37%	5.98%
8/19/2011	10.25%	4.36%	5.89%
9/2/2011	12.88%	4.32%	8.56%
9/22/2011	10.00%	4.24%	5.76%
10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%
12/14/2011	10.00%	3.80%	6.20%
12/14/2011	10.30%	3.80%	6.50%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.76%	6.44%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%
12/23/2011	10.19%	3.74%	6.45%
1/25/2012	10.50%	3.57%	6.93%
1/27/2012	10.50%	3.56%	6.94%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.44%	6.46%
2/27/2012	10.25%	3.43%	6.82%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012	10.37%	3.32%	7.05%
4/4/2012	10.00%	3.30%	6.70%
4/26/2012	10.00%	3.21%	6.79%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.17%	6.63%
5/15/2012	10.00%	3.14%	6.86%
5/29/2012	10.05%	3.11%	6.94%
6/7/2012	10.30%	3.08%	7.22%
6/14/2012	9.40%	3.06%	6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.06%	6.54%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.02%	6.78%
7/20/2012	9.31%	3.01%	6.30%
7/20/2012	9.81%	3.01%	6.80%
9/13/2012	9.80%	2.94%	6.86%
9/19/2012	9.80%	2.94%	6.86%
9/19/2012	10.05%	2.94%	7.11%
9/26/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.75%	2.89%	6.86%
11/29/2012	9.88%	2.89%	6.99%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.87%	6.84%
12/19/2012	10.25%	2.87%	7.38%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%

12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
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8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013	10.20%	3.31%	6.89%
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.48%	5.24%
12/9/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%
12/17/2013	10.95%	3.51%	7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%
12/30/2013	9.50%	3.54%	5.96%
2/20/2014	9.20%	3.68%	5.52%
2/26/2014	9.75%	3.69%	6.06%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
6/30/2014	9.55%	3.64%	5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%
7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.57%	6.18%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%
9/11/2014	9.60%	3.51%	6.09%
9/15/2014	10.25%	3.51%	6.74%
10/9/2014	9.80%	3.45%	6.35%
11/6/2014	9.56%	3.37%	6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.33%	6.37%
11/26/2014	10.20%	3.33%	6.87%
12/4/2014	9.68%	3.31%	6.37%
12/10/2014	9.25%	3.29%	5.96%
12/10/2014	9.25%	3.29%	5.96%
12/11/2014	10.07%	3.29%	6.78%
12/12/2014	10.20%	3.28%	6.92%
12/17/2014	9.17%	3.27%	5.90%
12/18/2014	9.83%	3.26%	6.57%
1/23/2015	9.50%	3.14%	6.36%

2/24/2015	9.83%	3.04%	6.79%
3/18/2015	9.75%	2.98%	6.77%
3/25/2015	9.50%	2.96%	6.54%
3/26/2015	9.72%	2.95%	6.77%
4/23/2015	10.20%	2.87%	7.33%
4/29/2015	9.53%	2.86%	6.67%
5/1/2015	9.60%	2.85%	6.75%
5/26/2015	9.75%	2.83%	6.92%
6/17/2015	9.00%	2.82%	6.18%
6/17/2015	9.00%	2.82%	6.18%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.00%	2.88%	7.12%
11/19/2015	10.30%	2.88%	7.42%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/15/2015	9.60%	2.91%	6.69%
12/17/2015	9.70%	2.91%	6.79%
12/18/2015	9.50%	2.91%	6.59%
12/30/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.94%	6.56%
2/23/2016	9.75%	2.94%	6.81%
3/16/2016	9.85%	2.91%	6.94%
4/29/2016	9.80%	2.83%	6.97%
6/3/2016	9.75%	2.80%	6.95%
6/8/2016	9.48%	2.80%	6.68%
6/15/2016	9.00%	2.79%	6.21%
6/15/2016	9.00%	2.79%	6.21%

# of Cases: 1,475  
Average: 4.51%

Constant Growth Discounted Cash Flow Model  
30 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.08	\$59.67	3.49%	3.57%	5.50%	5.00%	4.00%	4.83%	7.56%	8.40%	9.08%
Alliant Energy Corporation	LNT	\$1.18	\$38.20	3.08%	3.17%	6.10%	6.60%	6.00%	6.23%	9.17%	9.40%	9.78%
Ameren Corporation	AEE	\$1.70	\$50.12	3.39%	3.49%	6.10%	5.20%	6.00%	5.77%	8.68%	9.26%	9.60%
American Electric Power Company, Inc.	AEP	\$2.24	\$66.05	3.39%	3.47%	4.90%	4.10%	4.00%	4.33%	7.46%	7.80%	8.37%
Avista Corporation	AVA	\$1.37	\$41.65	3.29%	3.37%	5.00%	5.00%	5.00%	5.00%	8.37%	8.37%	8.37%
CMS Energy Corporation	CMS	\$1.24	\$42.95	2.89%	2.98%	6.40%	7.24%	6.00%	6.55%	8.97%	9.53%	10.23%
DTE Energy Company	DTE	\$3.08	\$92.91	3.32%	3.40%	5.80%	5.35%	5.00%	5.38%	8.40%	8.79%	9.21%
El Paso Electric Company	EE	\$1.24	\$45.30	2.74%	2.81%	6.70%	7.00%	2.50%	5.40%	5.27%	8.21%	9.83%
Entergy Corporation	ETR	\$3.40	\$77.45	4.39%	4.47%	NA	NA	3.50%	3.50%	7.97%	7.97%	7.97%
Eversource Energy	ES	\$1.78	\$56.36	3.16%	3.25%	6.30%	5.49%	6.00%	5.93%	8.73%	9.18%	9.56%
FirstEnergy Corp.	FE	\$1.44	\$33.34	4.32%	4.51%	NA	NA	9.00%	9.00%	13.51%	13.51%	13.51%
IDACORP, Inc.	IDA	\$2.04	\$74.50	2.74%	2.79%	4.00%	4.00%	3.00%	3.67%	5.78%	6.46%	6.79%
MGE Energy, Inc.	MGEE	\$1.18	\$53.30	2.21%	2.27%	NA	4.00%	7.00%	5.50%	6.26%	7.77%	9.29%
NorthWestern Corporation	NWE	\$2.00	\$59.68	3.35%	3.44%	5.00%	5.00%	6.50%	5.50%	8.43%	8.94%	9.96%
OGE Energy Corp.	OGE	\$1.10	\$30.95	3.55%	3.63%	5.20%	4.30%	3.00%	4.17%	6.61%	7.80%	8.85%
Otter Tail Corporation	OTTR	\$1.25	\$30.96	4.04%	4.16%	NA	6.00%	6.00%	6.00%	10.16%	10.16%	10.16%
Pinnacle West Capital Corporation	PNW	\$2.50	\$75.82	3.30%	3.36%	4.00%	3.73%	4.00%	3.91%	7.09%	7.27%	7.36%
PNM Resources, Inc.	PNM	\$0.88	\$33.49	2.63%	2.74%	7.60%	8.76%	9.00%	8.45%	10.33%	11.19%	11.75%
Portland General Electric Company	POR	\$1.28	\$41.86	3.06%	3.15%	6.40%	6.57%	5.50%	6.16%	8.64%	9.31%	9.73%
SCANA Corporation	SCG	\$2.30	\$71.01	3.24%	3.32%	5.30%	5.40%	4.50%	5.07%	7.81%	8.39%	8.73%
Wisconsin Energy Corporation	WEC	\$1.98	\$61.68	3.21%	3.31%	6.30%	6.77%	6.00%	6.36%	9.31%	9.67%	10.09%
Xcel Energy Inc.	XEL	\$1.36	\$42.20	3.22%	3.31%	5.30%	5.27%	5.50%	5.36%	8.58%	8.67%	8.81%
PROXY GROUP MEAN				3.27%	3.36%	5.66%	5.54%	5.32%	5.55%	8.32%	8.91%	9.41%
PROXY GROUP MEDIAN				3.26%	3.34%	5.65%	5.31%	5.50%	5.45%	8.42%	8.73%	9.42%

Notes:

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional, equals 30-trading day average as of June 30, 2016
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + 0.5 x [8])
- [5] Source: Zacks
- [6] Source: Yahoo! Finance
- [7] Source: Value Line
- [8] Equals Average([5], [6], [7])
- [9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
- [10] Equals [4] + [8]
- [11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])



Constant Growth Discounted Cash Flow Model - Combination Group  
90 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.08	\$57.08	3.64%	3.73%	5.50%	5.00%	4.00%	4.83%	7.72%	8.57%	9.24%
Alliant Energy Corporation	LNT	\$1.18	\$36.64	3.21%	3.31%	6.10%	6.60%	6.00%	6.23%	9.30%	9.54%	9.91%
Ameren Corporation	AEE	\$1.70	\$48.90	3.48%	3.58%	6.10%	5.20%	6.00%	5.77%	8.77%	9.34%	9.68%
American Electric Power Company, Inc.	AEP	\$2.24	\$65.03	3.44%	3.52%	4.90%	4.10%	4.00%	4.33%	7.51%	7.85%	8.43%
Avista Corporation	AVA	\$1.37	\$40.48	3.38%	3.47%	5.00%	5.00%	5.00%	5.00%	8.47%	8.47%	8.47%
CMS Energy Corporation	CMS	\$1.24	\$41.70	2.97%	3.07%	6.40%	7.24%	6.00%	6.55%	9.06%	9.62%	10.32%
DTE Energy Company	DTE	\$3.08	\$89.93	3.42%	3.52%	5.80%	5.35%	5.00%	5.38%	8.51%	8.90%	9.32%
El Paso Electric Company	EE	\$1.24	\$44.56	2.78%	2.86%	6.70%	7.00%	2.50%	5.40%	5.32%	8.26%	9.88%
Entergy Corporation	ETR	\$3.40	\$76.55	4.44%	4.52%	NA	NA	3.50%	3.50%	8.02%	8.02%	8.02%
Eversource Energy	ES	\$1.78	\$56.58	3.15%	3.24%	6.30%	5.49%	6.00%	5.93%	8.72%	9.17%	9.54%
FirstEnergy Corp.	FE	\$1.44	\$34.24	4.21%	4.40%	NA	NA	9.00%	9.00%	13.40%	13.40%	13.40%
IDACORP, Inc.	IDA	\$2.04	\$73.58	2.77%	2.82%	4.00%	4.00%	3.00%	3.67%	5.81%	6.49%	6.83%
MGE Energy, Inc.	MGEE	\$1.18	\$51.38	2.30%	2.36%	NA	4.00%	7.00%	5.50%	6.34%	7.86%	9.38%
NorthWestern Corporation	NWE	\$2.00	\$59.59	3.36%	3.45%	5.00%	5.00%	6.50%	5.50%	8.44%	8.95%	9.97%
OGE Energy Corp.	OGE	\$1.10	\$29.13	3.78%	3.86%	5.20%	4.30%	3.00%	4.17%	6.83%	8.02%	9.07%
Otter Tail Corporation	OTTR	\$1.25	\$29.44	4.25%	4.37%	NA	6.00%	6.00%	6.00%	10.37%	10.37%	10.37%
Pinnacle West Capital Corporation	PNW	\$2.50	\$73.65	3.39%	3.46%	4.00%	3.73%	4.00%	3.91%	7.19%	7.37%	7.46%
PNM Resources, Inc.	PNM	\$0.88	\$32.94	2.67%	2.78%	7.60%	8.76%	9.00%	8.45%	10.37%	11.24%	11.79%
Portland General Electric Company	POR	\$1.28	\$40.24	3.18%	3.28%	6.40%	6.57%	5.50%	6.16%	8.77%	9.44%	9.86%
SCANA Corporation	SCG	\$2.30	\$69.22	3.32%	3.41%	5.30%	5.40%	4.50%	5.07%	7.90%	8.47%	8.81%
Wisconsin Energy Corporation	WEC	\$1.98	\$59.53	3.33%	3.43%	6.30%	6.77%	6.00%	6.36%	9.43%	9.79%	10.21%
Xcel Energy Inc.	XEL	\$1.36	\$41.15	3.31%	3.39%	5.30%	5.27%	5.50%	5.36%	8.66%	8.75%	8.90%
PROXY GROUP MEAN				3.35%	3.45%	5.66%	5.54%	5.32%	5.55%	8.41%	8.99%	9.49%
PROXY GROUP MEDIAN				3.34%	3.44%	5.65%	5.31%	5.50%	5.45%	8.49%	8.83%	9.46%

Notes:

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional, equals 90-trading day average as of June 30, 2016
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + 0.5 x [8])
- [5] Source: Zacks
- [6] Source: Yahoo! Finance
- [7] Source: Value Line
- [8] Equals Average([5], [6], [7])
- [9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
- [10] Equals [4] + [8]
- [11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model - Combination Group  
180 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.08	\$54.07	3.85%	3.94%	5.50%	5.00%	4.00%	4.83%	7.92%	8.77%	9.45%
Alliant Energy Corporation	LNT	\$1.18	\$33.83	3.47%	3.58%	6.10%	6.60%	6.00%	6.23%	9.58%	9.81%	10.19%
Ameren Corporation	AEE	\$1.70	\$46.40	3.66%	3.77%	6.10%	5.20%	6.00%	5.77%	8.96%	9.54%	9.88%
American Electric Power Company, Inc.	AEP	\$2.24	\$61.54	3.64%	3.72%	4.90%	4.10%	4.00%	4.33%	7.71%	8.05%	8.63%
Avista Corporation	AVA	\$1.37	\$37.83	3.62%	3.71%	5.00%	5.00%	5.00%	5.00%	8.71%	8.71%	8.71%
CMS Energy Corporation	CMS	\$1.24	\$39.10	3.17%	3.27%	6.40%	7.24%	6.00%	6.55%	9.27%	9.82%	10.53%
DTE Energy Company	DTE	\$3.08	\$85.80	3.59%	3.69%	5.80%	5.35%	5.00%	5.38%	8.68%	9.07%	9.49%
El Paso Electric Company	EE	\$1.24	\$41.72	2.97%	3.05%	6.70%	7.00%	2.50%	5.40%	5.51%	8.45%	10.08%
Entergy Corporation	ETR	\$3.40	\$72.44	4.69%	4.78%	NA	NA	3.50%	3.50%	8.28%	8.28%	8.28%
Eversource Energy	ES	\$1.78	\$54.15	3.29%	3.38%	6.30%	5.49%	6.00%	5.93%	8.87%	9.31%	9.69%
FirstEnergy Corp.	FE	\$1.44	\$33.04	4.36%	4.55%	NA	NA	9.00%	9.00%	13.55%	13.55%	13.55%
IDACORP, Inc.	IDA	\$2.04	\$70.82	2.88%	2.93%	4.00%	4.00%	3.00%	3.67%	5.92%	6.60%	6.94%
MGE Energy, Inc.	MGEE	\$1.18	\$48.29	2.44%	2.51%	NA	4.00%	7.00%	5.50%	6.49%	8.01%	9.53%
NorthWestern Corporation	NWE	\$2.00	\$57.21	3.50%	3.59%	5.00%	5.00%	6.50%	5.50%	8.58%	9.09%	10.11%
OGE Energy Corp.	OGE	\$1.10	\$27.72	3.97%	4.05%	5.20%	4.30%	3.00%	4.17%	7.03%	8.22%	9.27%
Otter Tail Corporation	OTTR	\$1.25	\$28.18	4.44%	4.57%	NA	6.00%	6.00%	6.00%	10.57%	10.57%	10.57%
Pinnacle West Capital Corporation	PNW	\$2.50	\$69.12	3.62%	3.69%	4.00%	3.73%	4.00%	3.91%	7.41%	7.60%	7.69%
PNM Resources, Inc.	PNM	\$0.88	\$31.32	2.81%	2.93%	7.60%	8.76%	9.00%	8.45%	10.52%	11.38%	11.94%
Portland General Electric Company	POR	\$1.28	\$38.74	3.30%	3.41%	6.40%	6.57%	5.50%	6.16%	8.90%	9.56%	9.98%
SCANA Corporation	SCG	\$2.30	\$64.86	3.55%	3.64%	5.30%	5.40%	4.50%	5.07%	8.13%	8.70%	9.04%
Wisconsin Energy Corporation	WEC	\$1.98	\$55.89	3.54%	3.66%	6.30%	6.77%	6.00%	6.36%	9.65%	10.01%	10.43%
Xcel Energy Inc.	XEL	\$1.36	\$38.85	3.50%	3.59%	5.30%	5.27%	5.50%	5.36%	8.86%	8.95%	9.10%
PROXY GROUP MEAN				3.54%	3.64%	5.66%	5.54%	5.32%	5.55%	8.60%	9.19%	9.69%
PROXY GROUP MEDIAN				3.54%	3.65%	5.65%	5.31%	5.50%	5.45%	8.70%	9.01%	9.61%

Notes:

- [1] Source: Bloomberg Professional
- [2] Source: Bloomberg Professional, equals 180-trading day average as of June 30, 2016
- [3] Equals [1] / [2]
- [4] Equals [3] x (1 + 0.5 x [8])
- [5] Source: Zacks
- [6] Source: Yahoo! Finance
- [7] Source: Value Line
- [8] Equals Average([5], [6], [7])
- [9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
- [10] Equals [4] + [8]
- [11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

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

Inputs	[1] Stock	[2] [3] [4] [5] EPS Growth Rate Estimates				[6] Long-Term	[7]	[8] [9] Payout Ratio			[10] [11] Iterative Solution		[12] Terminal	[13] Terminal			
		Price	Zacks	First Call	Value Line			Average	Growth	2016	2020	2026			Proof	IRR	P/E Ratio
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio			
ALLETE, Inc.	ALE	\$59.67	5.50%	5.00%	4.00%	4.83%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	9.51%	16.83	3.16			
Alliant Energy Corporation	LNT	\$38.20	6.10%	6.00%	6.00%	6.23%	5.32%	64.00%	61.00%	66.88%	(\$0.00)	8.87%	19.84	3.73			
Ameren Corporation	AEE	\$50.12	6.10%	5.20%	6.00%	5.77%	5.32%	68.00%	64.00%	66.88%	(\$0.00)	9.06%	18.87	3.54			
American Electric Power Company, Inc.	AEP	\$66.05	4.90%	4.10%	4.00%	4.33%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	9.23%	18.04	3.39			
Avista Corporation	AVA	\$41.65	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	(\$0.00)	8.70%	20.85	3.92			
CMS Energy Corporation	CMS	\$42.95	6.40%	7.24%	6.00%	6.55%	5.32%	63.00%	62.00%	66.88%	(\$0.00)	8.93%	19.51	3.67			
DTE Energy Company	DTE	\$92.91	5.80%	5.35%	5.00%	5.38%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	8.96%	19.39	3.64			
El Paso Electric Company	EE	\$45.30	6.70%	7.00%	2.50%	5.40%	5.32%	59.00%	61.00%	66.88%	(\$0.00)	8.71%	20.78	3.90			
Energy Corporation	ETR	\$77.45	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	\$0.00	10.39%	13.90	2.61			
Eversource Energy	ES	\$56.36	6.30%	5.49%	6.00%	5.93%	5.32%	60.00%	58.00%	66.88%	(\$0.00)	9.14%	18.44	3.46			
FirstEnergy Corp.	FE	\$33.34	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	10.83%	12.79	2.40			
IDACORP, Inc.	IDA	\$74.50	4.00%	4.00%	3.00%	3.67%	5.32%	53.00%	60.00%	66.88%	(\$0.00)	8.80%	20.26	3.81			
MGE Energy, Inc.	MGEE	\$53.30	NA	4.00%	7.00%	5.50%	5.32%	56.00%	44.00%	66.88%	(\$0.00)	8.17%	24.70	4.64			
NorthWestern Corporation	NWE	\$59.68	5.00%	5.00%	6.00%	5.50%	5.32%	65.00%	59.00%	66.88%	(\$0.00)	9.03%	19.00	3.57			
OGE Energy Corp.	OGE	\$30.95	5.20%	4.30%	3.00%	4.17%	5.32%	67.00%	70.00%	66.88%	(\$0.00)	9.24%	17.98	3.38			
Otter Tail Corporation	OTTR	\$30.96	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	(\$0.00)	9.39%	17.32	3.26			
Pinnacle West Capital Corporation	PNW	\$75.82	4.00%	3.73%	4.00%	3.91%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	8.91%	19.63	3.69			
PNM Resources, Inc.	PNM	\$33.49	7.60%	8.76%	9.00%	8.45%	5.32%	51.00%	55.00%	66.88%	(\$0.00)	9.75%	15.89	2.99			
Portland General Electric Company	POR	\$41.86	6.40%	6.57%	5.50%	6.16%	5.32%	56.00%	56.00%	66.88%	(\$0.00)	9.15%	18.40	3.46			
SCANA Corporation	SCG	\$71.01	5.30%	5.40%	4.50%	5.07%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	9.29%	17.75	3.33			
Wisconsin Energy Corporation	WEC	\$61.68	6.30%	6.77%	6.00%	6.36%	5.32%	68.00%	67.00%	66.88%	(\$0.00)	8.43%	22.69	4.26			
Xcel Energy Inc.	XEL	\$42.20	5.30%	5.27%	5.50%	5.36%	5.32%	62.00%	63.00%	66.88%	(\$0.00)	9.11%	18.62	3.50			
												MEAN	9.16%				
												MAX	10.83%				
												MIN	8.17%				

Projected Annual Earnings per Share	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.77	\$6.08	\$6.41	\$6.75	\$7.11	\$7.48
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.73	\$3.92	\$4.13
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63
American Electric Power Company, Inc.	AEP	\$3.59	\$3.75	\$3.91	\$4.08	\$4.25	\$4.44	\$4.64	\$4.85	\$5.09	\$5.34	\$5.62	\$5.92	\$6.23	\$6.56	\$6.91	\$7.28	\$7.67
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.01	\$2.15	\$2.29	\$2.44	\$2.60	\$2.76	\$2.93	\$3.10	\$3.28	\$3.46	\$3.65	\$3.84	\$4.04	\$4.26	\$4.49	\$4.73
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.77	\$7.13	\$7.51	\$7.91	\$8.33	\$8.77	\$9.24	\$9.73	\$10.25
El Paso Electric Company	EE	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$3.43	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68
Energy Corporation	ETR	\$6.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.92	\$3.10	\$3.28	\$3.48	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.10	\$5.37	\$5.65	\$5.96	\$6.27	\$6.61
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$4.01	\$4.16	\$4.31	\$4.47	\$4.63	\$4.82	\$5.02	\$5.24	\$5.50	\$5.77	\$6.08	\$6.40	\$6.74	\$7.10	\$7.48	\$7.88
MGE Energy, Inc.	MGEE	\$2.06	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$3.16	\$3.33	\$3.50	\$3.69	\$3.89	\$4.09	\$4.31	\$4.54	\$4.78
NorthWestern Corporation	NWE	\$2.90	\$3.06	\$3.23	\$3.41	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.47	\$5.76	\$6.07	\$6.39	\$6.73
OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.83	\$1.91	\$1.99	\$2.07	\$2.16	\$2.26	\$2.37	\$2.49	\$2.61	\$2.75	\$2.90	\$3.05	\$3.22	\$3.39	\$3.57
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.23	\$4.40	\$4.57	\$4.75	\$4.95	\$5.16	\$5.40	\$5.66	\$5.95	\$6.27	\$6.60	\$6.95	\$7.32	\$7.71	\$8.12
PNM Resources, Inc.	PNM	\$1.64	\$1.78	\$1.93	\$2.09	\$2.27	\$2.46	\$2.66	\$2.85	\$3.05	\$3.24	\$3.43	\$3.62	\$3.81	\$4.01	\$4.22	\$4.45	\$4.69
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.30	\$2.44	\$2.59	\$2.75	\$2.92	\$3.09	\$3.26	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.97	\$6.28	\$6.62	\$6.97	\$7.34	\$7.73	\$8.14	\$8.58
Wisconsin Energy Corporation	WEC	\$2.34	\$2.49	\$2.65	\$2.82	\$2.99	\$3.18	\$3.38	\$3.58	\$3.79	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.46	\$2.59	\$2.73	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58	\$4.83

Projected Annual Dividend Payout Ratio	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]	
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	65.96%	66.94%	67.92%	68.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%					

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$125.92	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$82.00	
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$106.24	
American Electric Power Company, Inc.	AEP	\$2.40	\$2.53	\$2.67	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$138.31	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.30	
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$92.20	
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$198.64	
El Paso Electric Company	EE	\$1.26	\$1.34	\$1.43	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$97.26	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$162.41	
Eversource Energy	ES	\$1.75	\$1.84	\$1.94	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$121.82	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$75.89	
IDACORP, Inc.	IDA	\$2.13	\$2.28	\$2.44	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$159.67	
MGE Energy, Inc.	MGEE	\$1.22	\$1.22	\$1.21	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$118.15	
NorthWestern Corporation	NWE	\$1.99	\$2.05	\$2.11	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$127.93	
OG Energy Corp.	OG	\$1.18	\$1.24	\$1.31	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$64.15	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$65.02	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$159.45	
PNM Resources, Inc.	PNM	\$0.91	\$1.00	\$1.11	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$74.46	
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$91.28	
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$152.23	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$130.97	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$89.86	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$59.67)	\$0.00	\$1.18	\$2.40	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$130.93
Alliant Energy Corporation	LNT	(\$38.20)	\$0.00	\$0.58	\$1.18	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$84.76
Ameren Corporation	AEE	(\$50.12)	\$0.00	\$0.86	\$1.76	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$110.01
American Electric Power Company, Inc.	AEP	(\$66.05)	\$0.00	\$1.21	\$2.45	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$143.44
Avista Corporation	AVA	(\$41.65)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.13
CMS Energy Corporation	CMS	(\$42.95)	\$0.00	\$0.64	\$1.31	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$95.36
DTE Energy Company	DTE	(\$92.91)	\$0.00	\$1.49	\$3.03	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$205.49
El Paso Electric Company	EE	(\$45.30)	\$0.00	\$0.64	\$1.30	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$100.39
Energy Corporation	ETR	(\$77.45)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$170.22	
Eversource Energy	ES	(\$56.36)	\$0.00	\$0.88	\$1.81	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$126.24
FirstEnergy Corp.	FE	(\$33.34)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$79.86
IDACORP, Inc.	IDA	(\$74.50)	\$0.00	\$1.07	\$2.17	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$164.94
MGE Energy, Inc.	MGEE	(\$53.30)	\$0.00	\$0.61	\$1.25	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$121.34
NorthWestern Corporation	NWE	(\$59.68)	\$0.00	\$1.00	\$2.04	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$132.44
OG Energy Corp.	OG	(\$30.95)	\$0.00	\$0.59	\$1.20	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$66.54
Otter Tail Corporation	OTTR	(\$30.96)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$67.53
Pinnacle West Capital Corporation	PNW	(\$75.82)	\$0.00	\$1.31	\$2.66	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$164.88
PNM Resources, Inc.	PNM	(\$33.49)	\$0.00	\$0.46	\$0.95	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$77.60
Portland General Electric Company	POR	(\$41.86)	\$0.00	\$0.61	\$1.25	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$94.60
SCANA Corporation	SCG	(\$71.01)	\$0.00	\$1.19	\$2.42	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$157.97
Wisconsin Energy Corporation	WEC	(\$61.68)	\$0.00	\$0.85	\$1.75	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$134.83
Xcel Energy Inc.	XEL	(\$42.20)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$93.08

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

Inputs	[1] Stock	[2] EPS Growth Rate Estimates					[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Zacks	First Call	Value Line	Average	Growth	Long-Term	Payout Ratio	Iterative Solution	Terminal	Terminal						
Company	Ticker	Price															
ALLETE, Inc.	ALE	\$57.08	5.50%	5.00%	4.00%	4.83%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	9.70%	16.08	3.02			
Alliant Energy Corporation	LNT	\$36.64	6.10%	6.60%	6.00%	6.23%	5.32%	64.00%	61.00%	66.88%	(\$0.00)	9.03%	19.01	3.57			
Ameren Corporation	AEE	\$48.90	6.10%	5.20%	6.00%	5.77%	5.32%	68.00%	64.00%	66.88%	(\$0.00)	9.15%	18.39	3.46			
American Electric Power Company, Inc.	AEP	\$65.03	4.90%	4.10%	4.00%	4.33%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	9.29%	17.75	3.34			
Avista Corporation	AVA	\$40.48	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	(\$0.00)	8.80%	20.25	3.80			
CMS Energy Corporation	CMS	\$41.70	6.40%	7.24%	6.00%	6.55%	5.32%	63.00%	62.00%	66.88%	(\$0.00)	9.04%	18.94	3.56			
DTE Energy Company	DTE	\$89.93	5.80%	5.35%	5.00%	5.38%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.08%	18.75	3.52			
El Paso Electric Company	EE	\$44.56	6.70%	7.00%	2.50%	5.40%	5.32%	59.00%	61.00%	66.88%	(\$0.00)	8.77%	20.44	3.84			
Energy Corporation	ETR	\$76.55	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	10.45%	13.73	2.58			
Eversource Energy	ES	\$56.58	6.30%	5.49%	6.00%	5.93%	5.32%	60.00%	58.00%	66.88%	(\$0.00)	9.13%	18.51	3.48			
FirstEnergy Corp.	FE	\$34.24	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	10.69%	13.12	2.46			
IDACORP, Inc.	IDA	\$73.58	4.00%	4.00%	3.00%	3.67%	5.32%	53.00%	60.00%	66.88%	(\$0.00)	8.84%	20.01	3.76			
MGE Energy, Inc.	MGEE	\$51.38	NA	4.00%	7.00%	5.50%	5.32%	56.00%	44.00%	66.88%	(\$0.00)	8.28%	23.83	4.48			
NorthWestern Corporation	NWE	\$59.59	5.00%	5.00%	5.00%	5.50%	5.32%	65.00%	59.00%	66.88%	(\$0.00)	9.04%	18.97	3.56			
OGE Energy Corp.	OGE	\$29.13	5.20%	4.30%	3.00%	4.17%	5.32%	67.00%	70.00%	66.88%	(\$0.00)	9.49%	16.88	3.17			
Otter Tail Corporation	OTTR	\$29.44	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	(\$0.00)	9.61%	16.45	3.09			
Pinnacle West Capital Corporation	PNW	\$73.65	4.00%	3.73%	4.00%	3.91%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	9.02%	19.05	3.58			
PNM Resources, Inc.	PNM	\$32.94	7.60%	8.76%	9.00%	8.45%	5.32%	51.00%	55.00%	66.88%	(\$0.00)	9.83%	15.64	2.94			
Portland General Electric Company	POR	\$40.24	6.40%	6.57%	5.50%	6.16%	5.32%	56.00%	56.00%	66.88%	(\$0.00)	9.31%	17.68	3.32			
SCANA Corporation	SCG	\$69.22	5.30%	5.40%	4.50%	5.07%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	9.40%	17.29	3.25			
Wisconsin Energy Corporation	WEC	\$59.53	6.30%	6.77%	6.00%	6.36%	5.32%	68.00%	67.00%	66.88%	(\$0.00)	8.54%	21.88	4.11			
Xcel Energy Inc.	XEL	\$41.15	5.30%	5.27%	5.50%	5.36%	5.32%	62.00%	63.00%	66.88%	(\$0.00)	9.20%	18.15	3.41			
												MEAN	9.26%				
												MAX	10.69%				
												MIN	8.28%				

Projected Annual Earnings per Share	Company	Ticker	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.77	\$6.08	\$6.41	\$6.75	\$7.11	\$7.48	
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.73	\$3.92	\$4.13	
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	
American Electric Power Company, Inc.	AEP	\$3.59	\$3.75	\$3.91	\$4.08	\$4.25	\$4.44	\$4.64	\$4.85	\$5.09	\$5.34	\$5.62	\$5.92	\$6.23	\$6.56	\$6.91	\$7.28	\$7.67	
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23	
CMS Energy Corporation	CMS	\$1.89	\$2.01	\$2.15	\$2.29	\$2.44	\$2.60	\$2.76	\$2.93	\$3.10	\$3.28	\$3.46	\$3.65	\$3.84	\$4.04	\$4.26	\$4.49	\$4.73	
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.77	\$7.13	\$7.51	\$7.91	\$8.33	\$8.77	\$9.24	\$9.73	\$10.25	
El Paso Electric Company	EE	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$3.43	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68	
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69	
Eversource Energy	ES	\$2.76	\$2.92	\$3.10	\$3.28	\$3.48	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.10	\$5.37	\$5.65	\$5.96	\$6.27	\$6.61	
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93	
IDACORP, Inc.	IDA	\$3.87	\$4.01	\$4.16	\$4.31	\$4.47	\$4.63	\$4.82	\$5.02	\$5.24	\$5.50	\$5.77	\$6.08	\$6.40	\$6.74	\$7.10	\$7.48	\$7.88	
MGE Energy, Inc.	MGEE	\$2.06	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$3.16	\$3.33	\$3.50	\$3.69	\$3.89	\$4.09	\$4.31	\$4.54	\$4.78	
NorthWestern Corporation	NWE	\$2.90	\$3.06	\$3.23	\$3.41	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.47	\$5.76	\$6.07	\$6.39	\$6.73	
OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.83	\$1.91	\$1.99	\$2.07	\$2.16	\$2.26	\$2.37	\$2.49	\$2.61	\$2.75	\$2.90	\$3.05	\$3.22	\$3.39	\$3.57	
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75	
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.23	\$4.40	\$4.57	\$4.75	\$4.95	\$5.16	\$5.40	\$5.66	\$5.95	\$6.27	\$6.60	\$6.95	\$7.32	\$7.71	\$8.12	
PNM Resources, Inc.	PNM	\$1.64	\$1.78	\$1.93	\$2.09	\$2.27	\$2.46	\$2.66	\$2.85	\$3.05	\$3.24	\$3.43	\$3.62	\$3.81	\$4.01	\$4.22	\$4.45	\$4.69	
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.30	\$2.44	\$2.59	\$2.75	\$2.92	\$3.09	\$3.26	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96	
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.97	\$6.28	\$6.62	\$6.97	\$7.34	\$7.73	\$8.14	\$8.58	
Wisconsin Energy Corporation	WEC	\$2.34	\$2.49	\$2.65	\$2.82	\$2.99	\$3.18	\$3.38	\$3.58	\$3.79	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77	
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.46	\$2.59	\$2.73	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58	\$4.83	

Projected Annual Dividend Payout Ratio	Company	Ticker	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	65.86%	66.84%	67.82%	68.80%	69.78%	70.76%	71.74%	72.72%	73.70%	74.68%	75.66%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	56.88%	58.03%	59.18%	60.33%	61.48%	62.63%	63.78%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.													

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2031	Value
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$120.32	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$78.59	
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$103.59	
American Electric Power Company, Inc.	AEP	\$2.40	\$2.53	\$2.67	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$136.12	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$85.75	
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$89.48	
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$192.17	
El Paso Electric Company	EE	\$1.26	\$1.34	\$1.43	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$95.66	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$160.45	
Eversource Energy	ES	\$1.75	\$1.84	\$1.94	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$122.31	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$77.84	
IDACORP, Inc.	IDA	\$2.13	\$2.28	\$2.44	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$157.69	
MGE Energy, Inc.	MGEE	\$1.22	\$1.22	\$1.21	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$113.96	
NorthWestern Corporation	NWE	\$1.99	\$2.05	\$2.11	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$127.73	
OG Energy Corp.	OG	\$1.18	\$1.24	\$1.31	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$60.22	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$61.72	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$154.76	
PNM Resources, Inc.	PNM	\$0.91	\$1.00	\$1.11	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$73.27	
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$87.75	
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$148.34	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$126.29	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$87.58	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$57.08)	\$0.00	\$1.18	\$2.40	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$125.33
Alliant Energy Corporation	LNT	(\$36.64)	\$0.00	\$0.58	\$1.18	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$81.36
Ameren Corporation	AEE	(\$48.90)	\$0.00	\$0.86	\$1.76	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$107.35
American Electric Power Company, Inc.	AEP	(\$65.03)	\$0.00	\$1.21	\$2.45	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$141.25
Avista Corporation	AVA	(\$40.48)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.58
CMS Energy Corporation	CMS	(\$41.70)	\$0.00	\$0.64	\$1.31	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$92.64
DTE Energy Company	DTE	(\$89.93)	\$0.00	\$1.49	\$3.03	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$199.02
El Paso Electric Company	EE	(\$44.56)	\$0.00	\$0.64	\$1.30	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$98.79
Energy Corporation	ETR	(\$76.55)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$168.27	
Eversource Energy	ES	(\$56.58)	\$0.00	\$0.88	\$1.81	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$126.72
FirstEnergy Corp.	FE	(\$34.24)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$81.81
IDACORP, Inc.	IDA	(\$73.58)	\$0.00	\$1.07	\$2.17	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$162.96
MGE Energy, Inc.	MGEE	(\$51.38)	\$0.00	\$0.61	\$1.25	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$117.16
NorthWestern Corporation	NWE	(\$59.59)	\$0.00	\$1.00	\$2.04	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$132.23
OG Energy Corp.	OG	(\$29.13)	\$0.00	\$0.59	\$1.20	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$62.60
Otter Tail Corporation	OTTR	(\$29.44)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$64.23
Pinnacle West Capital Corporation	PNW	(\$73.65)	\$0.00	\$1.31	\$2.66	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$160.19
PNM Resources, Inc.	PNM	(\$32.94)	\$0.00	\$0.46	\$0.95	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$76.40
Portland General Electric Company	POR	(\$40.24)	\$0.00	\$0.61	\$1.25	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$91.07
SCANA Corporation	SCG	(\$69.22)	\$0.00	\$1.19	\$2.42	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$154.07
Wisconsin Energy Corporation	WEC	(\$59.53)	\$0.00	\$0.85	\$1.75	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$130.15
Xcel Energy Inc.	XEL	(\$41.15)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$90.81

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

Inputs	[1] Stock	[2]-[5] EPS Growth Rate Estimates				[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	
		Zacks	First Call	Value Line	Average	Growth	2016	2020	2026	Iterative Solution	Terminal	Terminal		
Company	Ticker	Price												
ALLETE, Inc.	ALE	\$54.07	5.50%	5.00%	4.00%	4.83%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	9.95%	15.21	2.86
Alliant Energy Corporation	LNT	\$33.83	6.10%	6.60%	6.00%	6.23%	5.32%	64.00%	61.00%	66.88%	(\$0.00)	9.34%	17.54	3.30
Ameren Corporation	AEE	\$46.40	6.10%	5.20%	6.00%	5.77%	5.32%	68.00%	64.00%	66.88%	(\$0.00)	9.36%	17.43	3.28
American Electric Power Company, Inc.	AEP	\$61.54	4.90%	4.10%	4.00%	4.33%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	9.52%	16.76	3.15
Avista Corporation	AVA	\$37.83	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	(\$0.00)	9.05%	18.89	3.55
CMS Energy Corporation	CMS	\$39.10	6.40%	7.24%	6.00%	6.55%	5.32%	63.00%	62.00%	66.88%	(\$0.00)	9.29%	17.74	3.33
DTE Energy Company	DTE	\$85.80	5.80%	5.35%	5.00%	5.38%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.26%	17.88	3.36
El Paso Electric Company	EE	\$41.72	6.70%	7.00%	2.50%	5.40%	5.32%	59.00%	61.00%	66.88%	(\$0.00)	9.01%	19.12	3.59
Energy Corporation	ETR	\$72.44	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	10.75%	12.97	2.44
Eversource Energy	ES	\$54.15	6.30%	5.49%	6.00%	5.93%	5.32%	60.00%	58.00%	66.88%	(\$0.00)	9.30%	17.71	3.33
FirstEnergy Corp.	FE	\$33.04	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	(\$0.00)	10.88%	12.67	2.38
IDACORP, Inc.	IDA	\$70.82	4.00%	4.00%	3.00%	3.67%	5.32%	53.00%	60.00%	66.88%	(\$0.00)	8.98%	19.25	3.62
MGE Energy, Inc.	MGEE	\$48.29	NA	4.00%	7.00%	5.50%	5.32%	56.00%	44.00%	66.88%	(\$0.00)	8.46%	22.42	4.21
NorthWestern Corporation	NWE	\$57.21	5.00%	5.00%	6.50%	5.50%	5.32%	65.00%	59.00%	66.88%	(\$0.00)	9.19%	18.20	3.42
OGE Energy Corp.	OGE	\$27.72	5.20%	4.30%	3.00%	4.17%	5.32%	67.00%	70.00%	66.88%	(\$0.00)	9.72%	16.03	3.01
Otter Tail Corporation	OTTR	\$28.18	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	(\$0.00)	9.80%	15.72	2.95
Pinnacle West Capital Corporation	PNW	\$69.12	4.00%	3.73%	4.00%	3.91%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	9.27%	17.84	3.35
PNM Resources, Inc.	PNM	\$31.32	7.60%	8.76%	9.00%	8.45%	5.32%	51.00%	55.00%	66.88%	(\$0.00)	10.05%	14.88	2.80
Portland General Electric Company	POR	\$38.74	6.40%	6.57%	5.50%	6.16%	5.32%	56.00%	56.00%	66.88%	(\$0.00)	9.46%	17.03	3.20
SCANA Corporation	SCG	\$64.86	5.30%	5.40%	4.50%	5.07%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	9.67%	16.19	3.04
Wisconsin Energy Corporation	WEC	\$55.89	6.30%	6.77%	6.00%	6.36%	5.32%	68.00%	67.00%	66.88%	(\$0.00)	8.76%	20.51	3.85
Xcel Energy Inc.	XEL	\$38.85	5.30%	5.27%	5.50%	5.36%	5.32%	62.00%	63.00%	66.88%	(\$0.00)	9.44%	17.12	3.22
											MEAN	9.48%		
											MAX	10.88%		
											MIN	8.46%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.77	\$6.08	\$6.41	\$6.75	\$7.11	\$7.48
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.73	\$3.92	\$4.13
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63
American Electric Power Company, Inc.	AEP	\$3.59	\$3.75	\$3.91	\$4.08	\$4.25	\$4.44	\$4.64	\$4.85	\$5.09	\$5.34	\$5.62	\$5.92	\$6.23	\$6.56	\$6.91	\$7.28	\$7.67
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.01	\$2.15	\$2.29	\$2.44	\$2.60	\$2.76	\$2.93	\$3.10	\$3.28	\$3.46	\$3.65	\$3.84	\$4.04	\$4.26	\$4.49	\$4.73
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.77	\$7.13	\$7.51	\$7.91	\$8.33	\$8.77	\$9.24	\$9.73	\$10.25
El Paso Electric Company	EE	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$3.43	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.92	\$3.10	\$3.28	\$3.48	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.10	\$5.37	\$5.65	\$5.96	\$6.27	\$6.61
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$4.01	\$4.16	\$4.31	\$4.47	\$4.63	\$4.82	\$5.02	\$5.24	\$5.50	\$5.77	\$6.08	\$6.40	\$6.74	\$7.10	\$7.48	\$7.88
MGE Energy, Inc.	MGEE	\$2.06	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$3.16	\$3.33	\$3.50	\$3.69	\$3.89	\$4.09	\$4.31	\$4.54	\$4.78
NorthWestern Corporation	NWE	\$2.90	\$3.06	\$3.23	\$3.41	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.47	\$5.76	\$6.07	\$6.39	\$6.73
OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.83	\$1.91	\$1.99	\$2.07	\$2.16	\$2.26	\$2.37	\$2.49	\$2.61	\$2.75	\$2.90	\$3.05	\$3.22	\$3.39	\$3.57
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.23	\$4.40	\$4.57	\$4.75	\$4.95	\$5.16	\$5.40	\$5.66	\$5.95	\$6.27	\$6.60	\$6.95	\$7.32	\$7.71	\$8.12
PNM Resources, Inc.	PNM	\$1.64	\$1.78	\$1.93	\$2.09	\$2.27	\$2.46	\$2.66	\$2.85	\$3.05	\$3.24	\$3.43	\$3.62	\$3.81	\$4.01	\$4.22	\$4.45	\$4.69
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.30	\$2.44	\$2.59	\$2.75	\$2.92	\$3.09	\$3.26	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.97	\$6.28	\$6.62	\$6.97	\$7.34	\$7.73	\$8.14	\$8.58
Wisconsin Energy Corporation	WEC	\$2.34	\$2.49	\$2.65	\$2.82	\$2.99	\$3.18	\$3.38	\$3.58	\$3.79	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.46	\$2.59	\$2.73	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58	\$4.83

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	65.96%	66.94%	67.92%	68.90%	69.88%	69.88%	69.88%	69.88%	69.88%	69.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	56.88%	56.88%	56.88%	56.88%	56.88%	56.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.6										

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$113.80	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$72.50	
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$98.17	
American Electric Power Company, Inc.	AEP	\$2.40	\$2.53	\$2.67	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$128.55	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$80.01	
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$83.85	
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$183.20	
El Paso Electric Company	EE	\$1.26	\$1.34	\$1.43	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$89.50	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$151.57	
Eversource Energy	ES	\$1.75	\$1.84	\$1.94	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$117.02	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$75.22	
IDACORP, Inc.	IDA	\$2.13	\$2.28	\$2.44	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$151.68	
MGE Energy, Inc.	MGEE	\$1.22	\$1.22	\$1.21	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$107.22	
NorthWestern Corporation	NWE	\$1.99	\$2.05	\$2.11	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$122.57	
OG Energy Corp.	OG	\$1.18	\$1.24	\$1.31	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$57.18	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$58.99	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$144.92	
PNM Resources, Inc.	PNM	\$0.91	\$1.00	\$1.11	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$69.74	
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$84.48	
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$138.87	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$118.39	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$82.60	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$54.07)	\$0.00	\$1.18	\$2.40	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$118.81
Alliant Energy Corporation	LNT	(\$33.83)	\$0.00	\$0.58	\$1.18	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$75.27
Ameren Corporation	AEE	(\$46.40)	\$0.00	\$0.86	\$1.76	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$101.93
American Electric Power Company, Inc.	AEP	(\$61.54)	\$0.00	\$1.21	\$2.45	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$133.68
Avista Corporation	AVA	(\$37.83)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$82.84
CMS Energy Corporation	CMS	(\$39.10)	\$0.00	\$0.64	\$1.31	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$87.01
DTE Energy Company	DTE	(\$85.80)	\$0.00	\$1.49	\$3.03	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$190.06
El Paso Electric Company	EE	(\$41.72)	\$0.00	\$0.64	\$1.30	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$92.63
Energy Corporation	ETR	(\$72.44)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$159.39	
Eversource Energy	ES	(\$54.15)	\$0.00	\$0.88	\$1.81	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$121.44
FirstEnergy Corp.	FE	(\$33.04)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$79.19
IDACORP, Inc.	IDA	(\$70.82)	\$0.00	\$1.07	\$2.17	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$156.95
MGE Energy, Inc.	MGEE	(\$48.29)	\$0.00	\$0.61	\$1.25	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$110.42
NorthWestern Corporation	NWE	(\$57.21)	\$0.00	\$1.00	\$2.04	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$127.07
OG Energy Corp.	OG	(\$27.72)	\$0.00	\$0.59	\$1.20	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$59.56
Otter Tail Corporation	OTTR	(\$28.18)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$61.50
Pinnacle West Capital Corporation	PNW	(\$69.12)	\$0.00	\$1.31	\$2.66	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$150.35
PNM Resources, Inc.	PNM	(\$31.32)	\$0.00	\$0.46	\$0.95	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$72.88
Portland General Electric Company	POR	(\$38.74)	\$0.00	\$0.61	\$1.25	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$87.80
SCANA Corporation	SCG	(\$64.86)	\$0.00	\$1.19	\$2.42	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$144.61
Wisconsin Energy Corporation	WEC	(\$55.89)	\$0.00	\$0.85	\$1.75	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$122.25
Xcel Energy Inc.	XEL	(\$38.85)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$85.83



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

Inputs	[1] Stock	[2]	[3] EPS Growth Rate Estimates				[5] Long-Term	[6]	[7]	[8] Payout Ratio			[9]	[10] Iterative Solution		[11]	[12]	[13]
			Zacks	First Call	Value Line	Growth				2016	2020	2026		Proof	IRR			
Company	Ticker	Price																
ALLETE, Inc.	ALE	\$59.67	5.50%	5.00%	4.00%	4.00%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	9.28%	17.80	3.34				
Alliant Energy Corporation	LNT	\$38.20	6.10%	6.60%	6.00%	6.00%	5.32%	64.00%	61.00%	66.88%	(\$0.00)	8.82%	20.15	3.79				
Ameren Corporation	AEE	\$50.12	6.10%	5.20%	6.00%	5.20%	5.32%	68.00%	64.00%	66.88%	(\$0.00)	8.92%	19.60	3.68				
American Electric Power Company, Inc.	AEP	\$66.05	4.90%	4.10%	4.00%	4.00%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	9.14%	18.45	3.47				
Avista Corporation	AVA	\$41.65	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	(\$0.00)	8.70%	20.85	3.92				
CMS Energy Corporation	CMS	\$42.95	6.40%	7.24%	6.00%	6.00%	5.32%	63.00%	62.00%	66.88%	(\$0.00)	8.80%	20.23	3.80				
DTE Energy Company	DTE	\$92.91	5.80%	5.35%	5.00%	5.00%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	8.86%	19.89	3.74				
El Paso Electric Company	EE	\$45.30	6.70%	7.00%	2.50%	2.50%	5.32%	59.00%	61.00%	66.88%	(\$0.00)	8.10%	25.35	4.76				
Energy Corporation	ETR	\$77.45	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	\$0.00	10.39%	13.90	2.61				
Eversource Energy	ES	\$56.36	6.30%	5.49%	6.00%	5.49%	5.32%	60.00%	58.00%	66.88%	(\$0.00)	9.03%	18.98	3.57				
FirstEnergy Corp.	FE	\$33.34	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	10.83%	12.79	2.40				
IDACORP, Inc.	IDA	\$74.50	4.00%	4.00%	3.00%	3.00%	5.32%	53.00%	60.00%	66.88%	(\$0.00)	8.64%	21.21	3.99				
MGE Energy, Inc.	MGEE	\$53.30	NA	4.00%	7.00%	4.00%	5.32%	56.00%	44.00%	66.88%	(\$0.00)	7.90%	27.32	5.13				
NorthWestern Corporation	NWE	\$59.68	5.00%	5.00%	5.00%	5.00%	5.32%	65.00%	59.00%	66.88%	(\$0.00)	8.91%	19.65	3.69				
OGE Energy Corp.	OGE	\$30.95	5.20%	4.30%	3.00%	3.00%	5.32%	67.00%	70.00%	66.88%	(\$0.00)	8.94%	19.49	3.66				
Otter Tail Corporation	OTTR	\$30.96	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	(\$0.00)	9.39%	17.32	3.26				
Pinnacle West Capital Corporation	PNW	\$75.82	4.00%	3.73%	4.00%	3.73%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	8.87%	19.87	3.73				
PNM Resources, Inc.	PNM	\$33.49	7.60%	8.76%	9.00%	7.60%	5.32%	51.00%	55.00%	66.88%	(\$0.00)	9.52%	16.78	3.15				
Portland General Electric Company	POR	\$41.86	6.40%	6.57%	5.50%	5.50%	5.32%	56.00%	56.00%	66.88%	(\$0.00)	8.99%	19.21	3.61				
SCANA Corporation	SCG	\$71.01	5.30%	5.40%	4.50%	4.50%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	9.14%	18.43	3.46				
Wisconsin Energy Corporation	WEC	\$61.68	6.30%	6.77%	6.00%	6.00%	5.32%	68.00%	67.00%	66.88%	(\$0.00)	8.35%	23.24	4.37				
Xcel Energy Inc.	XEL	\$42.20	5.30%	5.27%	5.50%	5.27%	5.32%	62.00%	63.00%	66.88%	(\$0.00)	9.08%	18.73	3.52				
												MEAN	9.03%					
												MAX	10.83%					
												MIN	7.90%					

Projected Annual Earnings per Share	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.44	\$5.73	\$6.03	\$6.35	\$6.69	\$7.05
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.14	\$3.30	\$3.48	\$3.66	\$3.86	\$4.07
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88	\$5.14	\$5.41
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.88	\$4.04	\$4.20	\$4.37	\$4.55	\$4.75	\$4.98	\$5.22	\$5.49	\$5.78	\$6.08	\$6.41	\$6.75	\$7.11	\$7.49
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.00	\$2.12	\$2.25	\$2.39	\$2.53	\$2.68	\$2.83	\$2.99	\$3.16	\$3.33	\$3.51	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55
DTE Energy Company	DTE	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.94	\$7.30	\$7.69	\$8.10	\$8.53	\$8.99	\$9.47	\$9.97
El Paso Electric Company	EE	\$2.03	\$2.08	\$2.13	\$2.19	\$2.24	\$2.30	\$2.36	\$2.45	\$2.54	\$2.65	\$2.78	\$2.93	\$3.09	\$3.25	\$3.42	\$3.61	\$3.80
Energy Corporation	ETR	\$6.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.91	\$3.07	\$3.24	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77	\$6.08	\$6.40
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$3.99	\$4.11	\$4.23	\$4.36	\$4.49	\$4.64	\$4.81	\$5.01	\$5.24	\$5.50	\$5.79	\$6.10	\$6.43	\$6.77	\$7.13	\$7.51
MGE Energy, Inc.	MGEE	\$2.06	\$2.14	\$2.23	\$2.32	\$2.41	\$2.51	\$2.61	\$2.73	\$2.86	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.87	\$4.08	\$4.30
NorthWestern Corporation	NWE	\$2.90	\$3.05	\$3.20	\$3.36	\$3.52	\$3.70	\$3.89	\$4.09	\$4.30	\$4.52	\$4.76	\$5.01	\$5.28	\$5.56	\$5.86	\$6.17	\$6.50
OGE Energy Corp.	OGE	\$1.69	\$1.74	\$1.79	\$1.85	\$1.90	\$1.96	\$2.03	\$2.10	\$2.19	\$2.29	\$2.40	\$2.53	\$2.66	\$2.81	\$2.96	\$3.11	\$3.28
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.22	\$4.38	\$4.54	\$4.71	\$4.90	\$5.10	\$5.34	\$5.59	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23	\$7.61	\$8.02
PNM Resources, Inc.	PNM	\$1.64	\$1.76	\$1.90	\$2.04	\$2.20	\$2.37	\$2.54	\$2.71	\$2.88	\$3.06	\$3.23	\$3.41	\$3.59	\$3.78	\$3.98	\$4.19	\$4.42
Portland General Electric Company	POR	\$2.04	\$2.15	\$2.27	\$2.40	\$2.53	\$2.67	\$2.81	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74
SCANA Corporation	SCG	\$3.81	\$3.98	\$4.16	\$4.35	\$4.54	\$4.75	\$4.97	\$5.21	\$5.46	\$5.74	\$6.03	\$6.36	\$6.69	\$7.05	\$7.42	\$7.82	\$8.24
Wisconsin Energy Corporation	WEC	\$2.34	\$2.48	\$2.63	\$2.79	\$2.95	\$3.13	\$3.32	\$3.51	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57	\$4.82	\$5.07	\$5.34	\$5.63
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.71	\$2.86	\$3.01	\$3.17	\$3.34	\$3.51	\$3.70	\$3.90	\$4.11	\$4.32	\$4.55	\$4.80

Projected Annual Dividend Payout Ratio	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]	
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%				

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$125.46	
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$81.92	
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$106.00	
American Electric Power Company, Inc.	AEP	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$138.14	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.30	
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$91.99	
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$198.32	
El Paso Electric Company	EE	\$1.23	\$1.27	\$1.31	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$96.28	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$162.41	
Eversource Energy	ES	\$1.75	\$1.83	\$1.91	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$121.57	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$75.89	
IDACORP, Inc.	IDA	\$2.11	\$2.25	\$2.39	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$159.25	
MGE Energy, Inc.	MGEE	\$1.20	\$1.18	\$1.16	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$117.36	
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$127.65	
OG Energy Corp.	OG	\$1.17	\$1.21	\$1.26	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$63.91	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$65.02	
Pinnacle West Capital Corporation	PNW	\$2.60	\$2.71	\$2.82	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$159.34	
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$74.08	
Portland General Electric Company	POR	\$1.21	\$1.27	\$1.34	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$90.98	
SCANA Corporation	SCG	\$2.35	\$2.47	\$2.59	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$151.84	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.78	\$1.88	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$130.82	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$89.82	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$59.67)	\$0.00	\$1.17	\$2.37	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$130.17
Alliant Energy Corporation	LNT	(\$38.20)	\$0.00	\$0.58	\$1.18	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$84.63
Ameren Corporation	AEE	(\$50.12)	\$0.00	\$0.86	\$1.75	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$109.62
American Electric Power Company, Inc.	AEP	(\$66.05)	\$0.00	\$1.20	\$2.44	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$143.14
Avista Corporation	AVA	(\$41.65)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.13
CMS Energy Corporation	CMS	(\$42.95)	\$0.00	\$0.64	\$1.30	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$95.03
DTE Energy Company	DTE	(\$92.91)	\$0.00	\$1.48	\$3.02	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$204.99
El Paso Electric Company	EE	(\$45.30)	\$0.00	\$0.62	\$1.24	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$98.82
Energy Corporation	ETR	(\$77.45)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$170.22
Eversource Energy	ES	(\$56.36)	\$0.00	\$0.88	\$1.79	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$125.85
FirstEnergy Corp.	FE	(\$33.34)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$79.86
IDACORP, Inc.	IDA	(\$74.50)	\$0.00	\$1.06	\$2.14	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$164.27
MGE Energy, Inc.	MGEE	(\$53.30)	\$0.00	\$0.60	\$1.22	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$120.23
NorthWestern Corporation	NWE	(\$59.68)	\$0.00	\$1.00	\$2.03	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$132.00
OG Energy Corp.	OG	(\$30.95)	\$0.00	\$0.59	\$1.18	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$66.10
Otter Tail Corporation	OTTR	(\$30.96)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$67.53
Pinnacle West Capital Corporation	PNW	(\$75.82)	\$0.00	\$1.31	\$2.65	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$164.71
PNM Resources, Inc.	PNM	(\$33.49)	\$0.00	\$0.45	\$0.93	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$77.03
Portland General Electric Company	POR	(\$41.86)	\$0.00	\$0.61	\$1.24	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$94.15
SCANA Corporation	SCG	(\$71.01)	\$0.00	\$1.18	\$2.40	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$157.34
Wisconsin Energy Corporation	WEC	(\$61.68)	\$0.00	\$0.85	\$1.74	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$134.59
Xcel Energy Inc.	XEL	(\$42.20)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$93.03

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

Inputs	[1] Stock	[2] [3] [4] [5] EPS Growth Rate Estimates				[6] Long-Term	[7] Growth	[8] [9] [10] Payout Ratio			[11] Iterative Solution	[12] Terminal	[13] Terminal							
		Price	Zacks	First Call	Value Line			2016	2020	2026				Proof	IRR	P/E Ratio	PEG Ratio			
Company	Ticker	Price	Zacks	First Call	Value Line	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio							
ALLETE, Inc.	ALE	\$57.08	5.50%	5.00%	4.00%	4.00%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	9.46%	17.00	3.19						
Alliant Energy Corporation	LNT	\$36.64	6.10%	6.60%	6.00%	6.00%	5.32%	64.00%	61.00%	66.88%	(\$0.00)	8.97%	19.31	3.63						
Ameren Corporation	AEE	\$48.90	6.10%	5.20%	6.00%	5.20%	5.32%	68.00%	64.00%	66.88%	(\$0.00)	9.01%	19.11	3.59						
American Electric Power Company, Inc.	AEP	\$65.03	4.90%	4.10%	4.00%	4.00%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	9.20%	18.16	3.41						
Avista Corporation	AVA	\$40.48	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	(\$0.00)	8.80%	20.25	3.80						
CMS Energy Corporation	CMS	\$41.70	6.40%	7.24%	6.00%	6.00%	5.32%	63.00%	62.00%	66.88%	(\$0.00)	8.91%	19.63	3.69						
DTE Energy Company	DTE	\$89.93	5.80%	5.35%	5.00%	5.00%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	8.98%	19.24	3.62						
El Paso Electric Company	EE	\$44.56	6.70%	7.00%	2.50%	2.50%	5.32%	59.00%	61.00%	66.88%	(\$0.00)	8.15%	24.93	4.68						
Energy Corporation	ETR	\$76.55	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	10.45%	13.73	2.58						
Eversource Energy	ES	\$56.58	6.30%	5.49%	6.00%	5.49%	5.32%	60.00%	58.00%	66.88%	(\$0.00)	9.02%	19.06	3.58						
FirstEnergy Corp.	FE	\$34.24	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	10.69%	13.12	2.46						
IDACORP, Inc.	IDA	\$73.58	4.00%	4.00%	3.00%	3.00%	5.32%	53.00%	60.00%	66.88%	(\$0.00)	8.69%	20.95	3.94						
MGE Energy, Inc.	MGEE	\$51.38	NA	4.00%	7.00%	4.00%	5.32%	56.00%	44.00%	66.88%	(\$0.00)	8.00%	26.35	4.95						
NorthWestern Corporation	NWE	\$59.59	5.00%	5.00%	5.00%	5.00%	5.32%	65.00%	59.00%	66.88%	(\$0.00)	8.91%	19.61	3.69						
OGE Energy Corp.	OGE	\$29.13	5.20%	4.30%	3.00%	3.00%	5.32%	67.00%	70.00%	66.88%	(\$0.00)	9.17%	18.29	3.44						
Otter Tail Corporation	OTTR	\$29.44	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	(\$0.00)	9.61%	16.45	3.09						
Pinnacle West Capital Corporation	PNW	\$73.65	4.00%	3.73%	4.00%	3.73%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	8.97%	19.29	3.62						
PNM Resources, Inc.	PNM	\$32.94	7.60%	8.76%	9.00%	7.60%	5.32%	51.00%	55.00%	66.88%	(\$0.00)	9.59%	16.51	3.10						
Portland General Electric Company	POR	\$40.24	6.40%	6.57%	5.50%	5.50%	5.32%	56.00%	56.00%	66.88%	(\$0.00)	9.14%	18.47	3.47						
SCANA Corporation	SCG	\$69.22	5.30%	5.40%	4.50%	4.50%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	9.24%	17.96	3.37						
Wisconsin Energy Corporation	WEC	\$59.53	6.30%	6.77%	6.00%	6.00%	5.32%	68.00%	67.00%	66.88%	(\$0.00)	8.47%	22.41	4.21						
Xcel Energy Inc.	XEL	\$41.15	5.30%	5.27%	5.50%	5.27%	5.32%	62.00%	63.00%	66.88%	(\$0.00)	9.18%	18.25	3.43						
												MEAN	9.12%							
												MAX	10.69%							
												MIN	8.00%							

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.44	\$5.73	\$6.03	\$6.35	\$6.69	\$7.05
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.14	\$3.30	\$3.48	\$3.66	\$3.86	\$4.07
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88	\$5.14	\$5.41
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.88	\$4.04	\$4.20	\$4.37	\$4.55	\$4.75	\$4.98	\$5.22	\$5.49	\$5.78	\$6.08	\$6.41	\$6.75	\$7.11	\$7.49
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.00	\$2.12	\$2.25	\$2.39	\$2.53	\$2.68	\$2.83	\$2.99	\$3.16	\$3.33	\$3.51	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55
DTE Energy Company	DTE	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.94	\$7.30	\$7.69	\$8.10	\$8.53	\$8.99	\$9.47	\$9.97
El Paso Electric Company	EE	\$2.03	\$2.08	\$2.13	\$2.19	\$2.24	\$2.30	\$2.36	\$2.45	\$2.54	\$2.65	\$2.78	\$2.93	\$3.09	\$3.25	\$3.42	\$3.61	\$3.80
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.91	\$3.07	\$3.24	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77	\$6.08	\$6.40
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$3.99	\$4.11	\$4.23	\$4.36	\$4.49	\$4.64	\$4.81	\$5.01	\$5.24	\$5.50	\$5.79	\$6.10	\$6.43	\$6.77	\$7.13	\$7.51
MGE Energy, Inc.	MGEE	\$2.06	\$2.14	\$2.23	\$2.32	\$2.41	\$2.51	\$2.61	\$2.73	\$2.86	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.87	\$4.08	\$4.30
NorthWestern Corporation	NWE	\$2.90	\$3.05	\$3.20	\$3.36	\$3.52	\$3.70	\$3.89	\$4.09	\$4.30	\$4.52	\$4.76	\$5.01	\$5.28	\$5.56	\$5.86	\$6.17	\$6.50
OGE Energy Corp.	OGE	\$1.69	\$1.74	\$1.79	\$1.85	\$1.90	\$1.96	\$2.03	\$2.10	\$2.19	\$2.29	\$2.40	\$2.53	\$2.66	\$2.81	\$2.96	\$3.11	\$3.28
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.22	\$4.38	\$4.54	\$4.71	\$4.90	\$5.10	\$5.34	\$5.59	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23	\$7.61	\$8.02
PNM Resources, Inc.	PNM	\$1.64	\$1.76	\$1.90	\$2.04	\$2.20	\$2.37	\$2.54	\$2.71	\$2.88	\$3.06	\$3.23	\$3.41	\$3.59	\$3.78	\$3.98	\$4.19	\$4.42
Portland General Electric Company	POR	\$2.04	\$2.15	\$2.27	\$2.40	\$2.53	\$2.67	\$2.81	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74
SCANA Corporation	SCG	\$3.81	\$3.98	\$4.16	\$4.35	\$4.54	\$4.75	\$4.97	\$5.21	\$5.46	\$5.74	\$6.03	\$6.36	\$6.69	\$7.05	\$7.42	\$7.82	\$8.24
Wisconsin Energy Corporation	WEC	\$2.34	\$2.48	\$2.63	\$2.79	\$2.95	\$3.13	\$3.32	\$3.51	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57	\$4.82	\$5.07	\$5.34	\$5.63
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.71	\$2.86	\$3.01	\$3.17	\$3.34	\$3.51	\$3.70	\$3.90	\$4.11	\$4.32	\$4.55	\$4.80

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	56.88%	56.88%	56.88%	56.88%	56.88%	56.88%
IDAC																	

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2031	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$119.86	
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$78.51	
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$103.35	
American Electric Power Company, Inc.	AEP	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$135.94	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$85.75	
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$89.27	
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$191.85	
El Paso Electric Company	EE	\$1.23	\$1.27	\$1.31	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$94.68	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$160.45	
Eversource Energy	ES	\$1.75	\$1.83	\$1.91	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$122.05	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$77.84	
IDACORP, Inc.	IDA	\$2.11	\$2.25	\$2.39	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$157.26	
MGE Energy, Inc.	MGEE	\$1.20	\$1.18	\$1.16	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$113.18	
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$127.44	
OG Energy Corp.	OG	\$1.17	\$1.21	\$1.26	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$59.97	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$61.72	
Pinnacle West Capital Corporation	PNW	\$2.60	\$2.71	\$2.82	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$154.65	
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$72.88	
Portland General Electric Company	POR	\$1.21	\$1.27	\$1.34	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$87.46	
SCANA Corporation	SCG	\$2.35	\$2.47	\$2.59	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$147.94	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.78	\$1.88	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$126.14	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$87.55	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$57.08)	\$0.00	\$1.17	\$2.37	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$124.58
Alliant Energy Corporation	LNT	(\$36.64)	\$0.00	\$0.58	\$1.18	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$81.23
Ameren Corporation	AEE	(\$48.90)	\$0.00	\$0.86	\$1.75	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$106.96
American Electric Power Company, Inc.	AEP	(\$65.03)	\$0.00	\$1.20	\$2.44	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$140.95
Avista Corporation	AVA	(\$40.48)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.58
CMS Energy Corporation	CMS	(\$41.70)	\$0.00	\$0.64	\$1.30	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$92.31
DTE Energy Company	DTE	(\$89.93)	\$0.00	\$1.48	\$3.02	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$198.52
El Paso Electric Company	EE	(\$44.56)	\$0.00	\$0.62	\$1.24	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$97.22
Energy Corporation	ETR	(\$76.55)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$168.27
Eversource Energy	ES	(\$56.58)	\$0.00	\$0.88	\$1.79	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$126.33
FirstEnergy Corp.	FE	(\$34.24)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$81.81
IDACORP, Inc.	IDA	(\$73.58)	\$0.00	\$1.06	\$2.14	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$162.29
MGE Energy, Inc.	MGEE	(\$51.38)	\$0.00	\$0.60	\$1.22	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$116.06
NorthWestern Corporation	NWE	(\$59.59)	\$0.00	\$1.00	\$2.03	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$131.79
OG Energy Corp.	OG	(\$29.13)	\$0.00	\$0.59	\$1.18	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$62.16
Otter Tail Corporation	OTTR	(\$29.44)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$64.23
Pinnacle West Capital Corporation	PNW	(\$73.65)	\$0.00	\$1.31	\$2.65	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$160.01
PNM Resources, Inc.	PNM	(\$32.94)	\$0.00	\$0.45	\$0.93	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$75.84
Portland General Electric Company	POR	(\$40.24)	\$0.00	\$0.61	\$1.24	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$90.63
SCANA Corporation	SCG	(\$69.22)	\$0.00	\$1.18	\$2.40	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$153.45
Wisconsin Energy Corporation	WEC	(\$59.53)	\$0.00	\$0.85	\$1.74	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$129.91
Xcel Energy Inc.	XEL	(\$41.15)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$90.76



Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$113.34	
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$72.42	
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$97.93	
American Electric Power Company, Inc.	AEP	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$128.37	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$80.01	
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$83.65	
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$182.89	
El Paso Electric Company	EE	\$1.23	\$1.27	\$1.31	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$88.51	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$151.57	
Eversource Energy	ES	\$1.75	\$1.83	\$1.91	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$116.77	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$75.22	
IDACORP, Inc.	IDA	\$2.11	\$2.25	\$2.39	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$151.26	
MGE Energy, Inc.	MGEE	\$1.20	\$1.18	\$1.16	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$106.44	
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$122.29	
OG Energy Corp.	OG	\$1.17	\$1.21	\$1.26	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$56.93	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$58.99	
Pinnacle West Capital Corporation	PNW	\$2.60	\$2.71	\$2.82	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$144.82	
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$69.36	
Portland General Electric Company	POR	\$1.21	\$1.27	\$1.34	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$84.19	
SCANA Corporation	SCG	\$2.35	\$2.47	\$2.59	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$138.47	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.78	\$1.88	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$118.24	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$82.57	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$54.07)	\$0.00	\$1.17	\$2.37	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$118.05
Alliant Energy Corporation	LNT	(\$33.83)	\$0.00	\$0.58	\$1.18	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$75.14
Ameren Corporation	AEE	(\$46.40)	\$0.00	\$0.86	\$1.75	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$101.55
American Electric Power Company, Inc.	AEP	(\$61.54)	\$0.00	\$1.20	\$2.44	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$133.38
Avista Corporation	AVA	(\$39.10)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$82.84
CMS Energy Corporation	CMS	(\$39.10)	\$0.00	\$0.64	\$1.30	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$86.69
DTE Energy Company	DTE	(\$85.80)	\$0.00	\$1.48	\$3.02	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$189.55
El Paso Electric Company	EE	(\$41.72)	\$0.00	\$0.62	\$1.24	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$91.05
Energy Corporation	ETR	(\$72.44)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$159.39
Eversource Energy	ES	(\$54.15)	\$0.00	\$0.88	\$1.79	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$121.05
FirstEnergy Corp.	FE	(\$33.04)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$79.19
IDACORP, Inc.	IDA	(\$70.82)	\$0.00	\$1.06	\$2.14	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$156.28
MGE Energy, Inc.	MGEE	(\$48.29)	\$0.00	\$0.60	\$1.22	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$109.32
NorthWestern Corporation	NWE	(\$57.21)	\$0.00	\$1.00	\$2.03	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$126.63
OG Energy Corp.	OG	(\$27.72)	\$0.00	\$0.59	\$1.18	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$59.12
Otter Tail Corporation	OTTR	(\$28.18)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$61.50
Pinnacle West Capital Corporation	PNW	(\$69.12)	\$0.00	\$1.31	\$2.65	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$150.18
PNM Resources, Inc.	PNM	(\$31.32)	\$0.00	\$0.45	\$0.93	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$72.32
Portland General Electric Company	POR	(\$38.74)	\$0.00	\$0.61	\$1.24	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$87.35
SCANA Corporation	SCG	(\$64.86)	\$0.00	\$1.18	\$2.40	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$143.98
Wisconsin Energy Corporation	WEC	(\$55.89)	\$0.00	\$0.85	\$1.74	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$122.01
Xcel Energy Inc.	XEL	(\$38.85)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$85.78

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

Inputs	Company	Ticker	Price	[1] Stock	[2] EPS Growth Rate Estimates			[5] High Growth	[6] Long-Term Growth	[7] Payout Ratio			[9] Iterative Solution	[10] Proof	[11] IRR	[12] Terminal P/E Ratio	[13] Terminal PEG Ratio
					Zacks	First Call	Value Line			2016	2020	2026					
ALLETE, Inc.	ALE	\$59.67	5.50%	5.00%	4.00%	5.50%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	9.70%	16.10	3.02			
Alliant Energy Corporation	LNT	\$38.20	6.10%	6.00%	6.00%	6.00%	5.32%	64.00%	61.00%	66.88%	(\$0.00)	8.96%	19.36	3.64			
Ameren Corporation	AEE	\$50.12	6.10%	5.20%	6.00%	6.10%	5.32%	68.00%	64.00%	66.88%	(\$0.00)	9.14%	18.45	3.47			
American Electric Power Company, Inc.	AEP	\$66.05	4.90%	4.10%	4.00%	4.90%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	9.38%	17.36	3.26			
Avista Corporation	AVA	\$41.65	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	(\$0.00)	8.70%	20.85	3.92			
CMS Energy Corporation	CMS	\$42.95	6.40%	7.24%	6.00%	7.24%	5.32%	63.00%	62.00%	66.88%	(\$0.00)	9.10%	18.64	3.50			
DTE Energy Company	DTE	\$92.91	5.80%	5.35%	5.00%	5.80%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.06%	18.85	3.54			
El Paso Electric Company	EE	\$45.30	6.70%	7.00%	2.50%	7.00%	5.32%	59.00%	61.00%	66.88%	(\$0.00)	9.09%	18.69	3.51			
Energy Corporation	ETR	\$77.45	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	\$0.00	10.39%	13.90	2.61			
Eversource Energy	ES	\$56.36	6.30%	5.49%	6.00%	6.30%	5.32%	60.00%	58.00%	66.88%	(\$0.00)	9.24%	18.00	3.38			
FirstEnergy Corp.	FE	\$33.34	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	10.83%	12.79	2.40			
IDACORP, Inc.	IDA	\$74.50	4.00%	4.00%	3.00%	4.00%	5.32%	53.00%	60.00%	66.88%	(\$0.00)	8.88%	19.81	3.72			
MGE Energy, Inc.	MGEE	\$53.30	NA	4.00%	7.00%	7.00%	5.32%	56.00%	44.00%	66.88%	(\$0.00)	8.47%	22.38	4.21			
NorthWestern Corporation	NWE	\$59.68	5.00%	5.00%	6.00%	5.00%	5.32%	65.00%	59.00%	66.88%	(\$0.00)	9.28%	17.78	3.34			
OGE Energy Corp.	OGE	\$30.95	5.20%	4.30%	3.00%	5.20%	5.32%	67.00%	70.00%	66.88%	(\$0.00)	9.52%	16.77	3.15			
Otter Tail Corporation	OTTR	\$30.96	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	(\$0.00)	9.39%	17.32	3.26			
Pinnacle West Capital Corporation	PNW	\$75.82	4.00%	3.73%	4.00%	4.00%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	8.93%	19.51	3.67			
PNM Resources, Inc.	PNM	\$33.49	7.60%	8.76%	9.00%	9.00%	5.32%	51.00%	55.00%	66.88%	(\$0.00)	9.91%	15.35	2.88			
Portland General Electric Company	POR	\$41.86	6.40%	6.57%	5.50%	6.57%	5.32%	56.00%	56.00%	66.88%	(\$0.00)	9.26%	17.90	3.36			
SCANA Corporation	SCG	\$71.01	5.30%	5.40%	4.50%	5.40%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	9.38%	17.36	3.26			
Wisconsin Energy Corporation	WEC	\$61.68	6.30%	6.77%	6.00%	6.77%	5.32%	68.00%	67.00%	66.88%	(\$0.00)	8.51%	22.06	4.15			
Xcel Energy Inc.	XEL	\$42.20	5.30%	5.27%	5.50%	5.50%	5.32%	62.00%	63.00%	66.88%	(\$0.00)	9.14%	18.44	3.46			
												MEAN	9.28%				
												MAX	10.83%				
												MIN	8.47%				

Company	Ticker	Projected Annual Earnings per Share																	
		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	
ALLETE, Inc.	ALE	\$3.38	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.46	\$5.75	\$6.06	\$6.38	\$6.72	\$7.07	\$7.45	\$7.85	
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.11	\$3.27	\$3.45	\$3.63	\$3.82	\$4.03	\$4.24	
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.01	\$4.22	\$4.45	\$4.69	\$4.94	\$5.20	\$5.47	\$5.77	
American Electric Power Company, Inc.	AEP	\$3.59	\$3.77	\$3.95	\$4.14	\$4.35	\$4.56	\$4.79	\$5.03	\$5.29	\$5.56	\$5.85	\$6.16	\$6.49	\$6.84	\$7.20	\$7.58	\$7.99	
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23	
CMS Energy Corporation	CMS	\$1.89	\$2.03	\$2.17	\$2.33	\$2.50	\$2.68	\$2.87	\$3.06	\$3.25	\$3.44	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96	
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.34	\$7.73	\$8.14	\$8.58	\$9.03	\$9.51	\$10.02	\$10.55	
El Paso Electric Company	EE	\$2.03	\$2.17	\$2.32	\$2.49	\$2.66	\$2.85	\$3.04	\$3.23	\$3.43	\$3.64	\$3.84	\$4.04	\$4.26	\$4.49	\$4.72	\$4.98	\$5.24	
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69	
Eversource Energy	ES	\$2.76	\$2.93	\$3.12	\$3.32	\$3.52	\$3.75	\$3.98	\$4.21	\$4.46	\$4.71	\$4.97	\$5.23	\$5.51	\$5.80	\$6.11	\$6.44	\$6.78	
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93	
IDACORP, Inc.	IDA	\$3.87	\$4.02	\$4.19	\$4.35	\$4.53	\$4.71	\$4.91	\$5.13	\$5.36	\$5.63	\$5.91	\$6.23	\$6.56	\$6.91	\$7.28	\$7.66	\$8.07	
MGE Energy, Inc.	MGEE	\$2.06	\$2.20	\$2.36	\$2.52	\$2.70	\$2.89	\$3.08	\$3.28	\$3.48	\$3.69	\$3.90	\$4.10	\$4.32	\$4.55	\$4.79	\$5.05	\$5.32	
NorthWestern Corporation	NWE	\$2.90	\$3.09	\$3.29	\$3.50	\$3.73	\$3.97	\$4.22	\$4.48	\$4.75	\$5.02	\$5.29	\$5.58	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23	
OGE Energy Corp.	OGE	\$1.69	\$1.78	\$1.87	\$1.97	\$2.07	\$2.18	\$2.29	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$3.29	\$3.46	\$3.65	\$3.84	
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75	
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.08	\$4.24	\$4.41	\$4.59	\$4.77	\$4.97	\$5.19	\$5.43	\$5.70	\$5.99	\$6.31	\$6.64	\$7.00	\$7.37	\$7.76	\$8.18	
PNM Resources, Inc.	PNM	\$1.64	\$1.79	\$1.95	\$2.12	\$2.31	\$2.52	\$2.73	\$2.95	\$3.16	\$3.37	\$3.57	\$3.76	\$3.95	\$4.17	\$4.39	\$4.62	\$4.87	
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.32	\$2.47	\$2.63	\$2.80	\$2.98	\$3.17	\$3.35	\$3.55	\$3.74	\$3.94	\$4.15	\$4.37	\$4.61	\$4.85	\$5.11	
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.11	\$6.43	\$6.78	\$7.14	\$7.52	\$7.92	\$8.34	\$8.78	
Wisconsin Energy Corporation	WEC	\$2.34	\$2.50	\$2.67	\$2.85	\$3.04	\$3.25	\$3.46	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.83	\$5.09	\$5.36	\$5.64	\$5.94	
Xcel Energy Inc.	XEL	\$2.10	\$2.22	\$2.34	\$2.47	\$2.60	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88	

Company	Ticker	Projected Annual Dividend Payout Ratio																	
		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]		
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	57.44%	60.59%	63.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Wisconsin Energy Corporation	WEC	68.00%	67.75%	67.50%	67.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$126.32	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$82.12	
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$106.39	
American Electric Power Company, Inc.	AEP	\$2.41	\$2.56	\$2.71	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$138.62	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.30	
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$92.48	
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$199.00	
El Paso Electric Company	EE	\$1.28	\$1.38	\$1.49	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$97.94	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$162.41	
Eversource Energy	ES	\$1.76	\$1.86	\$1.96	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$122.04	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$75.89	
IDACORP, Inc.	IDA	\$2.13	\$2.29	\$2.46	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$159.89	
MGE Energy, Inc.	MGEE	\$1.23	\$1.25	\$1.26	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$119.03	
NorthWestern Corporation	NWE	\$2.01	\$2.09	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$128.54	
OGE Energy Corp.	OGE	\$1.19	\$1.27	\$1.35	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$64.40	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$65.02	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$159.50	
PNM Resources, Inc.	PNM	\$0.91	\$1.01	\$1.13	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$74.72	
Portland General Electric Company	POR	\$1.22	\$1.30	\$1.38	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$91.48	
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$152.48	
Wisconsin Energy Corporation	WEC	\$1.70	\$1.81	\$1.92	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$131.14	
Xcel Energy Inc.	XEL	\$1.37	\$1.46	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$89.91	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$59.67)	\$0.00	\$1.19	\$2.42	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$131.57
Alliant Energy Corporation	LNT	(\$38.20)	\$0.00	\$0.58	\$1.19	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$84.96
Ameren Corporation	AEE	(\$50.12)	\$0.00	\$0.87	\$1.77	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$110.24
American Electric Power Company, Inc.	AEP	(\$66.05)	\$0.00	\$1.21	\$2.47	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$143.96
Avista Corporation	AVA	(\$41.65)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.13
CMS Energy Corporation	CMS	(\$42.95)	\$0.00	\$0.64	\$1.32	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$95.80
DTE Energy Company	DTE	(\$92.91)	\$0.00	\$1.50	\$3.05	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$206.05
El Paso Electric Company	EE	(\$45.30)	\$0.00	\$0.65	\$1.33	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$101.44
Energy Corporation	ETR	(\$77.45)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$170.22	
Eversource Energy	ES	(\$56.36)	\$0.00	\$0.89	\$1.82	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$126.58
FirstEnergy Corp.	FE	(\$33.34)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$79.86
IDACORP, Inc.	IDA	(\$74.50)	\$0.00	\$1.08	\$2.18	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$165.29
MGE Energy, Inc.	MGEE	(\$53.30)	\$0.00	\$0.62	\$1.28	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$122.58
NorthWestern Corporation	NWE	(\$59.68)	\$0.00	\$1.01	\$2.07	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$133.37
OGE Energy Corp.	OGE	(\$30.95)	\$0.00	\$0.60	\$1.22	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$66.97
Otter Tail Corporation	OTTR	(\$30.96)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$67.53
Pinnacle West Capital Corporation	PNW	(\$75.82)	\$0.00	\$1.32	\$2.66	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$164.97
PNM Resources, Inc.	PNM	(\$33.49)	\$0.00	\$0.46	\$0.95	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$77.98
Portland General Electric Company	POR	(\$41.86)	\$0.00	\$0.61	\$1.26	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$94.89
SCANA Corporation	SCG	(\$71.01)	\$0.00	\$1.19	\$2.43	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$158.35
Wisconsin Energy Corporation	WEC	(\$61.68)	\$0.00	\$0.86	\$1.76	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$135.12
Xcel Energy Inc.	XEL	(\$42.20)	\$0.00	\$0.69	\$1.41	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$93.17



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

Inputs	[1] Stock	[2] [3] [4] EPS Growth Rate Estimates			[5] High Growth	[6] Long-Term Growth	[7] 2016	[8] 2020	[9] 2026	[10] Payout Ratio	[11] Iterative Solution	[12] Terminal	[13] Terminal	
		Price	Zacks	First Call										Value Line
Company	Ticker	Price	Zacks	First Call	Value Line	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	
ALLETE, Inc.	ALE	\$57.08	5.50%	5.00%	4.00%	5.50%	5.32%	66.00%	63.00%	66.88%	(6.00)	9.90%	15.38	2.89
Alliant Energy Corporation	LNT	\$36.64	6.10%	6.00%	6.00%	6.60%	5.32%	64.00%	61.00%	66.88%	(6.00)	9.12%	18.56	3.49
Ameren Corporation	AEE	\$48.90	6.10%	5.20%	6.00%	6.10%	5.32%	68.00%	64.00%	66.88%	(6.00)	9.24%	17.99	3.38
American Electric Power Company, Inc.	AEP	\$65.03	4.90%	4.10%	4.00%	4.90%	5.32%	64.00%	67.00%	66.88%	(6.00)	9.45%	17.08	3.21
Avista Corporation	AVA	\$40.48	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	(6.00)	8.80%	20.25	3.80
CMS Energy Corporation	CMS	\$41.70	6.40%	7.24%	6.00%	7.24%	5.32%	63.00%	62.00%	66.88%	(6.00)	9.22%	18.09	3.40
DTE Energy Company	DTE	\$89.93	5.80%	5.35%	5.00%	5.80%	5.32%	63.00%	61.00%	66.88%	(6.00)	9.18%	18.24	3.43
El Paso Electric Company	EE	\$44.56	6.70%	7.00%	2.50%	7.00%	5.32%	59.00%	61.00%	66.88%	(6.00)	9.15%	18.38	3.45
Energy Corporation	ETR	\$76.55	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(6.00)	10.45%	13.73	2.58
Eversource Energy	ES	\$56.58	6.30%	5.49%	6.00%	6.30%	5.32%	60.00%	58.00%	66.88%	(6.00)	9.22%	18.07	3.39
FirstEnergy Corp.	FE	\$34.24	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	10.69%	13.12	2.46
IDACORP, Inc.	IDA	\$73.58	4.00%	4.00%	3.00%	4.00%	5.32%	53.00%	60.00%	66.88%	(6.00)	8.92%	19.57	3.68
MGE Energy, Inc.	MGEE	\$51.38	NA	4.00%	7.00%	7.00%	5.32%	56.00%	44.00%	66.88%	(6.00)	8.58%	21.60	4.06
NorthWestern Corporation	NWE	\$59.59	5.00%	5.00%	6.00%	6.50%	5.32%	65.00%	59.00%	66.88%	(6.00)	9.29%	17.76	3.34
OGE Energy Corp.	OGE	\$29.13	5.20%	4.30%	3.00%	5.20%	5.32%	67.00%	70.00%	66.88%	(6.00)	9.80%	15.74	2.96
Otter Tail Corporation	OTTR	\$29.44	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	(6.00)	9.61%	16.45	3.09
Pinnacle West Capital Corporation	PNW	\$73.65	4.00%	3.73%	4.00%	4.00%	5.32%	64.00%	65.00%	66.88%	(6.00)	9.04%	18.94	3.56
PNM Resources, Inc.	PNM	\$32.94	7.60%	8.76%	9.00%	9.00%	5.32%	51.00%	55.00%	66.88%	(6.00)	9.98%	15.11	2.84
Portland General Electric Company	POR	\$40.24	6.40%	6.57%	5.50%	6.57%	5.32%	56.00%	56.00%	66.88%	(6.00)	9.41%	17.21	3.23
SCANA Corporation	SCG	\$69.22	5.30%	5.40%	4.50%	5.40%	5.32%	59.00%	60.00%	66.88%	(6.00)	9.49%	16.92	3.18
Wisconsin Energy Corporation	WEC	\$59.53	6.30%	6.77%	6.00%	6.77%	5.32%	68.00%	67.00%	66.88%	(6.00)	8.63%	21.28	4.00
Xcel Energy Inc.	XEL	\$41.15	5.30%	5.27%	5.50%	5.50%	5.32%	62.00%	63.00%	66.88%	(6.00)	9.24%	17.97	3.38
										MEAN	9.38%			
										MAX	10.69%			
										MIN	8.58%			

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.46	\$5.75	\$6.06	\$6.38	\$6.72	\$7.07	\$7.45	\$7.85
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.11	\$3.27	\$3.45	\$3.63	\$3.82	\$4.03	\$4.24
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.01	\$4.22	\$4.45	\$4.69	\$4.94	\$5.20	\$5.47	\$5.77
American Electric Power Company, Inc.	AEP	\$3.59	\$3.77	\$3.95	\$4.14	\$4.35	\$4.56	\$4.79	\$5.03	\$5.29	\$5.56	\$5.85	\$6.16	\$6.49	\$6.84	\$7.20	\$7.58	\$7.99
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.03	\$2.17	\$2.33	\$2.50	\$2.68	\$2.87	\$3.06	\$3.25	\$3.44	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.34	\$7.73	\$8.14	\$8.58	\$9.03	\$9.51	\$10.02	\$10.55
El Paso Electric Company	EE	\$2.03	\$2.17	\$2.32	\$2.49	\$2.66	\$2.85	\$3.04	\$3.23	\$3.43	\$3.64	\$3.84	\$4.04	\$4.26	\$4.49	\$4.72	\$4.98	\$5.24
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.93	\$3.12	\$3.32	\$3.52	\$3.75	\$3.98	\$4.21	\$4.46	\$4.71	\$4.97	\$5.23	\$5.51	\$5.80	\$6.11	\$6.44	\$6.78
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.68	\$5.08	\$5.35	\$5.63	\$5.93	\$6.24
IDACORP, Inc.	IDA	\$3.87	\$4.02	\$4.19	\$4.35	\$4.53	\$4.71	\$4.91	\$5.13	\$5.36	\$5.63	\$5.91	\$6.23	\$6.56	\$6.91	\$7.28	\$7.66	\$8.07
MGE Energy, Inc.	MGEE	\$2.06	\$2.20	\$2.36	\$2.52	\$2.70	\$2.89	\$3.08	\$3.28	\$3.48	\$3.69	\$3.90	\$4.10	\$4.32	\$4.55	\$4.79	\$5.05	\$5.32
NorthWestern Corporation	NWE	\$2.90	\$3.09	\$3.29	\$3.50	\$3.73	\$3.97	\$4.22	\$4.48	\$4.75	\$5.02	\$5.29	\$5.58	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23
OGE Energy Corp.	OGE	\$1.69	\$1.78	\$1.87	\$1.97	\$2.07	\$2.18	\$2.29	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$3.29	\$3.46	\$3.65	\$3.84
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.08	\$4.24	\$4.41	\$4.59	\$4.77	\$4.97	\$5.19	\$5.43	\$5.70	\$5.99	\$6.31	\$6.64	\$7.00	\$7.37	\$7.76	\$8.18
PNM Resources, Inc.	PNM	\$1.64	\$1.79	\$1.95	\$2.12	\$2.31	\$2.52	\$2.73	\$2.95	\$3.16	\$3.37	\$3.57	\$3.76	\$3.95	\$4.17	\$4.39	\$4.62	\$4.87
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.32	\$2.47	\$2.63	\$2.80	\$2.98	\$3.17	\$3.35	\$3.55	\$3.74	\$3.94	\$4.15	\$4.37	\$4.61	\$4.85	\$5.11
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.11	\$6.43	\$6.78	\$7.14	\$7.52	\$7.92	\$8.34	\$8.78
Wisconsin Energy Corporation	WEC	\$2.34	\$2.50	\$2.67	\$2.85	\$3.04	\$3.25	\$3.46	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.83	\$5.09	\$5.36	\$5.64	\$5.94
Xcel Energy Inc.	XEL	\$2.10	\$2.22	\$2.34	\$2.47	\$2.60	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	56.88%	56.88%	56.88%	56.88%	56.88%	56.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75														

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$120.72	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$78.72	
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$103.73	
American Electric Power Company, Inc.	AEP	\$2.41	\$2.56	\$2.71	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$136.43	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$85.75	
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$89.76	
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$192.52	
El Paso Electric Company	EE	\$1.28	\$1.38	\$1.49	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$96.34	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$160.45	
Eversource Energy	ES	\$1.76	\$1.86	\$1.96	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$122.53	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$77.84	
IDACORP, Inc.	IDA	\$2.13	\$2.29	\$2.46	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$157.91	
MGE Energy, Inc.	MGEE	\$1.23	\$1.25	\$1.26	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$114.84	
NorthWestern Corporation	NWE	\$2.01	\$2.09	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$128.33	
OGE Energy Corp.	OGE	\$1.19	\$1.27	\$1.35	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$60.47	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$61.72	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$154.81	
PNM Resources, Inc.	PNM	\$0.91	\$1.01	\$1.13	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$73.52	
Portland General Electric Company	POR	\$1.22	\$1.30	\$1.38	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$87.95	
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$148.58	
Wisconsin Energy Corporation	WEC	\$1.70	\$1.81	\$1.92	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$126.47	
Xcel Energy Inc.	XEL	\$1.37	\$1.46	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$87.64	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$57.08)	\$0.00	\$1.19	\$2.42	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$125.97
Alliant Energy Corporation	LNT	(\$36.64)	\$0.00	\$0.58	\$1.19	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$81.56
Ameren Corporation	AEE	(\$48.90)	\$0.00	\$0.87	\$1.77	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$107.59
American Electric Power Company, Inc.	AEP	(\$65.03)	\$0.00	\$1.21	\$2.47	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$141.77
Avista Corporation	AVA	(\$40.48)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.58
CMS Energy Corporation	CMS	(\$41.70)	\$0.00	\$0.64	\$1.32	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$93.08
DTE Energy Company	DTE	(\$89.93)	\$0.00	\$1.50	\$3.05	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$199.58
El Paso Electric Company	EE	(\$44.56)	\$0.00	\$0.65	\$1.33	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$99.84
Energy Corporation	ETR	(\$76.55)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$168.27	
Eversource Energy	ES	(\$56.58)	\$0.00	\$0.89	\$1.82	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$127.06
FirstEnergy Corp.	FE	(\$34.24)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$81.81
IDACORP, Inc.	IDA	(\$73.58)	\$0.00	\$1.08	\$2.18	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$163.30
MGE Energy, Inc.	MGEE	(\$51.38)	\$0.00	\$0.62	\$1.28	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$118.40
NorthWestern Corporation	NWE	(\$59.59)	\$0.00	\$1.01	\$2.07	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$133.16
OGE Energy Corp.	OGE	(\$29.13)	\$0.00	\$0.60	\$1.22	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$63.04
Otter Tail Corporation	OTTR	(\$29.44)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$64.23
Pinnacle West Capital Corporation	PNW	(\$73.65)	\$0.00	\$1.32	\$2.66	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$160.28
PNM Resources, Inc.	PNM	(\$32.94)	\$0.00	\$0.46	\$0.95	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$76.78
Portland General Electric Company	POR	(\$40.24)	\$0.00	\$0.61	\$1.26	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$91.37
SCANA Corporation	SCG	(\$69.22)	\$0.00	\$1.19	\$2.43	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$154.46
Wisconsin Energy Corporation	WEC	(\$59.53)	\$0.00	\$0.86	\$1.76	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$130.44
Xcel Energy Inc.	XEL	(\$41.15)	\$0.00	\$0.69	\$1.41	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$90.90

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

Inputs	[1]	[2]	[3] [4] [5]			[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	
			Stock	EPS Growth Rate Estimates										Long-Term
Company	Ticker	Price	Zacks	First Call	Value Line	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	
ALLETE, Inc.	ALE	\$54.07	5.50%	5.00%	4.00%	5.50%	5.32%	66.00%	63.00%	66.88%	\$0.00	10.16%	14.55	2.73
Alliant Energy Corporation	LNT	\$33.83	6.10%	6.00%	6.00%	6.60%	5.32%	64.00%	61.00%	66.88%	(\$0.00)	9.44%	17.12	3.22
Ameren Corporation	AEE	\$46.40	6.10%	5.20%	6.00%	6.10%	5.32%	68.00%	64.00%	66.88%	(\$0.00)	9.45%	17.05	3.20
American Electric Power Company, Inc.	AEP	\$61.54	4.90%	4.10%	4.00%	4.90%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	9.69%	16.14	3.03
Avista Corporation	AVA	\$37.83	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	(\$0.00)	9.05%	18.89	3.55
CMS Energy Corporation	CMS	\$39.10	6.40%	7.24%	6.00%	7.24%	5.32%	63.00%	62.00%	66.88%	(\$0.00)	9.48%	16.96	3.19
DTE Energy Company	DTE	\$85.80	5.80%	5.35%	5.00%	5.80%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.37%	17.39	3.27
El Paso Electric Company	EE	\$41.72	6.70%	7.00%	2.50%	7.00%	5.32%	59.00%	61.00%	66.88%	(\$0.00)	9.42%	17.21	3.23
Energy Corporation	ETR	\$72.44	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	10.75%	12.97	2.44
Eversource Energy	ES	\$54.15	6.30%	5.49%	6.00%	6.30%	5.32%	60.00%	58.00%	66.88%	(\$0.00)	9.40%	17.29	3.25
FirstEnergy Corp.	FE	\$33.04	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	(\$0.00)	10.88%	12.67	2.38
IDACORP, Inc.	IDA	\$70.82	4.00%	4.00%	3.00%	4.00%	5.32%	53.00%	60.00%	66.88%	(\$0.00)	9.06%	18.82	3.54
MGE Energy, Inc.	MGEE	\$48.29	NA	4.00%	7.00%	7.00%	5.32%	56.00%	44.00%	66.88%	(\$0.00)	8.79%	20.33	3.82
NorthWestern Corporation	NWE	\$57.21	5.00%	5.00%	6.50%	6.50%	5.32%	65.00%	59.00%	66.88%	(\$0.00)	9.46%	17.04	3.20
OGE Energy Corp.	OGE	\$27.72	5.20%	4.30%	3.00%	5.20%	5.32%	67.00%	70.00%	66.88%	(\$0.00)	10.03%	14.95	2.81
Otter Tail Corporation	OTTR	\$28.18	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	(\$0.00)	9.80%	15.72	2.95
Pinnacle West Capital Corporation	PNW	\$69.12	4.00%	3.73%	4.00%	4.00%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	9.29%	17.73	3.33
PNM Resources, Inc.	PNM	\$31.32	7.60%	8.76%	9.00%	9.00%	5.32%	51.00%	55.00%	66.88%	\$0.00	10.22%	14.38	2.70
Portland General Electric Company	POR	\$38.74	6.40%	6.57%	5.50%	6.57%	5.32%	56.00%	56.00%	66.88%	(\$0.00)	9.57%	16.57	3.11
SCANA Corporation	SCG	\$64.86	5.30%	5.40%	4.50%	5.32%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	9.77%	15.84	2.98
Wisconsin Energy Corporation	WEC	\$55.89	6.30%	6.77%	6.00%	6.77%	5.32%	68.00%	67.00%	66.88%	(\$0.00)	8.85%	19.95	3.75
Xcel Energy Inc.	XEL	\$38.85	5.30%	5.27%	5.50%	5.50%	5.32%	62.00%	63.00%	66.88%	(\$0.00)	9.48%	16.95	3.19
											MEAN	9.61%		
											MAX	10.88%		
											MIN	8.79%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.46	\$5.75	\$6.06	\$6.38	\$6.72	\$7.07	\$7.45	\$7.85
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.11	\$3.27	\$3.45	\$3.63	\$3.82	\$4.03	\$4.24
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.01	\$4.22	\$4.45	\$4.69	\$4.94	\$5.20	\$5.47	\$5.77
American Electric Power Company, Inc.	AEP	\$3.59	\$3.77	\$3.95	\$4.14	\$4.35	\$4.56	\$4.79	\$5.03	\$5.29	\$5.56	\$5.85	\$6.16	\$6.49	\$6.84	\$7.20	\$7.58	\$7.99
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.03	\$2.17	\$2.33	\$2.50	\$2.68	\$2.87	\$3.06	\$3.25	\$3.44	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.34	\$7.73	\$8.14	\$8.58	\$9.03	\$9.51	\$10.02	\$10.55
El Paso Electric Company	EE	\$2.03	\$2.17	\$2.32	\$2.49	\$2.66	\$2.85	\$3.04	\$3.23	\$3.43	\$3.64	\$3.84	\$4.04	\$4.26	\$4.49	\$4.72	\$4.98	\$5.24
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.93	\$3.12	\$3.32	\$3.52	\$3.75	\$3.98	\$4.21	\$4.46	\$4.71	\$4.97	\$5.23	\$5.51	\$5.80	\$6.11	\$6.44	\$6.78
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$4.02	\$4.19	\$4.35	\$4.53	\$4.71	\$4.91	\$5.13	\$5.36	\$5.63	\$5.91	\$6.23	\$6.56	\$6.91	\$7.28	\$7.66	\$8.07
MGE Energy, Inc.	MGEE	\$2.06	\$2.20	\$2.36	\$2.52	\$2.70	\$2.89	\$3.08	\$3.28	\$3.48	\$3.69	\$3.90	\$4.10	\$4.32	\$4.55	\$4.79	\$5.05	\$5.32
NorthWestern Corporation	NWE	\$2.90	\$3.09	\$3.29	\$3.50	\$3.73	\$3.97	\$4.22	\$4.48	\$4.75	\$5.02	\$5.29	\$5.58	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23
OGE Energy Corp.	OGE	\$1.69	\$1.78	\$1.87	\$1.97	\$2.07	\$2.18	\$2.29	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$3.29	\$3.46	\$3.65	\$3.84
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.08	\$4.24	\$4.41	\$4.59	\$4.77	\$4.97	\$5.19	\$5.43	\$5.70	\$5.99	\$6.31	\$6.64	\$7.00	\$7.37	\$7.76	\$8.18
PNM Resources, Inc.	PNM	\$1.64	\$1.79	\$1.95	\$2.12	\$2.31	\$2.52	\$2.73	\$2.95	\$3.16	\$3.37	\$3.57	\$3.76	\$3.95	\$4.17	\$4.39	\$4.62	\$4.87
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.32	\$2.47	\$2.63	\$2.80	\$2.98	\$3.17	\$3.35	\$3.55	\$3.74	\$3.94	\$4.15	\$4.37	\$4.61	\$4.85	\$5.11
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.11	\$6.43	\$6.78	\$7.14	\$7.52	\$7.92	\$8.34	\$8.78
Wisconsin Energy Corporation	WEC	\$2.34	\$2.50	\$2.67	\$2.85	\$3.04	\$3.25	\$3.46	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.83	\$5.09	\$5.36	\$5.64	\$5.94
Xcel Energy Inc.	XEL	\$2.10	\$2.22	\$2.34	\$2.47	\$2.60	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%														

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$114.20	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$72.63	
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$98.31	
American Electric Power Company, Inc.	AEP	\$2.41	\$2.56	\$2.71	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$128.86	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$80.01	
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$84.13	
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$183.56	
El Paso Electric Company	EE	\$1.28	\$1.38	\$1.49	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$90.17	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$151.57	
Eversource Energy	ES	\$1.76	\$1.86	\$1.96	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$117.24	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$75.22	
IDACORP, Inc.	IDA	\$2.13	\$2.29	\$2.46	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$151.91	
MGE Energy, Inc.	MGEE	\$1.23	\$1.25	\$1.26	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$108.10	
NorthWestern Corporation	NWE	\$2.01	\$2.09	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$123.17	
OG Energy Corp.	OG	\$1.19	\$1.27	\$1.35	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$57.42	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$58.99	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$144.97	
PNM Resources, Inc.	PNM	\$0.91	\$1.01	\$1.13	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$70.00	
Portland General Electric Company	POR	\$1.22	\$1.30	\$1.38	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$84.68	
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$139.12	
Wisconsin Energy Corporation	WEC	\$1.70	\$1.81	\$1.92	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$118.57	
Xcel Energy Inc.	XEL	\$1.37	\$1.46	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$82.66	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$54.07)	\$0.00	\$1.19	\$2.42	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$119.44
Alliant Energy Corporation	LNT	(\$33.83)	\$0.00	\$0.58	\$1.19	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$75.47
Ameren Corporation	AEE	(\$46.40)	\$0.00	\$0.87	\$1.77	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$102.17
American Electric Power Company, Inc.	AEP	(\$61.54)	\$0.00	\$1.21	\$2.47	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$134.20
Avista Corporation	AVA	(\$39.10)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$82.84
CMS Energy Corporation	CMS	(\$39.10)	\$0.00	\$0.64	\$1.32	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$87.45
DTE Energy Company	DTE	(\$85.80)	\$0.00	\$1.50	\$3.05	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$190.62
El Paso Electric Company	EE	(\$41.72)	\$0.00	\$0.65	\$1.33	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$93.67
Energy Corporation	ETR	(\$72.44)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$159.39	
Eversource Energy	ES	(\$54.15)	\$0.00	\$0.89	\$1.82	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$121.78
FirstEnergy Corp.	FE	(\$33.04)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$79.19
IDACORP, Inc.	IDA	(\$70.82)	\$0.00	\$1.08	\$2.18	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$157.30
MGE Energy, Inc.	MGEE	(\$48.29)	\$0.00	\$0.62	\$1.28	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$111.65
NorthWestern Corporation	NWE	(\$57.21)	\$0.00	\$1.01	\$2.07	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$128.00
OG Energy Corp.	OG	(\$27.72)	\$0.00	\$0.60	\$1.22	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$59.99
Otter Tail Corporation	OTTR	(\$28.18)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$61.50
Pinnacle West Capital Corporation	PNW	(\$69.12)	\$0.00	\$1.32	\$2.66	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$150.44
PNM Resources, Inc.	PNM	(\$31.32)	\$0.00	\$0.46	\$0.95	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$73.25
Portland General Electric Company	POR	(\$38.74)	\$0.00	\$0.61	\$1.26	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$88.09
SCANA Corporation	SCG	(\$64.86)	\$0.00	\$1.19	\$2.43	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$144.99
Wisconsin Energy Corporation	WEC	(\$55.89)	\$0.00	\$0.86	\$1.76	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$122.54
Xcel Energy Inc.	XEL	(\$38.85)	\$0.00	\$0.69	\$1.41	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$85.92

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

Inputs	[1] Stock	[2] EPS Growth Rate Estimates					[6] Long-Term	[7]	[8] Payout Ratio			[10] Iterative Solution	[11] Terminal	[12] Terminal	[13] Terminal
		Price	Zacks	First Call	Value Line	Average			Growth	2016	2020				
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	
ALLETE, Inc.	ALE	\$59.67	5.50%	5.00%	4.00%	4.83%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	10.66%	20.86	3.92	
Alliant Energy Corporation	LNT	\$38.20	6.10%	6.00%	6.00%	6.23%	5.32%	64.00%	61.00%	66.88%	\$0.00	9.15%	20.86	3.92	
Ameren Corporation	AEE	\$50.12	6.10%	5.20%	6.00%	5.77%	5.32%	68.00%	64.00%	66.88%	\$0.00	9.60%	20.86	3.92	
American Electric Power Company, Inc.	AEP	\$66.05	4.90%	4.10%	4.00%	4.33%	5.32%	64.00%	67.00%	66.88%	\$0.00	10.01%	20.86	3.92	
Avista Corporation	AVA	\$41.65	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	\$0.00	8.70%	20.86	3.92	
CMS Energy Corporation	CMS	\$42.95	6.40%	7.24%	6.00%	6.55%	5.32%	63.00%	62.00%	66.88%	\$0.00	9.30%	20.86	3.92	
DTE Energy Company	DTE	\$92.91	5.80%	5.35%	5.00%	5.38%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.36%	20.86	3.92	
El Paso Electric Company	EE	\$45.30	6.70%	7.00%	2.50%	5.40%	5.32%	59.00%	61.00%	66.88%	\$0.00	8.73%	20.86	3.92	
Energy Corporation	ETR	\$77.45	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	12.50%	20.86	3.92	
Eversource Energy	ES	\$56.36	6.30%	5.49%	6.00%	5.93%	5.32%	60.00%	58.00%	66.88%	\$0.00	9.82%	20.86	3.92	
FirstEnergy Corp.	FE	\$33.34	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	13.37%	20.86	3.92	
IDACORP, Inc.	IDA	\$74.50	4.00%	4.00%	3.00%	3.67%	5.32%	53.00%	60.00%	66.88%	\$0.00	8.96%	20.86	3.92	
MGE Energy, Inc.	MGEE	\$53.30	NA	4.00%	7.00%	5.50%	5.32%	56.00%	44.00%	66.88%	\$0.00	7.21%	20.86	3.92	
NorthWestern Corporation	NWE	\$59.68	5.00%	5.00%	6.00%	5.50%	5.32%	65.00%	59.00%	66.88%	\$0.00	9.54%	20.86	3.92	
OGE Energy Corp.	OGE	\$30.95	5.20%	4.30%	3.00%	4.17%	5.32%	67.00%	70.00%	66.88%	\$0.00	10.04%	20.86	3.92	
Otter Tail Corporation	OTTR	\$30.96	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	\$0.00	10.39%	20.86	3.92	
Pinnacle West Capital Corporation	PNW	\$75.82	4.00%	3.73%	4.00%	3.91%	5.32%	64.00%	65.00%	66.88%	\$0.00	9.24%	20.86	3.92	
PNM Resources, Inc.	PNM	\$33.49	7.60%	8.76%	9.00%	8.45%	5.32%	51.00%	55.00%	66.88%	\$0.00	11.21%	20.86	3.92	
Portland General Electric Company	POR	\$41.86	6.40%	6.57%	5.50%	6.16%	5.32%	56.00%	56.00%	66.88%	\$0.00	9.84%	20.86	3.92	
SCANA Corporation	SCG	\$71.01	5.30%	5.40%	4.50%	5.07%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	10.17%	20.86	3.92	
Wisconsin Energy Corporation	WEC	\$61.68	6.30%	6.77%	6.00%	6.36%	5.32%	68.00%	67.00%	66.88%	\$0.00	7.96%	20.86	3.92	
Xcel Energy Inc.	XEL	\$42.20	5.30%	5.27%	5.50%	5.36%	5.32%	62.00%	63.00%	66.88%	\$0.00	9.72%	20.86	3.92	
											MEAN	9.79%			
											MAX	13.37%			
											MIN	7.21%			

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.77	\$6.08	\$6.41	\$6.75	\$7.11	\$7.48
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.73	\$3.92	\$4.13
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63
American Electric Power Company, Inc.	AEP	\$3.59	\$3.75	\$3.91	\$4.08	\$4.25	\$4.44	\$4.64	\$4.85	\$5.09	\$5.34	\$5.62	\$5.92	\$6.23	\$6.56	\$6.91	\$7.28	\$7.67
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.01	\$2.15	\$2.29	\$2.44	\$2.60	\$2.76	\$2.93	\$3.10	\$3.28	\$3.46	\$3.65	\$3.84	\$4.04	\$4.26	\$4.49	\$4.73
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.77	\$7.13	\$7.51	\$7.91	\$8.33	\$8.77	\$9.24	\$9.73	\$10.25
El Paso Electric Company	EE	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$3.43	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.92	\$3.10	\$3.28	\$3.48	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.10	\$5.37	\$5.65	\$5.96	\$6.27	\$6.61
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$4.01	\$4.16	\$4.31	\$4.47	\$4.63	\$4.82	\$5.02	\$5.24	\$5.50	\$5.77	\$6.08	\$6.40	\$6.74	\$7.10	\$7.48	\$7.88
MGE Energy, Inc.	MGEE	\$2.06	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$3.16	\$3.33	\$3.50	\$3.69	\$3.89	\$4.09	\$4.31	\$4.54	\$4.78
NorthWestern Corporation	NWE	\$2.90	\$3.06	\$3.23	\$3.41	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.47	\$5.76	\$6.07	\$6.39	\$6.73
OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.83	\$1.91	\$1.99	\$2.07	\$2.16	\$2.26	\$2.37	\$2.49	\$2.61	\$2.75	\$2.90	\$3.05	\$3.22	\$3.39	\$3.57
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.23	\$4.40	\$4.57	\$4.75	\$4.95	\$5.16	\$5.40	\$5.66	\$5.95	\$6.27	\$6.60	\$6.95	\$7.32	\$7.71	\$8.12
PNM Resources, Inc.	PNM	\$1.64	\$1.78	\$1.93	\$2.09	\$2.27	\$2.46	\$2.66	\$2.85	\$3.05	\$3.24	\$3.43	\$3.62	\$3.81	\$4.01	\$4.22	\$4.45	\$4.69
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.30	\$2.44	\$2.59	\$2.75	\$2.92	\$3.09	\$3.26	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.97	\$6.28	\$6.62	\$6.97	\$7.34	\$7.73	\$8.14	\$8.58
Wisconsin Energy Corporation	WEC	\$2.34	\$2.49	\$2.65	\$2.82	\$2.99	\$3.18	\$3.38	\$3.58	\$3.79	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.46	\$2.59	\$2.73	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58	\$4.83

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	65.86%	66.84%	67.82%	68.80%	68.88%	68.88%	68.88%	68.88%	68.88%	68.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.									

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$156.10	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$86.22	
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$117.47	
American Electric Power Company, Inc.	AEP	\$2.40	\$2.53	\$2.67	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$159.96	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.33	
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$98.58	
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$213.74	
El Paso Electric Company	EE	\$1.26	\$1.34	\$1.43	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$97.62	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$243.80	
Eversource Energy	ES	\$1.75	\$1.84	\$1.94	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$137.81	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$123.80	
IDACORP, Inc.	IDA	\$2.13	\$2.28	\$2.44	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$164.36	
MGE Energy, Inc.	MGEE	\$1.22	\$1.22	\$1.21	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$99.77	
NorthWestern Corporation	NWE	\$1.99	\$2.05	\$2.11	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$140.45	
OGE Energy Corp.	OGE	\$1.18	\$1.24	\$1.31	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$74.41	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$78.28	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$169.43	
PNM Resources, Inc.	PNM	\$0.91	\$1.00	\$1.11	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$97.74	
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$103.51	
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$178.92	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$120.42	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$100.68	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$59.67)	\$0.00	\$1.18	\$2.40	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$161.11
Alliant Energy Corporation	LNT	(\$38.20)	\$0.00	\$0.58	\$1.18	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$88.98
Ameren Corporation	AEE	(\$50.12)	\$0.00	\$0.86	\$1.76	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$121.24
American Electric Power Company, Inc.	AEP	(\$66.05)	\$0.00	\$1.21	\$2.45	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$165.09
Avista Corporation	AVA	(\$41.65)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.16
CMS Energy Corporation	CMS	(\$42.95)	\$0.00	\$0.64	\$1.31	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$101.74
DTE Energy Company	DTE	(\$92.91)	\$0.00	\$1.49	\$3.03	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$220.59
El Paso Electric Company	EE	(\$45.30)	\$0.00	\$0.64	\$1.30	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$100.75
Energy Corporation	ETR	(\$77.45)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$251.62	
Eversource Energy	ES	(\$56.36)	\$0.00	\$0.88	\$1.81	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$142.23
FirstEnergy Corp.	FE	(\$33.34)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$127.77
IDACORP, Inc.	IDA	(\$74.50)	\$0.00	\$1.07	\$2.17	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$169.63
MGE Energy, Inc.	MGEE	(\$53.30)	\$0.00	\$0.61	\$1.25	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$102.97
NorthWestern Corporation	NWE	(\$59.68)	\$0.00	\$1.00	\$2.04	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$144.96
OGE Energy Corp.	OGE	(\$30.95)	\$0.00	\$0.59	\$1.20	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$76.79
Otter Tail Corporation	OTTR	(\$30.96)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$80.79
Pinnacle West Capital Corporation	PNW	(\$75.82)	\$0.00	\$1.31	\$2.66	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$174.86
PNM Resources, Inc.	PNM	(\$33.49)	\$0.00	\$0.46	\$0.95	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$100.88
Portland General Electric Company	POR	(\$41.86)	\$0.00	\$0.61	\$1.25	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$106.83
SCANA Corporation	SCG	(\$71.01)	\$0.00	\$1.19	\$2.42	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$184.65
Wisconsin Energy Corporation	WEC	(\$61.68)	\$0.00	\$0.85	\$1.75	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$124.28
Xcel Energy Inc.	XEL	(\$42.19)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$103.90

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

Inputs	[1] Stock	[2] [3] [4] [5] [6] EPS Growth Rate Estimates					[7] Long-Term	[8] [9] Payout Ratio			[10] Iterative Solution	[11] IRR	[12] Terminal P/E Ratio	[13] Terminal PEG Ratio
		Price	Zacks	First Call	Value Line	Average		Growth	2016	2020				
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	\$57.08	5.50%	5.00%	4.00%	4.83%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	11.09%	20.86	3.92
Alliant Energy Corporation	LNT	\$36.64	6.10%	6.00%	6.00%	6.23%	5.32%	64.00%	61.00%	66.88%	\$0.00	9.53%	20.86	3.92
Ameren Corporation	AEE	\$48.90	6.10%	5.20%	6.00%	5.77%	5.32%	68.00%	64.00%	66.88%	\$0.00	9.83%	20.86	3.92
American Electric Power Company, Inc.	AEP	\$65.03	4.90%	4.10%	4.00%	4.33%	5.32%	64.00%	67.00%	66.88%	\$0.00	10.16%	20.86	3.92
Avista Corporation	AVA	\$40.48	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	\$0.00	8.96%	20.86	3.92
CMS Energy Corporation	CMS	\$41.70	6.40%	7.24%	6.00%	6.55%	5.32%	63.00%	62.00%	66.88%	\$0.00	9.57%	20.86	3.92
DTE Energy Company	DTE	\$89.93	5.80%	5.35%	5.00%	5.38%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.66%	20.86	3.92
El Paso Electric Company	EE	\$44.56	6.70%	7.00%	2.50%	5.40%	5.32%	59.00%	61.00%	66.88%	\$0.00	8.88%	20.86	3.92
Energy Corporation	ETR	\$76.55	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	12.62%	20.86	3.92
Eversource Energy	ES	\$56.58	6.30%	5.49%	6.00%	5.93%	5.32%	60.00%	58.00%	66.88%	\$0.00	9.78%	20.86	3.92
FirstEnergy Corp.	FE	\$34.24	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	13.11%	20.86	3.92
IDACORP, Inc.	IDA	\$73.58	4.00%	4.00%	3.00%	3.67%	5.32%	53.00%	60.00%	66.88%	\$0.00	9.07%	20.86	3.92
MGE Energy, Inc.	MGEE	\$51.38	NA	4.00%	7.00%	5.50%	5.32%	56.00%	44.00%	66.88%	\$0.00	7.52%	20.86	3.92
NorthWestern Corporation	NWE	\$59.59	5.00%	5.00%	5.00%	5.00%	5.32%	65.00%	59.00%	66.88%	\$0.00	9.56%	20.86	3.92
OGE Energy Corp.	OGE	\$29.13	5.20%	4.30%	3.00%	4.17%	5.32%	67.00%	70.00%	66.88%	\$0.00	10.62%	20.86	3.92
Otter Tail Corporation	OTTR	\$29.44	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	\$0.00	10.87%	20.86	3.92
Pinnacle West Capital Corporation	PNW	\$73.65	4.00%	3.73%	4.00%	3.91%	5.32%	64.00%	65.00%	66.88%	\$0.00	9.51%	20.86	3.92
PNM Resources, Inc.	PNM	\$32.94	7.60%	8.76%	9.00%	8.45%	5.32%	51.00%	55.00%	66.88%	\$0.00	11.37%	20.86	3.92
Portland General Electric Company	POR	\$40.24	6.40%	6.57%	5.50%	6.16%	5.32%	56.00%	56.00%	66.88%	\$0.00	10.20%	20.86	3.92
SCANA Corporation	SCG	\$69.22	5.30%	5.40%	4.50%	5.07%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	10.41%	20.86	3.92
Wisconsin Energy Corporation	WEC	\$59.53	6.30%	6.77%	6.00%	6.36%	5.32%	68.00%	67.00%	66.88%	\$0.00	8.28%	20.86	3.92
Xcel Energy Inc.	XEL	\$41.15	5.30%	5.27%	5.50%	5.36%	5.32%	62.00%	63.00%	66.88%	\$0.00	9.96%	20.86	3.92
											MEAN	10.03%		
											MAX	13.11%		
											MIN	7.52%		

Projected Annual Earnings per Share	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.77	\$6.08	\$6.41	\$6.75	\$7.11	\$7.48
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.73	\$3.92	\$4.13
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63
American Electric Power Company, Inc.	AEP	\$3.59	\$3.75	\$3.91	\$4.08	\$4.25	\$4.44	\$4.64	\$4.85	\$5.09	\$5.34	\$5.62	\$5.92	\$6.23	\$6.56	\$6.91	\$7.28	\$7.67
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.01	\$2.15	\$2.29	\$2.44	\$2.60	\$2.76	\$2.93	\$3.10	\$3.28	\$3.46	\$3.65	\$3.84	\$4.04	\$4.26	\$4.49	\$4.73
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.77	\$7.13	\$7.51	\$7.91	\$8.33	\$8.77	\$9.24	\$9.73	\$10.25
El Paso Electric Company	EE	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$3.43	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68
Energy Corporation	ETR	\$6.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.92	\$3.10	\$3.28	\$3.48	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.10	\$5.37	\$5.65	\$5.96	\$6.27	\$6.61
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$4.01	\$4.16	\$4.31	\$4.47	\$4.63	\$4.82	\$5.02	\$5.24	\$5.50	\$5.77	\$6.08	\$6.40	\$6.74	\$7.10	\$7.48	\$7.88
MGE Energy, Inc.	MGEE	\$2.06	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$3.16	\$3.33	\$3.50	\$3.69	\$3.89	\$4.09	\$4.31	\$4.54	\$4.78
NorthWestern Corporation	NWE	\$2.90	\$3.06	\$3.23	\$3.41	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.47	\$5.76	\$6.07	\$6.39	\$6.73
OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.83	\$1.91	\$1.99	\$2.07	\$2.16	\$2.26	\$2.37	\$2.49	\$2.61	\$2.75	\$2.90	\$3.05	\$3.22	\$3.39	\$3.57
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.23	\$4.40	\$4.57	\$4.75	\$4.95	\$5.16	\$5.40	\$5.66	\$5.95	\$6.27	\$6.60	\$6.95	\$7.32	\$7.71	\$8.12
PNM Resources, Inc.	PNM	\$1.64	\$1.78	\$1.93	\$2.09	\$2.27	\$2.46	\$2.66	\$2.85	\$3.05	\$3.24	\$3.43	\$3.62	\$3.81	\$4.01	\$4.22	\$4.45	\$4.69
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.30	\$2.44	\$2.59	\$2.75	\$2.92	\$3.09	\$3.26	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.97	\$6.28	\$6.62	\$6.97	\$7.34	\$7.73	\$8.14	\$8.58
Wisconsin Energy Corporation	WEC	\$2.34	\$2.49	\$2.65	\$2.82	\$2.99	\$3.18	\$3.38	\$3.58	\$3.79	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.46	\$2.59	\$2.73	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58	\$4.83

Projected Annual Dividend Payout Ratio	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]	
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	65.86%	66.84%	67.82%	68.80%	68.88%	68.88%	68.88%	68.88%	68.88%	68.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	56.88%	58.03%	59.18%	60.33%	61.48%	62.63%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Wisconsin Energy Corporation	WEC	68.00%	67.75%	67.50%	67.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%</					

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$156.10	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$86.22	
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$117.47	
American Electric Power Company, Inc.	AEP	\$2.40	\$2.53	\$2.67	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$159.96	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.33	
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$98.58	
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$213.74	
El Paso Electric Company	EE	\$1.26	\$1.34	\$1.43	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$97.62	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$243.80	
Eversource Energy	ES	\$1.75	\$1.84	\$1.94	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$137.81	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$123.80	
IDACORP, Inc.	IDA	\$2.13	\$2.28	\$2.44	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$164.36	
MGE Energy, Inc.	MGEE	\$1.22	\$1.22	\$1.21	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$99.77	
NorthWestern Corporation	NWE	\$1.99	\$2.05	\$2.11	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$140.45	
OGE Energy Corp.	OGE	\$1.18	\$1.24	\$1.31	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$74.41	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$78.28	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$169.43	
PNM Resources, Inc.	PNM	\$0.91	\$1.00	\$1.11	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$97.74	
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$103.51	
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$178.92	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$120.42	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$100.68	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$57.08)	\$0.00	\$1.18	\$2.40	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$161.11
Alliant Energy Corporation	LNT	(\$36.64)	\$0.00	\$0.58	\$1.18	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$88.98
Ameren Corporation	AEE	(\$48.89)	\$0.00	\$0.86	\$1.76	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$121.24
American Electric Power Company, Inc.	AEP	(\$65.03)	\$0.00	\$1.21	\$2.45	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$165.09
Avista Corporation	AVA	(\$40.48)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.16
CMS Energy Corporation	CMS	(\$41.70)	\$0.00	\$0.64	\$1.31	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$101.74
DTE Energy Company	DTE	(\$89.93)	\$0.00	\$1.49	\$3.03	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$220.59
El Paso Electric Company	EE	(\$44.56)	\$0.00	\$0.64	\$1.30	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$100.75
Energy Corporation	ETR	(\$76.55)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$251.62	
Eversource Energy	ES	(\$56.58)	\$0.00	\$0.88	\$1.81	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$142.23
FirstEnergy Corp.	FE	(\$34.24)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$127.77
IDACORP, Inc.	IDA	(\$73.58)	\$0.00	\$1.07	\$2.17	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$169.63
MGE Energy, Inc.	MGEE	(\$51.38)	\$0.00	\$0.61	\$1.25	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$102.97
NorthWestern Corporation	NWE	(\$59.59)	\$0.00	\$1.00	\$2.04	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$144.96
OGE Energy Corp.	OGE	(\$29.13)	\$0.00	\$0.59	\$1.20	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$76.79
Otter Tail Corporation	OTTR	(\$29.44)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$80.79
Pinnacle West Capital Corporation	PNW	(\$73.65)	\$0.00	\$1.31	\$2.66	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$174.86
PNM Resources, Inc.	PNM	(\$32.94)	\$0.00	\$0.46	\$0.95	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$100.88
Portland General Electric Company	POR	(\$40.24)	\$0.00	\$0.61	\$1.25	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$106.83
SCANA Corporation	SCG	(\$69.22)	\$0.00	\$1.19	\$2.42	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$184.65
Wisconsin Energy Corporation	WEC	(\$59.53)	\$0.00	\$0.85	\$1.75	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$124.28
Xcel Energy Inc.	XEL	(\$41.15)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$103.90



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

Inputs	[1] Stock	[2] [3] [4] [5] [6] [7] EPS Growth Rate Estimates						[8] [9] Long-Term Payout Ratio			[10] [11] [12] [13] Iterative Solution Terminal Terminal						
		Price	Zacks	First Call	Value Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio			
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio			
ALLETE, Inc.	ALE	\$54.07	5.50%	5.00%	4.00%	4.83%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	11.62%	20.86	3.92			
Alliant Energy Corporation	LNT	\$33.83	6.10%	6.00%	6.00%	6.23%	5.32%	64.00%	61.00%	66.88%	\$0.00	10.27%	20.86	3.92			
Ameren Corporation	AEE	\$46.40	6.10%	5.20%	6.00%	5.77%	5.32%	68.00%	64.00%	66.88%	\$0.00	10.33%	20.86	3.92			
American Electric Power Company, Inc.	AEP	\$61.54	4.90%	4.10%	4.00%	4.33%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	10.69%	20.86	3.92			
Avista Corporation	AVA	\$37.83	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	\$0.00	9.59%	20.86	3.92			
CMS Energy Corporation	CMS	\$39.10	6.40%	7.24%	6.00%	6.55%	5.32%	63.00%	62.00%	66.88%	\$0.00	10.17%	20.86	3.92			
DTE Energy Company	DTE	\$85.80	5.80%	5.35%	5.00%	5.38%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	10.10%	20.86	3.92			
El Paso Electric Company	EE	\$41.72	6.70%	7.00%	2.50%	5.40%	5.32%	59.00%	61.00%	66.88%	\$0.00	9.48%	20.86	3.92			
Energy Corporation	ETR	\$72.44	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	13.18%	20.86	3.92			
Eversource Energy	ES	\$54.15	6.30%	5.49%	6.00%	5.93%	5.32%	60.00%	58.00%	66.88%	\$0.00	10.19%	20.86	3.92			
FirstEnergy Corp.	FE	\$33.04	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	13.46%	20.86	3.92			
IDACORP, Inc.	IDA	\$70.82	4.00%	4.00%	3.00%	3.67%	5.32%	53.00%	60.00%	66.88%	\$0.00	9.42%	20.86	3.92			
MGE Energy, Inc.	MGEE	\$48.29	NA	4.00%	7.00%	5.50%	5.32%	56.00%	44.00%	66.88%	\$0.00	8.06%	20.86	3.92			
NorthWestern Corporation	NWE	\$57.21	5.00%	5.00%	5.00%	5.50%	5.32%	65.00%	59.00%	66.88%	\$0.00	9.93%	20.86	3.92			
OGE Energy Corp.	OGE	\$27.72	5.20%	4.30%	3.00%	4.17%	5.32%	67.00%	70.00%	66.88%	\$0.00	11.11%	20.86	3.92			
Otter Tail Corporation	OTTR	\$28.18	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	\$0.00	11.30%	20.86	3.92			
Pinnacle West Capital Corporation	PNW	\$69.12	4.00%	3.73%	4.00%	3.91%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	10.11%	20.86	3.92			
PNM Resources, Inc.	PNM	\$31.32	7.60%	8.76%	9.00%	8.45%	5.32%	51.00%	55.00%	66.88%	\$0.00	11.85%	20.86	3.92			
Portland General Electric Company	POR	\$38.74	6.40%	6.57%	5.50%	6.16%	5.32%	56.00%	56.00%	66.88%	\$0.00	10.56%	20.86	3.92			
SCANA Corporation	SCG	\$64.86	5.30%	5.40%	4.50%	5.07%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	11.02%	20.86	3.92			
Wisconsin Energy Corporation	WEC	\$55.89	6.30%	6.77%	6.00%	6.36%	5.32%	68.00%	67.00%	66.88%	\$0.00	8.85%	20.86	3.92			
Xcel Energy Inc.	XEL	\$38.85	5.30%	5.27%	5.50%	5.36%	5.32%	62.00%	63.00%	66.88%	\$0.00	10.50%	20.86	3.92			
												MEAN	10.54%				
												MAX	13.46%				
												MIN	8.06%				

Projected Annual Earnings per Share	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.54	\$3.71	\$3.89	\$4.08	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.48	\$5.77	\$6.08	\$6.41	\$6.75	\$7.11	\$7.48
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.91	\$2.03	\$2.15	\$2.29	\$2.43	\$2.57	\$2.72	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.73	\$3.92	\$4.13
Ameren Corporation	AEE	\$2.38	\$2.52	\$2.66	\$2.82	\$2.98	\$3.15	\$3.33	\$3.52	\$3.71	\$3.91	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63
American Electric Power Company, Inc.	AEP	\$3.59	\$3.75	\$3.91	\$4.08	\$4.25	\$4.44	\$4.64	\$4.85	\$5.09	\$5.34	\$5.62	\$5.92	\$6.23	\$6.56	\$6.91	\$7.28	\$7.67
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.01	\$2.15	\$2.29	\$2.44	\$2.60	\$2.76	\$2.93	\$3.10	\$3.28	\$3.46	\$3.65	\$3.84	\$4.04	\$4.26	\$4.49	\$4.73
DTE Energy Company	DTE	\$4.45	\$4.69	\$4.94	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.77	\$7.13	\$7.51	\$7.91	\$8.33	\$8.77	\$9.24	\$9.73	\$10.25
El Paso Electric Company	EE	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$3.43	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.92	\$3.10	\$3.28	\$3.48	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.10	\$5.37	\$5.65	\$5.96	\$6.27	\$6.61
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$4.01	\$4.16	\$4.31	\$4.47	\$4.63	\$4.82	\$5.02	\$5.24	\$5.50	\$5.77	\$6.08	\$6.40	\$6.74	\$7.10	\$7.48	\$7.88
MGE Energy, Inc.	MGEE	\$2.06	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$3.16	\$3.33	\$3.50	\$3.69	\$3.89	\$4.09	\$4.31	\$4.54	\$4.78
NorthWestern Corporation	NWE	\$2.90	\$3.06	\$3.23	\$3.41	\$3.59	\$3.79	\$4.00	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.47	\$5.76	\$6.07	\$6.39	\$6.73
OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.83	\$1.91	\$1.99	\$2.07	\$2.16	\$2.26	\$2.37	\$2.49	\$2.61	\$2.75	\$2.90	\$3.05	\$3.22	\$3.39	\$3.57
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.23	\$4.40	\$4.57	\$4.75	\$4.95	\$5.16	\$5.40	\$5.66	\$5.95	\$6.27	\$6.60	\$6.95	\$7.32	\$7.71	\$8.12
PNM Resources, Inc.	PNM	\$1.64	\$1.78	\$1.93	\$2.09	\$2.27	\$2.46	\$2.66	\$2.85	\$3.05	\$3.24	\$3.43	\$3.62	\$3.81	\$4.01	\$4.22	\$4.45	\$4.69
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.30	\$2.44	\$2.59	\$2.75	\$2.92	\$3.09	\$3.26	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96
SCANA Corporation	SCG	\$3.81	\$4.00	\$4.21	\$4.42	\$4.64	\$4.88	\$5.13	\$5.39	\$5.67	\$5.97	\$6.28	\$6.62	\$6.97	\$7.34	\$7.73	\$8.14	\$8.58
Wisconsin Energy Corporation	WEC	\$2.34	\$2.49	\$2.65	\$2.82	\$2.99	\$3.18	\$3.38	\$3.58	\$3.79	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.46	\$2.59	\$2.73	\$2.87	\$3.03	\$3.19	\$3.36	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58	\$4.83

Projected Annual Dividend Payout Ratio	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]	
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Wisconsin Energy Corporation	WEC	68.00%	67.75%	67.50%	67.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.			

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2031	Value
ALLETE, Inc.	ALE	\$2.34	\$2.42	\$2.51	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$56.10	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.27	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$86.22	
Ameren Corporation	AEE	\$1.71	\$1.78	\$1.86	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$117.47	
American Electric Power Company, Inc.	AEP	\$2.40	\$2.53	\$2.67	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$159.96	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.33	
CMS Energy Corporation	CMS	\$1.27	\$1.35	\$1.43	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$98.58	
DTE Energy Company	DTE	\$2.95	\$3.09	\$3.23	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$213.74	
El Paso Electric Company	EE	\$1.26	\$1.34	\$1.43	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$97.62	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$243.80	
Eversource Energy	ES	\$1.75	\$1.84	\$1.94	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$137.81	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$123.80	
IDACORP, Inc.	IDA	\$2.13	\$2.28	\$2.44	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$164.36	
MGE Energy, Inc.	MGEE	\$1.22	\$1.22	\$1.21	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$99.77	
NorthWestern Corporation	NWE	\$1.99	\$2.05	\$2.11	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$140.45	
OG Energy Corp.	OG	\$1.18	\$1.24	\$1.31	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$74.41	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$78.28	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$169.43	
PNM Resources, Inc.	PNM	\$0.91	\$1.00	\$1.11	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$97.74	
Portland General Electric Company	POR	\$1.21	\$1.29	\$1.37	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$103.51	
SCANA Corporation	SCG	\$2.36	\$2.49	\$2.63	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$178.92	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$120.42	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$100.68	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$54.07)	\$0.00	\$1.18	\$2.40	\$2.60	\$2.70	\$2.86	\$3.03	\$3.22	\$3.42	\$3.63	\$3.86	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$161.11
Alliant Energy Corporation	LNT	(\$33.83)	\$0.00	\$0.58	\$1.18	\$1.33	\$1.39	\$1.50	\$1.62	\$1.74	\$1.86	\$2.00	\$2.13	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$88.98
Ameren Corporation	AEE	(\$46.40)	\$0.00	\$0.86	\$1.76	\$1.94	\$2.02	\$2.15	\$2.28	\$2.43	\$2.58	\$2.74	\$2.91	\$3.06	\$3.22	\$3.40	\$3.58	\$3.77	\$121.24
American Electric Power Company, Inc.	AEP	(\$61.54)	\$0.00	\$1.21	\$2.45	\$2.82	\$2.97	\$3.11	\$3.25	\$3.41	\$3.58	\$3.76	\$3.96	\$4.17	\$4.39	\$4.62	\$4.87	\$5.13	\$165.09
Avista Corporation	AVA	(\$39.10)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.16
CMS Energy Corporation	CMS	(\$39.10)	\$0.00	\$0.64	\$1.31	\$1.52	\$1.61	\$1.73	\$1.86	\$2.00	\$2.14	\$2.29	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$3.16	\$101.74
DTE Energy Company	DTE	(\$85.80)	\$0.00	\$1.49	\$3.03	\$3.38	\$3.53	\$3.78	\$4.04	\$4.33	\$4.63	\$4.95	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.85	\$220.59
El Paso Electric Company	EE	(\$41.72)	\$0.00	\$0.64	\$1.30	\$1.52	\$1.61	\$1.72	\$1.85	\$1.98	\$2.11	\$2.26	\$2.42	\$2.54	\$2.68	\$2.82	\$2.97	\$3.13	\$100.75
Energy Corporation	ETR	(\$72.44)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$251.62	
Eversource Energy	ES	(\$54.15)	\$0.00	\$0.88	\$1.81	\$2.03	\$2.14	\$2.32	\$2.51	\$2.72	\$2.93	\$3.17	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$142.23
FirstEnergy Corp.	FE	(\$33.04)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$127.77
IDACORP, Inc.	IDA	(\$70.82)	\$0.00	\$1.07	\$2.17	\$2.60	\$2.78	\$2.94	\$3.13	\$3.33	\$3.55	\$3.79	\$4.07	\$4.28	\$4.51	\$4.75	\$5.00	\$5.27	\$169.63
MGE Energy, Inc.	MGEE	(\$48.29)	\$0.00	\$0.61	\$1.25	\$1.20	\$1.18	\$1.36	\$1.55	\$1.75	\$1.97	\$2.21	\$2.47	\$2.60	\$2.74	\$2.88	\$3.04	\$3.20	\$102.97
NorthWestern Corporation	NWE	(\$57.21)	\$0.00	\$1.00	\$2.04	\$2.17	\$2.24	\$2.41	\$2.60	\$2.80	\$3.01	\$3.23	\$3.47	\$3.66	\$3.85	\$4.06	\$4.28	\$4.50	\$144.96
OG Energy Corp.	OG	(\$27.72)	\$0.00	\$0.59	\$1.20	\$1.38	\$1.45	\$1.50	\$1.56	\$1.62	\$1.69	\$1.76	\$1.84	\$1.94	\$2.04	\$2.15	\$2.27	\$2.39	\$76.79
Otter Tail Corporation	OTTR	(\$28.17)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$80.79
Pinnacle West Capital Corporation	PNW	(\$69.12)	\$0.00	\$1.31	\$2.66	\$2.96	\$3.09	\$3.23	\$3.39	\$3.56	\$3.75	\$3.96	\$4.19	\$4.41	\$4.65	\$4.90	\$5.16	\$5.43	\$174.86
PNM Resources, Inc.	PNM	(\$31.32)	\$0.00	\$0.46	\$0.95	\$1.23	\$1.35	\$1.51	\$1.68	\$1.86	\$2.04	\$2.23	\$2.42	\$2.55	\$2.68	\$2.83	\$2.98	\$3.13	\$100.88
Portland General Electric Company	POR	(\$38.74)	\$0.00	\$0.61	\$1.25	\$1.45	\$1.54	\$1.69	\$1.84	\$2.01	\$2.18	\$2.37	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$106.83
SCANA Corporation	SCG	(\$64.86)	\$0.00	\$1.19	\$2.42	\$2.77	\$2.93	\$3.14	\$3.36	\$3.60	\$3.85	\$4.13	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45	\$5.74	\$184.65
Wisconsin Energy Corporation	WEC	(\$55.89)	\$0.00	\$0.85	\$1.75	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.68	\$2.83	\$2.98	\$3.14	\$3.30	\$3.48	\$3.67	\$3.86	\$124.28
Xcel Energy Inc.	XEL	(\$38.85)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.72	\$1.83	\$1.95	\$2.07	\$2.20	\$2.34	\$2.49	\$2.62	\$2.76	\$2.91	\$3.06	\$3.23	\$103.90

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

Inputs	[1] Stock	[2] EPS Growth Rate Estimates							[7] Payout Ratio	[8] 2026	[9] 2026	[10] Iterative Solution			[12] Terminal	[13] Terminal		
		Price	Zacks	First Call	Value Line	Growth	2016	2020				2026	Proof	IRR			P/E Ratio	PEG Ratio
Company	Ticker	Price	Zacks	First Call	Value Line	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	Terminal	Terminal			
ALLETE, Inc.	ALE	\$59.67	5.50%	5.00%	4.00%	4.00%	5.32%	66.00%	63.00%	66.88%	\$0.00	10.14%	20.86	3.92				
Alliant Energy Corporation	LNT	\$38.20	6.10%	6.00%	6.00%	6.00%	5.32%	64.00%	61.00%	66.88%	\$0.00	9.01%	20.86	3.92				
Ameren Corporation	AEE	\$50.12	6.10%	5.20%	6.00%	5.20%	5.32%	68.00%	64.00%	66.88%	\$0.00	9.26%	20.86	3.92				
American Electric Power Company, Inc.	AEP	\$66.05	4.90%	4.10%	4.00%	4.00%	5.32%	64.00%	67.00%	66.88%	\$0.00	9.80%	20.86	3.92				
Avista Corporation	AVA	\$41.65	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	\$0.00	8.70%	20.86	3.92				
CMS Energy Corporation	CMS	\$42.95	6.40%	7.24%	6.00%	6.00%	5.32%	63.00%	62.00%	66.88%	\$0.00	8.97%	20.86	3.92				
DTE Energy Company	DTE	\$92.91	5.80%	5.35%	5.00%	5.00%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.13%	20.86	3.92				
El Paso Electric Company	EE	\$45.30	6.70%	7.00%	2.50%	2.50%	5.32%	59.00%	61.00%	66.88%	\$0.00	7.00%	20.86	3.92				
Energy Corporation	ETR	\$77.45	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	12.50%	20.86	3.92				
Eversource Energy	ES	\$56.36	6.30%	5.49%	6.00%	5.49%	5.32%	60.00%	58.00%	66.88%	\$0.00	9.55%	20.86	3.92				
FirstEnergy Corp.	FE	\$33.34	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	13.37%	20.86	3.92				
IDACORP, Inc.	IDA	\$74.50	4.00%	4.00%	3.00%	3.00%	5.32%	53.00%	60.00%	66.88%	\$0.00	8.55%	20.86	3.92				
MGE Energy, Inc.	MGEE	\$53.30	NA	4.00%	7.00%	4.00%	5.32%	56.00%	44.00%	66.88%	(\$0.00)	6.35%	20.86	3.92				
NorthWestern Corporation	NWE	\$59.68	5.00%	5.00%	5.00%	5.00%	5.32%	65.00%	59.00%	66.88%	\$0.00	9.24%	20.86	3.92				
OGE Energy Corp.	OGE	\$30.95	5.20%	4.30%	3.00%	3.00%	5.32%	67.00%	70.00%	66.88%	\$0.00	9.31%	20.86	3.92				
Otter Tail Corporation	OTTR	\$30.96	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	\$0.00	10.39%	20.86	3.92				
Pinnacle West Capital Corporation	PNW	\$75.82	4.00%	3.73%	4.00%	3.73%	5.32%	64.00%	65.00%	66.88%	\$0.00	9.13%	20.86	3.92				
PNM Resources, Inc.	PNM	\$33.49	7.60%	8.76%	9.00%	7.60%	5.32%	51.00%	55.00%	66.88%	\$0.00	10.70%	20.86	3.92				
Portland General Electric Company	POR	\$41.86	6.40%	6.57%	5.50%	5.50%	5.32%	56.00%	56.00%	66.88%	\$0.00	9.44%	20.86	3.92				
SCANA Corporation	SCG	\$71.01	5.30%	5.40%	4.50%	4.50%	5.32%	59.00%	60.00%	66.88%	\$0.00	9.82%	20.86	3.92				
Wisconsin Energy Corporation	WEC	\$61.68	6.30%	6.77%	6.00%	6.00%	5.32%	68.00%	67.00%	66.88%	\$0.00	7.75%	20.86	3.92				
Xcel Energy Inc.	XEL	\$42.20	5.30%	5.27%	5.50%	5.27%	5.32%	62.00%	63.00%	66.88%	\$0.00	9.67%	20.86	3.92				
											MEAN	9.44%						
											MAX	13.37%						
											MIN	6.35%						

Projected Annual Earnings per Share	Company	Ticker	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
	ALLETE, Inc.	ALE	\$3.38	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.44	\$5.73	\$6.03	\$6.35	\$6.69	\$7.05
	Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.14	\$3.30	\$3.48	\$3.66	\$3.86	\$4.07
	Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88	\$5.14	\$5.41
	American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.88	\$4.04	\$4.20	\$4.37	\$4.55	\$4.75	\$4.98	\$5.22	\$5.49	\$5.78	\$6.08	\$6.41	\$6.75	\$7.11	\$7.49
	Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
	CMS Energy Corporation	CMS	\$1.89	\$2.00	\$2.12	\$2.25	\$2.39	\$2.53	\$2.68	\$2.83	\$2.99	\$3.16	\$3.33	\$3.51	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55
	DTE Energy Company	DTE	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.94	\$7.30	\$7.69	\$8.10	\$8.53	\$8.99	\$9.47	\$9.97
	El Paso Electric Company	EE	\$2.03	\$2.08	\$2.13	\$2.19	\$2.24	\$2.30	\$2.36	\$2.45	\$2.54	\$2.65	\$2.78	\$2.93	\$3.09	\$3.25	\$3.42	\$3.61	\$3.80
	Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
	Eversource Energy	ES	\$2.76	\$2.91	\$3.07	\$3.24	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77	\$6.08	\$6.40
	FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
	IDACORP, Inc.	IDA	\$3.87	\$3.99	\$4.11	\$4.23	\$4.36	\$4.49	\$4.64	\$4.81	\$5.01	\$5.24	\$5.50	\$5.79	\$6.10	\$6.43	\$6.77	\$7.13	\$7.51
	MGE Energy, Inc.	MGEE	\$2.06	\$2.14	\$2.23	\$2.32	\$2.41	\$2.51	\$2.61	\$2.73	\$2.86	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.87	\$4.08	\$4.30
	NorthWestern Corporation	NWE	\$2.90	\$3.05	\$3.20	\$3.36	\$3.52	\$3.70	\$3.89	\$4.09	\$4.30	\$4.52	\$4.76	\$5.01	\$5.28	\$5.56	\$5.86	\$6.17	\$6.50
	OGE Energy Corp.	OGE	\$1.69	\$1.74	\$1.79	\$1.85	\$1.90	\$1.96	\$2.03	\$2.10	\$2.19	\$2.29	\$2.40	\$2.53	\$2.66	\$2.81	\$2.96	\$3.11	\$3.28
	Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
	Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.22	\$4.38	\$4.54	\$4.71	\$4.90	\$5.10	\$5.34	\$5.59	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23	\$7.61	\$8.02
	PNM Resources, Inc.	PNM	\$1.64	\$1.76	\$1.90	\$2.04	\$2.20	\$2.37	\$2.54	\$2.71	\$2.88	\$3.06	\$3.23	\$3.41	\$3.59	\$3.78	\$3.98	\$4.19	\$4.42
	Portland General Electric Company	POR	\$2.04	\$2.15	\$2.27	\$2.40	\$2.53	\$2.67	\$2.81	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74
	SCANA Corporation	SCG	\$3.81	\$3.98	\$4.16	\$4.35	\$4.54	\$4.75	\$4.97	\$5.21	\$5.46	\$5.74	\$6.03	\$6.36	\$6.69	\$7.05	\$7.42	\$7.82	\$8.24
	Wisconsin Energy Corporation	WEC	\$2.34	\$2.48	\$2.63	\$2.79	\$2.95	\$3.13	\$3.32	\$3.51	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57	\$4.82	\$5.07	\$5.34	\$5.63
	Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.71	\$2.86	\$3.01	\$3.17	\$3.34	\$3.51	\$3.70	\$3.90	\$4.11	\$4.32	\$4.55	\$4.80

Projected Annual Dividend Payout Ratio	Company	Ticker	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
	ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.48%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	56.88%	58.02%	59.17%	60.31%	61.46%	62.61%
	IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
	NorthWestern Corporation	NWE	65.0															

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$147.04	
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$84.81	
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$112.83	
American Electric Power Company, Inc.	AEP	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$156.18	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.33	
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$94.84	
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$207.98	
El Paso Electric Company	EE	\$1.23	\$1.27	\$1.31	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$79.22	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$243.80	
Eversource Energy	ES	\$1.75	\$1.83	\$1.91	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$133.58	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$123.80	
IDACORP, Inc.	IDA	\$2.11	\$2.25	\$2.39	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$156.61	
MGE Energy, Inc.	MGEE	\$1.20	\$1.18	\$1.16	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$89.62	
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$135.54	
OGE Energy Corp.	OGE	\$1.17	\$1.21	\$1.26	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$68.39	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$78.28	
Pinnacle West Capital Corporation	PNW	\$2.60	\$2.71	\$2.82	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$167.25	
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$92.10	
Portland General Electric Company	POR	\$1.21	\$1.27	\$1.34	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$98.80	
SCANA Corporation	SCG	\$2.35	\$2.47	\$2.59	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$171.81	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.78	\$1.88	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$117.42	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$100.06	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$59.67)	\$0.00	\$1.17	\$2.37	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$151.76
Alliant Energy Corporation	LNT	(\$38.20)	\$0.00	\$0.58	\$1.18	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$87.53
Ameren Corporation	AEE	(\$50.12)	\$0.00	\$0.86	\$1.75	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$116.45
American Electric Power Company, Inc.	AEP	(\$66.05)	\$0.00	\$1.20	\$2.44	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$161.18
Avista Corporation	AVA	(\$41.65)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.16
CMS Energy Corporation	CMS	(\$42.95)	\$0.00	\$0.64	\$1.30	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$97.88
DTE Energy Company	DTE	(\$92.91)	\$0.00	\$1.48	\$3.02	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$214.65
El Paso Electric Company	EE	(\$45.30)	\$0.00	\$0.62	\$1.24	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$81.76
Energy Corporation	ETR	(\$77.45)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$251.62
Eversource Energy	ES	(\$56.36)	\$0.00	\$0.88	\$1.79	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$137.86
FirstEnergy Corp.	FE	(\$33.34)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$127.77
IDACORP, Inc.	IDA	(\$74.50)	\$0.00	\$1.06	\$2.14	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$161.64
MGE Energy, Inc.	MGEE	(\$53.30)	\$0.00	\$0.60	\$1.22	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$92.49
NorthWestern Corporation	NWE	(\$59.68)	\$0.00	\$1.00	\$2.03	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$139.88
OGE Energy Corp.	OGE	(\$30.95)	\$0.00	\$0.59	\$1.18	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$70.59
Otter Tail Corporation	OTTR	(\$30.96)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$80.79
Pinnacle West Capital Corporation	PNW	(\$75.82)	\$0.00	\$1.31	\$2.65	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$172.61
PNM Resources, Inc.	PNM	(\$33.49)	\$0.00	\$0.45	\$0.93	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$95.06
Portland General Electric Company	POR	(\$41.86)	\$0.00	\$0.61	\$1.24	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$101.97
SCANA Corporation	SCG	(\$71.01)	\$0.00	\$1.18	\$2.40	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$177.32
Wisconsin Energy Corporation	WEC	(\$61.68)	\$0.00	\$0.85	\$1.74	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$121.19
Xcel Energy Inc.	XEL	(\$42.19)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$103.26

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

Inputs	[1] Stock	[2] [3] [4] [5] EPS Growth Rate Estimates				[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	
		Low				Long-Term	Payout Ratio	Iterative Solution	Terminal	Terminal				
		Price	Zacks	First Call	Value Line	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	
Company	Ticker													
ALLETE, Inc.	ALE	\$57.08	5.50%	5.00%	4.00%	4.00%	5.32%	66.00%	63.00%	66.88%	\$0.00	10.56%	20.86	3.92
Alliant Energy Corporation	LNT	\$36.64	6.10%	6.00%	6.00%	6.00%	5.32%	64.00%	61.00%	66.88%	\$0.00	9.39%	20.86	3.92
Ameren Corporation	AEE	\$48.90	6.10%	5.20%	6.00%	5.20%	5.32%	68.00%	64.00%	66.88%	\$0.00	9.49%	20.86	3.92
American Electric Power Company, Inc.	AEP	\$65.03	4.90%	4.10%	4.00%	4.00%	5.32%	64.00%	67.00%	66.88%	\$0.00	9.95%	20.86	3.92
Avista Corporation	AVA	\$40.48	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	\$0.00	8.96%	20.86	3.92
CMS Energy Corporation	CMS	\$41.70	6.40%	7.24%	6.00%	6.00%	5.32%	63.00%	62.00%	66.88%	\$0.00	9.24%	20.86	3.92
DTE Energy Company	DTE	\$89.93	5.80%	5.35%	5.00%	5.00%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.42%	20.86	3.92
El Paso Electric Company	EE	\$44.56	6.70%	7.00%	2.50%	2.50%	5.32%	59.00%	61.00%	66.88%	\$0.00	7.14%	20.86	3.92
Energy Corporation	ETR	\$76.55	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	12.62%	20.86	3.92
Eversource Energy	ES	\$56.58	6.30%	5.49%	6.00%	5.49%	5.32%	60.00%	58.00%	66.88%	\$0.00	9.51%	20.86	3.92
FirstEnergy Corp.	FE	\$34.24	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	13.11%	20.86	3.92
IDACORP, Inc.	IDA	\$73.58	4.00%	4.00%	3.00%	3.00%	5.32%	53.00%	60.00%	66.88%	\$0.00	8.66%	20.86	3.92
MGE Energy, Inc.	MGEE	\$51.38	NA	4.00%	7.00%	4.00%	5.32%	56.00%	44.00%	66.88%	(\$0.00)	6.66%	20.86	3.92
NorthWestern Corporation	NWE	\$59.59	5.00%	5.00%	5.00%	5.00%	5.32%	65.00%	59.00%	66.88%	\$0.00	9.25%	20.86	3.92
OGE Energy Corp.	OGE	\$29.13	5.20%	4.30%	3.00%	3.00%	5.32%	67.00%	70.00%	66.88%	\$0.00	9.88%	20.86	3.92
Otter Tail Corporation	OTTR	\$29.44	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	\$0.00	10.87%	20.86	3.92
Pinnacle West Capital Corporation	PNW	\$73.65	4.00%	3.73%	4.00%	3.73%	5.32%	64.00%	65.00%	66.88%	\$0.00	9.40%	20.86	3.92
PNM Resources, Inc.	PNM	\$32.94	7.60%	8.76%	9.00%	7.60%	5.32%	51.00%	55.00%	66.88%	\$0.00	10.85%	20.86	3.92
Portland General Electric Company	POR	\$40.24	6.40%	6.57%	5.50%	5.50%	5.32%	56.00%	56.00%	66.88%	\$0.00	9.80%	20.86	3.92
SCANA Corporation	SCG	\$69.22	5.30%	5.40%	4.50%	4.50%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	10.05%	20.86	3.92
Wisconsin Energy Corporation	WEC	\$59.53	6.30%	6.77%	6.00%	6.00%	5.32%	68.00%	67.00%	66.88%	\$0.00	8.07%	20.86	3.92
Xcel Energy Inc.	XEL	\$41.15	5.30%	5.27%	5.50%	5.27%	5.32%	62.00%	63.00%	66.88%	\$0.00	9.91%	20.86	3.92
											MEAN	9.67%		
											MAX	13.11%		
											MIN	6.66%		

Projected Annual Earnings per Share	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.44	\$5.73	\$6.03	\$6.35	\$6.69	\$7.05
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.14	\$3.30	\$3.48	\$3.66	\$3.86	\$4.07
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88	\$5.14	\$5.41
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.88	\$4.04	\$4.20	\$4.37	\$4.55	\$4.75	\$4.98	\$5.22	\$5.49	\$5.78	\$6.08	\$6.41	\$6.75	\$7.11	\$7.49
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.00	\$2.12	\$2.25	\$2.39	\$2.53	\$2.68	\$2.83	\$2.99	\$3.16	\$3.33	\$3.51	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55
DTE Energy Company	DTE	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.94	\$7.30	\$7.69	\$8.10	\$8.53	\$8.99	\$9.47	\$9.97
El Paso Electric Company	EE	\$2.03	\$2.08	\$2.13	\$2.19	\$2.24	\$2.30	\$2.36	\$2.45	\$2.54	\$2.65	\$2.78	\$2.93	\$3.09	\$3.25	\$3.42	\$3.61	\$3.80
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.91	\$3.07	\$3.24	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77	\$6.08	\$6.40
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$3.99	\$4.11	\$4.23	\$4.36	\$4.49	\$4.64	\$4.81	\$5.01	\$5.24	\$5.50	\$5.79	\$6.10	\$6.43	\$6.77	\$7.13	\$7.51
MGE Energy, Inc.	MGEE	\$2.06	\$2.14	\$2.23	\$2.32	\$2.41	\$2.51	\$2.61	\$2.73	\$2.86	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.87	\$4.08	\$4.30
NorthWestern Corporation	NWE	\$2.90	\$3.05	\$3.20	\$3.36	\$3.52	\$3.70	\$3.89	\$4.09	\$4.30	\$4.52	\$4.76	\$5.01	\$5.28	\$5.56	\$5.86	\$6.17	\$6.50
OGE Energy Corp.	OGE	\$1.69	\$1.74	\$1.79	\$1.85	\$1.90	\$1.96	\$2.03	\$2.10	\$2.19	\$2.29	\$2.40	\$2.53	\$2.66	\$2.81	\$2.96	\$3.11	\$3.28
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.22	\$4.38	\$4.54	\$4.71	\$4.90	\$5.10	\$5.34	\$5.59	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23	\$7.61	\$8.02
PNM Resources, Inc.	PNM	\$1.64	\$1.76	\$1.90	\$2.04	\$2.20	\$2.37	\$2.54	\$2.71	\$2.88	\$3.06	\$3.23	\$3.41	\$3.59	\$3.78	\$3.98	\$4.19	\$4.42
Portland General Electric Company	POR	\$2.04	\$2.15	\$2.27	\$2.40	\$2.53	\$2.67	\$2.81	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74
SCANA Corporation	SCG	\$3.81	\$3.98	\$4.16	\$4.35	\$4.54	\$4.75	\$4.97	\$5.21	\$5.46	\$5.74	\$6.03	\$6.36	\$6.69	\$7.05	\$7.42	\$7.82	\$8.24
Wisconsin Energy Corporation	WEC	\$2.34	\$2.48	\$2.63	\$2.79	\$2.95	\$3.13	\$3.32	\$3.51	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57	\$4.82	\$5.07	\$5.34	\$5.63
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.71	\$2.86	\$3.01	\$3.17	\$3.34	\$3.51	\$3.70	\$3.90	\$4.11	\$4.32	\$4.55	\$4.80

Projected Annual Dividend Payout Ratio	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]	
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Wisconsin Energy Corporation	WEC	68.00%	67.75%	67.50%	67.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$147.04	
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$84.81	
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$112.83	
American Electric Power Company, Inc.	AEP	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$156.18	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.33	
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$94.84	
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$207.98	
El Paso Electric Company	EE	\$1.23	\$1.27	\$1.31	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$79.22	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$243.80	
Eversource Energy	ES	\$1.75	\$1.83	\$1.91	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$133.58	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$123.80	
IDACORP, Inc.	IDA	\$2.11	\$2.25	\$2.39	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$156.61	
MGE Energy, Inc.	MGEE	\$1.20	\$1.18	\$1.16	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$89.62	
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$135.54	
OGE Energy Corp.	OGE	\$1.17	\$1.21	\$1.26	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$68.39	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$78.28	
Pinnacle West Capital Corporation	PNW	\$2.60	\$2.71	\$2.82	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$167.25	
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$92.10	
Portland General Electric Company	POR	\$1.21	\$1.27	\$1.34	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$98.80	
SCANA Corporation	SCG	\$2.35	\$2.47	\$2.59	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$171.81	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.78	\$1.88	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$117.42	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$100.06	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$57.08)	\$0.00	\$1.17	\$2.37	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$151.76
Alliant Energy Corporation	LNT	(\$36.64)	\$0.00	\$0.58	\$1.18	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$87.53
Ameren Corporation	AEE	(\$48.89)	\$0.00	\$0.86	\$1.75	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$116.45
American Electric Power Company, Inc.	AEP	(\$65.03)	\$0.00	\$1.20	\$2.44	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$161.18
Avista Corporation	AVA	(\$40.48)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.16
CMS Energy Corporation	CMS	(\$41.70)	\$0.00	\$0.64	\$1.30	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$97.88
DTE Energy Company	DTE	(\$89.93)	\$0.00	\$1.48	\$3.02	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$214.65
El Paso Electric Company	EE	(\$44.56)	\$0.00	\$0.62	\$1.24	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$81.76
Energy Corporation	ETR	(\$76.55)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$251.62
Eversource Energy	ES	(\$56.58)	\$0.00	\$0.88	\$1.79	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$137.86
FirstEnergy Corp.	FE	(\$34.24)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$127.77
IDACORP, Inc.	IDA	(\$73.58)	\$0.00	\$1.06	\$2.14	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$161.64
MGE Energy, Inc.	MGEE	(\$51.38)	\$0.00	\$0.60	\$1.22	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$92.49
NorthWestern Corporation	NWE	(\$59.59)	\$0.00	\$1.00	\$2.03	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$139.88
OGE Energy Corp.	OGE	(\$29.13)	\$0.00	\$0.59	\$1.18	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$70.59
Otter Tail Corporation	OTTR	(\$29.44)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$80.79
Pinnacle West Capital Corporation	PNW	(\$73.65)	\$0.00	\$1.31	\$2.65	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$172.61
PNM Resources, Inc.	PNM	(\$32.94)	\$0.00	\$0.45	\$0.93	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$95.06
Portland General Electric Company	POR	(\$40.24)	\$0.00	\$0.61	\$1.24	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$101.97
SCANA Corporation	SCG	(\$69.22)	\$0.00	\$1.18	\$2.40	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$177.32
Wisconsin Energy Corporation	WEC	(\$59.53)	\$0.00	\$0.85	\$1.74	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$121.19
Xcel Energy Inc.	XEL	(\$41.15)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$103.26

Multi-Stage Growth Discounted Cash Flow Model with Terminal P/E  
180 Day Average Stock Price  
Low EPS Growth Rate Estimate in First Stage

Inputs	[1] Stock	[2] EPS Growth Rate Estimates			[3] [4] [5] Low			[6] [7] [8] Long-Term			[9] [10] [11] Payout Ratio			[12] [13] Iterative Solution			Terminal	
		Price	Zacks	First Call	Value Line	Growth	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	Terminal			
																Terminal		
Company	Ticker																	
ALLETE, Inc.	ALE	\$54.07	5.50%	5.00%	4.00%	4.00%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	11.08%	20.86	3.92				
Alliant Energy Corporation	LNT	\$33.83	6.10%	6.00%	6.00%	6.00%	5.32%	64.00%	61.00%	66.88%	\$0.00	10.13%	20.86	3.92				
Ameren Corporation	AEE	\$46.40	6.10%	5.20%	6.00%	5.20%	5.32%	68.00%	64.00%	66.88%	\$0.00	9.98%	20.86	3.92				
American Electric Power Company, Inc.	AEP	\$61.54	4.90%	4.10%	4.00%	4.00%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	10.48%	20.86	3.92				
Avista Corporation	AVA	\$37.83	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	\$0.00	9.59%	20.86	3.92				
CMS Energy Corporation	CMS	\$39.10	6.40%	7.24%	6.00%	6.00%	5.32%	63.00%	62.00%	66.88%	\$0.00	9.83%	20.86	3.92				
DTE Energy Company	DTE	\$85.80	5.80%	5.35%	5.00%	5.00%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.86%	20.86	3.92				
El Paso Electric Company	EE	\$41.72	6.70%	7.00%	2.50%	2.50%	5.32%	59.00%	61.00%	66.88%	\$0.00	7.72%	20.86	3.92				
Energy Corporation	ETR	\$72.44	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	13.18%	20.86	3.92				
Eversource Energy	ES	\$54.15	6.30%	5.49%	6.00%	5.49%	5.32%	60.00%	58.00%	66.88%	\$0.00	9.92%	20.86	3.92				
FirstEnergy Corp.	FE	\$33.04	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	13.46%	20.86	3.92				
IDACORP, Inc.	IDA	\$70.82	4.00%	4.00%	3.00%	3.00%	5.32%	53.00%	60.00%	66.88%	\$0.00	9.01%	20.86	3.92				
MGE Energy, Inc.	MGEE	\$48.29	NA	4.00%	7.00%	4.00%	5.32%	56.00%	44.00%	66.88%	\$0.00	7.19%	20.86	3.92				
NorthWestern Corporation	NWE	\$57.21	5.00%	5.00%	6.50%	5.00%	5.32%	65.00%	59.00%	66.88%	\$0.00	9.63%	20.86	3.92				
OGE Energy Corp.	OGE	\$27.72	5.20%	4.30%	3.00%	3.00%	5.32%	67.00%	70.00%	66.88%	\$0.00	10.36%	20.86	3.92				
Otter Tail Corporation	OTTR	\$28.18	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	\$0.00	11.30%	20.86	3.92				
Pinnacle West Capital Corporation	PNW	\$69.12	4.00%	3.73%	4.00%	3.73%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	10.00%	20.86	3.92				
PNM Resources, Inc.	PNM	\$31.32	7.60%	8.76%	9.00%	7.60%	5.32%	51.00%	55.00%	66.88%	\$0.00	11.32%	20.86	3.92				
Portland General Electric Company	POR	\$38.74	6.40%	6.57%	5.50%	5.50%	5.32%	56.00%	56.00%	66.88%	\$0.00	10.16%	20.86	3.92				
SCANA Corporation	SCG	\$64.86	5.30%	5.40%	4.50%	4.50%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	10.67%	20.86	3.92				
Wisconsin Energy Corporation	WEC	\$55.89	6.30%	6.77%	6.00%	6.00%	5.32%	68.00%	67.00%	66.88%	\$0.00	8.64%	20.86	3.92				
Xcel Energy Inc.	XEL	\$38.85	5.30%	5.27%	5.50%	5.27%	5.32%	62.00%	63.00%	66.88%	\$0.00	10.45%	20.86	3.92				
												MEAN	10.18%					
												MAX	13.46%					
												MIN	7.19%					

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.52	\$3.66	\$3.80	\$3.95	\$4.11	\$4.29	\$4.48	\$4.68	\$4.91	\$5.16	\$5.44	\$5.73	\$6.03	\$6.35	\$6.69	\$7.05
Alliant Energy Corporation	LNT	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.39	\$2.53	\$2.68	\$2.82	\$2.98	\$3.14	\$3.30	\$3.48	\$3.66	\$3.86	\$4.07
Ameren Corporation	AEE	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.07	\$3.23	\$3.40	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88	\$5.14	\$5.41
American Electric Power Company, Inc.	AEP	\$3.59	\$3.73	\$3.88	\$4.04	\$4.20	\$4.37	\$4.55	\$4.75	\$4.98	\$5.22	\$5.49	\$5.78	\$6.08	\$6.41	\$6.75	\$7.11	\$7.49
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.00	\$2.12	\$2.25	\$2.39	\$2.53	\$2.68	\$2.83	\$2.99	\$3.16	\$3.33	\$3.51	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55
DTE Energy Company	DTE	\$4.45	\$4.67	\$4.91	\$5.15	\$5.41	\$5.68	\$5.97	\$6.27	\$6.59	\$6.94	\$7.30	\$7.69	\$8.10	\$8.53	\$8.99	\$9.47	\$9.97
El Paso Electric Company	EE	\$2.03	\$2.08	\$2.13	\$2.19	\$2.24	\$2.30	\$2.36	\$2.45	\$2.54	\$2.65	\$2.78	\$2.93	\$3.09	\$3.25	\$3.42	\$3.61	\$3.80
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.91	\$3.07	\$3.24	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23	\$4.45	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77	\$6.08	\$6.40
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$3.99	\$4.11	\$4.23	\$4.36	\$4.49	\$4.64	\$4.81	\$5.01	\$5.24	\$5.50	\$5.79	\$6.10	\$6.43	\$6.77	\$7.13	\$7.51
MGE Energy, Inc.	MGEE	\$2.06	\$2.14	\$2.23	\$2.32	\$2.41	\$2.51	\$2.61	\$2.73	\$2.86	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.87	\$4.08	\$4.30
NorthWestern Corporation	NWE	\$2.90	\$3.05	\$3.20	\$3.36	\$3.52	\$3.70	\$3.89	\$4.09	\$4.30	\$4.52	\$4.76	\$5.01	\$5.28	\$5.56	\$5.86	\$6.17	\$6.50
OGE Energy Corp.	OGE	\$1.69	\$1.74	\$1.79	\$1.85	\$1.90	\$1.96	\$2.03	\$2.10	\$2.19	\$2.29	\$2.40	\$2.53	\$2.66	\$2.81	\$2.96	\$3.11	\$3.28
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.07	\$4.22	\$4.38	\$4.54	\$4.71	\$4.90	\$5.10	\$5.34	\$5.59	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23	\$7.61	\$8.02
PNM Resources, Inc.	PNM	\$1.64	\$1.76	\$1.90	\$2.04	\$2.20	\$2.37	\$2.54	\$2.71	\$2.88	\$3.06	\$3.23	\$3.41	\$3.59	\$3.78	\$3.98	\$4.19	\$4.42
Portland General Electric Company	POR	\$2.04	\$2.15	\$2.27	\$2.40	\$2.53	\$2.67	\$2.81	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74
SCANA Corporation	SCG	\$3.81	\$3.98	\$4.16	\$4.35	\$4.54	\$4.75	\$4.97	\$5.21	\$5.46	\$5.74	\$6.03	\$6.36	\$6.69	\$7.05	\$7.42	\$7.82	\$8.24
Wisconsin Energy Corporation	WEC	\$2.34	\$2.48	\$2.63	\$2.79	\$2.95	\$3.13	\$3.32	\$3.51	\$3.71	\$3.91	\$4.12	\$4.34	\$4.57	\$4.82	\$5.07	\$5.34	\$5.63
Xcel Energy Inc.	XEL	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.71	\$2.86	\$3.01	\$3.17	\$3.34	\$3.51	\$3.70	\$3.90	\$4.11	\$4.32	\$4.55	\$4.80

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	56.88%	56.88%	56.88%	56.88%	56.88%	56.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.							

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.32	\$2.39	\$2.45	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$147.04	
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$84.81	
Ameren Corporation	AEE	\$1.70	\$1.76	\$1.83	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$112.83	
American Electric Power Company, Inc.	AEP	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$156.18	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.33	
CMS Energy Corporation	CMS	\$1.26	\$1.33	\$1.41	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$94.84	
DTE Energy Company	DTE	\$2.94	\$3.07	\$3.19	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$207.98	
El Paso Electric Company	EE	\$1.23	\$1.27	\$1.31	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$79.22	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$243.80	
Eversource Energy	ES	\$1.75	\$1.83	\$1.91	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$133.58	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$123.80	
IDACORP, Inc.	IDA	\$2.11	\$2.25	\$2.39	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$156.61	
MGE Energy, Inc.	MGEE	\$1.20	\$1.18	\$1.16	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$89.62	
NorthWestern Corporation	NWE	\$1.98	\$2.03	\$2.08	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$135.54	
OG Energy Corp.	OG	\$1.17	\$1.21	\$1.26	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$68.39	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$78.28	
Pinnacle West Capital Corporation	PNW	\$2.60	\$2.71	\$2.82	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$167.25	
PNM Resources, Inc.	PNM	\$0.90	\$0.99	\$1.08	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$92.10	
Portland General Electric Company	POR	\$1.21	\$1.27	\$1.34	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$98.80	
SCANA Corporation	SCG	\$2.35	\$2.47	\$2.59	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$171.81	
Wisconsin Energy Corporation	WEC	\$1.69	\$1.78	\$1.88	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$117.42	
Xcel Energy Inc.	XEL	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$100.06	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$54.07)	\$0.00	\$1.17	\$2.37	\$2.52	\$2.59	\$2.73	\$2.88	\$3.04	\$3.22	\$3.42	\$3.64	\$3.83	\$4.04	\$4.25	\$4.48	\$4.71	\$151.76
Alliant Energy Corporation	LNT	(\$33.83)	\$0.00	\$0.58	\$1.18	\$1.32	\$1.38	\$1.48	\$1.59	\$1.71	\$1.83	\$1.96	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$2.72	\$87.53
Ameren Corporation	AEE	(\$46.40)	\$0.00	\$0.86	\$1.75	\$1.89	\$1.96	\$2.08	\$2.21	\$2.34	\$2.48	\$2.63	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$3.62	\$116.45
American Electric Power Company, Inc.	AEP	(\$61.54)	\$0.00	\$1.20	\$2.44	\$2.78	\$2.93	\$3.05	\$3.18	\$3.33	\$3.49	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01	\$161.18
Avista Corporation	AVA	(\$39.10)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.16
CMS Energy Corporation	CMS	(\$39.10)	\$0.00	\$0.64	\$1.30	\$1.49	\$1.57	\$1.68	\$1.80	\$1.93	\$2.06	\$2.20	\$2.35	\$2.47	\$2.60	\$2.74	\$2.89	\$3.04	\$97.88
DTE Energy Company	DTE	(\$85.80)	\$0.00	\$1.48	\$3.02	\$3.33	\$3.46	\$3.70	\$3.95	\$4.22	\$4.50	\$4.81	\$5.15	\$5.42	\$5.71	\$6.01	\$6.33	\$6.67	\$214.65
El Paso Electric Company	EE	(\$41.72)	\$0.00	\$0.62	\$1.24	\$1.36	\$1.40	\$1.47	\$1.54	\$1.63	\$1.72	\$1.83	\$1.96	\$2.06	\$2.17	\$2.29	\$2.41	\$2.54	\$81.76
Energy Corporation	ETR	(\$72.44)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$251.62
Eversource Energy	ES	(\$54.15)	\$0.00	\$0.88	\$1.79	\$2.00	\$2.09	\$2.26	\$2.44	\$2.64	\$2.85	\$3.07	\$3.30	\$3.48	\$3.67	\$3.86	\$4.07	\$4.28	\$137.86
FirstEnergy Corp.	FE	(\$33.04)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$127.77
IDACORP, Inc.	IDA	(\$70.82)	\$0.00	\$1.06	\$2.14	\$2.54	\$2.69	\$2.84	\$3.00	\$3.18	\$3.39	\$3.62	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$161.64
MGE Energy, Inc.	MGEE	(\$48.29)	\$0.00	\$0.60	\$1.22	\$1.13	\$1.10	\$1.25	\$1.41	\$1.58	\$1.77	\$1.98	\$2.22	\$2.34	\$2.46	\$2.59	\$2.73	\$2.87	\$92.49
NorthWestern Corporation	NWE	(\$57.21)	\$0.00	\$1.00	\$2.03	\$2.13	\$2.18	\$2.35	\$2.52	\$2.71	\$2.91	\$3.12	\$3.35	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$139.88
OG Energy Corp.	OG	(\$27.72)	\$0.00	\$0.59	\$1.18	\$1.32	\$1.37	\$1.41	\$1.45	\$1.50	\$1.55	\$1.62	\$1.69	\$1.78	\$1.88	\$1.98	\$2.08	\$2.19	\$70.59
Otter Tail Corporation	OTTR	(\$28.17)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$80.79
Pinnacle West Capital Corporation	PNW	(\$69.12)	\$0.00	\$1.31	\$2.65	\$2.94	\$3.06	\$3.20	\$3.35	\$3.52	\$3.70	\$3.91	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$5.36	\$172.61
PNM Resources, Inc.	PNM	(\$31.32)	\$0.00	\$0.45	\$0.93	\$1.19	\$1.30	\$1.45	\$1.60	\$1.76	\$1.93	\$2.10	\$2.28	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$95.06
Portland General Electric Company	POR	(\$38.74)	\$0.00	\$0.61	\$1.24	\$1.42	\$1.49	\$1.63	\$1.77	\$1.92	\$2.08	\$2.26	\$2.44	\$2.57	\$2.71	\$2.86	\$3.01	\$3.17	\$101.97
SCANA Corporation	SCG	(\$64.86)	\$0.00	\$1.18	\$2.40	\$2.71	\$2.85	\$3.04	\$3.24	\$3.46	\$3.71	\$3.97	\$4.25	\$4.48	\$4.71	\$4.97	\$5.23	\$5.51	\$177.32
Wisconsin Energy Corporation	WEC	(\$55.89)	\$0.00	\$0.85	\$1.74	\$1.99	\$2.10	\$2.22	\$2.35	\$2.48	\$2.62	\$2.76	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$3.76	\$121.19
Xcel Energy Inc.	XEL	(\$38.85)	\$0.00	\$0.69	\$1.41	\$1.62	\$1.71	\$1.82	\$1.93	\$2.06	\$2.19	\$2.33	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$3.21	\$103.26





Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$163.70	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$88.48	
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$120.28	
American Electric Power Company, Inc.	AEP	\$2.41	\$2.56	\$2.71	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$166.59	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.33	
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$103.50	
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$220.16	
El Paso Electric Company	EE	\$1.28	\$1.38	\$1.49	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$109.31	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$243.80	
Eversource Energy	ES	\$1.76	\$1.86	\$1.96	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$141.47	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$123.80	
IDACORP, Inc.	IDA	\$2.13	\$2.29	\$2.46	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$168.36	
MGE Energy, Inc.	MGEE	\$1.23	\$1.25	\$1.26	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$110.93	
NorthWestern Corporation	NWE	\$2.01	\$2.09	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$150.76	
OGE Energy Corp.	OGE	\$1.19	\$1.27	\$1.35	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$80.12	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$78.28	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$170.53	
PNM Resources, Inc.	PNM	\$0.91	\$1.01	\$1.13	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$101.51	
Portland General Electric Company	POR	\$1.22	\$1.30	\$1.38	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$106.58	
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$183.22	
Wisconsin Energy Corporation	WEC	\$1.70	\$1.81	\$1.92	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$123.98	
Xcel Energy Inc.	XEL	\$1.37	\$1.46	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$101.71	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$59.67)	\$0.00	\$1.19	\$2.42	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$168.95
Alliant Energy Corporation	LNT	(\$38.20)	\$0.00	\$0.58	\$1.19	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$91.31
Ameren Corporation	AEE	(\$50.12)	\$0.00	\$0.87	\$1.77	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$124.14
American Electric Power Company, Inc.	AEP	(\$66.05)	\$0.00	\$1.21	\$2.47	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$171.93
Avista Corporation	AVA	(\$41.65)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.16
CMS Energy Corporation	CMS	(\$42.95)	\$0.00	\$0.64	\$1.32	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$106.82
DTE Energy Company	DTE	(\$92.91)	\$0.00	\$1.50	\$3.05	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$227.22
El Paso Electric Company	EE	(\$45.30)	\$0.00	\$0.65	\$1.33	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$112.82
Energy Corporation	ETR	(\$77.45)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$251.62	
Eversource Energy	ES	(\$56.36)	\$0.00	\$0.89	\$1.82	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$146.01
FirstEnergy Corp.	FE	(\$33.34)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$127.77
IDACORP, Inc.	IDA	(\$74.50)	\$0.00	\$1.08	\$2.18	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$173.76
MGE Energy, Inc.	MGEE	(\$53.30)	\$0.00	\$0.62	\$1.28	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$114.48
NorthWestern Corporation	NWE	(\$59.68)	\$0.00	\$1.01	\$2.07	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$155.59
OGE Energy Corp.	OGE	(\$30.95)	\$0.00	\$0.60	\$1.22	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$82.69
Otter Tail Corporation	OTTR	(\$30.96)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$80.79
Pinnacle West Capital Corporation	PNW	(\$75.82)	\$0.00	\$1.32	\$2.66	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$176.00
PNM Resources, Inc.	PNM	(\$33.49)	\$0.00	\$0.46	\$0.95	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$104.77
Portland General Electric Company	POR	(\$41.86)	\$0.00	\$0.61	\$1.26	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$109.99
SCANA Corporation	SCG	(\$71.01)	\$0.00	\$1.19	\$2.43	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$189.09
Wisconsin Energy Corporation	WEC	(\$61.68)	\$0.00	\$0.86	\$1.76	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$127.96
Xcel Energy Inc.	XEL	(\$42.19)	\$0.00	\$0.69	\$1.41	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$104.97

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

Inputs	[1] Stock	[2] [3] [4] [5] [6] EPS Growth Rate Estimates					[7] Long-Term Growth	[8] [9] [10] Payout Ratio			[11] [12] Iterative Solution		[13] Terminal Terminal	
		Price	Zacks	First Call	Value Line	High Growth		2016	2020	2026	Proof	IRR		P/E Ratio
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio	
ALLETE, Inc.	ALE	\$57.08	5.50%	5.00%	4.00%	5.50%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	11.51%	20.86	3.92
Alliant Energy Corporation	LNT	\$36.64	6.10%	6.60%	6.00%	6.60%	5.32%	64.00%	61.00%	66.88%	\$0.00	9.75%	20.86	3.92
Ameren Corporation	AEE	\$48.90	6.10%	5.20%	6.00%	6.10%	5.32%	68.00%	64.00%	66.88%	\$0.00	10.04%	20.86	3.92
American Electric Power Company, Inc.	AEP	\$65.03	4.90%	4.10%	4.00%	4.90%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	10.51%	20.86	3.92
Avista Corporation	AVA	\$40.48	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	\$0.00	8.96%	20.86	3.92
CMS Energy Corporation	CMS	\$41.70	6.40%	7.24%	6.00%	7.24%	5.32%	63.00%	62.00%	66.88%	\$0.00	9.99%	20.86	3.92
DTE Energy Company	DTE	\$89.93	5.80%	5.35%	5.00%	5.80%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	9.91%	20.86	3.92
El Paso Electric Company	EE	\$44.56	6.70%	7.00%	2.50%	7.00%	5.32%	59.00%	61.00%	66.88%	\$0.00	9.84%	20.86	3.92
Energy Corporation	ETR	\$76.55	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	12.62%	20.86	3.92
Eversource Energy	ES	\$56.58	6.30%	5.49%	6.00%	6.30%	5.32%	60.00%	58.00%	66.88%	\$0.00	10.00%	20.86	3.92
FirstEnergy Corp.	FE	\$34.24	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	13.11%	20.86	3.92
IDACORP, Inc.	IDA	\$73.58	4.00%	4.00%	3.00%	4.00%	5.32%	53.00%	60.00%	66.88%	\$0.00	9.27%	20.86	3.92
MGE Energy, Inc.	MGEE	\$51.38	NA	4.00%	7.00%	7.00%	5.32%	56.00%	44.00%	66.88%	\$0.00	8.39%	20.86	3.92
NorthWestern Corporation	NWE	\$59.59	5.00%	5.00%	6.00%	6.50%	5.32%	65.00%	59.00%	66.88%	\$0.00	10.16%	20.86	3.92
OGE Energy Corp.	OGE	\$29.13	5.20%	4.30%	3.00%	5.20%	5.32%	67.00%	70.00%	66.88%	\$0.00	11.28%	20.86	3.92
Otter Tail Corporation	OTTR	\$29.44	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	\$0.00	10.87%	20.86	3.92
Pinnacle West Capital Corporation	PNW	\$73.65	4.00%	3.73%	4.00%	4.00%	5.32%	64.00%	65.00%	66.88%	\$0.00	9.57%	20.86	3.92
PNM Resources, Inc.	PNM	\$32.94	7.60%	8.76%	9.00%	9.00%	5.32%	51.00%	55.00%	66.88%	\$0.00	11.70%	20.86	3.92
Portland General Electric Company	POR	\$40.24	6.40%	6.57%	5.50%	6.57%	5.32%	56.00%	56.00%	66.88%	\$0.00	10.45%	20.86	3.92
SCANA Corporation	SCG	\$69.22	5.30%	5.40%	4.50%	5.40%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	10.61%	20.86	3.92
Wisconsin Energy Corporation	WEC	\$59.53	6.30%	6.77%	6.00%	6.77%	5.32%	68.00%	67.00%	66.88%	\$0.00	8.52%	20.86	3.92
Xcel Energy Inc.	XEL	\$41.15	5.30%	5.27%	5.50%	5.50%	5.32%	62.00%	63.00%	66.88%	\$0.00	10.05%	20.86	3.92
											MEAN	10.32%		
											MAX	13.11%		
											MIN	8.39%		

Company	Ticker	Projected Annual Earnings per Share																
		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
ALLETE, Inc.	ALE	\$3.38	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.46	\$5.75	\$6.06	\$6.38	\$6.72	\$7.07	\$7.45	\$7.85
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.11	\$3.27	\$3.45	\$3.63	\$3.82	\$4.03	\$4.24
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.01	\$4.22	\$4.45	\$4.69	\$4.94	\$5.20	\$5.47	\$5.77
American Electric Power Company, Inc.	AEP	\$3.59	\$3.77	\$3.95	\$4.14	\$4.35	\$4.56	\$4.79	\$5.03	\$5.29	\$5.56	\$5.85	\$6.16	\$6.49	\$6.84	\$7.20	\$7.58	\$7.99
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.03	\$2.17	\$2.33	\$2.50	\$2.68	\$2.87	\$3.06	\$3.25	\$3.44	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.34	\$7.73	\$8.14	\$8.58	\$9.03	\$9.51	\$10.02	\$10.55
El Paso Electric Company	EE	\$2.03	\$2.17	\$2.32	\$2.49	\$2.66	\$2.85	\$3.04	\$3.23	\$3.43	\$3.64	\$3.84	\$4.04	\$4.26	\$4.49	\$4.72	\$4.98	\$5.24
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.93	\$3.12	\$3.32	\$3.52	\$3.75	\$3.98	\$4.21	\$4.46	\$4.71	\$4.97	\$5.23	\$5.51	\$5.80	\$6.11	\$6.44	\$6.78
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$4.02	\$4.19	\$4.35	\$4.53	\$4.71	\$4.91	\$5.13	\$5.36	\$5.63	\$5.91	\$6.23	\$6.56	\$6.91	\$7.28	\$7.66	\$8.07
MGE Energy, Inc.	MGEE	\$2.06	\$2.20	\$2.36	\$2.52	\$2.70	\$2.89	\$3.08	\$3.28	\$3.48	\$3.69	\$3.90	\$4.10	\$4.32	\$4.55	\$4.79	\$5.05	\$5.32
NorthWestern Corporation	NWE	\$2.90	\$3.09	\$3.29	\$3.50	\$3.73	\$3.97	\$4.22	\$4.48	\$4.75	\$5.02	\$5.29	\$5.58	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23
OGE Energy Corp.	OGE	\$1.69	\$1.78	\$1.87	\$1.97	\$2.07	\$2.18	\$2.29	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$3.29	\$3.46	\$3.65	\$3.84
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.08	\$4.24	\$4.41	\$4.59	\$4.77	\$4.97	\$5.19	\$5.43	\$5.70	\$5.99	\$6.31	\$6.64	\$7.00	\$7.37	\$7.76	\$8.18
PNM Resources, Inc.	PNM	\$1.64	\$1.79	\$1.95	\$2.12	\$2.31	\$2.52	\$2.73	\$2.95	\$3.16	\$3.37	\$3.57	\$3.76	\$3.95	\$4.17	\$4.39	\$4.62	\$4.87
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.32	\$2.47	\$2.63	\$2.80	\$2.98	\$3.17	\$3.35	\$3.55	\$3.74	\$3.94	\$4.15	\$4.37	\$4.61	\$4.85	\$5.11
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.11	\$6.43	\$6.78	\$7.14	\$7.52	\$7.92	\$8.34	\$8.78
Wisconsin Energy Corporation	WEC	\$2.34	\$2.50	\$2.67	\$2.85	\$3.04	\$3.25	\$3.46	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.83	\$5.09	\$5.36	\$5.64	\$5.94
Xcel Energy Inc.	XEL	\$2.10	\$2.22	\$2.34	\$2.47	\$2.60	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88

Company	Ticker	Projected Annual Dividend Payout Ratio																
		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]	
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	53.44%	54.59%	55.73%	56.88%	56.88%	56.88%	56.88%	56.88%	56.88%	56.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Wisconsin Energy Corporation	WEC	68.00%	67.75%	67.50%	67.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$163.70	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$88.48	
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$120.28	
American Electric Power Company, Inc.	AEP	\$2.41	\$2.56	\$2.71	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$166.59	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.33	
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$103.50	
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$220.16	
El Paso Electric Company	EE	\$1.28	\$1.38	\$1.49	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$109.31	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$243.80	
Eversource Energy	ES	\$1.76	\$1.86	\$1.96	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$141.47	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$123.80	
IDACORP, Inc.	IDA	\$2.13	\$2.29	\$2.46	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$168.36	
MGE Energy, Inc.	MGEE	\$1.23	\$1.25	\$1.26	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$110.93	
NorthWestern Corporation	NWE	\$2.01	\$2.09	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$150.76	
OGE Energy Corp.	OGE	\$1.19	\$1.27	\$1.35	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$80.12	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$78.28	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$170.53	
PNM Resources, Inc.	PNM	\$0.91	\$1.01	\$1.13	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$101.51	
Portland General Electric Company	POR	\$1.22	\$1.30	\$1.38	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$106.58	
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$183.22	
Wisconsin Energy Corporation	WEC	\$1.70	\$1.81	\$1.92	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$123.98	
Xcel Energy Inc.	XEL	\$1.37	\$1.46	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$101.71	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$57.08)	\$0.00	\$1.19	\$2.42	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$168.95
Alliant Energy Corporation	LNT	(\$36.64)	\$0.00	\$0.58	\$1.19	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$91.31
Ameren Corporation	AEE	(\$48.89)	\$0.00	\$0.87	\$1.77	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$124.14
American Electric Power Company, Inc.	AEP	(\$65.03)	\$0.00	\$1.21	\$2.47	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$171.93
Avista Corporation	AVA	(\$40.48)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.16
CMS Energy Corporation	CMS	(\$41.70)	\$0.00	\$0.64	\$1.32	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$106.82
DTE Energy Company	DTE	(\$89.93)	\$0.00	\$1.50	\$3.05	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$227.22
El Paso Electric Company	EE	(\$44.56)	\$0.00	\$0.65	\$1.33	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$112.82
Energy Corporation	ETR	(\$76.55)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$251.62	
Eversource Energy	ES	(\$56.58)	\$0.00	\$0.89	\$1.82	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$146.01
FirstEnergy Corp.	FE	(\$34.24)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$127.77
IDACORP, Inc.	IDA	(\$73.58)	\$0.00	\$1.08	\$2.18	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$173.76
MGE Energy, Inc.	MGEE	(\$51.38)	\$0.00	\$0.62	\$1.28	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$114.48
NorthWestern Corporation	NWE	(\$59.59)	\$0.00	\$1.01	\$2.07	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$155.59
OGE Energy Corp.	OGE	(\$29.13)	\$0.00	\$0.60	\$1.22	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$82.69
Otter Tail Corporation	OTTR	(\$29.44)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$80.79
Pinnacle West Capital Corporation	PNW	(\$73.65)	\$0.00	\$1.32	\$2.66	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$176.00
PNM Resources, Inc.	PNM	(\$32.94)	\$0.00	\$0.46	\$0.95	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$104.77
Portland General Electric Company	POR	(\$40.24)	\$0.00	\$0.61	\$1.26	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$109.99
SCANA Corporation	SCG	(\$69.22)	\$0.00	\$1.19	\$2.43	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$189.09
Wisconsin Energy Corporation	WEC	(\$59.53)	\$0.00	\$0.86	\$1.76	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$127.96
Xcel Energy Inc.	XEL	(\$41.15)	\$0.00	\$0.69	\$1.41	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$104.97

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

Inputs	[1] Stock	[2] EPS Growth Rate Estimates				[3] High Growth			[4] Long-Term Payout Ratio			[5] Iterative Solution		[6] Terminal	[7] Terminal
		Price	Zacks	First Call	Value Line	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio		
Company	Ticker	Price	Zacks	First Call	Value Line	Growth	2016	2020	2026	Proof	IRR	P/E Ratio	PEG Ratio		
ALLETE, Inc.	ALE	\$54.07	5.50%	5.00%	4.00%	5.50%	5.32%	66.00%	63.00%	66.88%	(\$0.00)	12.04%	20.86	3.92	
Alliant Energy Corporation	LNT	\$33.83	6.10%	6.00%	6.00%	6.00%	5.32%	64.00%	61.00%	66.88%	\$0.00	10.50%	20.86	3.92	
Ameren Corporation	AEE	\$46.40	6.10%	5.20%	6.00%	6.10%	5.32%	68.00%	64.00%	66.88%	\$0.00	10.54%	20.86	3.92	
American Electric Power Company, Inc.	AEP	\$61.54	4.90%	4.10%	4.00%	4.90%	5.32%	64.00%	67.00%	66.88%	(\$0.00)	11.05%	20.86	3.92	
Avista Corporation	AVA	\$37.83	5.00%	5.00%	5.00%	5.00%	5.32%	68.00%	63.00%	66.88%	\$0.00	9.59%	20.86	3.92	
CMS Energy Corporation	CMS	\$39.10	6.40%	7.24%	6.00%	7.24%	5.32%	63.00%	62.00%	66.88%	\$0.00	10.59%	20.86	3.92	
DTE Energy Company	DTE	\$85.80	5.80%	5.35%	5.00%	5.80%	5.32%	63.00%	61.00%	66.88%	(\$0.00)	10.35%	20.86	3.92	
El Paso Electric Company	EE	\$41.72	6.70%	7.00%	2.50%	7.00%	5.32%	59.00%	61.00%	66.88%	\$0.00	10.45%	20.86	3.92	
Energy Corporation	ETR	\$72.44	NA	NA	3.50%	3.50%	5.32%	67.00%	59.00%	66.88%	(\$0.00)	13.18%	20.86	3.92	
Eversource Energy	ES	\$54.15	6.30%	5.49%	6.00%	6.30%	5.32%	60.00%	58.00%	66.88%	\$0.00	10.41%	20.86	3.92	
FirstEnergy Corp.	FE	\$33.04	NA	NA	9.00%	9.00%	5.32%	55.00%	48.00%	66.88%	\$0.00	13.46%	20.86	3.92	
IDACORP, Inc.	IDA	\$70.82	4.00%	4.00%	3.00%	4.00%	5.32%	53.00%	60.00%	66.88%	\$0.00	9.63%	20.86	3.92	
MGE Energy, Inc.	MGEE	\$48.29	NA	4.00%	7.00%	7.00%	5.32%	56.00%	44.00%	66.88%	\$0.00	8.93%	20.86	3.92	
NorthWestern Corporation	NWE	\$57.21	5.00%	5.00%	6.50%	6.50%	5.32%	65.00%	59.00%	66.88%	\$0.00	10.54%	20.86	3.92	
OGE Energy Corp.	OGE	\$27.72	5.20%	4.30%	3.00%	5.20%	5.32%	67.00%	70.00%	66.88%	\$0.00	11.77%	20.86	3.92	
Otter Tail Corporation	OTTR	\$28.18	NA	6.00%	6.00%	6.00%	5.32%	80.00%	63.00%	66.88%	\$0.00	11.30%	20.86	3.92	
Pinnacle West Capital Corporation	PNW	\$69.12	4.00%	3.73%	4.00%	4.00%	5.32%	64.00%	65.00%	66.88%	(\$0.00)	10.17%	20.86	3.92	
PNM Resources, Inc.	PNM	\$31.32	7.60%	8.76%	9.00%	9.00%	5.32%	51.00%	55.00%	66.88%	\$0.00	12.18%	20.86	3.92	
Portland General Electric Company	POR	\$38.74	6.40%	6.57%	5.50%	6.57%	5.32%	56.00%	56.00%	66.88%	\$0.00	10.81%	20.86	3.92	
SCANA Corporation	SCG	\$64.86	5.30%	5.40%	4.50%	5.40%	5.32%	59.00%	60.00%	66.88%	(\$0.00)	11.23%	20.86	3.92	
Wisconsin Energy Corporation	WEC	\$55.89	6.30%	6.77%	6.00%	6.77%	5.32%	68.00%	67.00%	66.88%	\$0.00	9.10%	20.86	3.92	
Xcel Energy Inc.	XEL	\$38.85	5.30%	5.27%	5.50%	5.50%	5.32%	62.00%	63.00%	66.88%	\$0.00	10.59%	20.86	3.92	
											MEAN	10.84%			
											MAX	13.46%			
											MIN	8.93%			

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.38	\$3.57	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.18	\$5.46	\$5.75	\$6.06	\$6.38	\$6.72	\$7.07	\$7.45	\$7.85
Alliant Energy Corporation	LNT	\$1.69	\$1.80	\$1.92	\$2.05	\$2.18	\$2.33	\$2.47	\$2.63	\$2.78	\$2.94	\$3.11	\$3.27	\$3.45	\$3.63	\$3.82	\$4.03	\$4.24
Ameren Corporation	AEE	\$2.38	\$2.53	\$2.68	\$2.84	\$3.02	\$3.20	\$3.39	\$3.59	\$3.79	\$4.01	\$4.22	\$4.45	\$4.69	\$4.94	\$5.20	\$5.47	\$5.77
American Electric Power Company, Inc.	AEP	\$3.59	\$3.77	\$3.95	\$4.14	\$4.35	\$4.56	\$4.79	\$5.03	\$5.29	\$5.56	\$5.85	\$6.16	\$6.49	\$6.84	\$7.20	\$7.58	\$7.99
Avista Corporation	AVA	\$1.89	\$1.98	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$4.23
CMS Energy Corporation	CMS	\$1.89	\$2.03	\$2.17	\$2.33	\$2.50	\$2.68	\$2.87	\$3.06	\$3.25	\$3.44	\$3.64	\$3.83	\$4.03	\$4.25	\$4.47	\$4.71	\$4.96
DTE Energy Company	DTE	\$4.45	\$4.71	\$4.98	\$5.27	\$5.58	\$5.90	\$6.24	\$6.59	\$6.95	\$7.34	\$7.73	\$8.14	\$8.58	\$9.03	\$9.51	\$10.02	\$10.55
El Paso Electric Company	EE	\$2.03	\$2.17	\$2.32	\$2.49	\$2.66	\$2.85	\$3.04	\$3.23	\$3.43	\$3.64	\$3.84	\$4.04	\$4.26	\$4.49	\$4.72	\$4.98	\$5.24
Energy Corporation	ETR	\$5.81	\$6.01	\$6.22	\$6.44	\$6.67	\$6.90	\$7.16	\$7.46	\$7.79	\$8.15	\$8.56	\$9.02	\$9.50	\$10.00	\$10.54	\$11.10	\$11.69
Eversource Energy	ES	\$2.76	\$2.93	\$3.12	\$3.32	\$3.52	\$3.75	\$3.98	\$4.21	\$4.46	\$4.71	\$4.97	\$5.23	\$5.51	\$5.80	\$6.11	\$6.44	\$6.78
FirstEnergy Corp.	FE	\$2.00	\$2.18	\$2.38	\$2.59	\$2.82	\$3.08	\$3.34	\$3.59	\$3.85	\$4.10	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35	\$5.63	\$5.93
IDACORP, Inc.	IDA	\$3.87	\$4.02	\$4.19	\$4.35	\$4.53	\$4.71	\$4.91	\$5.13	\$5.36	\$5.63	\$5.91	\$6.23	\$6.56	\$6.91	\$7.28	\$7.66	\$8.07
MGE Energy, Inc.	MGEE	\$2.06	\$2.20	\$2.36	\$2.52	\$2.70	\$2.89	\$3.08	\$3.28	\$3.48	\$3.69	\$3.90	\$4.10	\$4.32	\$4.55	\$4.79	\$5.05	\$5.32
NorthWestern Corporation	NWE	\$2.90	\$3.09	\$3.29	\$3.50	\$3.73	\$3.97	\$4.22	\$4.48	\$4.75	\$5.02	\$5.29	\$5.58	\$5.87	\$6.19	\$6.52	\$6.86	\$7.23
OGE Energy Corp.	OGE	\$1.69	\$1.78	\$1.87	\$1.97	\$2.07	\$2.18	\$2.29	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$3.29	\$3.46	\$3.65	\$3.84
Otter Tail Corporation	OTTR	\$1.56	\$1.65	\$1.75	\$1.86	\$1.97	\$2.09	\$2.21	\$2.34	\$2.47	\$2.61	\$2.75	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75
Pinnacle West Capital Corporation	PNW	\$3.92	\$4.08	\$4.24	\$4.41	\$4.59	\$4.77	\$4.97	\$5.19	\$5.43	\$5.70	\$5.99	\$6.31	\$6.64	\$7.00	\$7.37	\$7.76	\$8.18
PNM Resources, Inc.	PNM	\$1.64	\$1.79	\$1.95	\$2.12	\$2.31	\$2.52	\$2.73	\$2.95	\$3.16	\$3.37	\$3.57	\$3.76	\$3.95	\$4.17	\$4.39	\$4.62	\$4.87
Portland General Electric Company	POR	\$2.04	\$2.17	\$2.32	\$2.47	\$2.63	\$2.80	\$2.98	\$3.17	\$3.35	\$3.55	\$3.74	\$3.94	\$4.15	\$4.37	\$4.61	\$4.85	\$5.11
SCANA Corporation	SCG	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.96	\$5.22	\$5.50	\$5.80	\$6.11	\$6.43	\$6.78	\$7.14	\$7.52	\$7.92	\$8.34	\$8.78
Wisconsin Energy Corporation	WEC	\$2.34	\$2.50	\$2.67	\$2.85	\$3.04	\$3.25	\$3.46	\$3.68	\$3.90	\$4.12	\$4.35	\$4.59	\$4.83	\$5.09	\$5.36	\$5.64	\$5.94
Xcel Energy Inc.	XEL	\$2.10	\$2.22	\$2.34	\$2.47	\$2.60	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$3.57	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.88

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	66.00%	65.25%	64.50%	63.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Alliant Energy Corporation	LNT	64.00%	63.25%	62.50%	61.75%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Ameren Corporation	AEE	68.00%	67.00%	66.00%	65.00%	64.00%	64.88%	64.96%	65.44%	65.92%	66.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
American Electric Power Company, Inc.	AEP	64.00%	64.75%	65.50%	66.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Avista Corporation	AVA	68.00%	66.75%	65.50%	64.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
CMS Energy Corporation	CMS	63.00%	62.75%	62.50%	62.25%	62.00%	62.81%	63.63%	64.44%	65.25%	66.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
DTE Energy Company	DTE	63.00%	62.50%	62.00%	61.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
El Paso Electric Company	EE	59.00%	59.50%	60.00%	60.50%	61.00%	61.98%	62.96%	63.94%	64.92%	65.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Energy Corporation	ETR	67.00%	65.00%	63.00%	61.00%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Eversource Energy	ES	60.00%	59.50%	59.00%	58.50%	58.00%	59.48%	60.96%	62.44%	63.92%	65.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
FirstEnergy Corp.	FE	55.00%	53.25%	51.50%	49.75%	48.00%	51.15%	52.29%	57.44%	60.59%	63.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
IDACORP, Inc.	IDA	53.00%	54.75%	56.50%	58.25%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
MGE Energy, Inc.	MGEE	56.00%	53.00%	50.00%	47.00%	44.00%	47.81%	51.63%	55.44%	59.25%	63.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
NorthWestern Corporation	NWE	65.00%	63.50%	62.00%	60.50%	59.00%	60.31%	61.63%	62.94%	64.25%	65.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
OGE Energy Corp.	OGE	67.00%	67.75%	68.50%	69.25%	70.00%	69.48%	68.96%	68.44%	67.92%	67.40%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Otter Tail Corporation	OTTR	80.00%	75.75%	71.50%	67.25%	63.00%	63.65%	64.29%	64.94%	65.59%	66.23%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Pinnacle West Capital Corporation	PNW	64.00%	64.25%	64.50%	64.75%	65.00%	65.31%	65.63%	65.94%	66.25%	66.57%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
PNM Resources, Inc.	PNM	51.00%	52.00%	53.00%	54.00%	55.00%	56.98%	58.96%	60.94%	62.92%	64.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Portland General Electric Company	POR	56.00%	56.00%	56.00%	56.00%	56.00%	57.81%	59.63%	61.44%	63.25%	65.07%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
SCANA Corporation	SCG	59.00%	59.25%	59.50%	59.75%	60.00%	61.15%	62.29%	63.44%	64.59%	65.73%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Wisconsin Energy Corporation	WEC	68.00%	67.75%	67.50%	67.25%	67.00%	66.98%	66.96%	66.94%	66.92%	66.90%	66.88%	66.88%	66.88%	66.88%	66.88%	66.88%
Xcel Energy Inc.	XEL	62.00%	62.25%	62.50%	62.75%	63.00%	63.65%	64.29%	64.94%	65.59%	66.						

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]	[63]	Terminal Value
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
ALLETE, Inc.	ALE	\$2.35	\$2.45	\$2.56	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$163.70	
Alliant Energy Corporation	LNT	\$1.15	\$1.21	\$1.28	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$88.48	
Ameren Corporation	AEE	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$120.28	
American Electric Power Company, Inc.	AEP	\$2.41	\$2.56	\$2.71	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$166.59	
Avista Corporation	AVA	\$1.35	\$1.39	\$1.43	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$88.33	
CMS Energy Corporation	CMS	\$1.28	\$1.36	\$1.46	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$103.50	
DTE Energy Company	DTE	\$2.97	\$3.11	\$3.27	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$220.16	
El Paso Electric Company	EE	\$1.28	\$1.38	\$1.49	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$109.31	
Energy Corporation	ETR	\$4.03	\$4.05	\$4.06	\$4.07	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$243.80	
Eversource Energy	ES	\$1.76	\$1.86	\$1.96	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$141.47	
FirstEnergy Corp.	FE	\$1.20	\$1.27	\$1.33	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$123.80	
IDACORP, Inc.	IDA	\$2.13	\$2.29	\$2.46	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$168.36	
MGE Energy, Inc.	MGEE	\$1.23	\$1.25	\$1.26	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$110.93	
NorthWestern Corporation	NWE	\$2.01	\$2.09	\$2.17	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$150.76	
OGE Energy Corp.	OGE	\$1.19	\$1.27	\$1.35	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$80.12	
Otter Tail Corporation	OTTR	\$1.32	\$1.33	\$1.33	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$78.28	
Pinnacle West Capital Corporation	PNW	\$2.61	\$2.72	\$2.84	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$170.53	
PNM Resources, Inc.	PNM	\$0.91	\$1.01	\$1.13	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$101.51	
Portland General Electric Company	POR	\$1.22	\$1.30	\$1.38	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$106.58	
SCANA Corporation	SCG	\$2.37	\$2.51	\$2.65	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$183.22	
Wisconsin Energy Corporation	WEC	\$1.70	\$1.81	\$1.92	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$123.98	
Xcel Energy Inc.	XEL	\$1.37	\$1.46	\$1.54	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$101.71	

Projected Annual Data Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	[80]	[81]
Company	Ticker	Initial Outflow	6/30/16	12/31/16	6/30/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31
ALLETE, Inc.	ALE	(\$54.07)	\$0.00	\$1.19	\$2.42	\$2.67	\$2.78	\$2.97	\$3.16	\$3.36	\$3.58	\$3.81	\$4.05	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$168.95
Alliant Energy Corporation	LNT	(\$33.83)	\$0.00	\$0.58	\$1.19	\$1.35	\$1.42	\$1.53	\$1.65	\$1.78	\$1.91	\$2.05	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.84	\$91.31
Ameren Corporation	AEE	(\$46.40)	\$0.00	\$0.87	\$1.77	\$1.96	\$2.05	\$2.19	\$2.33	\$2.48	\$2.64	\$2.80	\$2.98	\$3.13	\$3.30	\$3.48	\$3.66	\$3.86	\$124.14
American Electric Power Company, Inc.	AEP	(\$61.54)	\$0.00	\$1.21	\$2.47	\$2.88	\$3.06	\$3.21	\$3.37	\$3.54	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.81	\$5.07	\$5.34	\$171.93
Avista Corporation	AVA	(\$39.10)	\$0.00	\$0.68	\$1.38	\$1.48	\$1.52	\$1.61	\$1.71	\$1.82	\$1.93	\$2.05	\$2.19	\$2.30	\$2.42	\$2.55	\$2.69	\$2.83	\$91.16
CMS Energy Corporation	CMS	(\$39.10)	\$0.00	\$0.64	\$1.32	\$1.56	\$1.66	\$1.80	\$1.94	\$2.09	\$2.25	\$2.40	\$2.56	\$2.70	\$2.84	\$2.99	\$3.15	\$3.32	\$106.82
DTE Energy Company	DTE	(\$85.80)	\$0.00	\$1.50	\$3.05	\$3.43	\$3.60	\$3.87	\$4.15	\$4.45	\$4.76	\$5.10	\$5.45	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$227.22
El Paso Electric Company	EE	(\$41.72)	\$0.00	\$0.65	\$1.33	\$1.61	\$1.74	\$1.88	\$2.04	\$2.20	\$2.36	\$2.53	\$2.70	\$2.85	\$3.00	\$3.16	\$3.33	\$3.50	\$112.82
Energy Corporation	ETR	(\$72.44)	\$0.00	\$2.03	\$4.10	\$4.07	\$4.32	\$4.60	\$4.90	\$5.24	\$5.61	\$6.03	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$251.62	
Eversource Energy	ES	(\$54.15)	\$0.00	\$0.89	\$1.82	\$2.06	\$2.17	\$2.36	\$2.57	\$2.78	\$3.01	\$3.25	\$3.50	\$3.69	\$3.88	\$4.09	\$4.31	\$4.54	\$146.01
FirstEnergy Corp.	FE	(\$33.04)	\$0.00	\$0.60	\$1.25	\$1.40	\$1.48	\$1.71	\$1.95	\$2.21	\$2.49	\$2.77	\$3.06	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$127.77
IDACORP, Inc.	IDA	(\$70.82)	\$0.00	\$1.08	\$2.18	\$2.64	\$2.83	\$3.00	\$3.19	\$3.40	\$3.63	\$3.89	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$173.76
MGE Energy, Inc.	MGEE	(\$48.29)	\$0.00	\$0.62	\$1.28	\$1.27	\$1.27	\$1.47	\$1.69	\$1.93	\$2.19	\$2.46	\$2.74	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$114.48
NorthWestern Corporation	NWE	(\$57.21)	\$0.00	\$1.01	\$2.07	\$2.26	\$2.34	\$2.55	\$2.76	\$2.99	\$3.22	\$3.47	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59	\$4.83	\$155.59
OGE Energy Corp.	OGE	(\$27.72)	\$0.00	\$0.60	\$1.22	\$1.43	\$1.52	\$1.59	\$1.66	\$1.74	\$1.81	\$1.90	\$1.98	\$2.09	\$2.20	\$2.32	\$2.44	\$2.57	\$82.69
Otter Tail Corporation	OTTR	(\$28.17)	\$0.00	\$0.67	\$1.36	\$1.32	\$1.32	\$1.41	\$1.50	\$1.60	\$1.71	\$1.82	\$1.94	\$2.04	\$2.15	\$2.26	\$2.38	\$2.51	\$80.79
Pinnacle West Capital Corporation	PNW	(\$69.12)	\$0.00	\$1.32	\$2.66	\$2.97	\$3.10	\$3.25	\$3.41	\$3.58	\$3.78	\$3.99	\$4.22	\$4.44	\$4.68	\$4.93	\$5.19	\$5.47	\$176.00
PNM Resources, Inc.	PNM	(\$31.32)	\$0.00	\$0.46	\$0.95	\$1.25	\$1.39	\$1.56	\$1.74	\$1.92	\$2.12	\$2.31	\$2.51	\$2.65	\$2.79	\$2.93	\$3.09	\$3.25	\$104.77
Portland General Electric Company	POR	(\$38.74)	\$0.00	\$0.61	\$1.26	\$1.47	\$1.57	\$1.72	\$1.89	\$2.06	\$2.24	\$2.44	\$2.64	\$2.78	\$2.92	\$3.08	\$3.24	\$3.42	\$109.99
SCANA Corporation	SCG	(\$64.86)	\$0.00	\$1.19	\$2.43	\$2.81	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.23	\$4.53	\$4.77	\$5.03	\$5.30	\$5.58	\$5.87	\$189.09
Wisconsin Energy Corporation	WEC	(\$55.89)	\$0.00	\$0.86	\$1.76	\$2.05	\$2.18	\$2.32	\$2.46	\$2.61	\$2.76	\$2.91	\$3.07	\$3.23	\$3.40	\$3.58	\$3.77	\$3.98	\$127.96
Xcel Energy Inc.	XEL	(\$38.85)	\$0.00	\$0.69	\$1.41	\$1.63	\$1.73	\$1.84	\$1.96	\$2.09	\$2.22	\$2.37	\$2.52	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26	\$104.97

Multi-Stage DCF Notes:

- [1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of June 30, 2016
- [2] Source: Zacks
- [3] Source: Yahoo! Finance
- [4] Source: Value Line
- [5] Equals indicated value (average, minimum, maximum) of Columns [2], [3], [4]
- [6] Source: Federal Reserve, Bureau of Economic Analysis
- [7] Source: Value Line
- [8] Source: Value Line
- [9] Source: Bloomberg Professional
- [10] Equals Column [1] + Column [62]
- [11] Equals result of Excel Solver function; goal: Column [10] equals \$0.00
- [12] Equals Column [61] / Column [30]
- [13] Equals Column [12] / (Column [6] x 100)
- [14] Source: Value Line
- [15] Equals Column [14] x (1 + Column [5])
- [16] Equals Column [15] x (1 + Column [5])
- [17] Equals Column [16] x (1 + Column [5])
- [18] Equals Column [17] x (1 + Column [5])
- [19] Equals Column [18] x (1 + Column [5])
- [20] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2021 - 2020)))) x Column [19]
- [21] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2022 - 2020)))) x Column [20]
- [22] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2023 - 2020)))) x Column [21]
- [23] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2024 - 2020)))) x Column [22]
- [24] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2026 - 2021 + 1)) x (2025 - 2020)))) x Column [23]
- [25] Equals Column [24] x (1 + Column [6])
- [26] Equals Column [25] x (1 + Column [6])
- [27] Equals Column [26] x (1 + Column [6])
- [28] Equals Column [27] x (1 + Column [6])
- [29] Equals Column [28] x (1 + Column [6])
- [30] Equals Column [29] x (1 + Column [6])
- [31] Equals Column [7]
- [32] Equals Column [31] + ((Column [35] - Column [31]) / 4)
- [33] Equals Column [32] + ((Column [35] - Column [31]) / 4)
- [34] Equals Column [33] + ((Column [35] - Column [31]) / 4)
- [35] Equals Column [8]
- [36] Equals Column [35] + ((Column [42] - Column [35]) / 6)
- [37] Equals Column [36] + ((Column [42] - Column [35]) / 6)
- [38] Equals Column [37] + ((Column [42] - Column [35]) / 6)
- [39] Equals Column [38] + ((Column [42] - Column [35]) / 6)
- [40] Equals Column [39] + ((Column [42] - Column [35]) / 6)
- [41] Equals Column [9]
- [42] Equals Column [9]
- [43] Equals Column [9]
- [44] Equals Column [9]
- [45] Equals Column [9]
- [46] Equals Column [9]
- [47] Equals Column [15] x Column [31]
- [48] Equals Column [16] x Column [32]
- [49] Equals Column [17] x Column [33]
- [50] Equals Column [18] x Column [34]
- [51] Equals Column [19] x Column [35]
- [52] Equals Column [20] x Column [36]
- [53] Equals Column [21] x Column [37]
- [54] Equals Column [22] x Column [38]
- [55] Equals Column [23] x Column [39]
- [56] Equals Column [24] x Column [40]
- [57] Equals Column [25] x Column [41]
- [58] Equals Column [26] x Column [42]
- [59] Equals Column [27] x Column [43]
- [60] Equals Column [28] x Column [44]
- [61] Equals Column [29] x Column [45]
- [62] Equals Column [30] x Column [46]
- [63] Equals (Column [62] x (1 + Column [6])) / (Column [11] - Column [6])
- [64] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [65] through Column [81]
- [65] Equals \$0.00
- [66] Equals Column [47] x (12/31/2016 - 6/30/2016) / 365
- [67] Equals Column [47] + (0.5 x Column [5])
- [68] Equals Column [49]
- [69] Equals Column [50]
- [70] Equals Column [51]
- [71] Equals Column [52]
- [72] Equals Column [53]
- [73] Equals Column [54]
- [74] Equals Column [55]
- [75] Equals Column [56]
- [76] Equals Column [57]
- [77] Equals Column [58]
- [78] Equals Column [59]
- [79] Equals Column [60]
- [80] Equals Column [61]
- [81] Equals Column [62] + [63]

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

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-day	Implied Market
Market Return	average)	Risk Premium
13.09%	2.50%	10.59%

[4]	[5]	[6]	[7]	[8]	[9]		
Company	Market	Estimated	Long-Term	DCF Result	Weighted		
Ticker	Capitalization	Dividend Yield	Growth Est.		DCF Result		
AGILENT TECHNOLOGIES INC	A	14,440.14	0.08%	1.01%	10.13%	11.19%	0.0084%
ALCOA INC	AA	12,191.04	0.06%	1.31%	5.00%	6.34%	0.0040%
AMERICAN AIRLINES GROUP INC	AAL	16,368.04	0.09%	1.50%	-21.78%	-20.44%	-0.0174%
ADVANCE AUTO PARTS INC	AAP	11,888.86	0.06%	0.16%	12.01%	12.17%	0.0075%
APPLE INC	AAPL	523,641.83	2.72%	2.29%	11.56%	13.99%	0.3808%
ABBVIE INC	ABBV	100,130.67	0.52%	3.70%	13.51%	17.46%	0.0909%
AMERISOURCEBERGEN CORP	ABC	17,121.60	0.09%	1.70%	11.20%	12.99%	0.0116%
ABBOTT LABORATORIES	ABT	57,752.37	0.30%	2.66%	11.73%	14.55%	0.0437%
ACCENTURE PLC-CL A	ACN	73,850.67	0.38%	2.03%	9.82%	11.95%	0.0459%
ADOBE SYSTEMS INC	ADBE	47,731.28	0.25%	0.00%	20.26%	20.26%	0.0503%
ANALOG DEVICES INC	ADI	17,408.29	0.09%	2.93%	8.92%	11.98%	0.0108%
ARCHER-DANIELS-MIDLAND CO	ADM	25,201.40	0.13%	2.81%	7.15%	10.06%	0.0132%
AUTOMATIC DATA PROCESSING	ADP	41,849.98	0.22%	2.25%	10.29%	12.65%	0.0275%
ALLIANCE DATA SYSTEMS CORP	ADS	11,547.48	0.06%	0.00%	13.83%	13.83%	0.0083%
AUTODESK INC	ADSK	12,162.88	0.06%	0.00%	20.96%	20.96%	0.0133%
AMEREN CORPORATION	AEE	13,000.37	0.07%	3.25%	4.43%	7.75%	0.0052%
AMERICAN ELECTRIC POWER	AEP	34,436.15	0.18%	3.22%	5.05%	8.35%	0.0150%
AES CORP	AES	8,224.33	0.04%	3.53%	7.33%	10.99%	0.0047%
AETNA INC	AET	42,818.78	0.22%	0.82%	10.57%	11.44%	0.0255%
AFLAC INC	AFL	29,873.30	0.16%	2.31%	3.86%	6.22%	0.0097%
ALLERGAN PLC	AGN	91,409.25	0.48%	0.00%	12.32%	12.32%	0.0585%
AMERICAN INTERNATIONAL GROUP	AIG	59,185.62	0.31%	2.42%	9.50%	12.04%	0.0370%
APARTMENT INVT & MGMT CO -A	AIV	6,915.68	0.04%	2.99%	6.82%	9.92%	0.0036%
ASSURANT INC	AIZ	5,345.77	0.03%	2.27%	12.36%	14.77%	0.0041%
ARTHUR J GALLAGHER & CO	AJG	8,431.34	0.04%	3.19%	7.97%	11.29%	0.0050%
AKAMAI TECHNOLOGIES INC	AKAM	9,820.85	0.05%	0.00%	15.60%	15.60%	0.0080%
ALASKA AIR GROUP INC	ALK	7,184.39	0.04%	1.89%	2.65%	4.56%	0.0017%
ALLSTATE CORP	ALL	26,186.99	0.14%	1.89%	9.00%	10.97%	0.0149%
ALLEGION PLC	ALLE	6,646.79	0.03%	0.70%	13.10%	13.85%	0.0048%
ALEXION PHARMACEUTICALS INC	ALXN	26,156.59	0.14%	0.00%	27.12%	27.12%	0.0369%
APPLIED MATERIALS INC	AMAT	26,106.78	0.14%	1.70%	15.43%	17.26%	0.0234%
AMETEK INC	AME	10,950.55	0.06%	0.85%	10.30%	11.20%	0.0063%
AFILIATED MANAGERS GROUP	AMG	7,979.77	0.04%	0.00%	13.73%	13.73%	0.0057%
AMGEN INC	AMGN	114,297.68	0.59%	2.61%	7.92%	10.64%	0.0632%
AMERIPRISE FINANCIAL INC	AMP	14,898.34	0.08%	3.16%	13.23%	16.60%	0.0129%
AMERICAN TOWER CORP	AMT	48,241.62	0.25%	1.91%	20.41%	22.52%	0.0565%
AMAZON.COM INC	AMZN	337,649.52	1.76%	0.00%	47.03%	47.03%	0.8256%
AUTONATION INC	AN	4,843.81	0.03%	0.00%	8.33%	8.33%	0.0021%
ANTHEM INC	ANTM	34,536.25	0.18%	1.98%	8.87%	10.93%	0.0196%
AOON PLC	AOO	28,937.41	0.15%	1.19%	12.08%	13.35%	0.0201%
APACHE CORP	APA	21,072.97	0.11%	1.79%	8.50%	10.37%	0.0114%
ANADARKO PETROLEUM CORP	APC	27,180.22	0.14%	0.38%	8.33%	8.72%	0.0123%
AIR PRODUCTS & CHEMICALS INC	APD	30,692.17	0.16%	2.36%	8.17%	10.63%	0.0170%
AMPHENOL CORP-CL A	APH	17,653.46	0.09%	1.01%	9.26%	10.31%	0.0095%
ACTIVISION BLIZZARD INC	ATVI	29,319.79	0.15%	0.66%	12.00%	12.70%	0.0194%
AVALONBAY COMMUNITIES INC	AVB	24,742.75	0.13%	2.98%	7.25%	10.34%	0.0133%
BROADCOM LTD	AVGO	61,463.59	0.32%	1.23%	15.70%	17.02%	0.0544%
AVERY DENNISON CORP	AVY	6,665.90	0.03%	2.21%	8.20%	10.50%	0.0036%
AMERICAN WATER WORKS CO INC	AWK	15,018.65	0.08%	1.75%	7.34%	9.16%	0.0072%
AMERICAN EXPRESS CO	AXP	57,784.77	0.30%	2.00%	9.00%	11.09%	0.0333%
ACUITY BRANDS INC	AYI	10,882.24	0.06%	0.21%	19.60%	19.83%	0.0112%
AUTOZONE INC	AZO	23,205.56	0.12%	0.00%	11.93%	11.93%	0.0144%
BOEING CO/THE	BA	82,728.64	0.43%	3.37%	12.08%	15.65%	0.0673%
BANK OF AMERICA CORP	BAC	136,308.32	0.71%	2.00%	7.50%	9.58%	0.0679%
BAXTER INTERNATIONAL INC	BAX	24,973.32	0.13%	1.09%	12.04%	13.20%	0.0171%
BED BATH & BEYOND INC	BBBY	6,671.73	0.03%	1.10%	6.83%	7.97%	0.0028%
BB&T CORP	BBT	28,917.04	0.15%	3.18%	5.27%	8.54%	0.0128%
BEST BUY CO INC	BBY	9,876.23	0.05%	4.17%	10.18%	14.57%	0.0075%
CR BARD INC	BCR	17,241.62	0.09%	0.42%	10.75%	11.19%	0.0100%
BECTON DICKINSON AND CO	BDX	35,987.34	0.19%	1.56%	11.38%	13.03%	0.0244%
FRANKLIN RESOURCES INC	BEN	19,519.16	0.10%	2.16%	4.88%	7.09%	0.0072%
BROWN-FORMAN CORP-CLASS B	BF/B	20,347.91	0.11%	1.42%	9.61%	11.09%	0.0117%
BAKER HUGHES INC	BHI	19,763.05	0.10%	1.51%	14.00%	15.62%	0.0160%
BIOGEN INC	BIIB	52,971.03	0.28%	0.00%	8.26%	8.26%	0.0228%
BANK OF NEW YORK MELLON CORP	BK	41,844.66	0.22%	1.89%	15.87%	17.90%	0.0390%
BLACKROCK INC	BLK	56,501.55	0.29%	2.67%	12.67%	15.52%	0.0456%
BALL CORP	BLL	10,250.51	0.05%	0.58%	4.40%	4.99%	0.0027%
BRISTOL-MYERS SQUIBB CO	BMY	122,777.55	0.64%	2.08%	20.56%	22.85%	0.1459%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	356,822.76	1.86%	0.00%	7.10%	7.10%	0.1317%
BOSTON SCIENTIFIC CORP	BSX	31,709.98	0.16%	0.00%	11.73%	11.73%	0.0193%
BORGWARNER INC	BWA	6,424.12	0.03%	1.76%	11.60%	13.46%	0.0045%
BOSTON PROPERTIES INC	BXP	20,261.33	0.11%	2.25%	6.55%	8.88%	0.0094%
CITIGROUP INC	C	124,411.65	0.65%	0.92%	11.80%	12.78%	0.0827%
CA INC	CA	13,800.48	0.07%	3.15%	5.50%	8.73%	0.0063%
CONAGRA FOODS INC	CAG	20,865.00	0.11%	2.20%	8.00%	10.29%	0.0112%
CARDINAL HEALTH INC	CAH	25,416.85	0.13%	1.95%	11.90%	13.97%	0.0185%
CATERPILLAR INC	CAT	44,264.82	0.23%	4.10%	7.23%	11.47%	0.0264%
CHUBB LTD	CB	60,711.98	0.32%	2.10%	7.86%	10.04%	0.0317%
CBRE GROUP INC - A	CBG	8,882.34	0.05%	0.00%	12.50%	12.50%	0.0058%
CBS CORP-CLASS B NON VOTING	CBS	24,804.60	0.13%	1.20%	17.03%	18.33%	0.0236%
CROWN CASTLE INTL CORP	CCI	34,238.68	0.18%	3.54%	15.50%	19.32%	0.0344%
CARNIVAL CORP	CCL	33,238.05	0.17%	2.93%	16.58%	19.75%	0.0341%
CELGENE CORP	CELG	76,398.95	0.40%	0.00%	22.42%	22.42%	0.0891%
CERNER CORP	CERN	19,811.59	0.10%	0.00%	16.13%	16.13%	0.0166%
CF INDUSTRIES HOLDINGS INC	CF	5,617.56	0.03%	4.99%	17.15%	22.57%	0.0066%
CITIZENS FINANCIAL GROUP	CFG	10,569.02	0.05%	2.34%	9.00%	11.45%	0.0063%
CHURCH & DWIGHT CO INC	CHD	13,203.88	0.07%	1.38%	9.29%	10.73%	0.0074%
CHESAPEAKE ENERGY CORP	CHK	2,930.12	0.02%	0.00%	-3.48%	-3.48%	-0.0005%



C.H. ROBINSON WORLDWIDE INC	CHRW	10,600.42	0.06%	2.35%	10.28%	12.74%	0.0070%
CIGNA CORP	CI	32,831.11	0.17%	0.03%	8.62%	8.66%	0.0148%
CINCINNATI FINANCIAL CORP	CINF	12,317.88	0.06%	0.00%	16.30%	16.30%	0.0104%
COLGATE-PALMOLIVE CO	CL	65,368.89	0.34%	2.15%	8.38%	10.62%	0.0361%
CLOROX COMPANY	CLX	17,899.42	0.09%	2.24%	6.47%	8.78%	0.0082%
COMERICA INC	CMA	7,203.26	0.04%	2.12%	5.04%	7.22%	0.0027%
COMCAST CORP-CLASS A	CMCSA	158,228.88	0.82%	1.70%	11.32%	13.12%	0.1079%
CME GROUP INC	CME	32,983.82	0.17%	5.11%	12.78%	18.21%	0.0312%
CHIPOTLE MEXICAN GRILL INC	CMG	11,761.16	0.06%	0.00%	16.72%	16.72%	0.0102%
CUMMINS INC	CMI	19,155.23	0.10%	3.53%	4.26%	7.86%	0.0078%
CMS ENERGY CORP	CMS	12,839.04	0.07%	2.70%	6.00%	8.78%	0.0059%
CENTENE CORP	CNC	12,166.66	0.06%	0.00%	16.57%	16.57%	0.0105%
CENTERPOINT ENERGY INC	CNP	10,334.87	0.05%	4.30%	5.67%	10.09%	0.0054%
CAPITAL ONE FINANCIAL CORP	COF	32,523.44	0.17%	2.67%	6.57%	9.33%	0.0158%
CABOT OIL & GAS CORP	COG	11,969.11	0.06%	0.31%	40.79%	41.16%	0.0256%
COACH INC	COH	11,326.93	0.06%	3.31%	14.23%	17.78%	0.0105%
ROCKWELL COLLINS INC	COL	11,084.73	0.06%	1.58%	8.32%	9.97%	0.0057%
CONOCOPHILLIPS	COP	53,993.68	0.28%	2.30%	6.67%	9.04%	0.0254%
COSTCO WHOLESALE CORP	COST	68,793.82	0.36%	1.08%	10.55%	11.69%	0.0418%
CAMPBELL SOUP CO	CPB	20,534.29	0.11%	2.03%	7.32%	9.42%	0.0101%
COLUMBIA PIPELINE GROUP	CPGX	10,206.23	N/A	2.20%	N/A	N/A	N/A
SALESFORCE.COM INC	CRM	53,800.28	0.28%	0.00%	25.42%	25.42%	0.0711%
CISCO SYSTEMS INC	CSCO	144,302.44	0.75%	3.28%	8.77%	12.19%	0.0914%
CSRA INC	CSRA	3,829.02	0.02%	1.71%	10.00%	11.79%	0.0023%
CSX CORP	CSX	24,929.01	0.13%	2.85%	6.46%	9.40%	0.0122%
CINTAS CORP	CTAS	10,500.22	0.05%	1.08%	11.84%	12.98%	0.0071%
CENTURYLINK INC	CTL	15,840.97	0.08%	7.45%	-1.52%	5.87%	0.0048%
COGNIZANT TECH SOLUTIONS-A	CTSH	34,679.97	0.18%	0.00%	13.78%	13.78%	0.0249%
CITRIX SYSTEMS INC	CTXS	12,422.12	0.06%	0.00%	16.70%	16.70%	0.0108%
CVS HEALTH CORP	CVS	102,826.88	0.53%	1.73%	13.85%	15.70%	0.0840%
CHEVRON CORP	CVX	197,573.35	1.03%	4.10%	3.25%	7.42%	0.0762%
CONCHO RESOURCES INC	CXO	15,690.05	0.08%	0.00%	25.00%	25.00%	0.0204%
DOMINION RESOURCES INC/VA	D	48,021.89	0.25%	3.59%	6.25%	9.96%	0.0249%
DELTA AIR LINES INC	DAL	28,109.11	0.15%	1.67%	15.98%	17.77%	0.0260%
DU PONT (E.I.) DE NEMOURS	DD	56,632.99	0.29%	2.44%	8.25%	10.79%	0.0318%
DEERE & CO	DE	25,467.54	0.13%	2.98%	7.76%	10.85%	0.0144%
DISCOVER FINANCIAL SERVICES	DFS	22,091.15	0.11%	2.21%	8.13%	10.43%	0.0120%
DOLLAR GENERAL CORP	DG	26,675.16	0.14%	1.05%	13.89%	15.01%	0.0208%
QUEST DIAGNOSTICS INC	DGX	11,516.03	0.06%	1.95%	8.91%	10.94%	0.0066%
DR HORTON INC	DHI	11,676.73	0.06%	1.03%	14.71%	15.81%	0.0096%
DANAHER CORP	DHR	69,558.24	0.36%	0.63%	11.98%	12.64%	0.0457%
WALT DISNEY CO/THE	DIS	158,707.15	0.83%	1.49%	9.80%	11.36%	0.0938%
DISCOVERY COMMUNICATIONS-A	DISCA	15,147.86	0.08%	0.00%	13.45%	13.45%	0.0106%
DELPHI AUTOMOTIVE PLC	DLPH	17,088.36	0.09%	1.86%	9.88%	11.83%	0.0105%
DIGITAL REALTY TRUST INC	DLR	17,364.98	0.09%	3.23%	5.94%	9.26%	0.0084%
DOLLAR TREE INC	DLTR	22,209.17	0.12%	0.00%	17.67%	17.67%	0.0204%
DUN & BRADSTREET CORP	DNB	4,417.72	0.02%	1.58%	11.75%	13.43%	0.0031%
DIAMOND OFFSHORE DRILLING	DO	3,337.34	N/A	0.00%	N/A	N/A	N/A
DOVER CORP	DOV	10,754.91	0.06%	2.48%	10.48%	13.08%	0.0073%
DOW CHEMICAL CO/THE	DOW	55,963.47	0.29%	3.73%	6.00%	9.85%	0.0286%
DR PEPPER SNAPPLE GROUP INC	DPS	17,955.02	0.09%	2.18%	13.24%	15.57%	0.0145%
DARDEN RESTAURANTS INC	DRI	8,026.81	0.04%	3.46%	13.38%	17.08%	0.0071%
DTE ENERGY COMPANY	DTE	17,785.64	0.09%	3.02%	5.54%	8.65%	0.0080%
DUKE ENERGY CORP	DUK	59,091.55	0.31%	3.95%	4.71%	8.75%	0.0269%
DAVITA HEALTHCARE PARTNERS I	DVA	15,966.58	0.08%	0.00%	10.11%	10.11%	0.0084%
DEVON ENERGY CORP	DVN	18,995.00	0.10%	1.16%	7.97%	9.17%	0.0091%
ELECTRONIC ARTS INC	EA	22,832.80	0.12%	0.00%	11.27%	11.27%	0.0134%
EBAY INC	EBAY	26,895.85	0.14%	0.00%	8.89%	8.89%	0.0124%
ECOLAB INC	ECL	34,786.00	0.18%	1.20%	12.36%	13.63%	0.0247%
CONSOLIDATED EDISON INC	ED	24,466.66	0.13%	3.33%	3.07%	6.45%	0.0082%
EQUIFAX INC	EFX	15,281.39	0.08%	1.03%	9.21%	10.28%	0.0082%
EDISON INTERNATIONAL	EIX	25,305.76	0.13%	2.48%	5.44%	7.99%	0.0105%
ESTEE LAUDER COMPANIES-CL A	EL	33,608.03	0.17%	1.25%	11.73%	13.05%	0.0228%
EMC CORP/MA	EMC	53,108.30	0.28%	1.78%	10.58%	12.45%	0.0344%
EASTMAN CHEMICAL CO	EMN	10,038.11	0.05%	2.66%	5.50%	8.24%	0.0043%
EMERSON ELECTRIC CO	EMR	33,557.19	0.17%	3.64%	7.33%	11.10%	0.0194%
ENDO INTERNATIONAL PLC	ENDP	3,471.29	0.02%	0.00%	4.70%	4.70%	0.0008%
EOG RESOURCES INC	EOG	45,904.07	0.24%	0.78%	-9.66%	-8.92%	-0.0213%
EQUINIX INC	EQIX	26,919.74	0.14%	1.80%	22.05%	24.05%	0.0337%
EQUITY RESIDENTIAL	EQR	25,175.79	0.13%	18.91%	6.08%	25.56%	0.0335%
EQT CORP	EQT	13,375.03	0.07%	0.15%	25.00%	25.17%	0.0175%
EVERSOURCE ENERGY	ES	19,000.70	0.10%	2.97%	7.00%	10.07%	0.0100%
EXPRESS SCRIPTS HOLDING CO	ESRX	47,946.23	0.25%	0.00%	12.85%	12.85%	0.0320%
ESSEX PROPERTY TRUST INC	ESS	14,923.95	0.08%	2.79%	6.83%	9.72%	0.0075%
E*TRADE FINANCIAL CORP	ETFC	6,547.34	0.03%	0.03%	17.87%	17.90%	0.0061%
EATON CORP PLC	ETN	27,356.34	0.14%	3.83%	8.42%	12.41%	0.0176%
ENTERGY CORP	ETR	14,540.57	0.08%	4.22%	1.56%	5.82%	0.0044%
EDWARDS LIFESCIENCES CORP	EW	21,119.10	0.11%	0.00%	14.57%	14.57%	0.0160%
EXELON CORP	EXC	33,512.82	0.17%	3.47%	4.00%	7.53%	0.0131%
EXPEDITORS INTL WASH INC	EXPD	8,928.17	0.05%	1.56%	8.53%	10.16%	0.0047%
EXPEDIA INC	EXPE	15,849.71	0.08%	0.81%	22.29%	23.18%	0.0191%
EXTRA SPACE STORAGE INC	EXR	11,586.72	0.06%	2.98%	7.35%	10.44%	0.0063%
FORD MOTOR CO	F	49,938.54	0.26%	4.77%	6.72%	11.65%	0.0303%
FASTENAL CO	FAST	12,823.53	0.07%	2.71%	12.02%	14.89%	0.0099%
FACEBOOK INC-A	FB	326,875.71	1.70%	0.00%	31.69%	31.69%	0.5386%
FORTUNE BRANDS HOME & SECURI	FBHS	8,891.21	0.05%	1.11%	18.63%	19.84%	0.0092%
FREEMPORT-MCMORAN INC	FCX	13,948.86	N/A	0.00%	N/A	N/A	N/A
FEDEX CORP	FDX	40,741.36	0.21%	1.03%	12.25%	13.34%	0.0283%
FIRSTENERGY CORP	FE	14,826.71	0.08%	4.12%	-1.55%	2.54%	0.0020%
F5 NETWORKS INC	FFIV	7,625.15	0.04%	0.00%	13.18%	13.18%	0.0052%
FIDELITY NATIONAL INFO SERV	FIS	24,053.13	0.13%	1.45%	12.13%	13.66%	0.0171%
FISERV INC	FISV	24,173.93	0.13%	0.00%	12.50%	12.50%	0.0157%
FIFTH THIRD BANCORP	FITB	13,504.16	0.07%	3.09%	3.83%	6.98%	0.0049%
FOOT LOCKER INC	FL	7,423.05	0.04%	2.05%	10.75%	12.91%	0.0050%
FLIR SYSTEMS INC	FLIR	4,259.71	0.02%	1.49%	15.00%	16.60%	0.0037%
FLUOR CORP	FLR	6,861.26	0.04%	1.71%	2.39%	4.12%	0.0015%
FLOWSERVE CORP	FLS	5,888.67	0.03%	1.68%	11.67%	13.45%	0.0041%
FMC CORP	FMC	6,194.03	0.03%	1.46%	9.53%	11.06%	0.0036%
TWENTY-FIRST CENTURY FOX-A	FOXA	51,399.08	0.27%	1.21%	13.84%	15.13%	0.0404%
FEDERAL REALTY INVS TRUST	FRT	11,738.17	0.06%	2.32%	6.26%	8.65%	0.0053%
FIRST SOLAR INC	FSLR	4,956.84	0.03%	0.00%	10.00%	10.00%	0.0026%
FMC TECHNOLOGIES INC	FTI	6,036.90	0.03%	0.00%	-8.10%	-8.10%	-0.0025%
FRONTIER COMMUNICATIONS CORP	FTR	5,795.00	0.03%	8.50%	11.55%	20.54%	0.0062%

AGL RESOURCES INC	GAS	7,961.26	0.04%	3.21%	6.50%	9.82%	0.0041%
GENERAL DYNAMICS CORP	GD	42,558.28	0.22%	2.14%	7.83%	10.05%	0.0222%
GENERAL ELECTRIC CO	GE	289,479.28	1.51%	2.96%	9.98%	13.09%	0.1970%
GENERAL GROWTH PROPERTIES	GGP	26,336.92	0.14%	2.59%	6.73%	9.40%	0.0129%
GILEAD SCIENCES INC	GILD	111,100.55	0.58%	2.21%	1.96%	4.20%	0.0242%
GENERAL MILLS INC	GIS	42,392.72	0.22%	2.64%	9.63%	12.40%	0.0273%
CORNING INC	GLW	22,023.14	0.11%	2.65%	12.34%	15.15%	0.0174%
GENERAL MOTORS CO	GM	43,577.06	0.23%	5.37%	9.44%	15.06%	0.0341%
ALPHABET INC-CL A	GOOGL	478,804.14	2.49%	0.00%	15.66%	15.66%	0.3899%
GENUINE PARTS CO	GPC	15,149.34	0.08%	2.60%	6.33%	9.01%	0.0071%
GLOBAL PAYMENTS INC	GPN	10,992.57	0.06%	0.06%	14.42%	14.48%	0.0083%
GAP INC/THE	GPS	8,444.80	0.04%	4.30%	6.91%	11.37%	0.0050%
GARMIN LTD	GRMN	8,019.66	0.04%	4.83%	5.68%	10.65%	0.0044%
GOLDMAN SACHS GROUP INC	GS	64,513.58	0.34%	1.81%	14.11%	16.05%	0.0538%
GOODYEAR TIRE & RUBBER CO	GT	6,824.13	0.04%	1.10%	7.00%	8.14%	0.0029%
WW GRAINGER INC	GWW	13,935.47	0.07%	2.15%	9.34%	11.59%	0.0084%
HALLIBURTON CO	HAL	38,916.11	0.20%	1.57%	12.53%	14.19%	0.0287%
HARMAN INTERNATIONAL	HAR	5,067.24	0.03%	1.97%	17.50%	19.64%	0.0052%
HASBRO INC	HAS	10,473.73	0.05%	2.43%	10.40%	12.96%	0.0071%
HUNTINGTON BANCSHARES INC	HBAN	7,141.87	0.04%	3.21%	5.32%	8.62%	0.0032%
HANESBRANDS INC	HBI	9,487.01	0.05%	1.74%	12.03%	13.88%	0.0068%
HCA HOLDINGS INC	HCA	30,115.06	0.16%	0.00%	11.00%	11.00%	0.0172%
WELLTOWER INC	HCN	27,192.32	0.14%	4.49%	4.67%	9.26%	0.0131%
HCP INC	HCP	16,525.56	0.09%	6.45%	2.81%	9.35%	0.0080%
HOME DEPOT INC	HD	158,847.29	0.83%	2.16%	13.47%	15.77%	0.1302%
HESS CORP	HES	19,034.83	0.10%	1.66%	-20.09%	-18.60%	-0.0184%
HARTFORD FINANCIAL SVCS GRP	HIG	17,458.42	0.09%	1.98%	9.33%	11.41%	0.0104%
HARLEY-DAVIDSON INC	HOG	8,203.38	0.04%	3.09%	10.35%	13.60%	0.0058%
HOLOGIC INC	HOLX	9,647.51	0.05%	0.00%	8.94%	8.94%	0.0045%
HONEYWELL INTERNATIONAL INC	HON	88,649.27	0.46%	2.11%	9.32%	11.53%	0.0531%
STARWOOD HOTELS & RESORTS	HOT	12,537.31	0.07%	2.03%	7.26%	9.36%	0.0061%
HELMERICH & PAYNE	HP	7,252.67	0.04%	4.12%	-1.40%	2.69%	0.0010%
HEWLETT PACKARD ENTERPRIS	HPE	30,359.53	0.16%	1.20%	6.42%	7.66%	0.0121%
HP INC	HPQ	21,468.11	0.11%	4.22%	2.83%	7.11%	0.0079%
H&R BLOCK INC	HRB	5,071.90	0.03%	3.83%	11.00%	15.04%	0.0040%
HORMEL FOODS CORP	HRL	19,392.89	0.10%	1.57%	5.90%	7.51%	0.0076%
HARRIS CORP	HRS	10,407.13	N/A	N/A	N/A	N/A	N/A
HENRY SCHEIN INC	HSIC	14,509.34	0.08%	0.00%	11.43%	11.43%	0.0086%
HOST HOTELS & RESORTS INC	HST	12,113.98	0.06%	5.13%	5.00%	10.25%	0.0065%
HERSHEY CO/THE	HSY	24,215.69	0.13%	2.09%	9.18%	11.36%	0.0143%
HUMANA INC	HUM	26,808.71	0.14%	0.66%	13.14%	13.85%	0.0193%
INTL BUSINESS MACHINES CORP	IBM	145,703.01	0.76%	3.54%	7.15%	7.15%	0.0542%
INTERCONTINENTAL EXCHANGE INC	ICE	30,470.92	0.16%	1.33%	14.24%	15.66%	0.0248%
INTL FLAVORS & FRAGRANCES	IFF	10,049.53	0.05%	1.83%	11.00%	12.94%	0.0068%
ILLUMINA INC	ILMN	20,663.94	0.11%	0.00%	13.98%	13.98%	0.0150%
INTEL CORP	INTC	154,881.60	0.81%	3.16%	8.52%	11.81%	0.0951%
INTUIT INC	INTU	28,557.79	0.15%	1.08%	17.11%	18.28%	0.0271%
INTERNATIONAL PAPER CO	IP	17,425.57	0.09%	4.20%	7.50%	11.86%	0.0107%
INTERPUBLIC GROUP OF COS INC	IPG	9,295.56	0.05%	2.54%	8.00%	10.64%	0.0051%
INGERSOLL-RAND PLC	IR	16,395.29	0.09%	2.01%	10.71%	12.82%	0.0109%
IRON MOUNTAIN INC	IRM	10,461.09	N/A	4.77%	N/A	N/A	N/A
INTUITIVE SURGICAL INC	ISRG	25,173.51	0.13%	0.00%	13.07%	13.07%	0.0171%
ILLINOIS TOOL WORKS	ITW	37,432.02	0.19%	2.17%	6.65%	8.90%	0.0173%
INVESCO LTD	IVZ	10,656.98	0.06%	4.37%	9.55%	14.13%	0.0078%
HUNT (JB) TRANSPRT SVCS INC	JBHT	9,117.12	0.05%	1.08%	13.74%	14.90%	0.0071%
JOHNSON CONTROLS INC	JCI	28,696.86	0.15%	2.58%	9.20%	11.90%	0.0178%
JACOBS ENGINEERING GROUP INC	JEC	6,073.09	0.03%	0.00%	6.92%	6.92%	0.0022%
JOHNSON & JOHNSON	JNJ	333,653.15	1.73%	2.59%	6.29%	8.96%	0.1554%
JUNIPER NETWORKS INC	JNPR	8,634.92	0.04%	1.88%	9.56%	11.53%	0.0052%
JPMORGAN CHASE & CO	JPM	227,224.79	1.18%	3.04%	4.21%	7.31%	0.0863%
NORDSTROM INC	JWN	6,599.20	0.03%	4.05%	8.23%	12.45%	0.0043%
KELLOGG CO	K	28,581.44	0.15%	2.52%	5.82%	8.42%	0.0125%
KEYCORP	KEY	9,308.22	0.05%	3.05%	4.50%	7.62%	0.0037%
KRAFT HEINZ CO/THE	KHC	107,587.72	0.56%	2.65%	20.38%	23.30%	0.1303%
KIMCO REALTY CORP	KIM	13,168.58	0.07%	3.27%	5.67%	9.04%	0.0062%
KLA-TENCOR CORP	KLAC	11,405.64	0.06%	2.87%	5.55%	8.50%	0.0050%
KIMBERLY-CLARK CORP	KMB	49,510.37	0.26%	2.67%	7.64%	10.41%	0.0268%
KINDER MORGAN INC	KMI	41,774.73	0.22%	2.68%	14.65%	17.52%	0.0381%
CARMAX INC	KMX	9,486.29	0.05%	0.00%	12.92%	12.92%	0.0064%
COCA-COLA CO/THE	KO	196,106.59	1.02%	3.05%	5.72%	8.86%	0.0903%
MICHAEL KORS HOLDINGS LTD	KORS	8,730.68	0.05%	0.00%	5.35%	5.35%	0.0024%
KROGER CO	KR	34,913.43	0.18%	1.20%	9.44%	10.70%	0.0194%
KOHL'S CORP	KSS	6,966.25	0.04%	5.33%	3.25%	8.67%	0.0031%
KANSAS CITY SOUTHERN	KSU	9,728.61	0.05%	1.50%	9.42%	10.99%	0.0056%
LOEWS CORP	L	13,930.18	N/A	0.61%	N/A	N/A	N/A
L BRANDS INC	LB	19,300.04	0.10%	6.58%	10.54%	17.47%	0.0175%
LEGGETT & PLATT INC	LEG	6,865.40	0.04%	2.56%	10.00%	12.69%	0.0045%
LENNAR CORP-A	LEN	9,621.04	0.05%	0.35%	11.68%	12.04%	0.0060%
LABORATORY CRP OF AMER HLDGS	LH	13,339.65	0.07%	0.00%	11.29%	11.29%	0.0078%
LKQ CORP	LKQ	9,721.73	0.05%	0.00%	16.13%	16.13%	0.0082%
L-3 COMMUNICATIONS HOLDINGS	LLL	11,288.20	0.06%	1.94%	9.94%	11.98%	0.0070%
LINEAR TECHNOLOGY CORP	LLTC	11,125.24	0.06%	2.65%	6.91%	9.65%	0.0056%
ELI LILLY & CO	LLY	86,927.16	0.45%	2.59%	11.85%	14.59%	0.0660%
LEGG MASON INC	LM	3,099.71	0.02%	2.98%	15.82%	19.04%	0.0031%
LOCKHEED MARTIN CORP	LMT	75,556.11	0.39%	2.71%	7.61%	10.42%	0.0409%
LINCOLN NATIONAL CORP	LNC	9,286.31	0.05%	2.62%	11.80%	14.58%	0.0070%
LOWE'S COS INC	LOW	70,152.91	0.36%	1.55%	16.39%	18.07%	0.0659%
LAM RESEARCH CORP	LRCX	13,415.78	0.07%	1.41%	9.72%	11.20%	0.0078%
LEUCADIA NATIONAL CORP	LUK	6,279.18	0.03%	1.44%	18.00%	19.57%	0.0064%
SOUTHWEST AIRLINES CO	LUV	25,042.91	0.13%	0.88%	8.46%	9.37%	0.0122%
LEVEL 3 COMMUNICATIONS INC	LVL3	18,429.96	0.10%	0.00%	-0.69%	-0.69%	-0.0007%
LYONDELLBASELL INDU-CL A	LYB	31,757.03	0.17%	4.49%	5.67%	10.28%	0.0170%
MACY'S INC	M	10,365.16	0.05%	4.50%	9.67%	14.38%	0.0078%
MASTERCARD INC-CLASS A	MA	96,751.30	0.50%	0.86%	14.60%	15.53%	0.0781%
MACERICH CO/THE	MAC	12,679.79	0.07%	5.05%	7.12%	12.35%	0.0081%
MARRIOTT INTERNATIONAL -CL A	MAR	16,896.24	0.09%	1.73%	11.96%	13.79%	0.0121%
MASCO CORP	MAS	10,295.17	0.05%	1.24%	14.68%	16.00%	0.0086%
MATTEL INC	MAT	10,652.55	0.06%	4.86%	10.15%	15.25%	0.0084%
MCDONALD'S CORP	MCD	105,641.38	0.55%	3.04%	10.31%	13.51%	0.0742%
MICROCHIP TECHNOLOGY INC	MCHP	10,904.02	0.06%	2.76%	9.64%	12.53%	0.0071%
MCKESSON CORP	MCK	42,125.74	0.22%	0.62%	12.00%	12.65%	0.0277%
MOODY'S CORP	MCO	18,207.85	0.09%	1.53%	11.00%	12.61%	0.0119%
MONDELEZ INTERNATIONAL INC-A	MDLZ	70,634.28	0.37%	1.50%	12.99%	14.58%	0.0535%

MEDTRONIC PLC	MDT	121,020.89	0.63%	1.96%	8.31%	10.35%	0.0651%
METLIFE INC	MET	43,759.89	0.23%	4.04%	5.10%	9.25%	0.0210%
MOHAWK INDUSTRIES INC	MHK	14,059.56	0.07%	0.00%	11.10%	11.10%	0.0081%
MEAD JOHNSON NUTRITION CO	MJN	16,939.75	0.09%	1.92%	9.84%	11.85%	0.0104%
MCCORMICK & CO-NON VGT SHRS	MKC	13,533.19	0.07%	1.60%	9.10%	10.77%	0.0076%
MARTIN MARIETTA MATERIALS	MLM	12,197.22	0.06%	0.83%	22.16%	23.08%	0.0146%
MARSH & MCLENNAN COS	MMC	35,683.62	0.19%	1.94%	11.62%	13.67%	0.0254%
3M CO	MMM	106,212.82	0.55%	2.54%	8.88%	11.53%	0.0637%
MALLINCKRODT PLC	MNK	6,644.80	0.03%	0.00%	9.35%	9.35%	0.0032%
MONSTER BEVERAGE CORP	MNST	32,630.99	0.17%	0.00%	18.96%	18.96%	0.0322%
ALTRIA GROUP INC	MO	134,915.06	0.70%	3.45%	7.67%	11.25%	0.0789%
MONSANTO CO	MON	45,249.69	0.24%	2.09%	7.85%	10.02%	0.0236%
MOSAIC CO/THE	MOS	9,158.19	0.05%	4.20%	0.85%	5.07%	0.0024%
MARATHON PETROLEUM CORP	MPC	20,112.53	0.10%	3.47%	5.63%	9.21%	0.0096%
MERCK & CO. INC.	MRK	159,465.94	0.83%	3.19%	5.08%	8.35%	0.0693%
MARATHON OIL CORP	MRO	12,723.20	0.07%	1.33%	-12.38%	-11.13%	-0.0074%
MORGAN STANLEY	MS	50,323.89	0.26%	2.68%	6.43%	9.20%	0.0241%
MICROSOFT CORP	MSFT	402,220.09	2.09%	2.76%	8.46%	11.33%	0.2370%
MOTOROLA SOLUTIONS INC	MSI	11,518.65	0.06%	2.50%	5.28%	7.84%	0.0047%
M & T BANK CORP	MTB	18,798.45	0.10%	2.41%	4.84%	7.30%	0.0071%
MICRON TECHNOLOGY INC	MU	14,269.71	0.07%	0.00%	6.10%	6.10%	0.0045%
MURPHY OIL CORP	MUR	5,467.20	N/A	4.38%	N/A	N/A	N/A
MYLAN NV	MYL	21,981.82	0.11%	0.00%	9.42%	9.42%	0.0108%
NAVIENT CORP	NAVI	3,949.64	N/A	5.41%	N/A	N/A	N/A
NOBLE ENERGY INC	NBL	15,409.47	0.08%	1.11%	7.03%	8.18%	0.0066%
NASDAQ INC	NDAQ	10,639.16	0.06%	1.90%	7.48%	9.45%	0.0052%
NEXTERA ENERGY INC	NEE	60,172.55	0.31%	2.67%	6.32%	9.07%	0.0284%
NEWMONT MINING CORP	NEM	20,754.37	0.11%	0.27%	6.13%	6.41%	0.0069%
NETFLIX INC	NFLX	39,180.77	0.20%	0.00%	35.50%	35.50%	0.0723%
NEWFIELD EXPLORATION CO	NFX	8,769.08	0.05%	0.00%	27.50%	27.50%	0.0125%
NISOURCE INC	NI	8,527.36	N/A	2.41%	N/A	N/A	N/A
NIKE INC -CL B	NKE	92,996.64	0.48%	1.34%	13.64%	15.07%	0.0729%
NIELSEN HOLDINGS PLC	NLSN	18,751.04	0.10%	2.34%	12.33%	14.81%	0.0144%
NORTHROP GRUMMAN CORP	NOC	40,110.79	0.21%	1.54%	7.54%	9.14%	0.0191%
NATIONAL OILWELL VARCO INC	NOV	12,688.10	0.07%	1.81%	-14.31%	-12.62%	-0.0083%
NRG ENERGY INC	NRG	4,720.47	N/A	1.60%	N/A	N/A	N/A
NORFOLK SOUTHERN CORP	NSC	25,176.16	0.13%	2.82%	12.44%	15.44%	0.0202%
NETAPP INC	NTAP	6,887.17	0.04%	3.09%	8.97%	12.19%	0.0044%
NORTHERN TRUST CORP	NTRS	15,118.13	0.08%	2.26%	11.45%	13.84%	0.0109%
NUCOR CORP	NUE	15,708.85	0.08%	3.04%	8.40%	11.57%	0.0094%
NVIDIA CORP	NVDA	25,103.34	0.13%	0.98%	9.67%	10.70%	0.0140%
NEWELL BRANDS INC	NWL	23,214.12	0.12%	1.55%	13.77%	15.43%	0.0186%
NEWS CORP - CLASS A	NWSA	6,646.70	0.03%	1.76%	8.80%	10.64%	0.0037%
REALTY INCOME CORP	O	17,869.29	0.09%	3.46%	3.67%	7.19%	0.0067%
OWENS-ILLINOIS INC	OI	2,916.16	0.02%	0.00%	7.37%	7.37%	0.0011%
ONEOK INC	OKE	9,969.46	0.05%	5.19%	7.30%	12.68%	0.0066%
OMNICOM GROUP	OMC	19,374.24	0.10%	2.64%	6.45%	9.17%	0.0092%
ORACLE CORP	ORCL	168,743.34	0.88%	1.45%	8.25%	9.76%	0.0857%
O'REILLY AUTOMOTIVE INC	ORLY	26,149.18	0.14%	0.00%	15.54%	15.54%	0.0211%
OCCIDENTAL PETROLEUM CORP	OXY	57,708.31	0.30%	3.99%	8.00%	12.15%	0.0365%
PAYCHEX INC	PAYX	21,427.20	N/A	2.82%	N/A	N/A	N/A
PEOPLE'S UNITED FINANCIAL	PBCT	4,557.22	N/A	4.62%	N/A	N/A	N/A
PITNEY BOWES INC	PBI	3,357.44	0.02%	4.21%	14.00%	18.51%	0.0032%
PACCAR INC	PCAR	18,178.51	0.09%	3.57%	7.83%	11.55%	0.0109%
P G & E CORP	PCG	31,707.02	0.16%	3.03%	4.98%	8.08%	0.0133%
PRICELINE GROUP INC/THE	PCLN	61,970.30	0.32%	0.00%	18.01%	18.01%	0.0580%
PATTERSON COS INC	PDCO	4,745.84	0.02%	2.10%	6.95%	9.12%	0.0023%
PUBLIC SERVICE ENTERPRISE GP	PEG	23,581.37	0.12%	3.52%	3.22%	6.80%	0.0083%
PEPSICO INC	PEP	153,021.54	0.80%	2.77%	6.41%	9.27%	0.0738%
PFIZER INC	PFE	213,543.35	1.11%	3.41%	5.80%	9.31%	0.1033%
PRINCIPAL FINANCIAL GROUP	PFGE	11,915.84	0.06%	3.83%	9.03%	13.03%	0.0081%
PROCTER & GAMBLE CO/THE	PG	225,379.00	1.17%	3.14%	6.25%	9.49%	0.1112%
PROGRESSIVE CORP	PCR	19,530.38	0.10%	1.98%	8.37%	10.43%	0.0106%
PARKER HANNIFIN CORP	PH	14,552.33	0.08%	2.33%	8.21%	10.64%	0.0080%
PULTEGROUP INC	PHM	6,744.17	0.04%	1.85%	14.04%	16.02%	0.0056%
PERKINELMER INC	PKI	5,715.38	0.03%	0.54%	19.78%	20.37%	0.0061%
PROLOGIS INC	PLD	25,749.96	0.13%	3.43%	5.04%	8.55%	0.0114%
PHILIP MORRIS INTERNATIONAL	PM	157,794.61	0.82%	4.09%	8.24%	12.50%	0.1026%
PNC FINANCIAL SERVICES GROUP	PNC	40,639.96	0.21%	2.62%	6.03%	8.72%	0.0184%
PENTAIR PLC	PNR	10,533.96	0.05%	2.31%	8.66%	11.07%	0.0061%
PINNACLE WEST CAPITAL	PNW	9,009.01	0.05%	3.13%	4.64%	7.84%	0.0037%
PPG INDUSTRIES INC	PPG	27,710.50	0.14%	1.49%	8.50%	10.05%	0.0145%
PPL CORP	PPL	25,554.68	0.13%	4.03%	3.83%	7.93%	0.0105%
PERRIGO CO PLC	PRGO	12,986.00	0.07%	0.64%	9.68%	10.35%	0.0070%
PRUDENTIAL FINANCIAL INC	PRU	31,532.28	0.16%	3.95%	7.90%	12.01%	0.0197%
PUBLIC STORAGE	PSA	44,314.71	0.23%	2.78%	5.51%	8.37%	0.0193%
PHILLIPS 66	PSX	41,699.63	0.22%	3.01%	9.79%	12.94%	0.0281%
PVH CORP	PVH	7,619.10	0.04%	0.16%	6.36%	6.52%	0.0026%
QUANTA SERVICES INC	PWR	3,491.95	0.02%	0.00%	8.00%	8.00%	0.0015%
PRAXAIR INC	PX	32,060.92	0.17%	2.68%	7.11%	9.89%	0.0165%
PIONEER NATURAL RESOURCES CO	PXD	25,526.41	0.13%	0.05%	20.00%	20.06%	0.0266%
PAYPAL HOLDINGS INC	PYPL	44,251.09	0.23%	0.00%	15.50%	15.50%	0.0357%
QUALCOMM INC	QCOM	78,689.78	0.41%	3.66%	10.50%	14.35%	0.0587%
QORVO INC	QRVO	7,062.69	0.04%	0.00%	14.70%	14.70%	0.0054%
RYDER SYSTEM INC	R	3,283.43	0.02%	2.76%	9.92%	12.82%	0.0022%
REYNOLDS AMERICAN INC	RAI	76,976.51	0.40%	3.14%	9.44%	12.72%	0.0509%
ROYAL CARIBBEAN CRUISES LTD	RCL	14,453.46	0.08%	2.34%	24.87%	27.49%	0.0207%
REGENERON PHARMACEUTICALS	REGN	36,696.60	0.19%	0.00%	22.75%	22.75%	0.0434%
REGIONS FINANCIAL CORP	RF	10,779.73	0.06%	3.11%	5.26%	8.46%	0.0047%
ROBERT HALF INTL INC	RHI	5,011.12	0.03%	2.31%	11.63%	14.07%	0.0037%
RED HAT INC	RHT	13,147.06	0.07%	0.00%	17.70%	17.70%	0.0121%
TRANSOCEAN LTD	RIG	4,342.25	0.02%	0.00%	-6.20%	-6.20%	-0.0014%
RALPH LAUREN CORP	RL	7,451.16	0.04%	2.30%	7.46%	9.84%	0.0038%
ROCKWELL AUTOMATION INC	ROK	14,956.86	0.08%	2.66%	6.93%	9.68%	0.0075%
ROPER TECHNOLOGIES INC	ROP	17,260.82	0.09%	0.68%	11.43%	12.15%	0.0109%
ROSS STORES INC	ROST	22,648.21	0.12%	0.95%	12.46%	13.46%	0.0159%
RANGE RESOURCES CORP	RRC	7,322.82	0.04%	0.22%	-24.07%	-23.87%	-0.0091%
REPUBLIC SERVICES INC	RSG	17,645.41	0.09%	2.39%	8.11%	10.60%	0.0097%
RAYTHEON COMPANY	RTN	40,374.43	0.21%	2.12%	7.94%	10.14%	0.0213%
STARBUCKS CORP	SBUX	83,675.09	0.44%	1.43%	18.45%	20.01%	0.0871%
SCANA CORP	SCG	10,813.09	0.06%	3.03%	5.55%	8.66%	0.0049%
SCHWAB (CHARLES) CORP	SCHW	33,452.00	0.17%	1.02%	17.31%	18.42%	0.0320%
SPECTRA ENERGY CORP	SE	25,674.32	0.13%	4.46%	10.20%	14.88%	0.0199%

SEALED AIR CORP	SEE	9,062.66	0.05%	1.27%	4.27%	5.57%	0.0026%
SHERWIN-WILLIAMS CO/THE	SHW	27,163.04	0.14%	1.14%	15.80%	17.03%	0.0241%
SIGNET JEWELERS LTD	SIG	6,428.46	0.03%	1.26%	14.40%	15.75%	0.0053%
JM SMUCKER CO/THE	SJM	17,744.54	0.09%	1.88%	8.30%	10.26%	0.0095%
SCHLUMBERGER LTD	SLB	110,018.25	0.57%	2.53%	5.63%	8.23%	0.0471%
SL GREEN REALTY CORP	SLG	11,098.15	0.06%	2.79%	4.85%	7.71%	0.0044%
SNAP-ON INC	SNA	9,176.66	0.05%	2.03%	4.80%	6.88%	0.0033%
SCRIPPS NETWORKS INTER-CL A	SNI	8,030.06	0.04%	1.62%	11.73%	13.45%	0.0056%
SOUTHERN CO/THE	SO	50,334.56	0.26%	4.15%	4.12%	8.36%	0.0219%
SIMON PROPERTY GROUP INC	SPG	67,112.51	0.35%	3.01%	7.92%	11.05%	0.0386%
S&P GLOBAL INC	SPGI	28,402.45	0.15%	1.35%	10.00%	11.42%	0.0169%
STAPLES INC	SPLS	5,571.00	0.03%	5.57%	1.60%	7.22%	0.0021%
STERICYCLE INC	SRCL	8,841.10	0.05%	0.00%	14.28%	14.28%	0.0066%
SEMPRA ENERGY	SRE	28,447.62	0.15%	2.65%	6.88%	9.62%	0.0142%
SUNTRUST BANKS INC	STI	20,586.32	0.11%	2.46%	6.19%	8.73%	0.0093%
ST JUDE MEDICAL INC	STJ	22,173.64	0.12%	1.59%	10.63%	12.30%	0.0142%
STATE STREET CORP	STT	21,349.10	0.11%	2.65%	10.71%	13.50%	0.0150%
SEAGATE TECHNOLOGY	STX	7,271.06	0.04%	9.81%	1.43%	11.31%	0.0043%
CONSTELLATION BRANDS INC-A	STZ	33,177.89	0.17%	0.97%	14.80%	15.84%	0.0273%
STANLEY BLACK & DECKER INC	SWK	16,695.97	0.09%	2.03%	10.50%	12.64%	0.0110%
SKYWORKS SOLUTIONS INC	SWKS	12,038.27	0.06%	1.66%	17.77%	19.57%	0.0123%
SOUTHWESTERN ENERGY CO	SWN	6,021.63	0.03%	0.00%	-19.71%	-19.71%	-0.0062%
SYNCHRONY FINANCIAL	SYF	21,081.51	0.11%	1.09%	6.25%	7.37%	0.0081%
STRYKER CORP	SYK	44,814.15	0.23%	1.28%	10.41%	11.76%	0.0274%
SYMANTEC CORP	SYMC	12,576.48	0.07%	1.48%	8.69%	10.23%	0.0067%
SYSCO CORP	SYI	28,592.80	0.15%	2.41%	9.21%	11.73%	0.0174%
AT&T INC	T	266,000.76	1.38%	4.46%	3.92%	8.47%	0.1171%
MOLSON COORS BREWING CO -B	TAP	21,710.61	0.11%	1.62%	19.77%	21.55%	0.0243%
TERADATA CORP	TDC	3,259.10	0.02%	0.00%	9.67%	9.67%	0.0016%
TRANSIGM GROUP INC	TDG	13,970.15	0.07%	0.00%	13.88%	13.88%	0.0101%
TECO ENERGY INC	TE	6,510.60	0.03%	3.35%	5.87%	9.32%	0.0032%
TE CONNECTIVITY LTD	TEL	20,423.46	0.11%	2.39%	12.20%	14.73%	0.0156%
TEGNA INC	TGNA	5,041.51	0.03%	2.42%	8.03%	10.55%	0.0028%
TARGET CORP	TGT	41,143.15	0.21%	3.30%	10.69%	14.17%	0.0303%
TIFFANY & CO	TIF	7,641.70	0.04%	2.73%	8.32%	11.16%	0.0044%
TJX COMPANIES INC	TJX	51,055.48	0.27%	1.33%	11.56%	12.97%	0.0344%
TORCHMARK CORP	TMK	7,458.63	0.04%	0.91%	7.98%	8.93%	0.0035%
THERMO FISHER SCIENTIFIC INC	TMO	58,145.37	0.30%	0.41%	11.83%	12.26%	0.0371%
TRIPADVISOR INC	TRIP	9,368.91	0.05%	0.00%	14.94%	14.94%	0.0073%
T ROWE PRICE GROUP INC	TROW	18,111.38	0.09%	2.96%	10.46%	13.57%	0.0128%
TRAVELERS COS INC/THE	TRV	34,806.66	0.18%	2.21%	8.04%	10.34%	0.0187%
TRACTOR SUPPLY COMPANY	TSCO	12,165.87	0.06%	0.96%	15.66%	16.70%	0.0106%
TYSON FOODS INC-CL A	TSN	26,879.48	0.14%	0.92%	12.30%	13.27%	0.0186%
TESORO CORP	TSO	8,988.59	0.05%	2.75%	-1.11%	1.63%	0.0008%
TOTAL SYSTEM SERVICES INC	TSS	9,751.64	0.05%	0.75%	11.00%	11.79%	0.0060%
TIME WARNER INC	TWX	57,831.44	0.30%	2.19%	14.38%	16.73%	0.0503%
TEXAS INSTRUMENTS INC	TXN	62,914.82	0.33%	2.45%	10.00%	12.58%	0.0411%
TEXTRON INC	TXT	9,828.49	0.05%	0.23%	7.31%	7.55%	0.0039%
TYCO INTERNATIONAL PLC	TYC	18,126.21	0.09%	2.02%	10.03%	12.15%	0.0115%
UNDER ARMOUR INC-CLASS A	UA	16,643.53	0.09%	0.00%	23.89%	23.89%	0.0207%
UNITED CONTINENTAL HOLDINGS	UAL	13,777.11	0.07%	0.00%	-12.07%	-12.07%	-0.0086%
UDR INC	UDR	9,862.71	0.05%	3.20%	6.73%	10.03%	0.0051%
UNIVERSAL HEALTH SERVICES-B	UHS	13,018.95	0.07%	0.30%	8.88%	9.19%	0.0062%
ULTA SALON COSMETICS & FRAGR	ULTA	15,216.45	0.08%	0.00%	21.00%	21.00%	0.0166%
UNITEDHEALTH GROUP INC	UNH	134,253.54	0.70%	1.43%	13.02%	14.54%	0.1015%
UNUM GROUP	UNM	7,558.35	0.04%	2.46%	7.60%	10.15%	0.0040%
UNION PACIFIC CORP	UNP	73,380.24	0.38%	2.57%	13.08%	15.83%	0.0604%
UNITED PARCEL SERVICE-CL B	UPS	95,081.12	0.49%	2.89%	10.04%	13.08%	0.0647%
URBAN OUTFITTERS INC	URBN	3,221.25	0.02%	0.00%	13.01%	13.01%	0.0022%
UNITED RENTALS INC	URI	5,938.51	0.03%	0.00%	14.13%	14.13%	0.0044%
US BANCORP	USB	69,625.84	0.36%	2.67%	5.86%	8.61%	0.0312%
UNITED TECHNOLOGIES CORP	UTX	85,820.58	0.45%	2.61%	9.56%	12.29%	0.0548%
VISA INC-CLASS A SHARES	V	176,888.54	0.92%	0.76%	17.45%	18.27%	0.1680%
VARIAN MEDICAL SYSTEMS INC	VAR	7,829.49	0.04%	0.00%	12.05%	12.05%	0.0049%
VF CORP	VFC	25,642.45	0.13%	2.46%	10.77%	13.36%	0.0178%
VIACOM INC-CLASS B	VIAB	16,668.47	0.09%	3.89%	5.81%	9.81%	0.0085%
VALERO ENERGY CORP	VLO	23,959.93	0.12%	4.74%	2.70%	7.50%	0.0093%
VULCAN MATERIALS CO	VMC	16,030.53	0.08%	0.67%	23.08%	23.82%	0.0199%
VORNADO REALTY TRUST	VNO	18,899.75	0.10%	2.59%	5.36%	8.02%	0.0079%
VERISK ANALYTICS INC	VRSK	13,634.93	0.07%	0.00%	12.00%	12.00%	0.0085%
VERISIGN INC	VRSN	9,378.79	0.05%	0.00%	9.85%	9.85%	0.0048%
VERTEX PHARMACEUTICALS INC	VRTX	21,277.04	0.11%	0.00%	50.53%	50.53%	0.0559%
VENTAS INC	VTR	24,622.78	0.13%	4.05%	1.93%	6.01%	0.0077%
VERIZON COMMUNICATIONS INC	VZ	227,619.92	1.18%	4.09%	3.95%	8.12%	0.0961%
WATERS CORP	WAT	11,384.42	0.06%	0.00%	8.92%	8.92%	0.0053%
WALGREENS BOOTS ALLIANCE INC	WBA	89,952.06	0.47%	1.75%	13.59%	15.46%	0.0723%
WESTERN DIGITAL CORP	WDC	13,300.73	0.07%	3.88%	1.90%	5.81%	0.0040%
WEC ENERGY GROUP INC	WEC	20,611.76	0.11%	3.03%	5.50%	8.62%	0.0092%
WELLS FARGO & CO	WFC	240,296.67	1.25%	3.27%	11.47%	14.93%	0.1866%
WHOLE FOODS MARKET INC	WFM	10,279.29	0.05%	1.69%	8.55%	10.31%	0.0055%
WHIRLPOOL CORP	WHR	12,659.12	0.07%	2.26%	15.17%	17.60%	0.0116%
WILLIS TOWERS WATSON PLC	WLTW	17,209.58	0.09%	1.54%	21.47%	23.18%	0.0207%
WASTE MANAGEMENT INC	WM	29,441.22	0.15%	2.47%	8.50%	11.08%	0.0170%
WILLIAMS COS INC	WMB	16,234.82	0.08%	10.29%	-2.07%	8.11%	0.0068%
WAL-MART STORES INC	WMT	227,577.54	1.18%	2.73%	2.87%	5.64%	0.0668%
WESTROCK CO	WRK	9,818.94	0.05%	3.86%	2.85%	6.76%	0.0035%
WESTERN UNION CO	WU	9,420.00	0.05%	3.34%	6.80%	10.25%	0.0050%
WEYERHAEUSER CO	WY	22,240.38	0.12%	4.26%	12.27%	16.78%	0.0194%
WYNDHAM WORLDWIDE CORP	WYN	7,974.32	0.04%	2.81%	7.65%	10.57%	0.0044%
WYNN RESORTS LTD	WYNN	9,226.33	0.05%	2.25%	10.00%	12.37%	0.0059%
CIMAREX ENERGY CO	XEC	11,313.33	0.06%	0.34%	-4.37%	-4.04%	-0.0024%
XCEL ENERGY INC	XEL	22,746.13	0.12%	3.04%	5.00%	8.12%	0.0096%
XL GROUP PLC	XL	9,439.01	0.05%	2.48%	9.00%	11.59%	0.0057%
XILINX INC	XLNX	11,684.36	0.06%	2.83%	8.23%	11.18%	0.0068%
EXXON MOBIL CORP	XOM	388,703.35	2.02%	3.18%	13.71%	17.11%	0.3457%
DENTSPLY SIRONA INC	XRAY	14,531.69	0.08%	0.47%	9.92%	10.42%	0.0079%
XEROX CORP	XRX	9,613.39	0.05%	3.30%	11.60%	15.09%	0.0075%
XYLEM INC	XYL	7,987.77	0.04%	1.39%	15.00%	16.49%	0.0068%
YAHOO! INC	YHOO	35,678.96	0.19%	0.00%	4.93%	4.93%	0.0091%
YUM! BRANDS INC	YUM	33,784.99	0.18%	2.28%	11.85%	14.26%	0.0251%
ZIMMER BIOMET HOLDINGS INC	ZBH	24,037.33	0.12%	0.78%	10.49%	11.31%	0.0141%
ZIONS BANCORPORATION	ZION	5,142.19	0.03%	1.18%	9.00%	10.24%	0.0027%
ZOETIS INC	ZTS	23,549.76	0.12%	0.80%	13.93%	14.79%	0.0181%

[1] Equals sum of Col. [9]	19,232,690	13.09%
[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]		
	19,343,630.12	99.43%

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

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-day	Implied Market
Market Return	average)	Risk Premium
13.63%	2.50%	11.13%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	15,195.37	0.09%	0.99%	4.50%	5.51%	0.0048%
ALCOA INC	AA	13,348.34	0.08%	1.18%	11.50%	12.75%	0.0097%
AMERICAN AIRLINES GROUP INC	AAL	17,763.01	N/A	1.32%	N/A	N/A	N/A
ADVANCE AUTO PARTS INC	AAP	11,396.03	0.06%	0.16%	11.50%	11.67%	0.0076%
APPLE INC	AAPL	526,478.70	3.00%	2.43%	11.50%	14.07%	0.4218%
ABBVIE INC	ABBV	99,160.27	0.56%	3.72%	13.00%	16.96%	0.0958%
AMERISOURCEBERGEN CORP	ABC	17,371.28	0.10%	1.75%	11.00%	12.85%	0.0127%
ABBOTT LABORATORIES	ABT	58,222.49	0.33%	2.62%	7.50%	10.22%	0.0339%
ACCENTURE PLC-CL A	ACN	76,896.48	0.44%	1.97%	6.50%	8.53%	0.0374%
ADOBE SYSTEMS INC	ADBE	48,171.68	0.27%	0.00%	35.50%	35.50%	0.0974%
ANALOG DEVICES INC	ADI	17,860.11	0.10%	2.89%	11.00%	14.05%	0.0143%
ARCHER-DANIELS-MIDLAND CO	ADM	25,070.77	0.14%	2.81%	6.00%	8.89%	0.0127%
AUTOMATIC DATA PROCESSING	ADP	41,021.64	0.23%	2.52%	9.50%	12.14%	0.0284%
ALLIANCE DATA SYSTEMS CORP	ADS	11,894.99	0.07%	0.00%	10.50%	10.50%	0.0071%
AUTODESK INC	ADSK	13,268.18	N/A	0.00%	N/A	N/A	N/A
AMEREN CORPORATION	AEE	12,493.90	0.07%	3.40%	6.00%	9.50%	0.0068%
AMERICAN ELECTRIC POWER	AEP	32,711.87	0.19%	3.45%	4.00%	7.52%	0.0140%
AES CORP	AES	7,973.88	0.05%	3.64%	8.50%	12.29%	0.0056%
AETNA INC	AET	42,422.60	0.24%	0.83%	9.50%	10.37%	0.0250%
AFLAC INC	AFL	29,799.12	0.17%	2.34%	4.50%	6.89%	0.0117%
ALLERGAN PLC	AGN	92,329.66	0.53%	0.00%	15.00%	15.00%	0.0789%
AMERICAN INTERNATIONAL GROUP	AIG	61,862.68	0.35%	2.34%	5.00%	7.40%	0.0261%
APARTMENT INVT & MGMT CO -A	AIV	-	N/A	3.13%	N/A	N/A	N/A
ASSURANT INC	AIZ	5,423.63	0.03%	2.31%	7.00%	9.39%	0.0029%
ARTHUR J GALLAGHER & CO	AJG	8,422.88	0.05%	3.20%	15.00%	18.44%	0.0088%
AKAMAI TECHNOLOGIES INC	AKAM	10,064.78	0.06%	0.00%	13.00%	13.00%	0.0075%
ALASKA AIR GROUP INC	ALK	7,328.22	0.04%	1.86%	13.50%	15.49%	0.0065%
ALLSTATE CORP	ALL	25,447.50	0.14%	1.95%	6.50%	8.51%	0.0123%
ALLEGION PLC	ALLE	6,629.58	0.04%	0.69%	10.50%	11.23%	0.0042%
ALEXION PHARMACEUTICALS INC	ALXN	27,704.64	0.16%	0.00%	27.50%	27.50%	0.0434%
APPLIED MATERIALS INC	AMAT	26,705.81	0.15%	1.63%	18.00%	19.78%	0.0301%
AMETEK INC	AME	11,079.97	0.06%	0.76%	6.00%	6.78%	0.0043%
AFFILIATED MANAGERS GROUP	AMG	8,903.45	0.05%	0.00%	8.50%	8.50%	0.0043%
AMGEN INC	AMGN	114,400.40	0.65%	2.76%	8.50%	11.38%	0.0741%
AMERIPRISE FINANCIAL INC	AMP	16,965.64	0.10%	2.95%	11.00%	14.11%	0.0136%
AMERICAN TOWER CORP	AMT	47,326.04	0.27%	2.01%	15.50%	17.67%	0.0476%
AMAZON.COM INC	AMZN	340,821.80	1.94%	0.00%	90.00%	90.00%	1.7467%
AUTONATION INC	AN	5,024.11	0.03%	0.00%	9.00%	9.00%	0.0026%
ANTHEM INC	ANTM	33,819.75	0.19%	2.02%	7.50%	9.60%	0.0185%
AON PLC	AON	28,836.72	0.16%	1.21%	12.00%	13.28%	0.0218%
APACHE CORP	APA	22,015.42	0.13%	1.72%	5.00%	6.76%	0.0085%
ANADARKO PETROLEUM CORP	APC	28,337.41	N/A	0.36%	N/A	N/A	N/A
AIR PRODUCTS & CHEMICALS INC	APD	31,552.14	0.18%	2.36%	12.00%	14.50%	0.0261%
AMPHENOL CORP-CL A	APH	18,320.46	0.10%	0.94%	8.00%	8.98%	0.0094%
ACTIVISION BLIZZARD INC	ATVI	28,723.23	0.16%	0.72%	8.00%	8.75%	0.0143%
AVALONBAY COMMUNITIES INC	AVB	-	N/A	3.15%	N/A	N/A	N/A
BROADCOM LTD	AVGO	62,625.39	0.36%	1.26%	23.00%	24.40%	0.0870%
VERY DENNISON CORP	AVY	6,884.97	0.04%	2.17%	9.50%	11.77%	0.0046%
AMERICAN WATER WORKS CO INC	AWK	14,030.40	0.08%	1.90%	8.00%	9.98%	0.0080%
AMERICAN EXPRESS CO	AXP	60,150.75	0.34%	2.02%	3.00%	5.05%	0.0173%
ACUITY BRANDS INC	AYI	11,091.79	0.06%	0.20%	19.50%	19.72%	0.0125%
AUTOZONE INC	AZO	22,502.48	0.13%	0.00%	11.50%	11.50%	0.0147%
BOEING CO/THE	BA	85,447.28	0.49%	3.44%	10.50%	14.12%	0.0687%
BANK OF AMERICA CORP	BAC	144,789.80	0.82%	1.71%	22.00%	23.90%	0.1970%
BAXTER INTERNATIONAL INC	BAX	25,334.21	0.14%	1.13%	-4.50%	-3.40%	-0.0049%
BED BATH & BEYOND INC	BBBY	7,170.02	0.04%	1.14%	3.00%	4.16%	0.0017%
BB&T CORP	BBT	28,908.90	0.16%	3.25%	7.50%	10.87%	0.0179%
BEST BUY CO INC	BBY	9,859.32	0.06%	3.68%	8.00%	11.83%	0.0066%
CR BARD INC	BCR	16,913.96	0.10%	0.45%	9.00%	9.47%	0.0091%
BECTON DICKINSON AND CO	BDX	36,539.06	0.21%	1.60%	9.50%	11.18%	0.0233%
FRANKLIN RESOURCES INC	BEN	20,268.52	0.12%	2.26%	4.50%	6.81%	0.0079%
BROWN-FORMAN CORP-CLASS B	BF/B	19,706.96	0.11%	1.41%	8.00%	9.47%	0.0106%
BAKER HUGHES INC	BHI	20,656.40	0.12%	1.44%	30.00%	31.66%	0.0372%
BIAGEN INC	BIIB	52,269.95	0.30%	0.00%	10.50%	10.50%	0.0313%
BANK OF NEW YORK MELLON CORP	BK	44,742.03	0.25%	1.64%	11.00%	12.73%	0.0324%
BLACKROCK INC	BLK	58,376.02	0.33%	2.57%	8.00%	10.67%	0.0355%
BALL CORP	BLL	10,410.45	0.06%	0.71%	11.00%	11.75%	0.0070%
BRISTOL-MYERS SQUIBB CO	BMJ	120,655.00	0.69%	2.09%	17.50%	19.77%	0.1359%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	359,874.30	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	31,114.41	0.18%	0.00%	18.00%	18.00%	0.0319%
BORGWARNER INC	BWA	7,333.76	0.04%	1.54%	8.50%	10.11%	0.0042%
BOSTON PROPERTIES INC	BXP	-	N/A	2.00%	N/A	N/A	N/A
CITIGROUP INC	C	130,486.90	0.74%	0.45%	12.00%	12.48%	0.0927%
CA INC	CA	13,849.80	0.08%	3.04%	4.50%	7.61%	0.0060%
CONAGRA FOODS INC	CAG	20,908.64	0.12%	2.09%	6.00%	8.15%	0.0097%
CARDINAL HEALTH INC	CAH	25,467.12	0.15%	2.38%	14.00%	16.55%	0.0240%
CATERPILLAR INC	CAT	45,670.23	0.26%	3.94%	5.00%	9.04%	0.0235%

CHUBB LTD	CB	59,725.50	0.34%	2.15%	8.00%	10.24%	0.0348%
CBRE GROUP INC - A	CBG	10,062.14	0.06%	0.00%	10.00%	10.00%	0.0057%
CBS CORP-CLASS B NON VOTING	CBS	24,375.26	0.14%	1.12%	13.00%	14.19%	0.0197%
CROWN CASTLE INTL CORP	CCI	32,432.77	0.18%	3.87%	21.00%	25.28%	0.0467%
CARNIVAL CORP	CCL	37,266.80	0.21%	2.84%	15.50%	18.56%	0.0394%
CELGENE CORP	CELG	77,981.30	0.44%	0.00%	24.00%	24.00%	0.1066%
CERNER CORP	CERN	19,223.47	0.11%	0.00%	13.50%	13.50%	0.0148%
CF INDUSTRIES HOLDINGS INC	CF	6,442.30	0.04%	4.88%	8.00%	13.08%	0.0048%
CITIZENS FINANCIAL GROUP	CFG	11,700.02	N/A	2.17%	N/A	N/A	N/A
CHURCH & DWIGHT CO INC	CHD	12,882.26	0.07%	1.41%	7.00%	8.46%	0.0062%
CHESAPEAKE ENERGY CORP	CHK	3,169.94	N/A	0.00%	N/A	N/A	N/A
C.H. ROBINSON WORLDWIDE INC	CHRW	10,286.79	0.06%	2.39%	7.50%	9.98%	0.0058%
CIGNA CORP	CI	33,282.56	0.19%	0.03%	12.50%	12.53%	0.0238%
CINCINNATI FINANCIAL CORP	CINF	11,807.21	0.07%	2.67%	6.50%	9.26%	0.0062%
COLGATE-PALMOLIVE CO	CL	64,895.62	0.37%	2.15%	14.00%	16.30%	0.0602%
COLOROX COMPANY	CLX	17,355.54	0.10%	2.41%	8.50%	11.01%	0.0109%
COMERICA INC	CMA	7,787.47	0.04%	1.98%	6.50%	8.54%	0.0038%
COMCAST CORP-CLASS A	CMCSA	152,792.00	0.87%	1.75%	10.00%	11.84%	0.1030%
CME GROUP INC	CME	32,426.98	0.18%	2.50%	9.50%	12.12%	0.0224%
CHIPOTLE MEXICAN GRILL INC	CMG	12,000.10	0.07%	0.00%	13.50%	13.50%	0.0092%
CUMMINS INC	CMI	20,270.79	0.12%	3.28%	5.00%	8.36%	0.0097%
CMS ENERGY CORP	CMS	12,170.33	0.07%	2.94%	6.00%	9.03%	0.0063%
CENTENE CORP	CNC	11,904.16	0.07%	0.00%	19.50%	19.50%	0.0132%
CENTERPOINT ENERGY INC	CNP	10,115.12	0.06%	4.47%	2.00%	6.51%	0.0038%
CAPITAL ONE FINANCIAL CORP	COF	33,749.82	0.19%	2.44%	3.50%	5.98%	0.0115%
CABOT OIL & GAS CORP	COG	11,741.25	0.07%	0.32%	39.00%	39.38%	0.0263%
COACH INC	COH	11,235.50	0.06%	3.34%	4.50%	7.92%	0.0051%
ROCKWELL COLLINS INC	COL	11,320.02	0.06%	1.61%	8.00%	9.67%	0.0062%
CONOCOPHILLIPS	COP	56,507.59	0.32%	2.19%	6.50%	8.76%	0.0282%
COSTCO WHOLESALE CORP	COST	68,836.93	0.39%	1.15%	9.00%	10.20%	0.0400%
CAMPBELL SOUP CO	CPB	19,355.76	0.11%	2.00%	5.50%	7.56%	0.0083%
COLUMBIA PIPELINE GROUP	CPGX	10,201.76	N/A	2.12%	N/A	N/A	N/A
SALESFORCE.COM INC	CRM	55,744.70	N/A	0.00%	N/A	N/A	N/A
CISCO SYSTEMS INC	CSCO	147,093.50	0.84%	3.56%	6.00%	9.67%	0.0810%
CSRA INC	CSRA	4,002.10	N/A	1.63%	N/A	N/A	N/A
CSX CORP	CSX	25,808.41	0.15%	2.67%	7.00%	9.76%	0.0143%
CINTAS CORP	CTAS	10,244.95	0.06%	1.10%	11.00%	12.16%	0.0071%
CENTURYLINK INC	CTL	15,576.60	0.09%	7.57%	14.50%	22.62%	0.0201%
COGNIZANT TECH SOLUTIONS-A	CTSH	38,008.74	0.22%	0.00%	12.50%	12.50%	0.0271%
CITRIX SYSTEMS INC	CTXS	13,345.13	0.08%	0.00%	11.00%	11.00%	0.0084%
CVS HEALTH CORP	CVS	101,635.60	0.58%	1.81%	11.50%	13.41%	0.0776%
CHEVRON CORP	CVX	196,838.30	1.12%	4.10%	4.50%	8.69%	0.0974%
CONCHO RESOURCES INC	CXO	17,096.87	0.10%	0.00%	16.50%	16.50%	0.0161%
DOMINION RESOURCES INC/VA	D	44,148.15	0.25%	3.94%	8.00%	12.10%	0.0304%
DELTA AIR LINES INC	DAL	29,559.27	0.17%	2.09%	14.50%	16.74%	0.0282%
DU PONT (E.I.) DE NEMOURS	DD	60,448.64	0.34%	2.31%	7.00%	9.39%	0.0323%
DEERE & CO	DE	26,488.89	0.15%	2.85%	-1.50%	1.33%	0.0020%
DISCOVER FINANCIAL SERVICES	DFS	22,484.24	0.13%	2.06%	5.00%	7.11%	0.0091%
DOLLAR GENERAL CORP	DG	26,016.77	0.15%	1.15%	13.50%	14.73%	0.0218%
QUEST DIAGNOSTICS INC	DGX	11,354.73	0.06%	1.99%	10.00%	12.09%	0.0078%
DR HORTON INC	DHI	11,600.17	0.07%	1.02%	13.00%	14.09%	0.0093%
DANAHER CORP	DHR	N/A	N/A	0.00%	N/A	N/A	N/A
WALT DISNEY CO/THE	DIS	168,334.00	0.96%	1.43%	10.00%	11.50%	0.1102%
DISCOVERY COMMUNICATIONS-A	DISCA	10,698.84	0.06%	0.00%	17.00%	17.00%	0.0104%
DELPHI AUTOMOTIVE PLC	DLPH	19,348.80	0.11%	1.75%	14.50%	16.38%	0.0180%
DIGITAL REALTY TRUST INC	DLR	-	N/A	3.44%	N/A	N/A	N/A
DOLLAR TREE INC	DLTR	21,764.73	0.12%	0.00%	21.00%	21.00%	0.0260%
DUN & BRADSTREET CORP	DNB	4,631.43	0.03%	1.51%	5.00%	6.55%	0.0017%
DIAMOND OFFSHORE DRILLING	DO	3,547.22	0.02%	0.00%	11.50%	11.50%	0.0023%
DOVER CORP	DOV	11,117.98	0.06%	2.34%	2.00%	4.36%	0.0028%
DOW CHEMICAL CO/THE	DOW	60,273.41	0.34%	3.58%	9.50%	13.25%	0.0455%
DR PEPPER SNAPPLE GROUP INC	DPS	17,282.27	0.10%	2.31%	8.00%	10.40%	0.0102%
DARDEN RESTAURANTS INC	DRI	8,614.83	0.05%	2.94%	13.50%	16.64%	0.0082%
DTE ENERGY COMPANY	DTE	16,877.66	0.10%	3.28%	5.00%	8.36%	0.0080%
DUKE ENERGY CORP	DUK	56,532.45	0.32%	4.13%	4.50%	8.72%	0.0281%
DAVITA HEALTHCARE PARTNERS I	DVA	15,923.22	0.09%	0.00%	11.00%	11.00%	0.0100%
DEVON ENERGY CORP	DVN	20,331.20	0.12%	0.62%	1.00%	1.62%	0.0019%
ELECTRONIC ARTS INC	EA	22,860.78	0.13%	0.00%	17.00%	17.00%	0.0221%
EBAY INC	EBAY	28,403.55	0.16%	0.00%	3.50%	3.50%	0.0057%
ECOLAB INC	ECL	35,471.70	0.20%	1.16%	8.50%	9.71%	0.0196%
CONSOLIDATED EDISON INC	ED	22,596.84	0.13%	3.54%	1.50%	5.07%	0.0065%
EQUIFAX INC	EFX	15,108.24	0.09%	1.04%	9.50%	10.59%	0.0091%
EDISON INTERNATIONAL	EIX	24,106.76	0.14%	2.69%	3.50%	6.24%	0.0086%
ESTEEL LAUDER COMPANIES-CL A	EL	35,052.88	0.20%	1.26%	8.00%	9.31%	0.0186%
EMC CORP/MA	EMC	54,410.58	0.31%	1.65%	3.50%	5.18%	0.0160%
EASTMAN CHEMICAL CO	EMN	10,789.86	0.06%	2.52%	9.50%	12.14%	0.0075%
EMERSON ELECTRIC CO	EMR	34,523.82	0.20%	3.54%	2.00%	5.58%	0.0110%
ENDO INTERNATIONAL PLC	ENDP	3,526.89	0.02%	0.00%	39.00%	39.00%	0.0078%
EOG RESOURCES INC	EOG	46,491.22	0.26%	0.91%	2.50%	3.42%	0.0091%
EQUINIX INC	EQIX	26,759.63	0.15%	1.82%	24.50%	26.54%	0.0404%
EQUITY RESIDENTIAL	EQR	-	N/A	3.10%	N/A	N/A	N/A
EQT CORP	EQT	12,648.38	0.07%	0.15%	12.00%	12.16%	0.0088%
EVERSOURCE ENERGY	ES	17,896.82	0.10%	3.26%	6.00%	9.36%	0.0095%
EXPRESS SCRIPTS HOLDING CO	ESRX	48,670.87	0.28%	0.00%	15.50%	15.50%	0.0430%
ESSEX PROPERTY TRUST INC	ESS	-	N/A	2.99%	N/A	N/A	N/A
E*TRADE FINANCIAL CORP	ETFC	7,320.79	0.04%	0.00%	17.50%	17.50%	0.0073%
EATON CORP PLC	ETN	28,771.56	0.16%	3.63%	5.00%	8.72%	0.0143%
ENTERGY CORP	ETR	13,966.07	0.08%	4.42%	3.50%	8.00%	0.0064%
EDWARDS LIFESCIENCES CORP	EW	20,995.05	0.12%	0.00%	17.00%	17.00%	0.0203%
EXELON CORP	EXC	32,223.90	0.18%	3.63%	7.00%	10.76%	0.0197%
EXPEDITORS INTL WASH INC	EXPD	8,898.35	0.05%	1.63%	11.00%	12.72%	0.0064%
EXPEDIA INC	EXPE	16,460.71	0.09%	0.87%	23.00%	23.97%	0.0225%
EXTRA SPACE STORAGE INC	EXR	-	N/A	3.59%	N/A	N/A	N/A

FORD MOTOR CO	F	53,235.99	0.30%	4.48%	7.00%	11.64%	0.0353%
FASTENAL CO	FAST	13,161.05	0.07%	2.63%	7.00%	9.72%	0.0073%
FACEBOOK INC-A	FB	329,128.80	1.87%	0.00%	34.00%	34.00%	0.6372%
FORTUNE BRANDS HOME & SECURI	FBHS	8,717.89	0.05%	1.13%	15.00%	16.21%	0.0080%
FREEMPORT-MCMORAN INC	FCX	14,736.04	0.08%	0.00%	36.50%	36.50%	0.0306%
FEDEX CORP	FDX	50,209.02	0.29%	1.01%	12.50%	13.57%	0.0388%
FIRSTENERGY CORP	FE	14,083.45	0.08%	4.34%	9.00%	13.54%	0.0109%
F5 NETWORKS INC	FFIV	8,134.17	0.05%	0.00%	9.00%	9.00%	0.0042%
FIDELITY NATIONAL INFO SERV	FIS	24,020.75	0.14%	1.41%	13.50%	15.01%	0.0205%
FISERV INC	FISV	23,555.49	0.13%	0.00%	9.50%	9.50%	0.0127%
FIFTH THIRD BANCORP	FITB	14,723.70	0.08%	2.93%	3.00%	5.97%	0.0050%
FOOT LOCKER INC	FL	7,226.46	0.04%	2.07%	9.00%	11.16%	0.0046%
FLIR SYSTEMS INC	FLIR	4,342.20	0.02%	1.59%	8.00%	9.65%	0.0024%
FLUOR CORP	FLR	7,376.04	0.04%	1.59%	1.50%	3.10%	0.0013%
FLOWSERVE CORP	FLS	6,517.90	0.04%	1.51%	2.50%	4.03%	0.0015%
FMC CORP	FMC	6,593.97	0.04%	1.38%	4.50%	5.91%	0.0022%
TWENTY-FIRST CENTURY FOX-A	FOXA	31,995.17	0.18%	1.03%	10.50%	11.58%	0.0211%
FEDERAL REALTY INVS TRUST	FRT	-	N/A	2.52%	N/A	N/A	N/A
FIRST SOLAR INC	FSLR	4,972.96	0.03%	0.00%	8.50%	8.50%	0.0024%
FMC TECHNOLOGIES INC	FTI	6,358.48	0.04%	0.00%	-1.00%	-1.00%	-0.0004%
FRONTIER COMMUNICATIONS CORP	FTR	5,980.56	0.03%	8.24%	13.50%	22.30%	0.0076%
AGL RESOURCES INC	GAS	7,962.40	0.05%	3.21%	5.00%	8.29%	0.0038%
GENERAL DYNAMICS CORP	GD	42,723.34	0.24%	2.18%	7.00%	9.26%	0.0225%
GENERAL ELECTRIC CO	GE	286,812.50	1.63%	2.95%	9.50%	12.59%	0.2056%
GENERAL GROWTH PROPERTIES	GGP	-	N/A	2.69%	N/A	N/A	N/A
GILEAD SCIENCES INC	GILD	112,382.80	0.64%	2.26%	10.00%	12.37%	0.0792%
GENERAL MILLS INC	GIS	39,634.68	0.23%	2.76%	5.00%	7.83%	0.0177%
CORNING INC	GLW	22,349.25	0.13%	2.60%	6.00%	8.68%	0.0110%
GENERAL MOTORS CO	GM	45,917.58	0.26%	5.10%	11.00%	16.38%	0.0428%
ALPHABET INC-CL A	GOOGL	N/A	N/A	0.00%	N/A	N/A	N/A
GENUINE PARTS CO	GPC	14,874.02	0.08%	0.00%	7.00%	9.74%	0.0083%
GLOBAL PAYMENTS INC	GNP	9,809.47	0.06%	0.05%	14.00%	14.05%	0.0079%
GAP INC/THE	GPS	8,330.14	0.05%	4.44%	1.50%	5.97%	0.0028%
GARMIN LTD	GRMN	8,188.27	0.05%	4.76%	-1.00%	3.74%	0.0017%
GOLDMAN SACHS GROUP INC	GS	63,746.54	0.36%	1.70%	7.00%	8.76%	0.0318%
GOODYEAR TIRE & RUBBER CO	GT	7,291.66	0.04%	1.13%	8.50%	9.68%	0.0040%
WW GRAINGER INC	GWV	13,856.93	0.08%	2.16%	6.00%	8.22%	0.0065%
HALLIBURTON CO	HAL	39,330.72	0.22%	1.57%	8.00%	9.63%	0.0216%
HARMAN INTERNATIONAL	HAR	5,420.74	0.03%	1.82%	17.00%	18.97%	0.0059%
HASBRO INC	HAS	10,763.36	0.06%	2.37%	11.00%	13.50%	0.0083%
HUNTINGTON BANCSHARES INC	HBAN	7,512.78	0.04%	3.29%	9.00%	12.44%	0.0053%
HANESBRANDS INC	HBI	9,992.77	0.06%	1.66%	11.50%	13.26%	0.0075%
HCA HOLDINGS INC	HCA	31,393.59	0.18%	0.00%	11.00%	11.00%	0.0197%
WELLTOWER INC	HCN	-	N/A	4.78%	N/A	N/A	N/A
HCP INC	HCP	-	0.00%	6.74%	74.00%	83.23%	0.0000%
HOME DEPOT INC	HD	159,721.10	0.91%	2.15%	12.50%	14.78%	0.1345%
HESS CORP	HES	18,930.29	0.11%	1.67%	-1.00%	0.66%	0.0007%
HARTFORD FINANCIAL SVCS GRP	HIG	17,786.31	0.10%	1.87%	11.50%	13.48%	0.0137%
HARLEY-DAVIDSON INC	HOG	8,485.88	0.05%	2.99%	9.00%	12.12%	0.0059%
HOLOGIC INC	HOLX	9,965.05	0.06%	0.00%	21.00%	21.00%	0.0119%
HONEYWELL INTERNATIONAL INC	HON	89,411.34	0.51%	2.03%	8.50%	10.62%	0.0541%
STARWOOD HOTELS & RESORTS	HOT	12,871.33	0.07%	1.98%	5.50%	7.53%	0.0055%
HELMERICH & PAYNE	HP	7,473.06	0.04%	4.05%	-6.00%	-2.07%	-0.0009%
HEWLETT PACKARD ENTERPRIS	HPE	33,876.60	N/A	1.12%	N/A	N/A	N/A
HP INC	HPQ	22,157.45	N/A	3.86%	N/A	N/A	N/A
H&R BLOCK INC	HRB	5,127.65	0.03%	3.85%	8.00%	12.00%	0.0035%
HORMEL FOODS CORP	HRL	18,334.22	0.10%	1.79%	14.00%	15.92%	0.0166%
HARRIS CORP	HRS	10,473.83	0.06%	2.47%	7.50%	10.06%	0.0060%
HENRY SCHEIN INC	HSIC	14,574.67	0.08%	0.00%	9.00%	9.00%	0.0075%
HOST HOTELS & RESORTS INC	HST	-	N/A	4.72%	N/A	N/A	N/A
HERSHEY CO/THE	HSY	20,796.21	0.12%	2.40%	6.00%	8.47%	0.0100%
HUMANA INC	HUM	27,915.93	0.16%	0.62%	9.50%	10.15%	0.0161%
INTL BUSINESS MACHINES CORP	IBM	149,130.10	0.85%	3.64%	0.50%	4.15%	0.0352%
INTERCONTINENTAL EXCHANGE IN	ICE	30,469.95	0.17%	1.33%	14.00%	15.42%	0.0268%
INTL FLAVORS & FRAGRANCES	IFF	10,150.16	0.06%	1.76%	4.50%	6.30%	0.0036%
ILLUMINA INC	ILMN	21,578.05	0.12%	0.00%	22.50%	22.50%	0.0276%
INTEL CORP	INTC	155,580.80	0.89%	3.15%	9.50%	12.80%	0.1134%
INTUIT INC	INTU	28,378.53	0.16%	1.10%	13.00%	14.17%	0.0229%
INTERNATIONAL PAPER CO	IP	17,799.25	0.10%	4.07%	15.00%	19.38%	0.0196%
INTERPUBLIC GROUP OF COS INC	IPG	9,899.16	0.06%	2.56%	13.00%	15.73%	0.0089%
INGERSOLL-RAND PLC	IR	17,056.41	0.10%	1.93%	8.50%	10.51%	0.0102%
IRON MOUNTAIN INC	IRM	8,179.07	0.05%	5.03%	13.00%	18.36%	0.0085%
INTUITIVE SURGICAL INC	ISRG	25,196.29	0.14%	0.00%	11.50%	11.50%	0.0165%
ILLINOIS TOOL WORKS	ITW	38,387.91	0.22%	2.06%	10.00%	12.16%	0.0266%
INVESCO LTD	IVZ	14,525.65	0.08%	3.78%	7.00%	10.91%	0.0090%
HUNT (JB) TRANSPRT SVCS INC	JBHT	9,096.81	0.05%	1.09%	11.00%	12.15%	0.0063%
JOHNSON CONTROLS INC	JCI	29,170.16	0.17%	2.58%	9.50%	12.20%	0.0203%
JACOBS ENGINEERING GROUP INC	JEC	6,485.95	0.04%	0.00%	4.00%	4.00%	0.0015%
JOHNSON & JOHNSON	JNJ	322,995.20	1.84%	2.77%	8.50%	11.39%	0.2094%
JUNIPER NETWORKS INC	JNPR	9,286.65	0.05%	1.79%	10.00%	11.88%	0.0063%
JPMORGAN CHASE & CO	JPM	234,209.00	1.33%	3.00%	6.50%	9.60%	0.1280%
NORDSTROM INC	JWN	6,632.55	0.04%	3.92%	4.00%	8.00%	0.0030%
KELLOGG CO	K	27,240.50	0.16%	2.62%	5.00%	7.69%	0.0119%
KEYCORP	KEY	10,099.06	0.06%	2.84%	7.50%	10.45%	0.0060%
KRAFT HEINZ CO/THE	KHC	104,851.30	N/A	2.72%	N/A	N/A	N/A
KIMCO REALTY CORP	KIM	-	N/A	3.57%	N/A	N/A	N/A
KLA-TENCOR CORP	KLAC	11,654.75	0.07%	2.78%	12.50%	15.45%	0.0103%
KIMBERLY-CLARK CORP	KMB	48,242.74	0.27%	2.75%	10.00%	12.89%	0.0354%
KINDER MORGAN INC	KMI	42,132.49	0.24%	2.65%	13.00%	15.82%	0.0380%
CARMAX INC	KMX	9,147.57	0.05%	0.00%	12.50%	12.50%	0.0065%
COCA-COLA CO/THE	KO	195,286.60	1.11%	3.11%	4.00%	7.17%	0.0798%
MICHAEL KORS HOLDINGS LTD	KORS	9,117.41	0.05%	0.00%	9.00%	9.00%	0.0047%
KROGER CO	KR	33,525.89	0.19%	1.36%	10.50%	11.93%	0.0228%



KOHL'S CORP	KSS	6,892.65	0.04%	5.44%	8.00%	13.66%	0.0054%
KANSAS CITY SOUTHERN	KSU	9,838.50	0.06%	1.45%	9.00%	10.52%	0.0059%
LOEWS CORP	L	13,763.21	0.08%	0.61%	12.50%	13.15%	0.0103%
L BRANDS INC	LB	19,915.20	0.11%	3.47%	8.00%	11.61%	0.0132%
LEGGETT & PLATT INC	LEG	6,865.40	0.04%	2.66%	11.00%	13.81%	0.0054%
LENNAR CORP-A	LEN	10,001.15	0.06%	0.34%	12.50%	12.86%	0.0073%
LABORATORY CRP OF AMER HLDGS	LH	13,393.48	0.08%	0.00%	9.50%	9.50%	0.0072%
LKQ CORP	LKQ	10,302.21	0.06%	0.00%	15.00%	15.00%	0.0088%
L-3 COMMUNICATIONS HOLDINGS	LLL	11,161.85	0.06%	1.94%	6.50%	8.50%	0.0054%
LINEAR TECHNOLOGY CORP	LLTC	11,399.80	0.06%	2.69%	5.50%	8.26%	0.0054%
ELI LILLY & CO	LLY	81,617.71	0.46%	2.76%	9.50%	12.39%	0.0576%
LEGG MASON INC	LM	3,512.10	0.02%	2.70%	10.50%	13.34%	0.0027%
LOCKHEED MARTIN CORP	LMT	73,068.72	0.42%	2.88%	8.00%	11.00%	0.0457%
LINCOLN NATIONAL CORP	LNC	10,604.65	0.06%	2.34%	7.00%	9.42%	0.0057%
LOWE'S COS INC	LOW	70,241.59	0.40%	1.78%	14.00%	15.90%	0.0636%
LAM RESEARCH CORP	LRCX	13,889.43	0.08%	1.38%	16.00%	17.49%	0.0138%
LEUCADIA NATIONAL CORP	LUK	N/A	N/A	0.00%	N/A	N/A	N/A
SOUTHWEST AIRLINES CO	LUV	26,473.32	0.15%	1.01%	17.50%	18.60%	0.0280%
LEVEL 3 COMMUNICATIONS INC	LVL	18,724.91	0.11%	0.00%	38.00%	38.00%	0.0405%
LYONDELLBASELL INDU-CL A	LYB	33,845.89	0.19%	4.30%	6.50%	10.94%	0.0211%
MACY'S INC	M	10,294.22	0.06%	4.52%	3.00%	7.59%	0.0044%
MASTERCARD INC-CLASS A	MA	105,472.40	0.60%	0.79%	11.00%	11.83%	0.0711%
MACERICH CO/THE	MAC	-	N/A	3.39%	N/A	N/A	N/A
MARRIOTT INTERNATIONAL -CL A	MAR	17,529.30	0.10%	1.74%	12.50%	14.35%	0.0143%
MASCO CORP	MAS	10,347.48	0.06%	1.21%	14.50%	15.80%	0.0093%
MATTEL INC	MAT	11,022.15	0.06%	4.69%	6.50%	11.34%	0.0071%
MCDONALD'S CORP	MCD	106,398.10	0.61%	2.97%	6.00%	9.06%	0.0549%
MICROCHIP TECHNOLOGY INC	MCHP	10,752.89	0.06%	2.73%	8.00%	10.84%	0.0066%
MCKESSON CORP	MCK	42,060.01	0.24%	0.61%	12.00%	12.65%	0.0303%
MOODY'S CORP	MCO	19,763.05	0.11%	1.46%	7.50%	9.01%	0.0101%
MONDELEZ INTERNATIONAL INC-A	MDLZ	69,723.36	0.40%	1.65%	11.50%	13.24%	0.0526%
MEDTRONIC PLC	MDT	120,167.50	0.68%	1.84%	7.00%	8.90%	0.0609%
METLIFE INC	MET	48,521.94	0.28%	3.62%	6.50%	10.24%	0.0283%
MOHAWK INDUSTRIES INC	MHK	14,657.12	0.08%	0.00%	10.50%	10.50%	0.0088%
MEAD JOHNSON NUTRITION CO	MJN	16,543.49	0.09%	1.86%	6.50%	8.42%	0.0079%
MCCORMICK & CO-NON VTG SHRS	MKC	12,997.43	0.07%	1.68%	7.50%	9.24%	0.0068%
MARTIN MARIETTA MATERIALS	MLM	11,935.77	0.07%	0.85%	24.50%	25.45%	0.0173%
MARSH & MCLENNAN COS	MMC	35,416.49	0.20%	2.00%	9.00%	11.09%	0.0224%
3M CO	MMM	105,600.30	0.60%	2.55%	8.50%	11.16%	0.0671%
MALLINCKRODT PLC	MNK	6,417.92	N/A	0.00%	N/A	N/A	N/A
MONSTER BEVERAGE CORP	MNST	31,962.72	0.18%	0.00%	13.50%	13.50%	0.0246%
ALTRIA GROUP INC	MO	129,749.40	0.74%	3.44%	9.50%	13.10%	0.0968%
MONSANTO CO	MON	47,669.84	0.27%	1.98%	6.00%	8.04%	0.0218%
MOOSAIC CO/THE	MOS	9,794.34	0.06%	4.29%	5.00%	9.40%	0.0052%
MARATHON PETROLEUM CORP	MPC	19,408.60	0.11%	3.55%	6.50%	10.17%	0.0112%
MERCK & CO. INC.	MRK	159,747.80	0.91%	3.19%	6.00%	9.29%	0.0845%
MARATHON OIL CORP	MRO	12,943.58	0.07%	1.31%	9.00%	10.37%	0.0076%
MORGAN STANLEY	MS	52,896.05	0.30%	2.20%	14.50%	16.86%	0.0508%
MICROSOFT CORP	MSFT	408,531.70	2.33%	2.77%	7.00%	9.87%	0.2295%
MOTOROLA SOLUTIONS INC	MSI	11,874.54	0.07%	2.54%	9.00%	11.65%	0.0079%
M & T BANK CORP	MTB	19,161.59	0.11%	2.33%	5.00%	7.39%	0.0081%
MICRON TECHNOLOGY INC	MU	15,314.50	0.09%	0.00%	1.00%	1.00%	0.0009%
MURPHY OIL CORP	MUR	5,580.84	N/A	4.32%	N/A	N/A	N/A
MYLAN NV	MYL	22,681.18	0.13%	0.00%	20.50%	20.50%	0.0265%
NAVIENT CORP	NAVI	4,075.50	N/A	5.18%	N/A	N/A	N/A
NOBLE ENERGY INC	NBL	15,999.35	N/A	1.08%	N/A	N/A	N/A
NASDAQ INC	NDAQ	10,595.64	0.06%	1.99%	10.00%	12.09%	0.0073%
NEXTERA ENERGY INC	NEE	57,076.41	0.33%	2.90%	6.00%	8.99%	0.0292%
NEWMONT MINING CORP	NEM	18,775.49	0.11%	0.28%	-1.00%	-0.72%	-0.0008%
NETFLIX INC	NFLX	39,256.97	0.22%	0.00%	35.00%	35.00%	0.0782%
NEWFIELD EXPLORATION CO	NFX	8,506.06	0.05%	0.00%	11.50%	11.50%	0.0056%
NISOURCE INC	NI	8,091.85	0.05%	2.62%	1.50%	4.14%	0.0019%
NIKE INC -CL B	NKE	91,192.20	0.52%	1.18%	15.00%	16.27%	0.0845%
NIELSEN HOLDINGS PLC	NLSN	19,388.05	0.11%	2.31%	9.00%	11.41%	0.0126%
NORTHROP GRUMMAN CORP	NOC	38,823.99	0.22%	1.68%	7.50%	9.24%	0.0204%
NATIONAL OILWELL VARCO INC	NOV	13,762.91	0.08%	0.55%	-9.00%	-8.47%	-0.0066%
NRG ENERGY INC	NRG	4,575.58	N/A	0.83%	N/A	N/A	N/A
NORFOLK SOUTHERN CORP	NSC	25,729.21	0.15%	2.71%	6.50%	9.30%	0.0136%
NETAPP INC	NTAP	7,571.82	N/A	2.92%	N/A	N/A	N/A
NORTHERN TRUST CORP	NTRS	16,322.85	0.09%	2.01%	7.50%	9.59%	0.0089%
NUCOR CORP	NUE	16,055.42	0.09%	2.97%	24.50%	27.83%	0.0254%
NVIDIA CORP	NVDA	25,893.66	0.15%	0.95%	11.50%	12.50%	0.0184%
NEWELL BRANDS INC	NWL	13,265.17	0.08%	1.54%	14.00%	15.65%	0.0118%
NEWS CORP - CLASS A	NWSA	6,877.82	0.04%	1.69%	27.50%	29.42%	0.0115%
REALTY INCOME CORP	O	-	N/A	3.72%	N/A	N/A	N/A
OWENS-ILLINOIS INC	OI	3,206.00	0.02%	0.00%	6.00%	6.00%	0.0011%
ONEOK INC	OKE	9,845.24	0.06%	5.36%	12.50%	18.20%	0.0102%
OMNICOM GROUP	OMC	20,199.24	0.12%	2.66%	9.00%	11.78%	0.0135%
ORACLE CORP	ORCL	169,439.00	0.96%	1.47%	4.50%	6.00%	0.0579%
O'REILLY AUTOMOTIVE INC	ORLY	25,560.11	0.15%	0.00%	11.00%	11.00%	0.0160%
OCCIDENTAL PETROLEUM CORP	OXY	59,816.31	0.34%	3.91%	4.00%	7.99%	0.0272%
PAYCHEX INC	PAYX	20,271.21	0.12%	3.20%	9.00%	12.34%	0.0142%
PEOPLE'S UNITED FINANCIAL	PBCT	4,940.06	0.03%	4.27%	10.50%	14.99%	0.0042%
PITNEY BOWES INC	PBI	3,498.79	0.02%	4.12%	4.00%	8.20%	0.0016%
PACCAR INC	PCAR	19,745.04	0.11%	3.90%	7.00%	11.04%	0.0124%
P G & E CORP	PCG	30,792.06	0.18%	3.16%	12.00%	15.35%	0.0269%
PRICELINE GROUP INC/THE	PCLN	69,006.74	0.39%	0.00%	15.50%	15.50%	0.0609%
PATTERSON COS INC	PDCO	4,801.85	0.03%	2.04%	9.50%	11.64%	0.0032%
PUBLIC SERVICE ENTERPRISE GP	PEG	22,371.50	0.13%	3.75%	3.00%	6.81%	0.0087%
PEPSICO INC	PEP	151,020.30	0.86%	2.88%	7.00%	9.98%	0.0858%
PFIZER INC	PFE	209,783.10	1.19%	3.47%	12.00%	15.68%	0.1873%
PRINCIPAL FINANCIAL GROUP	PFG	12,928.61	0.07%	3.50%	5.00%	8.59%	0.0063%
PROCTER & GAMBLE CO/THE	PG	224,154.60	1.28%	3.18%	6.50%	9.78%	0.1249%

PROGRESSIVE CORP	PGR	18,941.67	0.11%	2.74%	8.50%	11.36%	0.0122%
PARKER HANNIFIN CORP	PH	15,354.98	0.09%	2.21%	5.50%	7.77%	0.0068%
PULTEGROUP INC	PHM	7,001.58	0.04%	1.93%	11.00%	13.04%	0.0052%
PERKINELMER INC	PKI	5,911.88	0.03%	0.52%	6.50%	7.04%	0.0024%
PROLOGIS INC	PLD	-	N/A	3.35%	N/A	N/A	N/A
PHILIP MORRIS INTERNATIONAL	PM	158,073.20	0.90%	4.00%	5.00%	9.10%	0.0819%
PNC FINANCIAL SERVICES GROUP	PNC	43,248.33	0.25%	2.35%	4.00%	6.40%	0.0158%
PENTAIR PLC	PNR	11,114.86	0.06%	2.15%	12.50%	14.78%	0.0094%
PINNACLE WEST CAPITAL	PNW	8,592.23	0.05%	3.31%	4.00%	7.38%	0.0036%
PPG INDUSTRIES INC	PPG	29,591.53	0.17%	1.44%	9.50%	11.01%	0.0185%
PPL CORP	PPL	26,334.60	0.15%	3.93%	4.00%	8.01%	0.0120%
PERRIGO CO PLC	PRGO	13,937.28	0.08%	0.61%	15.00%	15.66%	0.0124%
PRUDENTIAL FINANCIAL INC	PRU	34,100.08	0.19%	3.64%	2.00%	5.68%	0.0110%
PUBLIC STORAGE	PSA	-	N/A	2.99%	N/A	N/A	N/A
PHILLIPS 66	PSX	42,503.73	0.24%	3.18%	2.50%	5.72%	0.0138%
PVH CORP	PVH	8,320.40	0.05%	0.15%	5.50%	5.65%	0.0027%
QUANTA SERVICES INC	PWR	3,702.43	0.02%	0.00%	8.50%	8.50%	0.0018%
PRAXAIR INC	PX	32,862.53	0.19%	2.69%	6.50%	9.28%	0.0174%
PIONEER NATURAL RESOURCES CO	PXD	26,265.62	0.15%	0.05%	18.50%	18.55%	0.0278%
PAYPAL HOLDINGS INC	PYPL	44,285.29	N/A	0.00%	N/A	N/A	N/A
QUALCOMM INC	QCOM	81,491.85	0.46%	3.82%	4.50%	8.41%	0.0390%
QORVO INC	QRVO	7,987.33	N/A	0.00%	N/A	N/A	N/A
RYDER SYSTEM INC	R	3,536.34	0.02%	2.49%	9.00%	11.60%	0.0023%
REYNOLDS AMERICAN INC	RAI	72,566.01	0.41%	3.30%	10.00%	13.47%	0.0556%
ROYAL CARIBBEAN CRUISES LTD	RCL	16,652.52	0.09%	1.94%	16.50%	18.60%	0.0176%
REGENERON PHARMACEUTICALS	REGN	36,813.99	0.21%	0.00%	23.00%	23.00%	0.0482%
REGIONS FINANCIAL CORP	RF	12,046.98	0.07%	2.86%	7.50%	10.47%	0.0072%
ROBERT HALF INTL INC	RHI	5,212.01	0.03%	2.24%	11.00%	13.36%	0.0040%
RED HAT INC	RHT	14,203.09	0.08%	0.00%	16.50%	16.50%	0.0133%
TRANSOCEAN LTD	RIG	4,391.94	0.03%	0.00%	-19.00%	-19.00%	-0.0048%
RALPH LAUREN CORP	RL	8,062.03	0.05%	2.16%	4.50%	6.71%	0.0031%
ROCKWELL AUTOMATION INC	ROK	15,699.42	0.09%	2.41%	3.00%	5.45%	0.0049%
ROPER TECHNOLOGIES INC	ROP	17,498.66	0.10%	0.69%	7.00%	7.71%	0.0077%
ROSS STORES INC	ROST	21,601.51	0.12%	1.04%	9.00%	10.09%	0.0124%
RANGE RESOURCES CORP	RRC	7,711.03	0.04%	0.18%	12.00%	12.19%	0.0054%
REPUBLIC SERVICES INC	RSG	17,173.32	0.10%	2.53%	8.50%	11.14%	0.0109%
RAYTHEON COMPANY	RTN	40,044.51	0.23%	2.17%	9.00%	11.27%	0.0257%
STARBUCKS CORP	SBUX	82,202.38	0.47%	1.59%	16.50%	18.22%	0.0853%
SCANA CORP	SCG	10,197.13	0.06%	3.27%	4.50%	7.84%	0.0046%
SCHWAB (CHARLES) CORP	SCHW	39,234.18	0.22%	0.94%	12.00%	13.00%	0.0290%
SPECTRA ENERGY CORP	SE	23,981.04	0.14%	4.62%	11.50%	16.39%	0.0224%
SEALED AIR CORP	SEE	9,433.96	0.05%	1.34%	16.00%	17.45%	0.0094%
SHERWIN-WILLIAMS CO/THE	SHW	26,724.58	0.15%	1.22%	11.00%	12.29%	0.0187%
SIGNET JEWELERS LTD	SIG	6,786.30	0.04%	1.20%	15.00%	16.29%	0.0063%
JM SMUCKER CO/THE	SJM	17,541.03	0.10%	1.89%	7.00%	8.96%	0.0089%
SCHLUMBERGER LTD	SLB	99,673.26	0.57%	2.51%	10.00%	12.64%	0.0717%
SL GREEN REALTY CORP	SLG	-	N/A	2.73%	N/A	N/A	N/A
SNAP-ON INC	SNA	9,047.59	0.05%	1.57%	10.00%	11.65%	0.0060%
SCRIPPS NETWORKS INTER-CL A	SNI	8,019.46	0.05%	1.61%	9.00%	10.68%	0.0049%
SOUTHERN CO/THE	SO	46,903.71	0.27%	4.43%	2.50%	6.99%	0.0187%
SIMON PROPERTY GROUP INC	SPG	-	N/A	3.06%	N/A	N/A	N/A
S&P GLOBAL INC	SPGI	29,258.99	0.17%	1.30%	11.00%	12.37%	0.0206%
STAPLES INC	SPLS	5,784.27	N/A	5.36%	N/A	N/A	N/A
STERICYCLE INC	SRCL	8,769.73	0.05%	0.00%	9.00%	9.00%	0.0045%
SEMPRA ENERGY	SRE	27,658.92	0.16%	2.77%	10.00%	12.91%	0.0203%
SUNTRUST BANKS INC	STI	21,840.19	0.12%	2.36%	7.00%	9.44%	0.0117%
ST JUDE MEDICAL INC	STJ	22,281.27	0.13%	1.63%	5.50%	7.17%	0.0091%
STATE STREET CORP	STT	23,840.58	0.14%	2.39%	5.50%	7.96%	0.0108%
SEAGATE TECHNOLOGY	STX	7,306.30	0.04%	10.29%	-2.00%	8.19%	0.0034%
CONSTELLATION BRANDS INC-A	STZ	31,077.11	0.18%	1.04%	16.50%	17.63%	0.0312%
STANLEY BLACK & DECKER INC	SWK	17,270.96	0.10%	1.91%	8.50%	10.49%	0.0103%
SKYWORKS SOLUTIONS INC	SWKS	12,783.34	0.07%	1.55%	17.50%	19.19%	0.0140%
SOUTHWESTERN ENERGY CO	SWN	5,287.44	0.03%	0.00%	-5.00%	-5.00%	-0.0015%
SYNCHRONY FINANCIAL	SYF	21,679.58	N/A	0.00%	N/A	N/A	N/A
STRYKER CORP	SYK	44,274.12	0.25%	1.28%	18.50%	19.90%	0.0502%
SYMANTEC CORP	SYM	12,998.88	0.07%	1.41%	-1.00%	0.40%	0.0003%
SYSCO CORP	SY	28,411.44	0.16%	2.51%	10.50%	13.14%	0.0213%
AT&T INC	T	257,822.60	1.47%	4.63%	6.50%	11.28%	0.1656%
MOLSON COORS BREWING CO -B	TAP	21,888.66	0.12%	1.61%	8.00%	9.67%	0.0121%
TERADATA CORP	TDC	3,695.66	0.02%	0.00%	3.50%	3.50%	0.0007%
TRANSDIGM GROUP INC	TDG	14,054.79	0.08%	0.00%	20.50%	20.50%	0.0164%
TECO ENERGY INC	TE	6,516.29	0.04%	3.36%	7.50%	10.99%	0.0041%
TE CONNECTIVITY LTD	TEL	22,522.56	0.13%	2.35%	9.00%	11.46%	0.0147%
TEGNA INC	TGNA	4,984.92	0.03%	2.44%	1.00%	3.45%	0.0010%
TARGET CORP	TGT	41,420.29	0.24%	3.44%	11.00%	14.63%	0.0345%
TIFFANY & CO	TIF	7,891.38	0.04%	2.87%	7.50%	10.48%	0.0047%
TJX COMPANIES INC	TJX	50,824.06	0.29%	1.35%	10.00%	11.42%	0.0330%
TORCHMARK CORP	TMK	7,554.99	0.04%	0.90%	7.00%	7.93%	0.0034%
THERMO FISHER SCIENTIFIC INC	TMO	59,868.92	0.34%	0.39%	9.00%	9.41%	0.0321%
TRIPADVISOR INC	TRIP	9,611.83	0.05%	0.00%	16.50%	16.50%	0.0090%
T ROWE PRICE GROUP INC	TROW	18,242.52	0.10%	2.98%	7.50%	10.59%	0.0110%
TRAVELERS COS INC/THE	TRV	33,289.74	0.19%	2.35%	1.50%	3.87%	0.0073%
TRACTOR SUPPLY COMPANY	TSCO	12,469.07	0.07%	1.06%	14.00%	15.13%	0.0107%
TYSON FOODS INC-CL A	TSN	23,443.20	0.13%	1.01%	12.50%	13.57%	0.0181%
TESORO CORP	TSO	9,327.92	0.05%	2.57%	5.50%	8.14%	0.0043%
TOTAL SYSTEM SERVICES INC	TSS	9,681.75	0.06%	0.76%	12.00%	12.81%	0.0071%
TIME WARNER INC	TWX	57,636.45	0.33%	2.20%	11.50%	13.83%	0.0454%
TEXAS INSTRUMENTS INC	TXN	63,715.95	0.36%	2.40%	7.50%	9.99%	0.0362%
TEXTRON INC	TXT	10,324.26	0.06%	0.21%	15.50%	15.73%	0.0092%
TYCO INTERNATIONAL PLC	TYC	18,682.19	0.11%	1.87%	9.50%	11.46%	0.0122%
UNDER ARMOUR INC-CLASS A	UA	16,676.17	0.09%	0.00%	24.50%	24.50%	0.0233%
UNITED CONTINENTAL HOLDINGS	UAL	15,326.41	0.09%	0.00%	7.00%	7.00%	0.0061%
UDR INC	UDR	-	N/A	3.35%	N/A	N/A	N/A

UNIVERSAL HEALTH SERVICES-B	UHS	13,419.52	0.08%	0.29%	11.50%	11.81%	0.0090%
ULTA SALON COSMETICS & FRAGR	ULTA	15,160.26	0.09%	0.00%	18.00%	18.00%	0.0155%
UNITEDHEALTH GROUP INC	UNH	132,787.30	0.76%	1.80%	14.00%	15.93%	0.1204%
UNUM GROUP	UNM	8,444.31	0.05%	2.08%	11.00%	13.19%	0.0063%
UNION PACIFIC CORP	UNP	74,456.73	0.42%	2.49%	7.00%	9.58%	0.0406%
UNITED PARCEL SERVICE-CL B	UPS	94,782.48	0.54%	2.95%	9.50%	12.59%	0.0680%
URBAN OUTFITTERS INC	URBN	3,150.45	0.02%	0.00%	13.50%	13.50%	0.0024%
UNITED RENTALS INC	URI	6,455.70	0.04%	0.00%	13.00%	13.00%	0.0048%
US BANCORP	USB	73,142.62	0.42%	2.51%	4.50%	7.07%	0.0294%
UNITED TECHNOLOGIES CORP	UTX	85,636.50	0.49%	2.58%	6.50%	9.16%	0.0447%
VISA INC-CLASS A SHARES	V	169,680.90	0.97%	0.77%	12.00%	12.82%	0.1238%
VARIAN MEDICAL SYSTEMS INC	VAR	8,055.82	0.05%	0.00%	7.50%	7.50%	0.0034%
VF CORP	VFC	27,117.84	0.15%	2.28%	11.00%	13.41%	0.0207%
VIACOM INC-CLASS B	VIAB	17,222.81	0.10%	3.68%	5.00%	8.77%	0.0086%
VALERO ENERGY CORP	VLO	25,232.42	0.14%	4.47%	5.50%	10.09%	0.0145%
VULCAN MATERIALS CO	VMC	15,873.75	0.09%	0.67%	33.50%	34.28%	0.0310%
VORNADO REALTY TRUST	VNO	18,675.11	0.11%	2.55%	22.50%	25.34%	0.0269%
VERISK ANALYTICS INC	VRSK	13,460.24	0.08%	0.00%	11.00%	11.00%	0.0084%
VERISIGN INC	VRSN	9,502.96	0.05%	0.00%	11.50%	11.50%	0.0062%
VERTEX PHARMACEUTICALS INC	VRTX	21,810.71	N/A	0.00%	N/A	N/A	N/A
VENTAS INC	VTR	-	N/A	4.27%	N/A	N/A	N/A
VERIZON COMMUNICATIONS INC	VZ	222,850.70	1.27%	4.13%	3.00%	7.19%	0.0913%
WATERS CORP	WAT	11,199.19	0.06%	0.00%	9.00%	9.00%	0.0057%
WALGREENS BOOTS ALLIANCE INC	WBA	91,835.88	0.52%	1.69%	13.00%	14.80%	0.0774%
WESTERN DIGITAL CORP	WDC	11,838.73	0.07%	3.94%	-0.50%	3.43%	0.0023%
WEC ENERGY GROUP INC	WEC	19,816.32	0.11%	3.23%	6.00%	9.33%	0.0105%
WELLS FARGO & CO	WFC	243,186.50	1.38%	3.17%	5.00%	8.25%	0.1142%
WHOLE FOODS MARKET INC	WFM	9,961.62	0.06%	1.83%	8.00%	9.90%	0.0056%
WHIRLPOOL CORP	WHR	13,588.80	0.08%	2.24%	11.50%	13.87%	0.0107%
WILLIS TOWERS WATSON PLC	WLTW	N/A	N/A	0.00%	N/A	N/A	N/A
WASTE MANAGEMENT INC	WM	28,217.74	0.16%	2.62%	7.50%	10.22%	0.0164%
WILLIAMS COS INC	WMB	16,335.00	0.09%	12.12%	16.50%	29.62%	0.0276%
WAL-MART STORES INC	WMT	225,312.50	1.28%	2.77%	2.00%	4.80%	0.0616%
WESTROCK CO	WRK	10,477.13	N/A	3.61%	N/A	N/A	N/A
WESTERN UNION CO	WU	9,529.15	0.05%	3.30%	8.00%	11.43%	0.0062%
WEYERHAEUSER CO	WY	22,406.98	0.13%	4.20%	10.50%	14.92%	0.0190%
WYNDHAM WORLDWIDE CORP	WYN	8,044.87	0.05%	2.78%	5.50%	8.36%	0.0038%
WYNN RESORTS LTD	WYNN	10,350.01	0.06%	1.97%	6.50%	8.53%	0.0050%
CIMAREX ENERGY CO	XEC	11,405.30	0.06%	0.27%	11.00%	11.28%	0.0073%
XCEL ENERGY INC	XEL	21,689.59	0.12%	3.23%	5.50%	8.82%	0.0109%
XL GROUP PLC	XL	9,809.11	0.06%	2.40%	9.00%	11.51%	0.0064%
XILINX INC	XLNX	12,034.91	0.07%	2.78%	6.00%	8.86%	0.0061%
EXXON MOBIL CORP	XOM	380,694.60	2.17%	3.27%	5.00%	8.35%	0.1811%
DENTSPLY SIRONA INC	XRAY	15,037.98	0.09%	0.48%	8.00%	8.50%	0.0073%
XEROX CORP	XRX	10,150.28	0.06%	3.19%	4.50%	7.76%	0.0045%
XYLEM INC	XYL	8,292.02	0.05%	1.34%	9.50%	10.90%	0.0051%
YAHOO! INC	YHOO	35,824.85	N/A	0.00%	N/A	N/A	N/A
YUM! BRANDS INC	YUM	34,961.30	0.20%	2.28%	10.00%	12.39%	0.0247%
ZIMMER BIOMET HOLDINGS INC	ZBH	24,075.17	0.14%	0.81%	13.00%	13.86%	0.0190%
ZIONS BANCORPORATION	ZION	5,759.96	0.03%	1.14%	11.00%	12.20%	0.0040%
ZOETIS INC	ZTS	23,778.38	0.14%	0.79%	11.00%	11.83%	0.0160%
		17,561,166					13.63%

[1] Equals sum of Col. [9]  
[2] Source: Bloomberg Professional  
[3] Equals [1] - [2]  
[4] Source: Value Line  
[5] Equals weight in S&P 500 based on market capitalization  
[6] Source: Value Line  
[7] Source: Value Line  
[8] Equals (([6] x (1 + (0.5 x [7]))) + [7])  
[9] Equals Col. [5] x Col. [8]

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1]	[2]
		Bloomberg	Value Line
ALLETE, Inc.	ALE	0.612	0.750
Alliant Energy Corporation	LNT	0.612	0.750
Ameren Corporation	AEE	0.617	0.750
American Electric Power Company, Inc.	AEP	0.559	0.700
Avista Corporation	AVA	0.580	0.750
CMS Energy Corporation	CMS	0.542	0.700
DTE Energy Company	DTE	0.598	0.700
El Paso Electric Company	EE	0.735	0.750
Entergy Corporation	ETR	0.639	0.700
Eversource Energy	ES	0.589	0.750
FirstEnergy Corp.	FE	0.676	0.700
IDACORP, Inc.	IDA	0.672	0.800
MGE Energy, Inc.	MGEE	0.576	0.700
NorthWestern Corporation	NWE	0.607	0.700
OGE Energy Corp.	OGE	0.700	0.950
Otter Tail Corporation	OTTR	0.692	0.800
Pinnacle West Capital Corporation	PNW	0.599	0.750
PNM Resources, Inc.	PNM	0.638	0.800
Portland General Electric Company	POR	0.606	0.800
SCANA Corporation	SCG	0.589	0.700
Wisconsin Energy Corporation	WEC	0.512	0.650
Xcel Energy Inc.	XEL	0.479	0.650
Mean		0.610	0.74

Notes:

[1] Source: Bloomberg Professional

[2] Source: Value Line

Proxy Group Capital Structure

Company	Ticker	% Common Equity								
		2016Q1	2015Q4	2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	Average
ALLETE, Inc.	ALE	58.83%	58.04%	58.01%	58.93%	58.70%	56.98%	56.18%	55.83%	57.69%
Alliant Energy Corporation	LNT	51.65%	51.24%	51.27%	51.18%	50.32%	50.11%	54.23%	52.94%	51.62%
Ameren Corporation	AEE	52.82%	52.22%	53.40%	52.44%	52.88%	52.82%	54.54%	53.83%	53.12%
American Electric Power Company, Inc.	AEP	49.13%	48.82%	49.13%	49.63%	52.23%	52.11%	52.27%	52.31%	50.71%
Avista Corporation	AVA	55.13%	54.30%	54.95%	54.98%	54.81%	51.39%	52.62%	51.19%	53.67%
CMS Energy Corporation	CMS	51.42%	50.63%	51.44%	51.15%	51.35%	50.21%	49.99%	53.44%	51.20%
DTE Energy Company	DTE	50.53%	50.39%	50.32%	49.81%	48.42%	50.39%	49.32%	50.30%	49.93%
El Paso Electric Company	EE	45.95%	49.86%	49.94%	49.04%	48.79%	49.01%	53.63%	52.57%	49.85%
Entergy Corporation	ETR	48.59%	50.94%	49.01%	48.61%	48.37%	47.81%	48.73%	48.61%	48.83%
Eversource Energy	ES	54.51%	54.02%	54.83%	53.73%	53.84%	53.64%	53.44%	52.05%	53.76%
FirstEnergy Corp.	FE	52.97%	52.39%	52.12%	52.58%	52.26%	51.69%	51.49%	50.74%	52.03%
IDACORP, Inc.	IDA	50.70%	52.34%	52.25%	51.61%	49.38%	52.94%	52.92%	52.03%	51.77%
MGE Energy, Inc.	MGEE	62.00%	61.90%	61.88%	61.20%	61.12%	60.52%	59.93%	59.49%	61.00%
NorthWestern Corporation	NWE	47.54%	47.31%	46.01%	46.97%	47.54%	47.06%	47.78%	47.45%	47.21%
OGE Energy Corp.	OGE	55.17%	54.30%	54.38%	53.31%	52.98%	53.08%	55.43%	52.94%	53.95%
Otter Tail Corporation	OTTR	53.10%	52.75%	52.51%	52.32%	51.13%	49.80%	49.32%	47.60%	51.07%
Pinnacle West Capital Corporation	PNW	55.54%	55.50%	57.11%	55.72%	55.86%	57.54%	58.43%	57.32%	56.63%
PNM Resources, Inc.	PNM	45.35%	45.32%	44.76%	45.63%	46.11%	45.86%	47.43%	47.14%	45.95%
Portland General Electric Company	POR	50.89%	50.61%	50.31%	49.57%	44.11%	43.31%	44.86%	46.64%	47.54%
SCANA Corporation	SCG	52.77%	52.57%	52.55%	52.08%	53.72%	53.46%	53.47%	52.85%	52.93%
Wisconsin Energy Corporation	WEC	55.80%	55.39%	56.60%	55.65%	56.21%	55.93%	55.70%	55.55%	55.85%
Xcel Energy Inc.	XEL	54.68%	54.43%	53.02%	53.88%	54.97%	54.62%	54.54%	53.41%	54.19%
Mean		52.50%	52.51%	52.54%	52.27%	52.05%	51.83%	52.56%	52.10%	52.30%

Operating Company Capital Structure

Operating Company	Parent	% Common Equity								
		2016Q1	2015Q4	2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	Average
Ameren Illinois Company	AEE	53.67%	53.42%	55.55%	54.67%	54.39%	53.90%	56.91%	56.19%	54.84%
Union Electric Company	AEE	51.97%	51.03%	51.25%	50.21%	51.37%	51.74%	52.17%	51.48%	51.40%
AEP Texas Central Company	AEP	44.18%	43.63%	43.32%	47.46%	45.01%	42.39%	43.93%	43.18%	44.14%
AEP Texas North Company	AEP	42.64%	42.36%	45.03%	48.87%	47.15%	46.96%	47.06%	46.79%	45.86%
Appalachian Power Company	AEP	47.20%	46.77%	46.66%	46.50%	46.52%	45.83%	46.29%	46.00%	46.47%
Indiana Michigan Power Company	AEP	48.26%	52.65%	52.41%	52.08%	51.94%	51.36%	51.45%	51.39%	51.44%
Kentucky Power Company	AEP	43.58%	43.26%	43.72%	43.87%	44.19%	44.74%	46.25%	48.23%	44.73%
Kingsport Power Company	AEP	65.21%	59.70%	59.76%	60.44%	60.77%	61.00%	60.55%	60.91%	61.04%
Ohio Power Company	AEP	50.03%	50.09%	50.36%	50.33%	49.30%	48.96%	46.03%	44.79%	48.74%
Public Service Company of Oklahoma	AEP	46.80%	46.45%	46.30%	45.29%	44.66%	49.69%	49.43%	48.30%	47.11%
Southwestern Electric Power Company	AEP	49.51%	49.59%	49.88%	47.62%	46.25%	50.46%	50.60%	51.26%	49.40%
Wheeling Power Company	AEP	53.90%	53.73%	53.89%	53.82%	86.56%	79.75%	81.14%	82.27%	68.13%
ALLETE (Minnesota Power)	ALE	56.60%	55.86%	55.62%	57.67%	57.56%	55.24%	53.98%	53.01%	55.69%
Superior Water, Light and Power Company	ALE	61.06%	60.23%	60.40%	60.19%	59.83%	58.72%	58.39%	58.65%	59.68%
Alaska Electric Light and Power Company	AVA	58.86%	58.18%	58.09%	58.07%	57.83%	NA	NA	NA	58.21%
Avista Corporation	AVA	51.39%	50.41%	51.80%	51.90%	51.78%	51.39%	52.62%	51.19%	51.56%
Consumers Energy Company	CMS	51.42%	50.63%	51.44%	51.15%	51.35%	50.21%	49.99%	53.44%	51.20%
DTE Electric Company	DTE	50.53%	50.39%	50.32%	49.81%	48.42%	50.39%	49.32%	50.30%	49.93%
El Paso Electric Company	EE	45.95%	49.86%	49.94%	49.04%	48.79%	49.01%	53.63%	52.57%	49.85%
Entergy Arkansas, Inc.	ETR	45.37%	44.18%	44.47%	43.76%	43.50%	43.29%	46.14%	45.30%	44.50%
Entergy Gulf States Louisiana, LLC	ETR	NA	52.85%	51.00%	50.47%	49.90%	48.96%	49.76%	51.50%	50.63%
Entergy Louisiana, LLC	ETR	47.60%	51.13%	48.89%	48.72%	48.09%	47.35%	48.02%	47.90%	48.46%
Entergy Mississippi, Inc.	ETR	49.27%	48.87%	48.86%	48.05%	48.23%	47.61%	47.71%	48.53%	48.39%
Entergy New Orleans, Inc.	ETR	53.42%	58.69%	50.76%	51.71%	50.62%	50.24%	50.58%	49.39%	51.93%
Entergy Texas, Inc.	ETR	47.29%	49.96%	50.09%	48.95%	49.86%	49.41%	50.14%	49.04%	49.34%
Connecticut Light and Power Company	ES	54.45%	53.05%	53.35%	52.25%	53.26%	53.11%	52.72%	50.52%	52.84%
NSTAR Electric Company	ES	55.76%	56.11%	59.18%	58.53%	58.22%	57.84%	57.17%	55.95%	57.34%
Public Service Company of New Hampshire	ES	54.04%	53.48%	53.56%	53.44%	53.40%	53.29%	53.92%	52.44%	53.45%
Western Massachusetts Electric Company	ES	53.78%	53.46%	53.25%	50.70%	50.48%	50.31%	49.97%	49.29%	51.40%
Cleveland Electric Illuminating Company	FE	45.05%	45.10%	44.89%	44.35%	45.44%	44.99%	45.28%	44.88%	45.00%
Jersey Central Power & Light Company	FE	52.37%	52.32%	52.77%	55.19%	54.99%	54.77%	55.24%	54.49%	54.02%
Monongahela Power Company	FE	49.61%	48.89%	48.79%	48.17%	47.92%	47.04%	46.86%	46.27%	47.94%
Ohio Edison Company	FE	64.08%	63.58%	65.73%	64.75%	64.01%	63.05%	57.70%	56.35%	62.40%
Pennsylvania Electric Company	FE	48.32%	47.70%	49.01%	48.46%	48.06%	47.66%	48.17%	47.74%	48.14%
Potomac Edison Company	FE	52.67%	51.59%	52.56%	51.73%	51.11%	51.05%	51.96%	51.17%	51.73%
Toledo Edison Company	FE	60.61%	60.41%	52.06%	51.72%	51.37%	50.74%	51.51%	50.70%	53.64%
West Penn Power Company	FE	51.06%	49.48%	51.14%	56.25%	55.18%	54.20%	55.21%	54.31%	53.35%
Idaho Power Co.	IDA	50.70%	52.34%	52.25%	51.61%	49.38%	52.94%	52.92%	52.03%	51.77%
Madison Gas and Electric Company	MGEE	62.00%	61.90%	61.88%	61.20%	61.12%	60.52%	59.93%	59.49%	61.00%
Interstate Water and Light Company	LNT	51.52%	50.91%	50.90%	51.72%	50.09%	49.90%	54.01%	52.05%	51.39%
Wisconsin Power and Light Company	LNT	51.78%	51.56%	51.63%	50.65%	50.54%	50.32%	54.45%	53.82%	51.84%
NorthWestern Corporation	NWE	47.54%	47.31%	46.01%	46.97%	47.54%	47.06%	47.78%	47.45%	47.21%
Oklahoma Gas and Electric Company	OGE	55.17%	54.30%	54.38%	53.31%	52.98%	53.08%	55.43%	52.94%	53.95%
Otter Tail Power Company	OTTR	53.10%	52.75%	52.51%	52.32%	51.13%	49.80%	49.32%	47.60%	51.07%
Public Service Company of New Mexico	PNM	45.35%	45.32%	44.76%	45.63%	46.11%	45.86%	47.43%	47.14%	45.95%
Texas-New Mexico Power Company	PNM	NA	NA	NA	NA	NA	NA	NA	NA	N/A
Arizona Public Service Company	PNW	55.54%	55.50%	57.11%	55.72%	55.86%	57.54%	58.43%	57.32%	56.63%
Portland General Electric Company	POR	50.89%	50.61%	50.31%	49.57%	44.11%	43.31%	44.86%	46.64%	47.54%
South Carolina Electric & Gas Co.	SCG	52.77%	52.57%	52.55%	52.08%	53.72%	53.46%	53.47%	52.85%	52.93%
Integrys Holding, Inc.	WEC	NA	NA	56.36%	55.10%	54.80%	54.61%	54.32%	54.05%	54.87%
Wisconsin Electric Power Company	WEC	56.95%	57.25%	57.07%	56.76%	59.02%	58.57%	58.45%	58.56%	57.83%
Wisconsin Public Service Corporation	WEC	54.65%	53.53%	56.36%	55.10%	54.80%	54.61%	54.32%	54.05%	54.68%
Northern States Power Company - MN	XEL	53.68%	53.26%	51.95%	53.34%	53.03%	52.89%	52.84%	52.49%	52.94%
Northern States Power Company - WI	XEL	54.43%	54.27%	52.92%	52.53%	56.36%	55.18%	55.01%	52.92%	54.20%
Public Service Company of Colorado	XEL	56.49%	56.34%	56.00%	55.55%	56.94%	56.79%	56.51%	56.12%	56.34%
Southwestern Public Service Company	XEL	54.13%	53.83%	51.20%	54.08%	53.54%	53.62%	53.81%	52.10%	53.29%
Mean		52.15%	52.09%	52.04%	51.99%	52.33%	51.98%	52.43%	51.95%	52.17%

Source: SNL Financial

Proxy Group Capital Structure

Company	Ticker	% Long-Term Debt								
		2016Q1	2015Q4	2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	Average
ALLETE, Inc.	ALE	41.17%	41.96%	41.99%	41.07%	41.30%	43.02%	43.82%	44.17%	42.31%
Alliant Energy Corporation	LNT	48.35%	48.76%	48.73%	48.82%	49.68%	49.89%	45.77%	47.06%	48.38%
Ameren Corporation	AEE	47.18%	47.78%	46.60%	47.56%	47.12%	47.18%	45.46%	46.17%	46.88%
American Electric Power Company, Inc.	AEP	50.87%	51.18%	50.87%	50.37%	47.77%	47.89%	47.73%	47.69%	49.29%
Avista Corporation	AVA	44.87%	45.70%	45.05%	45.02%	45.19%	48.61%	47.38%	48.81%	46.33%
CMS Energy Corporation	CMS	48.58%	49.37%	48.56%	48.85%	48.65%	49.79%	50.01%	46.56%	48.80%
DTE Energy Company	DTE	49.47%	49.61%	49.68%	50.19%	51.58%	49.61%	50.68%	49.70%	50.07%
El Paso Electric Company	EE	54.05%	50.14%	50.06%	50.96%	51.21%	50.99%	46.37%	47.43%	50.15%
Entergy Corporation	ETR	51.41%	49.06%	50.99%	51.39%	51.63%	52.19%	51.27%	51.39%	51.17%
Eversource Energy	ES	45.49%	45.98%	45.17%	46.27%	46.16%	46.36%	46.56%	47.95%	46.24%
FirstEnergy Corp.	FE	47.03%	47.61%	47.88%	47.42%	47.74%	48.31%	48.51%	49.26%	47.97%
IDACORP, Inc.	IDA	49.30%	47.66%	47.75%	48.39%	50.62%	47.06%	47.08%	47.97%	48.23%
MGE Energy, Inc.	MGEE	38.00%	38.10%	38.12%	38.80%	38.88%	39.48%	40.07%	40.51%	39.00%
NorthWestern Corporation	NWE	52.46%	52.69%	53.99%	53.03%	52.46%	52.94%	52.22%	52.55%	52.79%
OGE Energy Corp.	OGE	44.83%	45.70%	45.62%	46.69%	47.02%	46.92%	44.57%	47.06%	46.05%
Otter Tail Corporation	OTTR	46.90%	47.25%	47.49%	47.68%	48.87%	50.20%	50.68%	52.40%	48.93%
Pinnacle West Capital Corporation	PNW	44.46%	44.50%	42.89%	44.28%	44.14%	42.46%	41.57%	42.68%	43.37%
PNM Resources, Inc.	PNM	54.65%	54.68%	55.24%	54.37%	53.89%	54.14%	52.57%	52.86%	54.05%
Portland General Electric Company	POR	49.11%	49.39%	49.69%	50.43%	55.89%	56.69%	55.14%	53.36%	52.46%
SCANA Corporation	SCG	47.23%	47.43%	47.45%	47.92%	46.28%	46.54%	46.53%	47.15%	47.07%
Wisconsin Energy Corporation	WEC	44.20%	44.61%	43.40%	44.35%	43.79%	44.07%	44.30%	44.45%	44.15%
Xcel Energy Inc.	XEL	45.32%	45.57%	46.98%	46.12%	45.03%	45.38%	45.46%	46.59%	45.81%
Mean		47.50%	47.49%	47.46%	47.73%	47.95%	48.17%	47.44%	47.90%	47.70%

Operating Company Capital Structure

Operating Company	Parent	% Long-Term Debt								
		2016Q1	2015Q4	2015Q3	2015Q2	2015Q1	2014Q4	2014Q3	2014Q2	Average
Ameren Illinois Company	AEE	46.33%	46.58%	44.45%	45.33%	45.61%	46.10%	43.09%	43.81%	45.16%
Union Electric Company	AEE	48.03%	48.97%	48.75%	49.79%	48.63%	48.26%	47.83%	48.52%	48.60%
AEP Texas Central Company	AEP	55.82%	56.37%	56.68%	52.54%	54.99%	57.61%	56.07%	56.82%	55.86%
AEP Texas North Company	AEP	57.36%	57.64%	54.97%	51.13%	52.85%	53.04%	52.94%	53.21%	54.14%
Appalachian Power Company	AEP	52.80%	53.23%	53.34%	53.50%	53.48%	54.17%	53.71%	54.00%	53.53%
Indiana Michigan Power Company	AEP	51.74%	47.35%	47.59%	47.92%	48.06%	48.64%	48.55%	48.61%	48.56%
Kentucky Power Company	AEP	56.42%	56.74%	56.28%	56.13%	55.81%	55.26%	53.75%	51.77%	55.27%
Kingsport Power Company	AEP	34.79%	40.30%	40.24%	39.56%	39.23%	39.00%	39.45%	39.09%	38.96%
Ohio Power Company	AEP	49.97%	49.91%	49.64%	49.67%	50.70%	51.04%	53.97%	55.21%	51.26%
Public Service Company of Oklahoma	AEP	53.20%	53.55%	53.70%	54.71%	55.34%	50.31%	50.57%	51.70%	52.89%
Southwestern Electric Power Company	AEP	50.49%	50.41%	50.12%	52.38%	53.75%	49.54%	49.40%	48.74%	50.60%
Wheeling Power Company	AEP	46.10%	46.27%	46.11%	46.18%	13.44%	20.25%	18.86%	17.73%	31.87%
ALLETE (Minnesota Power)	ALE	43.40%	44.14%	44.38%	42.33%	42.44%	44.76%	46.02%	46.99%	44.31%
Superior Water, Light and Power Company	ALE	38.94%	39.77%	39.60%	39.81%	40.17%	41.28%	41.61%	41.35%	40.32%
Alaska Electric Light and Power Company	AVA	41.14%	41.82%	41.91%	41.93%	42.17%	NA	NA	NA	41.79%
Avista Corporation	AVA	48.61%	49.59%	48.20%	48.10%	48.22%	48.61%	47.38%	48.81%	48.44%
Consumers Energy Company	CMS	48.58%	49.37%	48.56%	48.85%	48.65%	49.79%	50.01%	46.56%	48.80%
DTE Electric Company	DTE	49.47%	49.61%	49.68%	50.19%	51.58%	49.61%	50.68%	49.70%	50.07%
El Paso Electric Company	EE	54.05%	50.14%	50.06%	50.96%	51.21%	50.99%	46.37%	47.43%	50.15%
Entergy Arkansas, Inc.	ETR	54.63%	55.82%	55.53%	56.24%	56.50%	56.71%	53.86%	54.70%	55.50%
Entergy Gulf States Louisiana, LLC	ETR	NA	47.15%	49.00%	49.53%	50.10%	51.04%	50.24%	48.50%	49.37%
Entergy Louisiana, LLC	ETR	52.40%	48.87%	51.11%	51.28%	51.91%	52.65%	51.98%	52.10%	51.54%
Entergy Mississippi, Inc.	ETR	50.73%	51.13%	51.14%	51.95%	51.77%	52.39%	52.29%	51.47%	51.61%
Entergy New Orleans, Inc.	ETR	46.58%	41.31%	49.24%	48.29%	49.38%	49.76%	49.42%	50.61%	48.07%
Entergy Texas, Inc.	ETR	52.71%	50.04%	49.91%	51.05%	50.14%	50.59%	49.86%	50.96%	50.66%
Connecticut Light and Power Company	ES	45.55%	46.95%	46.65%	47.75%	46.74%	46.89%	47.28%	49.48%	47.16%
NSTAR Electric Company	ES	44.24%	43.89%	40.82%	41.47%	41.78%	42.16%	42.83%	44.05%	42.66%
Public Service Company of New Hampshire	ES	45.96%	46.52%	46.44%	46.56%	46.60%	46.71%	46.08%	47.56%	46.55%
Western Massachusetts Electric Company	ES	46.22%	46.54%	46.75%	49.30%	49.52%	49.69%	50.03%	50.71%	48.60%
Cleveland Electric Illuminating Company	FE	54.95%	54.90%	55.11%	55.65%	54.56%	55.01%	54.72%	55.12%	55.00%
Jersey Central Power & Light Company	FE	47.63%	47.68%	47.23%	44.81%	45.01%	45.23%	44.76%	45.51%	45.98%
Monongahela Power Company	FE	50.39%	51.11%	51.21%	51.83%	52.08%	52.96%	53.14%	53.73%	52.06%
Ohio Edison Company	FE	35.92%	36.42%	34.27%	35.25%	35.99%	36.95%	42.30%	43.65%	37.60%
Pennsylvania Electric Company	FE	51.68%	52.30%	50.99%	51.54%	51.94%	52.34%	51.83%	52.26%	51.86%
Potomac Edison Company	FE	47.33%	48.41%	47.44%	48.27%	48.89%	48.95%	48.04%	48.83%	48.27%
Toledo Edison Company	FE	39.39%	39.59%	47.94%	48.28%	48.63%	49.26%	48.49%	49.30%	46.36%
West Penn Power Company	FE	48.94%	50.52%	48.86%	43.75%	44.82%	45.80%	44.79%	45.69%	46.65%
Idaho Power Co.	IDA	49.30%	47.66%	47.75%	48.39%	50.62%	47.06%	47.08%	47.97%	48.23%
Madison Gas and Electric Company	MGEE	38.00%	38.10%	38.12%	38.80%	38.88%	39.48%	40.07%	40.51%	39.00%
Interstate Power and Light Company	LNT	48.48%	49.09%	49.10%	48.28%	49.91%	50.10%	45.99%	47.95%	48.61%
Wisconsin Power and Light Company	LNT	48.22%	48.44%	48.37%	49.35%	49.46%	49.68%	45.55%	46.18%	48.16%
NorthWestern Corporation	NWE	52.46%	52.69%	53.99%	53.03%	52.46%	52.94%	52.22%	52.55%	52.79%
Oklahoma Gas and Electric Company	OGE	44.83%	45.70%	45.62%	46.69%	47.02%	46.92%	44.57%	47.06%	46.05%
Otter Tail Power Company	OTTR	46.90%	47.25%	47.49%	47.68%	48.87%	50.20%	50.68%	52.40%	48.93%
Public Service Company of New Mexico	PNM	54.65%	54.68%	55.24%	54.37%	53.89%	54.14%	52.57%	52.86%	54.05%
Texas-New Mexico Power Company	PNM	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arizona Public Service Company	PNW	44.46%	44.50%	42.89%	44.28%	44.14%	42.46%	41.57%	42.68%	43.37%
Portland General Electric Company	POR	49.11%	49.39%	49.69%	50.43%	55.89%	56.69%	55.14%	53.36%	52.46%
South Carolina Electric & Gas Co.	SCG	47.23%	47.43%	47.45%	47.92%	46.28%	46.54%	46.53%	47.15%	47.07%
Integrys Holding, Inc.	WEC	NA	NA	43.64%	44.90%	45.20%	45.39%	45.68%	45.95%	45.13%
Wisconsin Electric Power Company	WEC	43.05%	42.75%	42.93%	43.24%	40.98%	41.43%	41.55%	41.44%	42.17%
Wisconsin Public Service Corporation	WEC	45.35%	46.47%	43.64%	44.90%	45.20%	45.39%	45.68%	45.95%	45.32%
Northern States Power Company - MN	XEL	46.32%	46.74%	48.05%	46.66%	46.97%	47.11%	47.16%	47.51%	47.06%
Northern States Power Company - WI	XEL	45.57%	45.73%	47.08%	47.47%	43.64%	44.82%	44.99%	47.08%	45.80%
Public Service Company of Colorado	XEL	43.51%	43.66%	44.00%	44.45%	43.06%	43.21%	43.49%	43.88%	43.66%
Southwestern Public Service Company	XEL	45.87%	46.17%	48.80%	45.92%	46.46%	46.38%	46.19%	47.90%	46.71%
Mean		47.85%	47.91%	47.96%	48.01%	47.67%	48.02%	47.57%	48.05%	47.83%

Flotation Cost Adjustment - Combined Proxy Group

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

Company	Date	Shares Issued	Offering Price	Underwriting Discount	Offering Expense	Net Proceeds Per Share	Total Flotation Costs	Gross Equity Issue Before Costs	Net Proceeds	Flotation Cost Percentage
ALLETE, Inc.	2/26/2014	3,220,000	\$49.75	\$1.7413	\$450,000	\$47.87	\$6,056,825	\$160,195,000	\$154,138,175	3.781%
ALLETE, Inc.	5/25/2001	7,475,000	\$23.68	\$0.9472	\$350,000	\$22.69	\$7,430,320	\$177,008,000	\$169,577,680	4.198%
Alliant Energy Corporation	7/1/2003	17,250,000	\$19.25	\$0.7700	\$370,000	\$18.46	\$13,652,500	\$332,062,500	\$318,410,000	4.111%
Alliant Energy Corporation	11/8/2001	9,775,000	\$28.00	\$1.0500	\$425,000	\$26.91	\$10,688,750	\$273,700,000	\$263,011,250	3.905%
Ameren Corp.	9/9/2009	21,850,000	\$25.25	\$0.7575	\$450,000	\$24.47	\$17,001,375	\$551,712,500	\$534,711,125	3.082%
Ameren Corp.	6/30/2004	10,925,000	\$42.00	\$1.2600	\$400,000	\$40.70	\$14,165,500	\$458,850,000	\$444,684,500	3.087%
American Electric Power Company, Inc.	4/1/2009	69,000,000	\$24.50	\$0.7350	\$400,000	\$23.76	\$51,115,000	\$1,690,500,000	\$1,639,385,000	3.024%
American Electric Power Company, Inc.	2/27/2003	57,500,000	\$20.95	\$0.6285	\$550,000	\$20.31	\$36,688,750	\$1,204,625,000	\$1,167,936,250	3.046%
Avista Corporation	12/11/2006	3,162,500	\$25.05	\$0.4800	\$300,000	\$24.48	\$1,818,000	\$79,220,625	\$77,402,625	2.295%
CMS Energy Corporation	3/30/2005	23,000,000	\$12.25	\$0.4288	\$325,000	\$11.81	\$10,187,400	\$281,750,000	\$271,562,600	3.616%
CMS Energy Corporation	10/7/2004	32,775,000	\$9.10	\$0.3185	\$325,000	\$8.77	\$10,763,838	\$298,252,500	\$287,488,663	3.609%
DTE Energy Company	6/19/2002	6,325,000	\$43.25	\$1.4056	\$250,000	\$41.80	\$9,140,420	\$273,556,250	\$264,415,830	3.341%
Eversource Energy	3/16/2009	18,975,000	\$20.20	\$0.6565	\$335,000	\$19.53	\$12,792,088	\$383,295,000	\$370,502,913	3.337%
Eversource Energy	12/6/2005	23,000,000	\$19.09	\$0.6200	\$340,000	\$18.46	\$14,600,000	\$439,070,000	\$424,470,000	3.325%
FirstEnergy Corp.	9/11/2003	32,200,000	\$30.00	\$0.9750	\$423,000	\$29.01	\$31,818,000	\$966,000,000	\$934,182,000	3.294%
IDACORP, Inc.	12/7/2004	4,025,000	\$30.00	\$1.2000	\$300,000	\$28.73	\$5,130,000	\$120,750,000	\$115,620,000	4.248%
MGE Energy, Inc.	9/10/2004	1,265,000	\$31.85	\$1.0350	\$125,000	\$30.72	\$1,434,275	\$40,290,250	\$38,855,975	3.560%
NorthWestern Corporation	9/29/2015	1,100,000	\$51.81	\$1.3300	\$1,000,000	\$49.57	\$2,463,000	\$56,991,000	\$54,528,000	4.322%
NorthWestern Corporation	11/4/2014	7,766,990	\$51.50	\$1.8025	\$1,000,000	\$49.57	\$14,999,999	\$399,999,985	\$384,999,986	3.750%
OGE Energy Corp.	8/21/2003	5,324,074	\$21.60	\$0.7900	\$325,000	\$20.75	\$4,531,018	\$114,999,998	\$110,468,980	3.940%
Otter Tail Corporation	9/18/2008	5,175,000	\$30.00	\$1.0875	\$400,000	\$28.84	\$6,027,813	\$155,250,000	\$149,222,188	3.883%
Otter Tail Corporation	12/7/2004	3,335,000	\$25.45	\$0.9500	\$300,000	\$24.41	\$3,468,250	\$84,875,750	\$81,407,500	4.086%
Pinnacle West Capital Corporation	4/8/2010	6,900,000	\$38.00	\$1.3300	\$190,000	\$36.64	\$9,367,000	\$262,200,000	\$252,833,000	3.572%
Pinnacle West Capital Corporation	4/27/2005	6,095,000	\$42.00	\$1.3650	\$250,000	\$40.59	\$8,569,675	\$255,990,000	\$247,420,325	3.348%
PNM Resources, Inc.	12/6/2006	5,750,000	\$30.79	\$1.0780	\$250,000	\$29.67	\$6,448,500	\$177,042,500	\$170,594,000	3.642%
PNM Resources, Inc.	3/23/2005	3,910,000	\$26.76	\$0.8697	\$200,000	\$25.84	\$3,600,527	\$104,631,600	\$101,031,073	3.441%
Portland General Electric Company	6/11/2013	12,765,000	\$29.50	\$0.9588	\$600,000	\$28.49	\$12,838,444	\$376,567,500	\$363,729,056	3.409%
Portland General Electric Company	9/25/2009	12,477,500	\$14.10	\$0.4935	\$375,000	\$13.58	\$6,532,646	\$175,932,750	\$169,400,104	3.713%
SCANA Corporation	5/11/2010	8,222,500	\$37.00	\$1.2950	\$350,000	\$35.66	\$10,998,138	\$304,232,500	\$293,234,363	3.615%
SCANA Corporation	12/31/2008	2,875,000	\$35.50	\$0.5325	\$350,000	\$34.85	\$1,880,938	\$102,062,500	\$100,181,563	1.843%
Xcel Energy Inc.	8/3/2010	21,850,000	\$21.50	\$0.6450	\$600,000	\$20.83	\$14,693,250	\$469,775,000	\$455,081,750	3.128%
Xcel Energy Inc.	9/9/2008	17,250,000	\$20.25	\$0.1500	\$600,000	\$20.07	\$3,187,500	\$349,312,500	\$346,125,000	0.913%
Mean							\$11,377,804	\$347,521,913		
							WEIGHTED AVERAGE FLOTATION COSTS: 3.274%			

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

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield Current	Adjusted for Flot. Costs	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	DCF k(e)	Flotation Adjusted DCF k(e)
ALLETE, Inc.	ALE	\$2.08	\$59.67	3.49%	3.57%	3.69%	5.50%	5.00%	4.00%	4.83%	8.40%	8.52%
Alliant Energy Corporation	LNT	\$1.18	\$38.20	3.08%	3.17%	3.28%	6.10%	6.60%	6.00%	6.23%	9.40%	9.51%
Ameren Corporation	AEE	\$1.70	\$60.12	3.39%	3.49%	3.61%	6.10%	5.20%	6.00%	5.77%	9.26%	9.37%
American Electric Power Company, Inc.	AEP	\$2.24	\$66.05	3.39%	3.47%	3.58%	4.90%	4.10%	4.00%	4.33%	7.80%	7.92%
Avista Corporation	AVA	\$1.37	\$41.65	3.29%	3.37%	3.49%	5.00%	5.00%	5.00%	5.00%	8.37%	8.49%
CMS Energy Corporation	CMS	\$1.24	\$42.95	2.89%	2.98%	3.08%	6.40%	7.24%	6.00%	6.55%	9.53%	9.63%
DTE Energy Company	DTE	\$3.08	\$92.91	3.32%	3.40%	3.52%	5.80%	5.35%	5.00%	5.38%	8.79%	8.90%
El Paso Electric Company	EE	\$1.24	\$45.30	2.74%	2.81%	2.91%	6.70%	7.00%	2.50%	5.40%	8.21%	8.31%
Entergy Corporation	ETR	\$3.40	\$77.45	4.39%	4.47%	4.62%	NA	NA	3.50%	3.50%	7.97%	8.12%
Eversource Energy	ES	\$1.78	\$56.36	3.16%	3.25%	3.36%	6.30%	5.49%	6.00%	5.93%	9.18%	9.29%
FirstEnergy Corp.	FE	\$1.44	\$33.34	4.32%	4.51%	4.67%	NA	NA	9.00%	9.00%	13.51%	13.67%
IDACORP, Inc.	IDA	\$2.04	\$74.50	2.74%	2.79%	2.88%	4.00%	4.00%	3.00%	3.67%	6.46%	6.55%
MGE Energy, Inc.	MGEE	\$1.18	\$53.30	2.21%	2.27%	2.35%	NA	4.00%	7.00%	5.50%	7.77%	7.85%
NorthWestern Corporation	NWE	\$2.00	\$59.68	3.35%	3.44%	3.56%	5.00%	5.00%	6.50%	5.50%	8.94%	9.06%
OGE Energy Corp.	OGE	\$1.10	\$30.95	3.55%	3.63%	3.75%	5.20%	4.30%	3.00%	4.17%	7.80%	7.92%
Otter Tail Corporation	OTTR	\$1.25	\$30.96	4.04%	4.16%	4.30%	NA	6.00%	6.00%	6.00%	10.16%	10.30%
Pinnacle West Capital Corporation	PNW	\$2.50	\$75.82	3.30%	3.36%	3.48%	4.00%	3.73%	4.00%	3.91%	7.27%	7.39%
PNM Resources, Inc.	PNM	\$0.88	\$33.49	2.63%	2.74%	2.83%	7.60%	8.76%	9.00%	8.45%	11.19%	11.28%
Portland General Electric Company	POR	\$1.28	\$41.86	3.06%	3.15%	3.26%	6.40%	6.57%	5.50%	6.16%	9.31%	9.42%
SCANA Corporation	SCG	\$2.30	\$71.01	3.24%	3.32%	3.43%	5.30%	5.40%	4.50%	5.07%	8.39%	8.50%
Wisconsin Energy Corporation	WEC	\$1.98	\$61.68	3.21%	3.31%	3.42%	6.30%	6.77%	6.00%	6.36%	9.67%	9.78%
Xcel Energy Inc.	XEL	\$1.36	\$42.20	3.22%	3.31%	3.42%	5.30%	5.27%	5.50%	5.36%	8.67%	8.78%
PROXY GROUP MEAN											8.91%	9.02%

Notes:

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

DCF Result Adjusted For Flotation Costs: 9.02%  
DCF Result Unadjusted For Flotation Costs: 8.91%  
Difference (Flotation Cost Adjustment) 0.11% [12]

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

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

[6] Source: Zacks

[7] Source: Yahoo! Finance

[8] Source: Value Line

[9] Equals Average([6], [7], [8])

[10] Equals [4] + [9]

[11] Equals [5] + [9]

[12] Equals Average [11] - Average [10]

Proxy Group Comparison

Companies	Ticker	Hevert	Baudino	Gorman	Woolridge	Combined Group
ALLETE, Inc.	ALE	√	√	√	√	√
Alliant Energy Corporation	LNT	√	√	√	√	√
Ameren Corporation	AEE	√		√	√	√
American Electric Power Company	AEP	√		√	√	√
Avista Corporation	AVA	√	√	√	√	√
Black Hills Corporation	BKH				√	[1]
CMS Energy Corporation	CMS	√		√	√	√
Consolidated Edison, Inc.	ED		√		√	[2]
Dominion Resources, Inc.	D	√			√	[1]*
DTE Energy Corporation	DTE	√		√		√
Duke Energy Corporation	DUK				√	[1]
Edison International	EIX		√		√	[1]
El Paso Electric	EE				√	√
Entergy Corporation	ETR				√	√
Eversource Energy	ES		√		√	√
First Energy Corporation	FE				√	√
Great Plains Energy, Inc.	GXP	√				[1]*
IDACORP, Inc.	IDA	√	√	√	√	√
MGE Energy, Inc.	MGEE				√	√
NextEra Energy, Inc.	NEE				√	[1], [3]
NorthWestern Corporation	NWE	√	√	√	√	√
OGE Energy Corp.	OGE	√	√	√	√	√
Otter Tail Corporation	OTTR	√			√	√
PG&E Corporation	PCG				√	[1]
Pinnacle West Capital Corporation	PNW	√		√	√	√
PNM Resources	PNM	√		√	√	√
Portland General Electric Co.	POR	√	√	√	√	√
SCANA Corporation	SCG	√		√	√	√
Southern Company	SO				√	[1]
Westar Energy, Inc.	WR	√				[1]*
Wisconsin Energy Corporation	WEC		√		√	√
Xcel Energy, Inc.	XEL	√	√	√	√	√
√ Included in proxy group						
* Originally included in Hevert proxy group, but removed for recent activity						
[1] Removed for being party to a merger or significant transaction						
Note: EIX is subject to ongoing settlement payments associated with the bankruptcy of its merchant generation division						
Note: PCG was subject to significant penalties from the San Bruno pipeline incident						
[2] Removed for having no regulated generation						
[3] Parent company; removed to avoid circular logic						



Company	Ticker	Trailing P/E	P/E	Forecasted P/E	Percent Change Trailing to Forecast	Percent Change to Forecast
ALLETE, Inc.	ALE	17.30	18.70	14.00	-19%	-25%
Alliant Energy Corporation	LNT	22.90	20.80	15.00	-34%	-28%
Ameren Corporation	AEE	21.00	19.80	14.00	-33%	-29%
American Electric Power Company, Inc.	AEP	19.70	17.80	14.50	-26%	-19%
Avista Corporation	AVA	21.50	20.50	14.00	-35%	-32%
Black Hills Corporation	BKH	21.00	23.50	15.00	-29%	-36%
CMS Energy Corporation	CMS	24.30	21.30	14.00	-42%	-34%
Consolidated Edison, Inc.	ED	19.20	19.20	15.50	-19%	-19%
Dominion Resources, Inc.	D	22.50	20.10	18.00	-20%	-10%
Duke Energy Corporation	DUK	20.00	18.00	16.50	-18%	-8%
Edison International	EIX	17.20	17.70	15.00	-13%	-15%
El Paso Electric Company	EE	22.40	23.70	17.00	-24%	-28%
Entergy Corporation	ETR	14.40	15.40	13.00	-10%	-16%
Eversource Energy	ES	21.10	19.50	14.50	-31%	-26%
FirstEnergy Corp.	FE	15.10	13.00	11.50	-24%	-12%
IDACORP, Inc.	IDA	19.10	18.80	14.50	-24%	-23%
MGE Energy, Inc.	MGEE	26.20	24.10	15.00	-43%	-38%
NextEra Energy, Inc.	NEE	20.00	19.80	17.50	-13%	-12%
NorthWestern Corporation	NWE	23.30	21.20	13.50	-42%	-36%
OGE Energy Corp.	OGE	19.50	17.80	17.00	-13%	-4%
Otter Tail Corporation	OTTR	19.50	19.70	18.00	-8%	-9%
PG&E Corporation	PCG	29.80	21.10	12.00	-60%	-43%
Pinnacle West Capital Corporation	PNW	19.10	18.60	14.50	-24%	-22%
PNM Resources, Inc.	PNM	NMF	20.40	16.00	N/A	-22%
Portland General Electric Company	POR	19.50	18.30	13.00	-33%	-29%
SCANA Corporation	SCG	19.10	17.90	13.50	-29%	-25%
Southern Company	SO	17.50	17.90	15.00	-14%	-16%
Wisconsin Energy Corporation	WEC	23.50	21.00	15.00	-36%	-29%
Xcel Energy Inc.	XL	19.60	18.80	14.50	-26%	-23%

Source: Value Line as of June 30, 2016

Proof Concept: Earnings, Dividends, Book Value and  
Stock Price Growth Rate Equivalence in Constant Growth DCF

Line Description	IMPLIED GROWTH RATE AT ALLOWED ROE:
Input	Dividend Yield 4.50% [1]
Assumes g = Allowed ROE - Div. Yield	Assumed Growth Rate 6.50%
Input	Total Return 11.00% [1]
Input	Payout Ratio 67.50% [2]
Input	Book Value/Share 20 [2]

		0	1	2	3	4	5	6	7	8	9	10	250
BV/S Escalates at Constant Growth g	Book Value/Share	\$ 20.00	\$ 21.30	\$ 22.68	\$ 24.16	\$ 25.73	\$ 27.40	\$ 29.18	\$ 31.08	\$ 33.10	\$ 35.25	\$ 37.54	\$ 137,540,924.55
Demonstrating Constant BV/S growth		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Earnings based on ROE applied to BV/S	Earnings/share	\$ 2.20	\$ 2.34	\$ 2.50	\$ 2.66	\$ 2.83	\$ 3.01	\$ 3.21	\$ 3.42	\$ 3.64	\$ 3.88	\$ 4.13	\$ 15,129,501.70
Demonstrating Constant EPS growth		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Demonstrating Constant Return Earned based on BV/S and EPS	Allowed ROE	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%
Div/S based on EPS and Constant Payout ratio	Dividends/Share	\$ 1.49	\$ 1.58	\$ 1.68	\$ 1.79	\$ 1.91	\$ 2.03	\$ 2.17	\$ 2.31	\$ 2.46	\$ 2.62	\$ 2.79	\$ 10,212,413.65
Demonstrating Constant Div/S growth		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Retained Earnings based on difference between EPS and Div/S	Earnings retained to book value	\$ 0.72	\$ 0.76	\$ 0.81	\$ 0.86	\$ 0.92	\$ 0.98	\$ 1.04	\$ 1.11	\$ 1.18	\$ 1.26	\$ 1.34	\$ 4,917,088.05
Demonstrating Constant growth in Retained Earnings		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Demonstrating Constant Market/Book ratio	Market/Book Ratio	1.757	1.757	1.757	1.757	1.757	1.757	1.757	1.757	1.757	1.757	1.757	1.757
DCF calculation of market price = [Div/S]/[1+g]/[ROE-g]	Market Price	\$ 35.15	\$ 37.43	\$ 39.86	\$ 42.45	\$ 45.21	\$ 48.15	\$ 51.28	\$ 54.61	\$ 58.16	\$ 61.95	\$ 65.97	\$ 241,693,789.67
Demonstrating Price Appreciation equals Long Term Growth Rate	Price Appreciation	6.50%	OK	<== Price appreciation should equal long term growth rate									
Demonstrating Constant Price/Earnings Ratio	Price/Earnings	15.98	15.98	15.98	15.98	15.98	15.98	15.98	15.98	15.98	15.98	15.98	15.98
Present Value Factor calculated based upon the current period and the Constant ROE	Present Value Factor	0.9009	0.8116	0.7312	0.6587	0.5935	0.5346	0.4817	0.4339	0.3909	0.3522		0.0000

CASE 1	DIVIDENDS IN PERPETUITY												
Present value of Div/S obtained by multiplying nominal Div/S by the Present Value Factor for the period	Present Value Dividend	1.4248	1.3670	1.3116	1.2584	1.2074	1.1585	1.1115	1.0664	1.0232	0.9817		0.0000
Total Value of investment sum of all Present Value Dividends in perpetuity (250 instances for demonstration purposes)	Value of Investment	\$ 35.14											

CASE 2	10-YEAR HOLDING PERIOD												
Present value of Div/S obtained by multiplying nominal Div/S by the Present Value Factor for the period	Present Value of Dividend	\$ 1.42	\$ 1.37	\$ 1.31	\$ 1.26	\$ 1.21	\$ 1.16	\$ 1.11	\$ 1.07	\$ 1.02	\$ 0.98		
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 10th Period (Terminal Value)	Present Value of Stock Price	--	--	--	--	--	--	--	--	--	--	23.23	
Value of dividends = sum of all Present Value Dividends for periods 1-10	Value of Dividends	\$ 11.91											
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 10th Period (Terminal Value)	Value of Stock Price	\$ 23.23											
Total Value of investment sum of all Present Value Dividends for periods 1-10 and Present Value of Stock in period 10 (Terminal Value)	Value of Investment	\$ 35.15											

CASE 3	5-YEAR HOLDING PERIOD												
Present value of Div/S obtained by multiplying nominal Div/S by the Present Value Factor for the period	Present Value of Dividend	\$ 1.42	\$ 1.37	\$ 1.31	\$ 1.26	\$ 1.21							
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 5th Period (Terminal Value)	Present Value of Stock Price	--	--	--	--	28.58							
Value of dividends = sum of all Present Value Dividends for periods 1-5	Value of Dividends	\$ 6.57											
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 5th Period (Terminal Value)	Value of Stock Price	\$ 28.58											
Total Value of investment sum of all Present Value Dividends for periods 1-5 and Present Value of Stock in period 5 (Terminal Value)	Value of Investment	\$ 35.15											

[1] Source: Exhibit RBH-XX. Note, for purposes of this exhibit, these data are illustrative only.  
[2] Note: Illustrative only.

Growth Rate Regression Analysis

Company	Ticker	[1]	[2]	[3]	[4]	[5]
		Median P/E Ratio	Proj. Earnings Growth Rate	Proj. Div Growth Rate	Proj. BV Growth Rate	Sustainable Growth Rate
ALLETE	ALE	16.00	4.00%	3.50%	4.00%	3.1%
Alliant Energy	LNT	15.00	6.00%	4.50%	4.00%	4.9%
Ameren Corp.	AEE	15.00	6.00%	4.00%	3.50%	3.4%
Amer. Elec. Power	AEP	14.00	4.00%	5.00%	4.00%	3.1%
Avista Corp.	AVA	16.00	5.00%	4.00%	3.50%	3.3%
Black Hills	BKH	17.00	6.50%	6.00%	5.00%	4.9%
CMS Energy Corp.	CMS	16.00	6.00%	6.50%	6.00%	5.1%
Consol. Edison	ED	15.00	1.50%	3.00%	3.50%	2.6%
Dominion Resources	D	18.00	8.00%	8.00%	5.00%	5.0%
Duke Energy	DUK	N/A	4.00%	3.50%	1.50%	2.0%
Edison Int'l	EIX	12.00	3.50%	9.00%	5.50%	5.3%
El Paso Electric	EE	15.00	2.50%	5.00%	3.50%	3.3%
Entergy Corp.	ETR	13.00	3.50%	3.00%	3.00%	4.5%
FirstEnergy Corp.	FE	16.00	9.00%	1.00%	3.50%	4.7%
IDACORP, Inc.	IDA	14.00	3.00%	7.50%	4.00%	3.6%
MGE Energy	MGEE	16.00	7.00%	4.00%	5.00%	7.3%
NextEra Energy	NEE	15.00	6.00%	11.00%	5.50%	3.9%
Eversource Energy	ES	17.00	6.00%	6.00%	4.00%	4.0%
NorthWestern Corp.	NWE	16.00	6.50%	5.50%	4.50%	4.1%
OGE Energy	OGE	14.00	3.00%	9.50%	3.50%	3.6%
Otter Tail Corp.	OTTR	23.00	6.00%	1.50%	4.50%	3.9%
PG&E Corp.	PCG	16.00	12.00%	4.50%	5.00%	4.8%
Pinnacle West Capital	PNW	15.00	4.00%	5.00%	3.50%	3.5%
PNM Resources	PNM	17.00	9.00%	10.00%	3.50%	4.3%
Portland General	POR	15.00	5.50%	6.00%	4.00%	4.0%
SCANA Corp.	SCG	14.00	4.50%	5.00%	5.00%	4.0%
Southern Co.	SO	16.00	2.50%	3.00%	3.00%	3.1%
Wisconsin Energy	WEC	16.00	6.00%	7.00%	7.00%	3.6%
Xcel Energy Inc.	XEL	15.00	5.50%	6.00%	4.00%	3.9%

Source: Value Line Investment Survey as of June 30, 2016; Exhibit JRW-10

SUMMARY OUTPUT

<i>Regression Statistics</i>						
Multiple R	0.408347					
R Square	0.166747					
Adjusted R Square	0.134699					
Standard Error	1.796265					
Observations	28.000000					

<i>ANOVA</i>						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	16.787844	16.787844	5.203006	0.030982	
Residual	26	83.890728	3.226566			
Total	27	100.678571				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	13.736357	0.887633	15.475269	0.000000	11.911801	15.560912
Proj. Earnings Growth Rate	34.461849	15.108155	2.281010	0.030982	3.406592	65.517106

SUMMARY OUTPUT

<i>Regression Statistics</i>						
Multiple R	0.270143					
R Square	0.072977					
Adjusted R Square	0.037322					
Standard Error	1.894642					
Observations	28					

<i>ANOVA</i>						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	7.347222	7.347222	2.046770	0.164439	
Residual	26	93.331349	3.589667			
Total	27	100.678571				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	16.778439	0.893586	18.776533	0.000000	14.941648	18.615231
Proj. Div Growth Rate	-21.296296	14.885711	-1.430654	0.164439	-51.894314	9.301721

SUMMARY OUTPUT

<i>Regression Statistics</i>						
Multiple R		0.113124				
R Square		0.012797				
Adjusted R Square		-0.025172				
Standard Error		1.955172				
Observations		28				

ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	1.288398	1.288398	0.337039	0.566542	
Residual	26	99.390173	3.822699			
Total	27	100.678571				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	14.628613	1.725545	8.477675	0.000000	11.081703	18.175522
Proj. BV Growth Rate	22.832370	39.328829	0.580550	0.566542	-58.009196	103.673936

SUMMARY OUTPUT

<i>Regression Statistics</i>						
Multiple R		0.055388				
R Square		0.003068				
Adjusted R Square		-0.035276				
Standard Error		1.964783				
Observations		28				

ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	0.308861	0.308861	0.080008	0.779526	
Residual	26	100.369710	3.860373			
Total	27	100.678571				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	15.137599	1.701026	8.899100	0.000000	11.641090	18.634107
Sustainable Growth Rate	11.442334	40.452702	0.282857	0.779526	-71.709386	94.594053

SUMMARY OUTPUT

<i>Regression Statistics</i>						
Multiple R		0.546922				
R Square		0.299124				
Adjusted R Square		0.177233				
Standard Error		1.751561				
Observations		28				

ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	4	30.115390	7.528847	2.454020	0.074516	
Residual	23	70.563182	3.067964			
Total	27	100.678571				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	15.282894	1.828242	8.359341	0.000000	11.500889	19.064900
Proj. Earnings Growth Rate	41.198478	17.400325	2.367684	0.026688	5.203164	77.193792
Proj. Div Growth Rate	-26.857425	14.973545	-1.793658	0.086027	-57.832562	4.117713
Proj. BV Growth Rate	37.759099	42.386933	0.890819	0.382250	-49.924952	125.443150
Sustainable Growth Rate	-50.037609	44.298500	-1.129555	0.270307	-141.676039	41.600820

Analysts' Projected EPS Growth Rates - Woolridge Proxy Group as Filed

Company	Ticker	Yahoo	Reuters	Zacks	Mean
ALLETE, Inc.	ALE	3.00%	NA	4.50%	3.75%
Alliant Energy Corporation	LNT	6.60%	6.60%	6.10%	6.43%
Ameren Corporation	AEE	5.20%	5.20%	6.10%	5.50%
American Electric Power Company, Inc.	AEP	4.10%	4.10%	4.90%	4.37%
Avista Corporation	AVA	5.00%	NA	5.00%	5.00%
Black Hills Corporation	BKH	6.50%	NA	6.50%	6.50%
CMS Energy Corporation	CMS	7.20%	7.20%	6.40%	6.93%
Consolidated Edison, Inc.	ED	1.90%	1.90%	2.30%	2.03%
Dominion Resources, Inc.	D	5.90%	5.90%	6.80%	6.20%
Duke Energy Corporation	DUK	4.60%	4.60%	4.80%	4.67%
Edison International	EIX	2.50%	2.50%	4.90%	3.30%
El Paso Electric Company	EE	7.00%	NA	6.70%	6.85%
Entergy Corporation	ETR	-2.40%	-2.40%	-2.30%	-2.37%
Eversource Energy	ES	6.30%	6.30%	6.30%	6.30%
FirstEnergy Corp.	FE	-2.50%	-2.50%	-1.00%	-2.00%
IDACORP, Inc.	IDA	4.00%	4.00%	4.00%	4.00%
MGE Energy, Inc.	MGEE	4.00%	NA	NA	4.00%
NextEra Energy, Inc.	NEE	7.40%	7.40%	6.90%	7.23%
NorthWestern Corporation	NWE	5.00%	5.00%	5.00%	5.00%
OGE Energy Corp.	OGE	4.30%	4.30%	5.20%	4.60%
Otter Tail Corporation	OTTR	6.00%	NA	NA	6.00%
PG&E Corporation	PCG	6.10%	6.10%	5.10%	5.77%
Pinnacle West Capital Corporation	PNW	3.70%	3.70%	4.10%	3.83%
PNM Resources, Inc.	PNM	8.80%	8.80%	7.60%	8.40%
Portland General Electric Company	POR	6.60%	6.60%	6.40%	6.53%
SCANA Corporation	SCG	4.80%	4.80%	5.30%	4.97%
Southern Company	SO	3.30%	3.20%	4.10%	3.53%
WEC Energy Group, Inc.	WEC	6.80%	6.80%	6.30%	6.63%
Xcel Energy Inc.	XEL	5.30%	5.30%	5.30%	5.30%
Average		4.72%	4.58%	4.94%	4.80%
Median		5.00%	5.00%	5.20%	5.00%

Source: Exhibit JRW-10, Page 5 (Electronic version to two decimal places)

Analysts' Projected EPS Growth Rates - Woolridge Proxy Group Corrected

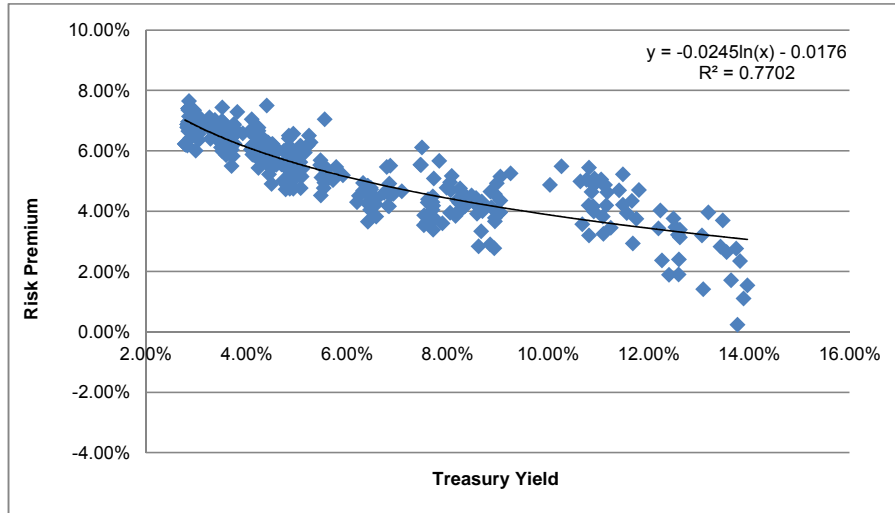
Company	Ticker	Yahoo	Reuters	Zacks	Mean
ALLETE, Inc.	ALE	3.00%	NA	4.50%	3.75%
Alliant Energy Corporation	LNT	6.60%	6.60%	6.10%	6.43%
Ameren Corporation	AEE	5.20%	5.20%	6.10%	5.50%
American Electric Power Company, Inc.	AEP	4.10%	4.10%	4.90%	4.37%
Avista Corporation	AVA	5.00%	NA	5.00%	5.00%
Black Hills Corporation	BKH	6.50%	NA	6.50%	6.50%
CMS Energy Corporation	CMS	7.20%	7.20%	6.40%	6.93%
Consolidated Edison, Inc.	ED	1.90%	1.90%	2.30%	2.03%
Dominion Resources, Inc.	D	5.90%	5.90%	6.80%	6.20%
Duke Energy Corporation	DUK	4.60%	4.60%	4.80%	4.67%
Edison International	EIX	2.50%	2.50%	4.90%	3.30%
El Paso Electric Company	EE	7.00%	NA	6.70%	6.85%
Entergy Corporation	ETR	NA	NA	NA	NA
Eversource Energy	ES	6.30%	6.30%	6.30%	6.30%
FirstEnergy Corp.	FE	NA	NA	NA	NA
IDACORP, Inc.	IDA	4.00%	4.00%	4.00%	4.00%
MGE Energy, Inc.	MGEE	4.00%	NA	NA	4.00%
NextEra Energy, Inc.	NEE	7.40%	7.40%	6.90%	7.23%
NorthWestern Corporation	NWE	5.00%	5.00%	5.00%	5.00%
OGE Energy Corp.	OGE	4.30%	4.30%	5.20%	4.60%
Otter Tail Corporation	OTTR	6.00%	NA	NA	6.00%
PG&E Corporation	PCG	6.10%	6.10%	5.10%	5.77%
Pinnacle West Capital Corporation	PNW	3.70%	3.70%	4.10%	3.83%
PNM Resources, Inc.	PNM	8.80%	8.80%	7.60%	8.40%
Portland General Electric Company	POR	6.60%	6.60%	6.40%	6.53%
SCANA Corporation	SCG	4.80%	4.80%	5.30%	4.97%
Southern Company	SO	3.30%	3.20%	4.10%	3.53%
WEC Energy Group, Inc.	WEC	6.80%	6.80%	6.30%	6.63%
Xcel Energy Inc.	XEL	5.30%	5.30%	5.30%	5.30%
Average		5.26%	5.25%	5.46%	5.32%
Median		5.20%	5.20%	5.30%	5.30%

Source: Exhibit JRW-10, Page 5

Difference: 0.52%

Bond Yield Plus Risk Premium - Settled Only

	[1]	[2]	[3]	[4]	[5]
	Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
	-1.76%	-2.45%			
Current 30-Year Treasury			2.50%	7.28%	9.78%
Blue Chip Financial Forecast 2017Q3 Projection			3.40%	6.52%	9.92%
Blue Chip Financial Forecast 2020 Projection			4.40%	5.89%	10.29%



Notes:

- [1] Constant of regression equation
- [2] Slope of regression equation
- [3] Source: Current = Bloomberg Professional,
- [3] Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 2.
- [3] Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 14.
- [4] Equals [1] + ln([3]) x [2]
- [5] Equals [3] + [4]
- [6] Source: SNL Financial
- [7] Source: SNL Financial
- [8] Source: Bloomberg Professional, equals 192-trading day average (i.e. lag period)
- [9] Equals [7] - [8]

Bond Yield Plus Risk Premium - Settled Only			
[6]	[7]	[8]	[9]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/2/1980	15.63%	10.65%	4.98%
6/12/1980	14.25%	10.68%	3.57%
7/15/1980	15.80%	10.76%	5.04%
8/14/1980	14.00%	10.81%	3.19%
8/14/1980	16.25%	10.81%	5.44%
9/15/1980	15.80%	10.92%	4.88%
10/16/1980	16.10%	11.06%	5.04%
12/9/1980	15.35%	11.16%	4.19%
12/18/1980	15.80%	11.18%	4.62%
9/3/1981	14.50%	13.09%	1.41%
10/15/1981	16.25%	13.43%	2.82%
11/25/1981	15.35%	13.64%	1.71%
2/17/1982	15.00%	13.89%	1.11%
4/2/1982	15.50%	13.96%	1.54%
6/23/1982	16.17%	13.82%	2.35%
7/13/1982	14.00%	13.77%	0.23%
7/19/1982	16.50%	13.75%	2.75%
9/3/1982	16.20%	13.56%	2.64%
9/23/1982	17.17%	13.47%	3.70%
10/22/1982	17.15%	13.19%	3.96%
11/4/1982	16.25%	13.06%	3.19%
12/22/1982	16.25%	12.50%	3.75%
1/12/1983	14.63%	12.26%	2.37%
3/30/1983	16.71%	11.49%	5.22%
5/23/1983	14.90%	10.91%	3.99%
8/19/1983	15.00%	10.81%	4.19%
9/7/1983	15.00%	10.88%	4.12%
9/14/1983	15.78%	10.91%	4.87%
11/1/1983	16.00%	11.08%	4.92%
11/10/1983	14.35%	11.11%	3.24%
11/23/1983	16.00%	11.13%	4.87%
12/20/1983	14.69%	11.25%	3.44%
1/30/1984	16.10%	11.41%	4.69%
2/15/1984	15.70%	11.49%	4.21%
4/2/1984	15.50%	11.76%	3.74%
6/22/1984	16.25%	12.23%	4.02%
7/19/1984	14.30%	12.41%	1.89%
9/26/1984	14.50%	12.60%	1.90%
9/28/1984	15.00%	12.60%	2.40%
11/9/1984	16.00%	12.62%	3.38%
11/14/1984	15.75%	12.62%	3.13%
12/3/1984	15.80%	12.59%	3.21%
12/20/1984	16.00%	12.54%	3.46%
3/15/1985	15.62%	12.20%	3.42%
5/10/1985	16.50%	11.81%	4.69%
5/29/1985	14.61%	11.69%	2.92%
5/31/1985	16.00%	11.67%	4.33%
6/14/1985	15.50%	11.57%	3.93%
9/9/1985	14.90%	11.09%	3.81%
10/28/1985	16.00%	10.92%	5.08%
10/31/1985	15.06%	10.90%	4.16%
11/7/1985	15.50%	10.87%	4.63%
2/5/1986	15.75%	10.27%	5.48%
3/5/1986	14.90%	10.04%	4.86%



5/16/1986	14.50%	9.26%	5.24%
9/16/1986	12.75%	7.98%	4.77%
12/16/1986	13.60%	7.50%	6.10%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%
8/27/1987	13.25%	8.09%	5.16%
9/30/1987	12.75%	8.35%	4.40%
10/15/1987	13.00%	8.48%	4.52%
12/17/1987	11.75%	8.85%	2.90%
12/18/1987	13.50%	8.86%	4.64%
12/22/1987	13.00%	8.87%	4.13%
1/26/1988	13.90%	8.98%	4.92%
3/30/1988	12.72%	8.94%	3.78%
5/16/1988	13.00%	9.00%	4.00%
8/23/1988	11.70%	8.93%	2.77%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.94%	3.66%
12/27/1988	13.00%	9.05%	3.95%
12/30/1988	13.40%	9.05%	4.35%
2/17/1989	13.00%	9.05%	3.95%
3/8/1989	13.00%	9.04%	3.96%
4/5/1989	14.20%	9.05%	5.15%
12/27/1989	13.00%	8.25%	4.75%
1/26/1990	12.00%	8.16%	3.84%
5/29/1990	12.40%	8.30%	4.10%
6/4/1990	12.90%	8.31%	4.59%
9/26/1990	11.45%	8.62%	2.83%
10/19/1990	13.00%	8.68%	4.32%
11/21/1990	12.70%	8.70%	4.00%
12/19/1990	12.00%	8.67%	3.33%
12/20/1990	12.75%	8.67%	4.08%
12/27/1990	12.79%	8.66%	4.13%
2/4/1991	12.50%	8.59%	3.91%
2/12/1991	13.00%	8.57%	4.43%
2/22/1991	12.80%	8.54%	4.26%
6/28/1991	12.50%	8.35%	4.15%
7/3/1991	12.50%	8.34%	4.16%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.25%	8.23%	4.02%
10/23/1991	12.55%	8.20%	4.35%
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.05%	4.95%
4/14/1992	11.50%	7.90%	3.60%
7/13/1992	13.50%	7.84%	5.66%
9/28/1992	11.40%	7.72%	3.68%
10/12/1992	12.20%	7.71%	4.49%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.70%	4.30%
12/30/1992	12.00%	7.61%	4.39%
12/31/1992	11.90%	7.61%	4.29%
2/2/1993	11.40%	7.54%	3.86%
8/24/1993	11.50%	6.93%	4.57%
11/2/1993	10.80%	6.57%	4.23%
1/4/1994	10.07%	6.42%	3.65%
2/25/1994	11.25%	6.32%	4.93%
3/1/1994	11.00%	6.32%	4.68%
5/13/1994	10.50%	6.46%	4.04%
11/28/1994	11.06%	7.53%	3.53%

2/17/1995	11.90%	7.72%	4.18%
3/9/1995	11.50%	7.73%	3.77%
3/23/1995	12.81%	7.73%	5.08%
4/6/1995	11.10%	7.72%	3.38%
6/9/1995	11.25%	7.60%	3.65%
9/27/1995	11.75%	7.09%	4.66%
11/9/1995	12.36%	6.86%	5.50%
11/9/1995	11.38%	6.86%	4.52%
11/17/1995	11.00%	6.82%	4.18%
12/4/1995	11.35%	6.75%	4.60%
3/29/1996	10.67%	6.41%	4.26%
4/24/1996	11.25%	6.41%	4.84%
4/30/1996	11.00%	6.41%	4.59%
5/13/1996	11.00%	6.41%	4.59%
5/23/1996	11.25%	6.42%	4.83%
6/25/1996	11.25%	6.47%	4.78%
6/27/1996	11.20%	6.48%	4.72%
8/12/1996	10.40%	6.59%	3.81%
10/16/1996	12.25%	6.79%	5.46%
11/5/1996	11.00%	6.84%	4.16%
12/18/1996	11.75%	6.84%	4.91%
12/12/1997	11.00%	6.59%	4.41%
3/6/1998	10.75%	6.24%	4.51%
3/20/1998	10.50%	6.20%	4.30%
11/30/1998	12.60%	5.56%	7.04%
9/23/1999	10.75%	5.73%	5.02%
11/17/1999	11.10%	5.92%	5.18%
1/23/2001	11.25%	5.79%	5.46%
6/26/2001	11.00%	5.61%	5.39%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001	10.50%	5.56%	4.94%
9/7/2001	10.75%	5.55%	5.20%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
1/22/2002	10.00%	5.49%	4.51%
6/18/2002	11.16%	5.47%	5.69%
6/20/2002	11.00%	5.47%	5.53%
12/4/2002	11.55%	5.28%	6.27%
12/13/2002	11.75%	5.25%	6.50%
12/20/2002	11.40%	5.22%	6.18%
1/8/2003	11.10%	5.17%	5.93%
6/25/2003	10.75%	4.80%	5.95%
6/26/2003	10.75%	4.80%	5.95%
7/9/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.78%	4.72%
8/26/2003	10.50%	4.82%	5.68%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/23/2003	10.50%	4.94%	5.56%
5/27/2004	10.25%	5.07%	5.18%
6/2/2004	11.22%	5.07%	6.15%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
8/25/2004	10.25%	5.10%	5.15%
11/9/2004	10.50%	5.07%	5.43%
12/14/2004	10.97%	5.08%	5.89%
12/21/2004	11.25%	5.09%	6.16%
12/29/2004	9.85%	5.08%	4.77%
1/6/2005	10.70%	5.08%	5.62%

2/25/2005	10.50%	4.94%	5.56%
3/24/2005	10.30%	4.88%	5.42%
4/7/2005	10.25%	4.85%	5.40%
5/18/2005	10.25%	4.77%	5.48%
5/25/2005	10.75%	4.75%	6.00%
5/26/2005	9.75%	4.75%	5.00%
6/1/2005	9.75%	4.74%	5.01%
8/15/2005	10.13%	4.60%	5.53%
9/28/2005	10.00%	4.53%	5.47%
10/4/2005	10.75%	4.52%	6.23%
12/21/2005	10.29%	4.53%	5.76%
12/21/2005	10.40%	4.53%	5.87%
3/3/2006	10.39%	4.54%	5.85%
6/27/2006	10.75%	4.81%	5.94%
7/6/2006	10.20%	4.84%	5.36%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.87%	5.63%
9/14/2006	10.00%	4.92%	5.08%
10/6/2006	9.67%	4.93%	4.74%
12/1/2006	10.50%	4.97%	5.53%
12/1/2006	10.25%	4.97%	5.28%
12/7/2006	10.75%	4.97%	5.78%
12/22/2006	10.25%	4.96%	5.29%
1/5/2007	10.00%	4.95%	5.05%
3/21/2007	11.35%	4.85%	6.50%
3/22/2007	9.75%	4.85%	4.90%
5/25/2007	9.67%	4.80%	4.87%
6/22/2007	10.50%	4.83%	5.67%
7/12/2007	9.67%	4.86%	4.81%
8/15/2007	10.40%	4.89%	5.51%
11/29/2007	10.90%	4.88%	6.02%
12/14/2007	10.70%	4.86%	5.84%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.86%	5.34%
12/20/2007	11.00%	4.86%	6.14%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
1/31/2008	10.71%	4.79%	5.92%
3/12/2008	10.25%	4.70%	5.55%
4/22/2008	10.25%	4.58%	5.67%
5/1/2008	10.70%	4.57%	6.13%
6/27/2008	10.50%	4.53%	5.97%
7/16/2008	9.40%	4.50%	4.90%
7/31/2008	10.70%	4.50%	6.20%
9/10/2008	10.30%	4.49%	5.81%
9/30/2008	10.20%	4.48%	5.72%
10/8/2008	10.15%	4.47%	5.68%
11/13/2008	10.55%	4.44%	6.11%
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.39%	5.86%
12/29/2008	10.20%	4.23%	5.97%
12/31/2008	10.75%	4.21%	6.54%
3/4/2009	10.50%	3.93%	6.57%
4/2/2009	11.10%	3.82%	7.28%
4/21/2009	10.61%	3.76%	6.85%
5/20/2009	10.25%	3.71%	6.54%
5/28/2009	10.50%	3.71%	6.79%
7/8/2009	10.63%	3.75%	6.88%
7/17/2009	10.50%	3.76%	6.74%

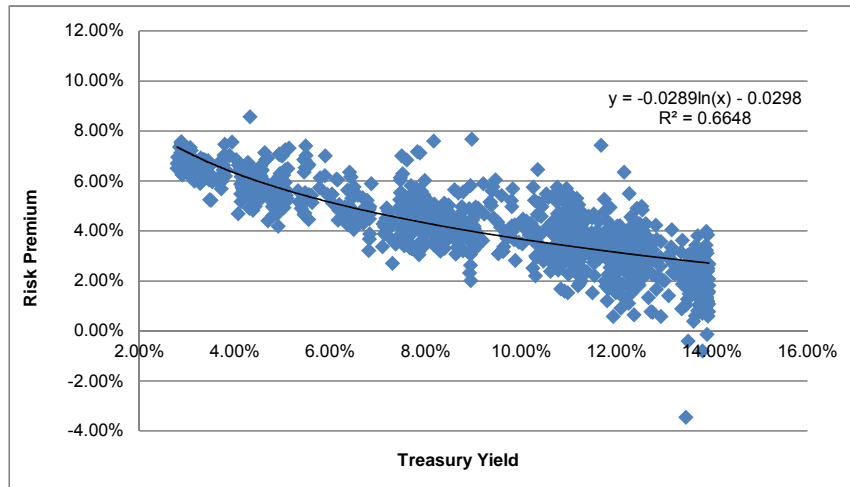
10/14/2009	10.70%	4.06%	6.64%
11/3/2009	10.70%	4.12%	6.58%
11/24/2009	10.25%	4.18%	6.07%
11/25/2009	10.75%	4.18%	6.57%
12/3/2009	10.50%	4.20%	6.30%
12/7/2009	10.70%	4.21%	6.49%
12/16/2009	11.00%	4.24%	6.76%
12/16/2009	10.90%	4.24%	6.66%
1/26/2010	10.13%	4.37%	5.76%
1/27/2010	10.40%	4.37%	6.03%
1/27/2010	10.40%	4.37%	6.03%
1/27/2010	10.70%	4.37%	6.33%
2/24/2010	10.18%	4.41%	5.77%
3/4/2010	10.50%	4.40%	6.10%
3/5/2010	10.50%	4.40%	6.10%
3/11/2010	11.90%	4.41%	7.49%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.20%	4.45%	5.75%
6/7/2010	10.30%	4.45%	5.85%
6/16/2010	10.00%	4.45%	5.55%
6/28/2010	10.50%	4.45%	6.05%
6/28/2010	9.67%	4.45%	5.22%
7/15/2010	10.70%	4.44%	6.26%
7/30/2010	10.70%	4.42%	6.28%
8/4/2010	10.50%	4.41%	6.09%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.32%	6.38%
9/16/2010	10.00%	4.32%	5.68%
9/16/2010	10.00%	4.32%	5.68%
10/14/2010	10.35%	4.22%	6.13%
10/28/2010	10.70%	4.19%	6.51%
11/19/2010	10.20%	4.15%	6.05%
12/1/2010	10.13%	4.14%	5.99%
12/9/2010	10.25%	4.13%	6.12%
12/13/2010	10.70%	4.13%	6.57%
12/14/2010	10.13%	4.13%	6.00%
12/17/2010	10.00%	4.12%	5.88%
12/21/2010	10.30%	4.12%	6.18%
12/29/2010	11.15%	4.11%	7.04%
1/5/2011	10.15%	4.10%	6.05%
1/20/2011	10.13%	4.09%	6.04%
2/25/2011	10.00%	4.14%	5.86%
3/30/2011	10.00%	4.19%	5.81%
4/26/2011	9.67%	4.24%	5.43%
6/8/2011	10.75%	4.33%	6.42%
6/17/2011	9.95%	4.34%	5.61%
8/8/2011	10.00%	4.39%	5.61%
8/11/2011	10.00%	4.38%	5.62%
8/19/2011	10.25%	4.36%	5.89%
9/22/2011	10.00%	4.23%	5.77%
10/12/2011	10.30%	4.12%	6.18%
12/14/2011	10.00%	3.77%	6.23%
12/14/2011	10.30%	3.77%	6.53%
12/20/2011	10.20%	3.73%	6.47%
12/21/2011	10.20%	3.72%	6.48%
1/25/2012	10.50%	3.53%	6.97%

1/27/2012	10.50%	3.52%	6.98%
2/15/2012	10.20%	3.43%	6.77%
2/23/2012	9.90%	3.40%	6.50%
2/29/2012	10.40%	3.38%	7.02%
3/29/2012	10.37%	3.27%	7.10%
4/4/2012	10.00%	3.25%	6.75%
4/26/2012	10.00%	3.16%	6.84%
5/2/2012	10.00%	3.15%	6.85%
5/15/2012	10.00%	3.12%	6.88%
6/14/2012	9.40%	3.05%	6.35%
6/18/2012	9.60%	3.05%	6.55%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.01%	6.79%
9/19/2012	9.80%	2.94%	6.86%
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%
11/29/2012	9.88%	2.89%	6.99%
11/29/2012	9.75%	2.89%	6.86%
12/13/2012	10.50%	2.86%	7.64%
12/19/2012	10.25%	2.85%	7.40%
12/20/2012	10.25%	2.85%	7.40%
12/20/2012	10.25%	2.85%	7.40%
12/20/2012	9.80%	2.85%	6.95%
12/20/2012	9.50%	2.85%	6.65%
12/26/2012	9.80%	2.84%	6.96%
1/9/2013	9.70%	2.83%	6.87%
1/9/2013	9.70%	2.83%	6.87%
1/9/2013	9.70%	2.83%	6.87%
1/16/2013	9.60%	2.83%	6.77%
1/16/2013	9.60%	2.83%	6.77%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.89%	6.41%
3/27/2013	9.80%	2.91%	6.89%
5/1/2013	9.84%	2.96%	6.88%
5/15/2013	10.30%	2.97%	7.33%
5/30/2013	10.20%	2.99%	7.21%
5/31/2013	9.00%	2.99%	6.01%
6/11/2013	10.00%	3.01%	6.99%
6/21/2013	9.75%	3.03%	6.72%
6/25/2013	9.80%	3.04%	6.76%
9/11/2013	10.25%	3.28%	6.97%
9/11/2013	10.20%	3.28%	6.92%
9/24/2013	10.20%	3.32%	6.88%
11/21/2013	10.00%	3.46%	6.54%
12/3/2013	10.25%	3.48%	6.77%
12/9/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.52%	6.43%
12/16/2013	9.95%	3.52%	6.43%
12/17/2013	9.50%	3.52%	5.98%
12/17/2013	10.95%	3.52%	7.43%
12/18/2013	9.80%	3.52%	6.28%
12/19/2013	10.15%	3.53%	6.62%
2/20/2014	9.20%	3.71%	5.49%
2/26/2014	9.75%	3.71%	6.04%
3/17/2014	9.55%	3.73%	5.82%
5/16/2014	9.80%	3.70%	6.10%
6/30/2014	9.55%	3.64%	5.91%

7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%
7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.55%	6.20%
8/25/2014	9.60%	3.54%	6.06%
8/29/2014	9.80%	3.53%	6.27%
9/11/2014	9.60%	3.50%	6.10%
9/15/2014	10.25%	3.49%	6.76%
10/9/2014	9.80%	3.43%	6.37%
12/4/2014	9.68%	3.29%	6.39%
12/11/2014	10.07%	3.27%	6.80%
2/24/2015	9.83%	3.02%	6.81%
4/23/2015	10.20%	2.85%	7.35%
5/1/2015	9.60%	2.83%	6.77%
6/17/2015	9.00%	2.80%	6.20%
6/17/2015	9.00%	2.80%	6.20%
10/15/2015	9.00%	2.83%	6.17%
12/15/2015	9.60%	2.92%	6.68%
12/18/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.96%	6.54%
2/23/2016	9.75%	2.94%	6.81%
6/15/2016	9.00%	2.78%	6.22%
6/15/2016	9.00%	2.78%	6.22%
		# of Cases:	373
		Average:	5.38%

Bond Yield Plus Risk Premium - Fully Litigated Only

[1]	[2]	[3]	[4]	[5]
Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
-2.98%	-2.89%			
		Current 30-Year Treasury	2.50%	7.67%
		Blue Chip Financial Forecast 2017Q3 Projection	3.40%	6.79%
		Blue Chip Financial Forecast 2020 Projection	4.40%	6.04%
			10.18%	10.19%
			10.44%	10.44%



Notes:

- [1] Constant of regression equation
- [2] Slope of regression equation
- [3] Source: Current = Bloomberg Professional,
- [3] Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 2.
- [3] Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 14.
- [4] Equals [1] + ln([3]) x [2]
- [5] Equals [3] + [4]
- [6] Source: SNL Financial
- [7] Source: SNL Financial
- [8] Source: Bloomberg Professional, equals 204-trading day average (i.e. lag period)
- [9] Equals [7] - [8]

Bond Yield Plus Risk Premium - Fully Litigated Only

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/1/1980	14.50%	9.35%	5.15%
1/7/1980	14.39%	9.38%	5.01%
1/9/1980	15.00%	9.39%	5.61%
1/14/1980	15.17%	9.41%	5.76%
1/17/1980	13.93%	9.43%	4.50%
1/23/1980	15.50%	9.46%	6.04%
1/30/1980	13.86%	9.51%	4.35%
1/31/1980	12.61%	9.52%	3.09%
2/6/1980	13.71%	9.57%	4.14%
2/13/1980	12.80%	9.62%	3.18%
2/14/1980	13.00%	9.64%	3.36%
2/19/1980	13.50%	9.67%	3.83%
2/27/1980	13.75%	9.77%	3.98%
2/29/1980	13.75%	9.80%	3.95%
2/29/1980	14.00%	9.80%	4.20%
2/29/1980	14.77%	9.80%	4.97%
3/7/1980	12.70%	9.88%	2.82%
3/14/1980	13.50%	9.95%	3.55%
3/26/1980	14.16%	10.08%	4.08%
3/27/1980	14.24%	10.10%	4.14%
3/28/1980	14.50%	10.11%	4.39%
4/11/1980	12.75%	10.25%	2.50%
4/14/1980	13.85%	10.26%	3.59%
4/16/1980	15.50%	10.28%	5.22%
4/22/1980	13.90%	10.32%	3.58%
4/22/1980	13.25%	10.32%	2.93%
4/24/1980	16.80%	10.34%	6.46%
4/29/1980	15.50%	10.38%	5.12%
5/6/1980	13.70%	10.42%	3.28%
5/7/1980	15.00%	10.42%	4.58%
5/8/1980	13.75%	10.43%	3.32%
5/9/1980	14.35%	10.44%	3.91%
5/13/1980	13.60%	10.45%	3.15%
5/15/1980	13.25%	10.46%	2.79%
5/19/1980	13.75%	10.48%	3.27%
5/27/1980	14.60%	10.51%	4.09%
5/27/1980	13.62%	10.51%	3.11%
5/29/1980	16.00%	10.52%	5.48%
5/30/1980	13.80%	10.53%	3.27%
6/9/1980	15.90%	10.57%	5.33%
6/10/1980	13.78%	10.57%	3.21%
6/19/1980	13.40%	10.59%	2.81%
6/30/1980	13.00%	10.62%	2.38%
6/30/1980	13.40%	10.62%	2.78%
7/9/1980	14.75%	10.64%	4.11%
7/10/1980	15.00%	10.65%	4.35%
7/18/1980	13.80%	10.68%	3.12%
7/22/1980	14.10%	10.69%	3.41%
7/24/1980	15.00%	10.70%	4.30%
7/25/1980	13.48%	10.70%	2.78%
7/31/1980	14.58%	10.73%	3.85%
8/8/1980	14.00%	10.76%	3.24%
8/8/1980	13.50%	10.76%	2.74%
8/8/1980	15.45%	10.76%	4.69%
8/11/1980	14.85%	10.77%	4.08%
8/25/1980	13.75%	10.81%	2.94%
8/27/1980	13.80%	10.82%	2.98%
8/29/1980	12.50%	10.83%	1.67%



9/15/1980	13.93%	10.86%	3.07%
9/15/1980	13.50%	10.86%	2.64%
9/24/1980	12.50%	10.91%	1.59%
9/24/1980	15.00%	10.91%	4.09%
9/26/1980	13.75%	10.93%	2.82%
9/30/1980	14.20%	10.94%	3.26%
9/30/1980	14.10%	10.94%	3.16%
10/1/1980	13.90%	10.95%	2.95%
10/3/1980	15.50%	10.96%	4.54%
10/7/1980	12.50%	10.98%	1.52%
10/9/1980	14.50%	10.99%	3.51%
10/9/1980	14.50%	10.99%	3.51%
10/9/1980	13.25%	10.99%	2.26%
10/17/1980	14.50%	11.01%	3.49%
10/31/1980	14.25%	11.09%	3.16%
10/31/1980	13.75%	11.09%	2.66%
11/4/1980	15.00%	11.10%	3.90%
11/5/1980	14.00%	11.11%	2.89%
11/5/1980	13.75%	11.11%	2.64%
11/8/1980	13.75%	11.13%	2.62%
11/10/1980	14.85%	11.14%	3.71%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.18%	2.82%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.22%	2.78%
12/8/1980	15.10%	11.24%	3.86%
12/8/1980	14.15%	11.24%	2.91%
12/12/1980	15.45%	11.26%	4.19%
12/17/1980	13.25%	11.26%	1.99%
12/19/1980	14.50%	11.25%	3.25%
12/19/1980	14.64%	11.25%	3.39%
12/22/1980	13.45%	11.25%	2.20%
12/22/1980	15.00%	11.25%	3.75%
12/30/1980	14.50%	11.24%	3.26%
12/30/1980	14.95%	11.24%	3.71%
12/31/1980	13.39%	11.24%	2.15%
1/2/1981	15.25%	11.24%	4.01%
1/7/1981	14.30%	11.23%	3.07%
1/19/1981	15.25%	11.22%	4.03%
1/23/1981	14.40%	11.22%	3.18%
1/23/1981	13.10%	11.22%	1.88%
1/26/1981	15.25%	11.22%	4.03%
1/27/1981	15.00%	11.22%	3.78%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.24%	4.51%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.32%	3.93%
3/11/1981	15.40%	11.47%	3.93%
3/12/1981	14.51%	11.49%	3.02%
3/12/1981	16.00%	11.49%	4.51%
3/13/1981	13.02%	11.49%	1.53%
3/18/1981	16.19%	11.52%	4.67%
3/19/1981	13.75%	11.53%	2.22%
3/23/1981	14.30%	11.55%	2.75%
3/25/1981	15.30%	11.58%	3.72%
4/1/1981	14.53%	11.64%	2.89%
4/3/1981	19.10%	11.67%	7.43%
4/9/1981	15.00%	11.74%	3.26%
4/9/1981	15.30%	11.74%	3.56%
4/9/1981	17.00%	11.74%	5.26%
4/9/1981	16.50%	11.74%	4.76%

4/10/1981	13.75%	11.76%	1.99%
4/13/1981	13.57%	11.77%	1.80%
4/15/1981	15.30%	11.81%	3.49%
4/16/1981	13.50%	11.83%	1.67%
4/17/1981	14.10%	11.83%	2.27%
4/21/1981	16.80%	11.86%	4.94%
4/21/1981	14.00%	11.86%	2.14%
4/24/1981	16.00%	11.91%	4.09%
4/27/1981	13.61%	11.93%	1.68%
4/27/1981	12.50%	11.93%	0.57%
4/29/1981	13.65%	11.96%	1.69%
4/30/1981	13.50%	11.98%	1.52%
5/4/1981	16.22%	12.02%	4.20%
5/5/1981	14.40%	12.04%	2.36%
5/7/1981	16.25%	12.07%	4.18%
5/7/1981	16.27%	12.07%	4.20%
5/8/1981	13.00%	12.09%	0.91%
5/8/1981	16.00%	12.09%	3.91%
5/12/1981	13.50%	12.12%	1.38%
5/15/1981	15.75%	12.18%	3.57%
5/18/1981	14.88%	12.19%	2.69%
5/20/1981	16.00%	12.22%	3.78%
5/21/1981	14.00%	12.24%	1.76%
5/26/1981	14.90%	12.27%	2.63%
5/27/1981	15.00%	12.28%	2.72%
5/29/1981	15.50%	12.30%	3.20%
6/1/1981	16.50%	12.32%	4.18%
6/3/1981	14.67%	12.34%	2.33%
6/5/1981	13.00%	12.36%	0.64%
6/10/1981	16.75%	12.39%	4.36%
6/17/1981	14.40%	12.43%	1.97%
6/18/1981	16.33%	12.44%	3.89%
6/25/1981	14.75%	12.48%	2.27%
6/26/1981	16.00%	12.49%	3.51%
6/30/1981	15.25%	12.52%	2.73%
7/1/1981	15.50%	12.53%	2.97%
7/1/1981	17.50%	12.53%	4.97%
7/10/1981	16.00%	12.59%	3.41%
7/14/1981	16.90%	12.61%	4.29%
7/15/1981	16.00%	12.62%	3.38%
7/17/1981	15.00%	12.64%	2.36%
7/20/1981	15.00%	12.66%	2.34%
7/21/1981	14.00%	12.67%	1.33%
7/28/1981	13.48%	12.72%	0.76%
7/31/1981	13.50%	12.75%	0.75%
7/31/1981	16.00%	12.75%	3.25%
7/31/1981	15.00%	12.75%	2.25%
8/5/1981	15.71%	12.79%	2.92%
8/10/1981	14.50%	12.83%	1.67%
8/11/1981	15.00%	12.85%	2.15%
8/20/1981	16.50%	12.93%	3.57%
8/20/1981	13.50%	12.93%	0.57%
8/24/1981	15.00%	12.95%	2.05%
8/28/1981	15.00%	13.00%	2.00%
9/10/1981	14.50%	13.09%	1.41%
9/11/1981	16.00%	13.10%	2.90%
9/16/1981	16.00%	13.13%	2.87%
9/17/1981	16.50%	13.14%	3.36%
9/23/1981	15.85%	13.18%	2.67%
9/28/1981	15.50%	13.22%	2.28%
10/9/1981	15.75%	13.30%	2.45%
10/16/1981	16.50%	13.35%	3.15%
10/16/1981	15.50%	13.35%	2.15%

10/19/1981	14.25%	13.36%	0.89%
10/20/1981	15.25%	13.38%	1.87%
10/20/1981	17.00%	13.38%	3.62%
10/23/1981	16.00%	13.42%	2.58%
10/27/1981	10.00%	13.45%	-3.45%
10/29/1981	16.50%	13.48%	3.02%
10/29/1981	14.75%	13.48%	1.27%
11/3/1981	15.17%	13.51%	1.66%
11/5/1981	16.60%	13.52%	3.08%
11/6/1981	15.17%	13.53%	1.64%
11/24/1981	15.50%	13.58%	1.92%
11/25/1981	16.10%	13.59%	2.51%
11/25/1981	16.10%	13.59%	2.51%
11/25/1981	15.25%	13.59%	1.66%
12/1/1981	16.50%	13.59%	2.91%
12/1/1981	15.70%	13.59%	2.11%
12/1/1981	16.49%	13.59%	2.90%
12/1/1981	16.00%	13.59%	2.41%
12/4/1981	16.00%	13.60%	2.40%
12/11/1981	16.25%	13.61%	2.64%
12/14/1981	14.00%	13.61%	0.39%
12/15/1981	15.81%	13.61%	2.20%
12/15/1981	16.00%	13.61%	2.39%
12/16/1981	15.25%	13.62%	1.63%
12/17/1981	16.50%	13.62%	2.88%
12/18/1981	15.45%	13.62%	1.83%
12/30/1981	16.00%	13.65%	2.35%
12/30/1981	16.25%	13.65%	2.60%
12/30/1981	14.25%	13.65%	0.60%
12/31/1981	16.15%	13.65%	2.50%
1/4/1982	15.50%	13.65%	1.85%
1/11/1982	14.50%	13.70%	0.80%
1/11/1982	17.00%	13.70%	3.30%
1/13/1982	14.75%	13.72%	1.03%
1/14/1982	15.75%	13.73%	2.02%
1/15/1982	15.00%	13.74%	1.26%
1/15/1982	16.50%	13.74%	2.76%
1/22/1982	16.25%	13.77%	2.48%
1/27/1982	16.84%	13.79%	3.05%
1/28/1982	13.00%	13.80%	-0.80%
1/29/1982	15.50%	13.80%	1.70%
2/1/1982	15.85%	13.81%	2.04%
2/3/1982	16.44%	13.82%	2.62%
2/8/1982	15.50%	13.84%	1.66%
2/11/1982	16.00%	13.86%	2.14%
2/11/1982	16.20%	13.86%	2.34%
2/19/1982	15.17%	13.88%	1.29%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%
3/12/1982	16.25%	13.87%	2.38%
3/17/1982	17.30%	13.87%	3.43%
3/22/1982	15.10%	13.87%	1.23%
3/27/1982	15.40%	13.88%	1.52%
3/30/1982	15.50%	13.89%	1.61%
3/31/1982	17.00%	13.89%	3.11%
4/1/1982	16.50%	13.89%	2.61%
4/1/1982	14.70%	13.89%	0.81%
4/5/1982	15.50%	13.90%	1.60%
4/8/1982	16.40%	13.91%	2.49%
4/13/1982	14.50%	13.92%	0.58%

4/23/1982	15.75%	13.93%	1.82%
4/27/1982	15.00%	13.93%	1.07%
4/28/1982	15.75%	13.93%	1.82%
4/30/1982	15.50%	13.93%	1.57%
4/30/1982	14.70%	13.93%	0.77%
5/3/1982	16.60%	13.93%	2.67%
5/4/1982	16.00%	13.93%	2.07%
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.91%	1.51%
5/19/1982	14.69%	13.91%	0.78%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/20/1982	15.00%	13.91%	1.09%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.90%	1.10%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.88%	1.62%
6/21/1982	14.90%	13.88%	1.02%
6/23/1982	16.00%	13.88%	2.12%
6/24/1982	14.85%	13.88%	0.97%
6/25/1982	14.70%	13.87%	0.83%
7/1/1982	16.00%	13.86%	2.14%
7/2/1982	15.62%	13.86%	1.76%
7/2/1982	17.00%	13.86%	3.14%
7/13/1982	16.80%	13.83%	2.97%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/22/1982	17.00%	13.79%	3.21%
7/22/1982	14.50%	13.79%	0.71%
7/27/1982	16.75%	13.77%	2.98%
7/29/1982	16.50%	13.76%	2.74%
8/11/1982	17.50%	13.70%	3.80%
8/18/1982	17.07%	13.65%	3.42%
8/20/1982	15.73%	13.63%	2.10%
8/25/1982	16.00%	13.59%	2.41%
8/26/1982	15.50%	13.57%	1.93%
8/30/1982	15.00%	13.56%	1.44%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.49%	-0.41%
9/15/1982	16.25%	13.49%	2.76%
9/16/1982	16.00%	13.49%	2.51%
9/17/1982	15.25%	13.48%	1.77%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.45%	1.80%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.33%	2.57%
10/22/1982	15.75%	13.26%	2.49%
10/29/1982	15.54%	13.19%	2.35%
11/1/1982	15.50%	13.17%	2.33%
11/3/1982	17.20%	13.15%	4.05%
11/5/1982	16.20%	13.12%	3.08%
11/9/1982	16.00%	13.08%	2.92%
11/23/1982	15.85%	12.91%	2.94%
11/23/1982	15.50%	12.91%	2.59%
11/30/1982	16.50%	12.84%	3.66%
12/1/1982	17.04%	12.82%	4.22%

12/6/1982	15.00%	12.76%	2.24%
12/6/1982	16.35%	12.76%	3.59%
12/10/1982	15.50%	12.68%	2.82%
12/13/1982	16.00%	12.67%	3.33%
12/14/1982	16.40%	12.65%	3.75%
12/14/1982	15.30%	12.65%	2.65%
12/20/1982	16.00%	12.59%	3.41%
12/21/1982	15.85%	12.57%	3.28%
12/21/1982	14.75%	12.57%	2.18%
12/22/1982	16.75%	12.56%	4.19%
12/22/1982	16.58%	12.56%	4.02%
12/29/1982	14.90%	12.50%	2.40%
12/29/1982	16.25%	12.50%	3.75%
12/30/1982	16.35%	12.49%	3.86%
12/30/1982	16.00%	12.49%	3.51%
12/30/1982	16.77%	12.49%	4.28%
1/5/1983	17.33%	12.43%	4.90%
1/11/1983	15.90%	12.37%	3.53%
1/12/1983	15.50%	12.35%	3.15%
1/20/1983	17.75%	12.26%	5.49%
1/21/1983	15.00%	12.25%	2.75%
1/24/1983	14.50%	12.24%	2.26%
1/24/1983	15.50%	12.24%	3.26%
1/25/1983	15.85%	12.22%	3.63%
1/27/1983	16.14%	12.19%	3.95%
2/1/1983	18.50%	12.15%	6.35%
2/4/1983	14.00%	12.12%	1.88%
2/10/1983	15.00%	12.08%	2.92%
2/21/1983	15.50%	12.01%	3.49%
2/22/1983	15.50%	12.00%	3.50%
2/23/1983	15.10%	11.98%	3.12%
2/23/1983	16.00%	11.98%	4.02%
3/2/1983	15.25%	11.92%	3.33%
3/9/1983	15.20%	11.85%	3.35%
3/15/1983	13.00%	11.80%	1.20%
3/18/1983	15.25%	11.76%	3.49%
3/23/1983	15.40%	11.72%	3.68%
3/24/1983	15.00%	11.71%	3.29%
3/29/1983	15.50%	11.67%	3.83%
3/31/1983	15.00%	11.64%	3.36%
4/4/1983	15.20%	11.62%	3.58%
4/8/1983	15.50%	11.56%	3.94%
4/11/1983	14.81%	11.54%	3.27%
4/19/1983	14.50%	11.43%	3.07%
4/20/1983	16.00%	11.41%	4.59%
4/29/1983	16.00%	11.29%	4.71%
5/1/1983	14.50%	11.29%	3.21%
5/9/1983	15.50%	11.19%	4.31%
5/11/1983	16.46%	11.16%	5.30%
5/12/1983	14.14%	11.15%	2.99%
5/18/1983	15.00%	11.10%	3.90%
5/23/1983	15.50%	11.05%	4.45%
5/25/1983	15.50%	11.03%	4.47%
5/27/1983	15.00%	11.00%	4.00%
5/31/1983	15.50%	10.99%	4.51%
5/31/1983	14.00%	10.99%	3.01%
6/2/1983	14.50%	10.97%	3.53%
6/17/1983	15.03%	10.87%	4.16%
7/1/1983	14.80%	10.81%	3.99%
7/1/1983	14.90%	10.81%	4.09%
7/8/1983	16.25%	10.78%	5.47%
7/13/1983	13.20%	10.77%	2.43%
7/19/1983	15.10%	10.76%	4.34%

7/19/1983	15.00%	10.76%	4.24%
7/25/1983	16.25%	10.75%	5.50%
7/28/1983	15.90%	10.75%	5.15%
8/3/1983	16.50%	10.75%	5.75%
8/3/1983	16.34%	10.75%	5.59%
8/22/1983	16.40%	10.80%	5.60%
8/22/1983	15.50%	10.80%	4.70%
8/31/1983	14.75%	10.84%	3.91%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.90%	3.60%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.93%	3.57%
9/29/1983	15.50%	10.94%	4.56%
9/30/1983	16.15%	10.94%	5.21%
9/30/1983	15.25%	10.94%	4.31%
10/4/1983	14.80%	10.95%	3.85%
10/7/1983	16.00%	10.96%	5.04%
10/13/1983	15.52%	10.98%	4.54%
10/17/1983	15.50%	10.99%	4.51%
10/18/1983	14.50%	10.99%	3.51%
10/19/1983	16.50%	11.00%	5.50%
10/19/1983	16.25%	11.00%	5.25%
10/26/1983	15.00%	11.03%	3.97%
10/27/1983	15.20%	11.03%	4.17%
11/9/1983	14.90%	11.08%	3.82%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.16%	3.59%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.18%	4.38%
12/19/1983	14.80%	11.20%	3.60%
12/20/1983	16.00%	11.20%	4.80%
12/20/1983	16.25%	11.20%	5.05%
12/22/1983	15.75%	11.22%	4.53%
12/22/1983	14.75%	11.22%	3.53%
1/3/1984	14.75%	11.26%	3.49%
1/10/1984	15.90%	11.28%	4.62%
1/12/1984	15.60%	11.29%	4.31%
1/18/1984	13.75%	11.31%	2.44%
1/19/1984	15.90%	11.32%	4.58%
1/31/1984	15.25%	11.36%	3.89%
2/1/1984	14.80%	11.36%	3.44%
2/6/1984	14.75%	11.38%	3.37%
2/6/1984	13.75%	11.38%	2.37%
2/9/1984	15.25%	11.40%	3.85%
2/20/1984	15.00%	11.44%	3.56%
2/20/1984	15.00%	11.44%	3.56%
2/22/1984	14.75%	11.45%	3.30%
2/28/1984	14.50%	11.49%	3.01%
3/2/1984	14.25%	11.51%	2.74%
3/20/1984	16.00%	11.63%	4.37%
3/23/1984	15.50%	11.65%	3.85%
3/26/1984	14.71%	11.66%	3.05%
4/6/1984	14.74%	11.73%	3.01%
4/11/1984	15.72%	11.76%	3.96%
4/17/1984	15.00%	11.79%	3.21%
4/18/1984	16.20%	11.80%	4.40%
4/25/1984	14.64%	11.84%	2.80%
4/30/1984	14.40%	11.86%	2.54%
5/16/1984	14.69%	11.97%	2.72%

5/16/1984	15.00%	11.97%	3.03%
5/22/1984	14.40%	12.01%	2.39%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.14%	3.11%
6/15/1984	15.60%	12.16%	3.44%
6/29/1984	15.25%	12.24%	3.01%
7/2/1984	13.35%	12.25%	1.10%
7/10/1984	16.00%	12.30%	3.70%
7/12/1984	16.50%	12.31%	4.19%
7/13/1984	16.25%	12.32%	3.93%
7/17/1984	14.14%	12.33%	1.81%
7/18/1984	15.50%	12.34%	3.16%
7/18/1984	15.30%	12.34%	2.96%
7/24/1984	16.79%	12.37%	4.42%
7/31/1984	16.00%	12.41%	3.59%
8/3/1984	14.25%	12.43%	1.82%
8/17/1984	14.30%	12.47%	1.83%
8/20/1984	15.00%	12.48%	2.52%
8/27/1984	16.30%	12.49%	3.81%
8/31/1984	15.55%	12.51%	3.04%
9/6/1984	16.00%	12.52%	3.48%
9/10/1984	14.75%	12.52%	2.23%
9/13/1984	15.00%	12.53%	2.47%
9/17/1984	17.38%	12.54%	4.84%
9/28/1984	16.25%	12.56%	3.69%
10/9/1984	14.75%	12.57%	2.18%
10/12/1984	15.60%	12.57%	3.03%
10/22/1984	15.00%	12.57%	2.43%
10/26/1984	16.40%	12.57%	3.83%
10/31/1984	16.25%	12.57%	3.68%
11/7/1984	15.60%	12.56%	3.04%
11/20/1984	15.25%	12.56%	2.69%
11/20/1984	15.92%	12.56%	3.36%
11/23/1984	15.00%	12.56%	2.44%
11/28/1984	16.15%	12.55%	3.60%
12/4/1984	16.50%	12.55%	3.95%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.52%	2.23%
12/19/1984	15.00%	12.52%	2.48%
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985	15.75%	12.47%	3.28%
1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.36%	2.11%
3/1/1985	13.84%	12.31%	1.53%
3/8/1985	16.85%	12.30%	4.55%
3/14/1985	15.50%	12.27%	3.23%
3/29/1985	15.62%	12.19%	3.43%
4/3/1985	14.60%	12.17%	2.43%
4/9/1985	15.50%	12.14%	3.36%
4/16/1985	15.70%	12.08%	3.62%
4/22/1985	14.00%	12.04%	1.96%
4/26/1985	15.50%	12.00%	3.50%
4/29/1985	15.00%	12.00%	3.00%
5/2/1985	14.68%	11.97%	2.71%
5/8/1985	15.62%	11.92%	3.70%
7/9/1985	15.00%	11.47%	3.53%
7/16/1985	14.50%	11.41%	3.09%

7/26/1985	14.50%	11.34%	3.16%
8/2/1985	14.80%	11.31%	3.49%
8/7/1985	15.00%	11.29%	3.71%
8/28/1985	14.25%	11.16%	3.09%
8/28/1985	15.50%	11.16%	4.34%
8/29/1985	14.50%	11.16%	3.34%
9/9/1985	14.60%	11.12%	3.48%
9/17/1985	14.90%	11.10%	3.80%
9/23/1985	15.00%	11.07%	3.93%
9/27/1985	15.80%	11.05%	4.75%
9/27/1985	15.50%	11.05%	4.45%
10/2/1985	14.75%	11.04%	3.71%
10/2/1985	14.00%	11.04%	2.96%
10/3/1985	15.25%	11.04%	4.21%
10/24/1985	15.40%	10.97%	4.43%
10/24/1985	15.85%	10.97%	4.88%
10/24/1985	15.82%	10.97%	4.85%
10/29/1985	16.65%	10.95%	5.70%
11/4/1985	14.50%	10.93%	3.57%
11/8/1985	14.30%	10.90%	3.40%
12/12/1985	14.75%	10.74%	4.01%
12/18/1985	15.00%	10.70%	4.30%
12/20/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.69%	3.81%
12/20/1985	14.50%	10.69%	3.81%
1/24/1986	15.40%	10.43%	4.97%
1/31/1986	15.00%	10.37%	4.63%
2/5/1986	15.00%	10.34%	4.66%
2/10/1986	13.30%	10.31%	2.99%
2/11/1986	12.50%	10.30%	2.20%
2/14/1986	14.40%	10.27%	4.13%
2/18/1986	16.00%	10.25%	5.75%
2/24/1986	14.50%	10.20%	4.30%
2/26/1986	14.00%	10.17%	3.83%
3/11/1986	14.50%	10.04%	4.46%
3/12/1986	13.50%	10.02%	3.48%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.85%	3.65%
4/1/1986	14.00%	9.84%	4.16%
4/2/1986	15.50%	9.82%	5.68%
4/4/1986	15.00%	9.79%	5.21%
4/14/1986	13.40%	9.71%	3.69%
4/23/1986	15.00%	9.59%	5.41%
5/16/1986	14.50%	9.35%	5.15%
5/29/1986	13.90%	9.22%	4.68%
5/30/1986	15.10%	9.21%	5.89%
6/2/1986	12.81%	9.20%	3.61%
6/11/1986	14.00%	9.10%	4.90%
6/24/1986	16.63%	8.97%	7.66%
6/26/1986	12.00%	8.94%	3.06%
6/26/1986	14.75%	8.94%	5.81%
6/30/1986	13.00%	8.91%	4.09%
7/10/1986	14.34%	8.79%	5.55%
7/11/1986	12.75%	8.77%	3.98%
7/14/1986	12.60%	8.75%	3.85%
7/17/1986	12.40%	8.70%	3.70%
7/25/1986	14.25%	8.61%	5.64%
8/6/1986	13.50%	8.48%	5.02%
8/14/1986	13.50%	8.39%	5.11%
9/19/1986	13.25%	8.07%	5.18%
10/1/1986	14.00%	7.98%	6.02%
10/3/1986	13.40%	7.96%	5.44%
10/31/1986	13.50%	7.81%	5.69%



11/5/1986	13.00%	7.78%	5.22%
12/3/1986	12.90%	7.61%	5.29%
12/4/1986	14.44%	7.60%	6.84%
12/22/1986	13.80%	7.52%	6.28%
12/30/1986	13.00%	7.50%	5.50%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.48%	4.92%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.53%	4.47%
5/5/1987	12.85%	7.57%	5.28%
5/12/1987	12.65%	7.61%	5.04%
5/28/1987	13.50%	7.69%	5.81%
6/15/1987	13.20%	7.77%	5.43%
6/29/1987	15.00%	7.83%	7.17%
6/30/1987	12.50%	7.83%	4.67%
7/8/1987	12.00%	7.85%	4.15%
7/10/1987	12.90%	7.86%	5.04%
7/15/1987	13.50%	7.87%	5.63%
7/16/1987	15.00%	7.88%	7.12%
7/16/1987	13.50%	7.88%	5.62%
7/27/1987	13.00%	7.91%	5.09%
7/27/1987	13.40%	7.91%	5.49%
7/27/1987	13.50%	7.91%	5.59%
7/31/1987	12.98%	7.94%	5.04%
8/26/1987	12.63%	8.05%	4.58%
8/26/1987	12.75%	8.05%	4.70%
9/9/1987	13.00%	8.12%	4.88%
9/30/1987	13.00%	8.29%	4.71%
10/2/1987	11.50%	8.31%	3.19%
11/2/1987	13.00%	8.52%	4.48%
11/19/1987	13.00%	8.61%	4.39%
11/30/1987	12.00%	8.66%	3.34%
12/3/1987	14.20%	8.68%	5.52%
12/15/1987	13.25%	8.75%	4.50%
12/16/1987	13.72%	8.76%	4.96%
12/16/1987	13.50%	8.76%	4.74%
12/21/1987	12.01%	8.78%	3.23%
12/22/1987	12.75%	8.79%	3.96%
12/22/1987	12.00%	8.79%	3.21%
12/22/1987	12.00%	8.79%	3.21%
1/20/1988	13.80%	8.91%	4.89%
1/29/1988	13.20%	8.94%	4.26%
2/4/1988	12.60%	8.95%	3.65%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%
3/24/1988	11.24%	8.92%	2.32%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.92%	4.33%
4/25/1988	10.96%	8.95%	2.01%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.98%	4.52%
6/30/1988	12.75%	9.01%	3.74%
7/1/1988	12.75%	9.00%	3.75%
7/20/1988	13.40%	8.98%	4.42%
8/5/1988	12.75%	8.94%	3.81%
8/29/1988	12.75%	8.94%	3.81%

10/13/1988	13.10%	8.94%	4.16%
12/19/1988	13.00%	9.00%	4.00%
12/20/1988	13.00%	9.01%	3.99%
12/20/1988	12.25%	9.01%	3.24%
12/21/1988	12.90%	9.01%	3.89%
12/28/1988	13.10%	9.02%	4.08%
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/30/1989	14.00%	9.05%	4.95%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.01%	4.19%
6/8/1989	13.50%	8.99%	4.51%
6/27/1989	13.25%	8.92%	4.33%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.64%	3.61%
10/24/1989	12.50%	8.55%	3.95%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.35%	4.65%
12/20/1989	12.90%	8.33%	4.57%
12/21/1989	12.90%	8.33%	4.57%
12/27/1989	12.50%	8.31%	4.19%
1/10/1990	12.80%	8.26%	4.54%
1/11/1990	12.90%	8.25%	4.65%
1/17/1990	12.80%	8.24%	4.56%
2/9/1990	12.10%	8.19%	3.91%
2/24/1990	12.86%	8.16%	4.70%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%
4/12/1990	12.52%	8.18%	4.34%
4/19/1990	12.75%	8.19%	4.56%
5/21/1990	12.10%	8.28%	3.82%
5/31/1990	12.00%	8.30%	3.70%
6/6/1990	12.25%	8.30%	3.95%
6/15/1990	13.20%	8.31%	4.89%
6/20/1990	12.92%	8.32%	4.60%
6/27/1990	12.90%	8.33%	4.57%
6/29/1990	12.50%	8.33%	4.17%
7/6/1990	12.35%	8.34%	4.01%
7/6/1990	12.10%	8.34%	3.76%
8/10/1990	12.55%	8.40%	4.15%
8/16/1990	13.21%	8.42%	4.79%
8/22/1990	13.10%	8.44%	4.66%
8/24/1990	13.00%	8.45%	4.55%
10/2/1990	13.00%	8.60%	4.40%
10/5/1990	12.84%	8.61%	4.23%
10/25/1990	12.30%	8.67%	3.63%
12/13/1990	12.30%	8.67%	3.63%
12/17/1990	12.87%	8.67%	4.20%
12/18/1990	13.10%	8.66%	4.44%
12/21/1990	12.50%	8.66%	3.84%
1/2/1991	13.10%	8.65%	4.45%
1/4/1991	12.50%	8.65%	3.85%
1/15/1991	12.75%	8.64%	4.11%
1/25/1991	11.70%	8.63%	3.07%
2/7/1991	12.50%	8.60%	3.90%
2/14/1991	12.72%	8.57%	4.15%
3/6/1991	13.10%	8.53%	4.57%
3/8/1991	13.00%	8.53%	4.47%
3/8/1991	12.30%	8.53%	3.77%

4/22/1991	13.00%	8.49%	4.51%
5/7/1991	13.50%	8.47%	5.03%
5/13/1991	13.25%	8.47%	4.78%
5/30/1991	12.75%	8.45%	4.30%
6/12/1991	12.00%	8.42%	3.58%
6/25/1991	11.70%	8.40%	3.30%
7/1/1991	12.00%	8.39%	3.61%
7/19/1991	12.10%	8.35%	3.75%
8/1/1991	12.90%	8.33%	4.57%
8/16/1991	13.20%	8.30%	4.90%
10/17/1991	13.00%	8.21%	4.79%
10/23/1991	12.50%	8.20%	4.30%
10/31/1991	11.80%	8.19%	3.61%
11/1/1991	12.00%	8.19%	3.81%
11/5/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.17%	4.23%
11/26/1991	12.50%	8.17%	4.33%
11/26/1991	11.60%	8.17%	3.43%
11/27/1991	12.10%	8.17%	3.93%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
1/9/1992	12.80%	8.09%	4.71%
1/27/1992	12.65%	8.06%	4.59%
1/31/1992	12.00%	8.05%	3.95%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.02%	4.48%
3/16/1992	11.43%	7.99%	3.44%
3/18/1992	12.28%	7.99%	4.29%
4/2/1992	12.10%	7.96%	4.14%
4/9/1992	11.45%	7.95%	3.50%
4/10/1992	11.50%	7.94%	3.56%
5/5/1992	11.50%	7.90%	3.60%
5/12/1992	12.46%	7.89%	4.57%
5/12/1992	11.87%	7.89%	3.98%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.72%	4.28%
9/30/1992	11.75%	7.70%	4.05%
10/2/1992	13.00%	7.70%	5.30%
10/16/1992	13.16%	7.70%	5.46%
12/3/1992	11.85%	7.68%	4.17%
12/15/1992	11.00%	7.67%	3.33%
12/16/1992	11.90%	7.67%	4.24%
12/16/1992	12.40%	7.67%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.40%	7.65%	4.75%
12/22/1992	12.30%	7.65%	4.65%
12/29/1992	12.25%	7.64%	4.61%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/15/1993	12.30%	7.53%	4.77%
2/24/1993	11.90%	7.50%	4.40%

2/26/1993	11.80%	7.49%	4.31%
2/26/1993	12.20%	7.49%	4.71%
4/23/1993	11.75%	7.30%	4.45%
5/11/1993	11.75%	7.25%	4.50%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.23%	4.27%
5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.11%	4.27%
7/23/1993	10.46%	7.10%	3.36%
9/21/1993	10.50%	6.82%	3.68%
9/29/1993	11.47%	6.78%	4.69%
9/30/1993	11.60%	6.77%	4.83%
11/12/1993	12.00%	6.58%	5.42%
11/26/1993	11.00%	6.53%	4.47%
12/14/1993	10.55%	6.49%	4.06%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.48%	4.82%
1/13/1994	11.00%	6.43%	4.57%
1/21/1994	11.00%	6.41%	4.59%
1/28/1994	11.35%	6.40%	4.95%
2/3/1994	11.40%	6.39%	5.01%
2/17/1994	10.60%	6.37%	4.23%
2/25/1994	12.00%	6.36%	5.64%
3/4/1994	11.00%	6.36%	4.64%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%
6/3/1994	11.00%	6.53%	4.47%
6/27/1994	11.40%	6.63%	4.77%
8/5/1994	12.75%	6.86%	5.89%
10/31/1994	10.00%	7.31%	2.69%
11/9/1994	10.85%	7.37%	3.48%
11/9/1994	10.85%	7.37%	3.48%
11/18/1994	11.20%	7.43%	3.77%
11/22/1994	11.60%	7.45%	4.15%
12/8/1994	11.70%	7.53%	4.17%
12/8/1994	11.50%	7.53%	3.97%
12/14/1994	10.95%	7.55%	3.40%
12/15/1994	11.50%	7.55%	3.95%
12/19/1994	11.50%	7.56%	3.94%
12/28/1994	12.15%	7.60%	4.55%
1/9/1995	12.28%	7.63%	4.65%
1/31/1995	11.00%	7.68%	3.32%
2/10/1995	12.60%	7.70%	4.90%
3/20/1995	12.00%	7.71%	4.29%
3/29/1995	11.60%	7.71%	3.89%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995	11.63%	7.67%	3.96%
5/25/1995	11.20%	7.64%	3.56%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.52%	3.58%
9/11/1995	11.30%	7.22%	4.08%
9/27/1995	11.50%	7.14%	4.36%
9/27/1995	11.30%	7.14%	4.16%
9/29/1995	11.00%	7.13%	3.87%
12/11/1995	11.40%	6.76%	4.64%
12/20/1995	11.60%	6.71%	4.89%
12/27/1995	12.00%	6.68%	5.32%
2/5/1996	12.25%	6.50%	5.75%

4/8/1996	11.00%	6.42%	4.58%
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
9/27/1996	11.00%	6.70%	4.30%
11/26/1996	11.30%	6.82%	4.48%
12/31/1996	11.50%	6.83%	4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.83%	4.97%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.81%	3.21%
4/2/1997	11.65%	6.81%	4.84%
4/28/1997	11.50%	6.81%	4.69%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
12/23/1997	11.12%	6.58%	4.54%
2/2/1998	12.75%	6.41%	6.34%
3/2/1998	11.25%	6.30%	4.95%
4/30/1998	12.20%	6.13%	6.07%
7/10/1998	11.40%	5.94%	5.46%
9/15/1998	11.90%	5.79%	6.11%
12/10/1998	12.20%	5.55%	6.65%
12/17/1998	12.10%	5.53%	6.57%
2/5/1999	10.30%	5.39%	4.91%
3/4/1999	10.50%	5.35%	5.15%
4/6/1999	10.94%	5.33%	5.61%
7/29/1999	10.75%	5.51%	5.24%
1/7/2000	11.50%	6.04%	5.46%
1/7/2000	11.50%	6.04%	5.46%
2/17/2000	10.60%	6.17%	4.43%
3/28/2000	11.25%	6.19%	5.06%
5/24/2000	11.00%	6.18%	4.82%
7/18/2000	12.20%	6.16%	6.04%
9/29/2000	11.16%	6.04%	5.12%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.89%	6.21%
2/8/2001	11.50%	5.78%	5.72%
5/8/2001	10.75%	5.62%	5.13%
7/25/2001	11.02%	5.60%	5.42%
7/25/2001	11.02%	5.60%	5.42%
9/10/2001	11.00%	5.55%	5.45%
9/20/2001	10.00%	5.55%	4.45%
12/3/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.49%	7.01%
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002	10.17%	5.46%	4.71%
6/10/2002	12.00%	5.47%	6.53%
6/20/2002	12.30%	5.47%	6.83%
7/15/2002	11.00%	5.47%	5.53%
9/12/2002	12.30%	5.45%	6.85%
9/26/2002	10.45%	5.41%	5.04%
1/31/2003	12.45%	5.14%	7.31%
2/28/2003	12.30%	5.06%	7.24%
3/6/2003	10.75%	5.04%	5.71%
3/7/2003	9.96%	5.03%	4.93%
3/20/2003	12.00%	5.00%	7.00%
4/3/2003	12.00%	4.97%	7.03%
4/15/2003	11.15%	4.95%	6.20%
7/16/2003	9.75%	4.79%	4.96%
12/17/2003	9.85%	4.93%	4.92%
12/19/2003	12.00%	4.93%	7.07%
12/19/2003	12.00%	4.93%	7.07%
1/13/2004	12.00%	4.95%	7.05%

3/2/2004	10.75%	4.97%	5.78%
3/26/2004	10.25%	5.01%	5.24%
4/5/2004	11.25%	5.02%	6.23%
5/18/2004	10.50%	5.08%	5.42%
5/25/2004	10.25%	5.08%	5.17%
7/16/2004	11.60%	5.11%	6.49%
9/9/2004	10.40%	5.10%	5.30%
11/23/2004	11.00%	5.06%	5.94%
12/21/2004	11.50%	5.06%	6.44%
12/22/2004	10.70%	5.06%	5.64%
12/22/2004	11.50%	5.06%	6.44%
2/18/2005	10.30%	4.99%	5.31%
3/10/2005	11.00%	4.94%	6.06%
4/4/2005	10.00%	4.89%	5.11%
7/19/2005	11.50%	4.65%	6.85%
8/5/2005	11.75%	4.63%	7.12%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/22/2005	11.15%	4.55%	6.60%
12/22/2005	11.00%	4.55%	6.45%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.54%	6.46%
1/27/2006	9.75%	4.52%	5.23%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.88%	4.67%
9/1/2006	10.54%	4.89%	5.65%
11/21/2006	10.08%	4.94%	5.14%
11/21/2006	10.08%	4.94%	5.14%
11/21/2006	10.12%	4.94%	5.18%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.90%	4.95%	5.95%
1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.95%	5.85%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.81%	5.39%
5/22/2007	10.50%	4.81%	5.69%
5/23/2007	10.70%	4.81%	5.89%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/28/2007	10.75%	4.84%	5.91%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.85%	5.11%
12/14/2007	10.80%	4.85%	5.95%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.82%	5.93%
1/28/2008	9.40%	4.80%	4.60%
1/30/2008	10.00%	4.79%	5.21%

2/29/2008	10.25%	4.75%	5.50%
3/25/2008	9.10%	4.70%	4.40%
4/24/2008	10.10%	4.61%	5.49%
5/19/2008	11.00%	4.57%	6.43%
5/27/2008	10.00%	4.56%	5.44%
6/10/2008	10.70%	4.55%	6.15%
6/27/2008	11.04%	4.55%	6.49%
7/10/2008	10.43%	4.53%	5.90%
7/30/2008	10.80%	4.51%	6.29%
8/11/2008	10.25%	4.51%	5.74%
8/26/2008	10.18%	4.50%	5.68%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.10%	6.66%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009	8.75%	4.07%	4.68%
3/12/2009	11.50%	3.95%	7.55%
4/24/2009	10.00%	3.80%	6.20%
4/30/2009	11.25%	3.79%	7.46%
5/4/2009	10.74%	3.79%	6.95%
6/22/2009	10.00%	3.77%	6.23%
6/24/2009	10.80%	3.77%	7.03%
8/31/2009	10.25%	3.82%	6.43%
10/23/2009	10.88%	4.03%	6.85%
11/2/2009	10.70%	4.08%	6.62%
11/30/2009	10.35%	4.15%	6.20%
12/18/2009	10.40%	4.21%	6.19%
12/18/2009	10.40%	4.21%	6.19%
12/22/2009	10.20%	4.22%	5.98%
12/22/2009	10.40%	4.22%	6.18%
12/22/2009	10.40%	4.22%	6.18%
12/30/2009	10.00%	4.25%	5.75%
1/4/2010	10.80%	4.26%	6.54%
1/11/2010	11.00%	4.29%	6.71%
2/9/2010	9.80%	4.37%	5.43%
2/18/2010	10.60%	4.39%	6.21%
3/2/2010	9.63%	4.41%	5.22%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/28/2010	10.10%	4.44%	5.66%
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7/1/2010	10.25%	4.42%	5.83%
7/15/2010	10.53%	4.42%	6.11%
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9/30/2010	9.75%	4.29%	5.46%
11/2/2010	10.38%	4.21%	6.17%
11/4/2010	10.70%	4.20%	6.50%
11/22/2010	10.00%	4.18%	5.82%
12/6/2010	9.86%	4.16%	5.70%
12/15/2010	10.44%	4.16%	6.28%
12/20/2010	10.60%	4.16%	6.44%
12/27/2010	9.90%	4.15%	5.75%

1/12/2011	10.30%	4.14%	6.16%
1/13/2011	10.30%	4.14%	6.16%
1/18/2011	10.00%	4.13%	5.87%
1/20/2011	9.30%	4.13%	5.17%
1/31/2011	9.60%	4.13%	5.47%
2/3/2011	10.00%	4.13%	5.87%
3/25/2011	9.80%	4.18%	5.62%
4/12/2011	10.00%	4.20%	5.80%
4/25/2011	10.74%	4.23%	6.51%
4/27/2011	10.40%	4.23%	6.17%
5/4/2011	10.00%	4.24%	5.76%
5/4/2011	10.00%	4.24%	5.76%
5/24/2011	10.50%	4.26%	6.24%
6/16/2011	9.20%	4.30%	4.90%
7/13/2011	10.20%	4.35%	5.85%
8/1/2011	9.20%	4.38%	4.82%
8/12/2011	10.35%	4.37%	5.98%
9/2/2011	12.88%	4.32%	8.56%
10/20/2011	10.50%	4.11%	6.39%
11/30/2011	10.90%	3.89%	7.01%
11/30/2011	10.90%	3.89%	7.01%
12/22/2011	9.90%	3.76%	6.14%
12/22/2011	10.40%	3.76%	6.64%
12/23/2011	10.19%	3.76%	6.43%
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9/19/2012	10.05%	2.94%	7.11%
9/26/2012	9.50%	2.94%	6.56%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.89%	6.91%
12/13/2012	9.50%	2.89%	6.61%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.88%	6.83%
12/20/2012	10.40%	2.88%	7.52%
12/20/2012	10.30%	2.88%	7.42%
12/20/2012	10.45%	2.88%	7.57%
12/21/2012	10.20%	2.88%	7.32%
2/13/2013	10.20%	2.85%	7.35%
2/22/2013	9.75%	2.85%	6.90%
7/12/2013	9.36%	3.07%	6.29%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.15%	6.00%
10/3/2013	9.65%	3.32%	6.33%
11/6/2013	10.20%	3.40%	6.80%
11/26/2013	10.00%	3.45%	6.55%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.47%	6.73%
12/9/2013	8.72%	3.48%	5.24%
12/13/2013	9.75%	3.49%	6.26%
12/16/2013	10.12%	3.50%	6.62%
12/18/2013	8.72%	3.50%	5.22%
12/30/2013	9.50%	3.53%	5.97%



3/26/2014	9.40%	3.72%	5.68%
3/26/2014	9.96%	3.72%	6.24%
4/2/2014	9.70%	3.72%	5.98%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
7/2/2014	9.62%	3.64%	5.98%
11/6/2014	9.56%	3.38%	6.18%
11/6/2014	10.20%	3.38%	6.82%
11/14/2014	10.20%	3.36%	6.84%
11/26/2014	9.70%	3.33%	6.37%
11/26/2014	10.20%	3.33%	6.87%
12/10/2014	9.25%	3.30%	5.95%
12/10/2014	9.25%	3.30%	5.95%
12/12/2014	10.20%	3.29%	6.91%
12/17/2014	9.17%	3.28%	5.89%
12/18/2014	9.83%	3.27%	6.56%
1/23/2015	9.50%	3.15%	6.35%
3/18/2015	9.75%	2.99%	6.76%
3/25/2015	9.50%	2.97%	6.53%
3/26/2015	9.72%	2.96%	6.76%
4/29/2015	9.53%	2.87%	6.66%
5/26/2015	9.75%	2.84%	6.91%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%
11/19/2015	10.30%	2.87%	7.43%
11/19/2015	10.00%	2.87%	7.13%
12/3/2015	10.00%	2.89%	7.11%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/17/2015	9.70%	2.90%	6.80%
12/30/2015	9.50%	2.92%	6.58%
3/16/2016	9.85%	2.91%	6.94%
4/29/2016	9.80%	2.84%	6.96%
6/3/2016	9.75%	2.80%	6.95%
6/8/2016	9.48%	2.80%	6.68%

# of Cases: 1,102  
 Average: 4.22%

Implied Return on Equity with M/B Ratio at Unity

Institution Name	Ticker	ROACE (%)	Price/ Book (%)
		2015	2015
ALLETE, Inc.	ALE	7.97	137.0
Alliant Energy Corporation	LNT	10.40	190.3
Ameren Corporation	AEE	9.23	151.0
American Electric Power Company, Inc.	AEP	11.74	159.9
Avista Corporation	AVA	8.17	144.2
Black Hills Corporation	BKH	N/A	162.1
CMS Energy Corporation	CMS	13.65	253.9
Consolidated Edison, Inc.	ED	9.28	144.3
Dominion Resources, Inc.	D	15.46	318.5
Duke Energy Corporation	DUK	7.01	123.7
Edison International	EIX	9.03	169.7
El Paso Electric Company	EE	8.21	153.2
Energys Corporation	ETR	N/A	131.7
Eversource Energy	ES	8.62	156.5
FirstEnergy Corp.	FE	4.63	108.2
IDACORP, Inc.	IDA	9.72	166.3
MGE Energy, Inc.	MGEE	10.56	233.0
NextEra Energy, Inc.	NEE	12.93	212.2
NorthWestern Corporation	NWE	9.95	163.3
OGE Energy Corp.	OGE	8.24	157.9
Otter Tail Corporation	OTTR	10.05	166.6
PG&E Corporation	PCG	5.42	157.9
Pinnacle West Capital Corporation	PNW	9.76	156.1
PNM Resources, Inc.	PNM	0.91	147.1
Portland General Electric Company	POR	8.12	143.0
SCANA Corporation	SCG	14.00	158.8
Southern Company	SO	11.67	207.2
WEC Energy Group, Inc.	WEC	9.08	187.2
Xcel Energy Inc.	XEL	9.50	171.9

Source: SNL Financial

Implied Return on Equity with M/B Ratio at Unity

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.696375
R Square	0.484938
Adjusted R Square	0.464336
Standard Error	31.472311
Observations	27

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	23314.418992	23314.418992	23.537879	0.000055
Residual	25	24762.658747	990.506350		
Total	26	48077.077739			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	76.870997	20.484734	3.752599	0.000933	34.681898	119.060097
ROACE (%)	10.119661	2.085846	4.851585	0.000055	5.823780	14.415542

ROE (%)	PRICE/BOOK
2.29	100.00
3.27	110.00

Constant Growth Discounted Cash Flow Model and Credit Rating Regression  
30 Day Dividend Yield

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	S&P Issuer Credit Rating	Numeric Credit Score
		Dividend Yield	Expected Dividend Yield	Yahoo Earnings Growth	Reuters Earnings Growth	Zacks Earnings Growth	Average Earnings Growth	Mean ROE			
ALLETE, Inc.	ALE	3.70%	3.77%	3.00%	NA	4.50%	3.75%	7.52%	BBB+		5
Alliant Energy Corporation	LNT	3.30%	3.41%	6.60%	6.60%	6.10%	6.43%	9.84%	A-		4
Ameren Corporation	AEE	3.50%	3.60%	5.20%	5.20%	6.10%	5.50%	9.10%	BBB+		5
American Electric Power Company, Inc.	AEP	3.50%	3.58%	4.10%	4.10%	4.90%	4.37%	7.94%	BBB		6
Avista Corporation	AVA	3.40%	3.49%	5.00%	NA	5.00%	5.00%	8.49%	BBB		6
Black Hills Corporation	BKH	2.80%	2.89%	6.50%	NA	6.50%	6.50%	9.39%	BBB		6
CMS Energy Corporation	CMS	3.00%	3.10%	7.20%	7.20%	6.40%	6.93%	10.04%	BBB+		5
Consolidated Edison, Inc.	ED	3.70%	3.74%	1.90%	1.90%	2.30%	2.03%	5.77%	A-		4
Dominion Resources, Inc.	D	4.00%	4.12%	5.90%	5.90%	6.80%	6.20%	10.32%	BBB+		5
Duke Energy Corporation	DUK	4.20%	4.30%	4.60%	4.60%	4.80%	4.67%	8.96%	A-		4
Edison International	EIX	2.70%	2.74%	2.50%	2.50%	4.90%	3.30%	6.04%	BBB+		5
El Paso Electric Company	EE	2.80%	2.90%	7.00%	NA	6.70%	6.85%	9.75%	BBB		6
Energy Corporation	ETR	4.50%	4.45%	-2.40%	-2.40%	-2.30%	-2.37%	2.08%	BBB		6
Eversource Energy	ES	3.20%	3.30%	6.30%	6.30%	6.30%	6.30%	9.60%	A		3
FirstEnergy Corp.	FE	4.30%	4.26%	-2.50%	-2.50%	-1.00%	-2.00%	2.26%	BBB-		7
IDACORP, Inc.	IDA	2.80%	2.86%	4.00%	4.00%	4.00%	4.00%	6.86%	BBB		6
MGE Energy, Inc.	MGEE	2.30%	2.35%	4.00%	NA	NA	4.00%	6.35%	AA-		1
NextEra Energy, Inc.	NEE	2.90%	3.00%	7.40%	7.40%	6.90%	7.23%	10.24%	A-		4
NorthWestern Corporation	NWE	3.50%	3.59%	5.00%	5.00%	5.00%	5.00%	8.59%	BBB		6
OGE Energy Corp.	OGE	3.70%	3.79%	4.30%	4.30%	5.20%	4.60%	8.39%	A-		4
Otter Tail Corporation	OTTR	4.30%	4.43%	6.00%	NA	NA	6.00%	10.43%	BBB		6
PG&E Corporation	PCG	3.30%	3.40%	6.10%	6.10%	5.10%	5.77%	9.16%	BBB		6
Pinnacle West Capital Corporation	PNW	3.40%	3.47%	3.70%	3.70%	4.10%	3.83%	7.30%	A-		4
PNM Resources, Inc.	PNM	2.70%	2.81%	8.80%	8.80%	7.60%	8.40%	11.21%	BBB+		5
Portland General Electric Company	POR	3.20%	3.30%	6.60%	6.60%	6.40%	6.53%	9.84%	BBB		6
SCANA Corporation	SCG	3.30%	3.38%	4.80%	4.80%	5.30%	4.97%	8.35%	BBB+		5
Southern Company	SO	4.50%	4.58%	3.30%	3.20%	4.10%	3.53%	8.11%	A-		4
WEC Energy Group, Inc.	WEC	3.40%	3.51%	6.80%	6.80%	6.30%	6.63%	10.15%	A-		4
Xcel Energy Inc.	XEL	3.30%	3.39%	5.30%	5.30%	5.30%	5.30%	8.69%	A-		4
PROXY GROUP MEAN		3.42%	3.50%	4.72%	4.58%	4.94%	4.80%	8.30%	BBB+		4.9
PROXY GROUP MEDIAN		3.40%	3.47%	5.00%	5.00%	5.20%	5.00%	8.69%	BBB+		5.0

REGRESSION OUTPUT

Regression Statistics	
Multiple R	0.133707
R Square	0.017878
Adjusted R Square	-0.018497
Standard Error	0.022034
Observations	29

ANOVA

	df	SS	MS	F	Signif. F
Regression	1	0.000239	0.000239	0.491482	0.489266
Residual	27	0.013108	0.000485		
Total	28	0.013347			

	Coefficients	Stand. Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.094593	0.017012	5.560305	0.000007	0.059687	0.129499
Credit Score	-0.002364	0.003372	-0.701058	0.489266	-0.009284	0.004555

Notes:

- [1] Source: JRW-10
- [2] Equals [1] x (1 + 0.5 x [6])
- [3] Source: JRW-10
- [4] Source: JRW-10
- [5] Source: JRW-10
- [6] Equals Average([3], [4], [5])
- [7] Equals [4] + [8]
- [8] Source: JRW-4

Constant Growth Discounted Cash Flow Model and Credit Rating Regression  
90 Day Dividend Yield

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	S&P Issuer Credit Rating	Numeric Credit Score
		Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Mean ROE			
ALLETE, Inc.	ALE	3.80%	3.87%	3.00%	NA	4.50%	3.75%	7.62%	BBB+		5
Alliant Energy Corporation	LNT	3.30%	3.41%	6.60%	6.60%	6.10%	6.43%	9.84%	A-		4
Ameren Corporation	AEE	3.60%	3.70%	5.20%	5.20%	6.10%	5.50%	9.20%	BBB+		5
American Electric Power Company, Inc.	AEP	3.50%	3.58%	4.10%	4.10%	4.90%	4.37%	7.94%	BBB		6
Avista Corporation	AVA	3.50%	3.59%	5.00%	NA	5.00%	5.00%	8.59%	BBB		6
Black Hills Corporation	BKH	2.90%	2.99%	6.50%	NA	6.50%	6.50%	9.49%	BBB		6
CMS Energy Corporation	CMS	3.10%	3.21%	7.20%	7.20%	6.40%	6.93%	10.14%	BBB+		5
Consolidated Edison, Inc.	ED	3.70%	3.74%	1.90%	1.90%	2.30%	2.03%	5.77%	A-		4
Dominion Resources, Inc.	D	4.00%	4.12%	5.90%	5.90%	6.80%	6.20%	10.32%	BBB+		5
Duke Energy Corporation	DUK	4.30%	4.40%	4.60%	4.60%	4.80%	4.67%	9.07%	A-		4
Edison International	EIX	2.80%	2.85%	2.50%	2.50%	4.90%	3.30%	6.15%	BBB+		5
El Paso Electric Company	EE	2.90%	3.00%	7.00%	NA	6.70%	6.85%	9.85%	BBB		6
Energy Corporation	ETR	4.60%	4.55%	-2.40%	-2.40%	-2.30%	-2.37%	2.18%	BBB		6
Eversource Energy	ES	3.20%	3.30%	6.30%	6.30%	6.30%	6.30%	9.60%	A		3
FirstEnergy Corp.	FE	4.30%	4.26%	-2.50%	-2.50%	-1.00%	-2.00%	2.26%	BBB-		7
IDACORP, Inc.	IDA	2.80%	2.86%	4.00%	4.00%	4.00%	4.00%	6.86%	BBB		6
MGE Energy, Inc.	MGEE	2.40%	2.45%	4.00%	NA	NA	4.00%	6.45%	AA-		1
NextEra Energy, Inc.	NEE	3.00%	3.11%	7.40%	7.40%	6.90%	7.23%	10.34%	A-		4
NorthWestern Corporation	NWE	3.40%	3.49%	5.00%	5.00%	5.00%	5.00%	8.49%	BBB		6
OGE Energy Corp.	OGE	3.90%	3.99%	4.30%	4.30%	5.20%	4.60%	8.59%	A-		4
Otter Tail Corporation	OTTR	4.40%	4.53%	6.00%	NA	NA	6.00%	10.53%	BBB		6
PG&E Corporation	PCG	3.40%	3.50%	6.10%	6.10%	5.10%	5.77%	9.26%	BBB		6
Pinnacle West Capital Corporation	PNW	3.50%	3.57%	3.70%	3.70%	4.10%	3.83%	7.40%	A-		4
PNM Resources, Inc.	PNM	2.70%	2.81%	8.80%	8.80%	7.60%	8.40%	11.21%	BBB+		5
Portland General Electric Company	POR	3.30%	3.41%	6.60%	6.60%	6.40%	6.53%	9.94%	BBB		6
SCANA Corporation	SCG	3.40%	3.48%	4.80%	4.80%	5.30%	4.97%	8.45%	BBB+		5
Southern Company	SO	4.60%	4.68%	3.30%	3.20%	4.10%	3.53%	8.21%	A-		4
WEC Energy Group, Inc.	WEC	3.40%	3.51%	6.80%	6.80%	6.30%	6.63%	10.15%	A-		4
Xcel Energy Inc.	XEL	3.40%	3.49%	5.30%	5.30%	5.30%	5.30%	8.79%	A-		4
PROXY GROUP MEAN		3.49%	3.57%	4.72%	4.58%	4.94%	4.80%	8.37%	BBB+		4.9
PROXY GROUP MEDIAN		3.40%	3.50%	5.00%	5.00%	5.20%	5.00%	8.79%	BBB+		5.0

REGRESSION OUTPUT

Regression Statistics	
Multiple R	0.137677
R Square	0.018955
Adjusted R Square	-0.017380
Standard Error	0.022042
Observations	29

ANOVA

	df	SS	MS	F	Signif. F
Regression	1	0.000253	0.000253	0.521673	0.476338
Residual	27	0.013117	0.000486		
Total	28	0.013371			

	Coefficients	Stand. Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.095618	0.017018	5.618640	0.000006	0.060700	0.130536
X Variable 1	-0.00244	0.003373	-0.722270	0.476338	-0.009358	0.004485

Notes:

- [1] Source: JRW-10
- [2] Equals [1] x (1 + 0.5 x [6])
- [3] Source: JRW-10
- [4] Source: JRW-10
- [5] Source: JRW-10
- [6] Equals Average([3], [4], [5])
- [7] Equals [4] + [8]
- [8] Source: JRW-4

Constant Growth Discounted Cash Flow Model and Credit Rating Regression  
180 Day Dividend Yield

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	S&P Issuer Credit Rating	Numeric Credit Score
		Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Mean ROE			
ALLETE, Inc.	ALE	4.00%	4.08%	3.00%	NA	4.50%	3.75%	7.83%	BBB+		5
Alliant Energy Corporation	LNT	3.60%	3.72%	6.60%	6.60%	6.10%	6.43%	10.15%	A-		4
Ameren Corporation	AEE	3.80%	3.90%	5.20%	5.20%	6.10%	5.50%	9.40%	BBB+		5
American Electric Power Company, Inc.	AEP	3.80%	3.88%	4.10%	4.10%	4.90%	4.37%	8.25%	BBB		6
Avista Corporation	AVA	3.80%	3.90%	5.00%	NA	5.00%	5.00%	8.90%	BBB		6
Black Hills Corporation	BKH	3.40%	3.51%	6.50%	NA	6.50%	6.50%	10.01%	BBB		6
CMS Energy Corporation	CMS	3.30%	3.41%	7.20%	7.20%	6.40%	6.93%	10.35%	BBB+		5
Consolidated Edison, Inc.	ED	3.90%	3.94%	1.90%	1.90%	2.30%	2.03%	5.97%	A-		4
Dominion Resources, Inc.	D	4.10%	4.23%	5.90%	5.90%	6.80%	6.20%	10.43%	BBB+		5
Duke Energy Corporation	DUK	4.50%	4.61%	4.60%	4.60%	4.80%	4.67%	9.27%	A-		4
Edison International	EIX	3.00%	3.05%	2.50%	2.50%	4.90%	3.30%	6.35%	BBB+		5
El Paso Electric Company	EE	3.40%	3.52%	7.00%	NA	6.70%	6.85%	10.37%	BBB		6
Energy Corporation	ETR	4.90%	4.84%	-2.40%	-2.40%	-2.30%	-2.37%	2.48%	BBB		6
Eversource Energy	ES	3.40%	3.51%	6.30%	6.30%	6.30%	6.30%	9.81%	A		3
FirstEnergy Corp.	FE	4.50%	4.46%	-2.50%	-2.50%	-1.00%	-2.00%	2.46%	BBB-		7
IDACORP, Inc.	IDA	3.00%	3.06%	4.00%	4.00%	4.00%	4.00%	7.06%	BBB		6
MGE Energy, Inc.	MGEE	2.50%	2.55%	4.00%	NA	NA	4.00%	6.55%	AA-		1
NextEra Energy, Inc.	NEE	3.20%	3.32%	7.40%	7.40%	6.90%	7.23%	10.55%	A-		4
NorthWestern Corporation	NWE	3.60%	3.69%	5.00%	5.00%	5.00%	5.00%	8.69%	BBB		6
OGE Energy Corp.	OGE	4.10%	4.19%	4.30%	4.30%	5.20%	4.60%	8.79%	A-		4
Otter Tail Corporation	OTTR	4.60%	4.74%	6.00%	NA	NA	6.00%	10.74%	BBB		6
PG&E Corporation	PCG	3.60%	3.70%	6.10%	6.10%	5.10%	5.77%	9.47%	BBB		6
Pinnacle West Capital Corporation	PNW	3.70%	3.77%	3.70%	3.70%	4.10%	3.83%	7.60%	A-		4
PNM Resources, Inc.	PNM	2.90%	3.02%	8.80%	8.80%	7.60%	8.40%	11.42%	BBB+		5
Portland General Electric Company	POR	3.40%	3.51%	6.60%	6.60%	6.40%	6.53%	10.04%	BBB		6
SCANA Corporation	SCG	3.70%	3.79%	4.80%	4.80%	5.30%	4.97%	8.76%	BBB+		5
Southern Company	SO	4.80%	4.88%	3.30%	3.20%	4.10%	3.53%	8.42%	A-		4
WEC Energy Group, Inc.	WEC	3.70%	3.82%	6.80%	6.80%	6.30%	6.63%	10.46%	A-		4
Xcel Energy Inc.	XEL	3.60%	3.70%	5.30%	5.30%	5.30%	5.30%	9.00%	A-		4
PROXY GROUP MEAN		3.72%	3.80%	4.72%	4.58%	4.94%	4.80%	8.61%	BBB+		4.9
PROXY GROUP MEDIAN		3.70%	3.77%	5.00%	5.00%	5.20%	5.00%	9.00%	BBB+		5.0

REGRESSION OUTPUT

Regression Statistics	
Multiple R	0.122515
R Square	0.015010
Adjusted R Square	-0.021471
Standard Error	0.022188
Observations	29

ANOVA

	df	SS	MS	F	Signif. F
Regression	1	0.000203	0.000203	0.411444	0.526646
Residual	27	0.013293	0.000492		
Total	28	0.013495			

	Coefficients	Stand. Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.09672	0.017131	5.645785	0.000005	0.061570	0.131871
X Variable 1	-0.00218	0.003396	-0.641439	0.526646	-0.009146	0.004790

Notes:

- [1] Source: JRW-10
- [2] Equals [1] x (1 + 0.5 x [6])
- [3] Source: JRW-10
- [4] Source: JRW-10
- [5] Source: JRW-10
- [6] Equals Average([3], [4], [5])
- [7] Equals [4] + [8]
- [8] Source: JRW-4

Hypothetical Example: Flotation Cost Recovery

Return on Equity 11.00%  
Flotation Costs 3.28%  
Market Value \$ 25.00  
Dividend Yield 4.50%  
Growth Rate 6.50%  
Adjusted ROE 11.15%  
**Flotation Cost Recovery: No**  
**DCF Estimate 10.85%**

	Common Stock	Retained Earnings	Book Value	Market Price	Market/ Book Value	Earnings Per Share	Dividends Per Share	Payout Ratio
1	\$ 24.18		\$ 24.18	\$ 25.00	1.0339	\$ 2.66	\$ 1.13	42.30%
2	\$ 24.18	\$ 1.53	\$ 25.71	\$ 26.59	1.0339	\$ 2.83	\$ 1.20	42.30%
3	\$ 24.18	\$ 3.17	\$ 27.35	\$ 28.27	1.0339	\$ 3.01	\$ 1.27	42.30%
4	\$ 24.18	\$ 4.90	\$ 29.08	\$ 30.07	1.0339	\$ 3.20	\$ 1.35	42.30%
5	\$ 24.18	\$ 6.75	\$ 30.93	\$ 31.98	1.0339	\$ 3.40	\$ 1.44	42.30%
6	\$ 24.18	\$ 8.71	\$ 32.89	\$ 34.01	1.0339	\$ 3.62	\$ 1.53	42.30%
7	\$ 24.18	\$ 10.80	\$ 34.98	\$ 36.17	1.0339	\$ 3.85	\$ 1.63	42.30%
8	\$ 24.18	\$ 13.02	\$ 37.20	\$ 38.46	1.0339	\$ 4.09	\$ 1.73	42.30%
9	\$ 24.18	\$ 15.38	\$ 39.56	\$ 40.90	1.0339	\$ 4.35	\$ 1.84	42.30%
10	\$ 24.18	\$ 17.89	\$ 42.07	\$ 43.50	1.0339	\$ 4.63	\$ 1.96	42.30%
<b>Growth Rate</b>			6.35%	6.35%		6.35%	6.35%	

Return on Equity 11.00%  
Flotation Costs 3.28%  
Market Value \$ 25.00  
Dividend Yield 4.50%  
Growth Rate 6.50%  
Adjusted ROE 11.15%  
**Flotation Cost Recovery: Yes**  
**DCF Estimate 11.00%**

	Common Stock	Retained Earnings	Book Value	Market Price	Market/ Book Value	Earnings Per Share	Dividends Per Share	Payout Ratio
1	\$ 24.18		\$ 24.18	\$ 25.00	1.0339	\$ 2.70	\$ 1.13	41.72%
2	\$ 24.18	\$ 1.57	\$ 25.75	\$ 26.63	1.0339	\$ 2.87	\$ 1.20	41.72%
3	\$ 24.18	\$ 3.25	\$ 27.43	\$ 28.36	1.0339	\$ 3.06	\$ 1.28	41.72%
4	\$ 24.18	\$ 5.03	\$ 29.21	\$ 30.20	1.0339	\$ 3.26	\$ 1.36	41.72%
5	\$ 24.18	\$ 6.93	\$ 31.11	\$ 32.16	1.0339	\$ 3.47	\$ 1.45	41.72%
6	\$ 24.18	\$ 8.95	\$ 33.13	\$ 34.25	1.0339	\$ 3.69	\$ 1.54	41.72%
7	\$ 24.18	\$ 11.10	\$ 35.28	\$ 36.48	1.0339	\$ 3.93	\$ 1.64	41.72%
8	\$ 24.18	\$ 13.40	\$ 37.58	\$ 38.85	1.0339	\$ 4.19	\$ 1.75	41.72%
9	\$ 24.18	\$ 15.84	\$ 40.02	\$ 41.37	1.0339	\$ 4.46	\$ 1.86	41.72%
10	\$ 24.18	\$ 18.44	\$ 42.62	\$ 44.06	1.0339	\$ 4.75	\$ 1.98	41.72%
<b>Growth Rate</b>			6.50%	6.50%		6.50%	6.50%	

Analysis Using Gorman's Rolling Average Equity Risk Premium Data

Year	Authorized Electric Returns	Treasury Bond Yield	Indicated Risk Premium	Rolling 5-Year Average Treasury	Rolling 5-Year Average Risk Premium	Slope	Rolling 10-Year Average Treasury	Rolling 10-Year Average Risk Premium	Slope
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%	8.48%	4.60%	-46.02%			-47.73%
1992	12.09%	7.67%	4.42%	8.36%	4.26%				
1993	11.41%	6.60%	4.81%	7.89%	4.45%				
1994	11.34%	7.37%	3.97%	7.68%	4.34%				
1995	11.55%	6.88%	4.67%	7.33%	4.46%		7.91%	4.53%	
1996	11.39%	6.70%	4.69%	7.04%	4.51%		7.80%	4.38%	
1997	11.40%	6.61%	4.79%	6.83%	4.59%		7.60%	4.42%	
1998	11.66%	5.58%	6.08%	6.63%	4.84%		7.26%	4.65%	
1999	10.77%	5.87%	4.90%	6.33%	5.03%		7.00%	4.68%	
2000	11.43%	5.94%	5.49%	6.14%	5.19%		6.73%	4.82%	
2001	11.09%	5.49%	5.60%	5.90%	5.37%		6.47%	4.94%	
2002	11.16%	5.43%	5.73%	5.66%	5.56%		6.25%	5.07%	
2003	10.97%	4.96%	6.01%	5.54%	5.55%		6.08%	5.19%	
2004	10.75%	5.05%	5.70%	5.37%	5.71%		5.85%	5.37%	
2005	10.54%	4.65%	5.89%	5.11%	5.79%		5.63%	5.49%	
2006	10.36%	4.99%	5.37%	5.01%	5.74%		5.46%	5.56%	
2007	10.36%	4.83%	5.53%	4.90%	5.70%		5.28%	5.63%	
2008	10.46%	4.28%	6.18%	4.76%	5.73%		5.15%	5.64%	
2009	10.48%	4.07%	6.41%	4.56%	5.88%		4.97%	5.79%	
2010	10.24%	4.25%	5.99%	4.49%	5.89%		4.80%	5.84%	
2011	10.07%	3.91%	6.16%	4.27%	6.05%		4.64%	5.90%	
2012	10.01%	2.92%	7.09%	3.89%	6.37%		4.39%	6.03%	
2013	9.79%	3.45%	6.34%	3.72%	6.40%		4.24%	6.07%	
2014	9.76%	3.34%	6.42%	3.57%	6.40%		4.07%	6.14%	
2015	9.58%	2.84%	6.74%	3.29%	6.55%		3.89%	6.22%	
2016	9.68%	2.72%	6.96%	3.05%	6.71%		3.66%	6.38%	
Average	11.17%	5.71%	5.46%	5.72%	5.40%		5.69%	5.40%	
Minimum				3.05%	4.25%		3.66%	4.38%	
Maximum				8.55%	6.71%		7.91%	6.38%	

Source: Exhibit MPG-13



Analysis Using Gorman's Rolling Average Equity Risk Premium Data

Year	Authorized Electric Returns	Utility Bond Yield	Rolling Indicated Risk Premium	Rolling 5-Year Average Utility Bond	5-Year Average Risk Premium	Rolling Slope	Rolling 10-Year Average Utility Bond	10-Year Average Risk Premium	Slope
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%	9.96%	3.12%	-45.15%			-44.87%
1991	12.55%	9.36%	3.19%	9.92%	2.88%				
1992	12.09%	8.69%	3.40%	9.63%	2.99%				
1993	11.41%	7.59%	3.82%	9.05%	3.29%				
1994	11.34%	8.31%	3.03%	8.76%	3.26%				
1995	11.55%	7.89%	3.66%	8.37%	3.42%		9.16%	3.27%	
1996	11.39%	7.75%	3.64%	8.05%	3.51%		8.98%	3.20%	
1997	11.40%	7.60%	3.80%	7.83%	3.59%		8.73%	3.29%	
1998	11.66%	7.04%	4.62%	7.72%	3.75%		8.39%	3.52%	
1999	10.77%	7.62%	3.15%	7.58%	3.77%		8.17%	3.52%	
2000	11.43%	8.24%	3.19%	7.65%	3.68%		8.01%	3.55%	
2001	11.09%	7.76%	3.33%	7.65%	3.62%		7.85%	3.56%	
2002	11.16%	7.37%	3.79%	7.61%	3.61%		7.72%	3.60%	
2003	10.97%	6.58%	4.39%	7.52%	3.57%		7.62%	3.66%	
2004	10.75%	6.16%	4.59%	7.22%	3.86%		7.40%	3.81%	
2005	10.54%	5.65%	4.89%	6.71%	4.20%		7.18%	3.94%	
2006	10.36%	6.07%	4.29%	6.37%	4.39%		7.01%	4.00%	
2007	10.36%	6.07%	4.29%	6.11%	4.49%		6.86%	4.05%	
2008	10.46%	6.53%	3.93%	6.10%	4.40%		6.81%	3.98%	
2009	10.48%	6.04%	4.44%	6.07%	4.37%		6.65%	4.11%	
2010	10.24%	5.46%	4.78%	6.03%	4.35%		6.37%	4.27%	
2011	10.07%	5.04%	5.03%	5.83%	4.49%		6.10%	4.44%	
2012	10.01%	4.13%	5.88%	5.44%	4.81%		5.77%	4.65%	
2013	9.79%	4.48%	5.31%	5.03%	5.09%		5.56%	4.74%	
2014	9.76%	4.28%	5.48%	4.68%	5.30%		5.37%	4.83%	
2015	9.58%	4.12%	5.46%	4.41%	5.43%		5.22%	4.89%	
2016	9.68%	4.18%	5.50%	4.24%	5.53%		5.03%	5.01%	
Average	11.17%	7.09%	4.08%	7.09%	4.03%		7.09%	4.00%	
Minimum				4.24%	2.88%		5.03%	3.20%	
Maximum				9.96%	5.53%		9.16%	5.01%	

Source: Exhibit MPG-14

Analysis Using Gorman's Rolling Average Equity Risk Premium Data

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.979694
R Square	0.959801
Adjusted R Square	0.958193
Standard Error	0.001584
Observations	27

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.001497	0.001497	596.900197	0.000000
Residual	25	0.000063	0.000003		
Total	26	0.001560			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.080351	0.001119	71.795082	0.000000	0.078046	0.082656	0.078046	0.082656
X Variable 1	-0.460208	0.018837	-24.431541	0.000000	-0.499003	-0.421413	-0.499003	-0.421413

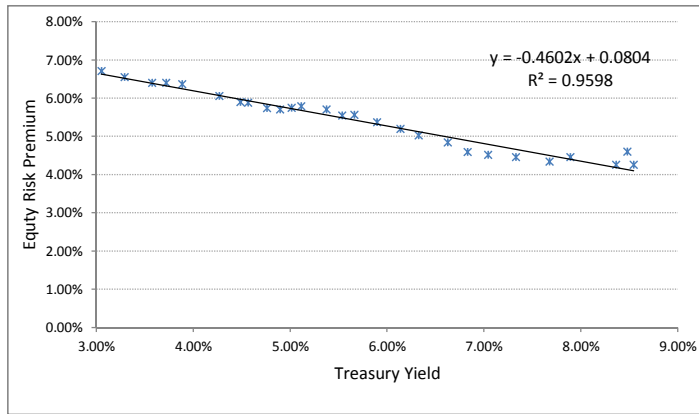
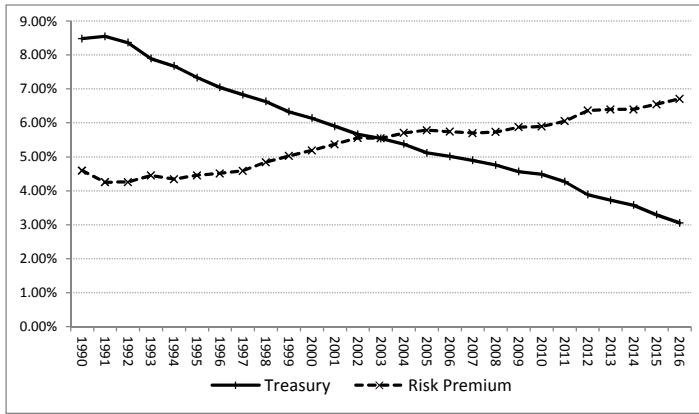
SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.980565
R Square	0.961508
Adjusted R Square	0.959968
Standard Error	0.001497
Observations	27

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.001400	0.001400	624.479845	0.000000
Residual	25	0.000056	0.000002		
Total	26	0.001456			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.072307	0.001314	55.042967	0.000000	0.069601	0.075012	0.069601	0.075012
X Variable 1	-0.451532	0.018069	-24.989595	0.000000	-0.488746	-0.414319	-0.488746	-0.414319



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

Year	ROE	Utility "A" Bond Yield	Treasury Bond Yield	Credit Spread	Treasury Equity Risk Premium	Utility Bond Equity Risk Premium	Treasury Yield	Credit Spread
1986	13.93%	9.58%	7.80%	1.78%	6.13%	4.35%	7.80%	1.78%
1987	12.99%	10.10%	8.58%	1.52%	4.41%	2.89%	8.58%	1.52%
1988	12.79%	10.49%	8.96%	1.53%	3.83%	2.30%	8.96%	1.53%
1989	12.97%	9.77%	8.45%	1.32%	4.52%	3.20%	8.45%	1.32%
1990	12.70%	9.86%	8.61%	1.25%	4.09%	2.84%	8.61%	1.25%
1991	12.55%	9.36%	8.14%	1.22%	4.41%	3.19%	8.14%	1.22%
1992	12.09%	8.69%	7.67%	1.02%	4.42%	3.40%	7.67%	1.02%
1993	11.41%	7.59%	6.60%	0.99%	4.81%	3.82%	6.60%	0.99%
1994	11.34%	8.31%	7.37%	0.94%	3.97%	3.03%	7.37%	0.94%
1995	11.55%	7.89%	6.88%	1.01%	4.67%	3.66%	6.88%	1.01%
1996	11.39%	7.75%	6.70%	1.05%	4.69%	3.64%	6.70%	1.05%
1997	11.40%	7.60%	6.61%	0.99%	4.79%	3.80%	6.61%	0.99%
1998	11.66%	7.04%	5.58%	1.46%	6.08%	4.62%	5.58%	1.46%
1999	10.77%	7.62%	5.87%	1.75%	4.90%	3.15%	5.87%	1.75%
2000	11.43%	8.24%	5.94%	2.30%	5.49%	3.19%	5.94%	2.30%
2001	11.09%	7.76%	5.49%	2.27%	5.60%	3.33%	5.49%	2.27%
2002	11.16%	7.37%	5.43%	1.94%	5.73%	3.79%	5.43%	1.94%
2003	10.97%	6.58%	4.96%	1.62%	6.01%	4.39%	4.96%	1.62%
2004	10.75%	6.16%	5.05%	1.11%	5.70%	4.59%	5.05%	1.11%
2005	10.54%	5.65%	4.65%	1.00%	5.89%	4.89%	4.65%	1.00%
2006	10.36%	6.07%	4.99%	1.08%	5.37%	4.29%	4.99%	1.08%
2007	10.36%	6.07%	4.83%	1.24%	5.53%	4.29%	4.83%	1.24%
2008	10.46%	6.53%	4.28%	2.25%	6.18%	3.93%	4.28%	2.25%
2009	10.48%	6.04%	4.07%	1.97%	6.41%	4.44%	4.07%	1.97%
2010	10.24%	5.46%	4.25%	1.21%	5.99%	4.78%	4.25%	1.21%
2011	10.07%	5.04%	3.91%	1.13%	6.16%	5.03%	3.91%	1.13%
2012	10.01%	4.13%	2.92%	1.21%	7.09%	5.88%	2.92%	1.21%
2013	9.79%	4.48%	3.45%	1.03%	6.34%	5.31%	3.45%	1.03%
2014	9.76%	4.28%	3.34%	0.94%	6.42%	5.48%	3.34%	0.94%
2015	9.58%	4.12%	2.84%	1.27%	6.74%	5.46%	2.84%	1.27%
2016	9.68%	4.18%	2.72%	1.46%	6.96%	5.50%	2.72%	1.46%

Sources: Exhibit MPG-13 and MPG-14

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.898826
R Square	0.807887
Adjusted R Square	0.801263
Standard Error	0.004088
Observations	31

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.002038	0.002038	121.953137	0.000000
Residual	29	0.000485	0.000017		
Total	30	0.002522			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.079782	0.002393	33.337504	0.000000	0.074887	0.084676
Treasury Yield	-0.440736	0.039910	-11.043239	0.000000	-0.522361	-0.359111

RESIDUAL OUTPUT

Observation	1 Equity Risk F	Residuals	$(e_t - e_{(t-1)})^2$	$(e_t)^2$
1	0.0454116	0.015905067		
2	0.04196651	0.002133486	0.00019	0.00000
3	0.04029539	-0.001987057	0.00002	0.00000
4	0.04254314	0.00266519	0.00002	0.00001
5	0.04184164	-0.000924972	0.00001	0.00000
6	0.04392412	0.000217551	0.00000	0.00000
7	0.0459919	-0.001758569	0.00000	0.00000
8	0.05070043	-0.002583764	0.00000	0.00001
9	0.04729942	-0.007599419	0.00003	0.00006
10	0.04944066	-0.002782328	0.00002	0.00001
11	0.05024868	-0.00335701	0.00000	0.00001
12	0.05066738	-0.002725709	0.00000	0.00001
13	0.05519594	0.005620729	0.00007	0.00003
14	0.05392882	-0.004887155	0.00011	0.00002
15	0.05359092	0.001284076	0.00004	0.00000
16	0.05557056	0.000396103	0.00000	0.00000
17	0.0558497	0.001450304	0.00000	0.00000
18	0.05793217	0.002192827	0.00000	0.00000
19	0.05753918	-0.00050585	0.00001	0.00000
20	0.0593058	-0.000364134	0.00000	0.00000
21	0.05777792	-0.004102916	0.00001	0.00002
22	0.05847575	-0.003217414	0.00000	0.00001
23	0.06092183	0.000886501	0.00002	0.00000
24	0.06184738	0.002260956	0.00000	0.00001
25	0.06104671	-0.001155041	0.00001	0.00000
26	0.06254521	-0.000953543	0.00000	0.00000
27	0.0669085	0.003983172	0.00002	0.00002
28	0.06458361	-0.001166946	0.00003	0.00000
29	0.06506108	-0.000861077	0.00000	0.00000
30	0.06726108	0.000130583	0.00000	0.00000
31	0.06779364	0.00180636	0.00000	0.00000

	Durbin-Watson	2.69423		
dL		1.147	4-dL	4-dU
dU		1.274	2.853	2.726
DW>2	TRUE			
DW<4-dU?	TRUE	No Autocorrelation		

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.916176
R Square	0.839379
Adjusted R Square	0.833841
Standard Error	0.003777
Observations	31

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.002162	0.002162	151.549633	0.000000
Residual	29	0.000414	0.000014		
Total	30	0.002575			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.072374	0.002653	27.275585	0.000000	0.066947	0.077801
Utility "A" Bond Yield	-0.445377	0.036178	-12.310550	0.000000	-0.519370	-0.371384

RESIDUAL OUTPUT

Observation	d Equity Risk F	Residuals	$(e_t - e_{(t-1)})^2$	$(e_t)^2$
1	0.02970688	0.013793119		
2	0.02739092	0.001509079	0.00015	0.00000
3	0.02565395	-0.00265395	0.00002	0.00001
4	0.02886067	0.003139335	0.00003	0.00001
5	0.02845983	-5.98258E-05	0.00001	0.00000
6	0.03068671	0.001213289	0.00000	0.00000
7	0.03367074	0.000329263	0.00000	0.00000
8	0.03856988	-0.000369884	0.00000	0.00000
9	0.03536317	-0.00506317	0.00002	0.00003
10	0.03723375	-0.000633753	0.00002	0.00000
11	0.03785728	-0.001457281	0.00000	0.00000
12	0.03852535	-0.000525347	0.00000	0.00000
13	0.04101946	0.005180542	0.00003	0.00003
14	0.03843627	-0.006936271	0.00015	0.00005
15	0.03565638	-0.003798043	0.00001	0.00001
16	0.03780161	-0.004526609	0.00000	0.00002
17	0.03953858	-0.001663579	0.00001	0.00000
18	0.04306448	0.000827186	0.00001	0.00000
19	0.0449384	0.000960762	0.00000	0.00000
20	0.04721391	0.001694423	0.00000	0.00000
21	0.04534704	-0.002430372	0.00002	0.00001
22	0.04532477	-0.002458103	0.00000	0.00001
23	0.0432983	-0.003981637	0.00000	0.00002
24	0.04548776	-0.001055128	0.00001	0.00000
25	0.04805082	-0.00026338	0.00000	0.00000
26	0.04992204	0.000366821	0.00000	0.00000
27	0.05397643	0.004815707	0.00002	0.00002
28	0.05243845	0.000700483	0.00002	0.00000
29	0.0533234	0.001502504	0.00000	0.00000
30	0.05404497	0.000601063	0.00000	0.00000
31	0.05375724	0.001242759	0.00000	0.00000

	0.00053	0.00022		
Durbin-Watson	2.37384			
dL	1.085	4-dL	4-dU	
dU	1.345	2.915	2.655	
DW>2	TRUE			
DW<4-dU?	TRUE	No Autocorrelation		

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.917057
R Square	0.840994
Adjusted R Square	0.829636
Standard Error	0.003785
Observations	31

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	0.002121	0.001061	74.046865	0.000000
Residual	28	0.000401	0.000014		
Total	30	0.002522			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.074097	0.003233	22.918543	0.000000	0.067474	0.080720
Treasury Yield	-0.438638	0.036962	-11.867392	0.000000	-0.514351	-0.362926
Credit Spread	0.402273	0.166607	2.414503	0.022540	0.060994	0.743552

RESIDUAL OUTPUT

<i>Observation</i>	<i>d Equity Risk F</i>	<i>Residuals</i>	$(e_t - e_{(t-1)})^2$	$(e_t)^2$
1	0.04705767	0.014258992		
2	0.04257637	0.001523628	0.00016	0.00000
3	0.04095678	-0.002648449	0.00002	0.00001
4	0.04234906	0.00285927	0.00003	0.00001
5	0.04137266	-0.000455992	0.00001	0.00000
6	0.0433346	0.000807068	0.00000	0.00000
7	0.04458464	-0.000351311	0.00000	0.00000
8	0.04914338	-0.001026709	0.00000	0.00000
9	0.04555071	-0.00585071	0.00002	0.00003
10	0.04794659	-0.001288257	0.00002	0.00000
11	0.04892508	-0.002033412	0.00000	0.00000
12	0.04912053	-0.001178868	0.00000	0.00000
13	0.05550817	0.005308499	0.00004	0.00003
14	0.05542373	-0.006382065	0.00014	0.00004
15	0.05728989	-0.002414887	0.00002	0.00001
16	0.05912936	-0.003162698	0.00000	0.00001
17	0.05809308	-0.000793077	0.00001	0.00000
18	0.05888172	0.001243279	0.00000	0.00000
19	0.05643934	0.000593988	0.00000	0.00000
20	0.05775472	0.001186949	0.00000	0.00000
21	0.05652575	-0.002850753	0.00002	0.00001
22	0.05787731	-0.002618976	0.00000	0.00001
23	0.06437471	-0.002566375	0.00000	0.00001
24	0.06416306	-5.47269E-05	0.00001	0.00000
25	0.0603204	-0.000428735	0.00000	0.00000
26	0.06148938	0.000102283	0.00000	0.00000
27	0.0661524	0.004739265	0.00002	0.00002
28	0.06310572	0.000310942	0.00002	0.00000
29	0.06321741	0.000982594	0.00000	0.00000
30	0.06676322	0.000628445	0.00000	0.00000
31	0.0680392	0.001560796	0.00000	0.00000

		0.00054	0.00020	
Durbin-Watson		2.73514		
dL		1.147	4-dL	4-dU
dU		1.274	2.853	2.726
DW>2	TRUE			
DW<4-dU	FALSE			
4-dU<DW<4-dL	TRUE	Inconclusive		

Forecasting 30 Year Treasury Yields: Regression Results Based on Data in Exhibit MPG-21

SUMMARY OUTPUT

<i>Regression Statistics</i>						
Multiple R		0.744743				
R Square		0.554642				
Adjusted R Square		0.546545				
Standard Error		0.005857				
Observations		57				

<i>ANOVA</i>						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	0.002350	0.002350	68.496210	0.000000	
Residual	55	0.001887	0.000034			
Total	56	0.004236				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.006803	0.004302	1.581230	0.119560	-0.001819	0.015424
PRIOR QUARTER ACTUAL YIELD (X)	0.783457	0.094663	8.276244	0.000000	0.593747	0.973166

SUMMARY OUTPUT

<i>Regression Statistics</i>						
Multiple R		0.905824				
R Square		0.820516				
Adjusted R Square		0.817253				
Standard Error		0.003718				
Observations		57				

<i>ANOVA</i>						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	0.003476	0.003476	251.434812	0.000000	
Residual	55	0.000760	0.000014			
Total	56	0.004236				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.055590	0.000998	55.697993	0.000000	0.053589	0.057590
TREND	-0.000475	0.000030	-15.856696	0.000000	-0.000535	-0.000415

December 2018 Trend Variable	105
Implied Treasury Yield	0.58%

Source: Exhibit MPG-21



Mr. Gorman's Financial Integrity Analysis (Exhibit MPG-19)

Description	Retail Cost of Service				Reference (5)
	Amount (1)	S&P Benchmark (Medial Volatility)			
		Intermediate (2)	Significant (3)	Aggressive (4)	
Rate Base	\$ 32,536,116				Schedule A-1.
Weighted Common Return	4.17%				Exhibit MPG-19, Page 3, Line 3, Col. 3.
Pre-Tax Rate of Return	8.19%				Exhibit MPG-19, Page 3, Line 7, Col. 4.
Income to Common	\$ 1,358,228				Line 1 x Line 2.
EBIT	\$ 2,663,715				Line 1 x Line 3.
Depreciation & Amortization	\$ 1,665,925				Schedule C-1
Imputed Amortization	\$ 52,057				Exhibit MPG-19, Page 1, Line 7, Col. 1.
Deferred Income Taxes & ITC	\$ 598,846				Schedule C-22
Funds from Operations (FFO)	\$ 3,675,056				Sum of Line 4 and Lines 6 through 8.
Imputed Interest Expense	\$ 40,363				Exhibit MPG-19, Page 1, Line 10, Col. 1.
EBITDA	\$ 4,422,060				Sum of Lines 5 through 7 and Line 10.
Total Debt Ratio	41%				Exhibit MPG-19, Page 4, Line 4, Col. 2.
Debt to EBITDA	3.0x	2.5x - 3.5x	3.5x - 4.5x	4.5x - 5.5x	(Line 1 x Line 12) / Line 11.
FFO to Total Debt	27%	23% - 35%	13% - 23%	9% - 13%	Line 9 / (Line 1 x Line 12).

Gorman's Financial Integrity Analysis, ROE of 6.55%

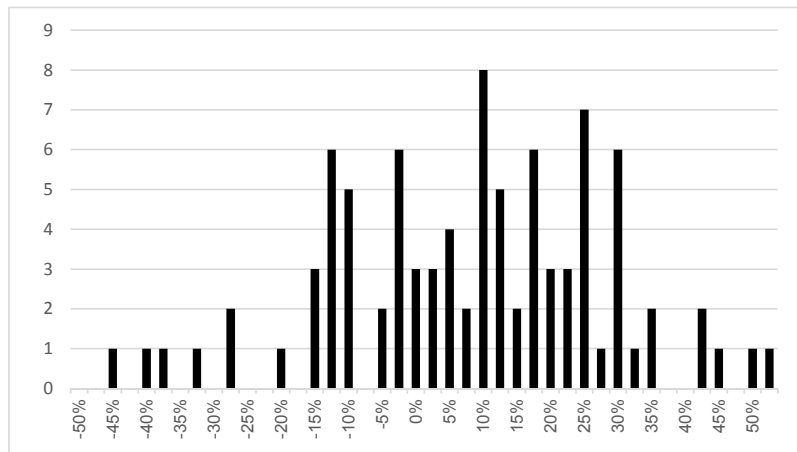
Description	Retail Cost of Service				Reference (5)
	Amount (1)	S&P Benchmark (Medial Volatility)			
		Intermediate (2)	Significant (3)	Aggressive (4)	
Rate Base	\$ 32,536,116				Schedule A-1.
Weighted Common Return	2.96%				Exhibit MPG-19, Page 3, Line 3, Col. 3 set as 4%
Pre-Tax Rate of Return	6.20%				Exhibit MPG-19, Page 3, Line 7, Col. 4 set as 4%
Income to Common	\$ 961,772				Line 1 x Line 2.
EBIT	\$ 2,017,397				Line 1 x Line 3.
Depreciation & Amortization	\$ 1,665,925				Schedule C-1
Imputed Amortization	\$ 52,057				CreditStats, www.globalcreditportal.com, June 30, 2016.
Deferred Income Taxes & ITC	\$ 598,846				Schedule C-22
Funds from Operations (FFO)	\$ 3,278,600				Sum of Line 4 and Lines 6 through 8.
Imputed Interest Expense	\$ 40,363				CreditStats, www.globalcreditportal.com, June 30, 2016.
EBITDA	\$ 3,775,742				Sum of Lines 5 through 7 and Line 10.
Total Debt Ratio	41%				Page 4, Line 4, Col. 2.
Debt to EBITDA	3.5x	2.5x - 3.5x	3.5x - 4.5x	4.5x - 5.5x	(Line 1 x Line 12) / Line 11.
FFO to Total Debt	25%	23% - 35%	13% - 23%	9% - 13%	Line 9 / (Line 1 x Line 12).

Gorman's Financial Integrity Analysis, ROE of 11.00%

Description	Retail Cost of Service				Reference (5)
	Amount (1)	S&P Benchmark (Medial Volatility)			
		Intermediate (2)	Significant (3)	Aggressive (4)	
Rate Base	\$ 32,536,116				Schedule A-1.
Weighted Common Return	4.96%				Exhibit MPG-19, Page 3, Line 3, Col. 3 set as 10.25%
Pre-Tax Rate of Return	9.47%				Exhibit MPG-19, Page 3, Line 7, Col. 4 set as 10.25%
Income to Common	\$ 1,615,190				Line 1 x Line 2.
EBIT	\$ 3,082,625				Line 1 x Line 3.
Depreciation & Amortization	\$ 1,665,925				Schedule C-1
Imputed Amortization	\$ 52,057				CreditStats, www.globalcreditportal.com, June 30, 2016.
Deferred Income Taxes & ITC	\$ 598,846				Schedule C-22
Funds from Operations (FFO)	\$ 3,932,018				Sum of Line 4 and Lines 6 through 8.
Imputed Interest Expense	\$ 40,363				CreditStats, www.globalcreditportal.com, June 30, 2016.
EBITDA	\$ 4,840,970				Sum of Lines 5 through 7 and Line 10.
Total Debt Ratio	41%				Page 4, Line 4, Col. 2.
Debt to EBITDA	2.8x	2.5x - 3.5x	3.5x - 4.5x	4.5x - 5.5x	(Line 1 x Line 12) / Line 11.
FFO to Total Debt	29%	23% - 35%	13% - 23%	9% - 13%	Line 9 / (Line 1 x Line 12).

Source:  
Exhibit MPG-19 (differences due to rounding)

Frequency Distribution of Observed Market Risk Premia, 1926 - 2015



Sources: Morningstar, Inc., Ibbotson SBBI 2016 Appendix A, at 3-5, 21-23.

Year	Large Company	Long-Term	MRP
	Stocks Total	Government	
	Returns	Bond Income	
	Jan-Dec*	Returns	
	Jan-Dec*	Jan-Dec*	MRP
1926	0.1162	0.0373	7.890
1927	0.3749	0.0341	34.080
1928	0.4361	0.0322	40.390
1929	-0.0842	0.0347	-11.890
1930	-0.2490	0.0332	-28.220
1931	-0.4334	0.0333	-46.670
1932	-0.0819	0.0369	-11.880
1933	0.5399	0.0312	50.870
1934	-0.0144	0.0318	-4.620
1935	0.4767	0.0281	44.860
1936	0.3392	0.0277	31.150
1937	-0.3503	0.0266	-37.690
1938	0.3112	0.0264	28.480
1939	-0.0041	0.0240	-2.810
1940	-0.0978	0.0223	-12.010
1941	-0.1159	0.0194	-13.530
1942	0.2034	0.0246	17.880
1943	0.2590	0.0244	23.460
1944	0.1975	0.0246	17.290
1945	0.3644	0.0234	34.100
1946	-0.0807	0.0204	-10.110
1947	0.0571	0.0213	3.580
1948	0.0550	0.0240	3.100
1949	0.1879	0.0225	16.540
1950	0.3171	0.0212	29.590
1951	0.2402	0.0238	21.640
1952	0.1837	0.0266	15.710
1953	-0.0099	0.0284	-3.830
1954	0.5262	0.0279	49.830
1955	0.3156	0.0275	28.810
1956	0.0656	0.0299	3.570
1957	-0.1078	0.0344	-14.220
1958	0.4336	0.0327	40.090

1959	0.1196	0.0401	7.950
1960	0.0047	0.0426	-3.790
1961	0.2689	0.0383	23.060
1962	-0.0873	0.0400	-12.730
1963	0.2280	0.0389	18.910
1964	0.1648	0.0415	12.330
1965	0.1245	0.0419	8.260
1966	-0.1006	0.0449	-14.550
1967	0.2398	0.0459	19.390
1968	0.1106	0.0550	5.560
1969	-0.0850	0.0595	-14.450
1970	0.0386	0.0674	-2.880
1971	0.1430	0.0632	7.980
1972	0.1899	0.0587	13.120
1973	-0.1469	0.0651	-21.200
1974	-0.2647	0.0727	-33.740
1975	0.3723	0.0799	29.240
1976	0.2393	0.0789	16.040
1977	-0.0716	0.0714	-14.300
1978	0.0657	0.0790	-1.330
1979	0.1861	0.0886	9.750
1980	0.3250	0.0997	22.530
1981	-0.0492	0.1155	-16.470
1982	0.2155	0.1350	8.050
1983	0.2256	0.1038	12.180
1984	0.0627	0.1174	-5.470
1985	0.3173	0.1125	20.480
1986	0.1867	0.0898	9.690
1987	0.0525	0.0792	-2.670
1988	0.1661	0.0897	7.640
1989	0.3169	0.0881	22.880
1990	-0.0310	0.0819	-11.290
1991	0.3047	0.0822	22.250
1992	0.0762	0.0726	0.360
1993	0.1008	0.0717	2.910
1994	0.0132	0.0659	-5.270
1995	0.3758	0.0760	29.980
1996	0.2296	0.0618	16.780
1997	0.3336	0.0664	26.720
1998	0.2858	0.0583	22.750
1999	0.2104	0.0557	15.470
2000	-0.0910	0.0650	-15.600
2001	-0.1189	0.0553	-17.420
2002	-0.2210	0.0559	-27.690
2003	0.2868	0.0480	23.880
2004	0.1088	0.0502	5.860
2005	0.0491	0.0469	0.220
2006	0.1579	0.0468	11.110
2007	0.0549	0.0486	0.630
2008	-0.3700	0.0445	-41.450
2009	0.2646	0.0347	22.990
2010	0.1506	0.0425	10.810
2011	0.0211	0.0390	-1.790
2012	0.1600	0.0246	13.540
2013	0.3239	0.0288	29.510
2014	0.1369	0.0341	10.280
2015	0.0138	0.0247	-1.090
Average	0.1195	0.0505	6.904
Std. Dev.	0.1999	0.0263	20.078

Bin	Frequency	Cumulative %
-50.00%	0	0.000%
-47.50%	0	0.000%
-45.00%	1	1.111%
-42.50%	0	1.111%
-40.00%	1	2.222%
-37.50%	1	3.333%
-35.00%	0	3.333%
-32.50%	1	4.444%
-30.00%	0	4.444%
-27.50%	2	6.667%
-25.00%	0	6.667%
-22.50%	0	6.667%
-20.00%	1	7.778%
-17.50%	0	7.778%
-15.00%	3	11.111%
-12.50%	6	17.778%
-10.00%	5	23.333%
-7.50%	0	23.333%
-5.00%	2	25.556%
-2.50%	6	32.222%
0.00%	3	35.556%
2.50%	3	38.889%
5.00%	4	43.333%
7.50%	2	45.556%
10.00%	8	54.444%
12.50%	5	60.000%
15.00%	2	62.222%
17.50%	6	68.889%
20.00%	3	72.222%
22.50%	3	75.556%
25.00%	7	83.333%
27.50%	1	84.444%
30.00%	6	91.111%
32.50%	1	92.222%
35.00%	2	94.444%
37.50%	0	94.444%
40.00%	0	94.444%
42.50%	2	96.667%
45.00%	1	97.778%
47.50%	0	97.778%
50.00%	1	98.889%
51.00%	1	100.000%
Count:	90	
Average		
MRP	10.68	Rank:
		55.90%

Alternative Bond Yield Plus Risk Premium Analysis

	[1]	[2]	[3]	[4]
	Constant	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX
Regression Coefficients	-0.026	-0.025	0.215	0.00005
Long Term Averages [5], [6]			1.81%	22.36

	30-Yr. Treasury Yield [7]	Risk Premium [8]	Return on Equity [9]
Current 30-Year Treasury	2.50%	7.33%	9.83%
Blue Chip Financial Forecast 2017 Projection	3.40%	6.55%	9.95%
Blue Chip Financial Forecast 2020 Projection	4.40%	5.89%	10.29%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.820612
R Square	0.673404
Adjusted R Square	0.671829
Standard Error	0.005498
Observations	626

ANOVA					
	df	SS	MS	F	Significance F
Regression	3	0.038767	0.012922	427.497607	0.000000
Residual	622	0.018802	0.000030		
Total	625	0.057569			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.025758	0.002491	-10.340783	0.000000	-0.030649	-0.020866	-0.030649	-0.020866
LN(30-Year Treasury)	-0.025474	0.000843	-30.202755	0.000000	-0.027131	-0.023818	-0.027131	-0.023818
Utility Baa Credit Spread	0.214700	0.047428	4.526891	0.000007	0.121562	0.307838	0.121562	0.307838
VIX	0.000055	0.000034	1.618449	0.106073	-0.000012	0.000122	-0.000012	0.000122

Notes:

- [1] Constant of regression equation (1992-2016)
- [2] Equals Regression Coefficient of LN(30-year Treasury Yield variable)
- [3] Equals Regression Coefficient of Credit Spread variable
- [4] Equals Regression Coefficient of VIX variable
- [5] Long-Term Historical Average of Baa Credit Spread
- [6] Source: <http://www.cboe.com/data/volatilityindexes/volatilityindexes.aspx>; accessed July 27, 2016
- [7] Source: Current = Bloomberg Professional, Near-Term Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 2. Forecast for Q3 2017. Long-Term Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 14.
- [8] Equals [1] + ([2] x LN[7]) + ([3] x [5]) + ([4] x [6])
- [9] Equals [7] + [8]
- [10] Source: SNL Financial
- [11] Source: SNL Financial
- [12] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
- [13] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
- [14] Equals LN[12]
- [15] Equals [13] - [12]
- [16] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
- [17] Equals [11] - [12]

[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]
Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Moody's Utility Baa Yield	LN(30-Year Treasury)	Moody's Utility Baa Credit Spread	VIX	Risk Premium
1/10/1990	12.80%	8.24%		-2.496477861		19.95	4.56%
1/11/1990	12.90%	8.23%		-2.497024601		19.96	4.67%
1/17/1990	12.80%	8.22%		-2.499113014		21.59	4.58%
1/26/1990	12.00%	8.19%		-2.501942804		22.87	3.81%
2/9/1990	12.10%	8.17%		-2.504801539		23.58	3.93%
2/24/1990	12.86%	8.15%		-2.507522892		23.35	4.71%
3/30/1990	12.90%	8.16%		-2.505906927		22.17	4.74%
4/4/1990	15.76%	8.17%		-2.505240839		22.16	7.59%
4/12/1990	12.52%	8.18%		-2.503520424		22.04	4.34%
4/19/1990	12.75%	8.20%		-2.501412987		22.01	4.55%
5/21/1990	12.10%	8.28%		-2.490818765		21.42	3.82%
5/29/1990	12.40%	8.30%		-2.489147186		21.25	4.10%
5/31/1990	12.00%	8.30%		-2.488692501		21.17	3.70%
6/4/1990	12.90%	8.30%		-2.4883905		21.11	4.60%
6/6/1990	12.25%	8.31%		-2.488115209		21.06	3.94%
6/15/1990	13.20%	8.32%		-2.486948935		20.80	4.88%

6/20/1990	12.92%	8.32%	-2.486220477	20.68	4.60%
6/27/1990	12.90%	8.33%	-2.484996704	20.52	4.57%
6/29/1990	12.50%	8.34%	-2.484701847	20.45	4.16%
7/6/1990	12.35%	8.34%	-2.48420579	20.33	4.01%
7/6/1990	12.10%	8.34%	-2.48420579	20.33	3.76%
8/10/1990	12.55%	8.41%	-2.475736762	20.52	4.14%
8/16/1990	13.21%	8.43%	-2.473575512	20.64	4.78%
8/22/1990	13.10%	8.45%	-2.471018017	20.82	4.65%
8/24/1990	13.00%	8.46%	-2.469496155	21.00	4.54%
9/26/1990	11.45%	8.59%	-2.454201215	21.96	2.86%
10/2/1990	13.00%	8.61%	-2.451809401	22.09	4.39%
10/5/1990	12.84%	8.63%	-2.450337442	22.18	4.21%
10/19/1990	13.00%	8.67%	-2.445512392	22.69	4.33%
10/25/1990	12.30%	8.68%	-2.444370992	22.80	3.62%
11/21/1990	12.70%	8.69%	-2.442615086	22.98	4.01%
12/13/1990	12.30%	8.67%	-2.44490271	22.97	3.63%
12/17/1990	12.87%	8.67%	-2.44545674	23.00	4.20%
12/18/1990	13.10%	8.67%	-2.445757644	23.02	4.43%
12/19/1990	12.00%	8.66%	-2.446009336	23.04	3.34%
12/20/1990	12.75%	8.66%	-2.446187995	23.05	4.09%
12/21/1990	12.50%	8.66%	-2.446334775	23.07	3.84%
12/27/1990	12.79%	8.66%	-2.44671836	23.13	4.13%
1/2/1991	13.10%	8.66%	-2.446942427	23.25	4.44%
1/4/1991	12.50%	8.65%	-2.4473669	23.31	3.85%
1/15/1991	12.75%	8.65%	-2.448168141	23.75	4.10%
1/25/1991	11.70%	8.63%	-2.450247154	23.94	3.07%
2/4/1991	12.50%	8.60%	-2.453128134	23.92	3.90%
2/7/1991	12.50%	8.59%	-2.454862821	23.95	3.91%
2/12/1991	13.00%	8.57%	-2.456475087	23.99	4.43%
2/14/1991	12.72%	8.56%	-2.457500722	24.02	4.16%
2/22/1991	12.80%	8.55%	-2.459800347	24.08	4.25%
3/6/1991	13.10%	8.53%	-2.461874245	24.18	4.57%
3/8/1991	13.00%	8.52%	-2.462251459	24.21	4.48%
3/8/1991	12.30%	8.52%	-2.462251459	24.21	3.78%
4/22/1991	13.00%	8.49%	-2.466242714	24.23	4.51%
5/7/1991	13.50%	8.47%	-2.468214975	24.22	5.03%
5/13/1991	13.25%	8.47%	-2.468668749	24.15	4.78%
5/30/1991	12.75%	8.43%	-2.473033695	23.59	4.32%
6/12/1991	12.00%	8.41%	-2.476341626	23.03	3.59%
6/25/1991	11.70%	8.38%	-2.478854049	22.47	3.32%
6/28/1991	12.50%	8.38%	-2.479875908	22.31	4.12%
7/1/1991	12.00%	8.37%	-2.480289386	22.25	3.63%
7/3/1991	12.50%	8.36%	-2.481170322	22.15	4.14%
7/19/1991	12.10%	8.34%	-2.484421541	21.55	3.76%
8/1/1991	12.90%	8.32%	-2.486808759	20.89	4.58%
8/16/1991	13.20%	8.29%	-2.490493686	20.12	4.91%
9/27/1991	12.50%	8.23%	-2.496936101	19.02	4.27%
9/30/1991	12.25%	8.23%	-2.49722421	18.99	4.02%
10/17/1991	13.00%	8.20%	-2.500713128	18.47	4.80%
10/23/1991	12.50%	8.20%	-2.501422183	18.20	4.30%
10/23/1991	12.55%	8.20%	-2.501422183	18.20	4.35%
10/31/1991	11.80%	8.19%	-2.502275923	17.68	3.61%
11/1/1991	12.00%	8.19%	-2.502450195	17.63	3.81%
11/5/1991	12.25%	8.19%	-2.502725164	17.55	4.06%
11/12/1991	12.50%	8.18%	-2.503292528	17.35	4.32%
11/12/1991	13.25%	8.18%	-2.503292528	17.35	5.07%
11/25/1991	12.40%	8.18%	-2.503712733	17.21	4.22%
11/26/1991	12.50%	8.18%	-2.503769265	17.20	4.32%
11/26/1991	11.60%	8.18%	-2.503769265	17.20	3.42%
11/27/1991	12.10%	8.18%	-2.503814739	17.19	3.92%
12/18/1991	12.25%	8.15%	-2.507331083	17.07	4.10%
12/19/1991	12.60%	8.15%	-2.507721524	17.06	4.45%
12/19/1991	12.80%	8.15%	-2.507721524	17.06	4.65%
12/20/1991	12.65%	8.14%	-2.508180009	17.04	4.51%
1/9/1992	12.80%	8.09%	-2.51476261	17.13	4.71%
1/16/1992	12.75%	8.07%	-2.516799408	17.14	4.68%
1/21/1992	12.00%	8.06%	-2.517809082	17.12	3.94%
1/22/1992	13.00%	8.06%	-2.518107633	17.10	4.94%
1/27/1992	12.65%	8.05%	-2.519087429	17.09	4.60%
1/31/1992	12.00%	8.04%	-2.520318057	17.12	3.96%
2/11/1992	12.40%	8.03%	-2.522191565	17.16	4.37%
2/25/1992	12.50%	8.01%	-2.524420455	17.14	4.49%
3/16/1992	11.43%	7.98%	-2.5279667	17.25	3.45%
3/18/1992	12.28%	7.98%	-2.528600856	17.26	4.30%
4/2/1992	12.10%	7.95%	-2.532341542	17.24	4.15%
4/9/1992	11.45%	7.93%	-2.534038199	17.24	3.52%
4/10/1992	11.50%	7.93%	-2.534424003	17.23	3.57%
4/14/1992	11.50%	7.92%	-2.535249959	17.21	3.58%
5/5/1992	11.50%	7.89%	-2.539367717	17.08	3.61%
5/12/1992	12.46%	7.88%	-2.540491605	17.09	4.58%
5/12/1992	11.87%	7.88%	-2.540491605	17.09	3.99%
6/1/1992	12.30%	7.86%	-2.542849882	17.02	4.44%

6/12/1992	10.90%	7.85%	-2.544044864		16.97	3.05%	
6/26/1992	12.35%	7.85%	-2.544922989		16.91	4.50%	
6/29/1992	11.00%	7.85%	-2.545003672		16.88	3.15%	
6/30/1992	13.00%	7.85%	-2.545063228		16.86	5.15%	
7/13/1992	13.50%	7.84%	-2.546223031		16.78	5.66%	
7/13/1992	11.90%	7.84%	-2.546223031		16.78	4.06%	
7/22/1992	11.20%	7.83%	-2.547220512		16.65	3.37%	
8/3/1992	12.00%	7.81%	-2.550005891		16.52	4.19%	
8/6/1992	12.50%	7.80%	-2.550979453		16.48	4.70%	
9/22/1992	12.00%	7.71%	-2.562150915		15.88	4.29%	
9/28/1992	11.40%	7.71%	-2.563005971		15.78	3.69%	
9/30/1992	11.75%	7.71%	-2.563248543		15.75	4.04%	
10/2/1992	13.00%	7.70%	-2.563503569		15.74	5.30%	
10/12/1992	12.20%	7.70%	-2.563555104		15.85	4.50%	
10/16/1992	13.16%	7.71%	-2.563267456		15.82	5.45%	
10/30/1992	11.75%	7.71%	-2.563084214		15.75	4.04%	
11/3/1992	12.00%	7.71%	-2.56315855		15.74	4.29%	
12/3/1992	11.85%	7.68%	-2.566695907		15.36	4.17%	
12/15/1992	11.00%	7.66%	-2.569018479		15.17	3.34%	
12/16/1992	11.90%	7.66%	-2.569326814		15.14	4.24%	
12/16/1992	12.40%	7.66%	-2.569326814		15.14	4.74%	
12/17/1992	12.00%	7.66%	-2.569679219		15.10	4.34%	
12/22/1992	12.40%	7.65%	-2.571003981		14.99	4.75%	
12/22/1992	12.30%	7.65%	-2.571003981		14.99	4.65%	
12/29/1992	12.25%	7.63%	8.61%	-2.573127127	0.98%	14.86	4.62%
12/30/1992	12.00%	7.63%	8.61%	-2.573498663	0.98%	14.84	4.37%
12/31/1992	11.90%	7.62%	8.61%	-2.573859792	0.99%	14.82	4.28%
1/12/1993	12.00%	7.61%	8.62%	-2.5762929	1.01%	14.72	4.39%
1/21/1993	11.25%	7.59%	8.61%	-2.578757112	1.02%	14.52	3.66%
2/2/1993	11.40%	7.56%	8.56%	-2.582792324	1.01%	14.35	3.84%
2/15/1993	12.30%	7.52%	8.52%	-2.587853331	1.00%	14.22	4.78%
2/24/1993	11.90%	7.49%	8.48%	-2.591873816	0.99%	14.18	4.41%
2/26/1993	11.80%	7.48%	8.46%	-2.593142317	0.98%	14.16	4.32%
2/26/1993	12.20%	7.48%	8.46%	-2.593142317	0.98%	14.16	4.72%
4/23/1993	11.75%	7.29%	8.29%	-2.619128589	1.00%	13.85	4.46%
5/11/1993	11.75%	7.24%	8.26%	-2.62487387	1.02%	13.86	4.51%
5/14/1993	11.50%	7.24%	8.26%	-2.625954403	1.02%	13.87	4.26%
5/25/1993	11.50%	7.22%	8.26%	-2.627704331	1.04%	13.87	4.28%
5/28/1993	11.00%	7.22%	8.26%	-2.628492033	1.04%	13.84	3.78%
6/3/1993	12.00%	7.21%	8.26%	-2.629953568	1.05%	13.83	4.79%
6/16/1993	11.50%	7.19%	8.24%	-2.633023609	1.06%	13.77	4.31%
6/18/1993	12.10%	7.18%	8.24%	-2.633671358	1.06%	13.77	4.92%
6/25/1993	11.67%	7.17%	8.23%	-2.635647271	1.06%	13.74	4.50%
7/21/1993	11.38%	7.10%	8.20%	-2.64572959	1.10%	13.42	4.28%
7/23/1993	10.46%	7.09%	8.16%	-2.646920829	1.08%	13.34	3.37%
8/24/1993	11.50%	6.95%	8.13%	-2.665744765	1.18%	12.79	4.55%
9/21/1993	10.50%	6.80%	8.05%	-2.687542088	1.25%	12.72	3.70%
9/29/1993	11.47%	6.76%	8.03%	-2.693671658	1.27%	12.73	4.71%
9/30/1993	11.60%	6.76%	8.03%	-2.694664066	1.27%	12.74	4.84%
11/2/1993	10.80%	6.60%	7.89%	-2.718055616	1.29%	12.67	4.20%
11/12/1993	12.00%	6.56%	7.86%	-2.723624369	1.30%	12.76	5.44%
11/26/1993	11.00%	6.52%	7.83%	-2.730429154	1.31%	12.85	4.48%
12/14/1993	10.55%	6.48%	7.80%	-2.736143407	1.32%	12.75	4.07%
12/16/1993	10.60%	6.48%	7.80%	-2.736836716	1.32%	12.72	4.12%
12/21/1993	11.30%	6.47%	7.80%	-2.738096605	1.33%	12.66	4.83%
1/4/1994	10.07%	6.44%	7.78%	-2.742426307	1.34%	12.49	3.63%
1/13/1994	11.00%	6.42%	7.77%	-2.746265671	1.35%	12.45	4.58%
1/21/1994	11.00%	6.40%	7.75%	-2.748645306	1.35%	12.39	4.60%
1/28/1994	11.35%	6.39%	7.74%	-2.750446141	1.35%	12.37	4.96%
2/3/1994	11.40%	6.38%	7.73%	-2.75225574	1.35%	12.34	5.02%
2/17/1994	10.60%	6.36%	7.71%	-2.755429452	1.35%	12.38	4.24%
2/25/1994	11.25%	6.35%	7.70%	-2.756899777	1.36%	12.39	4.90%
2/25/1994	12.00%	6.35%	7.70%	-2.756899777	1.36%	12.39	5.65%
3/1/1994	11.00%	6.35%	7.70%	-2.757370833	1.36%	12.40	4.65%
3/4/1994	11.00%	6.34%	7.70%	-2.757695555	1.36%	12.43	4.66%
4/25/1994	11.00%	6.40%	7.74%	-2.74819011	1.33%	13.03	4.60%
5/10/1994	11.75%	6.44%	7.77%	-2.741906094	1.32%	13.20	5.31%
5/13/1994	10.50%	6.46%	7.78%	-2.739522199	1.32%	13.25	4.04%
6/3/1994	11.00%	6.54%	7.84%	-2.727421288	1.30%	13.32	4.46%
6/27/1994	11.40%	6.65%	7.94%	-2.710605473	1.29%	13.42	4.75%
8/5/1994	12.75%	6.88%	8.15%	-2.676571985	1.27%	13.42	5.87%
10/31/1994	10.00%	7.33%	8.54%	-2.613065108	1.21%	13.77	2.67%
11/9/1994	10.85%	7.40%	8.60%	-2.604267563	1.20%	13.94	3.45%
11/9/1994	10.85%	7.40%	8.60%	-2.604267563	1.20%	13.94	3.45%
11/18/1994	11.20%	7.46%	8.65%	-2.59623401	1.20%	14.12	3.74%
11/22/1994	11.60%	7.47%	8.67%	-2.594037077	1.20%	14.14	4.13%
11/28/1994	11.06%	7.50%	8.69%	-2.590418601	1.20%	14.20	3.56%
12/8/1994	11.70%	7.55%	8.75%	-2.584071324	1.21%	14.29	4.15%
12/8/1994	11.50%	7.55%	8.75%	-2.584071324	1.21%	14.29	3.95%
12/14/1994	10.95%	7.57%	8.78%	-2.581380139	1.21%	14.28	3.38%
12/15/1994	11.50%	7.57%	8.78%	-2.580740162	1.21%	14.26	3.93%
12/19/1994	11.50%	7.58%	8.80%	-2.579505183	1.21%	14.24	3.92%

12/28/1994	12.15%	7.61%	8.83%	-2.575147209	1.21%	14.14	4.54%
1/9/1995	12.28%	7.64%	8.87%	-2.571310299	1.22%	14.14	4.64%
1/31/1995	11.00%	7.69%	8.93%	-2.565244175	1.24%	13.71	3.31%
2/10/1995	12.60%	7.70%	8.95%	-2.563744305	1.25%	13.56	4.90%
2/17/1995	11.90%	7.70%	8.96%	-2.563497046	1.26%	13.49	4.20%
3/9/1995	11.50%	7.72%	8.98%	-2.561774453	1.26%	13.37	3.78%
3/20/1995	12.00%	7.72%	8.98%	-2.561279667	1.26%	13.35	4.28%
3/23/1995	12.81%	7.72%	8.99%	-2.561193104	1.27%	13.32	5.09%
3/29/1995	11.60%	7.72%	8.99%	-2.561390321	1.27%	13.31	3.88%
4/6/1995	11.10%	7.72%	8.99%	-2.561975041	1.28%	13.30	3.38%
4/7/1995	11.00%	7.71%	8.99%	-2.562117041	1.28%	13.28	3.29%
4/19/1995	11.00%	7.70%	8.99%	-2.563551842	1.29%	13.20	3.30%
5/12/1995	11.63%	7.68%	8.97%	-2.566903376	1.29%	13.21	3.95%
5/25/1995	11.20%	7.65%	8.95%	-2.570704328	1.30%	13.22	3.55%
6/9/1995	11.25%	7.60%	8.91%	-2.576999458	1.31%	13.26	3.65%
6/21/1995	12.25%	7.56%	8.88%	-2.582523025	1.32%	13.24	4.69%
6/30/1995	11.10%	7.51%	8.85%	-2.588289223	1.33%	13.20	3.59%
9/11/1995	11.30%	7.20%	8.58%	-2.630863753	1.38%	12.48	4.10%
9/27/1995	11.50%	7.12%	8.50%	-2.642117081	1.38%	12.24	4.38%
9/27/1995	11.75%	7.12%	8.50%	-2.642117081	1.38%	12.24	4.63%
9/27/1995	11.30%	7.12%	8.50%	-2.642117081	1.38%	12.24	4.18%
9/29/1995	11.00%	7.11%	8.49%	-2.643930188	1.38%	12.24	3.89%
11/9/1995	12.36%	6.89%	8.30%	-2.674546417	1.40%	12.47	5.47%
11/9/1995	11.38%	6.89%	8.30%	-2.674546417	1.40%	12.47	4.49%
11/17/1995	11.00%	6.85%	8.26%	-2.680612738	1.41%	12.51	4.15%
12/4/1995	11.35%	6.78%	8.21%	-2.69155484	1.43%	12.52	4.57%
12/11/1995	11.40%	6.74%	8.18%	-2.697079693	1.44%	12.52	4.66%
12/20/1995	11.60%	6.69%	8.13%	-2.704042664	1.44%	12.50	4.91%
12/27/1995	12.00%	6.66%	8.11%	-2.709184261	1.45%	12.48	5.34%
2/5/1996	12.25%	6.48%	7.97%	-2.737087325	1.50%	12.63	5.77%
3/29/1996	10.67%	6.42%	7.92%	-2.746308744	1.50%	13.49	4.25%
4/8/1996	11.00%	6.42%	7.92%	-2.745813123	1.50%	13.63	4.58%
4/11/1996	12.59%	6.43%	7.93%	-2.74496808	1.51%	13.74	6.16%
4/11/1996	12.59%	6.43%	7.93%	-2.74496808	1.51%	13.74	6.16%
4/24/1996	11.25%	6.43%	7.95%	-2.744033106	1.51%	13.93	4.82%
4/30/1996	11.00%	6.43%	7.95%	-2.744203463	1.52%	13.99	4.57%
5/13/1996	11.00%	6.44%	7.97%	-2.743373053	1.53%	14.15	4.56%
5/23/1996	11.25%	6.43%	7.98%	-2.743837779	1.54%	14.24	4.82%
6/25/1996	11.25%	6.48%	8.01%	-2.736832837	1.53%	14.73	4.77%
6/27/1996	11.20%	6.48%	8.01%	-2.736140306	1.53%	14.77	4.72%
8/12/1996	10.40%	6.57%	8.09%	-2.722275526	1.51%	15.35	3.83%
9/27/1996	11.00%	6.71%	8.19%	-2.701473883	1.48%	15.98	4.29%
10/16/1996	12.25%	6.76%	8.22%	-2.693650854	1.46%	16.22	5.49%
11/5/1996	11.00%	6.81%	8.25%	-2.686455654	1.44%	16.44	4.19%
11/26/1996	11.30%	6.83%	8.27%	-2.683157094	1.43%	16.58	4.47%
12/18/1996	11.75%	6.84%	8.27%	-2.683065193	1.44%	16.80	4.91%
12/31/1996	11.50%	6.83%	8.27%	-2.683536548	1.44%	16.84	4.67%
1/3/1997	10.70%	6.83%	8.27%	-2.683469618	1.43%	16.85	3.87%
2/13/1997	11.80%	6.82%	8.24%	-2.684796545	1.42%	17.23	4.98%
2/20/1997	11.80%	6.82%	8.23%	-2.685897396	1.42%	17.29	4.98%
3/31/1997	10.02%	6.80%	8.21%	-2.688051022	1.40%	17.83	3.22%
4/2/1997	11.65%	6.80%	8.20%	-2.687962365	1.40%	17.86	4.85%
4/28/1997	11.50%	6.81%	8.20%	-2.686810534	1.39%	18.20	4.69%
4/29/1997	11.70%	6.81%	8.20%	-2.686853335	1.39%	18.20	4.89%
7/17/1997	12.00%	6.77%	8.14%	-2.692346266	1.37%	19.04	5.23%
12/12/1997	11.00%	6.60%	7.96%	-2.717610327	1.36%	22.58	4.40%
12/23/1997	11.12%	6.57%	7.88%	-2.722946277	1.31%	22.85	4.55%
2/2/1998	12.75%	6.39%	7.80%	-2.750652989	1.41%	23.45	6.36%
3/2/1998	11.25%	6.28%	7.71%	-2.76702993	1.42%	23.41	4.97%
3/6/1998	10.75%	6.27%	7.69%	-2.769940573	1.43%	23.39	4.48%
3/20/1998	10.50%	6.22%	7.64%	-2.777213672	1.42%	23.36	4.28%
4/30/1998	12.20%	6.12%	7.54%	-2.79337985	1.42%	23.68	6.08%
7/10/1998	11.40%	5.94%	7.39%	-2.824188014	1.46%	23.14	5.46%
9/15/1998	11.90%	5.78%	7.30%	-2.850769112	1.52%	23.80	6.12%
11/30/1998	12.60%	5.58%	7.26%	-2.886003023	1.68%	26.06	7.02%
12/10/1998	12.20%	5.54%	7.25%	-2.89315573	1.71%	26.34	6.66%
12/17/1998	12.10%	5.52%	7.25%	-2.897314092	1.73%	26.58	6.58%
2/5/1999	10.30%	5.38%	7.24%	-2.922553735	1.86%	27.54	4.92%
3/4/1999	10.50%	5.34%	7.25%	-2.930709887	1.91%	28.19	5.16%
4/6/1999	10.94%	5.32%	7.28%	-2.933623209	1.96%	28.47	5.62%
7/29/1999	10.75%	5.52%	7.54%	-2.897188406	2.02%	25.77	5.23%
9/23/1999	10.75%	5.70%	7.72%	-2.864128491	2.02%	24.95	5.05%
11/17/1999	11.10%	5.90%	7.90%	-2.830538984	2.00%	24.31	5.20%
1/7/2000	11.50%	6.05%	8.03%	-2.805234019	1.98%	23.49	5.45%
1/7/2000	11.50%	6.05%	8.03%	-2.805234019	1.98%	23.49	5.45%
2/17/2000	10.60%	6.17%	8.15%	-2.784697924	1.98%	23.35	4.43%
3/28/2000	11.25%	6.20%	8.23%	-2.781387114	2.03%	22.96	5.05%
5/24/2000	11.00%	6.18%	8.34%	-2.783420237	2.16%	23.84	4.82%
7/18/2000	12.20%	6.16%	8.40%	-2.787689912	2.24%	23.36	6.04%
9/29/2000	11.16%	6.03%	8.42%	-2.808572357	2.39%	22.44	5.13%
11/28/2000	12.90%	5.89%	8.40%	-2.832402316	2.51%	22.97	7.01%
11/30/2000	12.10%	5.88%	8.40%	-2.83326822	2.52%	23.03	6.22%

1/23/2001	11.25%	5.79%	8.33%	-2.848668238	2.54%	23.49	5.46%
2/8/2001	11.50%	5.77%	8.31%	-2.852595652	2.54%	23.15	5.73%
5/8/2001	10.75%	5.62%	8.12%	-2.878885019	2.50%	24.39	5.13%
6/26/2001	11.00%	5.62%	8.08%	-2.878717819	2.46%	24.93	5.38%
7/25/2001	11.02%	5.60%	8.06%	-2.882979849	2.46%	25.07	5.42%
7/25/2001	11.02%	5.60%	8.06%	-2.882979849	2.46%	25.07	5.42%
7/31/2001	11.00%	5.59%	8.05%	-2.883621127	2.46%	24.96	5.41%
8/31/2001	10.50%	5.56%	8.01%	-2.88991106	2.45%	24.49	4.94%
9/7/2001	10.75%	5.55%	8.01%	-2.890944082	2.45%	24.53	5.20%
9/10/2001	11.00%	5.55%	8.00%	-2.8911758	2.45%	24.55	5.45%
9/20/2001	10.00%	5.55%	8.00%	-2.891508082	2.45%	24.84	4.45%
10/24/2001	10.30%	5.54%	8.00%	-2.892931715	2.46%	25.69	4.76%
11/28/2001	10.60%	5.49%	8.01%	-2.902140335	2.52%	26.17	5.11%
12/3/2001	12.88%	5.49%	8.01%	-2.902751896	2.52%	26.22	7.39%
12/20/2001	12.50%	5.50%	8.03%	-2.900883598	2.53%	26.14	7.00%
1/22/2002	10.00%	5.50%	8.06%	-2.901113059	2.56%	25.49	4.50%
3/27/2002	10.10%	5.45%	8.10%	-2.910256497	2.65%	24.65	4.65%
4/22/2002	11.80%	5.45%	8.12%	-2.909549875	2.67%	24.49	6.35%
5/28/2002	10.17%	5.46%	8.15%	-2.906892594	2.69%	24.29	4.71%
6/10/2002	12.00%	5.47%	8.17%	-2.905117339	2.69%	24.33	6.53%
6/18/2002	11.16%	5.48%	8.17%	-2.904826571	2.70%	24.42	5.68%
6/20/2002	11.00%	5.48%	8.18%	-2.904761693	2.70%	24.46	5.52%
6/20/2002	12.30%	5.48%	8.18%	-2.904761693	2.70%	24.46	6.82%
7/15/2002	11.00%	5.48%	8.19%	-2.904867042	2.71%	24.08	5.52%
9/12/2002	12.30%	5.45%	8.14%	-2.909336723	2.69%	25.15	6.85%
9/26/2002	10.45%	5.41%	8.12%	-2.916605702	2.70%	25.82	5.04%
12/4/2002	11.55%	5.29%	8.04%	-2.939312994	2.75%	28.03	6.26%
12/13/2002	11.75%	5.27%	8.02%	-2.943691118	2.75%	28.29	6.48%
12/20/2002	11.40%	5.25%	8.01%	-2.947529791	2.76%	28.48	6.15%
1/8/2003	11.10%	5.19%	7.96%	-2.958831509	2.77%	28.93	5.91%
1/31/2003	12.45%	5.13%	7.89%	-2.970990735	2.76%	29.66	7.32%
2/28/2003	12.30%	5.04%	7.79%	-2.987360779	2.75%	30.74	7.26%
3/6/2003	10.75%	5.02%	7.76%	-2.991151425	2.74%	30.99	5.73%
3/7/2003	9.96%	5.02%	7.75%	-2.992064936	2.74%	31.04	4.94%
3/20/2003	12.00%	4.98%	7.70%	-2.999369836	2.71%	31.54	7.02%
4/3/2003	12.00%	4.95%	7.63%	-3.00477383	2.68%	31.74	7.05%
4/15/2003	11.15%	4.93%	7.59%	-3.008823419	2.65%	31.70	6.22%
6/25/2003	10.75%	4.79%	7.24%	-3.038054451	2.44%	28.27	5.96%
6/26/2003	10.75%	4.79%	7.23%	-3.038241201	2.44%	28.19	5.96%
7/9/2003	9.75%	4.79%	7.18%	-3.038725594	2.39%	27.44	4.96%
7/16/2003	9.75%	4.79%	7.16%	-3.038182058	2.36%	26.97	4.96%
7/25/2003	9.50%	4.79%	7.12%	-3.037864695	2.33%	26.27	4.71%
8/26/2003	10.50%	4.83%	7.02%	-3.030347336	2.19%	24.78	5.67%
12/17/2003	9.85%	4.94%	6.75%	-3.008547812	1.82%	20.47	4.91%
12/17/2003	10.70%	4.94%	6.75%	-3.008547812	1.82%	20.47	5.76%
12/18/2003	11.50%	4.94%	6.75%	-3.008306374	1.81%	20.40	6.56%
12/19/2003	12.00%	4.94%	6.75%	-3.008139377	1.81%	20.31	7.06%
12/19/2003	12.00%	4.94%	6.75%	-3.008139377	1.81%	20.31	7.06%
12/23/2003	10.50%	4.94%	6.74%	-3.007905668	1.80%	20.15	5.56%
1/13/2004	12.00%	4.95%	6.71%	-3.006044052	1.76%	19.31	7.05%
3/2/2004	10.75%	4.99%	6.63%	-2.997661168	1.63%	18.17	5.76%
3/26/2004	10.25%	5.02%	6.60%	-2.990888746	1.58%	17.96	5.23%
4/5/2004	11.25%	5.03%	6.60%	-2.98876185	1.57%	17.85	6.22%
5/18/2004	10.50%	5.07%	6.61%	-2.981503433	1.54%	17.43	5.43%
5/25/2004	10.25%	5.07%	6.60%	-2.980961895	1.53%	17.36	5.18%
5/27/2004	10.25%	5.08%	6.60%	-2.980817422	1.52%	17.33	5.17%
6/2/2004	11.22%	5.08%	6.59%	-2.980403032	1.52%	17.30	6.14%
6/30/2004	10.50%	5.10%	6.57%	-2.975822055	1.47%	16.96	5.40%
6/30/2004	10.50%	5.10%	6.57%	-2.975822055	1.47%	16.96	5.40%
7/16/2004	11.60%	5.11%	6.56%	-2.974028017	1.45%	16.69	6.49%
8/25/2004	10.25%	5.10%	6.53%	-2.975274132	1.43%	16.53	5.15%
9/9/2004	10.40%	5.10%	6.51%	-2.976412668	1.42%	16.35	5.30%
11/9/2004	10.50%	5.07%	6.43%	-2.982694322	1.37%	15.94	5.43%
11/23/2004	11.00%	5.06%	6.42%	-2.983091699	1.36%	15.75	5.94%
12/14/2004	10.97%	5.07%	6.42%	-2.982380897	1.35%	15.59	5.90%
12/21/2004	11.25%	5.07%	6.41%	-2.981810537	1.34%	15.51	6.18%
12/21/2004	11.50%	5.07%	6.41%	-2.981810537	1.34%	15.51	6.43%
12/22/2004	10.70%	5.07%	6.41%	-2.981683878	1.34%	15.47	5.63%
12/22/2004	11.50%	5.07%	6.41%	-2.981683878	1.34%	15.47	6.43%
12/29/2004	9.85%	5.08%	6.41%	-2.980600108	1.34%	15.30	4.77%
1/6/2005	10.70%	5.08%	6.41%	-2.980446978	1.33%	15.12	5.62%
2/18/2005	10.30%	4.98%	6.33%	-3.000646136	1.35%	14.59	5.32%
2/25/2005	10.50%	4.96%	6.31%	-3.004643114	1.35%	14.46	5.54%
3/10/2005	11.00%	4.93%	6.27%	-3.010737966	1.34%	14.18	6.07%
3/24/2005	10.30%	4.89%	6.23%	-3.017006419	1.34%	14.05	5.41%
4/4/2005	10.00%	4.87%	6.21%	-3.021138837	1.33%	14.02	5.13%
4/7/2005	10.25%	4.87%	6.19%	-3.022686157	1.33%	14.00	5.38%
5/18/2005	10.25%	4.78%	6.08%	-3.040911423	1.30%	13.89	5.47%
5/25/2005	10.75%	4.76%	6.06%	-3.044157534	1.30%	13.75	5.99%
5/26/2005	9.75%	4.76%	6.06%	-3.044786764	1.30%	13.71	4.99%
6/1/2005	9.75%	4.75%	6.05%	-3.047722875	1.30%	13.64	5.00%
7/19/2005	11.50%	4.64%	5.95%	-3.069666948	1.31%	13.17	6.86%



8/5/2005	11.75%	4.62%	5.93%	-3.074217217	1.31%	12.94	7.13%
8/15/2005	10.13%	4.61%	5.92%	-3.076430355	1.31%	12.84	5.52%
9/28/2005	10.00%	4.54%	5.87%	-3.091984314	1.32%	12.77	5.46%
10/4/2005	10.75%	4.53%	5.86%	-3.093410813	1.33%	12.78	6.22%
12/12/2005	11.00%	4.55%	5.93%	-3.090657422	1.38%	12.97	6.45%
12/13/2005	10.75%	4.55%	5.93%	-3.090774901	1.38%	12.96	6.20%
12/21/2005	10.29%	4.54%	5.93%	-3.091653062	1.39%	12.91	5.75%
12/21/2005	10.40%	4.54%	5.93%	-3.091653062	1.39%	12.91	5.86%
12/22/2005	11.15%	4.54%	5.94%	-3.091878642	1.39%	12.90	6.61%
12/22/2005	11.00%	4.54%	5.94%	-3.091878642	1.39%	12.90	6.46%
12/28/2005	10.00%	4.54%	5.94%	-3.092997227	1.40%	12.87	5.46%
12/28/2005	10.00%	4.54%	5.94%	-3.092997227	1.40%	12.87	5.46%
1/5/2006	11.00%	4.53%	5.93%	-3.094948	1.41%	12.82	6.47%
1/27/2006	9.75%	4.52%	5.94%	-3.096670977	1.42%	12.72	5.23%
3/3/2006	10.39%	4.53%	5.96%	-3.094156765	1.43%	12.39	5.86%
4/17/2006	10.20%	4.62%	6.05%	-3.075605406	1.44%	12.34	5.58%
4/26/2006	10.60%	4.64%	6.08%	-3.070230581	1.44%	12.34	5.96%
5/17/2006	11.60%	4.69%	6.14%	-3.058721844	1.45%	12.47	6.91%
6/6/2006	10.00%	4.75%	6.19%	-3.047813395	1.44%	12.72	5.25%
6/27/2006	10.75%	4.80%	6.25%	-3.036302206	1.45%	13.07	5.95%
7/6/2006	10.20%	4.83%	6.28%	-3.031062883	1.45%	13.12	5.37%
7/24/2006	9.60%	4.86%	6.32%	-3.02480261	1.46%	13.29	4.74%
7/26/2006	10.50%	4.86%	6.33%	-3.023940481	1.47%	13.29	5.64%
7/28/2006	10.05%	4.87%	6.33%	-3.022998842	1.47%	13.27	5.18%
8/23/2006	9.55%	4.89%	6.36%	-3.018275015	1.47%	13.20	4.66%
9/1/2006	10.54%	4.90%	6.36%	-3.016566705	1.47%	13.19	5.64%
9/14/2006	10.00%	4.91%	6.37%	-3.014511628	1.47%	13.25	5.09%
10/6/2006	9.67%	4.92%	6.37%	-3.011845109	1.45%	13.30	4.75%
11/21/2006	10.08%	4.95%	6.39%	-3.005242783	1.44%	13.12	5.13%
11/21/2006	10.08%	4.95%	6.39%	-3.005242783	1.44%	13.12	5.13%
11/21/2006	10.12%	4.95%	6.39%	-3.005242783	1.44%	13.12	5.17%
12/1/2006	10.50%	4.96%	6.38%	-3.004548713	1.43%	13.07	5.54%
12/1/2006	10.25%	4.96%	6.38%	-3.004548713	1.43%	13.07	5.29%
12/7/2006	10.75%	4.96%	6.38%	-3.004570614	1.43%	13.06	5.79%
12/21/2006	10.90%	4.95%	6.38%	-3.004971508	1.42%	12.98	5.95%
12/21/2006	11.25%	4.95%	6.38%	-3.004971508	1.42%	12.98	6.30%
12/22/2006	10.25%	4.95%	6.38%	-3.00491217	1.42%	12.98	5.30%
1/5/2007	10.00%	4.95%	6.37%	-3.00518353	1.42%	12.98	5.05%
1/11/2007	10.10%	4.95%	6.37%	-3.00597145	1.42%	12.98	5.15%
1/11/2007	10.10%	4.95%	6.37%	-3.00597145	1.42%	12.98	5.15%
1/11/2007	10.90%	4.95%	6.37%	-3.00597145	1.42%	12.98	5.95%
1/12/2007	10.10%	4.95%	6.37%	-3.006139	1.42%	12.98	5.15%
1/13/2007	10.40%	4.95%	6.36%	-3.006139	1.41%	12.98	5.45%
1/19/2007	10.80%	4.94%	6.36%	-3.00724106	1.42%	12.96	5.86%
3/21/2007	11.35%	4.86%	6.26%	-3.023136318	1.40%	12.81	6.49%
3/22/2007	9.75%	4.86%	6.26%	-3.023543588	1.40%	12.78	4.89%
5/15/2007	10.00%	4.81%	6.18%	-3.035131286	1.38%	12.22	5.19%
5/17/2007	10.25%	4.80%	6.18%	-3.035523183	1.38%	12.21	5.45%
5/17/2007	10.25%	4.80%	6.18%	-3.035523183	1.38%	12.21	5.45%
5/22/2007	10.20%	4.80%	6.18%	-3.035813023	1.37%	12.19	5.40%
5/22/2007	10.50%	4.80%	6.18%	-3.035813023	1.37%	12.19	5.70%
5/23/2007	10.70%	4.80%	6.18%	-3.035807374	1.37%	12.18	5.90%
5/25/2007	9.67%	4.80%	6.18%	-3.035748374	1.37%	12.16	4.87%
6/15/2007	9.90%	4.82%	6.18%	-3.032185058	1.36%	12.27	5.08%
6/21/2007	10.20%	4.83%	6.19%	-3.030757034	1.36%	12.30	5.37%
6/22/2007	10.50%	4.83%	6.19%	-3.030419127	1.36%	12.31	5.67%
6/28/2007	10.75%	4.84%	6.19%	-3.028770569	1.35%	12.38	5.91%
7/12/2007	9.67%	4.86%	6.21%	-3.024328119	1.35%	12.56	4.81%
7/19/2007	10.00%	4.87%	6.21%	-3.023067835	1.35%	12.65	5.13%
7/19/2007	10.00%	4.87%	6.21%	-3.023067835	1.35%	12.65	5.13%
8/15/2007	10.40%	4.88%	6.24%	-3.020041442	1.36%	13.76	5.52%
10/9/2007	10.00%	4.91%	6.32%	-3.01403012	1.41%	15.94	5.09%
10/17/2007	9.10%	4.91%	6.32%	-3.013249941	1.41%	16.15	4.19%
10/31/2007	9.96%	4.90%	6.33%	-3.015111405	1.43%	16.62	5.06%
11/29/2007	10.90%	4.87%	6.34%	-3.022447269	1.47%	18.14	6.03%
12/6/2007	10.75%	4.86%	6.35%	-3.023872047	1.49%	18.45	5.89%
12/13/2007	9.96%	4.86%	6.36%	-3.024379313	1.50%	18.60	5.10%
12/14/2007	10.70%	4.86%	6.37%	-3.024419338	1.51%	18.62	5.84%
12/14/2007	10.80%	4.86%	6.37%	-3.024419338	1.51%	18.62	5.94%
12/19/2007	10.20%	4.86%	6.37%	-3.024925123	1.52%	18.74	5.34%
12/20/2007	10.20%	4.86%	6.37%	-3.025146904	1.52%	18.77	5.34%
12/20/2007	11.00%	4.86%	6.37%	-3.025146904	1.52%	18.77	6.14%
12/28/2007	10.25%	4.85%	6.39%	-3.026113672	1.54%	18.84	5.40%
12/31/2007	11.25%	4.85%	6.39%	-3.026472202	1.54%	18.88	6.40%
1/8/2008	10.75%	4.83%	6.39%	-3.029431558	1.56%	19.16	5.92%
1/17/2008	10.75%	4.81%	6.40%	-3.033564395	1.58%	19.51	5.94%
1/28/2008	9.40%	4.80%	6.40%	-3.037591447	1.60%	19.99	4.60%
1/30/2008	10.00%	4.79%	6.40%	-3.038613023	1.61%	20.14	5.21%
1/31/2008	10.71%	4.79%	6.40%	-3.039198674	1.61%	20.21	5.92%
2/29/2008	10.25%	4.75%	6.44%	-3.047449143	1.70%	21.45	5.50%
3/12/2008	10.25%	4.73%	6.46%	-3.052209146	1.73%	21.99	5.52%
3/25/2008	9.10%	4.68%	6.47%	-3.061558162	1.79%	22.55	4.42%

4/22/2008	10.25%	4.60%	6.49%	-3.078832624	1.89%	23.32	5.65%
4/24/2008	10.10%	4.60%	6.50%	-3.080067582	1.90%	23.35	5.50%
5/1/2008	10.70%	4.58%	6.50%	-3.082615966	1.92%	23.46	6.12%
5/19/2008	11.00%	4.56%	6.52%	-3.087540151	1.96%	23.32	6.44%
5/27/2008	10.00%	4.55%	6.53%	-3.090159256	1.98%	23.18	5.45%
6/10/2008	10.70%	4.54%	6.55%	-3.091971478	2.01%	22.89	6.16%
6/27/2008	11.04%	4.54%	6.58%	-3.092903964	2.05%	22.73	6.50%
6/27/2008	10.50%	4.54%	6.58%	-3.092903964	2.05%	22.73	5.96%
7/10/2008	10.43%	4.52%	6.60%	-3.096262708	2.07%	22.88	5.91%
7/16/2008	9.40%	4.51%	6.60%	-3.09785137	2.09%	23.08	4.89%
7/30/2008	10.80%	4.51%	6.64%	-3.099343455	2.13%	23.33	6.29%
7/31/2008	10.70%	4.51%	6.64%	-3.09948303	2.13%	23.34	6.19%
8/11/2008	10.25%	4.50%	6.67%	-3.099990996	2.16%	23.37	5.75%
8/26/2008	10.18%	4.50%	6.70%	-3.101220659	2.20%	23.23	5.68%
9/10/2008	10.30%	4.50%	6.73%	-3.102089265	2.24%	23.01	5.80%
9/24/2008	10.65%	4.48%	6.77%	-3.105445296	2.29%	23.46	6.17%
9/24/2008	10.65%	4.48%	6.77%	-3.105445296	2.29%	23.46	6.17%
9/24/2008	10.65%	4.48%	6.77%	-3.105445296	2.29%	23.46	6.17%
9/30/2008	10.20%	4.47%	6.79%	-3.106880921	2.32%	23.77	5.73%
10/8/2008	10.15%	4.46%	6.83%	-3.109380865	2.37%	24.61	5.69%
11/13/2008	10.55%	4.45%	7.14%	-3.113307793	2.70%	29.58	6.10%
11/17/2008	10.20%	4.44%	7.17%	-3.113801229	2.73%	29.98	5.76%
12/1/2008	10.25%	4.39%	7.27%	-3.124869944	2.88%	31.79	5.86%
12/23/2008	11.00%	4.27%	7.40%	-3.153518936	3.13%	34.13	6.73%
12/29/2008	10.00%	4.24%	7.41%	-3.16118106	3.17%	34.34	5.76%
12/29/2008	10.20%	4.24%	7.41%	-3.16118106	3.17%	34.34	5.96%
12/31/2008	10.75%	4.22%	7.42%	-3.165299335	3.20%	34.47	6.53%
1/14/2009	10.50%	4.15%	7.48%	-3.182081347	3.33%	35.25	6.35%
1/21/2009	10.50%	4.11%	7.50%	-3.191026293	3.38%	35.81	6.39%
1/21/2009	10.50%	4.11%	7.50%	-3.191026293	3.38%	35.81	6.39%
1/21/2009	10.50%	4.11%	7.50%	-3.191026293	3.38%	35.81	6.39%
1/27/2009	10.76%	4.09%	7.52%	-3.196810512	3.43%	36.26	6.67%
1/30/2009	10.50%	4.07%	7.54%	-3.200583476	3.46%	36.58	6.43%
2/4/2009	8.75%	4.06%	7.55%	-3.203900576	3.49%	36.94	4.69%
3/4/2009	10.50%	3.96%	7.64%	-3.228968418	3.69%	39.59	6.54%
3/12/2009	11.50%	3.93%	7.68%	-3.237197803	3.75%	40.42	7.57%
4/2/2009	11.10%	3.85%	7.77%	-3.257597848	3.92%	42.04	7.25%
4/21/2009	10.61%	3.80%	7.83%	-3.270969095	4.04%	42.91	6.81%
4/24/2009	10.00%	3.78%	7.85%	-3.274149923	4.07%	43.10	6.22%
4/30/2009	11.25%	3.77%	7.87%	-3.277842627	4.10%	43.29	7.48%
5/4/2009	10.74%	3.77%	7.88%	-3.279318491	4.12%	43.40	6.97%
5/20/2009	10.25%	3.74%	7.92%	-3.286204298	4.18%	43.96	6.51%
5/28/2009	10.50%	3.74%	7.94%	-3.286261679	4.20%	44.24	6.76%
6/22/2009	10.00%	3.76%	7.98%	-3.280184058	4.22%	45.01	6.24%
6/24/2009	10.80%	3.76%	7.98%	-3.27948786	4.22%	45.06	7.04%
7/8/2009	10.63%	3.76%	7.98%	-3.279556337	4.22%	44.95	6.87%
7/17/2009	10.50%	3.77%	7.96%	-3.276804414	4.19%	44.55	6.73%
8/31/2009	10.25%	3.82%	7.63%	-3.265340673	3.81%	38.96	6.43%
10/14/2009	10.70%	4.02%	7.28%	-3.214483475	3.26%	33.90	6.68%
10/23/2009	10.88%	4.06%	7.22%	-3.203174858	3.15%	33.22	6.82%
11/2/2009	10.70%	4.10%	7.17%	-3.195312051	3.08%	32.57	6.60%
11/3/2009	10.70%	4.10%	7.16%	-3.194201474	3.06%	32.48	6.60%
11/24/2009	10.25%	4.16%	7.04%	-3.180528246	2.88%	30.89	6.09%
11/25/2009	10.75%	4.16%	7.03%	-3.179847438	2.87%	30.79	6.59%
11/30/2009	10.35%	4.17%	7.02%	-3.177361286	2.85%	30.58	6.18%
12/3/2009	10.50%	4.18%	6.99%	-3.175090026	2.82%	30.18	6.32%
12/7/2009	10.70%	4.19%	6.98%	-3.173207062	2.79%	29.90	6.51%
12/16/2009	11.00%	4.22%	6.93%	-3.165967328	2.71%	28.98	6.78%
12/16/2009	10.90%	4.22%	6.93%	-3.165967328	2.71%	28.98	6.68%
12/18/2009	10.40%	4.22%	6.91%	-3.164249054	2.69%	28.70	6.18%
12/18/2009	10.40%	4.22%	6.91%	-3.164249054	2.69%	28.70	6.18%
12/22/2009	10.20%	4.23%	6.90%	-3.162096838	2.66%	28.46	5.97%
12/22/2009	10.40%	4.23%	6.90%	-3.162096838	2.66%	28.46	6.17%
12/22/2009	10.40%	4.23%	6.90%	-3.162096838	2.66%	28.46	6.17%
12/30/2009	10.00%	4.26%	6.85%	-3.155121845	2.59%	27.91	5.74%
1/4/2010	10.80%	4.28%	6.84%	-3.151395302	2.56%	27.67	6.52%
1/11/2010	11.00%	4.31%	6.79%	-3.145305506	2.49%	27.09	6.69%
1/26/2010	10.13%	4.35%	6.69%	-3.134367263	2.34%	26.08	5.78%
1/27/2010	10.40%	4.36%	6.68%	-3.133477673	2.32%	26.01	6.04%
1/27/2010	10.40%	4.36%	6.68%	-3.133477673	2.32%	26.01	6.04%
1/27/2010	10.70%	4.36%	6.68%	-3.133477673	2.32%	26.01	6.34%
2/9/2010	9.80%	4.38%	6.60%	-3.127793047	2.21%	25.43	5.42%
2/18/2010	10.60%	4.40%	6.55%	-3.123777636	2.15%	25.05	6.20%
2/24/2010	10.18%	4.41%	6.52%	-3.121686872	2.11%	24.80	5.77%
3/2/2010	9.63%	4.41%	6.49%	-3.121269972	2.08%	24.54	5.22%
3/4/2010	10.50%	4.41%	6.47%	-3.120908261	2.06%	24.43	6.09%
3/5/2010	10.50%	4.41%	6.46%	-3.120784568	2.05%	24.37	6.09%
3/11/2010	11.90%	4.42%	6.44%	-3.120123654	2.02%	24.10	7.48%
3/17/2010	10.00%	4.41%	6.40%	-3.120488042	1.99%	23.85	5.59%
3/25/2010	10.15%	4.42%	6.36%	-3.119876023	1.94%	23.47	5.73%
4/2/2010	10.10%	4.43%	6.33%	-3.117231477	1.90%	23.15	5.67%
4/27/2010	10.00%	4.46%	6.26%	-3.110636567	1.80%	22.16	5.54%

4/29/2010	9.90%	4.46%	6.25%	-3.110494299	1.79%	22.11	5.44%
4/29/2010	10.06%	4.46%	6.25%	-3.110494299	1.79%	22.11	5.60%
4/29/2010	10.26%	4.46%	6.25%	-3.110494299	1.79%	22.11	5.80%
5/12/2010	10.30%	4.45%	6.21%	-3.111299926	1.75%	22.26	5.85%
5/12/2010	10.30%	4.45%	6.21%	-3.111299926	1.75%	22.26	5.85%
5/28/2010	10.20%	4.44%	6.17%	-3.113932092	1.73%	22.81	5.76%
5/28/2010	10.10%	4.44%	6.17%	-3.113932092	1.73%	22.81	5.66%
6/7/2010	10.30%	4.44%	6.17%	-3.114055732	1.73%	23.00	5.86%
6/16/2010	10.00%	4.44%	6.17%	-3.114597301	1.73%	23.16	5.56%
6/28/2010	10.50%	4.43%	6.17%	-3.115717468	1.73%	23.19	6.07%
6/28/2010	9.67%	4.43%	6.17%	-3.115717468	1.73%	23.19	5.24%
6/30/2010	9.40%	4.43%	6.17%	-3.116340439	1.74%	23.30	4.97%
7/1/2010	10.25%	4.43%	6.17%	-3.116562245	1.74%	23.34	5.82%
7/15/2010	10.70%	4.43%	6.17%	-3.117118905	1.74%	23.43	6.27%
7/15/2010	10.53%	4.43%	6.17%	-3.117118905	1.74%	23.43	6.10%
7/30/2010	10.70%	4.41%	6.16%	-3.120221767	1.74%	23.39	6.29%
8/4/2010	10.50%	4.41%	6.15%	-3.120995743	1.74%	23.40	6.09%
8/6/2010	9.83%	4.41%	6.15%	-3.121498459	1.74%	23.41	5.42%
8/25/2010	9.90%	4.37%	6.10%	-3.130131006	1.73%	23.38	5.53%
9/3/2010	10.60%	4.35%	6.07%	-3.135016174	1.72%	23.44	6.25%
9/14/2010	10.70%	4.33%	6.06%	-3.139529881	1.73%	23.46	6.37%
9/16/2010	10.00%	4.32%	6.05%	-3.140935713	1.73%	23.44	5.68%
9/16/2010	10.00%	4.32%	6.05%	-3.140935713	1.73%	23.44	5.68%
9/30/2010	9.75%	4.28%	6.02%	-3.150230015	1.73%	23.47	5.47%
10/14/2010	10.35%	4.24%	5.98%	-3.160773329	1.74%	23.50	6.11%
10/28/2010	10.70%	4.21%	5.95%	-3.168341788	1.75%	23.55	6.49%
11/2/2010	10.38%	4.20%	5.95%	-3.17043425	1.75%	23.60	6.18%
11/4/2010	10.70%	4.19%	5.94%	-3.171543411	1.75%	23.54	6.51%
11/19/2010	10.20%	4.17%	5.93%	-3.176070512	1.76%	23.28	6.03%
11/22/2010	10.00%	4.17%	5.93%	-3.176584599	1.76%	23.24	5.83%
12/1/2010	10.13%	4.16%	5.92%	-3.180510957	1.76%	23.21	5.97%
12/6/2010	9.86%	4.15%	5.91%	-3.181566727	1.76%	23.18	5.71%
12/9/2010	10.25%	4.15%	5.91%	-3.182246769	1.76%	23.14	6.10%
12/13/2010	10.70%	4.15%	5.91%	-3.182883161	1.76%	23.13	6.55%
12/14/2010	10.13%	4.15%	5.91%	-3.183079988	1.76%	23.12	5.98%
12/15/2010	10.44%	4.15%	5.91%	-3.183167264	1.76%	23.12	6.29%
12/17/2010	10.00%	4.14%	5.90%	-3.183507953	1.76%	23.11	5.86%
12/20/2010	10.60%	4.14%	5.90%	-3.183684527	1.76%	23.10	6.46%
12/21/2010	10.30%	4.14%	5.90%	-3.18386368	1.76%	23.09	6.16%
12/27/2010	9.90%	4.14%	5.90%	-3.184538125	1.76%	23.07	5.76%
12/29/2010	11.15%	4.14%	5.90%	-3.185177677	1.76%	23.07	7.01%
1/5/2011	10.15%	4.13%	5.89%	-3.187112059	1.77%	23.08	6.02%
1/12/2011	10.30%	4.12%	5.89%	-3.188930455	1.77%	23.07	6.18%
1/13/2011	10.30%	4.12%	5.89%	-3.189224696	1.77%	23.06	6.18%
1/18/2011	10.00%	4.12%	5.88%	-3.189817587	1.77%	23.05	5.88%
1/20/2011	9.30%	4.12%	5.88%	-3.190121488	1.77%	23.06	5.18%
1/20/2011	10.13%	4.12%	5.88%	-3.190121488	1.77%	23.06	6.01%
1/31/2011	9.60%	4.11%	5.88%	-3.190920371	1.76%	23.12	5.49%
2/3/2011	10.00%	4.11%	5.88%	-3.190715033	1.76%	23.13	5.89%
2/25/2011	10.00%	4.14%	5.88%	-3.183839904	1.74%	22.58	5.86%
3/25/2011	9.80%	4.18%	5.87%	-3.175519517	1.70%	21.29	5.62%
3/30/2011	10.00%	4.18%	5.87%	-3.173985214	1.69%	21.16	5.82%
4/12/2011	10.00%	4.21%	5.86%	-3.167347489	1.65%	20.69	5.79%
4/25/2011	10.74%	4.23%	5.86%	-3.162361798	1.63%	20.17	6.51%
4/26/2011	9.67%	4.24%	5.86%	-3.161766449	1.62%	20.13	5.43%
4/27/2011	10.40%	4.24%	5.86%	-3.161170032	1.62%	20.08	6.16%
5/4/2011	10.00%	4.25%	5.85%	-3.159264664	1.61%	19.84	5.75%
5/4/2011	10.00%	4.25%	5.85%	-3.159264664	1.61%	19.84	5.75%
5/24/2011	10.50%	4.27%	5.85%	-3.153484574	1.58%	19.44	6.23%
6/8/2011	10.75%	4.30%	5.86%	-3.145562201	1.55%	19.02	6.45%
6/16/2011	9.20%	4.32%	5.86%	-3.142525313	1.55%	18.83	4.88%
6/17/2011	9.95%	4.32%	5.86%	-3.142110224	1.55%	18.83	5.63%
7/13/2011	10.20%	4.37%	5.88%	-3.131313145	1.51%	18.48	5.83%
8/1/2011	9.20%	4.39%	5.89%	-3.126053204	1.50%	18.46	4.81%
8/8/2011	10.00%	4.38%	5.88%	-3.127241649	1.49%	18.77	5.62%
8/11/2011	10.00%	4.38%	5.87%	-3.128765757	1.49%	19.05	5.62%
8/12/2011	10.35%	4.38%	5.87%	-3.129218642	1.49%	19.13	5.97%
8/19/2011	10.25%	4.36%	5.85%	-3.133372714	1.49%	19.53	5.89%
9/2/2011	12.88%	4.32%	5.82%	-3.141667397	1.50%	20.31	8.56%
9/22/2011	10.00%	4.24%	5.76%	-3.160554415	1.52%	21.34	5.76%
10/12/2011	10.30%	4.14%	5.70%	-3.185236225	1.57%	22.82	6.16%
10/20/2011	10.50%	4.10%	5.68%	-3.194899365	1.58%	23.27	6.40%
11/30/2011	10.90%	3.87%	5.54%	-3.251672762	1.66%	25.28	7.03%
11/30/2011	10.90%	3.87%	5.54%	-3.251672762	1.66%	25.28	7.03%
12/14/2011	10.00%	3.79%	5.49%	-3.271703753	1.70%	25.67	6.21%
12/14/2011	10.30%	3.79%	5.49%	-3.271703753	1.70%	25.67	6.51%
12/20/2011	10.20%	3.76%	5.47%	-3.280231611	1.71%	25.76	6.44%
12/21/2011	10.20%	3.75%	5.46%	-3.282150288	1.71%	25.76	6.45%
12/22/2011	9.90%	3.75%	5.46%	-3.284074128	1.71%	25.77	6.15%
12/22/2011	10.40%	3.75%	5.46%	-3.284074128	1.71%	25.77	6.65%
12/23/2011	10.19%	3.74%	5.45%	-3.285945923	1.71%	25.76	6.45%
1/25/2012	10.50%	3.57%	5.36%	-3.333877869	1.80%	25.89	6.93%

1/27/2012	10.50%	3.55%	5.35%	-3.33779292	1.80%	25.91	6.95%
2/15/2012	10.20%	3.47%	5.29%	-3.361409425	1.82%	26.12	6.73%
2/23/2012	9.90%	3.43%	5.27%	-3.371270593	1.84%	26.14	6.47%
2/27/2012	10.25%	3.42%	5.27%	-3.374743262	1.84%	26.15	6.83%
2/29/2012	10.40%	3.41%	5.26%	-3.378194589	1.85%	26.16	6.99%
3/29/2012	10.37%	3.31%	5.20%	-3.407607481	1.89%	25.99	7.06%
4/4/2012	10.00%	3.29%	5.19%	-3.413550962	1.90%	25.89	6.71%
4/26/2012	10.00%	3.20%	5.14%	-3.441427686	1.94%	25.91	6.80%
5/2/2012	10.00%	3.18%	5.13%	-3.448747519	1.95%	25.85	6.82%
5/7/2012	9.80%	3.16%	5.12%	-3.453275485	1.95%	25.85	6.64%
5/15/2012	10.00%	3.14%	5.10%	-3.460060701	1.95%	25.79	6.86%
5/29/2012	10.05%	3.11%	5.08%	-3.4721097	1.98%	25.23	6.94%
6/7/2012	10.30%	3.07%	5.07%	-3.482000441	2.00%	24.77	7.23%
6/14/2012	9.40%	3.06%	5.06%	-3.486617828	2.00%	24.45	6.34%
6/15/2012	10.40%	3.06%	5.06%	-3.487549095	2.01%	24.40	7.34%
6/18/2012	9.60%	3.05%	5.06%	-3.488645419	2.01%	24.33	6.55%
6/19/2012	9.25%	3.05%	5.06%	-3.489530491	2.01%	24.25	6.20%
6/26/2012	10.10%	3.04%	5.06%	-3.493695579	2.02%	23.82	7.06%
6/29/2012	10.00%	3.04%	5.05%	-3.494637933	2.02%	23.58	6.96%
7/9/2012	10.20%	3.03%	5.05%	-3.497048482	2.02%	23.14	7.17%
7/16/2012	9.80%	3.02%	5.04%	-3.500418657	2.02%	22.59	6.78%
7/20/2012	9.81%	3.01%	5.04%	-3.504340258	2.03%	22.07	6.80%
7/20/2012	9.31%	3.01%	5.04%	-3.504340258	2.03%	22.07	6.30%
9/13/2012	9.80%	2.94%	4.99%	-3.527182873	2.05%	19.11	6.86%
9/19/2012	10.05%	2.94%	4.99%	-3.526826754	2.05%	18.84	7.11%
9/19/2012	9.80%	2.94%	4.99%	-3.526826754	2.05%	18.84	6.86%
9/26/2012	9.50%	2.94%	4.98%	-3.527062671	2.04%	18.51	6.56%
10/12/2012	9.60%	2.93%	4.95%	-3.52951591	2.02%	18.04	6.67%
10/23/2012	9.75%	2.93%	4.93%	-3.529590812	2.00%	17.84	6.82%
10/24/2012	10.30%	2.93%	4.93%	-3.529748862	2.00%	17.83	7.37%
11/9/2012	10.30%	2.92%	4.90%	-3.533860924	1.98%	17.75	7.38%
11/28/2012	10.40%	2.90%	4.86%	-3.542070693	1.97%	17.60	7.50%
11/29/2012	9.88%	2.89%	4.86%	-3.542597759	1.97%	17.58	6.99%
11/29/2012	9.75%	2.89%	4.86%	-3.542597759	1.97%	17.58	6.86%
12/5/2012	9.71%	2.89%	4.85%	-3.544668433	1.96%	17.53	6.82%
12/5/2012	10.40%	2.89%	4.85%	-3.544668433	1.96%	17.53	7.51%
12/12/2012	9.80%	2.88%	4.84%	-3.547301552	1.96%	17.48	6.92%
12/13/2012	10.50%	2.88%	4.84%	-3.547776921	1.96%	17.47	7.62%
12/13/2012	9.50%	2.88%	4.84%	-3.547776921	1.96%	17.47	6.62%
12/14/2012	10.40%	2.88%	4.83%	-3.548313291	1.96%	17.47	7.52%
12/19/2012	9.71%	2.87%	4.83%	-3.55032707	1.96%	17.44	6.84%
12/19/2012	10.25%	2.87%	4.83%	-3.55032707	1.96%	17.44	7.38%
12/20/2012	10.40%	2.87%	4.83%	-3.551071791	1.96%	17.43	7.53%
12/20/2012	10.30%	2.87%	4.83%	-3.551071791	1.96%	17.43	7.43%
12/20/2012	10.45%	2.87%	4.83%	-3.551071791	1.96%	17.43	7.58%
12/20/2012	10.25%	2.87%	4.83%	-3.551071791	1.96%	17.43	7.38%
12/20/2012	10.25%	2.87%	4.83%	-3.551071791	1.96%	17.43	7.38%
12/20/2012	9.80%	2.87%	4.83%	-3.551071791	1.96%	17.43	6.93%
12/20/2012	9.50%	2.87%	4.83%	-3.551071791	1.96%	17.43	6.63%
12/21/2012	10.20%	2.87%	4.82%	-3.552029679	1.96%	17.43	7.33%
12/26/2012	9.80%	2.86%	4.82%	-3.554468047	1.96%	17.46	6.94%
1/9/2013	9.70%	2.84%	4.79%	-3.560007089	1.95%	17.50	6.86%
1/9/2013	9.70%	2.84%	4.79%	-3.560007089	1.95%	17.50	6.86%
1/9/2013	9.70%	2.84%	4.79%	-3.560007089	1.95%	17.50	6.86%
1/16/2013	9.60%	2.84%	4.78%	-3.561332869	1.94%	17.45	6.76%
1/16/2013	9.60%	2.84%	4.78%	-3.561332869	1.94%	17.45	6.76%
2/13/2013	10.20%	2.84%	4.74%	-3.560233115	1.90%	17.01	7.36%
2/22/2013	9.75%	2.85%	4.73%	-3.556516105	1.88%	16.89	6.90%
2/27/2013	10.00%	2.86%	4.73%	-3.555309947	1.87%	16.85	7.14%
3/14/2013	9.30%	2.88%	4.72%	-3.546517094	1.83%	16.34	6.42%
3/27/2013	9.80%	2.90%	4.71%	-3.539647787	1.80%	15.88	6.90%
5/1/2013	9.84%	2.94%	4.65%	-3.526125487	1.71%	15.25	6.90%
5/15/2013	10.30%	2.96%	4.64%	-3.519540807	1.68%	15.02	7.34%
5/30/2013	10.20%	2.98%	4.64%	-3.513066975	1.66%	14.88	7.22%
5/31/2013	9.00%	2.98%	4.64%	-3.512192166	1.65%	14.89	6.02%
6/11/2013	10.00%	3.00%	4.64%	-3.505315119	1.63%	14.96	7.00%
6/21/2013	9.75%	3.02%	4.65%	-3.498759074	1.62%	14.99	6.73%
6/25/2013	9.80%	3.03%	4.65%	-3.49675999	1.62%	15.02	6.77%
7/12/2013	9.36%	3.08%	4.68%	-3.481789788	1.60%	15.07	6.28%
8/8/2013	9.83%	3.14%	4.73%	-3.45936077	1.59%	14.82	6.69%
8/14/2013	9.15%	3.16%	4.75%	-3.453855638	1.58%	14.72	5.99%
9/11/2013	10.25%	3.27%	4.83%	-3.421529571	1.57%	14.57	6.98%
9/11/2013	10.20%	3.27%	4.83%	-3.421529571	1.57%	14.57	6.93%
9/24/2013	10.20%	3.31%	4.87%	-3.409215674	1.57%	14.47	6.89%
10/3/2013	9.65%	3.33%	4.90%	-3.401082413	1.56%	14.45	6.32%
11/6/2013	10.20%	3.41%	4.96%	-3.379044872	1.55%	14.40	6.79%
11/21/2013	10.00%	3.44%	4.99%	-3.368809925	1.54%	14.36	6.56%
11/26/2013	10.00%	3.45%	4.99%	-3.366096324	1.54%	14.36	6.55%
12/3/2013	10.25%	3.47%	5.00%	-3.360895981	1.53%	14.38	6.78%
12/4/2013	9.50%	3.47%	5.01%	-3.359715842	1.53%	14.38	6.03%
12/5/2013	10.20%	3.48%	5.01%	-3.35846819	1.53%	14.38	6.72%
12/9/2013	8.72%	3.49%	5.01%	-3.356206097	1.53%	14.34	5.23%

12/9/2013	9.75%	3.49%	5.01%	-3.356206097	1.53%	14.34	6.26%
12/13/2013	9.75%	3.50%	5.03%	-3.352419421	1.53%	14.34	6.25%
12/16/2013	9.95%	3.50%	5.03%	-3.351442572	1.53%	14.35	6.45%
12/16/2013	9.95%	3.50%	5.03%	-3.351442572	1.53%	14.35	6.45%
12/16/2013	10.12%	3.50%	5.03%	-3.351442572	1.53%	14.35	6.62%
12/17/2013	9.50%	3.51%	5.03%	-3.350513821	1.52%	14.37	5.99%
12/17/2013	10.95%	3.51%	5.03%	-3.350513821	1.52%	14.37	7.44%
12/18/2013	8.72%	3.51%	5.03%	-3.349557441	1.52%	14.37	5.21%
12/18/2013	9.80%	3.51%	5.03%	-3.349557441	1.52%	14.37	6.29%
12/19/2013	10.15%	3.51%	5.04%	-3.348558925	1.52%	14.38	6.64%
12/30/2013	9.50%	3.54%	5.05%	-3.341237101	1.51%	14.41	5.96%
2/20/2014	9.20%	3.69%	5.14%	-3.300809253	1.46%	14.62	5.51%
2/26/2014	9.75%	3.70%	5.15%	-3.298142577	1.46%	14.65	6.05%
3/17/2014	9.55%	3.72%	5.17%	-3.291654434	1.45%	14.72	5.83%
3/26/2014	9.40%	3.73%	5.18%	-3.289458707	1.45%	14.66	5.67%
3/26/2014	9.96%	3.73%	5.18%	-3.289458707	1.45%	14.66	6.23%
4/2/2014	9.70%	3.73%	5.17%	-3.289430531	1.45%	14.58	5.97%
5/16/2014	9.80%	3.70%	5.11%	-3.296016163	1.40%	14.38	6.10%
5/30/2014	9.70%	3.68%	5.08%	-3.30223463	1.40%	14.35	6.02%
6/6/2014	10.40%	3.67%	5.07%	-3.304183446	1.40%	14.26	6.73%
6/30/2014	9.55%	3.64%	5.02%	-3.312939972	1.38%	13.95	5.91%
7/2/2014	9.62%	3.64%	5.01%	-3.313638177	1.38%	13.91	5.98%
7/10/2014	9.95%	3.63%	5.00%	-3.316024339	1.37%	13.86	6.32%
7/23/2014	9.75%	3.61%	4.97%	-3.321269779	1.36%	13.68	6.14%
7/29/2014	9.45%	3.60%	4.96%	-3.323360677	1.35%	13.57	5.85%
7/31/2014	9.90%	3.60%	4.95%	-3.324172133	1.35%	13.55	6.30%
8/20/2014	9.75%	3.56%	4.92%	-3.334006414	1.36%	13.61	6.19%
8/25/2014	9.60%	3.56%	4.91%	-3.336650742	1.36%	13.59	6.04%
8/29/2014	9.80%	3.54%	4.90%	-3.340939413	1.36%	13.57	6.26%
9/11/2014	9.60%	3.51%	4.88%	-3.349211325	1.37%	13.57	6.09%
9/15/2014	10.25%	3.51%	4.87%	-3.35067505	1.37%	13.57	6.74%
10/9/2014	9.80%	3.44%	4.83%	-3.368938807	1.39%	13.62	6.36%
11/6/2014	9.56%	3.37%	4.78%	-3.390572121	1.41%	14.09	6.19%
11/6/2014	10.20%	3.37%	4.78%	-3.390572121	1.41%	14.09	6.83%
11/14/2014	10.20%	3.35%	4.78%	-3.395556187	1.42%	13.94	6.85%
11/26/2014	9.70%	3.32%	4.77%	-3.403705802	1.44%	13.82	6.38%
11/26/2014	10.20%	3.32%	4.77%	-3.403705802	1.44%	13.82	6.88%
12/4/2014	9.68%	3.30%	4.76%	-3.409936411	1.45%	13.78	6.38%
12/10/2014	9.25%	3.29%	4.75%	-3.414456607	1.46%	13.80	5.96%
12/10/2014	9.25%	3.29%	4.75%	-3.414456607	1.46%	13.80	5.96%
12/11/2014	10.07%	3.28%	4.75%	-3.415853404	1.47%	13.83	6.79%
12/12/2014	10.20%	3.28%	4.75%	-3.417360316	1.47%	13.86	6.92%
12/17/2014	9.17%	3.27%	4.75%	-3.421672047	1.48%	13.96	5.90%
12/18/2014	9.83%	3.26%	4.74%	-3.422874511	1.48%	13.98	6.57%
1/23/2015	9.50%	3.14%	4.69%	-3.461973582	1.55%	14.37	6.36%
2/24/2015	9.83%	3.04%	4.65%	-3.494634623	1.62%	14.67	6.79%
3/18/2015	9.75%	2.98%	4.64%	-3.514002626	1.66%	14.90	6.77%
3/25/2015	9.50%	2.95%	4.63%	-3.521791091	1.67%	14.96	6.55%
3/26/2015	9.72%	2.95%	4.63%	-3.52324442	1.68%	14.98	6.77%
4/23/2015	10.20%	2.87%	4.61%	-3.551824778	1.74%	15.21	7.33%
4/29/2015	9.53%	2.86%	4.60%	-3.556018437	1.75%	15.22	6.67%
5/1/2015	9.60%	2.85%	4.60%	-3.55764862	1.75%	15.23	6.75%
5/26/2015	9.75%	2.83%	4.63%	-3.565489209	1.80%	15.16	6.92%
6/17/2015	9.00%	2.82%	4.66%	-3.569012071	1.84%	15.30	6.18%
6/17/2015	9.00%	2.82%	4.66%	-3.569012071	1.84%	15.30	6.18%
9/2/2015	9.50%	2.79%	4.79%	-3.579016567	2.00%	15.68	6.71%
9/10/2015	9.30%	2.79%	4.81%	-3.579283498	2.02%	15.99	6.51%
10/15/2015	9.00%	2.81%	4.90%	-3.571012447	2.09%	16.66	6.19%
11/19/2015	10.30%	2.88%	5.04%	-3.547076162	2.16%	16.28	7.42%
11/19/2015	10.00%	2.88%	5.04%	-3.547076162	2.16%	16.28	7.12%
12/3/2015	10.00%	2.90%	5.08%	-3.541396988	2.19%	16.28	7.10%
12/9/2015	9.14%	2.90%	5.11%	-3.539568146	2.20%	16.33	6.24%
12/9/2015	9.14%	2.90%	5.11%	-3.539568146	2.20%	16.33	6.24%
12/11/2015	10.30%	2.90%	5.12%	-3.53922282	2.21%	16.42	7.40%
12/15/2015	9.60%	2.91%	5.13%	-3.538307892	2.22%	16.50	6.69%
12/17/2015	9.70%	2.91%	5.14%	-3.537386373	2.23%	16.54	6.79%
12/18/2015	9.50%	2.91%	5.14%	-3.536907801	2.23%	16.57	6.59%
12/30/2015	9.50%	2.93%	5.18%	-3.530756888	2.25%	16.60	6.57%
1/6/2016	9.50%	2.94%	5.20%	-3.526766416	2.26%	16.72	6.56%
2/23/2016	9.75%	2.94%	5.34%	-3.528253531	2.40%	18.32	6.81%
3/16/2016	9.85%	2.91%	5.36%	-3.537673349	2.45%	18.69	6.94%
4/29/2016	9.80%	2.83%	5.31%	-3.563568465	2.47%	18.60	6.97%
6/3/2016	9.75%	2.80%	5.24%	-3.573972869	2.43%	18.79	6.95%
6/8/2016	9.48%	2.80%	5.23%	-3.576092552	2.43%	18.56	6.68%
6/15/2016	9.00%	2.79%	5.20%	-3.580432911	2.42%	18.29	6.21%
6/15/2016	9.00%	2.79%	5.20%	-3.580432911	2.42%	18.29	6.21%
Average:					1.81%	20	
Count:						748	

Value Line Projected Sustainable Growth And Return On Common Equity

Company	Value Line Return on Common Equity ("R")	Value Line Payout Ratio	Retention Ratio ("B")	B x R	Value Line Retained to Common Equity	Difference
ALE	8.50%	63.00%	37.00%	3.15%	3.00%	0.15%
LNT	12.50%	61.00%	39.00%	4.88%	5.50%	-0.63%
AVA	9.00%	63.00%	37.00%	3.33%	3.50%	-0.17%
ED	8.50%	69.00%	31.00%	2.64%	2.50%	0.14%
EIX	11.50%	54.00%	46.00%	5.29%	5.50%	-0.21%
ES	9.50%	58.00%	42.00%	3.99%	4.00%	-0.01%
IDA	9.00%	60.00%	40.00%	3.60%	3.50%	0.10%
NWE	10.00%	59.00%	41.00%	4.10%	4.00%	0.10%
OGE	12.00%	70.00%	30.00%	3.60%	3.50%	0.10%
POR	9.00%	56.00%	44.00%	3.96%	4.00%	-0.04%
WEC	11.00%	67.00%	33.00%	3.63%	3.50%	0.13%
XEL	10.50%	63.00%	37.00%	3.89%	4.00%	-0.12%
AVERAGE:	10.08%	61.92%	38.08%	3.84%	3.88%	-0.04%
MEDIAN:	9.75%	62.00%	38.00%	3.76%	3.75%	0.04%

Source: Value Line projections 2019-2021 period, as of June 30, 2016.

Note: Retention Ratio equals 1 - Payout Ratio

Mr. Baudino's Exhibit No.\_\_(RAB-7) Adjusted

AS FILED:

COMPANY	TICKER	Value Line	Value Line	Value Line	Zacks	IBES
		DPS	EPS	B x R		
ALLETE, Inc.	ALE	3.50%	4.00%	3.00%	4.50%	3.00%
Alliant Energy Corporation	LNT	4.50%	6.00%	5.50%	6.10%	6.60%
Avista Corporation	AVA	4.00%	5.00%	3.50%	5.00%	5.00%
Consolidated Edison, Inc.	ED	3.00%	1.50%	2.50%	2.30%	1.89%
Edison International	EIX	9.00%	3.50%	5.50%	4.90%	2.45%
Eversource Energy	ES	6.00%	6.00%	4.00%	6.30%	6.01%
IDACORP, Inc.	IDA	7.50%	3.00%	3.50%	4.00%	4.00%
NorthWestern Corp.	NWE	5.50%	6.50%	4.00%	5.00%	5.00%
OGE Energy	OGE	9.50%	3.00%	3.50%	5.20%	4.30%
Portland General Electric Company	POR	6.00%	5.50%	4.00%	6.40%	6.57%
WEC Energy	WEC	7.00%	6.00%	3.50%	6.30%	6.77%
Xcel Energy Inc.	XEL	6.00%	5.50%	4.00%	5.30%	5.27%
Average:		5.96%	4.63%	3.88%	5.11%	4.74%
Median:		6.00%	5.25%	3.75%	5.10%	5.00%

Method 1	Value Line	Value Line	Zacks	Thomson	Average of
	DPS	EPS		Financial	All Growth Rates
Dividend Yield	3.44%	3.44%	3.44%	3.44%	3.44%
Growth Rate	5.96%	4.63%	5.11%	4.74%	5.11%
Expected Div Yield	3.54%	3.52%	3.53%	3.52%	3.53%
DCF ROE	9.50%	8.14%	8.64%	8.26%	8.64%
				Midpoint:	8.82%
Method 2					
Dividend Yield	3.44%	3.44%	3.44%	3.44%	3.44%
Growth Rate	6.00%	5.25%	5.10%	5.00%	5.34%
Expected Div Yield	3.54%	3.53%	3.53%	3.53%	3.53%
DCF ROE	9.54%	8.78%	8.63%	8.53%	8.87%
				Midpoint:	9.03%

SOURCE: EXHIBIT NO.\_\_(RAB-7); differences due to rounding.

EQUITY DURATION CALCULATION USING MR. BAUDINO'S DCF MODEL DATA

Company	Ticker	Using Data As-Filed			Constant Growth DCF ROE	Solved ROE	Price	Div 1	Div 2	Div 3	Div 4	Div 5	Div 6	Div 7	Div 8	Div 9	Div 10	Div 199	Div 200
		Average Price	Annual Dividend	Mean Projected Growth Rate															
		6-Month	Annual	Mean															
ALLETE	ALE	53.33	2.08	3.75%	7.72%	7.72%	(\$53.33)	\$ 2.12	\$ 2.20	\$ 2.28	\$ 2.37	\$ 2.46	\$ 2.55	\$ 2.64	\$ 2.74	\$ 2.84	\$ 2.95	\$ 3,102.96	\$ 3,219.32
Alliant Energy	LNT	67.75	2.35	5.80%	9.37%	9.37%	(\$67.75)	\$ 2.42	\$ 2.56	\$ 2.71	\$ 2.87	\$ 3.03	\$ 3.21	\$ 3.39	\$ 3.59	\$ 3.80	\$ 4.02	\$ 170,614.09	\$ 180,509.71
Avista Corp.	AVA	38.11	1.37	4.75%	8.44%	8.43%	(\$38.11)	\$ 1.40	\$ 1.47	\$ 1.54	\$ 1.61	\$ 1.69	\$ 1.77	\$ 1.86	\$ 1.94	\$ 2.04	\$ 2.13	\$ 13,741.88	\$ 14,394.62
Consolidated Edison	ED	70.26	2.68	2.17%	6.03%	6.03%	(\$70.26)	\$ 2.71	\$ 2.77	\$ 2.83	\$ 2.89	\$ 2.95	\$ 3.02	\$ 3.08	\$ 3.15	\$ 3.22	\$ 3.29	\$ 190.97	\$ 195.12
Edison International	EIX	65.84	1.92	4.96%	7.95%	7.94%	(\$65.84)	\$ 1.97	\$ 2.07	\$ 2.17	\$ 2.28	\$ 2.39	\$ 2.51	\$ 2.63	\$ 2.76	\$ 2.90	\$ 3.04	\$ 28,754.81	\$ 30,181.77
Eversource Energy	ES	54.30	1.78	6.08%	9.46%	9.45%	(\$54.30)	\$ 1.83	\$ 1.95	\$ 2.06	\$ 2.19	\$ 2.32	\$ 2.46	\$ 2.61	\$ 2.77	\$ 2.94	\$ 3.12	\$ 217,184.69	\$ 230,384.09
IDACORP	IDA	70.54	2.04	4.63%	7.58%	7.57%	(\$70.54)	\$ 2.09	\$ 2.18	\$ 2.28	\$ 2.39	\$ 2.50	\$ 2.62	\$ 2.74	\$ 2.86	\$ 3.00	\$ 3.14	\$ 16,120.63	\$ 16,866.21
Northwestern Corp.	NWE	57.06	2.00	5.50%	9.10%	9.10%	(\$57.06)	\$ 2.06	\$ 2.17	\$ 2.29	\$ 2.41	\$ 2.55	\$ 2.69	\$ 2.83	\$ 2.99	\$ 3.15	\$ 3.33	\$ 82,565.54	\$ 87,106.65
OGE Energy	OGE	26.98	1.10	5.50%	9.69%	9.69%	(\$26.98)	\$ 1.13	\$ 1.19	\$ 1.26	\$ 1.33	\$ 1.40	\$ 1.48	\$ 1.56	\$ 1.64	\$ 1.73	\$ 1.83	\$ 45,411.05	\$ 47,908.66
Portland General Electric	POR	38.43	1.20	6.12%	9.34%	9.33%	(\$38.43)	\$ 1.24	\$ 1.31	\$ 1.39	\$ 1.48	\$ 1.57	\$ 1.66	\$ 1.77	\$ 1.87	\$ 1.99	\$ 2.11	\$ 157,795.31	\$ 167,448.44
WEC Energy	WEC	55.70	1.98	6.52%	10.19%	10.18%	(\$55.70)	\$ 2.04	\$ 2.18	\$ 2.32	\$ 2.47	\$ 2.63	\$ 2.80	\$ 2.99	\$ 3.18	\$ 3.39	\$ 3.61	\$ 549,468.87	\$ 585,280.51
Xcel Energy	XEL	38.62	1.36	5.52%	9.14%	9.13%	(\$38.62)	\$ 1.40	\$ 1.47	\$ 1.56	\$ 1.64	\$ 1.73	\$ 1.83	\$ 1.93	\$ 2.04	\$ 2.15	\$ 2.27	\$ 58,023.96	\$ 61,225.43

Duration calculation

Company	Ticker	Equity Duration	Div 1	Div 2	Div 3	Div 4	Div 5	Div 6	Div 7	Div 8	Div 9	Div 10	Div 199	Div 200
ALLETE	ALE	26.99	0.04	0.07	0.10	0.13	0.16	0.18	0.21	0.23	0.25	0.26	0.00	0.00
Alliant Energy	LNT	30.32	0.03	0.06	0.09	0.12	0.14	0.17	0.19	0.21	0.23	0.24	0.01	0.01
Avista Corp.	AVA	29.19	0.03	0.07	0.10	0.12	0.15	0.17	0.19	0.21	0.23	0.25	0.01	0.01
Consolidated Edison	ED	27.36	0.04	0.07	0.10	0.13	0.16	0.18	0.20	0.22	0.24	0.26	0.00	0.00
Edison International	EIX	35.26	0.03	0.05	0.08	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.02	0.02
Eversource Energy	ES	31.97	0.03	0.06	0.09	0.11	0.14	0.16	0.18	0.20	0.22	0.23	0.01	0.01
IDACORP	IDA	35.47	0.03	0.05	0.08	0.10	0.12	0.14	0.16	0.18	0.20	0.21	0.02	0.02
Northwestern Corp.	NWE	30.01	0.03	0.06	0.09	0.12	0.14	0.17	0.19	0.21	0.23	0.24	0.01	0.01
OGE Energy	OGE	26.09	0.04	0.07	0.11	0.14	0.16	0.19	0.21	0.23	0.25	0.27	0.00	0.00
Portland General Electric	POR	33.38	0.03	0.06	0.08	0.11	0.13	0.15	0.17	0.19	0.21	0.22	0.02	0.02
WEC Energy	WEC	29.76	0.03	0.06	0.09	0.12	0.15	0.17	0.19	0.21	0.23	0.25	0.01	0.01
Xcel Energy	XEL	29.89	0.03	0.06	0.09	0.12	0.14	0.17	0.19	0.21	0.23	0.24	0.01	0.01
		Average:	30.47											
		Median:	29.95											

Notes:

Source: Exhibit No. (RAB-6) and Exhibit No. (RAB-7)

Mean projected growth rate excludes Mr. Baudino's Sustainable Growth rate since that rate was not used in his DCF calculations

$$D = \frac{\sum_{t=1}^T t \times \frac{CF_t}{(1+r)^t}}{P}$$

Where: t = time period (1 through 200)  
 CF = Cash Flow (i.e. dividend) at time t  
 r = ROE  
 P = Current Stock Price



Duration of Treasury Bonds at Current Interest Rates

Start Date	6/30/2016	6/30/2016	6/30/2016
Maturity Date	6/30/2046	6/30/2036	6/30/2021
Term (years)	30	20	5
Par	100	100	100
Interest Rate	2.50%	2.07%	1.22% (30-day average)
Excel Duration	21.46	16.57	4.88

Manual calculation (check):

<u>Cash Flows</u>																														
Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
30year Treasury:	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	102.50
20year Treasury:	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	102.07
5year Treasury:	1.22	1.22	1.22	1.22	101.22																									

<u>Duration</u>																															
	<u>Discounted Value of Cash Flow</u>																														
21.46	30year Treasury:	2.44	2.38	2.32	2.26	2.21	2.15	2.10	2.05	2.00	1.95	1.90	1.86	1.81	1.77	1.73	1.68	1.64	1.60	1.56	1.53	1.49	1.45	1.42	1.38	1.35	1.32	1.28	1.25	1.22	48.89
16.57	20year Treasury:	2.03	1.99	1.95	1.91	1.87	1.83	1.80	1.76	1.72	1.69	1.65	1.62	1.59	1.56	1.52	1.49	1.46	1.43	1.40	67.71										
4.88	5year Treasury:	1.20	1.19	1.18	1.16	95.27																									

Notes:

Interest rates based on 30-day average; Source: Bloomberg Professional

$$D = \frac{\sum_{t=1}^T t \times \frac{CF_t}{(1+r)^t}}{P}$$

Where: t = time period  
 CF = cash flow (i.e. coupon) at time t  
 r = discount rate  
 P = current price (assumed par)

DCF Model ROE Estimate Assuming Different Holding Periods and No Terminal Value

Perpetual Holding Period (200 years)

		Using Data As-Filed																		
Company	Ticker	6-Month Average Price	Annual Dividend	Mean Projected Growth Rate	Constant Growth DCF ROE	Solved ROE	Price	Div 1	Div 2	Div 3	Div 4	Div 5	Div 6	Div 7	Div 8	Div 9	Div 10	Div 199	Div 200	
ALLETE	ALE	53.33	2.08	3.75%	7.72%	7.72%	(\$53.33)	\$ 2.12	\$ 2.20	\$ 2.28	\$ 2.37	\$ 2.46	\$ 2.55	\$ 2.64	\$ 2.74	\$ 2.84	\$ 2.95	\$ 3,102.96	\$ 3,219.32	
Alliant Energy	LNT	67.75	2.35	5.80%	9.37%	9.37%	(\$67.75)	\$ 2.42	\$ 2.56	\$ 2.71	\$ 2.87	\$ 3.03	\$ 3.21	\$ 3.39	\$ 3.59	\$ 3.80	\$ 4.02	\$ 170,614.09	\$ 180,509.71	
Avista Corp.	AVA	38.11	1.37	4.75%	8.44%	8.43%	(\$38.11)	\$ 1.40	\$ 1.47	\$ 1.54	\$ 1.61	\$ 1.69	\$ 1.77	\$ 1.86	\$ 1.94	\$ 2.04	\$ 2.13	\$ 13,741.88	\$ 14,394.62	
Consolidated Edison	ED	70.26	2.68	2.17%	6.03%	6.03%	(\$70.26)	\$ 2.71	\$ 2.77	\$ 2.83	\$ 2.89	\$ 2.95	\$ 3.02	\$ 3.08	\$ 3.15	\$ 3.22	\$ 3.29	\$ 190.97	\$ 195.12	
Edison International	EIX	65.84	1.92	4.96%	7.95%	7.94%	(\$65.84)	\$ 1.97	\$ 2.07	\$ 2.17	\$ 2.28	\$ 2.39	\$ 2.51	\$ 2.63	\$ 2.76	\$ 2.90	\$ 3.04	\$ 28,754.81	\$ 30,181.77	
Eversource Energy	ES	54.30	1.78	6.08%	9.46%	9.45%	(\$54.30)	\$ 1.83	\$ 1.95	\$ 2.06	\$ 2.19	\$ 2.32	\$ 2.46	\$ 2.61	\$ 2.77	\$ 2.94	\$ 3.12	\$ 217,184.69	\$ 230,384.09	
IDACORP	IDA	70.54	2.04	4.63%	7.58%	7.57%	(\$70.54)	\$ 2.09	\$ 2.18	\$ 2.28	\$ 2.39	\$ 2.50	\$ 2.62	\$ 2.74	\$ 2.86	\$ 3.00	\$ 3.14	\$ 16,120.63	\$ 16,866.21	
Northwestern Corp.	NEW	57.06	2.00	5.50%	9.10%	9.10%	(\$57.06)	\$ 2.06	\$ 2.17	\$ 2.29	\$ 2.41	\$ 2.55	\$ 2.69	\$ 2.83	\$ 2.99	\$ 3.15	\$ 3.33	\$ 82,565.54	\$ 87,106.65	
OGE Energy	OGE	26.98	1.10	5.50%	9.69%	9.69%	(\$26.98)	\$ 1.13	\$ 1.19	\$ 1.26	\$ 1.33	\$ 1.40	\$ 1.48	\$ 1.56	\$ 1.64	\$ 1.73	\$ 1.83	\$ 45,411.05	\$ 47,908.66	
Portland General Electric	POR	38.43	1.20	6.12%	9.34%	9.33%	(\$38.43)	\$ 1.24	\$ 1.31	\$ 1.39	\$ 1.48	\$ 1.57	\$ 1.66	\$ 1.77	\$ 1.87	\$ 1.99	\$ 2.11	\$ 157,795.31	\$ 167,448.44	
WEC Energy	WEC	55.70	1.98	6.52%	10.19%	10.18%	(\$55.70)	\$ 2.04	\$ 2.18	\$ 2.32	\$ 2.47	\$ 2.63	\$ 2.80	\$ 2.99	\$ 3.18	\$ 3.39	\$ 3.61	\$ 549,468.87	\$ 585,280.51	
Xcel Energy	XEL	38.62	1.36	5.52%	9.14%	9.13%	(\$38.62)	\$ 1.40	\$ 1.47	\$ 1.56	\$ 1.64	\$ 1.73	\$ 1.83	\$ 1.93	\$ 2.04	\$ 2.15	\$ 2.27	\$ 58,023.96	\$ 61,225.43	
						Mean:														
						Median:														

Twenty Year Holding Period

Company	Ticker	6-Month Average Price	Annual Dividend	Mean Projected Growth Rate	Constant Growth DCF ROE	Solved ROE	Price	Div 1	Div 2	Div 3	Div 4	Div 5	Div 6	Div 7	Div 8	Div 9	Div 10	Div 19	Div 20	
ALLETE	ALE	53.33	2.08	3.75%	7.72%	1.24%	(\$53.33)	\$ 2.12	\$ 2.20	\$ 2.28	\$ 2.37	\$ 2.46	\$ 2.55	\$ 2.64	\$ 2.74	\$ 2.84	\$ 2.95	\$ 4.11	\$ 4.26	
Alliant Energy	LNT	67.75	2.35	5.80%	9.37%	2.12%	(\$67.75)	\$ 2.42	\$ 2.56	\$ 2.71	\$ 2.87	\$ 3.03	\$ 3.21	\$ 3.39	\$ 3.59	\$ 3.80	\$ 4.02	\$ 6.68	\$ 7.06	
Avista Corp.	AVA	38.11	1.37	4.75%	8.44%	1.47%	(\$38.11)	\$ 1.40	\$ 1.47	\$ 1.54	\$ 1.61	\$ 1.69	\$ 1.77	\$ 1.86	\$ 1.94	\$ 2.04	\$ 2.13	\$ 3.24	\$ 3.39	
Consolidated Edison	ED	70.26	2.68	2.17%	6.03%	-0.42%	(\$70.26)	\$ 2.71	\$ 2.77	\$ 2.83	\$ 2.89	\$ 2.95	\$ 3.02	\$ 3.08	\$ 3.15	\$ 3.22	\$ 3.29	\$ 3.99	\$ 4.08	
Edison International	EIX	65.84	1.92	4.96%	7.95%	-0.13%	(\$65.84)	\$ 1.97	\$ 2.07	\$ 2.17	\$ 2.28	\$ 2.39	\$ 2.51	\$ 2.63	\$ 2.76	\$ 2.90	\$ 3.04	\$ 4.71	\$ 4.94	
Eversource Energy	ES	54.30	1.78	6.08%	9.46%	1.88%	(\$54.30)	\$ 1.83	\$ 1.95	\$ 2.06	\$ 2.19	\$ 2.32	\$ 2.46	\$ 2.61	\$ 2.77	\$ 2.94	\$ 3.12	\$ 5.30	\$ 5.63	
IDACORP	IDA	70.54	2.04	4.63%	7.58%	-0.51%	(\$70.54)	\$ 2.09	\$ 2.18	\$ 2.28	\$ 2.39	\$ 2.50	\$ 2.62	\$ 2.74	\$ 2.86	\$ 3.00	\$ 3.14	\$ 4.71	\$ 4.93	
Northwestern Corp.	NEW	57.06	2.00	5.50%	9.10%	1.92%	(\$57.06)	\$ 2.06	\$ 2.17	\$ 2.29	\$ 2.41	\$ 2.55	\$ 2.69	\$ 2.83	\$ 2.99	\$ 3.15	\$ 3.33	\$ 5.39	\$ 5.68	
OGE Energy	OGE	26.98	1.10	5.50%	9.69%	3.28%	(\$26.98)	\$ 1.13	\$ 1.19	\$ 1.26	\$ 1.33	\$ 1.40	\$ 1.48	\$ 1.56	\$ 1.64	\$ 1.73	\$ 1.83	\$ 2.96	\$ 3.13	
Portland General Electric	POR	38.43	1.20	6.12%	9.34%	1.50%	(\$38.43)	\$ 1.24	\$ 1.31	\$ 1.39	\$ 1.48	\$ 1.57	\$ 1.66	\$ 1.77	\$ 1.87	\$ 1.99	\$ 2.11	\$ 3.60	\$ 3.82	
WEC Energy	WEC	55.70	1.98	6.52%	10.19%	2.99%	(\$55.70)	\$ 2.04	\$ 2.18	\$ 2.32	\$ 2.47	\$ 2.63	\$ 2.80	\$ 2.99	\$ 3.18	\$ 3.39	\$ 3.61	\$ 6.37	\$ 6.79	
Xcel Energy	XEL	38.62	1.36	5.52%	9.14%	1.98%	(\$38.62)	\$ 1.40	\$ 1.47	\$ 1.56	\$ 1.64	\$ 1.73	\$ 1.83	\$ 1.93	\$ 2.04	\$ 2.15	\$ 2.27	\$ 3.67	\$ 3.88	
						Mean:														
						Median:														

Five Year Holding Period

Company	Ticker	6-Month Average Price	Annual Dividend	Mean Projected Growth Rate	Constant Growth DCF ROE	Solved ROE	Price	Div 1	Div 2	Div 3	Div 4	Div 5
ALLETE	ALE	53.33	2.08	3.75%	7.72%	-35.69%	(\$53.33)	\$ 2.12	\$ 2.20	\$ 2.28	\$ 2.37	\$ 2.46
Alliant Energy	LNT	67.75	2.35	5.80%	9.37%	-36.50%	(\$67.75)	\$ 2.42	\$ 2.56	\$ 2.71	\$ 2.87	\$ 3.03
Avista Corp.	AVA	38.11	1.37	4.75%	8.44%	-36.46%	(\$38.11)	\$ 1.40	\$ 1.47	\$ 1.54	\$ 1.61	\$ 1.69
Consolidated Edison	ED	70.26	2.68	2.17%	6.03%	-36.90%	(\$70.26)	\$ 2.71	\$ 2.77	\$ 2.83	\$ 2.89	\$ 2.95
Edison International	EIX	65.84	1.92	4.96%	7.95%	-39.66%	(\$65.84)	\$ 1.97	\$ 2.07	\$ 2.17	\$ 2.28	\$ 2.39
Eversource Energy	ES	54.30	1.78	6.08%	9.46%	-37.28%	(\$54.30)	\$ 1.83	\$ 1.95	\$ 2.06	\$ 2.19	\$ 2.32
IDACORP	IDA	70.54	2.04	4.63%	7.58%	-39.96%	(\$70.54)	\$ 2.09	\$ 2.18	\$ 2.28	\$ 2.39	\$ 2.50
Northwestern Corp.	NEW	57.06	2.00	5.50%	9.10%	-36.50%	(\$57.06)	\$ 2.06	\$ 2.17	\$ 2.29	\$ 2.41	\$ 2.55
OGE Energy	OGE	26.98	1.10	5.50%	9.69%	-33.99%	(\$26.98)	\$ 1.13	\$ 1.19	\$ 1.26	\$ 1.33	\$ 1.40
Portland General Electric	POR	38.43	1.20	6.12%	9.34%	-38.02%	(\$38.43)	\$ 1.24	\$ 1.31	\$ 1.39	\$ 1.48	\$ 1.57
WEC Energy	WEC	55.70	1.98	6.52%	10.19%	-35.74%	(\$55.70)	\$ 2.04	\$ 2.18	\$ 2.32	\$ 2.47	\$ 2.63
Xcel Energy	XEL	38.62	1.36	5.52%	9.14%	-36.42%	(\$38.62)	\$ 1.40	\$ 1.47	\$ 1.56	\$ 1.64	\$ 1.73
						Mean:						
						Median:						

Notes:

Source: Exhibit No. (RAB-6) and Exhibit No. (RAB-7)  
 Mean projected growth rate excludes Mr. Baudino's Sustainable Growth rate since that rate was not used in his DCF calculations

R-Squared of Beta Coefficient Regressions for Mr. Baudino's Proxy Group:  
Value Line Methodology

Company	Ticker	R-Squared of Beta Coefficient
ALLETE, Inc.	ALE	0.2556
Alliant Energy Corporation	LNT	0.2146
Avista Corporation	AVA	0.2359
Consolidated Edison, Inc.	ED	0.0468
Edison International	EIX	0.1443
Eversource Energy	ES	0.1868
IDACORP, Inc.	IDA	0.2941
NorthWestern Corporation	NWE	0.2257
OGE Energy Corp.	OGE	0.2426
Portland General Electric Company	POR	0.2204
WEC Energy Group, Inc.	WEC	0.1147
Xcel Energy Inc.	XEL	0.1258
Mean		0.1923

Notes:

Source: Bloomberg Professional; Beta coefficients were calculated using Value Line's methodology which derives the Beta coefficient from a regression analysis of the relationship between weekly percentage changes in the price of a stock and weekly percentage changes in the NYSE Composite Index over a period of five years.

Bond Yield Plus Risk Premium Analysis Applying 95.00% Confidence Interval

	[1]	[2]	[3]	[4]	[5]	95% Confidence Interval	
	Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity	[6] Lower Bound Return on Equity	[7] Upper Bound Return on Equity
Current	-2.70%	-2.78%	2.50%	7.53%	10.04%	9.47%	10.61%
Blue Chip Financial Forecast 2017 Projection	-2.70%	-2.78%	3.40%	6.68%	10.08%	9.54%	10.63%
Blue Chip Financial Forecast 2020 Projection	-2.70%	-2.78%	4.40%	5.97%	10.37%	9.85%	10.89%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.843796
R Square	0.711991
Adjusted R Square	0.711796
Standard Error	0.008539
Observations	1475

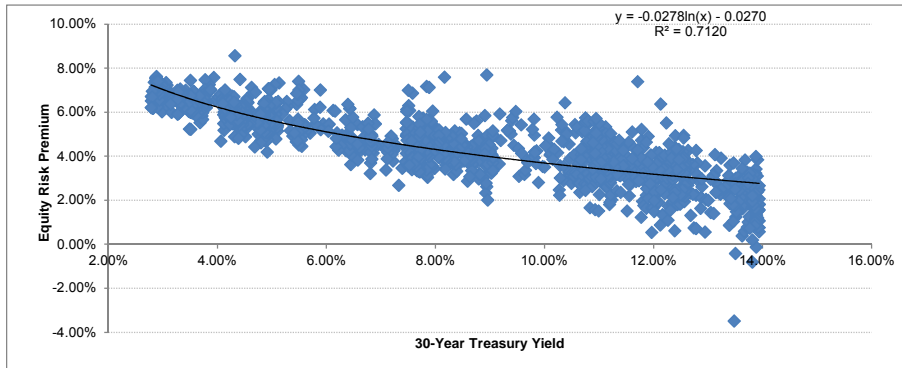
ANOVA

	df	SS	MS	F	Signif. F
Regression	1	0.265541	0.265541	3641.432302	0.000000
Residual	1473	0.107414	0.000073		
Total	1474	0.372955			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.027000	0.001215	-22.220102	0.000000	-0.029384	-0.024617
X Variable 1	-0.027751	0.000460	-60.344281	0.000000	-0.028654	-0.026849

Notes:

- [1] Constant of regression equation
- [2] Slope of regression equation
- [3] Source: Current = Bloomberg Professional, Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 2. Forecast for Q3 2017. Projected = Blue Chip Financial Forecasts, Vol. 35, No. 6, June 1, 2016, at 14.
- [4] Equals [1] + [2] x ln([3])
- [5] Equals [3] + [4]
- [6] Using 95% confidence interval data reported in regression output: ( lower bound constant + LN( [3] ) x upper bound slope ) + [3]
- [7] Using 95% confidence interval data reported in regression output: ( upper bound constant + LN( [3] ) x lower bound slope ) + [3]



Source: RBH-12

Date of Electric Rate Case	Return on Equity	Average 30-Year Treasury Yield	Risk Premium
1/1/1980	14.50%	9.36%	5.14%
1/7/1980	14.39%	9.38%	5.01%
1/9/1980	15.00%	9.40%	5.60%
1/14/1980	15.17%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980	15.50%	9.47%	6.03%
1/30/1980	13.86%	9.52%	4.34%
1/31/1980	12.61%	9.53%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980	12.80%	9.63%	3.17%
2/14/1980	13.00%	9.65%	3.35%
2/19/1980	13.50%	9.68%	3.82%
2/27/1980	13.75%	9.78%	3.97%

2/29/1980	13.75%	9.81%	3.94%
2/29/1980	14.00%	9.81%	4.19%
2/29/1980	14.77%	9.81%	4.96%
3/7/1980	12.70%	9.89%	2.81%
3/14/1980	13.50%	9.97%	3.53%
3/26/1980	14.16%	10.10%	4.06%
3/27/1980	14.24%	10.12%	4.12%
3/28/1980	14.50%	10.13%	4.37%
4/11/1980	12.75%	10.27%	2.48%
4/14/1980	13.85%	10.29%	3.56%
4/16/1980	15.50%	10.31%	5.19%
4/22/1980	13.25%	10.35%	2.90%
4/22/1980	13.90%	10.35%	3.55%
4/24/1980	16.80%	10.38%	6.43%
4/29/1980	15.50%	10.41%	5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980	15.00%	10.45%	4.55%
5/8/1980	13.75%	10.46%	3.29%
5/9/1980	14.35%	10.47%	3.88%
5/13/1980	13.60%	10.48%	3.12%
5/15/1980	13.25%	10.49%	2.76%
5/19/1980	13.75%	10.51%	3.24%
5/27/1980	13.62%	10.54%	3.08%
5/27/1980	14.60%	10.54%	4.06%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980	13.80%	10.56%	3.24%
6/2/1980	15.63%	10.57%	5.06%
6/9/1980	15.90%	10.60%	5.30%
6/10/1980	13.78%	10.60%	3.18%
6/12/1980	14.25%	10.61%	3.64%
6/19/1980	13.40%	10.62%	2.78%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980	14.75%	10.67%	4.08%
7/10/1980	15.00%	10.68%	4.32%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.71%	3.09%
7/22/1980	14.10%	10.72%	3.38%
7/24/1980	15.00%	10.73%	4.27%
7/25/1980	13.48%	10.73%	2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980	13.50%	10.88%	2.62%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.94%	2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.98%	4.52%
10/7/1980	12.50%	10.99%	1.51%
10/9/1980	13.25%	11.00%	2.25%
10/9/1980	14.50%	11.00%	3.50%
10/9/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	13.75%	11.12%	2.63%
11/5/1980	14.00%	11.12%	2.88%
11/8/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/8/1980	14.15%	11.22%	2.93%
12/8/1980	15.10%	11.22%	3.88%
12/9/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%

12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%
1/2/1981	15.25%	11.22%	4.03%
1/7/1981	14.30%	11.21%	3.09%
1/19/1981	15.25%	11.20%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.21%	3.79%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.33%	3.92%
3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981	16.00%	11.50%	4.50%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.60%	3.70%
4/1/1981	14.53%	11.68%	2.85%
4/3/1981	19.10%	11.71%	7.39%
4/9/1981	15.00%	11.78%	3.22%
4/9/1981	15.30%	11.78%	3.52%
4/9/1981	16.50%	11.78%	4.72%
4/9/1981	17.00%	11.78%	5.22%
4/10/1981	13.75%	11.80%	1.95%
4/13/1981	13.57%	11.82%	1.75%
4/15/1981	15.30%	11.85%	3.45%
4/16/1981	13.50%	11.87%	1.63%
4/17/1981	14.10%	11.87%	2.23%
4/21/1981	14.00%	11.90%	2.10%
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%
5/15/1981	15.75%	12.22%	3.53%
5/18/1981	14.88%	12.23%	2.65%
5/20/1981	16.00%	12.26%	3.74%
5/21/1981	14.00%	12.27%	1.73%
5/26/1981	14.90%	12.30%	2.60%
5/27/1981	15.00%	12.31%	2.69%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.37%	2.30%
6/5/1981	13.00%	12.39%	0.61%
6/10/1981	16.75%	12.42%	4.33%
6/17/1981	14.40%	12.46%	1.94%
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.51%	2.24%
6/26/1981	16.00%	12.52%	3.48%
6/30/1981	15.25%	12.54%	2.71%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.74%	0.74%
7/31/1981	13.50%	12.78%	0.72%
7/31/1981	15.00%	12.78%	2.22%
7/31/1981	16.00%	12.78%	3.22%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%

8/11/1981	15.00%	12.88%	2.12%
8/20/1981	13.50%	12.95%	0.55%
8/20/1981	16.50%	12.95%	3.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.05%	1.45%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%
3/12/1982	16.25%	13.88%	2.37%
3/17/1982	17.30%	13.88%	3.42%
3/22/1982	15.10%	13.89%	1.21%
3/27/1982	15.40%	13.89%	1.51%
3/30/1982	15.50%	13.90%	1.60%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982	15.50%	13.91%	1.59%
4/5/1982	15.50%	13.92%	1.58%
4/8/1982	16.40%	13.93%	2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%

4/27/1982	15.00%	13.94%	1.06%
4/28/1982	15.75%	13.94%	1.81%
4/30/1982	14.70%	13.94%	0.76%
4/30/1982	15.50%	13.94%	1.56%
5/3/1982	16.60%	13.94%	2.66%
5/4/1982	16.00%	13.94%	2.06%
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982	15.00%	13.91%	1.09%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/1/1982	15.50%	13.15%	2.35%
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%



12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	14.63%	12.33%	2.30%
1/12/1983	15.50%	12.33%	3.17%
1/20/1983	17.75%	12.24%	5.51%
1/21/1983	15.00%	12.22%	2.78%
1/24/1983	14.50%	12.21%	2.29%
1/24/1983	15.50%	12.21%	3.29%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.17%	3.97%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.10%	1.90%
2/10/1983	15.00%	12.06%	2.94%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.97%	3.53%
2/23/1983	15.10%	11.96%	3.14%
2/23/1983	16.00%	11.96%	4.04%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.77%	1.23%
3/18/1983	15.25%	11.73%	3.52%
3/23/1983	15.40%	11.69%	3.71%
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983	16.71%	11.61%	5.10%
3/31/1983	15.00%	11.59%	3.41%
4/4/1983	15.20%	11.58%	3.62%
4/8/1983	15.50%	11.51%	3.99%
4/11/1983	14.81%	11.49%	3.32%
4/19/1983	14.50%	11.38%	3.12%
4/20/1983	16.00%	11.36%	4.64%
4/29/1983	16.00%	11.24%	4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983	16.46%	11.12%	5.34%
5/12/1983	14.14%	11.11%	3.03%
5/18/1983	15.00%	11.05%	3.95%
5/23/1983	14.90%	11.01%	3.89%
5/23/1983	15.50%	11.01%	4.49%
5/25/1983	15.50%	10.98%	4.52%
5/27/1983	15.00%	10.96%	4.04%
5/31/1983	14.00%	10.95%	3.05%
5/31/1983	15.50%	10.95%	4.55%
6/2/1983	14.50%	10.93%	3.57%
6/17/1983	15.03%	10.84%	4.19%
7/1/1983	14.80%	10.78%	4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.00%	10.74%	4.26%
7/19/1983	15.10%	10.74%	4.36%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%
9/7/1983	15.00%	10.86%	4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983	16.15%	10.95%	5.20%
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10/7/1983	16.00%	10.97%	5.03%
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10/18/1983	14.50%	11.00%	3.50%
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10/19/1983	16.50%	11.01%	5.49%
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12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
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1/30/1984	16.10%	11.37%	4.73%
1/31/1984	15.25%	11.37%	3.88%
2/1/1984	14.80%	11.38%	3.42%
2/6/1984	13.75%	11.40%	2.35%
2/6/1984	14.75%	11.40%	3.35%
2/9/1984	15.25%	11.42%	3.83%
2/15/1984	15.70%	11.44%	4.26%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984	14.75%	11.47%	3.28%
2/28/1984	14.50%	11.51%	2.99%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.64%	4.36%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
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4/25/1984	14.64%	11.85%	2.79%
4/30/1984	14.40%	11.87%	2.53%
5/16/1984	14.69%	11.98%	2.71%
5/16/1984	15.00%	11.98%	3.02%
5/22/1984	14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.15%	3.10%
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984	16.00%	12.31%	3.69%
7/12/1984	16.50%	12.32%	4.18%
7/13/1984	16.25%	12.33%	3.92%
7/17/1984	14.14%	12.35%	1.79%
7/18/1984	15.30%	12.36%	2.94%
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7/31/1984	16.00%	12.43%	3.57%
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10/31/1984	16.25%	12.58%	3.67%
11/7/1984	15.60%	12.58%	3.02%
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11/20/1984	15.25%	12.58%	2.67%
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11/28/1984	16.15%	12.57%	3.58%
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12/4/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.53%	2.22%
12/19/1984	15.00%	12.53%	2.47%
12/20/1984	16.00%	12.53%	3.47%
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
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1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.35%	2.12%
3/1/1985	13.84%	12.31%	1.53%
3/8/1985	16.85%	12.28%	4.57%
3/14/1985	15.50%	12.25%	3.25%
3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.17%	3.45%
4/3/1985	14.60%	12.14%	2.46%
4/9/1985	15.50%	12.11%	3.39%
4/16/1985	15.70%	12.06%	3.64%
4/22/1985	14.00%	12.02%	1.98%
4/26/1985	15.50%	11.98%	3.52%
4/29/1985	15.00%	11.97%	3.03%
5/2/1985	14.68%	11.94%	2.74%
5/8/1985	15.62%	11.89%	3.73%
5/10/1985	16.50%	11.87%	4.63%
5/29/1985	14.61%	11.73%	2.88%
5/31/1985	16.00%	11.71%	4.29%
6/14/1985	15.50%	11.61%	3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.33%	3.17%
8/2/1985	14.80%	11.29%	3.51%
8/7/1985	15.00%	11.27%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.15%	3.35%
9/9/1985	14.60%	11.11%	3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.50%	11.05%	4.45%
9/27/1985	15.80%	11.05%	4.75%
10/2/1985	14.00%	11.03%	2.97%
10/2/1985	14.75%	11.03%	3.72%
10/3/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985	15.50%	10.90%	4.60%
11/8/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.23%	5.77%
2/24/1986	14.50%	10.18%	4.32%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%

4/14/1986	13.40%	9.69%	3.71%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.32%	5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986	15.10%	9.18%	5.92%
6/2/1986	12.81%	9.17%	3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986	12.00%	8.91%	3.09%
6/26/1986	14.75%	8.91%	5.84%
6/30/1986	13.00%	8.87%	4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.66%	3.74%
7/25/1986	14.25%	8.57%	5.68%
8/6/1986	13.50%	8.44%	5.06%
8/14/1986	13.50%	8.35%	5.15%
9/16/1986	12.75%	8.06%	4.69%
9/19/1986	13.25%	8.03%	5.22%
10/1/1986	14.00%	7.95%	6.05%
10/3/1986	13.40%	7.93%	5.47%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986	13.00%	7.75%	5.25%
12/3/1986	12.90%	7.58%	5.32%
12/4/1986	14.44%	7.58%	6.86%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.51%	6.29%
12/30/1986	13.00%	7.49%	5.51%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.47%	4.93%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.54%	4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987	13.50%	7.70%	5.80%
6/15/1987	13.20%	7.78%	5.42%
6/29/1987	15.00%	7.83%	7.17%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987	12.90%	7.86%	5.04%
7/15/1987	13.50%	7.88%	5.62%
7/16/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%
7/27/1987	13.00%	7.92%	5.08%
7/27/1987	13.40%	7.92%	5.48%
7/27/1987	13.50%	7.92%	5.58%
7/31/1987	12.98%	7.95%	5.03%
8/26/1987	12.63%	8.06%	4.57%
8/26/1987	12.75%	8.06%	4.69%
8/27/1987	13.25%	8.06%	5.19%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	12.75%	8.31%	4.44%
9/30/1987	13.00%	8.31%	4.69%
10/2/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.43%	4.57%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.68%	3.32%
12/3/1987	14.20%	8.70%	5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%
12/16/1987	13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987	13.00%	8.81%	4.19%
1/20/1988	13.80%	8.94%	4.86%
1/26/1988	13.90%	8.95%	4.95%
1/29/1988	13.20%	8.96%	4.24%

2/4/1988	12.60%	8.96%	3.64%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%
3/24/1988	11.24%	8.92%	2.32%
3/30/1988	12.72%	8.92%	3.80%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.93%	4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.99%	4.51%
5/16/1988	13.00%	8.99%	4.01%
6/30/1988	12.75%	9.00%	3.75%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.92%	3.83%
8/23/1988	11.70%	8.93%	2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%
12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989	13.00%	9.05%	3.95%
3/30/1989	14.00%	9.05%	4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.00%	4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
1/10/1990	12.80%	8.24%	4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.20%	3.80%
2/9/1990	12.10%	8.17%	3.93%
2/24/1990	12.86%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%
4/12/1990	12.52%	8.18%	4.34%
4/19/1990	12.75%	8.20%	4.55%
5/21/1990	12.10%	8.28%	3.82%
5/29/1990	12.40%	8.30%	4.10%
5/31/1990	12.00%	8.30%	3.70%
6/4/1990	12.90%	8.30%	4.60%
6/6/1990	12.25%	8.31%	3.94%
6/15/1990	13.20%	8.32%	4.88%
6/20/1990	12.92%	8.32%	4.60%
6/27/1990	12.90%	8.33%	4.57%
6/29/1990	12.50%	8.33%	4.17%
7/6/1990	12.10%	8.34%	3.76%
7/6/1990	12.35%	8.34%	4.01%
8/10/1990	12.55%	8.41%	4.14%
8/16/1990	13.21%	8.43%	4.78%
8/22/1990	13.10%	8.45%	4.65%
8/24/1990	13.00%	8.46%	4.54%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%
10/5/1990	12.84%	8.62%	4.22%
10/19/1990	13.00%	8.67%	4.33%
10/25/1990	12.30%	8.68%	3.62%
11/21/1990	12.70%	8.69%	4.01%
12/13/1990	12.30%	8.67%	3.63%
12/17/1990	12.87%	8.67%	4.20%

12/18/1990	13.10%	8.67%	4.43%
12/19/1990	12.00%	8.66%	3.34%
12/20/1990	12.75%	8.66%	4.09%
12/21/1990	12.50%	8.66%	3.84%
12/27/1990	12.79%	8.66%	4.13%
1/2/1991	13.10%	8.65%	4.45%
1/4/1991	12.50%	8.65%	3.85%
1/15/1991	12.75%	8.64%	4.11%
1/25/1991	11.70%	8.63%	3.07%
2/4/1991	12.50%	8.60%	3.90%
2/7/1991	12.50%	8.59%	3.91%
2/12/1991	13.00%	8.58%	4.43%
2/14/1991	12.72%	8.57%	4.15%
2/22/1991	12.80%	8.55%	4.25%
3/6/1991	13.10%	8.53%	4.57%
3/8/1991	12.30%	8.52%	3.78%
3/8/1991	13.00%	8.52%	4.48%
4/22/1991	13.00%	8.49%	4.51%
5/7/1991	13.50%	8.47%	5.03%
5/13/1991	13.25%	8.47%	4.78%
5/30/1991	12.75%	8.44%	4.31%
6/12/1991	12.00%	8.41%	3.59%
6/25/1991	11.70%	8.39%	3.31%
6/28/1991	12.50%	8.38%	4.12%
7/1/1991	12.00%	8.38%	3.62%
7/3/1991	12.50%	8.37%	4.13%
7/19/1991	12.10%	8.34%	3.76%
8/1/1991	12.90%	8.32%	4.58%
8/16/1991	13.20%	8.29%	4.91%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.25%	8.23%	4.02%
10/17/1991	13.00%	8.20%	4.80%
10/23/1991	12.50%	8.20%	4.30%
10/23/1991	12.55%	8.20%	4.35%
10/31/1991	11.80%	8.19%	3.61%
11/1/1991	12.00%	8.19%	3.81%
11/5/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.50%	8.18%	4.32%
11/27/1991	12.10%	8.18%	3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
1/9/1992	12.80%	8.09%	4.71%
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.06%	4.94%
1/27/1992	12.65%	8.05%	4.60%
1/31/1992	12.00%	8.04%	3.96%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.01%	4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.94%	3.51%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.93%	3.57%
5/5/1992	11.50%	7.89%	3.61%
5/12/1992	11.87%	7.88%	3.99%
5/12/1992	12.46%	7.88%	4.58%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/13/1992	13.50%	7.84%	5.66%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992	11.40%	7.71%	3.69%
9/30/1992	11.75%	7.70%	4.05%
10/2/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992	11.85%	7.68%	4.17%

12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992	12.40%	7.66%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.63%	4.27%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993	11.90%	7.49%	4.41%
2/26/1993	11.80%	7.48%	4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.25%	4.50%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.23%	4.27%
5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.10%	4.28%
7/23/1993	10.46%	7.09%	3.37%
8/24/1993	11.50%	6.96%	4.54%
9/21/1993	10.50%	6.81%	3.69%
9/29/1993	11.47%	6.77%	4.70%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.57%	5.43%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993	10.55%	6.48%	4.07%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.47%	4.83%
1/4/1994	10.07%	6.44%	3.63%
1/13/1994	11.00%	6.42%	4.58%
1/21/1994	11.00%	6.40%	4.60%
1/28/1994	11.35%	6.39%	4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.39%	3.46%
11/9/1994	10.85%	7.39%	3.46%
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.49%	3.57%
12/8/1994	11.50%	7.54%	3.96%
12/8/1994	11.70%	7.54%	4.16%
12/14/1994	10.95%	7.56%	3.39%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%
1/9/1995	12.28%	7.64%	4.64%
1/31/1995	11.00%	7.69%	3.31%
2/10/1995	12.60%	7.70%	4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.71%	3.79%
3/20/1995	12.00%	7.72%	4.28%
3/23/1995	12.81%	7.72%	5.09%
3/29/1995	11.60%	7.72%	3.88%
4/6/1995	11.10%	7.71%	3.39%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995	11.63%	7.68%	3.95%
5/25/1995	11.20%	7.65%	3.55%
6/9/1995	11.25%	7.60%	3.65%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.52%	3.58%
9/11/1995	11.30%	7.20%	4.10%
9/27/1995	11.30%	7.12%	4.18%

9/27/1995	11.50%	7.12%	4.38%
9/27/1995	11.75%	7.12%	4.63%
9/29/1995	11.00%	7.11%	3.89%
11/9/1995	11.38%	6.90%	4.48%
11/9/1995	12.36%	6.90%	5.46%
11/17/1995	11.00%	6.86%	4.14%
12/4/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.70%	4.90%
12/27/1995	12.00%	6.66%	5.34%
2/5/1996	12.25%	6.48%	5.77%
3/29/1996	10.67%	6.42%	4.25%
4/8/1996	11.00%	6.42%	4.58%
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
4/24/1996	11.25%	6.43%	4.82%
4/30/1996	11.00%	6.43%	4.57%
5/13/1996	11.00%	6.44%	4.56%
5/23/1996	11.25%	6.43%	4.82%
6/25/1996	11.25%	6.48%	4.77%
6/27/1996	11.20%	6.48%	4.72%
8/12/1996	10.40%	6.57%	3.83%
9/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%
12/18/1996	11.75%	6.83%	4.92%
12/31/1996	11.50%	6.83%	4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.80%	3.22%
4/2/1997	11.65%	6.80%	4.85%
4/28/1997	11.50%	6.81%	4.69%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
2/2/1998	12.75%	6.39%	6.36%
3/2/1998	11.25%	6.29%	4.96%
3/6/1998	10.75%	6.27%	4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998	11.40%	5.94%	5.46%
9/15/1998	11.90%	5.78%	6.12%
11/30/1998	12.60%	5.58%	7.02%
12/10/1998	12.20%	5.54%	6.66%
12/17/1998	12.10%	5.52%	6.58%
2/5/1999	10.30%	5.38%	4.92%
3/4/1999	10.50%	5.34%	5.16%
4/6/1999	10.94%	5.32%	5.62%
7/29/1999	10.75%	5.52%	5.23%
9/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
1/7/2000	11.50%	6.05%	5.45%
1/7/2000	11.50%	6.05%	5.45%
2/17/2000	10.60%	6.17%	4.43%
3/28/2000	11.25%	6.20%	5.05%
5/24/2000	11.00%	6.18%	4.82%
7/18/2000	12.20%	6.16%	6.04%
9/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
1/23/2001	11.25%	5.79%	5.46%
2/8/2001	11.50%	5.77%	5.73%
5/8/2001	10.75%	5.62%	5.13%
6/26/2001	11.00%	5.62%	5.38%
7/25/2001	11.02%	5.60%	5.42%
7/25/2001	11.02%	5.60%	5.42%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001	10.50%	5.56%	4.94%
9/7/2001	10.75%	5.55%	5.20%
9/10/2001	11.00%	5.55%	5.45%
9/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/3/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
1/22/2002	10.00%	5.50%	4.50%
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002	10.17%	5.46%	4.71%
6/10/2002	12.00%	5.47%	6.53%



6/18/2002	11.16%	5.48%	5.68%
6/20/2002	11.00%	5.48%	5.52%
6/20/2002	12.30%	5.48%	6.82%
7/15/2002	11.00%	5.48%	5.52%
9/12/2002	12.30%	5.45%	6.85%
9/26/2002	10.45%	5.41%	5.04%
12/4/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
1/8/2003	11.10%	5.19%	5.91%
1/31/2003	12.45%	5.13%	7.32%
2/28/2003	12.30%	5.05%	7.25%
3/6/2003	10.75%	5.03%	5.72%
3/7/2003	9.96%	5.02%	4.94%
3/20/2003	12.00%	4.98%	7.02%
4/3/2003	12.00%	4.96%	7.04%
4/15/2003	11.15%	4.94%	6.21%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003	9.75%	4.79%	4.96%
7/16/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.80%	4.70%
8/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
1/13/2004	12.00%	4.95%	7.05%
3/2/2004	10.75%	4.99%	5.76%
3/26/2004	10.25%	5.02%	5.23%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.08%	5.17%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
7/16/2004	11.60%	5.11%	6.49%
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%
12/29/2004	9.85%	5.07%	4.78%
1/6/2005	10.70%	5.08%	5.62%
2/18/2005	10.30%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005	10.25%	4.87%	5.38%
5/18/2005	10.25%	4.78%	5.47%
5/25/2005	10.75%	4.76%	5.99%
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005	11.50%	4.64%	6.86%
8/5/2005	11.75%	4.62%	7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%
12/22/2005	11.15%	4.54%	6.61%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.53%	6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006	10.20%	4.83%	5.37%

7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.89%	4.66%
9/1/2006	10.54%	4.90%	5.64%
9/14/2006	10.00%	4.91%	5.09%
10/6/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/1/2006	10.25%	4.95%	5.30%
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
1/5/2007	10.00%	4.95%	5.05%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.90%	4.95%	5.95%
1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.87%	6.48%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007	9.67%	4.80%	4.87%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/22/2007	10.50%	4.83%	5.67%
6/28/2007	10.75%	4.84%	5.91%
7/12/2007	9.67%	4.86%	4.81%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
8/15/2007	10.40%	4.88%	5.52%
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/28/2008	9.40%	4.80%	4.60%
1/30/2008	10.00%	4.79%	5.21%
1/31/2008	10.71%	4.79%	5.92%
2/29/2008	10.25%	4.75%	5.50%
3/12/2008	10.25%	4.73%	5.52%
3/25/2008	9.10%	4.68%	4.42%
4/22/2008	10.25%	4.60%	5.65%
4/24/2008	10.10%	4.60%	5.50%
5/1/2008	10.70%	4.59%	6.11%
5/19/2008	11.00%	4.56%	6.44%
5/27/2008	10.00%	4.55%	5.45%
6/10/2008	10.70%	4.54%	6.16%
6/27/2008	10.50%	4.54%	5.96%
6/27/2008	11.04%	4.54%	6.50%
7/10/2008	10.43%	4.52%	5.91%
7/16/2008	9.40%	4.52%	4.88%
7/30/2008	10.80%	4.51%	6.29%
7/31/2008	10.70%	4.51%	6.19%
8/11/2008	10.25%	4.51%	5.74%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008	10.30%	4.50%	5.80%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.48%	5.72%
10/8/2008	10.15%	4.46%	5.69%
11/13/2008	10.55%	4.45%	6.10%
11/17/2008	10.20%	4.44%	5.76%

12/1/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.79%	6.21%
4/30/2009	11.25%	3.78%	7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%
7/17/2009	10.50%	3.78%	6.72%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.30%	6.70%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.70%	4.35%	6.35%
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41%	5.77%
3/2/2010	9.63%	4.41%	5.22%
3/4/2010	10.50%	4.41%	6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.10%	4.44%	5.66%
5/28/2010	10.20%	4.44%	5.76%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010	9.67%	4.43%	5.24%
6/28/2010	10.50%	4.43%	6.07%
6/30/2010	9.40%	4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.53%	4.43%	6.10%
7/15/2010	10.70%	4.43%	6.27%
7/30/2010	10.70%	4.41%	6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010	9.90%	4.37%	5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.33%	5.67%
9/16/2010	10.00%	4.33%	5.67%

9/30/2010	9.75%	4.29%	5.46%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010	10.70%	4.20%	6.50%
11/19/2010	10.20%	4.18%	6.02%
11/22/2010	10.00%	4.18%	5.82%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010	10.25%	4.15%	6.10%
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.15%	5.85%
12/20/2010	10.60%	4.15%	6.45%
12/21/2010	10.30%	4.14%	6.16%
12/27/2010	9.90%	4.14%	5.76%
12/29/2010	11.15%	4.14%	7.01%
1/5/2011	10.15%	4.13%	6.02%
1/12/2011	10.30%	4.12%	6.18%
1/13/2011	10.30%	4.12%	6.18%
1/18/2011	10.00%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.12%	5.48%
2/3/2011	10.00%	4.12%	5.88%
2/25/2011	10.00%	4.14%	5.86%
3/25/2011	9.80%	4.18%	5.62%
3/30/2011	10.00%	4.18%	5.82%
4/12/2011	10.00%	4.21%	5.79%
4/25/2011	10.74%	4.23%	6.51%
4/26/2011	9.67%	4.23%	5.44%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.24%	5.76%
5/4/2011	10.00%	4.24%	5.76%
5/24/2011	10.50%	4.27%	6.23%
6/8/2011	10.75%	4.30%	6.45%
6/16/2011	9.20%	4.32%	4.88%
6/17/2011	9.95%	4.32%	5.63%
7/13/2011	10.20%	4.36%	5.84%
8/1/2011	9.20%	4.39%	4.81%
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011	10.35%	4.37%	5.98%
8/19/2011	10.25%	4.36%	5.89%
9/2/2011	12.88%	4.32%	8.56%
9/22/2011	10.00%	4.24%	5.76%
10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%
12/14/2011	10.00%	3.80%	6.20%
12/14/2011	10.30%	3.80%	6.50%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.76%	6.44%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%
12/23/2011	10.19%	3.74%	6.45%
1/25/2012	10.50%	3.57%	6.93%
1/27/2012	10.50%	3.56%	6.94%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.44%	6.46%
2/27/2012	10.25%	3.43%	6.82%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012	10.37%	3.32%	7.05%
4/4/2012	10.00%	3.30%	6.70%
4/26/2012	10.00%	3.21%	6.79%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.17%	6.63%
5/15/2012	10.00%	3.14%	6.86%
5/29/2012	10.05%	3.11%	6.94%
6/7/2012	10.30%	3.08%	7.22%
6/14/2012	9.40%	3.06%	6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.06%	6.54%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.02%	6.78%
7/20/2012	9.31%	3.01%	6.30%
7/20/2012	9.81%	3.01%	6.80%
9/13/2012	9.80%	2.94%	6.86%

9/19/2012	9.80%	2.94%	6.86%
9/19/2012	10.05%	2.94%	7.11%
9/26/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.75%	2.89%	6.86%
11/29/2012	9.88%	2.89%	6.99%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.87%	6.84%
12/19/2012	10.25%	2.87%	7.38%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
7/12/2013	9.36%	3.07%	6.29%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013	10.20%	3.31%	6.89%
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.48%	5.24%
12/9/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%
12/17/2013	10.95%	3.51%	7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%
12/30/2013	9.50%	3.54%	5.96%
2/20/2014	9.20%	3.68%	5.52%
2/26/2014	9.75%	3.69%	6.06%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
6/30/2014	9.55%	3.64%	5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%

7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.57%	6.18%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%
9/11/2014	9.60%	3.51%	6.09%
9/15/2014	10.25%	3.51%	6.74%
10/9/2014	9.80%	3.45%	6.35%
11/6/2014	9.56%	3.37%	6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.33%	6.37%
11/26/2014	10.20%	3.33%	6.87%
12/4/2014	9.68%	3.31%	6.37%
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6/17/2015	9.00%	2.82%	6.18%
6/17/2015	9.00%	2.82%	6.18%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.00%	2.88%	7.12%
11/19/2015	10.30%	2.88%	7.42%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/15/2015	9.60%	2.91%	6.69%
12/17/2015	9.70%	2.91%	6.79%
12/18/2015	9.50%	2.91%	6.59%
12/30/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.94%	6.56%
2/23/2016	9.75%	2.94%	6.81%
3/16/2016	9.85%	2.91%	6.94%
4/29/2016	9.80%	2.83%	6.97%
6/3/2016	9.75%	2.80%	6.95%
6/8/2016	9.48%	2.80%	6.68%
6/15/2016	9.00%	2.79%	6.21%
6/15/2016	9.00%	2.79%	6.21%

Average: 4.51%  
 Count: 1,475

S&P Business Risk Profiles and Credit Rankings

**Business Risk Profile (scale from 1 to 6)**

"Excellent" Business Risk (score = 1)	79
Total	107
% Total	73.83%

<b>U.S. Regulated Electric Utilities</b>		Business	Corp. Credit
Company	Designation	Risk Profile	Rating
AEP Texas Central Co.	Electric	1	BBB
AEP Texas North Co.	Electric	2	BBB
Alabama Power Co.	Electric	1	A
Ameren Illinois Co.	Electric	2	BBB+
Appalachian Power Co.	Electric	1	BBB
Arizona Public Service Co.	Electric	1	A-
Atlantic City Electric Co.	Electric	1	BBB+
Baltimore Gas & Electric Co.	Electric	1	A-
Black Hills Power Inc.	Electric	1	BBB
CenterPoint Energy Houston Electric LLC	Electric	1	A-
Central Hudson Gas & Electric Corp.	Electric	1	A
Central Maine Power Co.	Electric	1	BBB+
Cleco Power LLC	Electric	2	BBB+
Cleveland Electric Illuminating Co.	Electric	1	BBB-
Commonwealth Edison Co.	Electric	2	BBB
Connecticut Light & Power Co.	Electric	1	A-
Consolidated Edison Co. of New York Inc.	Electric	1	A-
Consumers Energy Co.	Electric	1	BBB+
Dayton Power & Light Co.	Electric	2	BB
Delmarva Power & Light Co.	Electric	1	BBB+
DTE Electric Co.	Electric	1	BBB+
Duke Energy Carolinas LLC	Electric	1	BBB+
Duke Energy Florida Inc.	Electric	1	BBB+
Duke Energy Indiana Inc.	Electric	1	BBB+
Duke Energy Kentucky Inc.	Electric	2	BBB+
Duke Energy Ohio Inc.	Electric	2	BBB+
Duke Energy Progress Inc.	Electric	1	BBB+
Duquesne Light Co.	Electric	1	BBB
El Paso Electric Co.	Electric	2	BBB
Empire District Electric Co.	Electric	2	BBB
Entergy Arkansas Inc.	Electric	1	BBB
Entergy Gulf States Louisiana LLC	Electric	1	BBB
Entergy Louisiana LLC	Electric	1	BBB
Entergy Mississippi Inc.	Electric	1	BBB
Entergy New Orleans Inc.	Electric	2	BBB
Entergy Texas Inc.	Electric	2	BBB
Florida Power & Light Co.	Electric	1	A-
Georgia Power Co.	Electric	1	A
Green Mountain Power Corp.	Electric	1	BBB+
Gulf Power Co.	Electric	1	A
Hawaiian Electric Co. Inc.	Electric	2	BBB-
Idaho Power Co.	Electric	2	BBB
Indiana Michigan Power Co.	Electric	1	BBB
Indianapolis Power & Light Co.	Electric	1	BB+
Interstate Power & Light Co.	Electric	1	A-
Jersey Central Power & Light Co.	Electric	2	BBB-
Kansas City Power & Light Co.	Electric	1	BBB+
Kansas Gas & Electric Co.	Electric	1	BBB+
KCP&L Greater Missouri Operations Co.	Electric	2	BBB+

Kentucky Power Co.	Electric	2	BBB
Kentucky Utilities Co.	Electric	1	BBB
LG&E and KU Energy LLC	Electric	1	BBB
Louisville Gas & Electric Co.	Electric	1	BBB
Madison Gas & Electric Co.	Electric	1	AA-
Metropolitan Edison Co.	Electric	1	BBB-
MidAmerican Energy Co.	Electric	1	A-
Mississippi Power Co.	Electric	2	A
Monongahela Power Co.	Electric	2	BBB-
Nevada Power Co.	Electric	2	BBB+
New York State Electric & Gas Corp.	Electric	1	BBB+
Niagara Mohawk Power Corp.	Electric	1	A-
Northern Indiana Public Service Co.	Electric	2	BBB-
Northern States Power Co.	Electric	1	A-
Northern States Power Wisconsin	Electric	1	A-
NSTAR Electric Co.	Electric	1	A-
Ohio Edison Co.	Electric	1	BBB-
Ohio Power Co.	Electric	1	BBB
Oklahoma Gas & Electric Co.	Electric	1	A-
Oncor Electric Delivery Co. LLC	Electric	1	BBB+
Orange and Rockland Utilities Inc.	Electric	1	A-
Otter Tail Power Co.	Electric	2	BBB
Pacific Gas & Electric Co.	Electric	1	BBB
PacifiCorp	Electric	1	A-
PECO Energy Co.	Electric	1	BBB
Pennsylvania Electric Co.	Electric	1	BBB-
Pennsylvania Power Co.	Electric	1	BBB-
Portland General Electric Co.	Electric	2	BBB
Potomac Edison Co.	Electric	2	BBB-
Potomac Electric Power Co.	Electric	1	BBB+
PPL Electric Utilities Corp.	Electric	1	BBB
Public Service Co. of Colorado	Electric	1	A-
Public Service Co. of New Hampshire	Electric	1	A-
Public Service Co. of New Mexico	Electric	2	BBB
Public Service Co. of Oklahoma	Electric	2	BBB
Public Service Electric & Gas Co.	Electric	1	BBB+
Puget Sound Energy Inc.	Electric	2	BBB
Rochester Gas & Electric Corp.	Electric	1	BBB+
San Diego Gas & Electric Co.	Electric	1	A
Sierra Pacific Power Co.	Electric	2	BBB+
South Carolina Electric & Gas Co.	Electric	1	BBB+
Southern California Edison Co.	Electric	1	BBB+
Southern Indiana Gas & Electric Co.	Electric	1	A-
Southwestern Electric Power Co.	Electric	1	BBB
Southwestern Public Service Co.	Electric	1	A-
Tampa Electric Co.	Electric	1	BBB+
Texas-New Mexico Power Co.	Electric	1	BBB
Toledo Edison Co.	Electric	1	BBB-
Tucson Electric Power Co.	Electric	2	BBB+
UIL Holdings Corp.	Electric	1	BBB
Union Electric Co. d/b/a Ameren Missouri	Electric	1	BBB+
United Illuminating Co. (The)	Electric	1	BBB
Virginia Electric & Power Co.	Electric	1	A-
West Penn Power Co.	Electric	1	BBB-
Western Massachusetts Electric Co.	Electric	1	A-
Wisconsin Electric Power Co.	Electric	1	A-
Wisconsin Power & Light Co.	Electric	1	A
Wisconsin Public Service Corp.	Electric	1	A-

Source: Standard & Poors Ratings Direct, as of March 5, 2015. (Company provided data).  
Business Risk: 1 = "Excellent", 2 = "Stong", 3 = "Satisfactory", 4 = "Fair", 5 = "Weak", 6 = "Vulnerable"



Recently Authorized ROEs

State	Company	Case Identification	Service	Case Type	Date	Return on Equity (%)	Vertically Integrated	Distribution	RRA Rank	All Cases			Vertically Integrated		
										Above Average	Average	Below Average	Above Average	Average	Below Average
Missouri	Kansas City Power & Light	C-ER-2012-0174	Electric	Vertically Integrated	1/9/2013	9.70	9.70		Average / 2		9.70		9.70		
Missouri	KCP&L Greater Missouri Op Co	C-ER-2012-0175 (MPS)	Electric	Vertically Integrated	1/9/2013	9.70	9.70		Average / 2		9.70		9.70		
Missouri	KCP&L Greater Missouri Op Co	C-ER-2012-0175 (L&P)	Electric	Vertically Integrated	1/9/2013	9.70	9.70		Average / 2		9.70		9.70		
Indiana	Indiana Michigan Power Co.	Ca-44075	Electric	Vertically Integrated	2/13/2013	10.20	10.20		Above Average / 3	10.20		10.20			
Maryland	Baltimore Gas and Electric Co.	C-9299 (elec)	Electric	Distribution	2/22/2013	9.75		9.75	Below Average / 2		9.75				
Louisiana	Southwestern Electric Power Co	D-U-32220	Electric	Vertically Integrated	2/27/2013	10.00	10.00		Average / 1		10.00		10.00		
New York	Niagara Mohawk Power Corp.	D-12-E-0201	Electric	Distribution	3/14/2013	9.30		9.30	Average / 2		9.30				
Idaho	Avista Corp.	C-AVU-E-12-08	Electric	Vertically Integrated	3/27/2013	9.80	9.80		Average / 2		9.80		9.80		
Ohio	Duke Energy Ohio Inc.	C-12-1682-EL-AIR	Electric	Distribution	5/1/2013	9.84		9.84	Average / 2		9.84				
Michigan	Consumers Energy Co.	C-U-17087	Electric	Vertically Integrated	5/15/2013	10.30	10.30		Average / 1		10.30		10.30		
North Carolina	Duke Energy Progress LLC	D-E-2, Sub 1023	Electric	Vertically Integrated	5/30/2013	10.20	10.20		Average / 1		10.20		10.20		
Hawaii	Maui Electric Company Ltd	D-2011-0092	Electric	Vertically Integrated	5/31/2013	9.00	9.00		Average / 1		9.00		9.00		
Arizona	Tucson Electric Power Co.	D-E-01933A-12-0291	Electric	Vertically Integrated	6/11/2013	10.00	10.00		Average / 3		10.00		10.00		
New Jersey	Atlantic City Electric Co.	D-ER-12121071	Electric	Distribution	6/21/2013	9.75		9.75	Average / 3		9.75				
Washington	Puget Sound Energy Inc.	D-UE-130137	Electric	Vertically Integrated	6/25/2013	9.80	9.80		Average / 3		9.80		9.80		
Maryland	Potomac Electric Power Co.	C-9311	Electric	Distribution	7/12/2013	9.36		9.36	Below Average / 2		9.36				
Minnesota	Northern States Power Co. - MN	D-E-002/GR-12-961	Electric	Vertically Integrated	8/8/2013	9.83	9.83		Average / 2		9.83		9.83		
Connecticut	United Illuminating Co.	D-13-01-19	Electric	Distribution	8/14/2013	9.15		9.15	Below Average / 2		9.15				
South Carolina	Duke Energy Carolinas LLC	D-2013-59-E	Electric	Vertically Integrated	9/11/2013	10.20	10.20		Average / 1		10.20		10.20		
Florida	Tampa Electric Co.	D-130040-EI	Electric	Vertically Integrated	9/11/2013	10.25	10.25		Above Average / 3	10.25		10.25			
North Carolina	Duke Energy Carolinas LLC	D-E-7, Sub 1026	Electric	Vertically Integrated	9/24/2013	10.20	10.20		Average / 1		10.20		10.20		
Texas	Southwestern Electric Power Co	D-40443	Electric	Vertically Integrated	10/3/2013	9.65	9.65		Below Average / 1		9.65		9.65		
Wisconsin	Wisconsin Public Service Corp.	D-6690-UR-122 (Elec)	Electric	Vertically Integrated	11/6/2013	10.20	10.20		Above Average / 2	10.20		10.20			
Kansas	Westar Energy Inc.	D-13-WSEE-629-RTS	Electric	Vertically Integrated	11/21/2013	10.00	10.00		Average / 2		10.00		10.00		
Virginia	Virginia Electric & Power Co.	C-PUE-2013-00020	Electric	Vertically Integrated	11/26/2013	10.00	10.00		Above Average / 2	10.00		10.00			
Florida	Gulf Power Co.	D-130140-EI	Electric	Vertically Integrated	12/3/2013	10.25	10.25		Above Average / 3	10.25		10.25			
Washington	PacifiCorp	D-UE-130043	Electric	Vertically Integrated	12/4/2013	9.50	9.50		Average / 3		9.50		9.50		
Wisconsin	Northern States Power Co - WI	D-4220-UR-119 (Elec)	Electric	Vertically Integrated	12/5/2013	10.20	10.20		Above Average / 2	10.20		10.20			
Illinois	Ameren Illinois	D-13-0301	Electric	Distribution	12/9/2013	8.72		8.72	Below Average / 1		8.72				
Oregon	Portland General Electric Co.	D-UE-262	Electric	Vertically Integrated	12/9/2013	9.75	9.75		Average / 3		9.75		9.75		
Maryland	Baltimore Gas and Electric Co.	C-9326 (elec)	Electric	Distribution	12/13/2013	9.75		9.75	Below Average / 2		9.75				
Louisiana	Entergy Gulf States LA LLC	D-U-32707	Electric	Vertically Integrated	12/16/2013	9.95	9.95		Average / 1		9.95		9.95		
Louisiana	Entergy Louisiana LLC	D-U-32708	Electric	Vertically Integrated	12/16/2013	9.95	9.95		Average / 1		9.95		9.95		
Nevada	Sierra Pacific Power Co.	D-13-06002	Electric	Vertically Integrated	12/16/2013	10.12	10.12		Average / 2		10.12		10.12		
Arizona	UNS Electric Inc.	D-E-04204A-12-0504	Electric	Vertically Integrated	12/17/2013	9.50	9.50		Average / 3		9.50		9.50		
Georgia	Georgia Power Co.	D-36989	Electric	Vertically Integrated	12/17/2013	10.95	10.95		Above Average / 3	10.95		10.95			
Illinois	Commonwealth Edison Co.	D-13-0318	Electric	Distribution	12/18/2013	8.72		8.72	Below Average / 1		8.72				
Oregon	PacifiCorp	D-UE-263	Electric	Vertically Integrated	12/18/2013	9.80	9.80		Average / 3		9.80		9.80		
Michigan	Upper Peninsula Power Co.	C-U-17274	Electric	Vertically Integrated	12/19/2013	10.15	10.15		Average / 1		10.15		10.15		
Arkansas	Entergy Arkansas Inc.	D-13-028-U	Electric	Vertically Integrated	12/30/2013	9.50	9.50		Average / 2		9.50		9.50		
New York	Consolidated Edison Co. of NY	C-13-E-0030	Electric	Distribution	2/20/2014	9.20		9.20	Average / 2		9.20				
North Dakota	Northern States Power Co. - MN	C-PU-12-813	Electric	Vertically Integrated	2/26/2014	9.75	9.75		Average / 1		9.75		9.75		
New Hampshire	Liberty Utilities Granite St	D-DE-13-063	Electric	Distribution	3/17/2014	9.55		9.55	Average / 3		9.55				
District of Columbia	Potomac Electric Power Co.	FC-1103-2013-E	Electric	Distribution	3/26/2014	9.40		9.40	Below Average / 1		9.40				
New Mexico	Southwestern Public Service Co	C-12-00350-UT	Electric	Vertically Integrated	3/26/2014	9.96	9.96		Below Average / 1		9.96		9.96		
Delaware	Delmarva Power & Light Co.	D-13-115	Electric	Distribution	4/2/2014	9.70		9.70	Average / 3		9.70				
Texas	Entergy Texas Inc.	D-41791	Electric	Vertically Integrated	5/16/2014	9.80	9.80		Below Average / 1		9.80		9.80		
Massachusetts	Fitchburg Gas & Electric Light	DPU 13-90	Electric	Distribution	5/30/2014	9.70		9.70	Average / 3		9.70				
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-119 (Elec)	Electric	Vertically Integrated	6/6/2014	10.40	10.40		Above Average / 2	10.40		10.40			
Maine	Emera Maine	D-2013-00443	Electric	Distribution	6/30/2014	9.55		9.55	Average / 2		9.55				
Maryland	Potomac Electric Power Co.	C-9336	Electric	Distribution	7/2/2014	9.62		9.62	Below Average / 2		9.62				
Louisiana	Entergy Louisiana LLC	D-UD-13-01	Electric	Vertically Integrated	7/10/2014	9.95	9.95		Average / 1		9.95		9.95		
New Jersey	Rockland Electric Company	D-ER-13111135	Electric	Distribution	7/23/2014	9.75		9.75	Average / 3		9.75				
Maine	Central Maine Power Co.	D-2013-00168	Electric	Distribution	7/29/2014	9.45		9.45	Average / 2		9.45				
Wyoming	Cheyenne Light Fuel Power Co.	D-20003-132-ER-13	Electric	Vertically Integrated	7/31/2014	9.90	9.90		Average / 2		9.90		9.90		
New Jersey	Atlantic City Electric Co.	D-ER-14030245	Electric	Distribution	8/20/2014	9.75		9.75	Average / 3		9.75				
Vermont	Green Mountain Power Corp	D-8190, 8191	Electric	Vertically Integrated	8/25/2014	9.60	9.60		Average / 3		9.60		9.60		
Utah	PacifiCorp	D-13-035-184	Electric	Vertically Integrated	8/29/2014	9.80	9.80		Average / 2		9.80		9.80		
Florida	Florida Public Utilities Co.	D-140025-EI	Electric	Vertically Integrated	9/15/2014	10.25	10.25		Above Average / 3	10.25		10.25			
Nevada	Nevada Power Co.	D-14-05004	Electric	Vertically Integrated	10/9/2014	9.80	9.80		Average / 2		9.80		9.80		
Illinois	MidAmerican Energy Co.	D-14-0066	Electric	Vertically Integrated	11/6/2014	9.56		9.56	Below Average / 1		9.56		9.56		
Wisconsin	Wisconsin Public Service Corp.	D-6690-UR-123 (Elec)	Electric	Vertically Integrated	11/6/2014	10.20	10.20		Above Average / 2	10.20		10.20			
Wisconsin	Wisconsin Electric Power Co.	D-05-UR-107 (WEP-Elec)	Electric	Vertically Integrated	11/14/2014	10.20	10.20		Above Average / 2	10.20		10.20			
Virginia	Appalachian Power Co.	C-PUE-2014-00026	Electric	Vertically Integrated	11/26/2014	9.70	9.70		Above Average / 2		9.70		9.70		
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-120 (Elec)	Electric	Vertically Integrated	11/26/2014	10.20	10.20		Above Average / 2	10.20		10.20			
Oregon	Portland General Electric Co.	D-UE-283	Electric	Vertically Integrated	12/4/2014	9.68	9.68		Average / 3		9.68		9.68		

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Illinois	Ameren Illinois	D-14-0317	Electric	Distribution	12/10/2014	9.25		9.25	Below Average / 1		9.25				
Illinois	Commonwealth Edison Co.	D-14-0312	Electric	Distribution	12/10/2014	9.25		9.25	Below Average / 1		9.25				
Mississippi	Entergy Mississippi Inc.	D-2014-UN-0132	Electric	Vertically Integrated	12/11/2014	10.07	10.07		Above Average / 3	10.07			10.07		
Wisconsin	Northern States Power Co - WI	D-4220-UR-120 (Elec)	Electric	Vertically Integrated	12/12/2014	10.20	10.20		Above Average / 2	10.20			10.20		
Connecticut	Connecticut Light & Power Co.	D-14-05-06	Electric	Distribution	12/17/2014	9.17		9.17	Below Average / 2		9.17				
Colorado	Black Hills Colorado Electric	D-14AL-0393E	Electric	Vertically Integrated	12/18/2014	9.83	9.83		Average / 1		9.83			9.83	
Wyoming	PacifiCorp	D-20000-446-ER-14	Electric	Vertically Integrated	1/23/2015	9.50	9.50		Average / 2		9.50			9.50	
Colorado	Public Service Co. of CO	D-14AL-0660E	Electric	Vertically Integrated	2/24/2015	9.83	9.83		Average / 1		9.83			9.83	
New Jersey	Jersey Cntrl Power & Light Co.	D-ER-12111052	Electric	Distribution	3/18/2015	9.75		9.75	Average / 3		9.75				
Washington	PacifiCorp	D-UE-140762	Electric	Vertically Integrated	3/25/2015	9.50	9.50		Average / 3		9.50			9.50	
Minnesota	Northern States Power Co. - MN	D-E-002/GR-13-868	Electric	Vertically Integrated	3/26/2015	9.72	9.72		Average / 2		9.72			9.72	
Michigan	Wisconsin Public Service Corp.	C-U-17669	Electric	Vertically Integrated	4/23/2015	10.20	10.20		Average / 1	10.20			10.20		
Missouri	Union Electric Co.	C-ER-2014-0258	Electric	Vertically Integrated	4/29/2015	9.53	9.53		Average / 2		9.53			9.53	
West Virginia	Appalachian Power Co.	C-14-1152-E-42T	Electric	Vertically Integrated	5/26/2015	9.75	9.75		Below Average / 1		9.75			9.75	
New York	Central Hudson Gas & Electric	C-14-E-0318	Electric	Distribution	6/17/2015	9.00		9.00	Average / 2		9.00				
New York	Consolidated Edison Co. of NY	C-15-E-0050/C-13-E-0030 (Ext)	Electric	Distribution	6/17/2015	9.00		9.00	Average / 2		9.00				
Missouri	Kansas City Power & Light	C-ER-2014-0370	Electric	Vertically Integrated	9/2/2015	9.50	9.50		Average / 2		9.50			9.50	
Kansas	Kansas City Power & Light	D-15-KCPE-116-RTS	Electric	Vertically Integrated	9/10/2015	9.30	9.30		Average / 2		9.30			9.30	
New York	Orange & Rockland Utlts Inc.	C-14-E-0493	Electric	Distribution	10/15/2015	9.00		9.00	Average / 2		9.00				
Wisconsin	Wisconsin Public Service Corp.	D-6690-UR-124 (Elec)	Electric	Vertically Integrated	11/19/2015	10.00	10.00		Above Average / 2	10.00			10.00		
Michigan	Consumers Energy Co.	C-U-17735	Electric	Vertically Integrated	11/19/2015	10.30	10.30		Average / 1		10.30			10.30	
Wisconsin	Northern States Power Co - WI	D-4220-UR-121 (Elec)	Electric	Vertically Integrated	12/3/2015	10.00	10.00		Above Average / 2	10.00			10.00		
Illinois	Ameren Illinois	D-15-0305	Electric	Distribution	12/9/2015	9.14		9.14	Below Average / 1		9.14				
Illinois	Commonwealth Edison Co.	D-15-0287	Electric	Distribution	12/9/2015	9.14		9.14	Below Average / 1		9.14				
Michigan	DTE Electric Co.	C-U-17767	Electric	Vertically Integrated	12/11/2015	10.30	10.30		Average / 1	10.30			10.30		
Oregon	Portland General Electric Co.	D-UE-294	Electric	Vertically Integrated	12/15/2015	9.60	9.60		Average / 3		9.60			9.60	
Texas	Southwestern Public Service Co	D-43695	Electric	Vertically Integrated	12/17/2015	9.70	9.70		Below Average / 1		9.70			9.70	
Idaho	Avista Corp.	C-AVU-E-15-05	Electric	Vertically Integrated	12/18/2015	9.50	9.50		Average / 2		9.50			9.50	
Wyoming	PacifiCorp	D-20000-469-ER-15	Electric	Vertically Integrated	12/30/2015	9.50	9.50		Average / 2		9.50			9.50	
Washington	Avista Corp.	D-UE-150204	Electric	Vertically Integrated	1/6/2016	9.50	9.50		Average / 3		9.50			9.50	
Arkansas	Entergy Arkansas Inc.	D-15-015-U	Electric	Vertically Integrated	2/23/2016	9.75	9.75		Average / 2		9.75			9.75	
Indiana	Indianapolis Power & Light Co.	Ca-44576	Electric	Vertically Integrated	3/16/2016	9.85	9.85		Above Average / 3	9.85			9.85		
Massachusetts	Fitchburg Gas & Electric Light	DPU 15-80	Electric	Distribution	4/29/2016	9.80		9.80	Average / 3		9.80				
Maryland	Baltimore Gas and Electric Co.	C-9406 (elec)	Electric	Distribution	6/3/2016	9.75		9.75	Below Average / 2		9.75				
New Mexico	El Paso Electric Co.	C-15-00127-UT	Electric	Vertically Integrated	6/8/2016	9.48	9.48		Below Average / 1		9.48			9.48	
New York	NY State Electric & Gas Corp.	C-15-E-0283	Electric	Distribution	6/15/2016	9.00		9.00	Average / 2		9.00				
New York	Rochester Gas & Electric Corp.	C-15-E-0285	Electric	Distribution	6/15/2016	9.00		9.00	Average / 2		9.00				
Total Cases						103	71	32		18	64	21	18	46	7
Mean						9.73	9.88	9.38		10.17	9.70	9.43	10.17	9.79	9.70
Median						9.75	9.83	9.38		10.20	9.75	9.48	10.20	9.80	9.70
Maximum						10.95	10.95	9.84		10.95	10.30	9.96	10.95	10.30	9.96
Minimum						8.72	9.00	8.72		9.70	9.00	8.72	9.70	9.00	9.48

Source: SNL Financial

Summary of Adjustment Clauses & Alternative Regulation/Incentive Plans

Company	Parent	State	Adjustment Clauses						
			Fuel/ Purchased Power	Decoupling (F/P) [1]	New Capital Investment [2]	Energy Efficiency [3]	Renewables & RPS [4]	Environmental [5]	Other [6]
Ameren Illinois Company	AEE	Illinois					✓	✓	✓
Union Electric Company	AEE	Missouri	✓	P			✓	✓	✓
Southwestern Electric Power Company	AEP	Arkansas	✓	P	✓		✓		✓
Indiana Michigan Power Company	AEP	Indiana	✓	P			✓	✓	✓
Kentucky Power Company	AEP	Kentucky	✓	P	✓		✓	✓	✓
Southwestern Electric Power Company	AEP	Louisiana	✓	P			✓	✓	✓
Indiana Michigan Power Company	AEP	Michigan	✓				✓		
Ohio Power Company	AEP	Ohio		P	✓		✓		✓
Public Service Company of Oklahoma	AEP	Oklahoma	✓	P	✓		✓		✓
Kingsport Power Company	AEP	Tennessee	✓						
AEP Texas Central Company	AEP	Texas			✓		✓		
AEP Texas North Company	AEP	Texas			✓		✓		
Southwestern Electric Power Company	AEP	Texas	✓		✓		✓		
Appalachian Power Company	AEP	Virginia	✓		✓		✓	✓	✓
Appalachian Power Company	AEP	West Virginia	✓						✓
Wheeling Power Company	AEP	West Virginia	✓						✓
ALLETE (Minnesota Power)	ALE	Minnesota	✓				✓	✓	✓
Alaska Electric Light and Power Company	AVA	Alaska	✓						
Avista Corporation - Electric	AVA	Idaho	✓				✓		
Avista Corporation - Electric	AVA	Washington		F					
Consumers Energy Company	CMS	Michigan	✓				✓		
DTE Electric Company	DTE	Michigan	✓				✓		✓
EI Paso Electric	EE	New Mexico	✓						✓
EI Paso Electric	EE	Texas	✓		✓		✓		✓
Connecticut Light & Power	ES	Connecticut	✓	F					
NSTAR Electric	ES	Massachusetts					✓		✓
Western Massachusetts Electric	ES	Massachusetts		F	✓		✓		✓
Public Service Co. of New Hampshire	ES	New Hampshire	✓		✓				✓
Entergy Arkansas	ETR	Arkansas	✓	P	✓		✓		✓
Entergy New Orleans - Electric	ETR	Louisiana	✓	P	✓		✓	✓	✓
Entergy Louisiana - Electric	ETR	Louisiana	✓	P	✓		✓	✓	✓
Entergy Mississippi	ETR	Mississippi	✓	P	✓		✓	✓	✓
Entergy Texas	ETR	Texas	✓		✓				✓
Potomac Edison Company	FE	Maryland					✓		✓
Jersey Central Power & Light Company	FE	New Jersey					✓		✓
Cleveland Electric Illuminating Company	FE	Ohio		P	✓		✓		✓
Ohio Edison Company	FE	Ohio		P	✓		✓		✓
Toledo Edison Company	FE	Ohio		P	✓		✓		✓
Metropolitan Edison Company	FE	Pennsylvania					✓		✓
Pennsylvania Electric Company	FE	Pennsylvania					✓		✓
Pennsylvania Power Company	FE	Pennsylvania					✓		✓
West Penn Power Company	FE	Pennsylvania					✓		✓
Monongahela Power Company	FE	West Virginia	✓						✓
Potomac Edison Company	FE	West Virginia	✓						✓
Idaho Power Co.	IDA	Idaho	✓				✓		
Idaho Power Co.	IDA	Oregon	✓	P					
Interstate Power and Light Company	LNT	Iowa	✓				✓	✓	✓
Wisconsin Power and Light Company	LNT	Wisconsin	✓						✓
Madison Gas & Electric - Electric	MGEE	Wisconsin	✓						✓
Madison Gas & Electric - Gas	MGEE	Wisconsin	✓						✓
NorthWestern Corp	NWE	Montana	✓	P			✓		✓
NorthWestern Corp.	NWE	South Dakota	✓				✓		
Oklahoma Gas and Electric Company	OGE	Arkansas	✓	P	✓		✓		✓
Oklahoma Gas and Electric Company	OGE	Oklahoma	✓	P	✓		✓		✓
Otter Tail Power Company	OTTR	Minnesota	✓				✓	✓	
Otter Tail Power Company	OTTR	North Dakota	✓		✓		✓	✓	✓
Public Service Co. of New Mexico	PNM	New Mexico	✓				✓	✓	✓
Texas-New Mexico Power	PNM	Texas			✓		✓		✓
Arizona Public Service Company	PNW	Arizona	✓	P	✓		✓	✓	✓
Portland General Electric Company	POR	Oregon	✓	P			✓		
South Carolina Electric & Gas Co.	SCG	South Carolina	✓		✓			✓	
Wisconsin Electric Power	WEC	Michigan					✓		
Wisconsin Electric Power	WEC	Wisconsin	✓						✓
Wisconsin Public Service	WEC	Wisconsin	✓						✓
Public Service Company of Colorado	XEL	Colorado			✓		✓		✓
Northern States Power Company - MN	XEL	Minnesota	✓				✓	✓	
Southwestern Public Service Company	XEL	New Mexico	✓				✓		✓
Northern States Power Company - MN	XEL	North Dakota	✓		✓		✓	✓	✓
Northern States Power Company - MN	XEL	South Dakota	✓	P	✓		✓	✓	✓
Southwestern Public Service Company	XEL	Texas	✓		✓		✓		✓
Northern States Power Company - WI	XEL	Wisconsin	✓						✓

Summary of Adjustment Clauses & Alternative Regulation/Incentive Plans

Company	Parent	State	Alternative Regulation / Incentive Plans					
			Formula-Based Rates	Price Freeze/Cap	Earnings Sharing	Formula-Based ROE	Service Quality/Performance	Merger Savings
Ameren Illinois Company	AEE	Illinois	✓		✓	✓	✓	
Union Electric Company	AEE	Missouri						
Southwestern Electric Power Company	AEP	Arkansas						
Indiana Michigan Power Company	AEP	Indiana						
Kentucky Power Company	AEP	Kentucky						
Southwestern Electric Power Company	AEP	Louisiana	✓	✓	✓			
Indiana Michigan Power Company	AEP	Michigan						
Ohio Power Company	AEP	Ohio		✓	✓			
Public Service Company of Oklahoma	AEP	Oklahoma						
Kingsport Power Company	AEP	Tennessee						
AEP Texas Central Company	AEP	Texas						
AEP Texas North Company	AEP	Texas						
Southwestern Electric Power Company	AEP	Texas						
Appalachian Power Company	AEP	Virginia			✓	✓	✓	
Appalachian Power Company	AEP	West Virginia						
Wheeling Power Company	AEP	West Virginia						
ALLETE (Minnesota Power)	ALE	Minnesota						
Alaska Electric Light and Power Company	AVA	Alaska						
Avista Corporation - Electric	AVA	Idaho		✓				
Avista Corporation - Electric	AVA	Washington		✓				
Consumers Energy Company	CMS	Michigan						
DTE Electric Company	DTE	Michigan						
EI Paso Electric	EE	New Mexico						
EI Paso Electric	EE	Texas						
Connecticut Light & Power	ES	Connecticut		✓	✓			
NSTAR Electric	ES	Massachusetts		✓			✓	
Western Massachusetts Electric	ES	Massachusetts		✓				
Public Service Co. of New Hampshire	ES	New Hampshire		✓	✓		✓	
Entergy Arkansas	ETR	Arkansas						
Entergy New Orleans - Electric	ETR	Louisiana						
Entergy Louisiana - Electric	ETR	Louisiana						
Entergy Mississippi	ETR	Mississippi	✓			✓	✓	
Entergy Texas	ETR	Texas						
Potomac Edison Company	FE	Maryland						
Jersey Central Power & Light Company	FE	New Jersey						
Cleveland Electric Illuminating Company	FE	Ohio		✓	✓			
Ohio Edison Company	FE	Ohio		✓	✓			
Toledo Edison Company	FE	Ohio		✓	✓			
Metropolitan Edison Company	FE	Pennsylvania						
Pennsylvania Electric Company	FE	Pennsylvania						
Pennsylvania Power Company	FE	Pennsylvania						
West Penn Power Company	FE	Pennsylvania						
Monongahela Power Company	FE	West Virginia						
Potomac Edison Company	FE	West Virginia						
Idaho Power Co.	IDA	Idaho			✓			
Idaho Power Co.	IDA	Oregon						
Interstate Power and Light Company	LNT	Iowa		✓				
Wisconsin Power and Light Company	LNT	Wisconsin		✓	✓			
Madison Gas & Electric - Electric	MGEE	Wisconsin		✓				
Madison Gas & Electric - Gas	MGEE	Wisconsin		✓				
NorthWestern Corp	NWE	Montana						
NorthWestern Corp.	NWE	South Dakota						
Oklahoma Gas and Electric Company	OGE	Arkansas						
Oklahoma Gas and Electric Company	OGE	Oklahoma						
Otter Tail Power Company	OTTR	Minnesota						
Otter Tail Power Company	OTTR	North Dakota						
Public Service Co. of New Mexico	PNM	New Mexico						
Texas-New Mexico Power	PNM	Texas						
Arizona Public Service Company	PNW	Arizona		✓				
Portland General Electric Company	POR	Oregon						
South Carolina Electric & Gas Co.	SCG	South Carolina		✓				
Wisconsin Electric Power	WEC	Michigan						
Wisconsin Electric Power	WEC	Wisconsin		✓				
Wisconsin Public Service	WEC	Wisconsin						
Public Service Company of Colorado	XEL	Colorado		✓	✓			
Northern States Power Company - MN	XEL	Minnesota						
Southwestern Public Service Company	XEL	New Mexico		✓				
Northern States Power Company - MN	XEL	North Dakota						
Northern States Power Company - MN	XEL	South Dakota		✓				
Southwestern Public Service Company	XEL	Texas		✓				
Northern States Power Company - WI	XEL	Wisconsin						

Notes:

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*A mechanism may cover one or more cost categories; therefore, designations may not indicate separate mechanisms for each category.*

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

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

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

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

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

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

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

Mr. Lawton's Financial Integrity Analysis Replicated, as Filed (Exhibit \_ (DJL-5))

	A	B	C	D	E
REQUESTED CAPITAL STRUCTURE, COST RATES, AND RETURN					
<b>DESCRIPTION</b>	<b>CAPITAL</b>	<b>RATIO</b>	<b>COST RATE</b>	<b>WEIGHTED COST</b>	<b>RETURN</b>
LONG TERM DEBT	\$9,358,417	28.76%	4.620%	1.33%	\$432,359
CUSTOMER DEPOSITS	\$407,328	1.25%	2.050%	0.03%	\$8,350
COMMON EQUITY	\$14,682,574	45.13%	11.500%	5.19%	\$1,688,496
SHORT TERM DEBT	\$612,939	1.88%	1.850%	0.03%	\$11,339
DEFERRED INCOME TAX	\$7,368,582	22.65%	0.000%	0.00%	\$0
INVESTMENT TAX CREDITS	\$106,275	0.33%	8.820%	0.03%	\$9,373
TOTAL CAPITAL	\$32,536,115	100.00%		6.61%	\$2,149,918
RATE BASE			\$32,536,115		
PER COMPANY SCHEDULES B-1					

ALTERNATIVE CAPITAL STRUCTURE, COST RATES, AND RETURN ON EQUITY @ 8.75%					
DESCRIPTION	CAPITAL	RATIO	COST RATE	WEIGHTED COST	RETURN
LONG TERM DEBT	\$11,636,598	35.56%	4.620%	1.643%	\$537,611
CUSTOMER DEPOSITS	\$409,700	1.25%	2.050%	0.026%	\$8,399
COMMON EQUITY	\$12,398,749	37.89%	8.750%	3.315%	\$1,084,891
SHORT TERM DEBT	\$762,151	2.33%	1.850%	0.043%	\$14,100
DEFERRED INCOME TAX	\$7,411,492	22.65%	0.000%	0.000%	\$0
INVESTMENT TAX CREDITS	\$106,894	0.33%	6.750%	0.022%	\$7,215
TOTAL CAPITAL	\$32,725,584	100.00%		5.049%	\$1,652,215
RATE BASE			\$32,725,584		(\$497,703)

PER COMPANY SCHEDULES B-1, ADJUSTED PER OPC TESTIMONY OF RALPH SMITH EXHIBIT RCS-2 P. 15

LINE NO.	DESCRIPTION	A	B	C	SOURCES COL. A	SOURCES COL. B
		Company Requested Capital Structure & 11.5% ROE	ALT. OPC Capital Structure ROE Adjusted to 8.75%	Difference		
1	RATE BASE	\$32,536,115	\$32,725,584		COMPANY FILING SCHEDULE A-1	COMPANY FILING SCHEDULE A-1 ADJUSTED PER OPC TESTIMONY OF RALPH SMITH AT EXHIBIT RCS-2 P. 2.
2	RATE OF RETURN	6.608%	5.049%		FPL SCHEDULE D1-A	COMPANY FILING SCHEDULE A-1 ADJUSTED PER OPC TESTIMONY OF RALPH SMITH AT EXHIBIT RCS-2 P. 2.
3	RETURN	\$2,149,918	\$1,652,215	(\$497,703)	LINE 1 TIMES LINE 2	LINE 1 TIMES LINE 2
4	DEPRECIATION & AMORTIZATION	\$1,665,925	\$1,140,564	(\$525,361)	FPL SCHEDULE C-1	OPC R. SMITH EX. RCS-2
5	CASH FLOW	\$3,815,843	\$2,792,779	(\$1,023,064)	SUM LINES 3 AND 4	SUM LINES 3 AND 4
6	TOTAL DEBT	\$9,971,356	\$12,398,749	\$2,427,393	DEBT ALL SOURCES	DEBT ALL SOURCES
7	TOTAL INTEREST ESTIMATED	\$443,698	\$551,711		WTD DEBT COST TIMES RATE BASE	WTD DEBT COST TIMES RATE BASE
		D	E	F	G	
				Moody's Guidelines for A Bonds	Moody's Guidelines for Baa Bonds	
	PROJECTED METRICS					
8	CASH FLOW/INTEREST DSC (X)	8.6	5.1	4.5x-6.0x	2.7x-4.5x	
9	CASH FLOW/DEBT (%)	38.27%	22.52%	22%-30%	13%-22%	
10	DEBT PERCENTAGE (%)	40.40%	50.00%	35% to 45%	45%-55%	

SOURCES:

COLUMNS D & E ROW 8: LINE 5/LINE 7

COLUMNS D & E ROW 9: LINE 5/LINE 6

COLUMNS D & E ROW 10: Debt Ratio Investor Sources PER CAPITAL STRUCTURE RECOMMENDATION OF FPL & OPC WITNESSES

COLUMN F & G: Moody's Investor Service, "Electric & Gas Utilities, Assessing Their Credit Quality and Outlook" (January 18, 2013 at 33)

DEBT PERCENTAGE BASED ON INVESTOR SOURCES SEE MR. DEWHURST DIRECT AT 23:2 also see OPC witness O'Donnell

ALL DOLLAR AMOUNTS ARE IN (\$000).

Mr. Lawton's Financial Integrity Analysis, adjusted (Exhibit \_ (DJI-5))

	A	B	C	D	E
REQUESTED CAPITAL STRUCTURE, COST RATES, AND RETURN ON EQUITY ADJUSTED TO 0.00%					
<b>DESCRIPTION</b>	<b>CAPITAL</b>	<b>RATIO</b>	<b>COST RATE</b>	<b>WEIGHTED COST</b>	<b>RETURN</b>
LONG TERM DEBT	\$9,358,417	28.76%	4.620%	1.33%	\$432,359
CUSTOMER DEPOSITS	\$407,328	1.25%	2.050%	0.03%	\$8,350
COMMON EQUITY	\$14,682,574	45.13%	<b>0.000%</b>	0.00%	\$0
SHORT TERM DEBT	\$612,939	1.88%	1.850%	0.03%	\$11,339
DEFERRED INCOME TAX	\$7,368,582	22.65%	0.000%	0.00%	\$0
INVESTMENT TAX CREDITS	\$106,275	0.33%	8.820%	0.03%	\$9,373
TOTAL CAPITAL	\$32,536,115	100.00%		1.42%	\$461,422
RATE BASE			\$32,536,115		
PER COMPANY SCHEDULES B-1					

	A	B	C	D	E
OPC ALTERNATIVE CAPITAL STRUCTURE, COST RATES, AND EQUITY RATIO ADJUSTED TO 34.99%					
<b>DESCRIPTION</b>	<b>CAPITAL</b>	<b>RATIO</b>	<b>COST RATE</b>	<b>WEIGHTED COST</b>	<b>RETURN</b>
LONG TERM DEBT	\$11,636,598	35.56%	4.620%	1.643%	\$537,611
CUSTOMER DEPOSITS	\$409,700	1.25%	2.050%	0.026%	\$8,399
COMMON EQUITY	\$12,398,749	37.89%	<b>6.249%</b>	2.368%	\$774,809
SHORT TERM DEBT	\$762,151	2.33%	1.850%	0.043%	\$14,100
DEFERRED INCOME TAX	\$7,411,492	22.65%	0.000%	0.000%	\$0
INVESTMENT TAX CREDITS	\$106,894	0.33%	6.750%	0.022%	\$7,215
TOTAL CAPITAL	\$32,725,584	100.00%		4.101%	\$1,342,134
RATE BASE			\$32,725,584		\$880,712

PER COMPANY SCHEDULES B-1, ADJUSTED PER OPC TESTIMONY OF RALPH SMITH EXHIBIT RCS-2 P. 15

LINE NO.	DESCRIPTION	A Company Requested Capital Structure & 0.00% ROE	B ALT. OPC Capital Structure ROE Adjusted to 8.75%	C Difference	SOURCES COL. A	SOURCES COL. B
1	RATE BASE	\$32,536,115	\$32,725,584			COMPANY FILING SCHEDULE A-1 COMPANY FILING SCHEDULE A-1 ADJUSTED PER OPC TESTIMONY OF RALPH SMITH AT EXHIBIT RCS-2 P. 2.
2	RATE OF RETURN	1.418%	4.101%			COMPANY FILING SCHEDULE A-1 FPL SCHEDULE D1-A ADJUSTED PER OPC TESTIMONY OF RALPH SMITH AT EXHIBIT RCS-2 P. 2.
3	RETURN	\$461,422	\$1,342,134	\$880,712	LINE 1 TIMES LINE 2	LINE 1 TIMES LINE 2
4	DEPRECIATION & AMORTIZATION	\$1,665,925	\$1,140,564	(\$525,361)	FPL SCHEDULE C- 1	OPC R. SMITH EX. RCS-2
5	CASH FLOW	\$2,127,347	\$2,482,698	\$355,351	SUM LINES 3 AND 4	SUM LINES 3 AND 4
6	TOTAL DEBT	\$9,971,356	\$12,398,749	\$2,427,393	DEBT ALL SOURCES	DEBT ALL SOURCES
7	TOTAL INTEREST ESTIMATED	\$443,698	\$551,711		WTD DEBT COST TIMES RATE BASE	WTD DEBT COST TIMES RATE BASE
		D	E	F Moody's Guidelines for A Bonds	G Moody's Guidelines for Baa Bonds	
PROJECTED METRICS						
8	CASH FLOW/INTEREST DSC (X)	4.8	4.5	4.5x-6.0x	2.7x-4.5x	
9	CASH FLOW/DEBT (%)	21.33%	20.02%	22%-30%	13%-22%	
10	DEBT PERCENTAGE (%)	40.40%	50.00%	35% to 45%	45%-55%	

SOURCES  
COLUMNS D & E ROW 8: LINE 5/LINE 7  
COLUMNS D & E ROW 9: LINE 5/LINE 6  
COLUMNS D & E ROW 10: Debt Ratio Investor Sources PER CAPITAL STURCTURE RECOMMENDATION OF FPL & OPC WITNESSES  
COLUMN F & G: Moody's Investor Service, "Electric & Gas Utilities, Assessing Their Credit Quality and Outlook" (January 18, 2013 at 33)  
DEBT PERCENTAGE BASED ON INVESTOR SOURCES SEE MR. DEWHURST DIRECT AT 23:2 also see OPC witness O'Donnell  
ALL DOLLAR AMOUNTS ARE IN (\$000).