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Before the Public Service Commission of the State of Missouri

**Rebuttal Testimony** 

of

**Robert B. Hevert** 

on behalf of

The Empire District Electric Company a Liberty Utilities Company

March 2020



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TERM	DESCRIPTION
Beta Coefficient	A component of the CAPM that measures the risk of
	a given stock relative to the risk of the overall market.
Bond Yield Plus Risk Premium	A risk premium model used to estimate the Cost of
Approach	Equity. The Bond Yield Plus Risk Premium
	approach assumes that investors required a risk
	premium over the cost of debt as compensation for
	assuming the greater risk of common equity
	investment. The model is expressed as a bond yield
	plus equity risk premium.
Capital Asset Pricing Model	A risk premium-based model used to estimate the
("CAPM")	Cost of Equity, assuming the stock is added to a well-
	diversified portfolio. The CAPM assumes that
	investors are compensated for the time value of
	money (represented by the Risk-Free Rate), and risk
	(represented by the combination of the Beta
	Coefficient and the Market Risk Premium).
Constant Growth DCF Model	A form of the DCF model that assumes cash flows
	will grow at a constant rate, in perpetuity. The model
	simplifies to a form that expresses the Cost of Equity
	as the sum of the expected dividend yield and the
	expected growth rate.
Cost of Equity	The return required by investors to invest in equity
	securities. The terms "Return on Equity" and "Cost
	of Equity" are used interchangeably.
Discounted Cash Flow ("DCF") Model	A model used to estimate the Cost of Equity based on
	expected cash flows. The Cost of Equity equals the
	discount rate that sets the current market price equal
Dividend Yield	to the present value of expected cash flows.
Dividend Yield	For a given stock, the current annualized dividend
Current Demonstrie Dure heart ("CDD")	divided by its current market price.
Gross Domestic Product ("GDP")	The value of all finished goods and services produced
	within a country during a given period of time
	(usually measured annually). GDP includes public and private consumption, government expenditures,
	investments, and net exports (that is, exports minus
	imports).
Market Return	The expected return on the equity market, taken as a
	portfolio.
Market Risk Premium	The additional compensation required by investing in
	the equity market as a portfolio over the Risk-Free
	rate. The Market Risk Premium is a component of
	the CAPM.

### GLOSSARY OF FREQUENTLY USED TERMS

TERM	DESCRIPTION
Proxy Group	A group of publicly traded companies used as the
	"proxy" for the subject company (in this case,
	Liberty-Empire). Proxy companies are sometimes
	referred to as "Comparable Companies."
Return on Equity ("ROE")	The return required by investors to invest in equity
	securities. The terms "Return on Equity" and "Cost
	of Equity" are used interchangeably. Please note that
	the ROE in this context is distinct from the
	accounting measure sometimes referred to as the
	"Return on Average Common Equity".
Risk-Free Rate	The rate of return on an asset with no risk of default.
Risk Premium	The additional compensation required by investors
	for taking on additional increments of risk. Risk
	Premium-based approaches are used in addition to the
	DCF and CAPM to estimate the Cost of Equity.
Treasury Yield	The return on Treasury securities; the yield on long-
	term Treasury bonds is considered to be a measure of
	the Risk-Free Rate.

#### REBUTTAL TESTIMONY OF ROBERT B. HEVERT THE EMPIRE DISTRICT ELECTRIC COMPANY BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION CASE NO. ER-2019-0374

### 1 I. INTRODUCTION AND SUMMARY OF RECOMMENDATIONS

#### 2 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Robert B. Hevert and my business address is ScottMadden, Inc., 1900 West
Park Drive, Suite 250, Westborough, MA 01581.

#### 5 Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

- 6 A. I am submitting this rebuttal testimony ("Rebuttal Testimony") before the Missouri Public
- 7 Service Commission ("Commission") on behalf of The Empire District Electric Company,
- 8 a Liberty Utilities company ("Liberty-Empire" or the "Company").

### 9 Q. ARE YOU THE SAME ROBERT B. HEVERT WHO FILED DIRECT

### 10 **TESTIMONY IN THIS MATTER ON BEHALF OF LIBERTY-EMPIRE?**

11 A. Yes, I am.

### 12 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. My Rebuttal Testimony responds to the Revenue Requirement Cost of Service Report (the
"Staff Cost of Service Report") submitted in this proceeding by the Missouri Public Service
Commission Utility Services Division ("Staff"), and the direct testimony of David Murray
on behalf of the Office of the Public Counsel ("OPC") (collectively, the "Opposing ROE
Witnesses"), as they relate to the Company's Return on Equity ("ROE" or "Cost of

Equity") and capital structure. Mr. Peter Chari presents Staff's ROE recommendation. My Rebuttal Testimony updates certain analyses contained in my Direct Testimony, and includes several additional analyses developed in response to issues raised by the Opposing ROE Witnesses. My analyses and conclusions are supported by the data presented in Schedules RBH-R1 through RBH-R13, which have been prepared by me or under my direction.

### 7 Q. PLEASE SUMMARIZE THE KEY ISSUES AND RECOMMENDATIONS 8 ADDRESSED IN YOUR REBUTTAL TESTIMONY.

9 A. In my Direct Testimony I found the Company's Cost of Equity to fall in the range of 9.80 10 percent to 10.60 percent.<sup>1</sup> As my Direct Testimony discussed, my ROE recommendation 11 considers a variety of factors, including capital market conditions in general and certain 12 risks faced by the Company. Because the application of financial models and the 13 interpretation of their results are often sources of disagreement among analysts in 14 regulatory proceedings, it is important to review and consider a variety of data points; doing so enables us to put in context both quantitative analyses and the associated 15 16 recommendations. As such, I have updated the Constant Growth Discounted Cash Flow 17 ("DCF") model, Capital Asset Pricing Model ("CAPM"), Empirical CAPM ("ECAPM"), 18 Bond Yield Risk Premium, and Expected Earnings analyses based on data through January 31,  $2020^{2}$ , and have provided additional analyses in response to issues raised by the 19 20 **Opposing ROE Witnesses.** 

<sup>&</sup>lt;sup>1</sup> Direct Testimony of Robert B. Hevert, at 2.

<sup>&</sup>lt;sup>2</sup> See, Schedules RBH-R1 through RBH-R6.

### Q. PLEASE PROVIDE AN OVERVIEW OF YOUR RESPONSE TO THE OPPOSING ROE WITNESSES.

A. Although I disagree with certain of Staff witness Mr. Chari's analyses and conclusions, the
 high end of his recommended range, 9.80 percent, overlaps with my recommended range.<sup>3</sup>
 Mr. Chari's 9.25 percent recommendation,<sup>4</sup> however, falls considerably below a
 reasonable estimate of the Company's Cost of Equity.

7 Mr. Chari presents his analyses as of November 30, 2019 and June 30, 2017, the 8 earlier date representing the analytical period underlying Staff's analysis in Spire Missouri, 9 Inc.'s ("Spire Missouri") rate proceeding, the most recent fully litigated rate case in Missouri.<sup>5</sup> Mr. Chari bases his recommendation on the change in Staff's analytical results 10 11 from that case to this. As discussed throughout my Rebuttal Testimony, I do not agree 12 with Staff's premise, that the Cost of Equity has fallen during that period. Nor do I believe 13 Mr. Chari's analyses support a specific 55-basis point decrease from the 9.80 percent ROE 14 authorized by the Commission in the Spire Missouri case, or that it is appropriate to 15 compare the results of a natural gas proxy group as of mid-June 2017 to those of an electric 16 proxy group based on more recent data to arrive at that conclusion.

Further, although Mr. Chari's recommended range is 9.05 percent to 9.80 percent, his average results range from 4.63 percent to 8.14 percent.<sup>6</sup> I understand Mr. Chari's recommendation does not rely on those results *per se*, but on how Staff's results have changed over time. Nonetheless, it is difficult to see how changes in unreliable results

<sup>&</sup>lt;sup>3</sup> Staff Cost of Service Report, at 18.

<sup>&</sup>lt;sup>4</sup> *Ibid*.

<sup>&</sup>lt;sup>5</sup> *See*, File Nos. GR-2017-0215 and GR-2017-0216.

<sup>&</sup>lt;sup>6</sup> Certain of those results are below Staff's recommended rate of return (i.e., 7.14 percent). Staff Cost of Service Report, Schedule PC-12.

produce a reliable estimate of the Company's Cost of Equity. Simply, if the results are
 unambiguously unreliable estimates in the first instance, they should not be relied on to
 measure changes in the Cost of Equity in the second.

4 OPC witness Mr. Murray's recommendation is similarly disconnected from his 5 analytical results. Although he recommends an ROE of 9.25 percent,<sup>7</sup> Mr. Murray's results 6 range from 5.44 percent to 7.27 percent.<sup>8</sup> As discussed in Section III, there are numerous 7 unreasonable assumptions underlying Mr. Murray's analyses that tend to reduce his ROE 8 estimates.

9

10

### Q. HAVE YOU MADE ANY CHANGES TO THE PROXY GROUP PRESENTED IN YOUR DIRECT TESTIMONY?

A. Yes, I have included Avista Corporation ("Avista"), which had been party to a proposed
acquisition by Hydro One Limited; that transaction was terminated on January 23, 2019.<sup>9</sup>
Because Avista meets all my screening criteria and enough time has passed that the model
inputs no longer are affected by the proposed transaction, I included Avista in my proxy
group. I refer to the resulting group as the "Updated Proxy Group".

<sup>&</sup>lt;sup>7</sup> Assuming his recommended common equity ratio of 46.00 percent.

<sup>&</sup>lt;sup>8</sup> Direct Testimony of David Murray, Schedules DM-D-6 through DM-D-9.

<sup>&</sup>lt;sup>9</sup> See, Hydro One and Avista Mutually Agree to Terminate Merger Agreement, Press Release, January 23, 2019.

1

7

### II. RESPONSE TO TESTIMONY OF STAFF WITNESS CHARI

### Q. PLEASE BRIEFLY SUMMARIZE STAFF'S RECOMMENDATION REGARDING THE COMPANY'S COST OF EQUITY.

- 4 A. Through its witness Mr. Chari, Staff recommends an ROE of 9.25 percent, within a range
- 5 of 9.05 percent to 9.80 percent.<sup>10</sup> Mr. Chari estimates the ROE using the Constant Growth
- 6 DCF model and the CAPM.<sup>11</sup> Mr. Chari reviews recently authorized returns for electric

and natural gas utilities as a check on the reasonableness of his recommended ROE,  $^{12}$  and

- 8 considers current market conditions.<sup>13</sup> As noted earlier, Mr. Chari's recommendation rests
- 9 on a relative analysis, comparing model results coincident with Spire Missouri's most
- 10 recent rate cases to those produced using current data.<sup>14</sup>

### 11 Q. WHAT ARE THE SPECIFIC AREAS IN WHICH YOU DISAGREE WITH MR.

### 12 CHARI'S ANALYSES AND CONCLUSIONS?

- 13 A. The areas in which I disagree with Mr. Chari include:
- 14 1. The basis of his ROE recommendation;
- 15 2. Mr. Chari's interpretation of capital market conditions;
- 16 3. Mr. Chari's Constant Growth DCF analyses;
- Mr. Chari's application of the CAPM, the reasonableness of those results, and
  their relevance in determining the Company's ROE; and
- 19 5. The relevance of authorized returns.
- 20 I discuss each in turn, below.

<sup>&</sup>lt;sup>10</sup> Staff Cost of Service Report, at 18.

<sup>&</sup>lt;sup>11</sup> *Ibid.*, at 14-17, and Schedule PC-12.

<sup>&</sup>lt;sup>12</sup> *Ibid.*, at 18.

<sup>&</sup>lt;sup>13</sup> *Ibid.*, at 9-11.

<sup>&</sup>lt;sup>14</sup> *Ibid.*, Schedule PC-10, PC-11, and PC-12.

1		A. ROE Recommendation
2	Q.	DO YOU HAVE ANY PRELIMINARY OBSERVATIONS REGARDING MR.
3		CHARI'S RECOMMENDED RANGE?
4	A.	Yes. Although I do not believe the low end of Mr. Chari's recommended range is a
5		reasonable estimate of the Company's ROE, I recognize the upper end of his range, 9.80
6		percent, overlaps with my recommended range.
7	Q.	PLEASE SUMMARIZE MR. CHARI'S ROE RECOMMENDATION AND ITS
8		DERIVATION.
9	A.	Mr. Chari recommends an ROE of 9.25 percent, within a range of 9.05 percent to 9.80
10		percent. <sup>15</sup> To determine his recommendation, Mr. Chari first:
11		1. Calculates the average of his Constant Growth DCF and CAPM results based on
12		his <i>electric proxy group</i> ;
13		2. Calculates the average of his Constant Growth DCF and CAPM results based on
14		his natural gas proxy group; and
15		3. Calculates the average of the Constant Growth DCF and CAPM results based on
16		the natural gas proxy group and data presented by Staff in Spire's 2017 rate
17		proceeding (Docket Nos. GR-2017-0215 and GR-2017-0216).
18		Mr. Chari then calculates the difference in the average results for his electric and natural
19		gas proxy groups (an increase of 18 basis points); and the difference in the average results
20		for his natural gas proxy group, and the average results based on the data presented in the
21		Spire Missouri rate case (a decrease of 75 basis points). He begins with the 9.80 percent
22		ROE authorized in the Spire Missouri rate case and makes two adjustments: (1) adding 18

<sup>&</sup>lt;sup>15</sup> Staff Cost of Service Report, at 18.

basis points; and (2) subtracting 75 basis points. That process produces an estimate of 9.23
 percent, which Mr. Chari rounds to 9.25 percent.<sup>16</sup>

#### 3 Q. DO YOU HAVE ANY CONCERNS WITH THAT APPROACH?

A. Yes, I do. Although Mr. Chari argues his approach reflects both the change in the results
for the natural gas proxy group since the Spire Missouri rate case and the differential
between the natural gas and electric proxy groups,<sup>17</sup> it simply reflects the difference in the
average results in the Spire Missouri rate case (which was based on a *natural gas proxy group*), and the average results for his *electric proxy group* in the current proceeding. The
calculation presented in Schedule PC-12 can be stated using the following formula:

$$y = a - b + b - c \quad [1]$$

11 Where:

10

12 y = the adjustment to the authorized ROE in the Spire Missouri Rate Case.

13 a = the average current results based on the electric proxy group.

14 b = the average current results based on the natural gas proxy group.

15 c = the average results based on the natural gas proxy group from the Spire Missouri 16 rate case.

17 Because it adds and subtracts *b*, Equation [1] can be simplified to:

$$y = a - c \quad [2]$$

The current results of the natural gas proxy group therefore have no effect on Mr.
Chari's adjustment to the 9.80 percent return authorized in the Spire Missouri rate case.
Whether the current natural gas proxy group results average 6.21 percent as Mr. Chari

<sup>&</sup>lt;sup>16</sup> Schedule PC-12.

<sup>&</sup>lt;sup>17</sup> Staff Cost of Service Report, at 5.

estimates, zero percent, 100.00 percent, or any other value, the adjustment remains negative 57 basis points (*see*, Schedule RBH-R8). That is, Mr. Chari's approach assumes it is appropriate to compare the current results of an *electric proxy group* to the prior results of a *natural gas proxy group* to determine how the ROE has changed over time. I do not agree, and it appears neither does Mr. Chari, as he states "Staff's current COE estimated for Staff's electric proxy group of 6.39% implies that the COE for the electric proxy group is 18 bps higher than for the [current results of the] gas proxy group."<sup>18</sup>

### 8 Q. DO YOU AGREE IT IS APPROPRIATE TO CONSIDER THE RELATIVE 9 CHANGES IN MODELS TO DETERMINE THE ROE?

10 A. Although it may be informative to review changes in model results over time, it is most 11 important that the proxy groups are comparable, the model inputs are reasonable, and the 12 results are meaningful. Here, the results presented in Schedule PC-12 all are significantly below the lowest authorized return for a vertically integrated utility in at least 40 years.<sup>19</sup> 13 14 In addition, as discussed in more detail in my response to Mr. Chari's CAPM analysis, certain of those results suggest Liberty-Empire's Cost of Equity is below Staff's 15 recommended (embedded) Cost of Debt, which is highly suspect given that equity investors 16 17 face greater risks than debt investors, and require higher returns than debt investors. When 18 models produce results so far removed from reasonable benchmarks, those results and the 19 analyses that produced them should be viewed with considerable caution. That is the case 20 even if they are being relied on solely to estimate changes over time.

<sup>&</sup>lt;sup>18</sup> *Ibid.* [Clarification added]

<sup>&</sup>lt;sup>19</sup> Source: Regulatory Research Associates.

1		Mr. Chari produces various analyses, but his recommendation is far removed from
2		those results. Recognizing that the Commission would be skeptical of model results and
3		ROE recommendations as low as 4.63 percent, Mr. Chari instead focuses on the "relative
4		change" in Staff's DCF and CAPM estimates. As discussed below, those analyses are
5		highly flawed and cannot be relied on in either an absolute or a relative sense. That said,
6		and assuming for the sake of argument Mr. Chari's approach, certain reasonable
7		adjustments to the DCF model indicate that the Cost of Equity has increased since the Spire
8		Missouri rate case.
9	Q.	WHAT HAS STAFF RECOMMENDED RECENTLY FOR OTHER UTILITIES?

11 KCP&L Greater Missouri Operations Company, Staff recommended an ROE of 9.85

In a recent electric rate case in Missouri for Kansas City Power & Light Company and

12 percent.<sup>20</sup> The Staff Cost of Service report in that case was filed on June 19, 2018. Staff

- 13 did not change its recommended ROE in its Rebuttal Testimony (filed July 27, 2018)<sup>21</sup> or
- 14 its Surrebuttal Testimony (filed September 4, 2018).<sup>22</sup>

10

A.

15In the most recent natural gas rate case in Missouri (for Ameren Missouri's natural16gas operations), Staff recommended an ROE of 9.50 percent.<sup>23</sup> The Staff Cost of Service17report in that case was filed on April 17, 2019. Staff did not change its recommended ROE

See, Staff Report Cost of Service, Missouri Public Service Commission, Docket No. ER-2018-0145 and ER-2018-0146, June 19, 2018, at 2. I recognize that Staff recommended a 9.25 percent ROE for Union Electric Company d/b/a Ameren Missouri's ("Ameren Missouri") electric operations in its Staff Cost of Service Report filed on December 4, 2019 in Case No. ER-2019-0335.

See, Rebuttal Testimony of Jeffrey Smith, Missouri Public Service Commission, Docket No. ER-2018-0145 and ER-2018-0146, July 27, 2018.

See, Surrebuttal Testimony of Jeffrey Smith, Missouri Public Service Commission, Docket No. ER-2018-0145 and ER-2018-0146, September 4, 2018, at 13.

<sup>&</sup>lt;sup>23</sup> See, Staff Report Cost of Service, Missouri Public Service Commission, Docket No. GR-2019-0077, April 17, 2019, at 2.

1

in its Rebuttal Testimony (filed June 7, 2019)<sup>24</sup> or its Surrebuttal Testimony (filed July 10, 2019).<sup>25</sup>

As noted above, Mr. Chari's analyses focus on the relative change over time. Mr. Chari, however, has not explained why investors view electric utilities, such as Liberty-Empire, as so much less risky now than in mid-2018 to lower their required return by 60 basis points. Similarly, Mr. Chari has not explained how market conditions have changed since mid-2019 that would cause Liberty-Empire's (a vertically integrated electric utility) ROE to be 25 basis points below the ROE for Ameren Missouri's natural gas operations.

# 9 Q. ARE YOU AWARE OF AN INSTANCE IN WHICH THE FINANCIAL 10 COMMUNITY REACTED NEGATIVELY TO A REGULATORY 11 COMMISSION'S ORDER REGARDING THE ROE, CAPITAL STRUCTURE, OR 12 OTHER CONSIDERATIONS?

A. Yes, I am. CenterPoint Energy Houston Electric LLC ("CEHE") recently was authorized an ROE of 9.40 percent, together with an equity ratio of 42.50 percent.<sup>26</sup> Throughout the Public Utility Commission of Texas's ("PUCT") deliberations in that proceeding, the financial community monitored the PUCT's deliberations, which initially called for an ROE of 9.25 percent and an equity ratio of 40.00 percent. The real-time effect of those deliberations has been clear: the stock of the Company's parent, CenterPoint Energy, Inc., significantly underperformed the utility sector, and its credit rating from Fitch has been

See, Rebuttal Testimony of Jeffrey Smith, Missouri Public Service Commission, Docket No. GR-2019-0077, June 7, 2019, at 15.

See, Surrebuttal Testimony of Jeffrey Smith, Missouri Public Service Commission, Docket No. GR-2019-0077, July 10, 2019, at 20.

<sup>&</sup>lt;sup>26</sup> See, S&P Global Market Intelligence, *Texas PUC OKs CenterPoint rate case settlement, adds no dividend restrictions*, February 14, 2020.

downgraded by one credit "notch."<sup>27</sup> The equally clear result is that CEHE's cost of capital
 has increased, to the detriment of its customers.

### 3 Q. DO YOU HAVE ANY OTHER CONCERNS WITH MR. CHARI'S 4 RECOMMENDED ROE?

- 5 A. Yes, I do. As discussed in more detail later in my response to Mr. Chari, I have several
  6 concerns with Mr. Chari's application of the DCF and CAPM methods, and the results they
  7 produce.
- 8

### B. Capital Market Conditions

### 9 Q. PLEASE SUMMARIZE MR. CHARI'S TESTIMONY AS IT RELATES TO 10 CURRENT CAPITAL MARKET CONDITIONS?

A. Mr. Chari reviews current economic conditions, and concludes low interest rates and high
utility stock prices suggest a lower Cost of Equity for utilities.<sup>28</sup> Mr. Chari also reviews
the equity markets, noting that utility stock prices and price-to-earnings ("P/E") ratios have
risen since 2017, in conjunction with lower dividend yields. Mr. Chari concludes that those
two factors suggest a lower ROE in the current market relative to 2017.<sup>29</sup>

### 16 Q. DO YOU AGREE WITH MR. CHARI'S CONCLUSION THAT THE CAPITAL

### MARKET ENVIRONMENT SUGGESTS A LOWER COST OF EQUITY FOR THE COMPANY?

A. No, I do not. In 2019, the 30-year Treasury yield fell by 119 basis points, a decline of
about 38.00 percent, in 126 trading days. Looking back to 2001, only 124 of 4,803

<sup>27</sup> Fitch Ratings, *Fitch Downgrades CenterPoint Energy Houston Electric to 'BBB+'; Affirms CNP; Outlooks Negative*, February 19, 2020.

<sup>&</sup>lt;sup>28</sup> Staff Cost of Service Report, at 10.

<sup>&</sup>lt;sup>29</sup> *Ibid.*, at 10-11.

observations saw greater declines (only 13 saw greater percentage declines). On an
absolute basis, 161 observations experienced greater basis point changes, and only 63 saw
greater percentage changes.
One means of viewing the increasing volatility of Treasury yields is to view the
Coefficient of Variation ("CoV") over time. The CoV is the ratio of the standard deviation
to the average; it is a means of standardizing variability. As Chart 1 (below) demonstrates,
by that measure long-term Treasury yields became increasingly variable in 2019 and 2020,

relative to 2017 (i.e., as of the Spire Missouri rate case).

8





Chart 1: 30-Year Treasury Yields Coefficient of Variation<sup>30</sup>

10

At issue is the extent to which that volatility should be considered in assessing the relationship between Treasury yields and the Cost of Equity. If the variability in yields relates to something other than long-term fundamental market factors, we should question the extent to which changes in bond yields reflect changes in investor return requirements.

-

Source: S&P Global Market Intelligence, through February 25, 2020.

1	As noted in my Direct Testimony, over time, significant and abrupt declines in
2	Treasury yields have been associated with increases in equity market volatility. <sup>31</sup> That
3	relationship makes intuitive sense; as investors see increasing risk their objectives may
4	shift to capital preservation (that is, avoiding a capital loss), rather than capital
5	appreciation. Consistent with that objective, investors may allocate capital to the relative
6	safety of Treasury yields, in a "flight to safety." Because bond yields are inversely related
7	to bond prices, as investors bid up the prices of bonds, they bid down the yields. That
8	pattern is seen in Chart 6 in my Direct Testimony, in which decreases in the 30-year
9	Treasury yield coincided with increases in the Volatility Index ("VIX"). In those instances,
10	the fall in yields does not reflect a reduction in required returns, it reflects an increase in
11	risk aversion and, therefore, an increase in investor-required returns.
12	As also shown in my Direct Testimony, the Cboe Options Exchange ("Cboe") VIX
13	increased since the Spire Missouri rate case in 2017. <sup>32</sup> Looking to more recent data (see,
14	Chart 2), the VIX continues to remain elevated relative to 2017. In addition, although the
15	VIX traded in a relatively narrow range in 2017, it experienced greater variability since the

beginning of 2018. 16

Direct Testimony of Robert B. Hevert, at 33. *Ibid.*, at 32. 31

<sup>32</sup> 



Chart 2: VIX Since January 2017<sup>33</sup>

As discussed in my Direct Testimony, since the 2008/2009 financial crisis, Treasury yields have generally remained below utility dividend yields.<sup>34</sup> As shown in Chart 3, below, that relationship remained similar in 2017 relative to the current market.

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Chart 3: Utility Dividend Yields and 30-Year Treasury Yields<sup>35</sup>



<sup>&</sup>lt;sup>33</sup> Source: Bloomberg Professional, through February 25, 2020.

<sup>&</sup>lt;sup>34</sup> Direct Testimony of Robert B. Hevert, at 36.

<sup>&</sup>lt;sup>35</sup> Source: S&P Global Market Intelligence, through February 25, 2020.

1		Further, although Mr. Chari suggests low interest rates, and relatively higher P/E
2		ratios imply reduced required returns as discussed in my Direct Testimony, the greater
3		variability in P/E ratios increases the risk of capital loss and a limit on valuation levels. <sup>36</sup>
4		As such, I do not agree that current market conditions imply a lower ROE.
5		C. Constant Growth Discounted Cash Flow Model
6	Q.	PLEASE SUMMARIZE STAFF'S CONSTANT GROWTH DCF ANALYSIS.
7	A.	Mr. Chari calculates the Constant Growth DCF results using an electric proxy group and a
8		natural gas proxy group. He calculates the dividend yield for each proxy company in his
9		proxy groups by "dividing the consensus analysts' expected dividend per share over the
10		next four quarters (see Schedule PC-10-1) by the average daily closing stock prices for the
11		three months ending November 30, 2019." <sup>37</sup> Mr. Chari then reviews the five- and ten-year
12		historical growth rates in earnings per share ("EPS"), as well as the projected EPS growth
13		rates <sup>38</sup> from Standard & Poor's ("S&P") Global Market Intelligence for his electric proxy
14		group. <sup>39</sup> After reviewing those growth rates, Mr. Chari concludes an appropriate growth
15		rate range, for both proxy groups, is from 4.20 percent to 5.00 percent. <sup>40</sup>

<sup>&</sup>lt;sup>36</sup> Direct Testimony of Robert B. Hevert, at 38.

<sup>&</sup>lt;sup>37</sup> Staff Cost of Service Report, at 14.

<sup>&</sup>lt;sup>38</sup> I attempted to recreate the long-term projected EPS growth rates Mr. Chari cites from S&P Global Market Intelligence. Although Mr. Chari notes on page 14-15 of the Staff Cost of Service Report that his projected EPS growth rates are as of November 30, 2019, it appears that the data is as of September 30, 2019. That is, it appears there is a disconnect in the timing between his dividend yield estimates and the projected EPS growth rates.

<sup>&</sup>lt;sup>39</sup> *Ibid.*, at 14-15. Mr. Chari also presents the ten- and five-year historical growth rates in dividend per share ("DPS") and book value per share ("BVPS") in Schedules PC-9-1 and PC-9-2. However, it does not appear he relies on that data to develop his assumed growth rate range.

<sup>&</sup>lt;sup>40</sup> *Ibid.*, at 16.

1 2 **Q**.

### THE RANGE OF GROWTH RATES SELECTED BY MR. CHARI?

TURNING TO THE DCF METHOD, DO YOU HAVE ANY CONCERNS WITH

A. Yes, I do. As noted above, Mr. Chari selects a range of growth rates of 4.20 percent to
5.00 percent for both his electric and natural gas proxy groups. However, Mr. Chari notes
that "Staff did not rely on 10- and 5-year historical and projected growth rates for the
natural gas utilities to arrive at the growth rate range of 4.20% - 5.00%."<sup>41</sup> That is, Mr.
Chari has provided no support for his natural gas proxy group assumed growth rates other
than "to maintain consistency with the growth rate range assumed in the Spire rate cases."<sup>42</sup>

### 9

### Q. IS IT REASONABLE TO ATTEMPT "TO MAINTAIN CONSISTENCY WITH

### 10 THE GROWTH RATE RANGE" USED IN PRIOR RATE CASES?<sup>43</sup>

11 A. No, it is not. Mr. Chari notes on page 14 of the Staff Cost of Service Report, the Constant 12 Growth DCF model estimates the Cost of Equity based on the expected dividend yield and 13 the expected growth rate. By holding the growth rate constant, Mr. Chari's approach 14 assumes changes in DCF results relate only to changes in dividend yields. Clearly, that is 15 an incorrect assumption. Under the fundamental assumptions of the Constant Growth DCF 16 model, decreases in growth rates generally are associated with lower stock prices and, 17 therefore, higher dividend yields. That is, higher growth expectations are reflected in 18 higher stock prices and, therefore, lower dividend yields. The converse also is the case -19 lower growth expectations are associated with lower stock prices and higher dividend

<sup>&</sup>lt;sup>41</sup> Mr. Chari's response to Liberty-Empire Data Request 0242.

<sup>&</sup>lt;sup>42</sup> Staff Cost of Service Report, at 16.

<sup>&</sup>lt;sup>43</sup> *Ibid*.

yields. Mr. Chari does not consider that fundamental relationship in his attempt "to
 maintain consistency with the growth rate range assumed in the Spire rate cases."<sup>44</sup>
 Further, Mr. Chari's assumed growth rate does not reflect the current expectation
 of future growth. He has simply assumed that the expected growth rates for his proxy
 companies have not changed in over two years, since the June 30, 2017 DCF analysis

presented by Staff in the Spire Missouri rate case. As noted above, he has done so without
providing any evidence that his assumption is valid for his natural gas proxy group.

8 Q. WHAT WERE THE EPS GROWTH RATES FOR MR. CHARI'S NATURAL GAS

9

### PROXY GROUP AS OF NOVEMBER 30, 2019?

A. The EPS growth rates for Mr. Chari's natural gas proxy group as of November 30, 2019
are provided in Table 1, below. I have compared those growth rates to the same growth
rates from the Spire Missouri rate case as of June 30, 2017.

13

### Table 1: Mr. Chari's Natural Gas Proxy Group EPS Growth Rates

Growth Rate	June 30, 2017	November 30, 2019 <sup>45</sup>	Difference
Five-Year Historical EPS	2.84%	7.14%	4.30%
Ten-Year Historical EPS <sup>46</sup>	4.12%	4.66%	0.54%
Projected EPS	5.19%	5.77%	0.58%

As shown in Table 1, each of the growth rates for Mr. Chari's natural gas proxy groups have increased by at least 56 basis points. In fact, the lowest EPS growth rate is 46 basis points above the low end of his assumed growth rate range. Assuming, conservatively, an increase of 50 basis points to the growth rate range<sup>47</sup> (i.e., to a range of

<sup>&</sup>lt;sup>44</sup> *Ibid*.

<sup>&</sup>lt;sup>45</sup> Source: S&P Global Market Intelligence.

<sup>&</sup>lt;sup>46</sup> The ten-year historical EPS growth rate excluding the negative growth rate for Northwest Natural Holding Company is 6.56 percent.

<sup>&</sup>lt;sup>47</sup> 50 basis points is approximately equal to the increase from 4.20 percent to the 4.66 percent low end estimate and is somewhat below the lowest increase in growth rates since June 30, 2017 in Table 1.

1	4.70 percent to 5.50 percent), Mr. Chari's Constant Growth DCF results would be 7.15
2	percent to 7.95 percent (using Mr. Chari's 2.45 percent expected dividend yield) relative
3	to the 6.90 percent to 7.70 percent range in the Spire Missouri rate case. <sup>48</sup> That is, based
4	on a conservative estimate of the increase in growth rates, the Constant Growth DCF results
5	increase by 25 basis points. I do not agree the current Constant Growth DCF results suggest
6	a decrease in the ROE. <sup>49</sup>

### 7 Q. HOW DO THE ADJUSTED RESULTS BASED ON MR. CHARI'S NATURAL GAS

#### 8 **PROXY GROUP AFFECT HIS ROE RECOMMENDATION?**

9 A. On a comparative basis, one reasonable adjustment to the range of growth rates indicates
10 an increase in DCF estimates, not a decrease as Mr. Chari supposes.

### 11 Q. DO YOU HAVE ANY CONCERNS WITH MR. CHARI'S ASSUMED GROWTH 12 RATE RANGE FOR HIS ELECTRIC PROXY GROUP?

13 A. Yes, I do. To develop his range of growth rates, Mr. Chari considers the five- and ten-year 14 historical growth rates in EPS, along with the projected five-year EPS growth rates from 15 S&P Global Market Intelligence. As noted on page 14 of the Staff Cost of Service Report, 16 the five- and ten-year historical EPS growth rates average 3.11 percent and 3.66 percent 17 for Mr. Chari's proxy group. However, as shown in Schedule PC-9-3, certain proxy 18 companies experienced negative growth over those two periods. Because Mr. Chari is 19 attempting to determine the growth rate in the DCF model, which is applied in perpetuity, 20 it is inappropriate to include negative EPS growth rates. By assuming a negative growth

<sup>&</sup>lt;sup>48</sup> Schedule PC-10-3.

<sup>&</sup>lt;sup>49</sup> Please note, I do not agree that DCF results of 7.15 percent to 7.95 percent are reasonable. However, based on Mr. Chari's methodology, they represent an increase, not a decrease, to the ROE since the Spire Missouri rate case.

rate, Mr. Chari assumes utility investors would willingly commit capital to a company
 expected to shrink, forever. Although Mr. Chari appears concerned with what he views as
 relatively high growth rates,<sup>50</sup> he has not considered the effect of negative growth rates on
 his DCF analysis.

As shown in Schedule RBH-R9, I have corrected Mr. Chari's Schedule PC-9-3, by removing negative growth rates. That results in average historical five- and ten-year EPS growth rates of 4.44 percent and 4.61 percent, respectively. Based on the corrected data, the low end of Mr. Chari's growth rate range is 24 basis points below the lowest average growth rate.<sup>51</sup> Had Mr. Chari relied on a growth rate range of 4.44 percent to 5.16 percent, more consistent with the average growth rates presented in Schedule RBH-R9, his Constant Growth DCF results would range from 7.58 percent to 8.30 percent.<sup>52</sup>

### 12 Q. DO YOU HAVE ANY OTHER CONCERNS WITH MR. CHARI'S ASSUMED 13 GROWTH RATE RANGE?

A. Yes, I do. Although it appears Mr. Chari has attempted to maintain consistency between the growth rate ranges in the Spire Missouri rate case and this one, the range of growth rates Staff assumed in the Spire Missouri analysis was based on a review of five- and tenyear historical growth rates in DPS, BVPS, and EPS, and projected EPS growth rates for a natural gas proxy group.<sup>53</sup> That is, Staff in the Spire Missouri rate case and Mr. Chari rely on different datasets to arrive at their growth rate ranges. Mr. Chari has provided no evidence to suggest that comparing different datasets for different proxy groups is a

<sup>&</sup>lt;sup>50</sup> Staff Cost of Service Report, at 15.

<sup>&</sup>lt;sup>51</sup> Schedule RBH-R9.

 $<sup>^{52}</sup>$  7.58% = 3.14% + 4.44%; 8.30% = 3.14% + 5.16%. Please note, I am not suggesting 7.58 percent to 8.30 percent is a reasonable range of estimates.

<sup>&</sup>lt;sup>53</sup> *Ibid.*, Schedule PC-10, and Missouri Public Service Commission, File Nos. GR-2017-0215 and GR-2017-0216, Staff Cost of Service Report, Schedule 9-4.

reasonable approach to estimate the change in growth rates (or as Mr. Chari does, assume
 there has been no change).

### 3 Q. PLEASE SUMMARIZE YOUR CONCERN WITH THE GROWTH RATES USED 4 IN STAFF'S DCF ANALYSIS.

A. Whereas my DCF analysis relies on analysts' consensus earnings growth projections, Mr.
Chari's analysis reflects, as noted above, historical and projected growth in EPS. Mr. Chari
observes the consensus EPS growth estimates (provided by S&P Global Market
Intelligence) average 5.16 percent for his electric proxy group,<sup>54</sup> and argues they are not
reliable relative to Staff's "high-end" estimate of long-term GDP growth (approximately
4.40 percent).<sup>55</sup>

### 11 Q. WHAT IS THE RELEVANCE OF EXPECTED GROWTH RATES IN THE DCF 12 MODEL?

A. As discussed in my Direct Testimony at page 47, the Constant Growth DCF model assumes the current price of a share of stock represents the present value of the expected cash flows associated with owning that stock. The expected cash flows include the dividends received during the period in which the stock is held, and the price at which the stock eventually is sold. The Cost of Equity is the discount rate that sets the current price equal to the present value of the expected cash flows.

### Because both dividends and stock prices are determined by earnings, analysts' consensus projected earnings growth rates are the proper measure of growth for the Constant Growth DCF model. As discussed in more detail below, there is long-standing

<sup>54</sup> *Ibid.*, Schedules PC-9-3.

<sup>&</sup>lt;sup>55</sup> *Ibid.*, at 15.

academic support for the use of earnings growth projections because they have a
 statistically meaningful relationship to utility stock prices. In summary, growth rates are
 important inputs to DCF analyses, and analysts' earnings growth rate projections are the
 appropriate measure of expected growth. Other measures, such as those proposed by Mr.
 Chari, often have the effect of unreasonably suppressing ROE estimates.

### 6 Q. WHY DOES MR. CHARI EXPRESS CONCERN WITH THE USE OF ANALYSTS'

### 7 FORECASTS OF EPS GROWTH IN HIS CONSTANT GROWTH DCF MODEL?

### 8 A. Mr. Chari asserts that because they are higher than his 4.40 percent high-end GDP growth 9 estimate, analysts' growth rate projections are unsustainable.<sup>56</sup>

### 10 Q. IS THE USE OF ANALYSTS' EARNINGS GROWTH PROJECTIONS IN THE 11 DCF MODEL SUPPORTED BY FINANCIAL LITERATURE?

A. Yes, it is. As explained in my Direct Testimony, the relationship between various growth
 rates and stock valuation metrics has been the subject of much academic research,
 including published articles that support the use of analysts' earnings growth projections
 in the DCF model.<sup>57</sup>

## 16Q.DOYOU AGREE WITH MR. CHARI THAT LOAD GROWTH IS A17REASONABLE MEASURE OF THE COMPANY'S EXPECTED GROWTH IN18THE DCF MODEL?58

A. No, I do not. Mr. Chari's position assumes there is a direct path from electric retail sales
to earnings. As a practical matter, many variables enter that relationship. Rate design, for

<sup>&</sup>lt;sup>56</sup> *Ibid.*, at 15.

<sup>&</sup>lt;sup>57</sup> *Ibid.*, at 49-51.

<sup>&</sup>lt;sup>58</sup> *Ibid.*, at 15.

example, may affect the relationship between retail sales and revenues. The relationship
 between revenue and earnings likewise is a function of operating margins, which in turn,
 are influenced by a variety of operating factors, such as productivity improvements.

4 To that point, the U.S. Energy Information Administration's ("EIA") 2019 Annual 5 Energy Outlook reports expected annual electricity sales to grow approximately 1.02 6 percent per year over the next five years,<sup>59</sup> whereas the average electric proxy company 7 expected earnings growth estimate reported in Schedule RBH R-1 is 5.49 percent. 8 Analysts' expectations for earnings growth are not limited by retail electric sales growth, 9 and Mr. Chari's focus on that factor is inconsistent with actual practice.

### 10Q.WHAT ARE STAFF'S DCF RESULTS BASED ON THE CHANGES NOTED11ABOVE?

A. As shown in Table 2, below, based on the reasonable adjustments to Staff's growth rates
noted above, the current results based on the natural gas and electric proxy group are higher
in this proceeding than in the Spire Missouri rate case, indicating an increase rather than a
decrease in the Company's Cost of Equity relative to the Cost of Equity approved for Spire
Missouri in 2017.

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#### Table 2: Adjusted DCF Results

Proxy Group	Low	High
Natural Gas – Spire Missouri	6.90%	7.70%
Natural Gas – Current	7.15%	7.95%
Electric	7.58%	8.30%

<sup>&</sup>lt;sup>59</sup> Source: U.S. Energy Information Administration (for the years 2019-2023). *Annual Energy Outlook 2019*, Table 8. Average of the year-over-year forecasted annual electricity sales growth for the years 2019 to 2024.

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#### D. Capital Asset Pricing Model

#### 2 Q. PLEASE BRIEFLY DESCRIBE MR. CHARI'S CAPM ANALYSES.

3 A. Mr. Chari's CAPM analyses assume a risk-free rate of 2.21 percent, an average calculated 4 Beta coefficient of 0.54 for his electric proxy group and 0.60 for his natural gas proxy 5 group, and historical Market Risk Premium ("MRP") estimates of 6.00 percent (using the 6 long-term arithmetic mean) and 4.50 percent (using the long-term geometric mean).<sup>60</sup> 7 Based on those inputs, Mr. Chari's CAPM calculations produce Cost of Equity estimates 8 of 4.63 to 5.43 percent for his electric proxy group and 4.91 percent to 5.81 percent for his 9 natural gas proxy group.<sup>61</sup> Again, Mr. Chari considers his results on a relative, not 10 absolute, basis and compares the current results to those as of June 30, 2017. Mr. Chari 11 reports the CAPM results as of June 30, 2017 to be in the range of 6.08 percent to 7.14 percent.<sup>62</sup> 12

### 13 Q. DO YOU AGREE WITH MR. CHARI'S CAPM ANALYSIS?

A. No, I do not. The principal difference in our approaches is that Mr. Chari performs an
historical, or *ex-post* analysis, whereas I perform a forward-looking, or *ex-ante* analysis.
Because the purpose of this proceeding is to establish the Company's Cost of Equity on a
forward-looking basis, it is important to develop a CAPM analysis that reflects investors'
expectations.

<sup>&</sup>lt;sup>60</sup> Staff Cost of Service Report, at 17, Schedule PC-11.

<sup>&</sup>lt;sup>61</sup> *Ibid*.

<sup>&</sup>lt;sup>62</sup> Ibid.

1 <b>Q</b>	•	<b>BEFORE TURNING TO</b>	THE MRP, DO	YOU AGREE	WITH MR.	<b>CHARI'S USE</b>
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#### 2 OF THE AVERAGE 30-YEAR TREASURY YIELD AS THE RISK-FREE RATE?

A. Although I agree with Mr. Chari that it is appropriate to use the current average 30-year
 Treasury yield, I relied on both the current 30-day average 30-year Treasury yield and the
 (near-term) projected 30-year Treasury yield as reported in the *Blue Chip Financial Forecast.*<sup>63</sup>

#### 7 Q. HOW DID MR. CHARI CALCULATE HIS MRP ESTIMATES?

8 A. Mr. Chari cites Duff & Phelps' <u>2019 SBBI Yearbook</u>, and states he calculated his MRP
9 estimates by taking the difference between the long-term average earned return on stocks
10 and bonds from 1926 – 2018.<sup>64</sup>

### 11 Q. IS IT APPROPRIATE TO RELY EXCLUSIVELY ON HISTORICAL DATA IN 12 ESTIMATING THE MRP, AS MR. CHARI HAS DONE?

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

19It is important to note that the expected equity risk premium, as it is used in20discount rates and cost of capital analysis, is a forward-looking concept.21That is, the equity risk premium that is used in the discount rate should be22reflective of what investors think the risk premium will be going forward.

<sup>&</sup>lt;sup>63</sup> Direct Testimony of Robert B. Hevert, Schedule RBH-D4.

<sup>&</sup>lt;sup>64</sup> Staff Cost of Service Report, Schedule PC-11.

<sup>&</sup>lt;sup>65</sup> Morningstar, Inc., <u>Ibbotson Stocks, Bonds, Bills and Inflation 2013 Valuation Yearbook</u> at 53.

The historical MRP, on the other hand, may not necessarily reflect investors' expectations or, for that matter, the relationship between market risk and returns. The relevant analytical issue in applying the CAPM is to ensure that all three components of the model (*i.e.*, the risk-free rate, the Beta coefficient, and the MRP) are consistent with market conditions and investor expectations. Therefore, the *ex-ante* CAPM analyses are the more appropriate method to estimate the Company's Cost of Equity.

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### 7 Q. WHAT IS THE DIFFERENCE BETWEEN THE GEOMETRIC AND THE 8 ARITHMETIC MEAN RISK PREMIUM?

9 A. The arithmetic mean is the simple average of single period rates of return, whereas the 10 geometric mean is the compound rate that equates a beginning value to its ending value. 11 The important distinction between the two methods is that the arithmetic mean assumes 12 that each periodic return is an independent observation and, therefore, incorporates 13 uncertainty in the calculation of the long-term average. The geometric mean, by contrast, 14 is a backward-looking calculation that equates a beginning value to an ending value over a 15 specific period of time. Geometric averages, therefore, provide a standardized basis of 16 review of historical performance across investments or investment managers; they do not, 17 however, reflect forward-looking uncertainty.

Because there is no uncertainty regarding past returns, the use of geometric averages is appropriate when comparing investment performance on a retrospective basis. On a prospective basis, however, uncertainty exists and should be taken into consideration when developing return expectations and requirements. That is why investors and researchers commonly use the arithmetic mean when estimating the risk premium over historical periods for the purpose of estimating equity cost rates.

1		Lastly, investment risk or volatility is typically measured on the basis of the
2		standard deviation. The standard deviation, in turn, is a function of the arithmetic, as
3		opposed to the geometric mean. In that regard, the Beta coefficients applied in CAPM
4		analyses are derived from the standard deviation of returns. <sup>66</sup> In any case, Morningstar
5		notes that:
6 7 8 9 10 11		The arithmetic average equity risk premium can be demonstrated to be the most appropriate when discounting future cash flows. For use as the expected equity risk premium in either the CAPM or the building block approach, the arithmetic mean or the simple difference of the arithmetic means of the stock market returns and the riskless rates is the relevant number. <sup>67</sup>
12		Similarly, an article reviewing literature on the topic noted the following rationale
13		for using the arithmetic mean:
14 15 16 17 18 19 20		Note that the arithmetic mean, not the geometric mean is the relevant value for this purpose. The quantity desired is the rate of return that investors expect over the next year for the random annual rate of return on the market. The arithmetic mean, or simple average, is the unbiased measure of the expected value of repeated observations of a random variable, not the geometric mean [The] geometric mean underestimates the expected annual rate of return. <sup>68</sup>
21	Q.	PUTTING ASIDE THE ISSUE OF WHETHER IT IS MORE APPROPRIATE TO
22		USE THE GEOMETRIC OR ARITHMETIC MEAN, DO YOU HAVE ANY
23		CONCERNS WITH THE MANNER IN WHICH MR. CHARI CALCULATED HIS
24		ASSUMED MARKET RISK PREMIUM?
25	A.	Yes, I do. Mr. Chari's estimates are based on the historical difference in the total returns
26		on stocks and bonds. According to Morningstar, however, the historical MRP is

<sup>66</sup> Direct Testimony of Robert B. Hevert at 54.

<sup>67</sup> Morningstar, Inc., Ibbotson Stocks, Bonds, Bills, and Inflation 2013 Valuation Yearbook at 56.

<sup>68</sup> Ian Cooper, Arithmetic versus geometric mean estimators: Setting discount rates for capital budgeting, European Financial Management Vol. 2, No. 2 at 158 (1996).

1 appropriately calculated by subtracting the *income only* portion of the government bond 2 return from the total return on large company stocks: 3 Another point to keep in mind when calculating the equity risk premium is 4 that the income return on the appropriate-horizon Treasury security, rather 5 than the total return, is used in the calculation. The total return is comprised 6 of three return components: the income return, the capital appreciation 7 return, and the reinvestment return.... The income return is thus used in the 8 estimation of the equity risk premium because it represents the truly riskless portion of the return.<sup>69</sup> 9 10 By subtracting the total return on government bonds from the total return on stocks, 11 Mr. Chari has understated the historical MRP by 93 basis points (using the arithmetic mean).<sup>70</sup> Based on Mr. Chari's average Beta coefficients of 0.54 and 0.60, the effect on 12 13 his mean CAPM estimate would be approximately 50 to 56 basis points. Even that 14 correction, however, produces results that are far too low to be reasonable estimates of the 15 Company's Cost of Equity.

### 16 Q. DO YOU HAVE ANY CONCERNS WITH THE RESULTS OF MR. CHARI'S 17 CAPM ANALYSIS?

18A.Yes, Mr. Chari's CAPM results are so far removed from observable benchmarks that they19provide little, if any, value in determining the Company's ROE. For example, Mr. Chari's20CAPM analysis suggests investors would be willing to receive an ROE ranging from 1321basis points below the Company's embedded Cost of Debt (as recommended by Staff, 4.7622percent) to only 67 basis points above.<sup>71</sup> Debt and equity are fundamentally different23securities with different risk/return characteristics, different lives, and different investors.24Debt investors have a contractual, senior claim on cash flows not available to equity

<sup>&</sup>lt;sup>69</sup> Morningstar, Inc., <u>Ibbotson Stocks</u>, <u>Bonds</u>, <u>Bills</u>, and <u>Inflation 2013 Valuation Yearbook</u>, at 55.

<sup>&</sup>lt;sup>70</sup> See Duff & Phelps, <u>CRSP Deciles Size Study – Supplementary Data Exhibits</u>.

<sup>&</sup>lt;sup>71</sup> Staff Cost of Service Report, at 13.

- investors and as such, equity investors bear the residual risk of ownership in perpetuity.
   As such, no rational equity investor would have a required ROE equal to the Cost of Debt,
   as Mr. Chari's CAPM analysis suggests.<sup>72</sup>
- In addition, a CAPM estimate of 4.63 percent is less than half of Liberty-Empire's
  currently authorized return. If the Company's authorized ROE were lowered by over half,
  it would certainly be viewed as extremely negative by investors and credit rating agencies.
  The notion that the Company's Cost of Equity now is 4.63 percent simply is implausible.

### 8 Q. WHAT ARE YOUR CONCLUSIONS REGARDING MR. CHARI'S CAPM 9 ANALYSIS?

- A. As a practical matter, estimates as low as 4.63 percent have little, if any, practical meaning
  for the purpose of determining the Company's ROE, even if only used to assess the change
  in the ROE over time. Financial models must be applied giving due consideration to the
  reasonableness of the inputs, assumptions, and results.
- 14

E.

#### Authorized Returns

### 15 Q. DO YOU HAVE ANY OBSERVATIONS REGARDING THE AUTHORIZED 16 RETURN DATA PRESENTED BY MR. CHARI?

A. Although Mr. Chari does not provide any conclusions regarding the authorized return data
presented on page 18 of the Staff Cost of Service Report, it is important to review that data
in proper context. Average annual data obscures variation in returns and does not address
the number of cases or the jurisdictions issuing orders within a given year. For example,
one year may have fewer cases decided, and a relatively large portion of those cases
decided by a single jurisdiction.

<sup>&</sup>lt;sup>72</sup> Based on the geometric MRP.

Mr. Chari only includes fully litigated rate cases in the average authorized returns 2 he presents. Tables 3 and 4, below, show the number of natural gas and vertically 3 integrated electric rate cases that were settled versus fully litigated (where an authorized 4 return was disclosed), from 2015 through 2019.

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### Table 3: Natural Gas Rate Cases<sup>73</sup>

Year	Fully Litigated	Settled	Total
2015	5	11	16
2016	9	16	25
2017	6	17	23
2018	15	24	39
2019	5	15	20

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#### Table 4: Vertically Integrated Electric Rate Cases<sup>74</sup>

Year	Fully Litigated	Settled	Total
2015	13	4	17
2016	9	11	20
2017	8	20	28
2018	9	14	23
2019	6	13	19

8

9 In 2015 and 2019 (through December 4) there were only five fully litigated rate 10 cases for natural gas utilities, and in 2017 there were only six fully litigated rate cases. In 11 2019 (through December 4) there were only six fully litigated rate cases for vertically 12 integrated electric utilities and no more than nine in any year since 2015.

13 In addition, focusing solely on annual averages of authorized returns does not take 14 into consideration the jurisdiction in which those returns were authorized. In the data 15 presented by Mr. Chari, 2017 is the highest in terms of the average authorized ROE for

<sup>73</sup> Source: Regulatory Research Associates. Through December 4, 2019, consistent with data presented on page 18 of the Staff Cost of Service Report.

<sup>74</sup> Source: Regulatory Research Associates. Through December 4, 2019, consistent with data presented on page 18 of the Staff Cost of Service Report.

natural gas utilities. In 2017, of the six fully litigated authorized returns, two were in Above
Average jurisdictions and another, ENSTAR Natural Gas in Alaska (which is considered a
Below Average jurisdiction from an investor perspective), was authorized an 11.88 percent
ROE. Interestingly, although there were 15 fully litigated rate cases for natural gas utilities
in 2018, only one was in an Above Average jurisdiction. That is, given the small number
of fully litigated cases in a given year, the jurisdiction in which returns are authorized can
have a significant effect on the average result.

8 Further, although the 2019 average for electric utilities appears to be lower, that 9 average is substantially biased by the 8.75 percent authorized return for Otter Tail Power 10 in South Dakota. That return represents the lowest authorized return for a vertically 11 integrated electric utility in at least the last 40 years.<sup>75</sup>

It is difficult to draw any conclusions regarding trends in authorized returns based on so few observations and on a simple review of annual averages. However, as shown in Charts 4 and 5, if all authorized ROEs (including both fully litigated and settled) are charted (rather than the simple average), there has been no meaningful trend since 2015; time explains no more than 1.00 percent of the change in ROEs, and the trend is statistically insignificant.

Source: Regulatory Research Associates.



### Chart 4: Natural Gas Authorized Returns (2015-2020)<sup>76</sup>



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Chart 5: Vertically Integrated Electric Authorized Returns (2015-2020)<sup>77</sup>



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<sup>&</sup>lt;sup>76</sup> Source: Regulatory Research Associates.

<sup>&</sup>lt;sup>77</sup> Source: Regulatory Research Associates.

1 2 **Q**.

### **DO YOU HAVE ANY OBSERVATIONS REGARDING THE 8.75 PERCENT ROE AUTHORIZED TO OTTER TAIL POWER?**

3 A. Yes, as note earlier the lowest authorized ROE for a vertically integrated electric utility 4 (8.75 percent) was authorized to Otter Tail Power by the South Dakota Public Utilities Commission ("SDPUC") on May 30, 2019.<sup>78</sup> In considering the effect of that order, there 5 are several points to keep in mind. First, South Dakota represents 10.00 percent of Otter 6 Tail Corporation's ("OTTR") retail electric revenues.<sup>79</sup> Yet, from May 6 to May 31, 2019, 7 8 OTTR lost about 5.20 percent of its market value, even though the Dow Jones Utility Average gained about 1.00 percent.<sup>80</sup> I recognize that is a limited observation, but still, it 9 10 appears OTTR meaningfully underperformed the utility sector around the time the SDPUC 11 issued its order. My view that the SDPUC's order was anomalously low relative to returns 12 authorized in other jurisdictions seems to be consistent with OTTR's price behavior.

#### EARLIER, YOU DISCUSSED THE EFFECT THE PUCT'S DELIBERATIONS IN 13 Q.

#### CENTERPOINT ENERGY HOUSTON ELECTRIC'S RATE CASE HAD ON 14

#### 15 **CENTERPOINT ENERGY'S STOCK PRICE. CONSIDERING BOTH THE** 16 OTTER TAIL POWER AND CENTERPOINT CASES, ARE THERE 17 **CONCLUSIONS TO BE DRAWN FROM THEM?**

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- 20

<sup>18</sup> A. Yes, there are. In the case of Otter Tail Power, it appears the market reacted adversely to an unfavorable regulatory decision, even though the operations affected by that decision represented only a small portion of the company's consolidated operations. The case of

<sup>78</sup> Public Utilities Commission of the State of South Dakota, In the Matter of the Application of Otter Tail Power Company Fore Authority to Increase its Electric Rates, Final Decision and Order; Notice of Entry, Docket No. EL18-021, May 30, 2019.

<sup>79</sup> Otter Tail Corporation, SEC Form 10-K for the fiscal year ended December 31, 2019, at 5.

<sup>80</sup> Source: Yahoo! Finance.
CenterPoint Energy is very clear. There, CenterPoint Energy Houston Electric represents
 about 45.00 percent of the company's combined net income.<sup>81</sup> In this proceeding, Liberty Empire's Missouri electric operations are significant, representing about 37.00 percent of
 Liberty Utilities' planned capital investment through 2024.<sup>82</sup>

5 In my view, if the Commission were to adopt Mr. Chari's recommendation, the 6 financial community's reaction would be adverse. An adverse reaction, whether 7 manifested negative credit actions, or simply the perception on the part of investors and 8 analysts that the regulatory environment has deteriorated, would impede the Company's 9 ability to raise capital at reasonable costs.

10 Because utilities such as Liberty-Empire invest in long-lived assets, the stability, 11 predictability, and supportiveness of the regulatory environment is a key concern to 12 investors. As noted in my response to Mr. Murray (below), Moody's applies 50.00 percent 13 weight to factors relating to the regulatory environment. Because equity investors do not 14 have the same level of protections given debt investors, regulatory supportiveness and 15 consistency is a significant concern. That concern is especially acute during periods of 16 heightened market instability when utility stocks, like all stocks, are susceptible to 17 devaluation. In the course of one week, from February 21, 2020 to February 28, 2020 the 18 Dow Jones Utility Average lost about 11.50 percent, the same loss experienced by the S&P 500.83 19

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21

To summarize, we have seen the financial community react negatively to adverse regulatory decisions. A consequence of those reactions is a diminished ability to compete

<sup>&</sup>lt;sup>81</sup> CenterPoint Energy, Inc. SEC Form 10- for the fiscal year ended December 31, 2019, at 61, 63.

<sup>&</sup>lt;sup>82</sup> Algonquin Power & Utilities Corporation, Investor Day Presentation, December 6, 2019, at A-1.

<sup>&</sup>lt;sup>83</sup> Source: S&P Capital IQ.

for capital, and an increase in the cost of capital, to the detriment of customers. If Mr.
 Chari's ROE recommendation, which is far removed from the returns available to other
 utilities were to be adopted, the eventual result would be an increase in the Company's cost
 of capital.

#### 5 III. <u>RESPONSE TO TESTIMONY OF OPC WITNESS MURRAY</u>

### Q. PLEASE BRIEFLY SUMMARIZE MR. MURRAY'S RECOMMENDATION 7 REGARDING THE COMPANY'S COST OF EQUITY.

A. Mr. Murray recommends an ROE of 9.25 percent, within a range of 8.50 percent to 9.25
percent, assuming a common equity ratio of 46.00 percent.<sup>84</sup> Mr. Murray estimates the
ROE using the Multi-Stage DCF model and the CAPM.<sup>85</sup> He also reviews his "rule of
thumb" method, and his Constant Growth DCF analysis, as checks on the reasonableness
of his ROE recommendation.<sup>86</sup>

13 A. Multi-Stage Discounted Cash Flow Model

#### 14 Q. PLEASE DESCRIBE MR. MURRAY'S MULTI-STAGE DCF MODEL.

A. Mr. Murray's Multi-Stage DCF analysis includes three stages, the first two of which include five-year horizons, while the third assumes cash flows in perpetuity. In the first stage, he relies on estimates of cash flow (where available), an estimated dividend payout ratio, and analysts' growth projections. The second stage assumes a linear transition from analysts' growth projections to a 2.85 percent growth rate and an industry payout ratio of 70.00 percent.<sup>87</sup> Since his final stage assumes his long-term growth rate will remain

<sup>&</sup>lt;sup>84</sup> Direct Testimony of David Murray, at 2.

<sup>&</sup>lt;sup>85</sup> *Ibid.*, at 19.

<sup>&</sup>lt;sup>86</sup> *Ibid*.

<sup>&</sup>lt;sup>87</sup> *Ibid.*, at 35, Schedule DM-D-6.

1		constant in perpetuity, it essentially is equivalent to the "Gordon Growth" form of the
2		Constant Growth DCF model. The "Gordon Growth" model represents the "terminal
3		value," or the expected price at which the stock may be sold at the end of the forecast
4		horizon. Mr. Murray's Multi-Stage DCF analysis produces average ROE estimates
5		between 6.47 percent to 7.22 percent based on the nine proxy groups he presents. <sup>88</sup>
6		Mr. Murray also presents a Multi-Stage DCF analysis based on the same approach
7		he used in prior rate cases. <sup>89</sup> That model also includes three stages but assumes a constant
8		payout ratio. The first stage relies on analyst growth rates, and the second stage assumes
9		a linear transition to a 3.00 percent third stage growth rate. <sup>90</sup>
10	Q.	HOW DID MR. MURRAY DEVELOP THE TERMINAL GROWTH ESTIMATES?
10 11	<b>Q.</b> A.	
	-	HOW DID MR. MURRAY DEVELOP THE TERMINAL GROWTH ESTIMATES?
11	-	HOW DID MR. MURRAY DEVELOP THE TERMINAL GROWTH ESTIMATES? Mr. Murray's Schedule DM-D-6 estimates his 2.85 percent terminal growth rate based on
11 12	-	<b>HOW DID MR. MURRAY DEVELOP THE TERMINAL GROWTH ESTIMATES?</b> Mr. Murray's Schedule DM-D-6 estimates his 2.85 percent terminal growth rate based on the sustainable growth rate, calculated as the product of an assumed ROE of 9.50 percent
11 12 13	-	<b>HOW DID MR. MURRAY DEVELOP THE TERMINAL GROWTH ESTIMATES?</b> Mr. Murray's Schedule DM-D-6 estimates his 2.85 percent terminal growth rate based on the sustainable growth rate, calculated as the product of an assumed ROE of 9.50 percent and a 30.00 retention ratio. <sup>91</sup>
11 12 13 14	-	HOW DID MR. MURRAY DEVELOP THE TERMINAL GROWTH ESTIMATES? Mr. Murray's Schedule DM-D-6 estimates his 2.85 percent terminal growth rate based on the sustainable growth rate, calculated as the product of an assumed ROE of 9.50 percent and a 30.00 retention ratio. <sup>91</sup> Mr. Murray does not explain how he determined 3.00 percent is an appropriate

<sup>88</sup> Ibid., Schedule DM-D-6.

<sup>89</sup> *Ibid.*, at 35.

<sup>90</sup> Ibid., Schedule DM-D-6.

<sup>91</sup> 

*Ibid.*, at 35. *Ibid.*, Schedule DM-D-6. 92

<sup>93</sup> *Ibid.*, at 35.

# 1Q.DOES MR. MURRAY PROVIDE SUPPORT FOR A SUSTAINABLE GROWTH2RATE OF APPROXIMATELY 2.00 PERCENT TO 3.00 PERCENT?

A. Mr. Murray refers to analyses of historical industry growth based on the Moody's electric
 utility index, and historical growth for a sample group of electric utility companies based
 on Value Line data, and equity analyst reports.<sup>94</sup>

### 6 Q. DO YOU HAVE ANY CONCERNS WITH MR. MURRAY'S ANALYSES?

A. Yes, I do. First, Mr. Murray's analyses of historical growth do not include data from the
past 20 years. His analysis of growth rates associated with the Moody's electric utility
index is based on the period 1947 through 2000, and his analysis of growth rates associated
with Value Line electric utilities is based on the period 1968 through 1999.<sup>95</sup> That is, Mr.
Murray's approach assumes electric utility growth rates over the subsequent 20-year period
are not relevant to a sustainable growth rate, which he assumes will be applied in
perpetuity, starting in 2029.

Further, to calculate the long-term historical growth rate based on the Moody's electric utility index, Mr. Murray reviews the geometric mean of dividends, earnings, and book value. As discussed in my response to Mr. Chari, the geometric mean is a backwardlooking calculation that equates a beginning value to an ending value over a specific period. Because the geometric mean does not consider uncertainty, as the arithmetic mean does, it is inappropriate for use in estimating a long-term sustainable growth.

20 The geometric mean also can be sensitive to the beginning and ending year chosen.

21

For example, based on the data provided by Mr. Murray (see Chart 6, below), in 1999 the

<sup>&</sup>lt;sup>94</sup> *Ibid.*, at 32.

<sup>&</sup>lt;sup>95</sup> See, Mr. Murray's response to Liberty-Empire's First Data Request 1.a and 2.a.

book value of the Moody's electric utility index increased approximately 28.00 percent in
1999 and then decreased almost 41.00 percent in 2000. Mr. Murray's calculated geometric
mean growth rate of 2.57 percent was based on the ending year 2000.<sup>96</sup> Had his analysis
ended only one year early in 1999, the geometric mean growth rate would have been 3.66
percent, 109 basis points higher.

6

7

Chart 6: Moody's Electric Utility Index Book Value 1947-2000<sup>97</sup>



8 Similarly, had Mr. Murray considered an ending year of 1999, instead of 2000, his 9 calculated growth rate in earnings would be 3.02 percent instead of 1.66 percent. Mr. 10 Murray also reports the average of the rolling ten-year average dividends, earnings, and 11 book value compound growth rates to be 3.74 percent, 3.18 percent, and 3.63 percent, 12 respectively. Each result is above Mr. Murray's assumed range of sustainable growth rates.

See, attachment "2.b. Moody's Utility Index Data.xls" to Mr. Murray's response to Liberty-Empire First Data Request 2.b.

<sup>&</sup>lt;sup>97</sup> Source: Attachment "1.a Moody's Utility Index Data.xls" to Mr. Murray's response to Liberty-Empire's First Data Request 1.a.

Given the arbitrary nature of the analysis and the period chosen by Mr. Murray, his
 review of calculated historical growth rates based on Moody's Utility Index data does not
 provide support for his assertion that the long-term sustainable growth rate is in the 2.00
 percent to 3.00 percent range.

### 5 Q. DO YOU HAVE ANY CONCERNS WITH MR. MURRAY'S ANALYSIS OF 6 HISTORICAL VALUE LINE GROWTH RATES?

A. Yes, Mr. Murray's analysis of historical growth rates from Value Line is similarly
outdated; of the ten companies in his historical analysis, only two remain as publicly traded
entities. In addition, Mr. Murray calculates the average of the rolling ten-year average
DPS, EPS, and BVPS, reporting those results as 3.99 percent, 3.62 percent, and 3.18
percent.<sup>98</sup> Although I do not agree those are reasonable estimates of long-term growth, it
is unclear how they support Mr. Murray's assertion that the long-term growth rate is
between 2.00 percent and 3.00 percent.

### 14 Q. DO YOU AGREE WITH MR. MURRAY'S ESTIMATE OF LONG-TERM 15 GROWTH?

16 A. No, I do not. The terminal growth rate is intended to reflect expected growth in perpetuity.

By assuming a long-term growth rate in the range of 2.85 to 3.00 percent, Mr. Murray has assumed the "sustainable growth rate" is lower than all but three of the five-year consensus

- 19 growth rates for the 39 companies in his broad proxy group.
- 20 Further, although I recognize the *Blue Chip Financial Forecast* long-range 21 consensus estimates end in 2030, based on those estimates the Consumer Price Index is

See, Mr. Murray's response to Liberty-Missouri's First Data Request 2.a.

expected to be between 2.10 and 2.20 percent over the next ten years.<sup>99</sup> That is, a terminal 1 2 growth rate of 3.00 percent is less than 100 basis points above the expected rate of inflation.<sup>100</sup> Under that assumption, utility stocks would provide a dividend yield and a 3 4 measure of protection against inflation, but little more than that. At the same time, 5 investors would remain exposed to the risk of capital losses associated with equity 6 ownership. Because other investments, such as Treasury Inflation Protected Securities 7 provide inflation protection and carry a minimal risk of capital loss (if held to maturity), 8 Mr. Murray's position assumes that investors would require the difference in yields as 9 compensation for the additional risk of capital loss, as well as minimal additional growth, 10 an unreasonable and unsupported assumption.

11 If Mr. Murray is correct that expected long-term growth is only somewhat greater 12 than expected inflation, electric utilities would offer investors little prospects for real 13 capital appreciation or dividend growth. Under that scenario, the industry would not be 14 able to attract equity capital at reasonable terms, and would not be able to generate the cash 15 flow needed to maintain appropriate credit metrics, or the liquidity needed to fund day-today operations. Utilities then would fund increasing amounts of capital investments with 16 17 long-term debt. That scenario suggests a downward spiral in which leverage increases, 18 creditworthiness decreases, and access to both debt and equity becomes increasingly 19 constrained. In the long run, utilities would not be able to fund the investments needed to 20 provide safe and reliable service in an efficient and cost-effective manner.

<sup>&</sup>lt;sup>99</sup> Source: *Blue Chip Financial Forecast*, Vol. 38, No. 12, December 1, 2019, at 14.

<sup>&</sup>lt;sup>100</sup> Or only 50 basis points based on Mr. Murray's stated 2.70 percent terminal growth rate.

In short, Mr. Murray has not meaningfully supported his assumption that investors
 would expect significantly lower growth rates in perpetuity, despite that assumption's
 significant effect on the model's result.

4

5

### Q. DO YOU HAVE ANY OTHER CONCERNS WITH MR. MURRAY'S ASSUMED TERMINAL GROWTH RATE?

A. Yes, I disagree with Mr. Murray's assumption that the historical payout ratios have been
7 70.00 percent. As shown in Schedule RBH-R10, since 1990 utilities have averaged a
8 payout ratio closer to 65.00 percent.<sup>101</sup> Had Mr. Murray assumed a 35.00 percent retention
9 ratio,<sup>102</sup> the terminal growth rate would increase from 2.85 percent to 3.33 percent.
10 Although I continue to believe 3.33 percent is unreasonably low, that change illustrates
11 how Mr. Murray's subjective assumptions may affect his analysis.

### 12 Q. DO YOU AGREE WITH MR. MURRAY'S SPECIFICATION OF THE 13 SUSTAINABLE GROWTH RATE?

A. No, I do not. The basic form of the model assumes growth is the product of (1) expected
earnings ("R"), and (2) the extent to which it retains earnings to invest in the enterprise (the
"retention ratio", or "B"). Mr. Murray relies on that basic form, which defines growth
solely as a function of internally generated funds.

#### 18

19

Although I do not believe it is appropriate to use "sustainable growth" as a measure of terminal growth, the more complete form should be used. That structure, sometimes

 <sup>&</sup>lt;sup>101</sup> As noted in his response to Liberty-Empire First Data Request 3.a, Mr. Murray stated that in determining the electric utility payout ratios are approximately 70.00 percent he reviewed historical payout ratios. However, his analysis covered the period 1968 through 1999, whereas my analysis included the period 1990 through 2018. Mr. Murray also calculated the payout ratio for the Moody's electric utility index over the period 1947 through 1999. Again, a period that ended approximately 20 years ago.
 <sup>102</sup> 0.35 = 1.00 - 0.65.

referred to as "BR + SV" form, models growth from internally generated funds (i.e., the
 "BR" term) and issuances of equity (i.e., the "SV" term). As noted above, the "BR" term
 represents growth from retained earnings. The "SV" term is represented as:

4 
$$\left(\frac{m}{b}-1\right)x$$
 Common shares growth rate [3]

5 where:

$$\left(\frac{m}{b}\right) =$$
 the Market – to – Book ratio.

7 The "SV" term models an additional element of growth resulting from the issuance of
8 shares at a price above book value.

9 10

Q.

6

### GROWTH RATE IN A MULTI-STAGE DCF MODEL?

ARE THERE ANY OTHER METHODS FOR ESTIMATING THE TERMINAL

11 Yes, there are. For example, a brief survey of finance texts demonstrates that the use of A. 12 long-term GDP growth is a reasonable estimate for the terminal period. For example, Dr. 13 Roger Morin notes that "[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 14 rate of the aggregate economy."<sup>103</sup> Similarly, Morningstar describes a Multi-Stage DCF 15 16 model in which the terminal growth rate is based on the long-term historical growth in real GDP and the rate of inflation.<sup>104</sup> As shown in Schedule RBH-R11, had Mr. Murray relied 17 18 on the method described by Morningstar, the long-term growth rate would be 5.09 percent. 19 As shown in Schedule RBH-R12, making that change increases Mr. Murray's Multi-Stage 20 DCF results by approximately 180 basis points. Although still unreasonably low (all 21 results, except the average of all companies in Mr. Murray's universe of companies and

<sup>&</sup>lt;sup>103</sup> Roger A. Morin, <u>New Regulatory Finance</u>, at 308 (2006).

<sup>&</sup>lt;sup>104</sup> See, Morningstar, Inc., <u>Ibbotson Stocks</u>, Bonds, Bills and Inflation 2013 Valuation Yearbook, at 52.

1 Mr. Murray's group "Average Regulated EEI", are below the lowest authorized ROE for a 2 vertically integrated electric utility since at least 1980), they are significantly higher than 3 Mr. Murray's unreasonably low results. The point simply is that the terminal growth rate 4 has a significant effect on the model's results, and Mr. Murray's assumption tends to 5 produce unreasonably low estimates of the Company's Cost of Equity.

### 6 Q. HAVE YOU ASSESSED THE REASONABLENESS OF MR. MURRAY'S 7 TERMINAL GROWTH ESTIMATE?

A. Yes, I have. As Mr. Murray noted in Docket No. ER-2014-0258, "[c]ost of equity estimates
using multi-stage DCF methodologies are extremely sensitive to the assumed perpetual
growth rate."<sup>105</sup> That sensitivity is due to the fact that the long-term growth rate used in
the DCF model extends indefinitely into the future. It is an important parameter,
accounting for approximately 73.00 percent of the model's results.<sup>106</sup>

Because they are perpetual, terminal growth rates that substantially deviate from the long-term historical average should be viewed with considerable caution. That is the case with Mr. Murray's estimates. As a point of reference, the long-term compound average GDP growth rate has been 6.09 percent, approximately 310 to 325 basis points above Mr. Murray's estimate.<sup>107</sup>

18 To assess the terminal growth rates used in Mr. Murray's Multi-Stage DCF 19 analyses, I calculated the average five-year annual growth rates from 1929 to 2019. I then 20 arranged that data in histograms to provide a perspective of how frequently various levels 21 of growth have occurred. As Chart 7 demonstrates, average annual growth as low as 2.85

<sup>105</sup> Staff Revenue Requirement Cost of Service Report, Docket No. ER-2014-0258, at 33 (original emphasis).

<sup>106</sup> Schedule RBH-R13.

<sup>&</sup>lt;sup>107</sup> Source: Bureau of Economic Analysis.

percent and 3.00 percent have been observed very infrequently. In fact, average annual
 growth *exceeded* 3.00 percent in 79 of 86 five-year periods.

3





4

### 5 Q. WHAT ARE YOUR CONCLUSIONS RELATED TO MR. MURRAY'S MULTI-

6

### STAGE DCF MODEL?

A. Mr. Murray's extremely low estimate of the terminal growth rate is inconsistent with
market data and results in estimates that are unreasonably low. As such, Mr. Murray's
application of the Multi-Stage DCF model should be given no weight in estimating the
Company's ROE.

11

### B. Capital Asset Pricing Model

### 12 Q. PLEASE BRIEFLY DESCRIBE MR. MURRAY'S CAPM ANALYSES.

- 13 A. Mr. Murray presents three CAPM analyses based on various estimates of the risk-free rate
- 14 and MRP. His first CAPM analysis assumes a risk-free rate of 2.10 percent, based on a

20-year Treasury yield, average calculated five-year Beta coefficients of 0.542 to 0.577
based on five proxy groups, and an historical MRP estimate of 6.00 percent.<sup>109</sup> Based on
those inputs, Mr. Murray's CAPM calculations produce Cost of Equity estimates of 5.35
percent to 5.56 percent.<sup>110</sup> His second CAPM analysis relies on the same approach, but he
relies on the 30-year Treasury yield (instead of the 20-year Treasury yield) of 2.26
percent.<sup>111</sup> Those results range from 5.51 percent to 5.72 percent.<sup>112</sup>

Mr. Murray's third approach assumes the same Beta coefficients, but relies on the
normalized risk-free rate (3.00 percent) and MRP (5.50 percent) from Duff & Phelps.<sup>113</sup>
Those results range from 5.98 percent to 6.17 percent.<sup>114</sup>

#### 10 Q. WHAT IS YOUR POSITION AS TO THE APPROPRIATE RISK-FREE RATE?

I disagree with Mr. Murray's use of the 20-year Treasury yield and continue to support use 11 A. 12 of the 30-year Treasury yield. As stated in my Direct Testimony, utility assets represent long-term investments.<sup>115</sup> Therefore, the maturity of the risk-free security should 13 14 approximate the life, or duration, of the underlying investment. Moreover, equity ownership represents a perpetual claim on the subject company's cash flows.<sup>116</sup> Because 15 16 the 30-year Treasury bond is the longest duration risk-free security, it most closely matches 17 the horizon of equity and, therefore, is the appropriate security for the CAPM. As noted 18 by Morningstar:

- 19
- 20

The traditional thinking regarding the time horizon of the chosen Treasury security is that it should match the time horizon of whatever is being valued.

<sup>110</sup> *Ibid*.

<sup>&</sup>lt;sup>109</sup> Direct Testimony of David Murray, Schedule DM-D-7.

<sup>&</sup>lt;sup>111</sup> *Ibid.*, Schedule DM-D-8.

<sup>&</sup>lt;sup>112</sup> *Ibid.* 

<sup>&</sup>lt;sup>113</sup> *Ibid.*, Schedule DM-D-9.

<sup>&</sup>lt;sup>114</sup> *Ibid*.

<sup>&</sup>lt;sup>115</sup> Direct Testimony of Robert B. Hevert, at 55.

<sup>&</sup>lt;sup>116</sup> The Constant Growth DCF model, for example, reflects the perpetual nature of equity investments.

1 2 3	When valuing a business that is being treated as a going concern, the appropriate Treasury yield should be that of a long-term Treasury bond. Note that the horizon is a function of the investment, not the investor. If an
3 4	investor plans to hold stock in a company for only five years, the yield on a
4 5	
	five-year Treasury note would not be appropriate since the company will
6	continue to exist beyond those five years. <sup>117</sup>
7	The Chartered Financial Analyst program also notes the risk-free rate used in the
8	CAPM should match the timing of the expected asset's cash flows:
9	A risk-free asset is defined here as an asset that has no default risk. A
10	common proxy for the risk-free rate is the yield on a default-free
11	government debt instrument. In general, the selection of the appropriate
12	risk-free rate should be guided by the duration of projected cash flows. If
13	we are evaluating a project with an estimated useful life of 10 years, we may
14	want to use the rate on the 10-year Treasury bond. <sup>118</sup>
15	Pratt and Grabowski likewise recommend matching the horizon of the investment
16	with the maturity of the risk-free security: "In theory, when determining the risk-free rate
17	and the matching ERP [Equity Risk Premium] you should be matching the risk-free
18	security and the ERP with the period in which the investment cash flows are expected." <sup>119</sup>
19	If interest rate risk is a concern, the shortest-term Treasury bill should be used as
20	the risk-free rate, but Mr. Murray rightly has not recommended that approach. The
21	appropriate approach is to recognize that the term of the risk-free security should match
22	the life of the asset being financed which, in this case, is the common equity of electric
23	utility companies. Because common equity is perpetual, the appropriate security is the
24	longest-lived (i.e., 30-year) Treasury bond.

<sup>&</sup>lt;sup>117</sup> Morningstar, Inc., <u>2013 Ibbotson Stocks</u>, Bonds, Bills and Inflation Valuation Yearbook, at 44.

<sup>&</sup>lt;sup>118</sup> 2011 CFA Curriculum Level I, Volume 4 at 52.

<sup>&</sup>lt;sup>119</sup> Shannon Pratt and Roger Grabowski, <u>Cost of Capital: Applications and Examples</u>, 3rd Ed. (Hoboken, NJ: John Wiley & Sons, Inc., 2008) at 92. "ERP" is the Equity Risk Premium. [clarification added]

1

#### Q. HOW DID MR. MURRAY CALCULATE HIS MRP ESTIMATES?

2 A. Mr. Murray reviews MRPs from Duff & Phelps' 2019 Valuation Handbook, Bank of 3 America Merrill lynch, and a survey from the Philadelphia Federal Reserve, concluding that a 6.00 percent MRP is reasonable.<sup>120</sup> As noted above, Mr. Murray relied on estimates 4 5 of the MRP from Duff & Phelps.

#### DO YOU AGREE WITH MR. MURRAY'S ESTIMATE OF THE MRP? 6 Q.

7 A. No, I do not. As to Mr. Murray's use of historical data, as discussed in my response to Mr. 8 Chari, the MRP is meant to be forward-looking. Simply relying on the historical MRP 9 may produce results that are inconsistent with investor sentiment and current conditions in 10 capital markets.

11 Regarding Mr. Murray's position that expected market returns "are as low as in the 5% to 6% range,"<sup>121</sup> as reported by the Federal Bank of Philadelphia, looking to the Federal 12 Bank of Philadelphia's First Quarter 2019 survey, only 16 of 38 participants responded to 13 the question regarding the expected return for the S&P 500 over the next ten years.<sup>122</sup> 14

Further, Mr. Murray's estimate of the MRP (i.e., 6.00 percent) implies a market 15 16 return of 8.26 percent (assuming Mr. Murray's 2.26 percent risk-free rate). That return, 17 which is for the overall market, is lower than Liberty-Empire's currently authorized return, 18 my recommended return and the recommended returns of the Opposing ROE Witnesses, 19 and the lowest authorized return for a vertically integrated electric utility since at least 20 1980. Because utilities generally are viewed as less risky than the market, I do not agree 21 that an expected market return of 8.26 percent is reasonable.

<sup>120</sup> Direct Testimony of David Murray, at 38-39.

<sup>121</sup> *Ibid.*, at 38.

<sup>122</sup> See, Federal Reserve Bank of Philadelphia, Survey of Professional Forecasters, First Quarter of 2019 at 19.

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

A. As a practical matter, estimates as low as 5.35 percent have little, if any, practical meaning
for the purpose of determining the Company's ROE. Mr. Murray's view that his 5.35
percent to 6.17 percent CAPM results have any analytical meaning is misplaced on its face.
Equally important, Mr. Murray's position demonstrates the difficulty in applying financial
models without giving due consideration to the reasonableness of the inputs, assumptions,
and results.

9

#### C. "Rule of Thumb" Calculation

### 10 Q. PLEASE BRIEFLY SUMMARIZE MR. MURRAY'S "RULE OF THUMB" 11 CALCULATION.

A. Mr. Murray's calculation adds "a 3% risk premium to recent average BBB rated and 'A' rated utility bond yields of 3.4% to 3.75%."<sup>123</sup> Based on that approach, Mr. Murray
 presents an ROE estimate of 6.40 percent to 6.75 percent.<sup>124</sup>

### 15 Q. ARE MR. MURRAY'S CONCLUSIONS VALID?

A. No, his "rule of thumb" approach ignores the finding that the Equity Risk Premium is
 inversely related to interest rates. That relationship, which was demonstrated with respect
 to long-term Treasury yields in my Direct Testimony,<sup>125</sup> and is consistent with published

<sup>&</sup>lt;sup>123</sup> Direct Testimony of David Murray, at 40.

<sup>&</sup>lt;sup>124</sup> *Ibid*.

<sup>&</sup>lt;sup>125</sup> Direct Testimony of Robert B. Hevert at 63.

research,<sup>126</sup> also applies to utility bond yields. As Chart 8 (below), demonstrates, there is
 a significant, negative relationship between the Moody's Baa Utility Bond Index yield and
 the Equity Risk Premium (defined by reference to authorized ROEs).



Chart 8: Equity Risk Premium vs. Moody's Utility Baa Index Yield<sup>127</sup>



5

Applying the 30-day average Moody's utility bond yield of 3.64 percent to the
regression equation provided in Chart 8 produces a Risk Premium estimate of
approximately 5.92 percent, and an ROE of 9.56 percent, well above Mr. Murray's "rule
of thumb" estimate.

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

<sup>&</sup>lt;sup>127</sup> Source: S&P Global Market Intelligence.

1

#### D. Constant Growth Discounted Cash Flow Model

### 2 Q. PLEASE BRIEFLY SUMMARIZE MR. MURRAY'S CONSTANT GROWTH DCF 3 MODEL.

A. Mr. Murray performs his generic Constant Growth DCF analysis based on a dividend yield
of 3.00 percent, and adds to that a 3.00 percent to 4.00 percent growth rate, which he bases
on "long-term industry averages and economic logic."<sup>128</sup>

## 7 Q. DO YOU HAVE ANY CONCERNS WITH MR. MURRAY'S CONSTANT 8 GROWTH DISCOUNTED CASH FLOW MODEL?

9 A. Yes, I do. Mr. Murray does not perform his Constant Growth DCF analysis on a proxy 10 group, as he does his Multi-Stage DCF and CAPM analyses. Rather, he applies the model 11 based on what he believes to be utility industry dividend yields and growth rates. As noted 12 in my Direct Testimony, the use of a proxy group is consistent with the economic principle of "opportunity costs", which is fundamental to the Cost of Equity.<sup>129</sup> Further, because 13 14 Mr. Murray's Constant Growth DCF analysis is entirely subjective, it is impossible to 15 recreate his analysis or to determine how new data may change the results. Although he 16 recognized the importance of relying on a proxy group in his Multi-Stage DCF and CAPM 17 analyses, Mr. Murray did not do so in his Constant Growth DCF analysis.

18 Moreover, Mr. Murray's Constant Growth DCF analysis does not reflect company-19 specific dividend yields or growth factors - it relies on what he considers reasonable 20 dividend yields and growth rates for the industry in general. That is, it does not consider 21 the risks of the Company or similar companies (i.e., proxy companies).

<sup>&</sup>lt;sup>128</sup> Direct Testimony of David Murray, at 40.

<sup>&</sup>lt;sup>129</sup> Direct Testimony of Robert B. Hevert, at

### Q. WHAT ARE YOUR CONCLUSIONS REGARDING MR. MURRAY'S CONSTANT GROWTH DCF MODEL?

A. Because Mr. Murray's Constant Growth DCF model is based solely on his view of what a
reasonable dividend yield and growth rate are for the utility industry in general, and does
not consider company-specific factors, I do not believe the analysis has any meaningful
value, and believe it should be disregarded.

### 7 E. Financial Integrity and ROE Determinations

8 Q. DID MR. MURRAY QUANTIFY THE POTENTIAL EFFECT OF HIS ROE

### 9 **RECOMMENDATION ON LIBERTY-EMPIRE'S FINANCIAL INTEGRITY?**

A. Mr. Murray develops a *pro forma* analysis in which he considers Liberty-Empire's Funds
 from Operations ("FFO") to debt ratio assuming a 46.00 percent common equity ratio
 together with a 9.25 percent ROE.<sup>130</sup> Mr. Murray states those assumptions support an S&P
 credit rating of BBB for Liberty-Empire.<sup>131</sup>

# 14 Q. DO YOU HAVE ANY GENERAL OBSERVATIONS REGARDING MR. 15 MURRAY'S APPROACH TO ASSESSING HIS RECOMMENDATION BY 16 REFERENCE TO *PRO FORMA* CREDIT METRICS?

A. Yes, I do. It is helpful to review rating agencies' perspectives regarding their use of credit
 metrics in rating determinations. On November 30, 2007, S&P released a statement
 announcing that electric, gas, and water utility ratings would be "categorized under the
 business/financial risk matrix used by the Corporate Ratings group".<sup>132</sup> S&P also provided

<sup>&</sup>lt;sup>130</sup> Direct Testimony of David Murray, at 16-17.

<sup>&</sup>lt;sup>131</sup> *Ibid*.

<sup>&</sup>lt;sup>132</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.

1	matrices of business and financial risk, based on "Financial Risk Indicative Ratios":
2	FFO/Debt; FFO/Interest; and Total Debt/Capital. In that announcement, S&P noted:
3	even after we assign a company business risk and financial risk, the
4	committee does not arrive by rote at a rating based on the matrix. The
5	matrix is a guide it is not intended to convey precision in the ratings
6	process or reduce the decision to plotting intersections on a graph.
7	Many small positives and negatives that affect credit quality can lead a
8	committee to a different conclusion than what is indicated in the matrix.
9	On May 27, 2009, S&P once again expanded its matrix, and noted the relative
10	significance of credit metrics to the rating process:
11	The rating matrix indicative outcomes are what we typically observe
12	but are not meant to be precise indications of guarantees of future rating
13	opinions. Positive and negative nuances in our analysis may lead to a
14	notch higher or lower than the outcomes indicated in the various cells
15	of the matrix Still, it is essential to realize that the financial
16	benchmarks are guidelines, neither gospel nor guarantees
17	Moreover, our assessment of financial risk is not as simplistic as looking
18	at a few ratios. <sup>133</sup>
19	Later, on September 18, 2012, S&P further expanded its matrix, confirming "[s]till, it is
20	essential to realize that the financial benchmarks are guidelines, neither gospel nor
21	guarantees." <sup>134</sup>
22	It is clear, therefore, that credit metrics are not relied on in a rote fashion, nor are
23	individual metrics reviewed in isolation, to the exclusion of other information. Rather,
24	those reviews encompass broad assessments of business and financial risk, including
25	factors that are often based on qualitative, not solely quantitative, discussions with
26	management.

<sup>133</sup> Standard & Poor's Ratings Services, Criteria Methodology: Business Risk/Financial Risk Matrix Expanded, May 27, 2009. Standard & Poor's Ratings Services, Methodology: Business Risk/Financial Risk Matrix Expanded,

<sup>134</sup> September 18, 2012.

1	Financial metrics, such as FFO/debt, are derived from financial statements,
2	including the Income Statement, Balance Sheet and Cash Flow Statements. For regulated
3	utilities, those ratios are influenced by the overall rate of return allowed by regulatory
4	commissions, which is reflected in the revenue requirement. The metrics therefore are a
5	result of the regulatory process, <i>i.e.</i> , the overall rate of return, which in turn is a function
6	of the capital structure (debt and equity ratios), debt cost rate, and the allowed ROE. It is
7	not the other way around. To set a component of the overall rate of return, such as the
8	equity ratio or ROE, based on pro forma credit metrics is a circular exercise and one that,
9	in my experience, is atypical of the regulatory process.

## 10 Q. ARE CREDIT RATINGS DETERMINED LARGELY BY THE FFO/DEBT 11 METRIC?

A. No, they are not. S&P's ratings process considers a range of both quantitative and qualitative data. As Chart 9 (below) demonstrates, Cash Flow/Leverage considerations are
but one element of a broad set of criteria. The FFO/debt metric therefore represent only a
portion of the factors considered by S&P. Again, a *pro forma* assessment of certain ratios
does not address the complex assessments considered by either debt or equity investors.



#### Chart 9: Standard & Poor's Corporate Criteria Framework<sup>135</sup>

2



<sup>&</sup>lt;sup>135</sup> Standard & Poor's Ratings Services, *Corporate Methodology*, November 19, 2013, at 5.

<sup>&</sup>lt;sup>136</sup> Standard & Poor's Ratings Services, *How Regulatory Advantage Scores Can Affect Ratings On Regulated Utilities*, April 23, 2015 at 2.

## Q. DOES MOODY'S CONSIDER SIMILAR FACTORS IN ITS RATINGS DETERMINATIONS?

A. Yes, it does. Moody's also considers a broad range of factors, many of which are
qualitative in nature. Of the four general categories considered, the nature of regulation
(including the Regulatory Framework, and the Ability to Recover Costs) accounts for about
one-half of the weight Moody's applies in its rating determinations. The financial metric
calculated in Mr. Murray's *pro forma* analysis, on the other hand, account for 15.00 percent
of the weight applied (*see* Chart 10, below).

9

Broad Rating Factors	Broad Rating Factor Weighting	Rating Sub-Factor	Sub-Factor Weighting
Regulatory Framework	25%	Legislative and Judicial Underpinnings of the Regulatory Framework	12.5%
		Consistency and Predictability of Regulation	12.5%
Ability to Recover Costs	25%	Timeliness of Recovery of Operating and Capital Costs	12.5%
and Earn Returns		Sufficiency of Rates and Returns	12.5%
Diversification	10%	Market Position	5%*
		Generation and Fuel Diversity	5%**
Financial Strength, Key	40%		
Financial Metrics		CFO pre-WC + Interest/ Interest	7.5%
		CFO pre-WC / Debt	15.0%
		CFO pre-WC – Dividends / Debt	10.0%
		Debt/Capitalization	7.5%
Total	100%		100%
Notching Adjustment			
Holding Company Struct	tural Subordination		0 to -3

Moody's ratings process is not mechanical and does not rely on pro forma

#### Chart 10: Moody's Rating Factors and Associated Weights<sup>137</sup>

10

11

12 assessments of financial metrics. As Moody's explains, "...the four rating factors and the 13 notching factor in the grid do not constitute an exhaustive treatment of all of the

Moody's Investors Service, Rating Methodology, Regulated Electric and Gas Utilities, June 23, 2017, at 4.

1		considerations that are important for ratings of companies in the regulated electric and gas
2		utility sector." <sup>138</sup> More generally, Moody's notes that its rating grid:
3		provides summarized guidance for the factors that are generally most
4		important in assigning ratings to companies in the regulated electric and
5		gas utility industry. However, the grid is a summary that does not
6		include every rating consideration. The weights shown for each factor
7		in the grid represent an approximation of their importance for rating
8		decisions but actual importance may vary substantially. In addition, the
9		grid in this document uses historical results while ratings are based on
10		our forward-looking expectations. As a result, the grid-indicated rating
11		is not expected to match the actual rating of each company. <sup>139</sup>
12		Both Moody's and S&P therefore consider a broad range of factors, of which pro forma
13		metrics are only one. In the case of both agencies, the assessment of credit metrics is
14		forward-looking, and consider factors not reflected in Mr. Murray's analysis.
15	Q.	DO YOU AGREE WITH MR. MURRAY THAT HIS ROE RECOMMENDATION
15 16	Q.	DO YOU AGREE WITH MR. MURRAY THAT HIS ROE RECOMMENDATION IS HIGHER THAN LIBERTY-EMPIRE'S ACTUAL COST OF EQUITY, AND
	Q.	
16	Q.	IS HIGHER THAN LIBERTY-EMPIRE'S ACTUAL COST OF EQUITY, AND
16 17	<b>Q.</b> A.	IS HIGHER THAN LIBERTY-EMPIRE'S ACTUAL COST OF EQUITY, AND THAT IT IS COMMON PRACTICE FOR UTILITY COMMISSIONS TO SET THE
16 17 18	-	IS HIGHER THAN LIBERTY-EMPIRE'S ACTUAL COST OF EQUITY, AND THAT IT IS COMMON PRACTICE FOR UTILITY COMMISSIONS TO SET THE AUTHORIZED ROE ABOVE THE ACTUAL COST OF EQUITY? <sup>140</sup>
16 17 18 19	-	IS HIGHER THAN LIBERTY-EMPIRE'S ACTUAL COST OF EQUITY, AND THAT IT IS COMMON PRACTICE FOR UTILITY COMMISSIONS TO SET THE AUTHORIZED ROE ABOVE THE ACTUAL COST OF EQUITY? <sup>140</sup> No, I do not. Mr. Murray argues his analysis suggests an ROE of 6.00 percent, but his
16 17 18 19 20	-	IS HIGHER THAN LIBERTY-EMPIRE'S ACTUAL COST OF EQUITY, AND THAT IT IS COMMON PRACTICE FOR UTILITY COMMISSIONS TO SET THE AUTHORIZED ROE ABOVE THE ACTUAL COST OF EQUITY? <sup>140</sup> No, I do not. Mr. Murray argues his analysis suggests an ROE of 6.00 percent, but his recommendation considers capital market conditions, investor expectations, and recently
16 17 18 19 20 21	-	IS HIGHER THAN LIBERTY-EMPIRE'S ACTUAL COST OF EQUITY, AND THAT IT IS COMMON PRACTICE FOR UTILITY COMMISSIONS TO SET THE AUTHORIZED ROE ABOVE THE ACTUAL COST OF EQUITY? <sup>140</sup> No, I do not. Mr. Murray argues his analysis suggests an ROE of 6.00 percent, but his recommendation considers capital market conditions, investor expectations, and recently authorized returns. He ultimately recommends an ROE of 9.25 percent. <sup>141</sup> Mr. Murray's

<sup>138</sup> *Ibid.* at 24.

<sup>139</sup> *Ibid.*, at 1.

Direct Testimony of David Murray, at 2. *Ibid.*, at 2, 4. *Ibid.*, at 17. 140

<sup>141</sup> 

<sup>142</sup> 

1		proceeding. The Hope and Bluefield standards require the authorized ROE to be
2		comparable to the returns available from companies with similar business and financial
3		risks. To that point, the Commission has determined that authorized ROEs in other
4		jurisdictions are a relevant benchmark in developing a zone of reasonableness against
5		which it may test the authorized ROE. <sup>143</sup>
6		F. Capital Structure
7	Q.	PLEASE BRIEFLY SUMMARIZE MR. MURRAY'S PROPOSED CAPITAL
8		STRUCTURE.
9	A.	Mr. Murray recommends a capital structure including 46.00 percent common equity and
10		54.00 percent long-term debt. <sup>144</sup> Mr. Murray's recommended capital structure considers
11		the capital structure of Liberty-Empire's immediate parent company and the "amount of
12		leverage APUC targets as reasonable for the lower business risk associated with LUCo's
13		regulated utilities." <sup>145</sup>
14	Q.	WHAT FACTORS DO UTILITIES GENERALLY CONSIDER IN DEVELOPING

15

### THEIR TARGET CAPITAL STRUCTURES?

A. Capital structure management is dynamic and complex, looking to satisfy multiple
 objectives subject to multiple constraints. Utilities must focus on the nature of the assets
 providing utility service, and recognize the constraints brought about by the obligation to
 serve. It therefore is important to understand utility financing practice, including the
 principles and constraints that drive financing decisions, and how that practice is reflected
 in the cost of capital.

<sup>&</sup>lt;sup>143</sup> *See, for example*, Report and Order, Case No. ER-2011-0028 at 67.

<sup>&</sup>lt;sup>144</sup> Direct Testimony of David Murray, at 5.

<sup>&</sup>lt;sup>145</sup> *Ibid*.

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1 In many ways, the nature of regulation determines the nature of utility assets, and 2 how they are financed. In exchange for the obligation to serve, equity investors expect 3 utilities to have the opportunity to earn a fair return on prudent investments. As the 4 regulated rate of return granted to utilities is below that expected from unregulated 5 enterprises, the nature of regulation is such that the variation in returns (that is, the expected 6 risk) for utilities is expected to be less than those of unregulated companies. It is the nature 7 of regulation that enables utilities to finance large, essentially irreversible, investments that 8 are recovered over decades. Financing practice therefore must address the nature of 9 investments made under the regulatory compact.

10 It also is important to keep in mind that capital structures, and the financial strength 11 they support, are set not only to ensure capital access during normal markets, but to enable 12 access when markets are constrained. The reason is straightforward: the obligation to serve 13 is not contingent on capital market conditions. When markets are constrained, only those 14 utilities with sufficient financial strength are able to attract capital at reasonable terms. 15 That ability provides those utilities with critically important financing flexibility.

16 The requirement to access the capital markets in all market conditions can be 17 contrasted with the financial needs of other entities without the legal obligation to serve. 18 Because of that obligation, the financial flexibility brought about by the access to both 19 long-term capital and short-term liquidity is critical for utilities' financial integrity, and 20 their ability to continually attract capital. Unregulated firms have options to choose 21 whether, where, and when to make investments; what services or products will be offered; 22 whether to invest in expansions; and whether to cease operations in a given location. That 23 is, unregulated companies may adjust the timing and amount of their major capital

expenditures to align with economic cycles, and to defer decisions and investments to
 better match market conditions. Regulated companies have limited options to do so.
 Ensuring the financial strength to access capital because of the reduced spending flexibility
 therefore is critically important to utilities, their investors, and their customers.

5 As noted above, an appropriate capital structure is important not only to ensure long-term financial integrity, it also is critical to enabling access to capital during 6 7 constrained markets, or when near-term liquidity is needed to fund extraordinary 8 requirements. In that important respect, the capital structure, and the financial strength it 9 engenders, must support both normal circumstances and periods of market uncertainty. 10 Optimizing the capital structure therefore is a very complex process, which balances the 11 need to maintain an appropriate financial profile while ensuring reasonable capital cost 12 rates.

### 13 Q. IS THERE A GENERAL FINANCING PRACTICE TYPICALLY USED BY 14 UTILITIES?

A. Yes, there is. As discussed in my Direct Testimony,<sup>146</sup> although capital structure optimization is complex, there are certain principles that commonly apply among utilities.
In my experience, the financing practice sometimes referred to as "maturity matching" is chief among those principles. That practice aligns the average life of the securities in the capital structure with the average lives of the assets being financed.<sup>147</sup>

20 The perpetual nature of common equity makes it an important component of the 21 capital structure. Because long-term debt generally has a duration shorter than the average

<sup>&</sup>lt;sup>146</sup> Direct Testimony of Robert B. Hevert, at 39-40.

<sup>&</sup>lt;sup>147</sup> This is not to say that an individual dollar may be traced from its source to its use.

1 life of the rate base, common equity is needed to extend the capital structure's duration to 2 more closely match that of the rate base. That is, owing to its perpetual life, common equity 3 extends the weighted average life of the capital structure, and mitigates financing risk. 4 Conversely, relying more heavily on debt increases the risk of refinancing maturing 5 obligations during less accommodating market environments.

#### 6 Q. WHAT WOULD BE THE EFFECT OF INCREASING THE DEBT COMPONENT 7 AND REDUCING THE COMMON EQUITY COMPONENT OF LIBERTY-8 **EMPIRE'S CAPITAL STRUCTURE AS MR. MURRAY SUGGESTS?**

9 A. Lowering Liberty-Empire's equity ratio would put upward pressure on its cost of capital, 10 to the long-term detriment of its customers. As noted earlier, rating agencies such as S&P 11 consider the regulatory environment, including the extent to which the presiding regulatory 12 commission is supportive of issues affecting credit quality, to be an important determinant 13 of the subject company's credit profile. Based on criteria established by S&P, a company's 14 credit rating is the result of the combination of the company's "Business Risk" rating and 15 its "Financial Risk" rating. A decision by the Commission to increase Liberty-Empire's 16 debt ratio (*i.e.*, increase Liberty-Empire's financial leverage) could adversely affect both 17 the Company's Business Risk rating and investors' perception of the regulatory 18 environment in Missouri.

19 In a similar fashion, Moody's considers the regulatory structure to be so important 20 that 50.00 percent of the factors that weigh in a ratings determination are related to the

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nature of regulation.<sup>148</sup> Among the factors considered by Moody's in assessing the 1 2 regulatory framework are the predictability and consistency of regulatory actions: 3 As the revenues set by the regulator are a primary component of a utility's 4 cash flow, the utility's ability to obtain predictable and supportive treatment 5 within its regulatory framework is one of the most significant factors in 6 assessing a utility's credit quality. The regulatory framework generally 7 provides more certainty around a utility's cash flow and typically allows the 8 company to operate with significantly less cushion in its cash flow metrics 9 than comparably rated companies in other industrial sectors. \*\*\* 10 11 In situations where the regulatory framework is less supportive, or is more contentious, a utility's credit quality can deteriorate rapidly.<sup>149</sup> 12 13 Q. MR. MURRAY ARGUES LIBERTY UTILITIES COMPANY (THE COMPANY'S 14 PARENT COMPANY) "IS USING A MORE ECONOMICAL CAPITAL 15 STRUCTURE THAN EMPIRE'S IMPLIED HIGHER COST CAPITAL AS A RESULT, HE SUGGESTS LIBERTY-EMPIRE'S 16 STRUCTURE."150 PARENT COMPANY ADJUSTED CAPITAL STRUCTURE SHOULD BE RELIED 17 **ON. WHAT IS YOUR RESPONSE?** 18 19 A. Mr. Murray's position appears to suggest the Company is engaging in double leverage, to the detriment of customers.<sup>151</sup> I have several concerns with that position. First, as 20 21 discussed above, in my experience utilities typically apply the prudent financing principle 22 of maturity, or duration matching. Under that principle, long-lived assets are financed with 23 correspondingly long-lived securities. As discussed earlier, due to its perpetual life 24 common equity has a long duration. Adding equity to the capital structure therefore

<sup>&</sup>lt;sup>148</sup> See, Moody's Investors Service, *Rating Methodology; Regulated Gas and Electric Utilities*, page 4 (June 23, 2017).

<sup>&</sup>lt;sup>149</sup> Moody's Investors Service, *Regulatory Frameworks – Ratings and Credit Quality for Investor-Owned Utilities*, page 2 (June 18, 2010).

<sup>&</sup>lt;sup>150</sup> Direct Testimony of David Murray, at 11. *See*, also, Direct Testimony of David Murray, at 10.

<sup>&</sup>lt;sup>151</sup> *Ibid*.

extends the capital structure's weighted average duration, more closely aligning it with the
 assets that form the rate base.

Mr. Murray's position also runs counter to the widely accepted "stand-alone" regulatory principle, which treats each utility subsidiary as its own company. Under the stand-alone approach, the cost of capital is determined using the subsidiary's capital structure and cost of debt and equity; the Cost of Equity is generally estimated by reference to a proxy group of firms of comparable risk.

8 Consistent with the stand-alone principle, the ownership structure does not affect 9 the operating utility's capital structure or cost of capital. Parent entities, like other 10 investors, have capital constraints and must consider the attractiveness of the expected risk-11 adjusted return of each investment alternative as part of their capital budgeting process. 12 This opportunity cost concept applies regardless of the source of the funding. When 13 funding is provided by a parent entity, the return on that financing must still be sufficient 14 to provide an incentive to the parent entity to allocate equity capital to the subsidiary or 15 business unit rather than other internal or external investment opportunities. That is, the 16 regulated subsidiary must compete for capital with its affiliates and with other, similarly 17 situated utility companies.

From an external investor's perspective, the combined company must provide a return reflecting the risks of the company's constituent parts. Investors therefore value combined entities on a sum-of-the-parts basis, expecting each operating segment to provide its appropriate risk-adjusted return. That practical financial principle is consistent with the regulatory principle of treating utilities as stand-alone entities. From both perspectives, it

is the utility's operating risk that defines the capital structure and cost of capital, not
 investors' sources of funds.

Contrary to those basic principles, Mr. Murray's double leverage argument assumes the required return depends on the source of financing, not on the risks of the underlying utility operations. The position that a company would have a different cost rate depending on how its investors fund their equity investments violates the widely acknowledged economic "law of one price", which states that in an efficient market, identical assets would have the same value. In other words, two utilities, identical in all respects but for their form of ownership, should have the same common equity cost rates.

Moreover, if the common equity of a subsidiary were held by both the parent and an external investor, the equity held by the parent would have one required return, and the equity held by outside investors would have another. To the extent the required returns differ, so would the value of the equity. But in an efficient market, identical assets must have the same price (value). If not, the difference quickly would be arbitraged away. As

15 Dr. Roger Morin noted in <u>New Regulatory Finance</u>:

- 16 Carrying the double leverage standard to its logical conclusion leads to 17 even more unreasonable prescriptions. If the common shares of a 18 subsidiary were held by both the parent and by individual investors, the 19 equity contributed by the parent would have one cost under the double 20 leverage computation while the equity contributed by the public would 21 have another.<sup>152</sup>
- 22 The double leverage argument also requires every affiliate within the corporate
- 23 family to have the same cost of capital, regardless of differences in risk. Algonquin Power
- 24 & Utilities Corp. reports three operating segments: Regulated Services Group, Renewable

Roger A. Morin, <u>New Regulatory Finance</u>, Public Utility Reports, Inc., 2006, at 523.

- 1 Energy Group, Corporate.<sup>153</sup> Because they are separately reported, we reasonably can
- 2

assume those segments face different risks. And because they face different risks, we

3 reasona

reasonably may assume they require different returns. Dr. Morin further noted:

- 4 Just as individual investors require different returns from different 5 assets in managing their personal affairs, why should regulation cause 6 parent companies making investment decisions on behalf of their 7 shareholders to act any differently? A parent company normally invests 8 money in many operating companies of varying sizes and varying risks. 9 These operating subsidiaries pay different rates for the use of investor 10 capital, such as long-term debt capital, because investors recognize the 11 differences in capital structure, risk, and prospects between the 12 subsidiaries. Yet, the double leverage calculation would assign the 13 same return to each activity, based on the parent's cost of capital. Investors recognize that different subsidiaries are exposed to different 14 15 risks, as evidenced by the different bond ratings and cost rates of 16 operating subsidiaries. The same argument carries over to common 17 equity. If the cost rate for debt is different because the risk is different, 18 the cost rate for common equity is also different, and the double leverage 19 adjustment shouldn't obscure this fact.<sup>154</sup>
- 20 Longstanding academic literature has thoroughly discussed the flaws associated
- 21 with the double leverage approach. For example:
- 1. Pettway and Jordan (1983), and Beranek and Miles (1988) point out the flaws in the double
- 23 leverage argument, particularly the excess return argument, and also demonstrate that the
- <sup>24</sup> "stand-alone" method is the superior approach.<sup>155</sup>
- 25 2. Rozeff (1983) discusses the ratepayer cross-subsidies of one subsidiary by another when
- 26 employing double leverage.<sup>156</sup>

See, Algonquin Power & Utilities Corp., Consolidated Financial Statements, for the years ended December 31, 2019 and 2018, at 56.

<sup>&</sup>lt;sup>154</sup> Roger A. Morin, <u>New Regulatory Finance</u>, Public Utility Reports, Inc., 2006, at 524-525.

Richard H. Pettway and Bradford D. Jordan, *Diversification, Double Leverage, and the Cost of Capital,* <u>The Journal of Financial Research</u>, Vol. VI, No. 4, Winter 1983; William Beranek and James A. Miles, *The Excess Return Argument and Double Leverage*, The Financial Review, Vo. 23, No. 2, May 1988.

<sup>&</sup>lt;sup>156</sup> Michael S. Rozeff, "Modified Double Leverage – A New Approach," Public Utilities Fortnightly, March 31, 1983.

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1 3. Lerner (1973) concludes that the returns granted to equity investors must be based on the 2 risks to which the investors' capital is exposed and not the investors' source of funds.<sup>157</sup> 3 Basic finance texts reach the same conclusions. In Principles of Corporate Finance, 8th 4 edition, Brealey, Myers, and Allen state: 5 In principle, each project should be evaluated at its own opportunity cost 6 of capital; the true cost of capital depends on the use to which the capital 7 is put. If we wish to estimate the cost of capital for a particular project, 8 it is project risk that counts.<sup>158</sup> Likewise, in Modern Cor<u>porate Finance</u>, 1<sup>st</sup> edition, Shapiro states: 9 10 Each project has its own required return, reflecting three basic elements: (1) the real or inflation-adjusted risk-free interest rate; (2) an inflation 11 12 premium approximately equal to the amount of expected inflation; and (3) a premium for risk. The first two cost elements are shared by all 13 14 projects and reflect the time value of money, whereas the third 15 component varies according to the risks borne by investors in the different projects. For a project to be acceptable to the firm's 16 17 shareholders, its return must be sufficient to compensate them for all 18 three cost components. This minimum or required return is the project's 19 cost of capital and is sometimes referred to as a hurdle rate. 20 The preceding paragraph bears a crucial message: The cost of capital 21 for a project depends on the riskiness of the assets being financed, not 22 on the identity of the firm undertaking the project.<sup>159</sup> Simply, the notion of double leverage runs counter to both financial and regulatory 23 principles. 24 25 Lastly, double leverage arguments have been rejected by several regulatory 26 commissions, including the Maryland Public Service Commission: 27 We reject People's Counsel's proposed capital structure [reflecting a 28 double leverage adjustment] because it suffers from numerous flaws. 29 First, it assumes that the rate of return depends on the source of capital

<sup>158</sup> Richard A. Brealey, Steward C. Meyers, Franklin Allen, <u>Principles of Corporate Finance</u>, McGraw-Hill Irwin, 8th Ed., 2006, at 234.

<sup>&</sup>lt;sup>157</sup> Eugene M. Lerner, "What are the Real Double Leverage Problems?" <u>Public Utilities Fortnightly</u>, June 7, 1973.

<sup>&</sup>lt;sup>159</sup> Alan C. Shapiro, <u>Modern Corporate Finance</u>, Wiley, 1st Ed., 1990, at 276.

1	rather than the risks faced by the capital. <sup>160</sup>
2	In 2016, the Federal Energy Regulatory Commission ("FERC") reiterated its
3	previous position on "double leveraging," <sup>161</sup> stating that "the motivations of a parent
4	company are irrelevant" <sup>162</sup> so long as the operating company passes the FERC's three-part
5	test: (i) it issues its own debt without guarantees; (2) it has its own bond rating; and (3) it
6	has a capital structure within the range of capital structures approved by the commission. <sup>163</sup>
7	Under FERC guidance, the capital structure of Duke Energy Corporation is not applicable
8	to DE Carolinas.
9	The Washington Utilities and Transportation Commission ("WUTC") has cited to
10	FERC's position on the use of double leverage in support of its decision in Docket No. UE
11	050684:
12 13 14 15 16 17 18 19	The FERC does not embrace the concept of double leverage. For purposes of calculating rate of return for wholly owned subsidiaries, FERC uses the stand-alone capital structure and return on equity of the subsidiary so long as the subsidiary issues its own debt, maintains its own credit ratings and meets other standards related to equity ratio. The courts have upheld this policy. <i>See Missouri Pub. Serv. Comm'n v. Federal Energy Reg Comm'n, 215 F.3d 1, 342 U. S. App. DC. 1</i> (D.C. Cir. June 27, 2000). <sup>164</sup>
20	In that same Order, the WUTC considered the effects of ring fencing in protecting
21	ratepayers against financial leverage at the parent level:
22 23 24 25	The ring fencing provisions required by our final order in Docket UE- 051090 insulate PacifiCorp and its customers from risks and financial distress at the MEHC level. Nonetheless, after having insulated PacifiCorp and its customers from the risks of leveraged financing at the

<sup>160</sup> Maryland Public Service Commission, Order No. 81517, Case No. 9092, In the Matter of the Application of Potomac Electric Power Company for Authority to Revise its Rate and Charges for Electric Service and for Certain Rate Design Changes, July 19, 2007, at 73. [Clarification added]

<sup>161</sup> See, Transcontinental Gas Pipe Line Corp., 80 FERC ¶ 61,157, 61,657 (1997) ("Opinion No. 414").

<sup>162</sup> See, 154 FERC ¶ 61,004, Docket No. ER15-945-001, at 15.

<sup>163</sup> Ibid. See, also, Transcontinental Gas Pipe Line Corp., 80 FERC ¶ 61,157, 61,657 (1997) ("Opinion No. 414").

<sup>164</sup> Washington Utilities and Transportation Commission, Docket No. UE 050684, Order No. 4, at 117.

1	parent, Staff and Public Counsel seek to secure for customers the cost
2	and tax benefits of that financing. The Company's expert witness
3	argues this may violate the familiar principle in utility law that financial
4	benefits should follow burden of risks. We agree. If the risks and costs
5	of activities at the parent-level are born exclusively by shareholders—
6	because customers are insulated from them by the ring fence—then it is
7	fair and appropriate for the shareholders, and not the customers, to
8	receive the benefits that result from those activities. <sup>165</sup>

### 9 Q. DOES MR. MURRAY CONSIDER WHETHER HIS PROPOSED CAPITAL

### 10 STRUCTURE IS CONSISTENT WITH INDUSTRY PRACTICE?

A. No, he does not. As noted above, Mr. Murray reviews the Company's capital structure
relative to its immediate and ultimate parent companies, but does not consider how it
compares to the companies in his proxy groups.

### 14 Q. IS MR. MURRAY'S PROPOSED CAPITAL STRUCTURE CONSISTENT WITH 15 INDUSTRY PRACTICE?

A. No, it is not. As shown in Schedule RBH-R7, Mr. Murray's proposed equity ratio of 46.00
percent is below the average equity ratio of all but one company in my proxy group, and is
over two standard deviations below the average equity ratio for the proxy group of 53.59
percent. On that basis it appears that Mr. Murray's proposed equity ratio is inconsistent
with industry practice and significantly differs from the Company's peers.

21 On the other hand, Liberty-Empire's proposed equity ratio updated as of September 22 30, 2019 of 52.93 percent continues to be within the range of its peers'. On that basis, I 23 believe it is reasonable and appropriate, and should be approved by the Commission.

<sup>&</sup>lt;sup>165</sup> *Ibid.*, at 54.

# Q. WHAT IS THE IMPLICATION OF A CAPITAL STRUCTURE THAT IS TOO HEAVILY WEIGHTED WITH DEBT FOR THE COMPANY'S COST OF CAPITAL?

4 A. Simply, adding additional debt, as Mr. Murray suggests, creates additional degrees of 5 financial risk. Financial risk, which is the additional risk that the subject company may 6 not have adequate cash flows to meet its financial obligations, is created by the introduction 7 of senior capital, i.e., debt and preferred stock, into the capital structure. Intuitively, as the 8 degree of financial leverage increases, the risk of financial distress also increases. Even if 9 two firms face the same business risks, the company with meaningfully higher levels of 10 debt in its capital structure is likely to have greater financial risk and, therefore, higher 11 costs of both debt and equity. As Brigham and Gapenski point out, "...the use of debt, or 12 financial leverage, concentrates the firm's business risk on its stockholders."

Because the capital structure affects the subject company's overall level of risk, it is an important consideration in establishing a fair rate of return: The higher the proportion of senior debt capital in the capital structure, the higher the financial risk that must be factored into the Cost of Equity. Mr. Murray's recommendation, if adopted, would lead to increased capital costs, to the detriment of customers.

### 18 Q. WHAT IS YOUR CONCLUSION REGARDING AN APPROPRIATE CAPITAL 19 STRUCTURE FOR THE COMPANY

A. Considering the average actual common equity ratios in place at the proxy companies, I
believe that Liberty-Empire's proposed common equity ratio as updated at September 30,
2019 of 52.93 percent is reasonable. Mr. Murray's proposed equity ratio, however, is

inconsistent with the equity ratios of comparable companies, would add unnecessary and
 unproductive levels of financial risk, and should be rejected.

3 IV. CONCLUSIONS AND RECOMMENDATION

### 4 Q. WHAT ARE YOUR OVERALL CONCLUSIONS AND RECOMMENDATIONS?

- A. Based on the analyses discussed throughout my Rebuttal Testimony, I conclude that the
  reasonable range of ROE estimates remains from 9.80 percent to 10.60 percent. I continue
  to believe an ROE of 9.95 percent is reasonable for Liberty-Empire.
- 8 In addition, the Company's updated at September 30, 2019 proposed capital 9 structure of 52.93 percent common equity and 47.07 percent long-term debt is consistent 10 with industry practice.

#### 11 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

12 A. Yes, it does.
#### Constant Growth Discounted Cash Flow Model 30 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
			Average		Expected	Zacks	First Call	Value Line	Average			
		Annualized	Stock	Dividend	Dividend	Earnings	Earnings	Earnings	Earnings	Low	Mean	High
Company	Ticker	Dividend	Price	Yield	Yield	Growth	Growth	Growth	Growth	ROE	ROE	ROE
ALLETE, Inc.	ALE	\$2.47	\$81.90	3.02%	3.11%	NA	7.00%	5.00%	6.00%	8.09%	9.11%	10.12%
Alliant Energy Corporation		\$1.52	\$55.93	2.72%	2.80%	5.70%	5.75%	6.50%	5.98%	8.50%	8.78%	9.31%
Ameren Corporation	AEE	\$1.98	\$33.93 \$77.93	2.54%	2.61%	6.20%	4.60%	6.50%	5.77%	7.20%	8.38%	9.12%
American Electric Power Company, Inc.	AEP	\$2.80	\$96.74	2.34 %	2.01%	5.60%	4.00 % 6.05%	4.00%	5.22%	6.95%	8.19%	9.12 %
American Electric Power Company, Inc. Avangrid, Inc.	AGR	\$2.80 \$1.76	\$90.74 \$51.41	3.42%	3.55%	7.50%	6.40%	4.00 % 8.50%	7.47%	9.93%	11.02%	9.03 <i>%</i> 12.07%
Avangha, inc. Avista Corporation	AGR	\$1.75	\$48.54	3.42 %	3.25%	3.50%	3.50%	3.50%	3.50%	9.93 <i>%</i> 6.75%	6.75%	6.75%
CMS Energy Corporation	CMS	\$1.63	\$48.54 \$64.28	2.54%	2.62%	6.10%	3.50 <i>%</i> 7.50%	7.00%	6.87%	8.71%	9.49%	10.13%
	DTE	\$4.05	\$130.59	2.54%	3.19%	6.00%	6.00%	4.50%	5.50%	7.67%	9.49% 8.69%	9.19%
DTE Energy Company	DUK	\$4.05 \$3.78	\$92.56	4.08%	4.19%	4.90%	4.61%	4.50% 6.00%	5.50%	8.79%	0.09% 9.36%	9.19% 10.21%
Duke Energy Corporation												
Evergy, Inc	EVRG	\$2.02	\$66.49	3.04%	3.14%	6.50%	6.50%	NMF	6.50%	9.64%	9.64%	9.64%
Hawaiian Electric Industries, Inc.	HE	\$1.28	\$47.05	2.72%	2.77%	4.20%	3.40%	2.50%	3.37%	5.25%	6.13%	6.98%
NextEra Energy, Inc.	NEE	\$5.00	\$249.63	2.00%	2.09%	7.80%	7.74%	10.50%	8.68%	9.82%	10.77%	12.61%
NorthWestern Corporation	NWE	\$2.30	\$73.06	3.15%	3.19%	3.50%	3.22%	2.00%	2.91%	5.18%	6.10%	6.70%
OGE Energy Corp.	OGE	\$1.55	\$44.77	3.46%	3.54%	4.20%	3.50%	6.50%	4.73%	7.02%	8.28%	10.08%
Otter Tail Corporation	OTTR	\$1.40	\$52.40	2.67%	2.77%	NA	9.00%	5.00%	7.00%	7.74%	9.77%	11.79%
Pinnacle West Capital Corporation	PNW	\$3.13	\$92.02	3.40%	3.48%	4.70%	4.41%	4.00%	4.37%	7.47%	7.85%	8.18%
PNM Resources, Inc.	PNM	\$1.23	\$51.31	2.40%	2.47%	5.80%	6.30%	7.00%	6.37%	8.27%	8.84%	9.48%
Portland General Electric Company	POR	\$1.54	\$57.46	2.68%	2.74%	4.90%	4.80%	4.50%	4.73%	7.24%	7.48%	7.65%
Southern Company	SO	\$2.48	\$65.51	3.79%	3.85%	4.50%	2.10%	3.50%	3.37%	5.93%	7.22%	8.37%
WEC Energy Group, Inc.	WEC	\$2.53	\$94.44	2.68%	2.76%	6.20%	6.08%	6.00%	6.09%	8.76%	8.85%	8.96%
Xcel Energy Inc.	XEL	\$1.62	\$64.52	2.51%	2.58%	5.70%	6.10%	5.50%	5.77%	8.08%	8.35%	8.69%
Dreve Crown Maan				0.05%	2.020/	E 4E0/	F 400/	F 400/	5.400/	7 700/	0.500/	0.000/
Proxy Group Mean				2.95%	3.03%	5.45%	5.46%	5.43%	5.49%	7.76%	8.53%	9.29%
Proxy Group Median				2.89%	2.97%	5.70%	6.00%	5.25%	5.77%	7.74%	8.69%	9.19%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals indicated number of trading day average as of January 31, 2020

[3] Equals [1] / [2] [4] Equals [3] x (1 + 0.5 x [8]) [5] Source: Zacks

[6] Source: Yahoo! Finance

[7] Source: Value Line [8] Equals Average([5], [6], [7]) [9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])

[10] Equals [4] + [8] [11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

#### Constant Growth Discounted Cash Flow Model 90 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
			Average		Expected	Zacks	First Call	Value Line	Average			
_		Annualized	Stock	Dividend	Dividend	Earnings	Earnings	Earnings	Earnings	Low	Mean	High
Company	Ticker	Dividend	Price	Yield	Yield	Growth	Growth	Growth	Growth	ROE	ROE	ROE
ALLETE, Inc.	ALE	\$2.47	\$82.91	2.98%	3.07%	NA	7.00%	5.00%	6.00%	8.05%	9.07%	10.08%
Alliant Energy Corporation	LNT	\$1.52	\$53.99	2.82%	2.90%	5.70%	5.75%	6.50%	5.98%	8.60%	8.88%	9.41%
Ameren Corporation	AEE	\$1.98	\$76.84	2.58%	2.65%	6.20%	4.60%	6.50%	5.77%	7.24%	8.42%	9.16%
American Electric Power Company, Inc.	AEP	\$2.80	\$93.76	2.99%	3.06%	5.60%	6.05%	4.00%	5.22%	7.05%	8.28%	9.13%
Avangrid, Inc.	AGR	\$1.76	\$50.32	3.50%	3.63%	7.50%	6.40%	8.50%	7.47%	10.01%	11.09%	12.15%
Avista Corporation	AVA	\$1.55	\$47.93	3.23%	3.29%	3.50%	3.50%	3.50%	3.50%	6.79%	6.79%	6.79%
CMS Energy Corporation	CMS	\$1.63	\$63.08	2.58%	2.67%	6.10%	7.50%	7.00%	6.87%	8.76%	9.54%	10.18%
DTE Energy Company	DTE	\$4.05	\$128.14	3.16%	3.25%	6.00%	6.00%	4.50%	5.50%	7.73%	8.75%	9.26%
Duke Energy Corporation	DUK	\$3.78	\$92.33	4.09%	4.20%	4.90%	4.61%	6.00%	5.17%	8.80%	9.37%	10.22%
Evergy, Inc	EVRG	\$2.02	\$64.82	3.12%	3.22%	6.50%	6.50%	NMF	6.50%	9.72%	9.72%	9.72%
Hawaiian Electric Industries, Inc.	HE	\$1.28	\$45.40	2.82%	2.87%	4.20%	3.40%	2.50%	3.37%	5.35%	6.23%	7.08%
NextEra Energy, Inc.	NEE	\$5.00	\$237.98	2.10%	2.19%	7.80%	7.74%	10.50%	8.68%	9.92%	10.87%	12.71%
NorthWestern Corporation	NWE	\$2.30	\$72.61	3.17%	3.21%	3.50%	3.22%	2.00%	2.91%	5.20%	6.12%	6.72%
OGE Energy Corp.	OGE	\$1.55	\$43.74	3.54%	3.63%	4.20%	3.50%	6.50%	4.73%	7.11%	8.36%	10.16%
Otter Tail Corporation	OTTR	\$1.40	\$52.22	2.68%	2.77%	NA	9.00%	5.00%	7.00%	7.75%	9.77%	11.80%
Pinnacle West Capital Corporation	PNW	\$3.13	\$91.33	3.43%	3.50%	4.70%	4.41%	4.00%	4.37%	7.50%	7.87%	8.21%
PNM Resources, Inc.	PNM	\$1.23	\$50.61	2.43%	2.51%	5.80%	6.30%	7.00%	6.37%	8.30%	8.87%	9.52%
Portland General Electric Company	POR	\$1.54	\$56.44	2.73%	2.79%	4.90%	4.80%	4.50%	4.73%	7.29%	7.53%	7.70%
Southern Company	SO	\$2.48	\$63.00	3.94%	4.00%	4.50%	2.10%	3.50%	3.37%	6.08%	7.37%	8.53%
WEC Energy Group, Inc.	WEC	\$2.53	\$92.40	2.74%	2.82%	6.20%	6.08%	6.00%	6.09%	8.82%	8.91%	9.02%
Xcel Energy Inc.	XEL	\$1.62	\$63.28	2.56%	2.63%	5.70%	6.10%	5.50%	5.77%	8.13%	8.40%	8.74%
Proxy Group Mean				3.01%	3.09%	5.45%	5.46%	5.43%	5.49%	7.82%	8.58%	9.35%
Proxy Group Median				2.98%	3.06%	5.70%	6.00%	5.25%	5.77%	7.75%	8.75%	9.26%

#### Notes:

[1] Source: Bloomberg Professional

[1] Source: Bloomberg Professional, equals indicated number of trading day average as of January 31, 2020
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Source: Zacks

[6] Source: Yahoo! Finance [7] Source: Value Line

[8] Equals Average([5], [6], [7]) [9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])

[10] Equals [4] + [8] [11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

#### Constant Growth Discounted Cash Flow Model 180 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
			Average		Expected	Zacks	First Call	Value Line	Average			
		Annualized	Stock	Dividend	Dividend	Earnings	Earnings	Earnings	Earnings	Low	Mean	High
Company	Ticker	Dividend	Price	Yield	Yield	Growth	Growth	Growth	Growth	ROE	ROE	ROE
ALLETE, Inc.	ALE	\$2.47	\$83.98	2.94%	3.03%	NA	7.00%	5.00%	6.00%	8.01%	9.03%	10.04%
Alliant Energy Corporation	LNT	\$1.52	\$52.14	2.92%	3.00%	5.70%	5.75%	6.50%	5.98%	8.70%	8.99%	9.51%
Ameren Corporation	AEE	\$1.98	\$76.48	2.59%	2.66%	6.20%	4.60%	6.50%	5.77%	7.25%	8.43%	9.17%
American Electric Power Company, Inc.	AEP	\$2.80	\$91.78	3.05%	3.13%	5.60%	6.05%	4.00%	5.22%	7.11%	8.35%	9.19%
Avangrid, Inc.	AGR	\$1.76	\$50.34	3.50%	3.63%	7.50%	6.40%	8.50%	7.47%	10.01%	11.09%	12.15%
Avista Corporation	AVA	\$1.55	\$46.57	3.33%	3.39%	3.50%	3.50%	3.50%	3.50%	6.89%	6.89%	6.89%
CMS Energy Corporation	CMS	\$1.63	\$61.24	2.66%	2.75%	6.10%	7.50%	7.00%	6.87%	8.84%	9.62%	10.26%
DTE Energy Company	DTE	\$4.05	\$128.63	3.15%	3.24%	6.00%	6.00%	4.50%	5.50%	7.72%	8.74%	9.24%
Duke Energy Corporation	DUK	\$3.78	\$90.91	4.16%	4.27%	4.90%	4.61%	6.00%	5.17%	8.86%	9.44%	10.28%
Evergy, Inc	EVRG	\$2.02	\$63.32	3.19%	3.29%	6.50%	6.50%	NMF	6.50%	9.79%	9.79%	9.79%
Hawaiian Electric Industries, Inc.	HE	\$1.28	\$44.59	2.87%	2.92%	4.20%	3.40%	2.50%	3.37%	5.41%	6.29%	7.13%
NextEra Energy, Inc.	NEE	\$5.00	\$224.52	2.23%	2.32%	7.80%	7.74%	10.50%	8.68%	10.05%	11.00%	12.84%
NorthWestern Corporation	NWE	\$2.30	\$72.31	3.18%	3.23%	3.50%	3.22%	2.00%	2.91%	5.21%	6.13%	6.74%
OGE Energy Corp.	OGE	\$1.55	\$43.38	3.57%	3.66%	4.20%	3.50%	6.50%	4.73%	7.14%	8.39%	10.19%
Otter Tail Corporation	OTTR	\$1.40	\$52.07	2.69%	2.78%	NA	9.00%	5.00%	7.00%	7.76%	9.78%	11.81%
Pinnacle West Capital Corporation	PNW	\$3.13	\$93.03	3.36%	3.44%	4.70%	4.41%	4.00%	4.37%	7.43%	7.81%	8.14%
PNM Resources, Inc.	PNM	\$1.23	\$50.30	2.45%	2.52%	5.80%	6.30%	7.00%	6.37%	8.32%	8.89%	9.53%
Portland General Electric Company	POR	\$1.54	\$55.77	2.76%	2.83%	4.90%	4.80%	4.50%	4.73%	7.32%	7.56%	7.73%
Southern Company	SO	\$2.48	\$59.81	4.15%	4.22%	4.50%	2.10%	3.50%	3.37%	6.29%	7.58%	8.74%
WEC Energy Group, Inc.	WEC	\$2.53	\$89.84	2.82%	2.90%	6.20%	6.08%	6.00%	6.09%	8.90%	9.00%	9.10%
Xcel Energy Inc.	XEL	\$1.62	\$62.17	2.61%	2.68%	5.70%	6.10%	5.50%	5.77%	8.18%	8.45%	8.79%
Proxy Group Mean				3.06%	3.14%	5.45%	5.46%	5.43%	5.49%	7.87%	8.63%	9.39%
Proxy Group Median				2.94%	3.03%	5.70%	6.00%	5.25%	5.77%	7.76%	8.74%	9.24%

#### Notes:

[1] Source: Bloomberg Professional

[1] Source: Bloomberg Professional, equals indicated number of trading day average as of January 31, 2020
[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])

#### 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
1	13.44%	2.25%	11.18%

		[4]	[5]	[6]	[7]	[8]	[9]
		Market		Estimated	Long-Term Growth		Weighted
Company	Ticker	Capitalization	Weight in Index	Dividend Yield	Est.	DCF Result	DCF Result
Agilent Technologies Inc	A	25,608.74	0.09%	0.87%	10.40%	11.32%	0.0105%
American Airlines Group Inc	AAL	11,757.48	0.04%	1.53%	6.23%	7.81%	0.0033%
Advance Auto Parts Inc Apple Inc	AAP AAPL	9,124.93 1,354,254.81	0.03% 4.89%	0.18% 1.04%	15.34% 11.97%	15.54% 13.07%	0.0051% 0.6392%
AbbVie Inc	ABBV	119,814.09	0.43%	5.30%	4.77%	10.19%	0.0441%
AmerisourceBergen Corp	ABC	17,616.10	0.06%	1.95%	12.35%	14.41%	0.0092%
ABIOMED Inc	ABMD	8,411.95	0.03%	0.00%	24.00%	24.00%	0.0073%
Abbott Laboratories	ABT	154,103.23	0.56%	1.60%	10.12%	11.80%	0.0657%
Accenture PLC Adobe Inc	ACN ADBE	130,514.21 169,295.47	0.47% 0.61%	1.56% 0.00%	10.43% 16.22%	12.07% 16.22%	0.0569% 0.0992%
Analog Devices Inc	ADI	40,492.75	0.15%	2.07%	12.53%	14.73%	0.0215%
Archer-Daniels-Midland Co	ADM	24,917.28	0.09%	3.25%	9.20%	12.60%	0.0113%
Automatic Data Processing Inc	ADP	73,998.36	0.27%	1.99%	12.55%	14.66%	0.0392%
Alliance Data Systems Corp Autodesk Inc	ADS ADSK	4,734.12	0.02%	2.47% 0.00%	10.44% 46.89%	13.04% 46.89%	0.0022% 0.0734%
Ameren Corp	ADSK	43,313.50 20,186.74	0.16% 0.07%	2.35%	46.89% 5.76%	46.89% 8.18%	0.0060%
American Electric Power Co Inc	AEP	51,479.66	0.19%	2.60%	6.03%	8.71%	0.0162%
AES Corp/VA	AES	13,184.91	0.05%	2.77%	8.47%	11.36%	0.0054%
Aflac Inc	AFL	37,853.31	0.14%	2.10%	3.41%	5.55%	0.0076%
Allergan PLC	AGN	61,269.68	0.22%	1.58%	5.50%	7.13%	0.0158%
American International Group Inc Apartment Investment & Management Co	AIG AIV	43,723.77 7,847.71	0.16% 0.03%	2.56% 3.08%	11.00% 3.99%	13.70% 7.14%	0.0216% 0.0020%
Assurant Inc	AIZ	7,916.61	N/A	1.90%	N/A	N/A	N/A
Arthur J Gallagher & Co	AJG	19,293.42	0.07%	1.74%	9.79%	11.62%	0.0081%
Akamai Technologies Inc	AKAM	15,085.47	0.05%	0.00%	13.20%	13.20%	0.0072%
Albemarle Corp	ALB ALGN	8,512.33	0.03%	1.79%	8.10% 20.31%	9.96%	0.0031%
Align Technology Inc Alaska Air Group Inc	ALGN	20,262.81 7,955.77	0.07% 0.03%	0.00% 2.31%	20.31%	20.31% 26.28%	0.0149% 0.0076%
Allstate Corp/The	ALL	38,401.76	0.14%	1.63%	9.00%	10.71%	0.0149%
Allegion PLC	ALLE	12,015.97	0.04%	0.83%	10.63%	11.51%	0.0050%
Alexion Pharmaceuticals Inc	ALXN	21,994.08	0.08%	0.00%	11.72%	11.72%	0.0093%
Applied Materials Inc Amcor PLC	AMAT AMCR	53,270.00	0.19%	1.54%	12.42%	14.05%	0.0270%
Advanced Micro Devices Inc	AMD	17,157.30 52,340.49	0.06% 0.19%	4.84% 0.00%	8.60% 17.67%	13.65% 17.67%	0.0085% 0.0334%
AMETEK Inc	AME	22,207.80	0.08%	0.58%	10.50%	11.11%	0.0089%
Amgen Inc	AMGN	127,685.55	0.46%	2.92%	7.88%	10.91%	0.0503%
Ameriprise Financial Inc	AMP	20,956.72	0.08%	2.48%	6.00%	8.55%	0.0065%
American Tower Corp Amazon.com Inc	AMT AMZN	102,647.02 999,961.80	0.37% 3.61%	1.62% 0.00%	20.34% 33.19%	22.13% 33.19%	0.0821% 1.1987%
Arista Networks Inc	ANET	17,062.96	0.06%	0.00%	17.95%	17.95%	0.0111%
ANSYS Inc	ANSS	23,479.83	0.08%	0.00%	10.65%	10.65%	0.0090%
Anthem Inc	ANTM	67,265.38	0.24%	1.42%	13.01%	14.53%	0.0353%
Aon PLC	AON	51,109.34	0.18%	0.86%	10.99%	11.90%	0.0220%
AO Smith Corp Apache Corp	AOS APA	6,963.25 10,318.44	0.03% 0.04%	2.46% 3.64%	8.00% -29.00%	10.56% -25.88%	0.0027% -0.0096%
Air Products & Chemicals Inc	APD	52,678.16	0.19%	2.13%	12.67%	14.94%	0.0284%
Amphenol Corp	APH	29,492.03	0.11%	0.99%	9.81%	10.85%	0.0116%
Aptiv PLC	APTV	21,645.88	0.08%	1.13%	5.95%	7.10%	0.0056%
Alexandria Real Estate Equities Inc	ARE	21,134.40	0.08%	2.45%	4.13%	6.63%	0.0051%
Arconic Inc Atmos Energy Corp	ARNC ATO	12,966.58	0.05%	0.28%	80.40%	80.79% 9.18%	0.0378% 0.0047%
Activision Blizzard Inc	ATVI	14,308.01 44,927.85	0.05% 0.16%	1.96% 0.64%	7.15% 10.01%	10.68%	0.0047%
AvalonBay Communities Inc	AVB	30,263.31	0.11%	2.80%	6.21%	9.10%	0.0099%
Broadcom Inc	AVGO	121,390.29	0.44%	4.26%	10.33%	14.81%	0.0649%
Avery Dennison Corp	AVY	10,958.92	0.04%	1.84%	5.35%	7.24%	0.0029%
American Water Works Co Inc American Express Co	AWK AXP	24,621.71 106,268.83	0.09%	1.45%	8.52%	10.03%	0.0089% 0.0416%
AutoZone Inc	AZO	24,960.14	0.38% 0.09%	1.38% 0.00%	9.39% 10.80%	10.83% 10.80%	0.0097%
Boeing Co/The	BA	179,234.45	0.65%	2.63%	29.38%	32.40%	0.2097%
Bank of America Corp	BAC	290,090.77	1.05%	2.41%	9.75%	12.28%	0.1286%
Baxter International Inc	BAX	45,551.79	0.16%	1.08%	11.74%	12.89%	0.0212%
Best Buy Co Inc	BBY	21,915.86	0.08%	2.36%	7.78%	10.23%	0.0081%
Becton Dickinson and Co Franklin Resources Inc	BDX BEN	74,577.01 12,571.51	0.27% 0.05%	1.31% 4.28%	10.42% 10.00%	11.80% 14.49%	0.0318% 0.0066%
Brown-Forman Corp	BF/B	31,751.84	0.11%	1.02%	7.08%	8.13%	0.0093%
Biogen Inc	BIIB	48,511.80	0.18%	0.00%	2.02%	2.02%	0.0035%
Bank of New York Mellon Corp/The	BK	40,332.58	0.15%	2.91%	6.30%	9.30%	0.0136%
Booking Holdings Inc	BKNG	76,618.95	0.28%	0.00%	16.37%	16.37%	0.0453%
Baker Hughes Co BlackRock Inc	BKR BLK	22,251.25 81,917.15	0.08% 0.30%	3.37% 2.68%	30.98% 9.76%	34.87% 12.58%	0.0280% 0.0372%
Ball Corp	BLL	23,612.31	0.09%	0.68%	5.50%	6.20%	0.0053%
Bristol-Myers Squibb Co	BMY	147,365.90	0.53%	2.61%	14.78%	17.59%	0.0936%
Broadridge Financial Solutions Inc	BR	13,678.72	0.05%	1.82%	7.50%	9.39%	0.0046%
Berkshire Hathaway Inc	BRK/B	548,282.67	N/A	0.00%	N/A	N/A	N/A
Boston Scientific Corp BorgWarner Inc	BSX BWA	58,359.39 7,077.78	0.21%	0.00% 1.99%	7.00% 4.90%	7.00% 6.94%	0.0148% 0.0018%
Dorgwallier IIIC	DWA	1,077.78	0.03%	1.99%	4.90%	0.94%	0.0010%

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Hart         Estimate         Logary         Ticker         Capalalation         Weight in holds         Divident Yield         Estimate         Long-Term Growth           Dester pipe frame         D	[8]	
Company         Ticker         Capitalization         Weight in Index         Dividend Yield         Est.           Disproup Inc         C         157/310.18         0.67%         2.21%         3.150%           Congrage Baras Inc         CAG         157/310.18         0.67%         2.29%         3.155%           Cateryliair Inc         CAT         7.251/68         0.02%         3.15%         6.37%           Cateryliair Inc         CBD         13.680.33         0.05%         1.08%         5.37%           Chubb Lid         CB         6.808.22         0.25%         3.06%         11.70%           Commid Corp         CCI         62.298.275         0.11%         4.66%         8.31%           Commid Corp         CCI         22.382.75         0.11%         4.66%         8.31%           CDW CorpDE         CER         12.514.2         0.03%         2.95%         18.31%           CDW CorpDE         CER         2.5518.2         0.03%         2.95%         18.39%           CDW CorpDE         CFG         8.758.51         0.03%         2.95%         18.39%           CDW CorpDE         CHR         18.205.32         0.05%         4.18.9%         5.17%           Colinair		[9]
Boston Properties Inc         B/P         22,189,19         0.08%         2.88%         7.17%           Contagra Brands Inc         C AG         16,025,91         0.06%         2.58%         7.37%           Cardinal Health Inc         C AH         14,978,33         0.05%         3.95%         9.37%           Caterplian Inc         C AH         14,978,33         0.05%         1.08%         9.51%           Caterplian Inc         C AH         72,591,86         0.02%         3.18%         9.51%           Cabe Global Markets Inc         C BCC         62,382,57         0.23%         3.06%         1.77%           Carwal Corp         C CL         22,382,75         0.11%         4.66%         9.31%           Cadence Design Systems Inc         C FK         2,378,14         0.07%         0.09%         9.35%           CDW Corp DE         C DW         12,743,14         0.07%         0.09%         9.35%           C Corp DE         C DW         12,743,14         0.07%         0.09%         9.35%           C CM Attraines Financia Group Inc         C F         8,788,15         0.03%         2,26%         14,80%           C Clauses Gorp         C E R         8,786,15         0.03%         2,415%	irowth DCF Result	Weighted DCF Result
Contage Brands Inc         CAG         16,025.91         0.08%         2.89%         7.79%           Catarian Health Inc         CAT         72,591.68         0.28%         3.18%         8.97%           Dubb Ld         CB         66,882.22         0.25%         1.98%         10.73%           Cobe Global Markets Inc         CBDE         13,880.33         0.05%         1.08%         5.91%           Cober Global Markets Inc         CBDE         13,880.33         0.05%         1.08%         5.91%           Commo Grommenational Corp         CCL         63,932.75         0.01%         0.86%         8.31%           Commo Grommenational Systems Inc         CDNV         12,743.14         0.07%         0.96%         13.10%           Calanese Corp         CER         2,2581.62         0.08%         1.8.89%         17.84%           Christ Shadings Inc         CFG         18,205.32         0.06%         4.18%         5.74%           Christ Shadings Inc         CFG         18,205.32         0.08%         1.8.89%         6.37%           Christ Shadings Inc         CFR         18,205.32         0.08%         4.18%         5.74%           Christ Shadings Inc         CHK         18,270.718         0.04%	5.08%	0.0041%
Cardinal Health Inc         CAH         14.978.33         0.05%         3.95%         1.37%           Chubb Lid         CB         68.882.22         0.25%         1.98%         6.91%           Chubb Lid         CB         68.882.22         0.25%         1.98%         6.91%           CBRE         20.438.59         0.07%         0.00%         1.10%         CBRE         20.438.59         0.07%         0.00%         1.10%         0.65%         1.31%         1.05%         1.10%         0.65%         1.31%         1.05%         1.10%         0.65%         1.31%         1.05%         1.10%         0.65%         1.31%         1.05%         0.65%         1.31%         1.05%         0.65%         1.31%         1.05%         0.65%         1.31%         1.05%         0.65%         1.31%         1.05%         0.65%         1.35%         1.05%         0.35%         1.64%         0.65%         1.35%         1.05%         0.26%         1.57%         0.05%         1.25%         1.05%         1.25%         1.05%         1.25%         1.05%         1.25%         1.05%         1.25%         1.25%         1.25%         1.25%         1.25%         1.25%         1.25%         1.25%         1.25%         1.25%         1.		0.0944%
Catespillar Inc         CAT         72,591.68         0.25%         3.18%         8.97%           Chub Lid         CB         63,802.29         0.25%         1.98%         10.73%           Chee Global Markets Inc         CBOE         13,600.33         0.05%         1.08%         6.01%           Carwal Corp         CCI         22,382.75         0.13%         4.06%         8.31%           Corver Castle International Corp         CCI         22,382.75         0.13%         4.06%         8.31%           Corver Castle International Corp         CCI         22,382.75         0.17%         4.06%         8.31%           Colver Corp         CERN         22,561.62         0.06%         2.47%         4.09%           Catero Corp         CFG         15,763.51         0.03%         2.49%         8.17%           Chark Corp         CFG         15,737.51         0.44%         2.49%         6.30%           Chark Corp         CINF         17,146.10         10.44%         2.49%         6.30%           Corpace Canothic Corp         CINF         17,446.10         10.44%         2.44%         3.40%           Corpace Canothic Corp         CINF         17,446.10         10.45%         2.04%         2.45	10.65%	0.0062%
Chubb Ltd	5.35% 12.29%	0.0029% 0.0322%
CboB Global Markets Inc         CBOE         13,600.33         0.05%         1.08%         5.91%           CRPR Group Inc         CBRE Group Markets         0.05%         1.08%         8.31%           Caron Castle International Corp         CCI         23,8275         0.11%         4.66%         8.31%           Cadence Design Systems Inc         CDNS         20,233,56         0.07%         0.00%         13,07%           Cadence Design Systems Inc         CDNS         20,233,56         0.07%         0.00%         13,47%           Calumes Corp         CE         12,510,47         0.05%         2,67%         4.05%           Camer Corp         CE         12,510,47         0.05%         2,85%         8,74%           Chrink Shoright Inc         CFFG         6,206,32         0.03%         4,85%         6,97%           Chrink Shoright Co Inc         CHRW         9,767,79         0.04%         2,98%         6,90%           Clipanta Shoright Co Inc         CHRW         9,767,79         0.04%         0.02%         1,21%           Clinicantal Financial Corp         CI         7,183,937         0.26%         0.02%         1,21%           Clinicantal Financial Corp         CI         7,183,937         0.26%		0.0322%
CBRE         20.438.59         0.07%         0.00%         11.00%           Corwn Castel International Corp         CCL         22.382.75         0.11%         4.66%         8.31%           Carlword Design Systems Inc         CDN         13.02%         0.00%         9.35%           CDW CorpDE         CDW         13.743.14         0.07%         0.06%         2.47%         4.08%           Carlword Design Systems Inc         CDW         13.745.315         0.03%         2.48%         18.49%           Carlword Design Systems Inc         CFG         8.758.315         0.03%         2.48%         16.49%           Childsens Holdings Inc         CFG         8.763.51         0.03%         2.48%         16.49%           Childsens Financial Group Inc         CFG         112.065.32         0.09%         4.19%         2.60%           Charlow Control Inc         CHR         12.053.29         0.49%         0.28%         12.11%           Conjana Corp         CHTR         12.053.29         0.09%         0.02%         12.11%           Conjana Corp         CHR         17.46.10         NA         2.45%         NA           Conjana Corp         CHR         17.46.10         NA         2.25%         2.42%		0.0035%
Carnival Corp         CCL         23.322.75         0.11%         4.66%         8.31%           CDW Corp/DE         CDW         18,743.14         0.07%         0.96%         13.10%           CDW Corp/DE         CDW         18,743.14         0.07%         0.96%         13.10%           Center Corp         CE RN         22.561.62         0.08%         0.36%         15.49%           Center Corp         CF RJ,758.15         0.03%         2.98%         18.80%           Chttarts Evolution Corp         CH RV         15.213.73         0.07%         13.25%         8.17%           Christ Som Workshow         CH TR         15.037.91         0.46%         2.00%         4.13%         13.25%         8.17%           Contrast Evolutionations inc         CH TR         17.145.10         NA         2.02%         2.44%         8.39%           Contrast Evolutionations inc         CH TR         17.439.57         0.07%         2.69%         3.44%           Contrast Evolutionations inc         CH R         17.461.0         NA         2.28%         3.44%           Contrast Evolutionations inc         CMA         8.816.48         0.03%         4.62%         9.15%           Commeris Inc         CMA         8.816.4	11.00%	0.0081%
Cadneo Design Systems Inc         CDNS         2233.56         0.07%         0.09%         9.35%           ColW Carp/DE         CDW         147.43.14         0.07%         2.67%         4.08%           Cenere Corp         CE         12.510.47         0.08%         12.64%         4.08%           CF Industries Holdings Inc         CF G         18.205.32         0.08%         13.80%         5.74%           Church & Dwight Co Inc         CH R         12.213.73         0.07%         1.32%         8.17%           Church & Dwight Co Inc         CH RW         9.767.79         0.04%         0.00%         3.30%           Charton Sinc         CHTR         12.5037.91         0.45%         0.00%         3.30%           Colgate Paintolive Co         CL         63.2217.2         0.02%         12.11%           Constant Financial Corp         CIMCSA         19.645.57         0.07%         2.44%         3.85%           Constant Corp         CMCSA         19.645.57         0.07%         2.45%         8.65%           Commast Corp         CMK SA         19.645.57         0.07%         2.39%         7.16%           Commast Corp         CMK SA         19.645.57         0.07%         2.39%         7.16%		0.0473%
CDW CorpIDE         CDW         13,743,14         0.07%         0.96%         13,10%           Cerner Corp         CERN         22,561,62         0.08%         0.36%         15,49%           Crindustrise Holdings Inc         CFG         87,581,15         0.03%         2,98%         18,80%           Citizans Financial Group Inc         CFG         15,206,32         0.06%         4,15%         5,74%           Chrtch & Dwight Co Inc         CHD         18,213,73         0.07%         1,32%         6,17%           Chards Communications Inc         CHTR         17,463,10         NA         2,28%         NA           Control CThe         CL         17,839,57         0.26%         0.02%         13,10%           Control CThe         CLX         19,742,95         0.07%         2,48%         3,39%           Control CThe         CLX         19,742,95         0.07%         2,28%         NA           Control CThe         CLX         19,742,95         0.03%         2,28%         3,39%           Control Control         CMG         2,401,77         0.08%         2,42%         8,65%           Control Control         CMG A 2,401,77         0.08%         2,39%         7,71%		0.0140%
Celenes Cop         CE         12,510.47         0.08%         26.7%         4.08%           CF Industries Holdings Inc         CF         8.758,15         0.03%         12.49%           CHurdustries Holdings Inc         CF         8.758,15         0.03%         12.9%         5.74%           Churds & Dwight Co Inc         CHR         13.21%         8.17%         6.774%         0.07%         1.32%         8.17%           Churds & Dwight Co Inc         CHR         125.037.91         0.45%         0.00%         34.30%           Colgiato-Palmonike Co         CH         78.3957         0.04%         2.89%         6.90%           Colgiato-Palmonike Co         CL         63.32272         0.28%         0.24%         3.43%           Comerica Inc         CMA         8.816.48         0.03%         4.62%         9.15%           Comerica Inc         CMA         8.816.48         0.03%         4.62%         9.15%           Comerica Inc         CMA         8.816.48         0.03%         4.62%         9.15%           Comerica Inc         CMA         8.816.48         0.03%         4.24%         8.85%           Chied Mexican Grill Inc         CMA         8.816.48         0.03%         5.94%	9.35% 14.12%	0.0068% 0.0096%
Center Corp         CERN         22,561.62         0.08%         0.38%         15.489%           Childustish Holdings Inc         CFG         16,206.32         0.00%         4.15%         5.74%           Childustish Holdings Inc         CFG         16,206.32         0.00%         4.15%         5.74%           Childustish Holdings Inc         CHRW         9,767.79         0.04%         2.89%         6.90%           Charles Communications Inc         CHT         17.463.037.91         0.04%         2.89%         NA           Colgato Palmolive Co         CL         16,323.27         0.23%         0.02%         12.11%           Colorax CoThe         CLX         19,742.95         0.07%         2.69%         3.44%           Commeat Corp         CMCSA         196.645.57         0.71%         2.12%         9.34%           Commeat Corp         CMG 2.401.77         0.04%         3.07%         4.71%           Cummits Inc         CMG         2.401.77         0.13%         0.00%         2.87%           Cummits Inc         CMG         2.401.77         0.13%         0.00%         2.87%           Cummits Inc         CMG         2.401.77         0.13%         0.00%         2.87%		0.0031%
Chitzens Financial Group Inc         CFG         16,206.32         0.06%         4.15%         5.74%           Church & Dwight Co Inc         CHD         18,213.73         0.04%         2.89%         6.90%           Charter Communications Inc         CHT         125,037.91         0.45%         0.00%         34.30%           Cipina Corp         CINF         17,148,10         N/A         2.25%         N/A           Colgate-Pairnolive Co         CL         63,322,72         0.23%         2.44%         3.39%           Corrox CoThe         CLX         19,742,95         0.07%         4.24%         8.66%           Commast Corp         CMCS A         9,6645,57         0.17%         4.21%         8.66%           Chipotel Mexican Grill Inc         CMG         24,091,77         0.09%         3.07%         4.71%           Cummins Inc         CMI         24,507,38         0.09%         3.07%         4.71%           Comeast Corp         CNN         13,271,27         0.13%         0.00%         15.03%           CenterPoint Energy Inc         CNP         43,264,97         0.13%         0.09%         2.39%         7.16%           CenterPoint Energy Inc         CNP         45,268,68         0.16%		0.0129%
Church & Dwight Co Inc         CHD         18,213,73         0.07%         1.32%         8.17%           CH Robinson Worldwide Inc         CHRW         3,767.79         0.04%         2.89%         6.90%           Charter Communications Inc         CHTR         125,037.91         0.45%         0.002%         12.11%           Clipran Corp         CI         17,148.10         N.A         2.25%         N/A           Colgate-Palmonial Financial Corp         CINF         17,146.10         N.A         2.25%         N/A           Colgate-Palmonial Corp         CINF         17,148.10         N.A         2.25%         N/A           Colgate-Palmonial Corp         CMC         18,616.48         0.03%         4.62%         9.15%           Comencial Inc         CMC         196,645.57         0.71%         2.12%         9.34%           Child Foreign Corp         CMC         196,645.57         0.71%         2.12%         9.34%           Child Foreign Corp         CMC         36,674.97         0.09%         3.07%         4.71%           Controp Corp         CMS         19,446.05         0.07%         2.39%         7.19%           Canter Corp         CMC         36,674.97         0.13%         0.00%		0.0070%
CH Robinson Worldwide Inc         CHRW         9,767,79         0.04%         2.89%         6.90%           Charter Communications Inc         CHTR         125,037,91         0.45%         0.00%         33.30%           Cigna Corp         CINF         17,143,157         0.26%         0.02%         12,11%           Cincinnas Tinncial Corp         CINF         17,146,10         N/A         2.25%         N/A           Colgrace Conthe         CLX         19,742,95         0.07%         2.46%         9.15%           Comcast Corp         CMCSA         196,645,57         0.71%         2.12%         9.34%           CME Group Inc         CME         77,804,34         0.28%         2.42%         8.65%           Chipotel Mexican Grill Inc         CMG         24,091,77         0.09%         0.07%         2.37%         7.16%           Center Ont Enroy Inc         CME         77,844,34         0.28%         2.42%         8.65%         Cinnot Strange Corp         CMG         24,091,77         0.09%         0.07%         2.33%         7.16%         Common Strange Corp         CMS         1.374,27         0.13%         0.00%         1.63%         5.97%         Capital Corp         COS         5.747,66         0.02%         0.33	10.01%	0.0059%
Chatter Communications Inc         CHTR         12,037.91         0.45%         0.00%         94.30%           Cinjana Corp         CI         17,1839.57         0.28%         0.02%         12,11%           Cinoinali Financial Corp         CINF         17,146.10         N/A         2.24%         3.39%           Corpate Fainolive Co         CL         63.232.72         0.23%         2.44%         3.39%           Cornencia Inc         CMA         8.816.48         0.03%         4.62%         9.15%           Cornencia Inc         CMG         196.645.57         0.71%         2.12%         9.34%           Connecia Inc         CMG         2.409.77         0.09%         0.00%         2.42%         8.65%           Childel Maxican Grill Inc         CMG         2.401.77         0.09%         0.00%         4.71%           CME Group Inc         CMS         1.9.446.05         0.07%         2.39%         7.16%           Cantena Corp         CMS         1.9.446.05         0.07%         2.39%         7.16%           Cantena Corp         CMS         1.9.446.05         0.07%         2.39%         7.16%           Cantena Corp         COF         4.5.668.68         0.16%         6.5% <t< td=""><td>9.54% 9.89%</td><td>0.0063% 0.0035%</td></t<>	9.54% 9.89%	0.0063% 0.0035%
Clipna Corp         Cl         71.839.57         0.28%         0.02%         12.11%           Colpate Paimolive Co         CL         63.232.72         0.23%         2.44%         3.39%           Cornecta Che         CLX         19.742.95         0.07%         2.69%         3.44%           Cornecta Corp         CMGSA         8.816.48         0.03%         4.62%         9.15%           Contract Corp         CMGSA         19.645.57         0.71%         2.12%         9.34%           CME Group Inc         CME         71.694.34         0.28%         2.42%         8.86%           Chipotie Mexican Grill Inc         CME         24.901.7         0.09%         0.00%         2.857%           Cummins Inc         CMI         24.507.36         0.09%         3.07%         4.71%           CME Temport         CNC         36.674.37         0.13%         0.00%         5.03%           Cantan Corp         COF         45.568.68         0.16%         1.85%         5.97%           Cabit One Trancical Corp         COF         45.568.68         0.16%         0.38%         4.66%           Cooper Cos IncThe         COP         13.4965.79         0.43%         2.23%         0.80%		0.1549%
Colgate-Palmolive Co         CL         63/232.72         0.23%         2.44%         3.39%           Comcast Corbe         CIX         13/742.92         0.07%         2.69%         3.44%           Comensico Inc         CMA         8.816.48         0.03%         4.62%         9.15%           Comessi Corp         CMGSA         196.645.57         0.71%         2.12%         9.34%           Chel Group Inc         CME         77.844.34         0.28%         2.42%         8.65%           Channins Inc         CMI         2.4507.98         0.09%         3.07%         4.71%           CME Sensy Corp         CMS         19.446.05         0.07%         2.9%         7.16%           Capital One Financial Corp         COF         45.568.68         0.16%         1.8%         4.66%           Capital One Financial Corp         COG         5.747.66         0.02%         2.4%         2.78%           Cabot Ol & Gas Corp         COG         5.747.66         0.02%         2.4%         2.39%           Cooper Cos Inc/The         COO         7.75.97         0.03%         2.0%         8.64%           Consto Wholesale Corp         COST         7.75.97         0.03%         2.9%         8.64% <td></td> <td>0.0315%</td>		0.0315%
Clorence CoThe         CLX         19,742.95         0.07%         2.69%         3.44%           Comerica Inc         CMA         8,816.48         0.03%         4.62%         9.15%           Comerica Inc         CMES and phe         0.71%         2.12%         9.34%           Comerica Inc         CME         77.804.34         0.28%         2.42%         8.65%           Chipotle Mexican Grill Inc         CME         2.4991.77         0.09%         0.00%         2.23%         7.16%           Cummins Inc         CMI         2.4507.98         0.09%         3.07%         4.71%           Center Point Energy Corp         CNC         3.674.97         0.13%         0.00%         15.03%           Center Point Energy Inc         CNP         13.271.27         0.05%         4.38%         4.66%           Cabit Oli & Gas Corp         COG         5.747.66         0.02%         2.44%         2.76%           Concorbillips         COP         65.210.68         0.24%         2.23%         0.80%           Costo Ini Gas Corp         COST         13.4965.79         0.49%         0.89%         8.81%           Comorcorbillips         COP         65.210.68         0.24%         2.23%         7.07%	N/A	N/A
Comercia Inc         CMA         8,816.48         0.03%         4,62%         9,15%           Comcast Corp         CMESA         196.645.57         0.71%         2,12%         9,34%           CME Group Inc         CME         77,804.34         0.28%         2,42%         8,65%           Chipotie Mexican Grill Inc         CMI         24,507.98         0.09%         3,07%         4,71%           CMS Energy Corp         CMS         19,446.05         0.07%         2,33%         7,16%           Centene Corp         CNC         36,674.97         0.13%         0.00%         15,03%           Capital One Financial Corp         COF         45,568.68         0.16%         1.65%         5,37%           Cabot Ol & Gas Corp         COC         17,476.66         0.02%         2,48%         2,7.68%           Cooper Cos Inc/The         COO         17,019.24         0.06%         0.03%         5,90%           Costato Wholesale Corp         COST         13,4965.79         0.49%         0.89%         8,81%           Coty Inc         COTY         7,775.97         0.03%         4,20%         8,64%           Coty Inc         COTY         7,775.97         0.03%         0,00%         1,03% <td>5.86%</td> <td>0.0134%</td>	5.86%	0.0134%
Comcast Corp         CMCSA         196,645.57         0.71%         2.12%         9.34%           CME Group Inc         CME         77,804.34         0.28%         2.42%         8.65%           Chipotle Mexican Grill Inc         CMG         24,907.98         0.09%         3.07%         4.71%           Cummins inc         CMI         24,507.98         0.09%         3.07%         4.71%           Center Point Energy Corp         CNC         3.674.97         0.13%         0.00%         15.03%           Center Point Energy Inc         CNP         13.271.27         0.05%         4.33%         4.66%           Cabot Oli & Gas Corp         COG         5.747.66         0.02%         2.44%         27.68%           Coope Cos Inc/The         COO         17.019.24         0.06%         0.03%         5.90%           ConcoPhillipis         COP         65.210.68         0.24%         2.23%         0.80%           Carsto Ivid Soup Co         CPB         14.597.10         0.03%         2.33%         7.07%           Carphole Soup Co         CPRT         4.543.00         0.02%         0.00%         N/A           Salestore.com Inc         CRM         161,709.97         0.58%         0.00%         N/A	6.17% 13.98%	0.0044% 0.0045%
CME         CME         77, 80.34         0.28%         2.42%         8.65%           Chipote Maxian Grill Inc         CMG         24.907,98         0.09%         3.07%         4.71%           CMS Energy Corp         CMS         19,446.05         0.07%         2.39%         7.16%           Centene Corp         CNC         36,674.97         0.13%         0.00%         15.03%           Centene Corp         COF         45,568.68         0.16%         1.65%         5.77%           Cabot Ol & Gas Corp         COF         45,568.68         0.16%         0.63%         5.90%           Cooper Cos IncThe         COO         17.019.24         0.06%         0.03%         5.90%           Consct Wholesale Corp         COS         7.747.66         0.02%         2.23%         0.80%           Costor Wholesale Corp         COST         13.4965.79         0.49%         0.89%         8.14%           Coty Inc         COTY         7.775.97         0.03%         4.20%         8.64%           Coty Inc         COTY         7.75.97         0.03%         4.00%         NA           Cambel Soup Co         CPRI         4.543.00         0.02%         0.03%         5.30%           Cap	11.55%	0.0820%
Curmins Inc         CMI         24 507 98         0.09%         3.07%         4.11%           CMS Energy Corp         CMS         19.446.05         0.07%         2.39%         7.16%           Centene Corp         CNC         36.674.97         0.13%         0.00%         15.03%           CenterPoint Energy Inc         CNP         13.271.27         0.05%         4.38%         4.66%           Capital One Financial Corp         COF         45.568.68         0.16%         0.65%         5.97%           Cabor ConcThe         COO         17.019.42         0.06%         0.03%         5.90%           Cooper Cos IncThe         COO         17.019.42         0.06%         0.03%         5.90%           ConcorDhillips         COP         65.210.68         0.24%         2.23%         0.80%           Costo Wholesale Corp         COST         134.9667         0.04%         0.03%         4.20%         8.64%           Capni Holdings Ltd         CPRI         2.3584.80         NA         0.00%         NA           Salesforce.com Inc         CRM         161.708.77         0.58%         0.00%         2.23%           Cisco Systems Inc         CTL         14.892.53         0.16%         7.32%	11.17%	0.0314%
CMS         19.446.05         0.07%         2.99%         7.16%           Centenc Corp         CNC         36.6747         0.13%         0.09%         15.03%           CenterPoint Energy Inc         CNP         13.271.27         0.05%         4.38%         4.66%           Capital One Financial Corp         COG         5.747.66         0.02%         2.48%         2.768%           Concor Chillips         COO         17.019.24         0.06%         0.03%         5.90%           Concorchillips         COP         65.210.68         0.24%         2.23%         0.80%           Concorchillips         COP         65.210.68         0.24%         2.23%         0.80%           Consol Nolesale Corp         COST         134,965.79         0.49%         2.83%         7.07%           Capri Holdings Lid         CPRI         4.543.00         0.02%         0.00%         4.40%           Cisco Systems Inc         CSC         CSC         195.016.81         0.77%         3.13%         5.40%           Contrat Enology Solutions Corp         CTA         14.892.53         0.05%         7.32%         3.37%           Corpicant Texnlogy Solutions Corp         CTVA         21.648.85         0.06%         7.32%	28.57%	0.0249%
Center Corp         CNC         36,674.97         0.13%         0.00%         15.03%           Center Foir Lenergy Inc         CNP         13,271.27         0.05%         4.38%         4.66%           Capital One Financial Corp         COF         45,568.68         0.16%         1.65%         5.97%           Cabtor Oll & Gas Corp         COG         5,747.66         0.02%         2.44%         27.68%           Cooper Cos Inc/The         COO         17.019.24         0.06%         0.03%         5.90%           ConcorDhillips         COP         65,210.68         0.24%         2.23%         0.80%           Costor Wholesale Corp         COST         134,965.79         0.49%         0.89%         8.91%           Coty Inc         COTY         7.775.97         0.03%         4.20%         8.64%           Carpit Holdings Ltd         CPRI         4,543.00         0.02%         0.00%         4.07%           Costor Wholesale Corp         CSX         S97.25.57         0.23%         1.33%         5.40%           Cisco Systems Inc         CSCO         195,016.81         0.70%         3.13%         5.40%           Cista Systems Inc         CTL         14,492.53         0.05%         7.32%		0.0070%
CenterPoint Energy Inc         CNP         13,271.27         0.05%         4.38%         4.66%           Capital One Financial Corp         COF         45,568.68         0.16%         1.65%         5.97%           Cabot Oli & Gas Corp         COG         5,747.66         0.02%         2.48%         27.68%           ConcocPhillips         COP         65,210.68         0.24%         2.23%         0.80%           Costo Wholesale Corp         COST         134,965.79         0.49%         0.89%         8.91%           Coty Inc         COTY         7,775.97         0.03%         4.20%         8.64%           Campbell Soup Co         CPB         14,597.10         0.05%         2.93%         7.07%           Capart Inc         CRNI         161,708.97         0.89%         0.00%         4.07%           Cisco Systems Inc         CSCO         195,016.81         0.70%         3.13%         5.40%           Cistas Corp         CTAS         28,843.36         0.10%         0.91%         10.25%           CenturyLink Inc         CTL         14,892.53         0.05%         7.32%         3.97%           Corpart Inc         CTXS         15,785.25         0.06%         1.85%         1.46%	9.63%	0.0068%
Capital One Finamal Corp         COF         45,668.68         0.16%         1.65%         5.97%           Cabot Oil & Gas Corp         COG         5,747.66         0.02%         2.48%         27.68%           Cooper Cos Inc/The         COP         65,210.68         0.24%         2.23%         0.80%           ConcorDhillips         COP         65,210.68         0.24%         2.23%         0.80%           Costoc Wholesale Corp         COST         134,9667.79         0.03%         4.20%         8.64%           Campbell Soup Co         CPB         14,597.10         0.05%         2.93%         7.07%           Copart Hic         CPRI         4,543.00         0.02%         0.00%         N.IA           Salesforce.com Inc         CRM         161,708.97         0.58%         0.00%         2.33%           Cistos Systems Inc         CSX         59,723.57         0.22%         1.35%         13.40%           Contract Technology Solutions Corp         CTK         2.8,943.36         0.10%         0.91%         10.25%           CenturyLink Inc         CTL         14,892.53         0.05%         1.33%         5.40%           Cortex a Inc         CXS         15,785.25         0.06%         1.18%		0.0199% 0.0044%
Caber Oil & Gas Corp         COG         5,747.66         0.02%         2.48%         27.68%           Cooper Cos Inc/The         COO         17,019.24         0.06%         0.03%         5.90%           ConcocPhillips         COP         65,210.68         0.24%         2.23%         0.80%           Costo Wholesale Corp         COST         134,965.79         0.49%         0.89%         8.91%           Capt Holdings Ltd         COTY         7,775.97         0.03%         4.20%         8.64%           Capri Holdings Ltd         CPRI         4,543.00         0.00%         0.00%         4.07%           Copart Inc         CPRT         23,584.80         N/A         0.00%         2.38%           Cisco Systems Inc         CSCO         195,016.81         0.76%         3.13%         5.40%           Cisco Systems Inc         CSX         59,723.57         0.22%         1.35%         13.40%           Contrave Inc         CTL         14,892.53         0.05%         7.32%         3.97%           Cognizant Technology Solutions Corp         CTSH         33,69.59         0.12%         1.86%         16.20%           Cottrave Inc         CTVA         21,648.85         0.08%         1.88%         1		0.0126%
ConcooPhillips         COP         65.210.88         0.24%         2.23%         0.80%           Costs Wholesale Corp         COST         134,965.79         0.49%         0.89%         8.91%           Composition         COTY         7,775.97         0.03%         4.20%         8.64%           Campholidings Lid         CPB         14,597.10         0.05%         2.93%         7.07%           Copart Inc         CPRT         23,584.80         N/A         0.00%         N/A           Cisco Systems Inc         CSCO         195,016.81         0.7%%         3.13%         5.40%           Cisco Systems Inc         CSX         59,723.57         0.22%         1.35%         13.40%           Cintas Corp         CTAS         28,943.36         0.10%         0.91%         10.25%           Contrus Inc         CTL         14,892.53         0.06%         7.32%         3.97%           Contrus Inc         CTVA         21,648.85         0.08%         1.88%         16.20%           Citrix Systems Inc         CTXS         15,785.25         0.06%         1.15%         9.17%           Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%	30.50%	0.0063%
Costo Wholesale Corp         COST         134 de6.79         0.49%         0.89%         8.91%           Coty Inc         COY         7,775.97         0.03%         4.20%         8.64%           Campbell Soup Co         CPB         14,597.10         0.05%         2.93%         7.07%           Capar Holdings Ltd         CPRI         4,543.00         0.02%         0.00%         4.07%           Copart Inc         CPRI         2,3584.80         NA         0.00%         NA           salesforce.com Inc         CRM         161.708.97         0.58%         0.00%         22.38%           Cisco Systems Inc         CSCO         195,016.81         0.70%         3.13%         5.40%           Cista Corp         CTAS         28,943.36         0.10%         0.91%         10.25%           CenturyLink Inc         CTL         14,492.53         0.05%         7.32%         3.97%           Coty Isstems Inc         CTXS         15,785.25         0.06%         1.15%         9.17%           CVS Health Corp         CVX         202.588.05         0.73%         4.67%         1.89%           Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%      D		0.0036%
Coty Inc         COTY         7,775.97         0.03%         4.20%         8.64%           Campbell Soup Co         CPB         14,597.10         0.05%         2.93%         7.07%           Capri Holdings Ltd         CPRI         4,543.00         0.02%         0.00%         4.07%           Copart Inc         CPRT         23,584.80         N/A         0.00%         22.38%           Cisco Systems Inc         CSCO         195,016.81         0.70%         3.13%         5.40%           Cisco Systems Inc         CSX         59,723.57         0.22%         1.35%         13.40%           Cintas Corp         CTA         14,892.53         0.05%         7.32%         3.97%           Cognizant Technology Solutions Corp         CTVA         21,648.85         0.08%         1.88%         16.20%           Citrix Systems Inc         CTVA         21,648.85         0.08%         1.85%         9.17%           COrbus Inc         CVX         88,231.38         0.32%         2.95%         5.35%           Chevron Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         DA         71,086.75         0.26%         4.27%         4.56% <td></td> <td>0.0071%</td>		0.0071%
Campbell Soup Co         CPB         14,597.10         0.05%         2.93%         7.07%           Capart Holdings Ltd         CPRI         4,543.00         0.02%         0.00%         4.07%           Copart Inc         CPRT         23,584.80         N/A         0.00%         N/A           salesfore.com Inc         CRM         161,708.97         0.58%         0.00%         22.38%           Cisco Systems Inc         CSCO         195,016.81         0.70%         3.13%         5.40%           Cisto Systems Inc         CTAS         28,943.36         0.10%         0.91%         10.25%           CenturyLink Inc         CTL         14,892.53         0.05%         7.32%         3.97%           Cognizant Technology Solutions Corp         CTSH         33,609.59         0.12%         1.30%         10.60%           Cotreva Inc         CTVA         21,648.85         0.08%         1.88%         16.20%           Citrix Systems Inc         CYX         202,588.05         0.73%         4.67%         1.89%           Corchor Resources Inc         DX         71,086.75         0.26%         4.27%         4.56%           DuPont de Nemours Inc         DA         37,097.4         0.14%         2.44%	9.84% 13.02%	0.0480% 0.0037%
Capit Holdings Ltd         CPRI         4,543.00         0.02%         0.00%         4.07%           Copart Inc         CPRT         23,584.80         N/A         0.00%         N/A           salesforce.com Inc         CRM         161,708.97         0.58%         0.00%         22.38%           Cisco Systems Inc         CSC         195,016.81         0.70%         3.13%         5.40%           Cisco Systems Inc         CSX         59,723.57         0.22%         1.35%         13.40%           Cintas Corp         CTAS         28,943.36         0.10%         0.91%         10.25%           CenturyLink Inc         CTL         14,892.53         0.05%         7.32%         3.97%           Cognizant Technology Solutions Corp         CTXS         15,785.25         0.06%         1.15%         9.17%           CVS Health Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%           Domino Energy Inc         D         71,086.75         0.26%         4.27%         4.56%           DuPont de Nemours Inc         DA         30,609.45         0.13%         2.97%         1	10.10%	0.0053%
salesforce.com Inc         CRM         161,708.97         0.58%         0.00%         22.38%           Cisco Systems Inc         CSCO         195,016.81         0.70%         3.13%         5.40%           Cista Corp         CSX         59,723.57         0.22%         1.35%         13.40%           Cintas Corp         CTAS         28,943.36         0.10%         0.91%         10.25%           Cognizant Technology Solutions Corp         CTSH         33,609.59         0.12%         1.30%         16.00%           Corteva Inc         CTVA         21,648.85         0.08%         1.88%         16.20%           Citrix Systems Inc         CTXS         15,785.25         0.06%         1.15%         9.17%           COver Andre Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         CXO         15,233.95         0.06%         7.88%         Detta Air Lines Inc         DA         71,086.75         0.26%         4.27%         4.56%           DuPont de Nemours Inc         DD         7,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         11.17%           D		0.0007%
Cisco Systems Inc         CSCO         195,016.81         0.70%         3.13%         5.40%           CSX Corp         CSX         59,723.57         0.22%         1.35%         13.40%           Cintas Corp         CTAS         28,943.36         0.10%         0.91%         10.25%           CenturyLink Inc         CTL         14,892.53         0.05%         7.32%         3.97%           Cogrizant Technology Solutions Corp         CTSH         33,609.59         0.12%         1.30%         10.60%           Corteva Inc         CTXS         15,785.25         0.06%         1.15%         9.17%           CVS Health Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%           Dominion Energy Inc         D         71,086.75         0.26%         4.27%         4.56%           DuPorot de Nemours Inc         DD         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.06%         2.44%         5.	N/A	N/A
CSX Corp         CSX         59,723.57         0.22%         1.35%         13.40%           Cintas Corp         CTAS         28,943.36         0.10%         0.91%         10.25%           CenturyLink Inc         CTL         14,892.53         0.05%         7.32%         3.97%           Cognizant Technology Solutions Corp         CTSH         33,609.59         0.12%         1.30%         10.60%           Critix Systems Inc         CTXS         15,785.25         0.06%         1.15%         9.17%           CVS Health Corp         CVS         88,231.38         0.32%         2.95%         5.35%           Chevron Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         D         71,086.75         0.26%         4.27%         4.65%           DuPont de Nemours Inc         DD         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DGX         14,966.33         0.05%         2.04%         6.		0.1307%
Cintas Corp         CTAS         28,943.36         0.10%         0.91%         10.25%           CenturyLink Inc         CTL         14,892.53         0.05%         7.32%         3.97%           Cognizant Technology Solutions Corp         CTSH         33,609.59         0.12%         1.30%         10.60%           Corteva Inc         CTVA         21,648.85         0.08%         1.88%         16.20%           Citrix Systems Inc         CTXS         15,785.25         0.06%         1.15%         9.17%           CVS Health Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         DAL         36,049.45         0.13%         2.97%         11.25%           DuPont de Nemours Inc         DA         71,086.75         0.26%         4.27%         4.66%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%		0.0607% 0.0320%
CenturyLink Inc         CTL         14,892.53         0.05%         7.32%         3.97%           Cognizant Technology Solutions Corp         CTSH         33,609.59         0.12%         1.30%         10.60%           Conteva Inc         CTVA         21,648.85         0.08%         1.88%         16.20%           Citrix Systems Inc         CTXS         15,785.25         0.06%         1.15%         9.17%           CVS Health Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%           Dominion Energy Inc         D         71,086.75         0.26%         4.27%         4.56%           Delta Air Lines Inc         DAL         36,049.45         0.13%         2.97%         11.25%           DuPont de Nemours Inc         DB         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DGX         14,906.39         0.05%         2.04% </td <td></td> <td>0.0117%</td>		0.0117%
Corteva Inc         CTVA         21,648.85         0.08%         1.88%         16.20%           Cirtix Systems Inc         CTXS         15,785.25         0.06%         1.15%         9.17%           CVS Health Corp         CVS         88,231.38         0.32%         2.95%         5.35%           Chevron Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%           Dominion Energy Inc         D         71,086.75         0.26%         4.27%         4.56%           Detta Air Lines Inc         DAL         36,049.45         0.13%         2.97%         11.25%           DuPont de Nemours Inc         DD         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,200.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,966.93         0.05%         2.04%         6.4		0.0061%
Citrix Systems Inc         CTXS         15,785.25         0.06%         1.15%         9.17%           CVS         88,231.38         0.32%         2.95%         5.35%           Chevron Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%           Dominion Energy Inc         D         71,086.75         0.26%         4.27%         4.56%           DuPont de Nemours Inc         DD         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,906.93         0.05%         2.04%         6.42%           Danaher Corp         DHR         111,885.09         0.40%         0.44%         13.01%           Wait Disney CoThe         DIS         249,685.43         0.90%         1.34%         6.40%		0.0145%
CVS Health Corp         CVS         88,231.38         0.32%         2.95%         5.35%           Chevron Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%           Deminion Energy Inc         D         71,086.75         0.26%         4.27%         4.56%           Delta Air Lines Inc         DAL         36,049.45         0.13%         2.97%         11.25%           DuPont de Nemours Inc         DD         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,906.93         0.05%         2.04%         6.42%           Danaher Corp         DHR         111,885.09         0.40%         0.44%         13.01%           Walt Disney CoThe         DISCA         20,130.70         0.07%         1.20%         11		0.0143%
Chevron Corp         CVX         202,588.05         0.73%         4.67%         1.89%           Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%           Dominion Energy Inc         D         71,086.75         0.26%         4.27%         4.56%           Delta Air Lines Inc         DAL         36,049.45         0.13%         2.97%         11.25%           DuPont de Nemours Inc         DD         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,906.93         0.05%         2.04%         6.42%           Danaher Corp         DHR         11,885.09         0.40%         0.44%         13.01%           Walt Disney Co/The         DISCA         20,130.70         0.07%         0.00%         6.42%           Discover Inc         DISCA         20,130.70         0.07%         0.00%         6.4	10.37% 8.37%	0.0059% 0.0267%
Concho Resources Inc         CXO         15,233.95         0.06%         0.66%         7.88%           Dominion Energy Inc         D         71,086.75         0.26%         4.27%         4.56%           Delta Air Lines Inc         DAL         36,049.45         0.13%         2.97%         11.25%           DuPont de Nemours Inc         DD         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,906.93         0.05%         2.04%         6.42%           DR Horton Inc         DHR         11.885.73         0.08%         1.18%         14.54%           Danaher Corp         DHR         111.865.99         0.40%         0.44%         13.01%           Discovery Inc         DISCA         20,130.70         0.07%         1.20%         11.50%           Disch Very Inc         DLTR         26,778.76         0.10%         3.51%         41.2	6.60%	0.0483%
Delta Air Lines Inc         DAL         30,049.45         0.13%         2.97%         11.25%           DuPont de Nemours Inc         DD         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,906.93         0.05%         2.04%         6.42%           Danher Corp         DHR         11,885.09         0.40%         0.44%         13.01%           Walt Disney Co/The         DIS         249,685.43         0.90%         1.34%         6.40%           Discovery Inc         DISCA         20,130.70         0.07%         1.20%         11.50%           Digital Realty Trust Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dolar Tree Inc         DUW         16,538.58         0.06%         1.80%         10.80%           Dower Corp         DV         16,538.58         0.06%         1.80%         10.8	8.57%	0.0047%
DuPont de Nemours Inc         DD         37,799.74         0.14%         2.44%         5.25%           Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,906.93         0.05%         2.04%         6.42%           DR Horton Inc         DHI         21,688.73         0.08%         1.18%         14.54%           Danaher Corp         DHR         111,885.09         0.40%         0.44%         13.01%           Walt Disney Co/The         DISCA         20,130.70         0.07%         1.20%         11.50%           Discovery Inc         DISCA         20,130.70         0.07%         0.00%         5.40%           Digital Realty Trust Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dover Corp         DOV         16,538.58         0.06%         1.80%         10.80%           Dover Corp         DOV         16,538.58         0.06%         1.80%         10.80% <td>8.92%</td> <td>0.0229%</td>	8.92%	0.0229%
Deere & Co         DE         49,922.25         0.18%         2.09%         6.08%           Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,906.93         0.05%         2.04%         6.42%           DR Horton Inc         DHI         21,688.73         0.08%         1.18%         14.54%           Danaher Corp         DHR         111,8509         0.40%         0.44%         13.01%           Walt Disney Co/The         DIS         249,685.43         0.90%         1.34%         6.40%           Discovery Inc         DISCA         20,130.70         0.07%         1.20%         11.50%           DisH Network Corp         DISH         19,221.67         0.07%         0.00%         5.40%           Dollar Tree Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dolwer Corp         DOV         16,538.58         0.06%         1.80%         10.80%           Dower Corp         DOW         34,239.78         0.12%         6.25%         -1.28%		0.0187%
Discover Financial Services         DFS         23,290.30         0.08%         2.39%         11.17%           Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,906.93         0.05%         2.04%         6.42%           DR Horton Inc         DH         21,688.73         0.08%         1.18%         14.54%           Danaher Corp         DHR         111,885.09         0.40%         0.44%         13.01%           Walt Disney CoThe         DIS         249,885.43         0.90%         1.34%         6.40%           Discovery Inc         DISCA         20,130.70         0.07%         1.20%         11.50%           Digital Realty Trust Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dolar Tree Inc         DLTR         20,606.19         0.07%         0.00%         6.42%           Dower Corp         DOV         16,538.58         0.66%         1.80%         10.80%           Dower Corp         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%	7.75% 8.24%	0.0106% 0.0148%
Dollar General Corp         DG         39,058.21         0.14%         0.84%         11.03%           Quest Diagnostics Inc         DGX         14,906.93         0.05%         2.04%         6.42%           DR Horton Inc         DHI         21,688.73         0.08%         1.18%         14.54%           Danaher Corp         DHR         111,885.09         0.40%         0.44%         13.01%           Walt Disney Co/The         DIS         249,685.43         0.90%         1.34%         6.40%           Discovery Inc         DISCA         20,130.70         0.07%         1.20%         11.50%           Digital Realty Trust Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dolar Tree Inc         DLTR         20,606.19         0.07%         0.00%         6.42%           Dover Corp         DOV         16,538.58         0.06%         1.80%         10.80%           Dower Corp         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%		0.0140%
DR Horton Inc         DHI         21,688.73         0.08%         1.18%         14.54%           Danaher Corp         DHR         111,885.09         0.40%         0.44%         13.01%           Walt Disney Co/The         DIS         249,685.43         0.90%         1.34%         6.40%           Discovery Inc         DISKA         20,130.70         0.07%         1.20%         11.50%           DISH Network Corp         DISH         19,221.67         0.07%         0.00%         5.40%           Digital Realty Trust Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dollar Tree Inc         DLTR         20,606.19         0.07%         0.00%         6.42%           Dover Corp         DOV         16,538.58         0.06%         1.80%         10.80%           Dow Inc         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.49         0.05%         2.68%         8.10%           DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%		0.0168%
Danaher Corp         DHR         111,885.09         0.40%         0.44%         13.01%           Walt Disney CoThe         DIS         249,885.43         0.90%         1.34%         6.40%           Discovery Inc         DISCA         20,130.70         0.07%         1.20%         11.50%           DISH Network Corp         DISH         19,221.67         0.07%         0.00%         5.40%           Digital Realty Trust Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dollar Tree Inc         DLTR         20,606.19         0.07%         0.00%         6.42%           Dover Corp         DOV         16,538.58         0.66%         1.80%         10.80%           Dow Inc         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%           DTE Energy Co         DTE         25475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78% <td></td> <td>0.0046%</td>		0.0046%
Walt Disney Co/The         DIS         249,685.43         0.90%         1.34%         6.40%           Discovery Inc         DISCA         20,130.70         0.07%         1.20%         11.50%           DISH Network Corp         DISH         19,221.67         0.07%         0.00%         5.40%           Digital Realty Trust Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dollar Tree Inc         DLTR         20,606.19         0.07%         0.00%         6.42%           Dover Corp         DOV         16,538.58         0.06%         1.80%         10.80%           Dow Inc         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%           DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78%		0.0124%
Discovery Inc         DISCA         20,130.70         0.07%         1.20%         11.50%           DISH Network Corp         DISH         19,221.67         0.07%         0.00%         5.40%           Digital Realty Trust Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dollar Tree Inc         DLTR         20,606.19         0.07%         0.00%         6.42%           Dover Corp         DOV         16,538.58         0.06%         1.80%         10.80%           Dow Inc         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%           DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78%		0.0545% 0.0702%
DISH Network Corp         DISH         19,221.67         0.07%         0.00%         5.40%           Digital Realty Trust Inc         DLR         26,778.76         0.10%         3.51%         41.20%           Dollar Tree Inc         DLTR         20,606.19         0.07%         0.00%         6.42%           Dover Corp         DOV         16,538.58         0.06%         1.80%         10.80%           Dow Inc         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%           DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78%		0.0093%
Dollar Tree Inc         DLTR         20,606.19         0.07%         0.00%         6.42%           Dover Corp         DOV         16,538.58         0.06%         1.80%         10.80%           Dow Inc         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%           DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78%		0.0037%
Dover Corp         DOV         16,538.58         0.06%         1.80%         10.80%           Dow Inc         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%           DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78%		0.0439%
Dow Inc         DOW         34,239.78         0.12%         6.25%         -1.28%           Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%           DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78%		0.0048%
Duke Realty Corp         DRE         13,346.49         0.05%         2.58%         4.80%           Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%           DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78%		0.0076% 0.0061%
Darden Restaurants Inc         DRI         14,147.42         0.05%         3.03%         8.10%           DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78%		0.0036%
DTE Energy Co         DTE         25,475.05         0.09%         2.89%         5.87%           Duke Energy Corp         DUK         71,175.48         0.26%         3.88%         4.78%		0.0057%
		0.0081%
		0.0225%
DaVita Inc         DVA         10,232.29         0.04%         0.00%         14.20%           Devon Energy Corp         DVN         8,342.65         0.03%         1.61%         11.40%		0.0052% 0.0039%
Devon Energy Corp         DVN         8,342.65         0.03%         1.61%         11.40%           DXC Technology Co         DXC         8,161.20         0.03%         2.60%         -1.44%		0.0003%
Electronic Arts Inc EA 31,510.36 0.11% 0.00% 7.79%		0.0089%
eBay Inc EBAY 26,716.47 0.10% 1.88% 12.25%	14.25%	0.0137%
Ecolab Inc ECL 56,527,61 0.20% 0.94% 12.37%		0.0273%
Consolidated Edison Inc         ED         31,248.46         0.11%         3.15%         3.58%           Enviée Los         EEY         18,450,40         0.07%         1.04%         11,67%		0.0077%
Equifax Inc         EFX         18,150.40         0.07%         1.04%         11.67%           Edison International         EIX         27,450.92         0.10%         3.23%         5.29%		0.0084% 0.0085%
Edison international EIX 27,450.92 0.10% 5.23% 5.29% Estee Lauder Cos Inc/The EL 70,221.21 0.25% 0.94% 11.84%		0.0326%
Eastman Chemical Co EMN 9,691.24 0.04% 3.73% 5.87%		0.0034%
Emerson Electric Co         EMR         43,633.69         0.16%         2.80%         8.03%	10.94%	0.0172%
EOG Resources Inc         EOG         42,416.42         0.15%         1.40%         6.00%           EOG Resources Inc         EOG         42,416.42         0.15%         1.40%         6.00%		0.0114%
Equinix Inc         EQIX         50,291.50         0.18%         1.67%         18.00%           Fourthy Recidential         EOP         30.878.42         0.11%         2.87%         8.78%		0.0360%
Equity Residential         EQR         30,878.42         0.11%         2.87%         8.78%           Eversource Energy         ES         29,928.50         0.11%         2.32%         6.67%		0.0131% 0.0098%
Every Solide Line gy         ES         23,32.30         0.11%         2.32.%         0.07%           Essex Property Trust Inc         ESS         20,469.45         0.07%         2.65%         8.22%		0.0081%

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		[4] Market	[5]	[6] Estimated	[7] Long-Term Growth	[8]	[9] Weighted
Company	Ticker	Capitalization	Weight in Index	Dividend Yield	Est.	DCF Result	DCF Result
E*TRADE Financial Corp	ETFC	9,488.16	0.03%	1.36%	3.38%	4.76%	0.0016%
Eaton Corp PLC	ETN	39,053.90	0.14%	2.99%	8.44%	11.55%	0.0163%
Entergy Corp	ETR EVRG	26,185.91	0.09% 0.06%	2.80% 2.67%	-0.94% 6.51%	1.85% 9.27%	0.0017% 0.0055%
Evergy Inc Edwards Lifesciences Corp	EWRG	16,445.49 45,856.20	0.08%	0.00%	14.32%	9.27% 14.32%	0.0237%
Exelon Corp	EXC	46,160.02	0.17%	3.04%	2.97%	6.06%	0.0101%
Expeditors International of Washington I	EXPD	12,438.80	0.04%	1.35%	9.73%	11.15%	0.0050%
Expedia Group Inc	EXPE	15,712.92	0.06%	1.22%	12.35%	13.65%	0.0077%
Extra Space Storage Inc	EXR	14,334.22	0.05%	3.22%	4.88%	8.18%	0.0042%
Ford Motor Co	F	34,970.39	0.13%	6.80%	3.59%	10.51%	0.0133%
Diamondback Energy Inc	FANG	11,937.08	0.04%	0.90%	24.41%	25.42%	0.0110%
Fastenal Co	FAST	20,025.62	0.07%	2.70%	14.25%	17.15%	0.0124%
Facebook Inc	FB	575,534.49	2.08%	0.00%	22.27%	22.27%	0.4629%
Fortune Brands Home & Security Inc	FBHS	9,561.08	0.03%	1.35%	8.96%	10.38%	0.0036%
Freeport-McMoRan Inc	FCX FDX	16,105.14	0.06% 0.14%	1.80% 1.81%	-1.93% 20.40%	-0.15% 22.40%	-0.0001% 0.0306%
FedEx Corp FirstEnergy Corp	FE	37,768.26 27,442.43	0.10%	2.99%	0.69%	3.69%	0.0037%
F5 Networks Inc	FFIV	7,425.26	0.03%	0.00%	8.50%	8.50%	0.0023%
Fidelity National Information Services I	FIS	88,293.48	0.32%	0.98%	11.94%	12.98%	0.0414%
Fiserv Inc	FISV	80,642.35	0.29%	0.00%	17.36%	17.36%	0.0506%
Fifth Third Bancorp	FITB	20,168.66	0.07%	3.84%	3.80%	7.71%	0.0056%
FLIR Systems Inc	FLIR	6,914.25	0.02%	1.31%	13.10%	14.50%	0.0036%
Flowserve Corp	FLS	6,108.55	0.02%	1.65%	11.39%	13.13%	0.0029%
FleetCor Technologies Inc	FLT	27,356.03	0.10%	0.00%	15.57%	15.57%	0.0154%
FMC Corp	FMC	12,389.93	0.04%	1.68%	10.20%	11.97%	0.0054%
Fox Corp	FOXA	22,815.36	0.08%	1.12%	6.02%	7.18%	0.0059%
First Republic Bank/CA	FRC	18,962.92	0.07%	0.71%	10.22%	10.97%	0.0075%
Federal Realty Investment Trust	FRT	9,441.86	0.03%	3.32%	5.70%	9.11%	0.0031%
TechnipFMC PLC Fortinet Inc	FTI FTNT	7,381.04 19,730.45	0.03% 0.07%	3.28% 0.00%	7.00% 16.82%	10.39% 16.82%	0.0028% 0.0120%
Fortive Corp	FTV	25,161.81	0.09%	0.39%	8.57%	8.97%	0.0082%
General Dynamics Corp	GD	50,755.86	0.18%	2.51%	7.78%	10.39%	0.0190%
General Electric Co	GE	108,732.69	0.39%	0.32%	8.13%	8.47%	0.0333%
Gilead Sciences Inc	GILD	79,957.20	0.29%	3.97%	1.27%	5.26%	0.0152%
General Mills Inc	GIS	31,583.53	0.11%	3.75%	6.50%	10.38%	0.0118%
Globe Life Inc	GL	11,290.14	0.04%	0.65%	8.07%	8.75%	0.0036%
Corning Inc	GLW	20,337.78	0.07%	3.43%	8.48%	12.06%	0.0089%
General Motors Co	GM	47,707.10	0.17%	4.59%	10.51%	15.34%	0.0264%
Alphabet Inc	GOOGL	988,702.25	3.57%	0.00%	15.76%	15.76%	0.5628%
Genuine Parts Co	GPC	13,595.08	0.05%	3.23%	4.47%	7.77%	0.0038%
Global Payments Inc Gap Inc/The	GPN GPS	58,742.11 6,499.14	0.21% 0.02%	0.14% 5.59%	18.27% 4.63%	18.42% 10.36%	0.0391% 0.0024%
Garmin Ltd	GRMN	18,430.49	0.02%	2.30%	6.70%	9.07%	0.0060%
Goldman Sachs Group Inc/The	GS	87,655.68	0.32%	2.20%	7.78%	10.07%	0.0319%
WW Grainger Inc	GWW	16,303.70	0.06%	1.97%	9.28%	11.33%	0.0067%
Halliburton Co	HAL	19,144.91	0.07%	3.33%	12.26%	15.80%	0.0109%
Hasbro Inc	HAS	13,939.21	0.05%	2.65%	10.93%	13.73%	0.0069%
Huntington Bancshares Inc/OH	HBAN	13,841.45	0.05%	4.56%	5.84%	10.53%	0.0053%
Hanesbrands Inc	HBI	4,976.95	0.02%	4.36%	4.94%	9.41%	0.0017%
HCA Healthcare Inc	HCA	47,077.95	0.17%	0.92%	9.72%	10.68%	0.0182%
Home Depot Inc/The	HD HES	248,818.56 17.237.23	0.90%	2.37%	9.38%	11.87%	0.1067%
Hess Corp HollyFrontier Corp	HES	7,249.63	0.06% 0.03%	1.83% 2.99%	4.40% -4.59%	6.27% -1.66%	0.0039% -0.0004%
Hartford Financial Services Group Inc/Th	HIG	21,365.77	0.08%	2.05%	9.50%	11.65%	0.0090%
Huntington Ingalls Industries Inc	HII	10,674.99	0.04%	1.33%	40.00%	41.60%	0.0160%
Hilton Worldwide Holdings Inc	HLT	30,417.17	0.11%	0.56%	12.00%	12.59%	0.0138%
Harley-Davidson Inc	HOG	5,153.37	0.02%	4.56%	7.70%	12.44%	0.0023%
Hologic Inc	HOLX	14,091.92	0.05%	0.00%	10.37%	10.37%	0.0053%
Honeywell International Inc	HON	123,771.49	0.45%	2.08%	7.24%	9.39%	0.0420%
Helmerich & Payne Inc	HP	4,444.45	0.02%	6.50%	4.47%	11.11%	0.0018%
Hewlett Packard Enterprise Co	HPE	18,010.46	0.07%	3.47%	5.41%	8.98%	0.0058%
HP Inc	HPQ	30,981.96	0.11%	3.30%	-1.30%	1.98%	0.0022%
H&R Block Inc Hormel Foods Corp	HRB HRL	4,529.71 25,271.66	0.02%	4.44% 1.96%	10.00% 4.62%	14.66%	0.0024% 0.0060%
Henry Schein Inc	HSIC	10,116.27	0.09% 0.04%	0.00%	3.21%	6.62% 3.21%	0.0012%
Host Hotels & Resorts Inc	HST	11,718.69	0.04%	5.04%	16.32%	21.78%	0.0092%
Hershey Co/The	HSY	32,418.33	0.12%	2.05%	7.90%	10.03%	0.0117%
Humana Inc	HUM	44,526.93	0.16%	0.65%	13.52%	14.22%	0.0229%
nternational Business Machines Corp	IBM	127,292.67	0.46%	4.66%	4.57%	9.34%	0.0429%
ntercontinental Exchange Inc	ICE	55,540.17	0.20%	1.12%	9.80%	10.97%	0.0220%
DEXX Laboratories Inc	IDXX	23,247.93	0.08%	0.00%	19.19%	19.19%	0.0161%
DEX Corp	IEX	12,462.41	0.05%	1.27%	12.23%	13.58%	0.0061%
nternational Flavors & Fragrances Inc	IFF	13,999.43	0.05%	2.23%	9.57%	11.90%	0.0060%
llumina Inc	ILMN	42,640.29	0.15%	0.00%	13.96%	13.96%	0.0215%
ncyte Corp	INCY	15,739.08	0.06%	0.00%	40.60%	40.60%	0.0231%
HS Markit Ltd	INFO	30,987.93	0.11%	0.54%	12.00%	12.57%	0.0141%
ntel Corp	INTC INTU	273,428.61	0.99%	2.04%	6.22%	8.32%	0.0821%
ntuit Inc nternational Paper Co	INTU	72,984.77 15,966.98	0.26% 0.06%	0.74% 5.05%	13.96% 6.10%	14.75% 11.31%	0.0389% 0.0065%
Interpublic Group of Cos Inc/The	IPG	8,801.52	0.08%	5.05% 4.14%	6.11%	10.37%	0.0085%
			0.02%	0.00%	-10.17%	-10.17%	-0.0025%
PG Photonics Corp		6 775 45		0.0070	10.1170		0.0020/0
PG Photonics Corp QVIA Holdings Inc	IPGP	6,775.45 30.124.33		0.00%	17.60%	17.60%	0.0191%
PG Photonics Corp QVIA Holdings Inc Ingersoll-Rand PLC		30,124.33	0.11%	0.00% 1.70%	17.60% 8.97%	17.60% 10.75%	0.0191% 0.0123%
QVIA Holdings Inc	IPGP IQV		0.11%	0.00% 1.70% 7.78%	17.60% 8.97% 4.42%	17.60% 10.75% 12.37%	0.0191% 0.0123% 0.0041%
QVIA Holdings Inc ngersoll-Rand PLC	IPGP IQV IR	30,124.33 31,750.95	0.11% 0.11%	1.70%	8.97%	10.75%	0.0123%
QVIA Holdings Inc ngersoll-Rand PLC ron Mountain Inc ntuitive Surgical Inc Sartner Inc	IPGP IQV IR IRM ISRG IT	30,124.33 31,750.95 9,076.60 64,695.74 14,382.25	0.11% 0.11% 0.03% 0.23% 0.05%	1.70% 7.78% 0.00% 0.00%	8.97% 4.42% 12.24% 12.77%	10.75% 12.37% 12.24% 12.77%	0.0123% 0.0041% 0.0286% 0.0066%
QVIA Holdings Inc ngersoll-Rand PLC ron Mountain Inc ntuitive Surgical Inc	IPGP IQV IR IRM ISRG	30,124.33 31,750.95 9,076.60 64,695.74	0.11% 0.11% 0.03% 0.23%	1.70% 7.78% 0.00%	8.97% 4.42% 12.24%	10.75% 12.37% 12.24%	0.0123% 0.0041% 0.0286%

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		[4] Market	[5]	[6] Estimated	[7] Long-Term Growth	[8]	[9] Weighted
Company	Ticker	Capitalization	Weight in Index	Dividend Yield	Est.	DCF Result	DCF Result
Jacobs Engineering Group Inc	J	12,329.57	0.04%	0.78%	11.99%	12.81%	0.0057%
JB Hunt Transport Services Inc	JBHT	11,502.95	0.04%	1.00%	11.83%	12.90%	0.0054%
Johnson Controls International plc	JCI	30,141.66	0.11%	2.79%	9.67%	12.59%	0.0137%
Jack Henry & Associates Inc	JKHY	11,505.14	0.04%	1.08%	12.65%	13.80%	0.0057%
Johnson & Johnson	JNJ JNPR	391,806.84	1.42% 0.03%	2.69% 3.43%	5.55% 8.66%	8.32% 12.24%	0.1177%
Juniper Networks Inc JPMorgan Chase & Co	JPM	7,678.18 415,145.14	1.50%	3.43% 2.84%	6.80%	9.74%	0.0034% 0.1460%
Nordstrom Inc	JWN	5,722.63	0.02%	4.02%	6.00%	10.14%	0.0021%
Kellogg Co	K	23,266.03	0.08%	3.32%	1.65%	5.00%	0.0042%
KeyCorp	KEY	18,428.56	0.07%	4.18%	11.45%	15.87%	0.0106%
Keysight Technologies Inc	KEYS	17,523.74	0.06%	0.00%	8.19%	8.19%	0.0052%
Kraft Heinz Co/The	KHC	35,657.89	0.13%	5.48%	-2.88%	2.52%	0.0033%
Kimco Realty Corp	KIM	8,226.07	0.03%	5.92%	4.47%	10.52%	0.0031%
KLA Corp	KLAC	26,152.86	0.09%	1.98%	13.90%	16.02%	0.0151%
Kimberly-Clark Corp	KMB	49,103.47	0.18%	2.98%	5.09%	8.15%	0.0145%
Kinder Morgan Inc/DE CarMax Inc	KMI KMX	47,269.83 15,854.89	0.17% 0.06%	5.97% 0.00%	3.10% 10.31%	9.16% 10.31%	0.0156% 0.0059%
Coca-Cola Co/The	KO	250,214.30	0.90%	2.86%	8.20%	11.18%	0.1010%
Kroger Co/The	KR	21,503.78	0.08%	2.24%	5.07%	7.38%	0.0057%
Kohl's Corp	KSS	6,693.28	0.02%	6.38%	8.00%	14.64%	0.0035%
Kansas City Southern	KSU	16,219.70	0.06%	0.94%	11.10%	12.09%	0.0071%
Loews Corp	L	15,303.24	N/A	0.49%	N/A	N/A	N/A
L Brands Inc	LB	6,403.15	0.02%	5.19%	11.50%	16.98%	0.0039%
Leidos Holdings Inc	LDOS	14,222.92	0.05%	1.34%	10.00%	11.40%	0.0059%
Leggett & Platt Inc	LEG	6,262.98	0.02%	3.32%	10.00%	13.49%	0.0031%
Lennar Corp	LEN	20,437.69	0.07%	0.50%	12.59%	13.11%	0.0097%
Laboratory Corp of America Holdings L3Harris Technologies Inc	LH LHX	17,031.34 48,928.24	0.06% N/A	0.00% 1.30%	5.32% N/A	5.32% N/A	0.0033% N/A
Linde PLC	LIN	48,928.24	0.39%	1.76%	9.50%	11.34%	0.0447%
LING FLC	LKQ	10.016.70	0.04%	0.00%	9.50%	14.20%	0.0051%
Eli Lilly & Co	LLY	134,072.66	0.48%	2.06%	10.49%	12.65%	0.0613%
Lockheed Martin Corp	LMT	120,760.42	0.44%	2.29%	8.89%	11.27%	0.0492%
Lincoln National Corp	LNC	10,805.05	0.04%	2.76%	9.00%	11.89%	0.0046%
Alliant Energy Corp	LNT	14,487.99	0.05%	2.40%	5.78%	8.24%	0.0043%
Lowe's Cos Inc	LOW	89,095.10	0.32%	1.81%	14.88%	16.83%	0.0541%
Lam Research Corp	LRCX	42,483.59	0.15%	1.51%	14.14%	15.76%	0.0242%
Southwest Airlines Co	LUV	28,934.66	0.10%	1.36%	7.70%	9.11%	0.0095%
Las Vegas Sands Corp	LVS LW	50,160.47	0.18%	4.85% 0.95%	4.45% 8.97%	9.41% 9.96%	0.0170% 0.0048%
Lamb Weston Holdings Inc LyondellBasell Industries NV	LYB	13,339.67 25,959.37	0.05% 0.09%	5.81%	6.40%	12.40%	0.0048%
Live Nation Entertainment Inc	LYV	14,566.85	N/A	0.00%	N/A	N/A	N/A
Macy's Inc	M	4,928.00	0.02%	9.46%	-1.93%	7.44%	0.0013%
Mastercard Inc	MA	318,151.58	1.15%	0.45%	17.42%	17.91%	0.2058%
Mid-America Apartment Communities Inc	MAA	15,650.98	N/A	2.92%	N/A	N/A	N/A
Marriott International Inc/MD	MAR	45,790.83	0.17%	1.32%	7.32%	8.69%	0.0144%
Masco Corp	MAS	13,594.21	0.05%	1.01%	9.60%	10.66%	0.0052%
McDonald's Corp	MCD	161,139.38	0.58%	2.37%	8.99%	11.47%	0.0667%
Microchip Technology Inc	MCHP MCK	23,295.54 25.696.60	0.08% 0.09%	1.50% 1.16%	9.31%	10.88% -14.49%	0.0092% -0.0134%
McKesson Corp Moody's Corp	MCO	48,481.95	0.18%	0.82%	-15.55% 11.33%	12.20%	0.0214%
Mondelez International Inc	MDLZ	82,617.12	0.30%	2.07%	8.32%	10.48%	0.0313%
Medtronic PLC	MDT	154,733.18	0.56%	1.84%	7.62%	9.53%	0.0533%
MetLife Inc	MET	45,714.87	0.17%	3.50%	9.96%	13.64%	0.0225%
MGM Resorts International	MGM	15,995.41	0.06%	1.67%	1.97%	3.66%	0.0021%
Mohawk Industries Inc	MHK	9,431.22	0.03%	0.00%	8.35%	8.35%	0.0028%
McCormick & Co Inc/MD	MKC	21,719.80	0.08%	1.50%	5.00%	6.54%	0.0051%
MarketAxess Holdings Inc	MKTX	13,431.76	N/A	0.67%	N/A	N/A	N/A
Martin Marietta Materials Inc	MLM	16,487.64	0.06%	0.78%	13.85%	14.69%	0.0087%
Marsh & McLennan Cos Inc 3M Co	MMC MMM	56,452.19 91,237.54	0.20% 0.33%	1.71% 3.75%	11.17% 6.65%	12.98% 10.53%	0.0265%
Monster Beverage Corp	MNST	91,237.54 35,809.60	0.33%	0.00%	12.50%	12.50%	0.0347% 0.0162%
Altria Group Inc	MO	88,309.86	0.32%	7.29%	7.23%	14.79%	0.0472%
Mosaic Co/The	MOS	7,514.65	0.03%	0.97%	4.45%	5.44%	0.0015%
Marathon Petroleum Corp	MPC	35,388.03	0.13%	4.28%	11.58%	16.10%	0.0206%
Merck & Co Inc	MRK	217,528.89	0.79%	2.58%	10.44%	13.15%	0.1033%
Marathon Oil Corp	MRO	9,095.19	0.03%	1.76%	0.20%	1.96%	0.0006%
Morgan Stanley	MS	84,587.93	0.31%	2.88%	10.85%	13.88%	0.0424%
MSCI Inc	MSCI	24,209.34	0.09%	1.00%	13.75%	14.82%	0.0130%
Microsoft Corp Motorola Solutions Inc	MSFT	1,294,777.38	4.68%	1.16%	11.88%	13.11%	0.6130%
Motorola Solutions Inc M&T Bank Corp	MSI MTB	30,326.48 22,237.91	0.11% 0.08%	1.30% 2.69%	7.10% 5.46%	8.44% 8.22%	0.0092% 0.0066%
Mettler-Toledo International Inc	MTD	18,440.51	0.08%	0.00%	5.46% 11.79%	8.22% 11.79%	0.0088%
Micron Technology Inc	MU	58,976.28	0.21%	0.00%	6.19%	6.19%	0.0132%
Maxim Integrated Products Inc	MXIM	16,195.98	0.06%	3.20%	6.73%	10.03%	0.0059%
Mylan NV	MYL	11,055.56	0.04%	0.00%	2.90%	2.90%	0.0012%
Noble Energy Inc	NBL	9,455.95	0.03%	2.36%	8.65%	11.11%	0.0038%
Norwegian Cruise Line Holdings Ltd	NCLH	11,456.99	0.04%	0.10%	8.21%	8.32%	0.0034%
Nasdaq Inc	NDAQ	19,089.55	0.07%	1.70%	7.83%	9.60%	0.0066%
NextEra Energy Inc	NEE	131,089.70	0.47%	2.10%	7.97%	10.15%	0.0481%
Newmont Corp	NEM	37,590.79	0.14%	1.83%	7.70%	9.60%	0.0130%
Netflix Inc	NFLX	151,427.79	0.55%	0.00%	29.57%	29.57%	0.1617%
NiSource Inc NIKE Inc	NI NKE	10,948.57 149,975.00	0.04% 0.54%	2.74% 0.97%	4.68% 14.25%	7.48% 15.29%	0.0030% 0.0828%
			0.54%	0.97%	4.67%	15.29% 6.11%	0.0828%
	NLOK	17 712 68					
NortonLifeLock Inc	NLOK NLSN	17,712.68 7,258.53					
	NLOK NLSN NOC	17,712.68 7,258.53 62,791.84	0.03%	5.48% 1.49%	8.75% 16.49%	14.47% 18.11%	0.0038% 0.0411%
NortonLifeLock Inc Nielsen Holdings PLC	NLSN	7,258.53	0.03%	5.48%	8.75%	14.47%	0.0038%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
NRG Energy Inc	NRG	9,281.31	0.03%	0.33%	37.98%	38.37%	0.0129%
Norfolk Southern Corp	NSC	53,698.39	0.19%	1.83%	11.20%	13.13%	0.0255%
NetApp Inc	NTAP	12,187.28	0.04%	3.59%	5.54%	9.22%	0.0041%
Northern Trust Corp	NTRS	20,724.14	0.07%	2.97%	9.42%	12.53%	0.0094%
Nucor Corp NVIDIA Corp	NUE NVDA	14,399.69 144,695.16	0.05% 0.52%	3.39% 0.27%	6.80% 9.17%	10.31% 9.46%	0.0054% 0.0494%
NVR Inc	NVR	13,866.18	0.05%	0.00%	12.23%	12.23%	0.0061%
Newell Brands Inc	NWL	8,269.00	0.03%	4.71%	-12.53%	-8.11%	-0.0024%
News Corp	NWSA	8,080.98	0.03%	1.42%	-1.25%	0.17%	0.0000%
Realty Income Corp	0	25,555.32	0.09%	3.46%	4.95%	8.50%	0.0078%
Old Dominion Freight Line Inc ONEOK Inc	ODFL OKE	15,663.77 30.927.65	0.06% 0.11%	0.34% 4.76%	12.87% 12.31%	13.23% 17.36%	0.0075% 0.0194%
Omnicom Group Inc	OMC	16,397.40	0.06%	3.45%	4.16%	7.68%	0.0045%
Oracle Corp	ORCL	168,241.19	0.61%	1.78%	8.18%	10.04%	0.0610%
O'Reilly Automotive Inc	ORLY	30,725.08	0.11%	0.00%	11.95%	11.95%	0.0133%
Occidental Petroleum Corp	OXY	35,482.57	0.13%	7.82%	4.80%	12.81%	0.0164%
Paycom Software Inc Paychex Inc	PAYC PAYX	18,580.23 30,738.81	0.07% 0.11%	0.00% 2.92%	26.00% 7.25%	26.00% 10.28%	0.0174% 0.0114%
People's United Financial Inc	PBCT	6,835.29	0.02%	4.65%	2.00%	6.70%	0.0017%
PACCAR Inc	PCAR	25,698.92	0.09%	3.56%	4.47%	8.11%	0.0075%
Healthpeak Properties Inc	PEAK	18,353.23	0.07%	4.11%	3.64%	7.83%	0.0052%
Public Service Enterprise Group Inc	PEG	29,939.01	0.11%	3.17%	5.22%	8.48%	0.0092%
PepsiCo Inc	PEP	198,037.71	0.72%	2.67%	5.08%	7.81%	0.0559%
Pfizer Inc Principal Financial Group Inc	PFE PFG	206,090.72 14,702.73	0.74% 0.05%	3.99% 4.30%	2.77% 8.34%	6.81% 12.82%	0.0507% 0.0068%
Procter & Gamble Co/The	PG	307,743.22	1.11%	2.40%	7.44%	9.93%	0.1104%
Progressive Corp/The	PGR	47,171.37	0.17%	3.33%	6.23%	9.67%	0.0165%
Parker-Hannifin Corp	PH	25,139.26	0.09%	1.74%	7.82%	9.62%	0.0087%
PulteGroup Inc	PHM	12,054.39	0.04%	1.08%	11.97%	13.10%	0.0057%
Packaging Corp of America	PKG	9,063.50	0.03%	3.39%	10.00%	13.56%	0.0044%
PerkinElmer Inc Prologis Inc	PKI PLD	10,274.60 58,679.26	0.04% 0.21%	0.30% 2.41%	7.67% 7.38%	7.98% 9.87%	0.0030% 0.0209%
Philip Morris International Inc	PM	128,670.83	0.46%	5.58%	6.04%	11.79%	0.0548%
PNC Financial Services Group Inc/The	PNC	64,322.15	0.23%	3.26%	7.57%	10.96%	0.0255%
Pentair PLC	PNR	7,216.23	0.03%	1.76%	7.96%	9.79%	0.0026%
Pinnacle West Capital Corp	PNW	10,981.41	0.04%	3.09%	4.67%	7.83%	0.0031%
PPG Industries Inc	PPG	28,337.75	0.10%	1.78%	5.52%	7.35%	0.0075%
PPL Corp Perrigo Co PLC	PPL PRGO	26,166.57 7,763.69	0.09% 0.03%	4.56% 1.41%	1.38% -1.60%	5.97% -0.20%	0.0056% -0.0001%
Prudential Financial Inc	PRU	36,606.12	0.13%	4.40%	9.00%	13.60%	0.0180%
Public Storage	PSA	39,086.51	0.14%	3.58%	3.51%	7.15%	0.0101%
Phillips 66	PSX	40,600.95	0.15%	4.21%	-0.04%	4.17%	0.0061%
PVH Corp	PVH	6,359.78	0.02%	0.17%	6.27%	6.45%	0.0015%
Quanta Services Inc	PWR	5,589.83	0.02%	0.33%	14.50%	14.85%	0.0030%
Pioneer Natural Resources Co PayPal Holdings Inc	PXD PYPL	22,362.28	0.08% 0.48%	0.62% 0.00%	20.13% 18.81%	20.81% 18.81%	0.0168% 0.0908%
QUALCOMM Inc	QCOM	133,592.97 97,451.84	0.35%	3.00%	12.26%	15.44%	0.0544%
Qorvo Inc	QRVO	12,246.37	0.04%	0.24%	13.24%	13.49%	0.0060%
Royal Caribbean Cruises Ltd	RCL	24,543.62	0.09%	2.49%	10.06%	12.68%	0.0112%
Everest Re Group Ltd	RE	11,279.11	0.04%	2.07%	10.00%	12.17%	0.0050%
Regency Centers Corp	REG	10,405.95	0.04%	3.77%	4.78%	8.64%	0.0032%
Regeneron Pharmaceuticals Inc Regions Financial Corp	REGN RF	37,104.38 15,019.43	0.13% 0.05%	0.00% 4.19%	9.59% 7.16%	9.59% 11.50%	0.0129% 0.0062%
Robert Half International Inc	RHI	6,753.34	0.02%	2.23%	1.83%	4.08%	0.0010%
Raymond James Financial Inc	RJF	12,699.63	0.05%	1.58%	9.85%	11.51%	0.0053%
Ralph Lauren Corp	RL	8,468.96	0.03%	2.40%	6.05%	8.52%	0.0026%
ResMed Inc	RMD	22,989.76	0.08%	1.00%	12.61%	13.67%	0.0114%
Rockwell Automation Inc	ROK	22,267.76	0.08%	2.13%	8.08%	10.30%	0.0083%
Rollins Inc Roper Technologies Inc	ROL ROP	12,426.41 39,714.75	N/A 0.14%	1.40% 0.54%	N/A 13.10%	N/A 13.68%	N/A 0.0196%
Ross Stores Inc	ROST	40,263.01	0.15%	0.91%	9.83%	10.79%	0.0157%
Republic Services Inc	RSG	30,334.71	0.11%	1.64%	8.38%	10.09%	0.0111%
Raytheon Co	RTN	61,527.15	0.22%	1.83%	7.41%	9.31%	0.0207%
SBA Communications Corp	SBAC	28,100.71	0.10%	0.28%	28.40%	28.72%	0.0292%
Starbucks Corp	SBUX	99,564.97	0.36%	1.95%	13.65%	15.74%	0.0566%
Charles Schwab Corp/The Sealed Air Corp	SCHW SEE	58,512.59 5,485.31	0.21% 0.02%	1.64% 1.81%	3.63% 5.08%	5.30% 6.93%	0.0112% 0.0014%
Sherwin-Williams Co/The	SHW	51,415.32	0.19%	0.96%	11.25%	12.26%	0.0228%
SVB Financial Group	SIVB	12,414.39	0.04%	0.02%	11.50%	11.52%	0.0052%
JM Smucker Co/The	SJM	11,817.38	0.04%	3.32%	1.27%	4.61%	0.0020%
Schlumberger Ltd	SLB	46,395.11	0.17%	5.97%	26.04%	32.78%	0.0549%
SL Green Realty Corp	SLG	7,481.07	0.03%	3.89%	7.58%	11.62%	0.0031%
Snap-on Inc	SNA SNPS	8,755.12	0.03%	2.41%	6.62%	9.11%	0.0029%
Synopsys Inc Southern Co/The	SNPS	22,205.40 73,830.87	0.08% 0.27%	0.00% 3.50%	13.77% 4.10%	13.77% 7.68%	0.0110% 0.0205%
Simon Property Group Inc	SPG	40,859.60	0.15%	6.25%	4.30%	10.68%	0.0158%
S&P Global Inc	SPGI	71,787.61	0.26%	0.77%	11.47%	12.29%	0.0319%
Sempra Energy	SRE	45,283.76	0.16%	2.42%	10.00%	12.53%	0.0205%
STERIS PLC	STE	12,775.97	0.05%	0.95%	10.10%	11.10%	0.0051%
State Street Corp	STT	27,500.83	0.10%	2.88%	8.61%	11.61%	0.0115%
Seagate Technology PLC	STX ST7	14,971.91	0.05%	4.50%	5.37%	9.99%	0.0054%
Constellation Brands Inc Stanley Black & Decker Inc	STZ SWK	36,138.73 24,220.04	0.13% 0.09%	1.59% 1.78%	5.17% 8.65%	6.80% 10.50%	0.0089% 0.0092%
Stanley Black & Decker Inc Skyworks Solutions Inc	SWK	24,220.04 19,253.06	0.09%	1.37%	8.65% 17.23%	10.50%	0.0092%
- ,			0.07%	2.84%	-0.43%	2.40%	0.0017%
Synchrony Financial	SYF	19,961.32	0.01 /0				
Synchrony Financial Stryker Corp	SYK	78,879.08	0.28%	1.10%	9.36%	10.51%	0.0299%
						10.51% 11.57% 11.29%	

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		[4] Markat	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Resu
Aolson Coors Beverage Co	TAP	12,109.45	0.04%	3.53%	-4.74%	-1.29%	-0.0006%
ransDigm Group Inc	TDG	34,446.58	0.12%	0.00%	11.86%	11.86%	0.0148%
E Connectivity Ltd	TEL	30,801.22	0.11%	2.00%	9.98%	12.08%	0.0134%
ruist Financial Corp	TFC	69,215.50	0.25%	3.63%	8.93%	12.72%	0.0318%
eleflex Inc	TFX	17,199.40	0.06%	0.36%	15.48%	15.87%	0.0099%
arget Corp	TGT	56,116.07	0.20%	2.39%	9.55%	12.05%	0.0244%
iffany & Co	TIF	16,234.06	0.06%	1.74%	6.77%	8.57%	0.0050%
JX Cos Inc/The	TJX	71,035.97	0.26%	1.56%	11.13%	12.78%	0.0328%
hermo Fisher Scientific Inc	тмо	125,586.44	0.45%	0.26%	12.57%	12.84%	0.0583%
Mobile US Inc	TMUS	67,752.97	0.24%	0.73%	6.00%	6.75%	0.0165%
apestry Inc	TPR	7,110.86	0.03%	5.27%	9.30%	14.81%	0.0038%
Rowe Price Group Inc	TROW TRV	31,202.93	0.11% 0.12%	2.43% 2.57%	10.66% 11.75%	13.22% 14.47%	0.0149%
avelers Cos Inc/The actor Supply Co	TSCO	33,628.91 11,004.00	0.04%	2.57%	10.78%	12.45%	0.0176%
ison Foods Inc	TSN	30.191.01	0.04%	2.04%	10.33%	12.45%	0.0049%
ke-Two Interactive Software Inc	TTWO	14,127.56	0.05%	0.00%	7.60%	7.60%	0.0039%
vitter Inc	TWTR	25,216.07	0.09%	0.00%	42.67%	42.67%	0.0389%
exas Instruments Inc	TXN	112,780.66	0.41%	3.01%	8.12%	11.25%	0.0458%
extron Inc	TXT	10,484.11	0.04%	0.17%	11.17%	11.35%	0.0043%
nder Armour Inc	UAA	8,566.16	0.03%	0.00%	28.88%	28.88%	0.0089%
nited Airlines Holdings Inc	UAL	18,927.67	0.07%	0.00%	11.23%	11.23%	0.0077%
DR Inc	UDR	14,040.19	0.05%	2.86%	5.31%	8.25%	0.0042%
niversal Health Services Inc	UHS	12,008.40	0.04%	0.44%	6.15%	6.60%	0.0029%
ta Beauty Inc	ULTA	15,314.10	0.06%	0.00%	16.68%	16.68%	0.0092%
nitedHealth Group Inc	UNH	258,123.20	0.93%	1.73%	13.53%	15.38%	0.1434%
num Group	UNM	5,505.31	0.02%	4.11%	9.00%	13.30%	0.0026%
nion Pacific Corp	UNP	124,553.34	0.45%	2.18%	8.40%	10.68%	0.0480%
nited Parcel Service Inc	UPS	88,801.80	0.32%	3.87%	7.95%	11.97%	0.0384%
nited Rentals Inc	URI	10,092.01	0.04%	0.00%	10.80%	10.80%	0.0039%
S Bancorp	USB	81,639.48	0.29%	3.29%	6.40%	9.79%	0.0289%
ited Technologies Corp	UTX	129,662.99	0.47%	2.04%	8.90%	11.03%	0.0516%
sa Inc	V	390,480.01	1.41%	0.58%	15.53%	16.15%	0.2278%
arian Medical Systems Inc	VAR	12,779.10	0.05%	0.00%	10.63%	10.63%	0.0049%
Corp	VFC	33,136.03	0.12%	2.14%	10.05%	12.29%	0.0147%
acomCBS Inc	VIAC	21,200.06	0.08%	2.02%	7.00%	9.09%	0.0070%
alero Energy Corp	VLO	34,622.13	0.13%	4.65%	17.78%	22.84%	0.0286%
ulcan Materials Co	VMC	18,745.38	0.07%	0.86%	19.05%	19.99%	0.0135%
ornado Realty Trust	VNO	12,552.23	0.05%	4.77%	5.15%	10.05%	0.0046%
erisk Analytics Inc	VRSK	26,623.93	0.10%	0.54%	9.90%	10.46%	0.0101%
eriSign Inc ertex Pharmaceuticals Inc	VRSN VRTX	24,437.51	0.09%	0.00%	10.30%	10.30%	0.0091%
entes Inc	VTR	58,804.36 21,566.51	0.21% 0.08%	0.00% 5.49%	38.78% 4.23%	38.78% 9.84%	0.0824%
erizon Communications Inc	VZ	245,843.84	0.89%	4.12%	2.84%	7.02%	0.0623%
estinghouse Air Brake Technologies Corp		14,157.67	0.05%	0.66%	11.42%	12.12%	0.00237
aters Corp	WAT	14,419.77	0.05%	0.00%	9.32%	9.32%	0.0049%
algreens Boots Alliance Inc	WBA	45,046.06	0.16%	3.63%	8.23%	12.00%	0.0195%
estern Digital Corp	WDC	19,480.00	0.07%	3.05%	2.77%	5.87%	0.0041%
EC Energy Group Inc	WEC	31,508.86	0.11%	2.52%	6.69%	9.30%	0.0106%
elltower Inc	WELL	34,456.44	0.12%	4.10%	2.87%	7.03%	0.0087%
ells Fargo & Co	WFC	194,068.74	0.70%	4.47%	10.31%	15.00%	0.1051%
hirlpool Corp	WHR	9,237.91	0.03%	3.41%	4.73%	8.22%	0.0027%
illis Towers Watson PLC	WLTW	27,166.13	0.10%	1.21%	10.00%	11.27%	0.0111%
aste Management Inc	WM	51,630.15	0.19%	1.68%	7.50%	9.24%	0.0172%
illiams Cos Inc/The	WMB	25,077.29	0.09%	7.35%	5.00%	12.53%	0.0113%
almart Inc	WMT	324,828.16	1.17%	1.88%	4.18%	6.10%	0.0716%
R Berkley Corp	WRB	13,486.28	0.05%	1.55%	6.95%	8.56%	0.0042%
estrock Co	WRK	10,079.79	0.04%	5.52%	4.45%	10.09%	0.0037%
estern Union Co/The	WU	11,277.99	0.04%	2.97%	4.22%	7.26%	0.0030%
eyerhaeuser Co	WY	21,571.87	0.08%	4.70%	3.80%	8.59%	0.0067%
ynn Resorts Ltd	WYNN	13,543.86	0.05%	2.97%	13.10%	16.27%	0.0080%
marex Energy Co	XEC	4,468.45	0.02%	1.69%	19.35%	21.20%	0.0034%
el Energy Inc	XEL	36,282.41	0.13%	2.46%	5.78%	8.31%	0.0109%
inx Inc	XLNX	21,021.71	0.08%	1.75%	9.05%	10.88%	0.0083%
xon Mobil Corp	XOM	262,836.31	0.95%	5.76%	6.33%	12.28%	0.1165%
ENTSPLY SIRONA Inc	XRAY	12,455.17	0.04%	0.63%	12.72%	13.39%	0.0060%
erox Holdings Corp	XRX	7,689.82	N/A	2.82%	N/A	N/A	N/A
/lem Inc/NY	XYL	14,705.24	0.05%	1.18%	12.28%	13.52%	0.0072%
um! Brands Inc	YUM	31,991.42	0.12%	1.59%	11.67%	13.35%	0.0154%
mmer Biomet Holdings Inc	ZBH	30,420.72	0.11%	0.65%	6.39%	7.06%	0.0078%
ebra Technologies Corp	ZBRA	12,888.31	0.05%	0.00%	11.80%	11.80%	0.0055%
ons Bancorp NA	ZION	7,508.44	0.03%	3.13%	5.24%	8.45%	0.0023%
petis Inc	ZTS	63,924.12	0.23%	0.49%	11.40%	11.91%	0.0275%

Notes: [1] Equals sum of Col. [9] [2] Source: Bloomberg Professional [3] Equals [1] – [2] [4] Source: Bloomberg Professional [5] Equals weight in S&P 500 based on market capitalization [6] Source: Bloomberg Professional [7] Source: Bloomberg Professional [8] Equals ([6]  $\times$  (1 + (0.5  $\times$  [7]))) + [7] [9] Equals Col. [5]  $\times$  Col. [8]

#### 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
14.51%	2.25%	12.25%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
· · ·					44.00%		
Agilent Technologies Inc American Airlines Group Inc	A AAL	27,575.81 12,615.41	0.10% 0.05%	0.81% 1.39%	11.00% 7.00%	11.85% 8.44%	0.0121% 0.0040%
Advance Auto Parts Inc	AAP	10,372.55	0.04%	0.16%	14.00%	14.17%	0.0055%
Apple Inc	AAPL	1,418,414.00	5.26%	1.01%	12.50%	13.57%	0.7146%
AbbVie Inc	ABBV	126,095.80	0.47%	5.54%	10.50%	16.33%	0.0764%
AmerisourceBergen Corp ABIOMED Inc	ABC ABMD	18,995.92 8,344.79	0.07% 0.03%	1.84% 0.00%	8.00% 12.50%	9.91% 12.50%	0.0070% 0.0039%
Abbott Laboratories	ABT	160,452.00	0.60%	1.59%	10.00%	11.67%	0.0695%
Accenture PLC	ACN	133,905.90	0.50%	1.52%	9.00%	10.59%	0.0526%
Adobe Inc	ADBE	170,569.50	0.63%	0.00%	21.00%	21.00%	0.1329%
Analog Devices Inc Archer-Daniels-Midland Co	ADI ADM	44,512.98 25.048.29	0.17% 0.09%	1.79% 3.29%	9.00% 9.50%	10.87% 12.95%	0.0180% 0.0120%
Automatic Data Processing Inc	ADP	77,071.52	0.29%	2.05%	13.50%	15.69%	0.0449%
Alliance Data Systems Corp	ADS	5,153.98	0.02%	2.25%	9.00%	11.35%	0.0022%
Autodesk Inc	ADSK	43,698.55	N/A	0.00%	N/A	N/A	N/A
Ameren Corp	AEE	19,753.80	0.07%	2.50%	6.50%	9.08%	0.0067%
American Electric Power Co Inc AES Corp/VA	AEP AES	49,872.72 13,649.64	0.19% N/A	2.81% 2.77%	4.00% N/A	6.87% N/A	0.0127% N/A
Aflac Inc	AFL	38,638.43	0.14%	2.13%	8.00%	10.22%	0.0146%
Allergan PLC	AGN	62,535.86	0.23%	1.55%	3.00%	4.57%	0.0106%
American International Group Inc	AIG	44,898.07	N/A	2.48%	N/A	N/A	N/A
Apartment Investment & Management Co	AIV	8,211.35	0.03%	2.90%	-3.00%	-0.14%	0.0000%
Assurant Inc Arthur J Gallagher & Co	AIZ AJG	7,918.72 18,088.64	0.03% 0.07%	1.93% 1.77%	8.50% 14.50%	10.51% 16.40%	0.0031% 0.0110%
Akamai Technologies Inc	AKAM	15,590.49	0.06%	0.00%	18.00%	18.00%	0.0104%
Albemarle Corp	ALB	8,683.94	0.03%	1.80%	5.50%	7.35%	0.0024%
Align Technology Inc	ALGN	21,339.90	0.08%	0.00%	25.00%	25.00%	0.0198%
Alaska Air Group Inc	ALK	8,281.82	0.03%	2.08%	6.00%	8.14%	0.0025%
Allstate Corp/The Allegion PLC	ALL ALLE	38,398.75 12,073.74	0.14% 0.04%	1.69% 0.83%	10.50% 9.50%	12.28% 10.37%	0.0175% 0.0046%
Alexion Pharmaceuticals Inc	ALXN	24,022.12	0.09%	0.00%	42.00%	42.00%	0.0374%
Applied Materials Inc	AMAT	58,523.24	0.22%	1.36%	7.50%	8.91%	0.0194%
Amcor PLC	AMCR	17,371.87	N/A	4.47%	N/A	N/A	N/A
Advanced Micro Devices Inc	AMD AME	57,604.94	0.21%	0.00%	34.00%	34.00%	0.0727%
AMETEK Inc Amgen Inc	AMGN	23,037.60 140,130.90	0.09% 0.52%	0.56% 2.72%	15.50% 7.50%	16.10% 10.32%	0.0138% 0.0537%
Ameriprise Financial Inc	AMP	21,834.67	0.08%	2.26%	12.50%	14.90%	0.0121%
American Tower Corp	AMT	105,319.40	0.39%	1.86%	7.50%	9.43%	0.0369%
Amazon.com Inc	AMZN	932,867.10	3.46%	0.00%	39.00%	39.00%	1.3503%
Arista Networks Inc ANSYS Inc	ANET ANSS	17,569.22 23,373.19	0.07% 0.09%	0.00% 0.00%	12.00% 12.00%	12.00% 12.00%	0.0078% 0.0104%
Anthem Inc	ANTM	77,250.64	0.29%	1.05%	18.50%	19.65%	0.0563%
Aon PLC	AON	49,886.71	0.19%	0.83%	11.00%	11.88%	0.0220%
AO Smith Corp	AOS	7,618.96	0.03%	2.06%	6.50%	8.63%	0.0024%
Apache Corp	APA	11,382.19	0.04%	3.30%	46.00%	50.06%	0.0211%
Air Products & Chemicals Inc Amphenol Corp	APD APH	52,288.04 31,604.25	0.19% 0.12%	2.26% 0.94%	10.50% 9.50%	12.88% 10.48%	0.0250% 0.0123%
Aptiv PLC	APTV	23,604.63	0.09%	0.95%	11.00%	12.00%	0.0105%
Alexandria Real Estate Equities Inc	ARE	18,362.49	N/A	2.50%	N/A	N/A	N/A
Arconic Inc	ARNC	12,784.75	N/A	0.27%	N/A	N/A	N/A
Atmos Energy Corp	ATO	13,814.75	0.05%	1.99%	7.50%	9.56%	0.0049%
Activision Blizzard Inc AvalonBay Communities Inc	ATVI AVB	46,187.41 30,262.61	0.17% 0.11%	0.67% 2.93%	9.00% 2.50%	9.70% 5.47%	0.0166% 0.0061%
Broadcom Inc	AVGO	127,220.70	0.47%	4.07%	33.50%	38.25%	0.1806%
Avery Dennison Corp	AVY	10,934.59	0.04%	1.91%	11.00%	13.02%	0.0053%
American Water Works Co Inc	AWK	24,456.38	0.09%	1.51%	9.50%	11.08%	0.0101%
American Express Co	AXP	107,854.80	0.40%	1.31%	10.00%	11.38%	0.0455%
AutoZone Inc Boeing Co/The	AZO BA	27,581.73 178,848.70	0.10% 0.66%	0.00% 2.59%	13.50% 12.00%	13.50% 14.75%	0.0138% 0.0979%
Bank of America Corp	BAC	309,784.60	1.15%	2.23%	10.50%	12.85%	0.1477%
Baxter International Inc	BAX	46,480.95	0.17%	0.97%	10.50%	11.52%	0.0199%
Best Buy Co Inc	BBY	23,353.20	0.09%	2.45%	10.50%	13.08%	0.0113%
Becton Dickinson and Co	BDX	75,376.11	0.28%	1.13%	9.50%	10.68%	0.0299%
Franklin Resources Inc Brown-Forman Corp	BEN BF/B	12,822.10 34,355.11	0.05% 0.13%	4.52% 0.97%	7.50% 14.50%	12.19% 15.54%	0.0058% 0.0198%
Biogen Inc	BIIB	51,697.80	0.19%	0.00%	8.00%	8.00%	0.0154%
Bank of New York Mellon Corp/The	BK	43,361.79	0.16%	2.64%	7.00%	9.73%	0.0157%
Booking Holdings Inc	BKNG	83,883.82	0.31%	0.00%	12.00%	12.00%	0.0374%
Baker Hughes Co	BKR	14,901.04	N/A	3.14%	N/A	N/A	N/A
BlackRock Inc Ball Corp	BLK BLL	83,648.43 23,659.31	0.31% 0.09%	2.44% 0.84%	9.00% 25.00%	11.55% 25.95%	0.0359% 0.0228%
Bristol-Myers Squibb Co	BMY	108,950.30	0.40%	2.69%	9.00%	11.81%	0.0228%
Broadridge Financial Solutions Inc	BR	15,042.40	0.06%	1.65%	11.00%	12.74%	0.0071%
Berkshire Hathaway Inc	BRK/B	-	N/A	0.00%	N/A	N/A	N/A
Boston Scientific Corp	DOV						
BorgWarner Inc	BSX BWA	60,726.82 8,375.36	0.23% 0.03%	0.00% 1.68%	15.50% 4.50%	15.50% 6.22%	0.0349% 0.0019%

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Index         Fight and the set of		101	(								
Company         Teker         Capitalization         Weight Influx         Dividend Yield         Growth         Etc.         DCF Result           Ciligroup Inc         C         17.418.90         0.05%         2.63%         10.00%         12.76%           Cardinal Heath Inc         CAH         18.076.91         0.05%         2.66%         8.25%           Cardinal Heath Inc         CAH         18.076.91         0.05%         2.65%         10.00%         12.76%           Chabit Lift         CB         7.839.32         0.05%         2.25%         10.00%         12.27%           Chao Global Markets Inc         CBOE         13.398.32         0.05%         0.00%         11.00%         11.62%           Camixal Corp         CCL         2.062.87         0.10%         4.04%         10.00%         14.24%           Candena Design, Systems Inc         CDNS         2.1162.32         0.05%         2.005%         8.00%         10.95%           Canival Corp         CCI         2.258.24         N/A         3.05%         10.05%         11.65%         10.65%           Camixal Corp         CDN         2.162.32         0.05%         1.05%         11.65%         11.65%           Camixal Corp         CDN	[9] Weighted	loj			[5]						
Boston Properties inc         BVP         21,854.66         0.08%         2.78%         5.0%         7.88%           Consign Brands Inc         CA         14,218.913.95         0.06%         2.66%         5.50%         8.23%           Canada Masinh Inc         CA         10,075.91         0.02%         2.66%         5.50%         8.23%           Chub Lub         CA         6.07%         0.02%         1.97%         10.00%         12.07%           Chub Lub         CB         6.9397.98         0.02%         1.97%         10.00%         12.07%           Chao Global Markets Inc         CBE E         20,427.33         0.08%         0.00%         11.00%         11.00%           Caminal Corp         CCL         26,062.87         0.01%         4.04%         10.00%         12.25%           Caminal Corp         CCE         14,023.67         0.05%         2.37%         8.05%         10.36%           Caminal Corp         CER         17,242.81         0.07%         2.35%         8.00%         10.36%           Caminal Corp         CER         12,35%         0.07%         2.35%         8.00%         10.36%           Caminal Corp         CER         2,355.24         N/A         3.06% </th <th>DCF Result</th> <th>DCF Result</th> <th></th> <th></th> <th>Weight in Index</th> <th></th> <th>Ticker</th> <th>Company</th>	DCF Result	DCF Result			Weight in Index		Ticker	Company			
Congrafia Brands Inc CAG 15,913,85 0.06% 2.86% 5.50% 8.22% Cardnal Health Inc CAH 15,07,891,93 0.29% 2.86% 12,00% 15,06% Chubb Ld CAT 78,891,93 0.29% 2.86% 12,70% 14,18% Chubb Ld CB CBC 13,308,32 0.05% 1.20% 14,05% 15,77% 10,00% 12,07% 20,00% 11,00% 11,00% 11,20% 20,0	0.0064%	7.85%				21,954.66		Boston Properties Inc			
Cardinal Health Inc         CAH         16,076,91         0.06%         3.50%         11.80%           Cardinal Inc         CA         78,89130         0.29%         1.97%         12.00%         12.07%           Chool Clobal Markets Inc         CBC         B6,8977.98         0.26%         1.97%         14.00%         11.00%           Corwn Castle International Corp         CBRE         20.427.33         0.09%         0.00%         11.00%         15.91%           Cardinal Markets Inc         CBNE         20.427.33         0.09%         0.00%         11.95%         12.50%           CDW CorpDE         CDW         19.832.20         0.05%         0.00%         1.95%         1.95%           CDW CorpDE         CDW         19.832.20         0.07%         1.95%         9.00%         1.95%           CDW CorpDE         CDW         19.832.20         0.05%         0.00%         9.95%         0.00%         1.95%           Corner Corp         CE         14.023.67         0.05%         2.35%         8.06%         10.95%           Carner Corp         CER         2.358.43         0.07%         3.94%         9.30%         13.65%           Chronta State Instresinstratins indifficula Inc         CFR <td< td=""><td>0.0825%</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	0.0825%										
Caterpillar Inc         CAT         78,891.33         0.29%         2.89%         12.00%         15.00%           Chook Global Markets Inc         CBDE         13,308.32         0.05%         1.20%         14.50%         15.79%           CBRE Group Inc         CBRE         2.0427.33         0.08%         0.00%         11.00%         15.91%           Caminal Corp         CCL         26.3308.43         0.23%         3.21%         12.05%         15.91%           Caminal Corp         CDN         21.162.32         0.06%         0.00%         12.05%         12.05%           Camoral Corp         CENN         2.3.767.31         0.09%         9.05%         9.00%         9.39%           Chindustries Holdings Inc         CFG         2.756.731         0.07%         3.81%         9.00%         13.69%           Church Abught Co Inc         CFG         2.757.31         0.07%         3.81%         9.00%         11.88%           Charler Communications Inc         CHR         10.212.0         0.41%         0.07%         1.80%         11.71%           Charler Computications Inc         CHR         10.745.13         0.04%         2.56%         9.00%         11.84%           Charler Computications Inc         CHRW </td <td>0.0049% 0.0085%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	0.0049% 0.0085%										
Chubb Ld         CB         68,977.98         0.28%         1.97%         1.00%         12.07%           Cose Global Markels Inc         CBRE         0.308.2         0.05%         1.20%         14.50%         14.50%         14.50%         14.50%         14.50%         15.78%         12.50%         14.50%         14.50%         15.94%         12.50%         14.54%         12.50%         15.94%         12.50%         12.50%         10.0%         14.24%         12.50%         1	0.0441%										
Choe Globel Markets Inc         CBOE         13,308.32         0.05%         1.20%         14.50%         15.79%           CRW Group Inc         CCI         26,308.48         0.23%         3.21%         12.50%         15.91%           Carwind Corp         CCI         26,308.48         0.23%         3.21%         12.50%         12.50%           Carwind Corp         CCI         26,308.48         0.00%         11.20%         12.50%           Carwind Corp         CE         14,023.67         0.06%         2.55%         8.0%         10.45%           Cell CW Corp/DE         CDW         13,033.25         0.07%         2.55%         8.0%         10.45%           Cell Industrins Holdings Inc         CFG         14,023.67         0.07%         3.91%         9.50%         13.60%           Chrich Ab Wight Co Inc         CFG         17,694.37         0.06%         2.11%         9.50%         11.75%           Cinand Ernancial Group         CI R         79,427.50         0.22%         0.02%         14.50%         14.52%           Cinand Ernancial Corp         CI R         79,427.50         0.22%         2.44%         3.00%         11.75%           Cinand Ernancial Corp         CI R         79,427.50	0.0309%										
Crown Casele International Corp         CCI         62.308.48         0.23%         3.21%         12.50%         15.91%           Cadence Design Systems Inc         CDNS         21.162.32         0.08%         0.00%         12.60%         12.50%           Celanses Corp         CE         14.023.67         0.05%         2.35%         9.00%         9.99%           Centro Corp         CE         14.023.67         0.05%         2.35%         9.00%         9.99%           Christens Financial Group Inc         CF         9.288.24         N/A         3.06%         9.09%         13.66%           Chrach A Dwight Co Inc         CH         7.731         0.09%         1.28%         9.00%         11.28%           Chrach A Dwight Co Inc         CHR         11.22.20         0.41%         2.66%         3.00%         11.28%           Chrach Communications Inc         CHTR         110.212.20         0.41%         2.64%         3.00%         14.52%           Calipa Corp         CIL         76.157.88         0.22%         2.44%         3.00%         6.22%           Commaic Corp         CIL         76.357.30         0.27%         3.45%         6.22%           Commaic Corp         CMA         95.115.40         <	0.0078%			1.20%	0.05%		CBOE	Cboe Global Markets Inc			
Caminal Corp         CCL         28,062,87         0.10%         4.04%         10.00%         12,65%           Colm Corp DE         CDW         19,963,25         0.07%         1.10%         10.50%         12,65%           Colm Corp DE         CE         10,237         0.05%         2.35%         8.50%         10,95%           Cenner Corp         CERN         23,757,31         0.09%         0.05%         9.07%         10,95%           Chrons Abright Co Inc         CFG         12,824,37         0.07%         3,91%         9,50%         13,60%           Chrons Abright Co Inc         CFG         17,894,37         0.07%         3,91%         9,50%         13,60%           Chrons Abright Co Inc         CHR         10,722,20         0.04%         2,26%         9,50%         11,45%           Chrons Abright Co Inc         CH         17,317,13         0.06%         2,11%         9,50%         8,01%           Constrain Financial Corp         CHNF         17,317,13         0.06%         2,67%         3,50%         6,22%           Constrain Financial Corp         CHNF         17,317,13         0.06%         2,67%         3,50%         6,17%           Conand Corp         CHNF         17,317,13	0.0083%							•			
Cadence Design Systems Inc         CDNS         21,162.32         0.08%         0.00%         12.50%         12.50%           Columos Corp         CE         14,023.67         0.05%         2.33%         8.50%         10.95%           Columase Corp         CE         14,023.67         0.09%         2.33%         8.50%         NA         NA           Crimuts Financial Group Inc         CFG         17,584.37         0.07%         3.91%         9.50%         13.60%           Charba D Wight Co Inc         CHR         17,513         0.04%         2.26%         9.00%         11.36%           Charban S Dorderwole Inc         CHRW         10,725.13         0.04%         2.67%         5.50%         11.27%           Charban S Dorderwole Inc         CHRW         10,721.23         0.41%         0.00%         11.45%         11.45%           Charban S Dorderwole Co         CL         10,747.513         0.04%         2.07%         5.50%         6.22%           Commarcial Corp         CINF         17.317.31         0.08%         2.07%         5.50%         6.22%           Commarcial Corp         CMA         9.5115.4         0.04%         4.07%         5.50%         6.22%           Commarcial Corp         <	0.0368%										
CDW Corp DE         CDW         19.683.25         0.07%         1.10%         10.50%         11.66%           Cennes Corp         CERN         23,757.31         0.09%         0.95%         9.00%         9.99%           Chruds tiss Holdings Inc         CFG         9.258.24         N/A         3.06%         N/A         N/A           Chruch S Dwight Co Inc         CFG         17.694.37         0.07%         3.91%         9.00%         10.34%           Chruch S Dwight Co Inc         CHG         17.741.11         0.06%         1.25%         9.00%         11.68%           Chruch S Dwight Co Inc         CH         17.717.13         0.04%         2.56%         9.00%         11.450%           Chrunch S Dwight Co Inc         CH         79.427.50         0.29%         0.02%         14.50%         14.452%           Chrunch S Dwight Co Inc         CH         79.427.50         0.29%         0.02%         15.50%         8.01%           Cincinati Financial Corp         CI         19.427.50         0.29%         0.02%         15.50%         8.01%           Corncart Corp         CI         4.055.420.773.30         0.27%         1.46%         15.0%         16.7%           Corncart Corp         CMCSA         <	0.0138% 0.0098%					- ,					
Celanse Corp         CE         14.023.67         0.05%         2.35%         8.50%         10.95%           CF Industries Holdings Inc         CF         9.288.24         NA         3.06%         NA         NA           Church & Dwight Co Inc         CF         9.288.24         NA         3.06%         NA         NA           Church & Dwight Co Inc         CH         17.411.11         0.06%         1.28%         9.00%         11.36%           Charton Controlword Inc         CH RW         10.785.13         0.04%         2.26%         9.00%         11.68%           Contract Corp         CI         79.427.50         0.29%         14.50%         14.52%           Contract Inc         CMA         9.515.88         0.22%         2.44%         5.50%         8.01%           Consert Corp         CMCS A         207.673.30         0.77%         1.84%         13.50%         15.46%           Comerica Inc         CMA         9.511.54         0.04%         9.50%         13.75%           Commark Grup Inc         CME         74.453.38         0.28%         1.44%         3.00%         4.46%           Chipote Mexican Grill Inc         CMG         2.468.73         0.00%         15.50%         15.50	0.0086%										
CF Industrise Holdings Inc         CF         9.288.24         NA         3.05%         NA         NA           Chursh Fancial Group Inc         CFG         17.694.37         0.07%         3.91%         9.00%         10.34%           Church & Dwight Co Inc         CHD         17.411.1         0.06%         12.85%         9.00%         11.88%           Charter Communications Inc         CHTR         110.212.20         0.41%         0.02%         14.50%         11.45%           Conjato-Palmolive Co         CL         60.515.88         0.02%         2.44%         5.50%         8.01%           Conjato-Palmolive Co         CL         60.515.88         0.02%         2.44%         5.50%         8.01%           Corpate-Palmolive Co         CL         60.515.88         0.02%         2.67%         3.50%         6.22%           Comerica Inc         CMA         9.511.54         0.04%         4.06%         9.50%         13.75%           Comerica Inc         CMG         2.4480.33         0.09%         0.00%         2.65%         2.25%           Commins Inc         CMG         2.4480.43         0.09%         2.65%         2.65%         2.65%         2.65%         2.65%         2.65%         2.65%	0.0057%							•			
Citzens Financial Group Inc         CFG         17,694.37         0.07%         3.91%         9.90%         13,80%           Church & Dwight Co Inc         CHB         17,411.11         0.04%         2.86%         9.00%         11,88%           Charter Communications Inc         CHR         110,212.20         0.04%         2.86%         9.00%         11,87%           Concinant Financial Corp         CI         79,427.50         0.29%         0.24%         14.50%         14.52%           Concinant Financial Corp         CILX         19,962.49         0.07%         2.87%         3.50%         8.01%           Corox CorThe         CLX         19,962.49         0.07%         2.87%         3.50%         6.22%           Comeat Corp         CMCS         20,773.30         0.07%         2.87%         3.50%         6.22%           Comeat Corp         CME         74,453.38         0.28%         1.44%         3.00%         4.46%           Chipotel Mexican Grill Inc         CME         22,834.75         0.11%         0.00%         25,50%         Center Corp         26,50%         26,50%         26,50%         26,50%         26,50%         26,50%         26,50%         26,50%         26,50%         26,50%         26,50%	0.0088%	9.99%						Cerner Corp			
Church & Dwight Co Inc         CHD         17,411.11         0.0%         12.8%         9.00%         10.34%           Ch Robinson Worldwide Inc         CHRW         10.725.13         0.04%         2.56%         9.00%         17.50%           Cigna Corp         CI         79.427.50         0.22%         14.50%         14.50%           Cinclinati Financial Corp         CI         79.427.50         0.22%         2.44%         5.50%         8.01%           Corox CorThe         CIX         19.962.49         0.07%         2.44%         3.50%         6.22%           Comercia Inc         CMA         9.511.54         0.04%         4.06%         9.50%         13.76%           Comercia Inc         CMCSA         207.673.30         0.77%         1.44%         3.00%         4.46%           Chied Mexican Grill Inc         CMG         24.460.43         0.09%         0.05%         8.00%         11.17%           CMME Group Inc         CMS         19.012.26         0.07%         2.43%         7.00%         9.52%           Centree Corp         CMS         19.012.26         0.07%         2.43%         7.05%         1.17%           CMB Energy Corp         CMS         19.012.26         0.07% <td< td=""><td>N/A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	N/A										
CH Rebinson, <sup>1</sup> Worldwide Inc         CHRW         10.785.13         0.04%         2.6%         9.00%         11.88%           Charter Communications Inc         CH         19.427.50         0.29%         0.02%         14.50%         14.52%           Cininnati Financial Corp         CI         19.427.50         0.29%         0.24%         14.50%         11.71%           Colgate-Palmolive Co         CL         60.515.88         0.22%         2.44%         5.50%         8.01%           Correx CorThe         CLX         19.962.49         0.07%         2.67%         3.50%         6.22%           Comacat Corp         CMA         9.511.54         0.04%         4.06%         9.50%         13.76%           Commact Corp         CME         74.435.38         0.28%         1.44%         3.00%         4.46%           Chipotel Mexican Grill Inc         CME         24.893         0.00%         2.65.50%         2.65.50%           Commant Energy Corp         CME         124.893.31         0.00%         4.64%         1.55%           Conter Corp         COF         49.380.40         0.18%         1.51.5%         Conter Corp         2.63%         4.650%         4.650%         4.650%         4.650%         4.650%	0.0089% 0.0067%										
Charler Communications Inc         CHTR         110.212.20         0.41%         0.00%         17.50%         17.50%           Cingina Corp         CI         79.427.50         0.29%         0.02%         14.55%         8.60%         11.21%           Cinclinnal Financial Corp         CINF         17.317.31         0.06%         2.14%         9.50%         8.11%           Corox CorThe         CLX         19.962.49         0.07%         2.44%         9.50%         13.75%           Comerica Inc         CMA         9.511.54         0.04%         4.06%         9.50%         13.75%           Comerica Inc         CMA         207.673.30         0.77%         1.84%         13.50%         15.46%           Chef Storp Inc         CME         74.435.38         0.28%         1.44%         3.00%         2.650%           Chef Storp Inc         CME         74.435.35         0.05%         4.00%         15.50%         1.17%           Chef Storp Corp         CMS         19.012.26         0.07%         2.63%         46.50%         49.74%           Contract Corp         CMS         19.612.26         0.07%         2.63%         46.50%         49.74%           Contreanis Corp         COF         49.38	0.0047%										
Cigna Corp         Cl         79,427,50         0.29%         0.02%         14,50%         14,52%           Colignate Financial Corp         CL         60,515,88         0.22%         2.44%         65,00%         8,01%           Conva CorDne         CLX         19,962,48         0.07%         2.67%         3.50%         6,22%           Commeats Corp         CMCSA         207,673,30         0.77%         1.84%         3.00%         4.46%           Chipote Mexican Grill Inc         CME         74,453,38         0.28%         1.44%         3.00%         4.46%           Chipote Mexican Grill Inc         CME         74,453,38         0.28%         1.44%         3.00%         4.46%           Chipote Mexican Grill Inc         CME         74,453,38         0.28%         1.44%         3.00%         4.46%           Chipote Mexican Grill Inc         CME         74,453,38         0.28%         7.00%         9.52%           Contrast Financial Corp         CON         26,545,75         0.11%         0.00%         1.50%         1.17%           Contrast Financial Corp         COG         6,212,86         0.02%         2.43%         7.00%         4.92%           Contreancial Corp         COG         6,212,86 <td>0.0716%</td> <td></td> <td></td> <td></td> <td></td> <td>,</td> <td></td> <td></td>	0.0716%					,					
Colgate-Paimolive Co         CL         60515.88         0.22%         2.44%         5.50%         8.01%           Comore Corroc         CMA         9.511.54         0.04%         2.67%         3.50%         6.22%           Comeast Corp         CMCSA         9.511.54         0.04%         4.06%         9.50%         1.375%           CME Group Inc         CME         74.435.38         0.28%         1.44%         3.00%         4.46%           Chipote Mexican Grill Inc         CME         74.435.38         0.28%         1.44%         3.00%         4.46%           Chipote Mexican Grill Inc         CME         24.400.43         0.09%         3.05%         8.00%         11.17%           CMS         19.012.26         0.07%         2.43%         7.00%         9.52%           Centare Corp         CNC         28.545.75         0.11%         0.00%         15.50%         15.50%           Centare Corp         COF         49.380.40         0.18%         1.51%         6.00%         7.56%           Catot Corp         COS         17.635.80         0.07%         0.02%         14.50%         14.52%           Contare Corp         COS         17.838.23.00         0.02%         14.05%         <	0.0428%	14.52%	14.50%	0.02%	0.29%		CI	Cigna Corp			
Clorox CorThe         CLX         19.982.49         0.07%         2.67%         3.50%         6.22%           Comerica Inc         CMA         9.511.54         0.04%         4.06%         9.50%         13.75%           Comasta Corp         CMCSA         207.673.30         0.77%         1.84%         3.00%         4.46%           CME Group Inc         CME         74.453.38         0.28%         1.44%         3.00%         4.66%           Chiptotte Mexican Grill Inc         CME         74.453.38         0.28%         1.44%         3.00%         4.66%           Cummins Inc         CMI         26.298.31         0.07%         2.43%         7.00%         9.52%           CenterPoint Energy Inc         CNP         13.52.19         0.05%         4.42%         10.50%         15.15%           Capital One Financial Corp         COF         49.380.40         0.18%         1.51%         6.00%         7.56%           ConcorDhilips         COP         0.028.16         0.26%         2.66%         37.00%         4.15%           ConcorDhilips         COP         13.52.15%         0.02%         2.66%         2.00%         4.89%           ConcorDhilips         COP         60.212.68         0.26% <td>0.0075%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	0.0075%										
Comersic Inc         CMA         9,511,54         0.04%         4.06%         9,50%         13,75%           Comcast Corp         CMCSA         207,673,30         0.77%         18,44%         3,00%         4,46%           Chipote Mexican Grill Inc         CME         74,435,38         0.28%         1,44%         3,00%         4,46%           Cummins Inc         CMI         26,293,31         0.10%         3,05%         8,00%         11,17%           CMS         19,012,26         0.07%         2,43%         7,00%         9,52%           Centene Corp         CNC         28,545,75         0.11%         0.00%         15,50%         15,50%           Capital One Financial Corp         COF         49,380,40         0.18%         1,51%         6,00%         7,56%           Cabot Oll & Gas Corp         COG         6,212,68         0.02%         14,05%         14,42%           Concorcobnilipos         COP         69,281,56         0.26%         2,06%         37,00%         40,15%           Costo Wholesale Corp         COST         18,223,50         0.51%         0.92%         11,00%         11,97%           Coty Inc         COTY         8,107,47         0.03%         4,67%         5.00% </td <td>0.0180%</td> <td></td> <td></td> <td></td> <td></td> <td>,</td> <td></td> <td></td>	0.0180%					,					
Comcast Corp         CMCSA         207,673.30         0.77%         1.84%         13.50%         14.46%           CME Group Inc         CME         74.465.38         0.28%         1.44%         3.00%         4.46%           Chipote Mexican Grill Inc         CMG         24,460.43         0.09%         0.00%         26.50%         26.50%           Cummins Inc         CMI         26,298.31         0.10%         3.05%         8.00%         11.17%           Conter Point Energy Corp         CNC         28,545.75         0.11%         0.00%         15.50%           Canter Point Energy Inc         CNP         13,525.19         0.05%         4.42%         10.50%         15.15%           Capital One Financial Corp         COF         49,380.40         0.18%         1.51%         6.00%         2.66%         37.00%         40.15%           Coabcol Ik a Gas Corp         COG         17,635.80         0.07%         0.46%         2.66%         37.00%         40.15%           Costoc Wholesale Corp         COST         138,223.50         0.51%         0.32%         11.00%         11.97%           Caty Inc         COTY         8,107.47         0.03%         4.67%         5.00%         3.79%           Capa	0.0046%										
CME Group Inc         CME         74,435,38         0.28%         1.44%         3.00%         4.46%           Chipote Mexican Grill Inc         CMG         24,460.43         0.09%         1.00%         26,50%         26,50%           Cummins Inc         CMI         26,298.31         0.10%         3.05%         8.00%         11.17%           CMS Energy Corp         CMS         19,012.26         0.07%         2.43%         7.00%         9.52%           Centere Corp         CNC         28,545,75         0.11%         0.00%         15,50%         15,50%           Capital One Financial Corp         COF         49,304.0         0.18%         1.41%         6.00%         7.56%           Cabot Oli & Gas Corp         COC         17,635.80         0.07%         0.02%         14,450%         14,55%           Capito Inc Inc/The         COO         17,635.80         0.07%         0.02%         14,05%         14,55%           Capito Inc Inc/The         COP         69,281.66         0.26%         2.66%         37.00%         41,55%           Capito Inc Inc/The         COP         18,243.60         0.02%         0.00%         10.50%         10.50%           Capito Inc         CRN         163,006.30	0.0049% 0.1192%					- /					
Chipothe Mexican Grill Inc         CMG         24,460.43         0.09%         0.00%         26,50%         26,50%           Cummins Inc         CMI         26,288.31         0.10%         2.43%         7.00%         9.52%           Center Corp         CMC         28,545.75         0.11%         0.00%         15,50%         15,50%           CanterPoint Energy Inc         CNP         13,525.19         0.05%         4.42%         10,50%         15,15%           Capital One Financial Corp         COF         49,380.40         0.18%         4.61%         6.00%         7.56%           Cabot Oli & Gas Corp         COG         6,612.12.86         0.02%         2.63%         46.650%         49.74%           ConocoPhilipia         COP         69.281.66         0.26%         2.66%         37.00%         40.15%           Castor Uhiosale Corp         COST         138.223.50         0.51%         0.32%         11.00%         11.97%           Caty Inc         COTY         8,107.47         0.03%         4.67%         5.00%         9.79%           Campbell Sup Co         CPR         15.514.61         0.02%         0.00%         16.00%         16.00%           Capart Inc         CPRT         23.201.51 </td <td>0.0123%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td>	0.0123%							•			
Cummins Inc         CMI         26,298.31         0.10%         3.05%         8.00%         11.17%           CMS Energy Corp         CMS         19,012.26         0.07%         2.43%         7.00%         9.52%           Centene Corp         CNC         2.8545.75         0.11%         0.00%         15.50%         15.50%           Centene Corp         CNP         13,525.19         0.05%         4.42%         10.60%         15.15%           Cabtol Ol & Gas Corp         COG         6,212.68         0.02%         2.63%         46.50%         49.74%           Cooper Cos Inc/The         COO         7.635.80         0.02%         14.50%         14.55%           Costco Wholesale Corp         COST         138,223.50         0.51%         0.92%         11.00%         11.97%           Caty Inc         COTY         8,107.47         0.03%         4.67%         5.00%         4.89%           Costo Wholesale Corp         CPRI         2.320.15         0.09%         0.00%         16.00%         16.00%           Salesfore com Inc         CRM         163.006.30         0.61%         0.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00	0.0241%					,		•			
CMS         19.012.26         0.07%         2.43%         7.00%         9.52%           Center Corp         CNC         28.545.75         0.11%         0.00%         15.50%         15.50%           Center Point Energy Inc         CNP         13.525.19         0.05%         4.42%         10.50%         15.15%           Capital One Financial Corp         COF         49.380.40         0.18%         1.51%         6.00%         7.55%           Conto Cas Inc/The         COO         17.635.80         0.02%         2.66%         37.00%         40.15%           ConcocPhillips         COP         69.281.68         0.26%         2.66%         37.00%         40.15%           Costco Wholesale Corp         COST         138.223.50         0.51%         0.92%         11.00%         11.97%           Campbell Soup Co         CPR         15.534.61         0.02%         2.06%         2.00%         4.89%           Capart Inc         CPRI         5.534.61         0.02%         0.00%         16.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.00%         30.	0.0109%					,					
CenterPoint Energy Inc         CNP         13.522.19         0.05%         4.42%         10.50%         15.15%           Capital One Financial Corp         COF         49.380.40         0.18%         1.51%         6.00%         7.56%           Cabot Ol & Gas Corp         COG         6.212.68         0.02%         2.63%         46.50%         49.74%           ConcocPhillips         COP         69.281.56         0.02%         14.50%         14.52%           ConcocPhillips         COST         138.223.50         0.51%         0.92%         11.00%         11.97%           Coty Inc         COTY         8.107.47         0.03%         4.67%         5.00%         9.79%           Campbell Soup Co         CPB         15.514.08         0.06%         2.86%         2.00%         4.48%           Copart Inc         CPRI         2.534.61         0.02%         0.00%         10.50%         10.50%           Cisco Systems Inc         CSCO         207.809.00         0.77%         2.86%         7.50%         10.47%           CSX Corp         CTX         59.958.31         0.12%         1.25%         16.46%           CenturyLink Inc         CTL         16.193.4         0.06%         6.73%         1.00	0.0067%					19,012.26					
Capital One Finamal Corp         COF         49,380.40         0.18%         1.51%         6.00%         7.56%           Cabot Oli & Gas Corp         COG         6,212.68         0.02%         2.63%         46.50%         49,74%           Cooper Cos Inc/The         COO         17,635.80         0.07%         0.02%         14.50%         14.52%           ConcocPhillips         COP         69,281.56         0.26%         2.66%         37.00%         40.15%           Costo Wholesale Corp         COST         18,223.50         0.03%         4.67%         5.00%         9.79%           Capri Holdings Ld         CPRI         5,534.61         0.02%         0.00%         10.50%         10.50%           Costo Wholesale Corp         CSC         207,080.00         0.61%         0.00%         16.00%         30.00%           Capri Holdings Ld         CPRT         23,220.15         0.09%         0.00%         16.00%         16.00%           Cisco Systems Inc         CSCO         207,080.00         0.77%         2.86%         7.50%         10.47%           Contax Corp         CTL         16,191.34         0.06%         6.73%         1.00%         7.32%           Cortava In         CTVA         21,291.7	0.0164%					- ,					
Cabat Oil & Gas Corp         COG         6,212.88         0.02%         2.63%         46,50%         49,74%           Cooper Cos Inc/The         COO         17,635.80         0.07%         0.02%         14,50%         14,52%           ConcocPhillips         COP         69,281.56         0.26%         2.66%         37,00%         40,15%           Costo Wholesale Corp         COST         138,223.50         0.51%         0.32%         11.00%         11.97%           Coty Inc         COTY         8,107.47         0.03%         4.67%         5.00%         9.78%           Campbell Soup Co         CPB         15,814.08         0.06%         2.86%         2.00%         4.89%           Capri Holdings Ltd         CPRI         2,320.15         0.09%         0.00%         16.00%         16.00%           Cisco Systems Inc         CSCO         207,809.00         0.77%         2.86%         7.50%         10.47%           Cista Systems Inc         CTL         16,191.34         0.28%         1.28%         6.00%         7.32%           Contex anc         CTVA         21,291.70         N/A         1.28%         6.00%         7.32%           Contex anc         CTVS         95,662.53         0.36%	0.0076%										
Cooper Cos Inc/The         COO         17,635.80         0.07%         0.02%         14,50%         14,52%           ConcocPhillips         COP         69,281.56         0.26%         2.66%         37.00%         40.15%           Costo Wholesale Corp         COST         138,223.50         0.51%         0.92%         11.00%         11.97%           Coty Inc         COTY         8.107.47         0.03%         4.67%         5.00%         9.79%           Campbell Sour Co         CPB         15.814.08         0.06%         2.86%         2.00%         4.89%           Capri Holdings Ltd         CPRT         23,220.15         0.09%         0.00%         16.00%         30.00%           Salesfore.com Inc         CRM         163,006.30         0.61%         0.00%         16.00%         16.00%           Salesfore.com Inc         CSCO         207,809.00         0.77%         2.86%         7.50%         10.47%           Corp Castr Technology Solutions Corp         CTAS         29,661.13         0.11%         0.89%         15.50%         16.46%           Contex Inc         CTL         16,191.34         0.06%         6.73%         1.09%         7.76%           Coganizant Technology Solutions Corp         CTSA<	0.0138% 0.0115%										
ConcooPhillips         COP         69,281.56         0.26%         2.66%         37.00%         40.15%           Costo Wholesale Corp         COST         138,223.50         0.51%         0.92%         11.00%         11.97%           Campbell Soup Co         CPB         15,814.08         0.06%         2.86%         2.00%         4.89%           Capri Holdings Ltd         CPRI         5,534.61         0.02%         0.00%         10.50%         10.50%           Copart Inc         CPRT         23,220.15         0.09%         0.00%         30.00%         30.00%           Salesforce.com Inc         CRM         163,006.30         0.61%         0.00%         30.00%         30.00%           Cisco Systems Inc         CSCO         207,809.00         0.77%         2.86%         7.50%         10.47%           Cognizant Technology Solutions Corp         CTAS         29,661.13         0.11%         0.88%         15.50%         16.46%           Corting Ink Inc         CTL         16,191.34         0.06%         6.73%         1.00%         7.32%           Contava Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           Cortiva Inc         CTVA         21,291.70 <td>0.0095%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	0.0095%										
Costo Wholesale Corp         COST         138,223.50         0.51%         0.92%         11.00%         11.97%           Coty Inc         COTY         8,107.47         0.03%         4.67%         5.00%         9.79%           Campbell Soup Co         CPB         15,814.08         0.06%         2.66%         2.00%         4.89%           Capri Holdings Ltd         CPRI         5,534.61         0.02%         0.00%         16.00%         16.00%           salesfore.com Inc         CRM         163,006.30         0.61%         0.00%         30.00%         30.00%           Cisco Systems Inc         CSCO         207,809.00         0.77%         2.86%         7.50%         16.46%           Contact Corp         CSX         59,958.31         0.22%         1.25%         14.50%         15.84%           Cintas Corp         CTAS         29,661.13         0.11%         0.89%         15.00%         16.46%           Contruy Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           Corteva Inc         CTXS         16,688.01         0.06%         1.09%         7.00%         8.13%           CVS         95,662.53         0.36%         2.72%         6.50%	0.1032%										
Campbell Soup Co         CPB         15,814.08         0.06%         2.86%         2.00%         4.89%           Capin Holdings Ltd         CPRI         5,534.61         0.02%         0.00%         10.50%         10.50%           Salesforce.com Inc         CRM         163,006.30         0.61%         0.00%         30.00%         30.00%           Cisco Systems Inc         CSCO         207,809.00         0.77%         2.86%         7.50%         10.47%           CSX Corp         CSX         59,958.31         0.22%         1.25%         14.50%         15.84%           Cintas Corp         CTAS         29,661.13         0.11%         0.89%         15.50%         16.46%           Cognizant Technology Solutions Corp         CTSH         34,402.50         0.13%         1.28%         6.00%         7.32%           Corteva Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           CVS Health Corp         CVS         95,662.53         0.36%         2.72%         6.50%         9.31%           Chevron Corp         CVX         213,857.60         0.79%         4.29%         16.50%         11.12%           Combine Energy Inc         D         69,189,62 <t< td=""><td>0.0614%</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	0.0614%										
Capit Holdings Ltd         CPRI         5,534.61         0.02%         0.00%         10.50%         10.50%           Copart Inc         CPRT         23,220.15         0.09%         0.00%         16.00%         16.00%           Salesforce.com Inc         CRM         163,006.30         0.61%         0.00%         30.00%         30.00%           Cisco Systems Inc         CSCO         207,809.00         0.77%         2.86%         7.50%         10.47%           CSX Corp         CSX         59,958.31         0.22%         1.25%         14.50%         15.84%           Cintas Corp         CTL         16,191.34         0.06%         6.73%         1.00%         7.76%           Cognizant Technology Solutions Corp         CTSH         34,402.50         0.13%         1.28%         6.00%         7.32%           Corteva Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           CVS Health Corp         CVS         95,662.53         0.36%         2.72%         6.50%         9.31%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         11.12%           Deminion Energy Inc         DA         43,566.10	0.0029%										
Copart Inc         CPRT         23,220.15         0.09%         0.00%         16.00%         16.00%           salesforce.com Inc         CRM         163,006.30         0.61%         0.00%         30.00%         30.00%           cisco Systems Inc         CSCO         207,809.00         0.77%         2.86%         7.50%         10.47%           CSX Corp         CSX         59,958.31         0.22%         1.25%         14.50%         15.84%           Cintas Corp         CTAS         29,661.13         0.06%         6.73%         1.00%         7.76%           Cognizant Technology Solutions Corp         CTSH         34,402.50         0.13%         1.28%         6.00%         7.32%           Corteva Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           Citrix Systems Inc         CTXS         16,688.01         0.06%         1.09%         7.00%         8.13%           CVS         95,662.53         0.36%         2.72%         6.50%         21.14%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           Dominion Energy Inc         D         69,180.62         0.26%         4.47%	0.0029%										
salesforce.com Inc         CRM         163,006.30         0.61%         0.00%         30.00%         30.00%           Cisco Systems Inc         CSCO         207,809.00         0.77%         2.86%         7.50%         10.47%           CSX Corp         CTAS         29,958.31         0.22%         1.25%         14.50%         15.84%           Cintas Corp         CTAS         29,661.13         0.11%         0.89%         15.50%         16.46%           Cognizant Technology Solutions Corp         CTSH         34,402.50         0.13%         1.28%         6.00%         7.32%           Corteva Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           Citrix Systems Inc         CTXS         16,688.01         0.06%         1.09%         7.00%         8.13%           CVS Health Corp         CVX         213,857.60         0.79%         4.29%         16.50%         21.14%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           DuPont de Nemours Inc         DA         38,979.20         0.14%         2.87%         10.00%         13.01%           DuPont de Nemours Inc         DE         54,17	0.0022%										
Cisco Systems Inc         CSCO         207,809.00         0.77%         2.86%         7.50%         10.47%           CSX Corp         CSX         59,958.31         0.22%         1.25%         14.50%         15.84%           Cintas Corp         CTAS         29,661.13         0.11%         0.89%         15.50%         16.46%           CenturyLink Inc         CTL         16,191.34         0.06%         6.73%         1.00%         7.76%           Cognizant Technology Solutions Corp         CTSH         34,402.50         0.13%         1.28%         6.00%         7.32%           Corteva Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           CVS Health Corp         CVS         95,662.53         0.36%         2.72%         6.50%         9.31%           Chevron Corp         CVX         213,857.60         0.79%         4.29%         16.50%         21.14%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           Deminion Energy Inc         D         43,566.10         N/A         2.15%         N/A         N/A           DuPort de Nemours Inc         DA         38,979.20         0.1	0.0138% 0.1815%										
CSX Corp         CSX         59,958.31         0.22%         1.25%         14.50%         15.84%           Cintas Corp         CTAS         29,661.13         0.11%         0.89%         15.50%         16.46%           CenturyLink Inc         CTL         16,191.34         0.06%         6.73%         1.00%         7.76%           Cognizant Technology Solutions Corp         CTSH         34,402.50         0.13%         1.28%         6.00%         7.32%           Corteva Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           Citrix Systems Inc         CTXS         16,688.01         0.06%         1.09%         7.00%         8.13%           CVS Health Corp         CVS         95,662.53         0.36%         2.72%         6.50%         9.31%           Chevron Corp         CVX         21,857.60         0.79%         4.29%         16.50%         21.14%           Concho Resources Inc         DAL         38,979.20         0.14%         2.87%         10.00%         13.01%           DuPont de Nemours Inc         DA         43,566.10         N/A         2.15%         N/A         N/A           Discover Financial Services         DFS         27,041.12	0.0807%										
Cintas Corp         CTAS         29,661.13         0.11%         0.89%         15.50%         16.46%           CenturyLink Inc         CTL         16,191.34         0.06%         6.73%         1.00%         7.76%           Cognizant Technology Solutions Corp         CTSH         34,402.50         0.13%         1.28%         6.00%         7.32%           Corteva Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           Citrx Systems Inc         CTXS         16,688.01         0.06%         1.09%         7.00%         8.13%           CVS Health Corp         CVS         95,662.53         0.36%         2.72%         6.50%         9.31%           Chevron Corp         CVX         213,857.60         0.79%         4.29%         16.50%         21.14%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           Dorminon Energy Inc         D         43,566.10         N/A         2.15%         11.12%           DuPont de Nemours Inc         DD         43,566.10         N/A         2.15%         N/A         N/A           Dolar General Corp         DG         39,498.65         0.15% <td< td=""><td>0.0353%</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	0.0353%										
Cognizant Technology Solutions Corp         CTSH         34,402.50         0.13%         1.28%         6.00%         7.32%           Corteva Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           Citrix Systems Inc         CTXS         16,688.01         0.06%         1.09%         7.00%         8.13%           CVS Health Corp         CVS         95,662.53         0.36%         2.72%         6.50%         9.31%           Chevron Corp         CVX         213,857.60         0.79%         4.29%         16.50%         21.14%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           Dominion Energy Inc         D         69,189.62         0.26%         4.47%         6.50%         11.12%           Delta Air Lines Inc         DAL         38,979.20         0.14%         2.87%         10.00%         13.01%           DuPont de Nemours Inc         DD         43,566.10         N/A         2.15%         N/A         N/A           Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Oular General Corp         DG         39,4	0.0181%										
Conteva Inc         CTVA         21,291.70         N/A         2.11%         N/A         N/A           Citrix Systems Inc         CTXS         16,688.01         0.06%         1.09%         7.00%         8.13%           CVS Health Corp         CVS         95,662.53         0.36%         2.72%         6.50%         9.31%           Chevron Corp         CVX         213,857.60         0.79%         4.29%         16.50%         21.14%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           Dominion Energy Inc         D         69,189.62         0.26%         4.47%         6.50%         11.12%           Detta Air Lines Inc         DAL         38,979.20         0.14%         2.87%         10.00%         13.01%           DuPont de Nemours Inc         DD         43,566.10         N/A         2.15%         N/A         N/A           Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Dolar General Corp         DG         39,486.5         0.15%         0.83%         12.00%         12.88%           Quest Diagnostics Inc         DGX         14,578.65	0.0047%					,					
Citrix Systems Inc         CTXS         16,688.01         0.06%         1.09%         7.00%         8.13%           CVS Health Corp         CVS         95,662.53         0.36%         2.72%         6.50%         9.31%           Chevron Corp         CVX         213,857.60         0.79%         4.29%         16.50%         21.14%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           Dominon Energy Inc         D         69,189.62         0.26%         4.47%         6.50%         11.12%           DuPont de Nemours Inc         DD         43,566.10         N/A         2.15%         N/A         N/A           Deere & Co         DE         54,177.05         0.20%         1.77%         13.50%         15.39%           Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Dollar General Corp         DG         39,498.65         0.15%         0.83%         12.00%         12.88%           Quest Diagnostics Inc         DGX         14,578.65         0.55%         1.96%         9.00%         11.05%           Danaher Corp         DHR         116,693.10	0.0093%										
CVS         95,662.53         0.36%         2.72%         6.50%         9.31%           Chevron Corp         CVX         213,857.60         0.79%         4.29%         16.50%         21.14%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           Dominion Energy Inc         D         69,189.62         0.26%         4.47%         6.50%         11.12%           Delta Air Lines Inc         DAL         38,979.20         0.14%         2.87%         10.00%         13.01%           DuPont de Nemours Inc         DD         43,566.10         N/A         2.15%         N/A         N/A           Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Dollar General Corp         DG         39,498.65         0.15%         0.83%         12.00%         11.05%           Dranaber Corp         DGX         14,578.65         0.05%         1.96%         9.00%         11.05%           Danaher Corp         DHR         116,693.10         0.43%         0.42%         13.50%         13.95%           Walt Disney Co/The         DIS         256,244.40         0.95%         <	N/A										
Chevron Corp         CVX         213,857.60         0.79%         4.29%         16.50%         21.14%           Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           Dominion Energy Inc         D         69,189.62         0.26%         4.47%         6.50%         11.12%           Delta Air Lines Inc         DAL         38,979.20         0.14%         2.87%         10.00%         13.01%           DuPont de Nemours Inc         DD         43,566.10         N/A         2.15%         N/A         N/A           Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Oular General Corp         DG         39,498.65         0.15%         0.83%         12.00%         12.88%           Quest Diagnostics Inc         DGX         14,578.65         0.05%         1.96%         9.00%         11.05%           Danaher Corp         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15	0.0050% 0.0331%										
Concho Resources Inc         CXO         16,921.87         0.06%         0.59%         21.00%         21.65%           Dominion Energy Inc         D         69,189.62         0.26%         4.47%         6.50%         11.12%           Delta Air Lines Inc         DAL         38,979.20         0.14%         2.87%         10.00%         13.01%           DuPont de Nemours Inc         DD         43,566.10         N/A         2.15%         N/A         N/A           Deere & Co         DE         54,177.05         0.20%         1.77%         13.50%         15.39%           Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Dollar General Corp         DG         39,498.65         0.15%         0.83%         12.00%         12.88%           Quest Diagnostics Inc         DGX         14,578.65         0.05%         1.96%         9.00%         11.05%           D anaher Corp         DHR         116,693.10         0.43%         0.42%         13.50%         8.23%           Discovery Inc         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15	0.1678%					,		•			
Delta Air Lines Inc         DAL         38,979.20         0.14%         2.87%         10.00%         13.01%           DuPont de Nemours Inc         DD         43,566.10         N/A         2.15%         N/A         N/A           Deere & Co         DE         54,177.05         0.20%         1.77%         13.50%         15.39%           Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Dollar General Corp         DG         39,498.65         0.15%         0.83%         12.00%         12.88%           Quest Diagnostics Inc         DGX         14,578.65         0.05%         1.96%         9.00%         11.05%           DR Horton Inc         DHI         21,733.74         0.08%         1.19%         7.00%         8.23%           Danaher Corp         DHR         116,693.10         0.43%         0.42%         13.50%         13.95%           Walt Disney Co/The         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15         0.06%         0.00%         18.00%         18.00%           Digital Realty Trust Inc         DLR         26,88.81 <td>0.0136%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	0.0136%										
DuPont de Nemours Inc         DD         43,566.10         N/A         2.15%         N/A         N/A           Deere & Co         DE         54,177.05         0.20%         1.77%         13.50%         15.39%           Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Dollar General Corp         DG         39,498.65         0.15%         0.83%         12.00%         12.88%           Quest Diagnostics Inc         DGX         14,578.65         0.05%         1.96%         9.00%         11.05%           DR Horton Inc         DHI         21,733.74         0.08%         1.19%         7.00%         8.23%           Danaher Corp         DHR         116,693.10         0.43%         0.42%         13.50%         13.95%           Walt Disney Co/The         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15         0.06%         0.00%         18.00%         18.00%           Digital Realty Trust Inc         DLR         26,238.81         0.10%         3.62%         7.00%         10.75%           Dollar Tree Inc         DLTR         20,815.40	0.0285%	11.12%	6.50%	4.47%	0.26%	69,189.62	D	Dominion Energy Inc			
Deere & Co         DE         54,177.05         0.20%         1.77%         13.50%         15.39%           Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Dollar General Corp         DG         39,498.65         0.15%         0.83%         12.00%         12.88%           Quest Diagnostics Inc         DGX         14,578.65         0.05%         1.96%         9.00%         11.05%           DR Horton Inc         DHI         21,733.74         0.08%         1.19%         7.00%         8.23%           Danaher Corp         DHR         116,693.10         0.43%         0.42%         13.50%         13.95%           Walt Disney Co/The         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15         0.06%         0.00%         18.00%         18.00%           Distal Realty Trust Inc         DLR         26,238.81         0.10%         3.62%         7.00%         10.75%           Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%         10.00%	0.0188%										
Discover Financial Services         DFS         27,041.12         0.10%         2.05%         7.50%         9.63%           Dollar General Corp         DG         39,498.65         0.15%         0.83%         12.00%         12.88%           Quest Diagnostics Inc         DGX         14,578.65         0.05%         1.96%         9.00%         11.05%           DR Horton Inc         DHI         21,733.74         0.08%         1.19%         7.00%         8.23%           Danaher Corp         DHR         116,693.10         0.43%         0.42%         13.50%         13.95%           Walt Disney Co/The         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15         0.06%         0.00%         18.00%         18.00%           DISH Network Corp         DISH         18,188.91         0.07%         0.00%         -2.00%         -2.00%         -2.00%         -2.00%         -2.00%         -2.00%         -2.00%         -2.00%         -2.00%         -0.07%         10.75%         Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%         10.00%         10.00%         10.00%         10.00%	N/A										
Dollar General Corp         DG         39,498.65         0.15%         0.83%         12.00%         12.88%           Quest Diagnostics Inc         DGX         14,578.65         0.05%         1.96%         9.00%         11.05%           DR Horton Inc         DHI         21,733.74         0.08%         1.19%         7.00%         8.23%           Danaher Corp         DHR         116,693.10         0.43%         0.42%         13.50%         13.95%           Walt Disney Co/The         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15         0.06%         0.00%         18.00%         18.00%           Digital Realty Trust Inc         DLR         26,238.81         0.10%         3.62%         7.00%         10.75%           Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%         10.00%	0.0309% 0.0097%					,					
Quest Diagnostics Inc         DGX         14,578.65         0.05%         1.96%         9.00%         11.05%           DR Horton Inc         DHI         21,733.74         0.08%         1.19%         7.00%         8.23%           Danaher Corp         DHR         116,693.10         0.43%         0.42%         13.50%         13.95%           Walt Disney Co/The         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15         0.06%         0.00%         18.00%         18.00%           Digital Realty Trust Inc         DLR         26,238.81         0.10%         3.62%         7.00%         10.75%           Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%         10.00%	0.0189%										
DR Horton Inc         DHI         21,733.74         0.08%         1.19%         7.00%         8.23%           Danaher Corp         DHR         116,693.10         0.43%         0.42%         13.50%         13.95%           Walt Disney Co/The         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15         0.06%         0.00%         18.00%         18.00%           DISH Network Corp         DISH         18,188.91         0.07%         0.00%         -2.00%         -2.00%           Digital Realty Trust Inc         DLR         26,818.1         0.10%         3.62%         7.00%         10.75%           Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%         10.00%	0.0060%							•			
Walt Disney Co/The         DIS         256,244.40         0.95%         1.24%         7.50%         8.79%           Discovery Inc         DISCA         16,047.15         0.06%         0.00%         18.00%         18.00%           DISH Network Corp         DISH         18,188.91         0.07%         0.00%         -2.00%         -2.00%           Digital Realty Trust Inc         DLR         26,838.1         0.10%         3.62%         7.00%         10.75%           Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%         10.00%	0.0066%										
Discovery Inc         DISCA         16,047.15         0.06%         0.00%         18.00%         18.00%           DISH Network Corp         DISH         18,188.91         0.07%         0.00%         -2.00%         -2.00%           Digital Realty Trust Inc         DLR         26,238.81         0.10%         3.62%         7.00%         10.75%           Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%         10.00%	0.0604%										
DISH Network Corp         DISH         18,188.91         0.07%         0.00%         -2.00%         -2.00%           Digital Realty Trust Inc         DLR         26,238.81         0.10%         3.62%         7.00%         10.75%           Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%         10.00%	0.0836%										
Digital Realty Trust Inc         DLR         26,238.81         0.10%         3.62%         7.00%         10.75%           Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%         10.00%	0.0107%										
Dollar Tree Inc         DLTR         20,815.40         0.08%         0.00%         10.00%	-0.0014% 0.0105%										
	0.0077%										
Dover Corp DOV 17,235.81 0.06% 1.65% 12.50% 14.25%	0.0091%	14.25%	12.50%	1.65%	0.06%	17,235.81	DOV	Dover Corp			
Dow Inc         DOW         37,260.18         N/A         5.97%         N/A         N/A	N/A	N/A	N/A	5.97%	N/A		DOW	Dow Inc			
Duke Realty Corp         DRE         12,904.28         0.05%         2.67%         4.50%         7.23%	0.0035%										
Darden Restaurants Inc         DRI         14,292.01         0.05%         3.03%         11.00%         14.20%           DTL         0.55%         0.03%         10.00%         10.	0.0075%										
DTE         24,556.86         0.09%         3.03%         4.50%         7.60%           Duke Energy Corp         DUK         70,042.32         0.26%         3.98%         6.00%         10.10%	0.0069% 0.0263%										
Duke Energy Corp         DUK         70,042.32         0.26%         3.98%         6.00%         10.10%           DaVita Inc         DVA         10,778.07         0.04%         0.00%         11.50%         11.50%	0.0263%										
Devon Energy Corp DVN 9,435.48 0.04% 1.48% 18.00% 19.61%	0.0069%										
DXC Technology Co DXC 9,089.42 0.03% 2.36% 10.00% 12.48%	0.0042%										
Electronic Arts Inc         EA         33,249.64         0.12%         0.00%         11.00%         11.00%	0.0136%	11.00%	11.00%	0.00%	0.12%	33,249.64					
eBay Inc EBAY 29,164,59 0.11% 1.66% 10.00% 11.74%	0.0127%										
Ecolab Inc ECL 57,150.05 0.21% 0.95% 10.00% 11.00%	0.0233%										
Consolidated Edison Inc         ED         30,799.64         0.11%         3.30%         3.00%         6.35%           Equifax Inc         EFX         18,764.45         0.07%         1.01%         8.50%         9.55%	0.0073%										
Equifax Inc         EFX         18,764.45         0.07%         1.01%         8.50%         9.55%           Edison International         EIX         27,853.65         0.10%         3.32%         14.00%         17.55%	0.0067% 0.0181%										
Edison international EL 27,653,55 0.10% 5.52% 14.00% 17.35% Estec Lauder Cos Inc/The EL 75,539,83 0.28% 0.92% 14.00% 14.98%	0.0419%										
Eastman Chemical Co EMN 10,066.83 0.04% 3.57% 5.00% 8.66%	0.0032%										
Emerson Electric Co         EMR         47,407.49         0.18%         2.58%         11.00%         13.72%	0.0241%	13.72%	11.00%	2.58%	0.18%		EMR	Emerson Electric Co			
EOG Resources Inc         EOG         47,606.81         0.18%         1.41%         31.50%         33.13%	0.0585%	33.13%	31.50%	1.41%	0.18%	47,606.81	EOG	EOG Resources Inc			
Equinix Inc EQIX 50,827.14 0.19% 1.77% 23.50% 25.48%	0.0481%										
Equity Residential EQR 30,690.17 0.11% 2.83% -13.50% -10.86%	-0.0124%										
Eversource Energy         ES         29,537.40         0.11%         2.44%         5.50%         8.01%           Essex Property Trust Inc         ESS         20,591.28         0.08%         2.61%         -0.50%         2.10%	0.0088% 0.0016%										
	0.001070	2.10/0	0.0070	2.0170	0.0070	20,031.20	200				

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		[4] Market	[5]	[6] Estimated	[7] Long-Term	[8]	[9] Weighted
Company	Ticker	Capitalization	Weight in Index	Dividend Yield	Growth Est.	DCF Result	DCF Result
E*TRADE Financial Corp	ETFC	10,448.45	0.04%	1.22%	17.50%	18.83%	0.0073%
Eaton Corp PLC	ETN	40,471.86	0.15%	2.90%	7.00%	10.00%	0.0150%
Entergy Corp	ETR	25,871.36	0.10%	2.88%	2.00%	4.91%	0.0047%
Evergy Inc Edwards Lifesciences Corp	EVRG EW	15,998.72 48,219.79	N/A 0.18%	2.92% 0.00%	N/A 16.50%	N/A 16.50%	N/A 0.0295%
Exelon Corp	EXC	46.607.40	0.17%	3.17%	9.00%	12.31%	0.0233 %
Expeditors International of Washington I	EXPD	12,592.88	0.05%	1.35%	9.00%	10.41%	0.0049%
Expedia Group Inc	EXPE	16,546.58	0.06%	1.20%	24.00%	25.34%	0.0156%
Extra Space Storage Inc	EXR	14,052.62	0.05%	3.37%	4.00%	7.44%	0.0039%
Ford Motor Co Diamondback Energy Inc	F FANG	35,591.57 13,648.73	0.13% 0.05%	6.57% 0.89%	3.50% 17.00%	10.18% 17.97%	0.0135% 0.0091%
Fastenal Co	FAST	20,681.35	0.08%	2.77%	8.50%	11.39%	0.0087%
Facebook Inc	FB	627,195.10	2.33%	0.00%	17.50%	17.50%	0.4074%
Fortune Brands Home & Security Inc	FBHS	9,818.49	0.04%	1.36%	8.50%	9.92%	0.0036%
Freeport-McMoRan Inc	FCX	17,368.47	0.06%	1.67%	22.50%	24.36%	0.0157%
FedEx Corp	FDX FE	40,442.11	0.15% 0.10%	1.68% 3.18%	6.00%	7.73%	0.0116%
FirstEnergy Corp F5 Networks Inc	FE	27,204.71 8,086.76	0.03%	0.00%	6.50% 12.50%	9.78% 12.50%	0.0099% 0.0038%
Fidelity National Information Services I	FIS	91,492.15	0.34%	0.94%	23.50%	24.55%	0.0834%
Fiserv Inc	FISV	83,214.18	0.31%	0.00%	15.00%	15.00%	0.0463%
Fifth Third Bancorp	FITB	21,097.60	0.08%	3.41%	7.00%	10.53%	0.0082%
FLIR Systems Inc	FLIR	7,362.04	0.03%	1.31%	12.00%	13.39%	0.0037%
Flowserve Corp	FLS	6,418.03	0.02%	1.55%	13.50%	15.15%	0.0036%
FleetCor Technologies Inc FMC Corp	FLT FMC	27,480.38 12,550.62	0.10% 0.05%	0.00% 1.82%	16.50% 15.00%	16.50% 16.96%	0.0168% 0.0079%
Fox Corp	FOXA	23,268.13	0.05% N/A	1.23%	N/A	N/A	0.0079% N/A
First Republic Bank/CA	FRC	19,525.04	0.07%	0.66%	10.50%	11.19%	0.0081%
Federal Realty Investment Trust	FRT	9,731.95	0.04%	3.22%	3.00%	6.27%	0.0023%
TechnipFMC PLC	FTI	N/A	N/A	0.00%	N/A	N/A	N/A
Fortinet Inc	FTNT	20,396.69	0.08%	0.00%	28.00%	28.00%	0.0212%
Fortive Corp	FTV GD	26,046.96	0.10%	0.36%	10.00%	10.38%	0.0100%
General Dynamics Corp General Electric Co	GE	53,411.67 102,793.90	0.20% 0.38%	2.21% 0.34%	6.00% 2.00%	8.28% 2.34%	0.0164% 0.0089%
Gilead Sciences Inc	GILD	80,948.05	0.30%	3.94%	-1.50%	2.41%	0.0072%
General Mills Inc	GIS	32,793.50	0.12%	3.61%	4.50%	8.19%	0.0100%
Globe Life Inc	GL	11,361.68	0.04%	0.66%	9.50%	10.19%	0.0043%
Corning Inc	GLW	22,694.40	0.08%	2.71%	14.50%	17.41%	0.0147%
General Motors Co	GM	48,832.00	0.18%	4.47%	2.00%	6.51%	0.0118%
Alphabet Inc Genuine Parts Co	GOOGL GPC	N/A 14,554.00	N/A 0.05%	0.00% 3.05%	N/A 8.00%	N/A 11.17%	N/A 0.0060%
Global Payments Inc	GPN	60,042.88	0.22%	0.39%	20.50%	20.93%	0.0466%
Gap Inc/The	GPS	6,643.13	0.02%	5.45%	3.00%	8.53%	0.0021%
Garmin Ltd	GRMN	19,116.76	0.07%	2.27%	10.50%	12.89%	0.0091%
Goldman Sachs Group Inc/The	GS	87,797.05	0.33%	2.04%	10.00%	12.14%	0.0396%
WW Grainger Inc	GWW	17,912.60	0.07%	1.73%	8.50%	10.30%	0.0069%
Halliburton Co	HAL HAS	20,656.08	0.08%	3.05% 2.58%	19.50%	22.85%	0.0175%
Hasbro Inc Huntington Bancshares Inc/OH	HBAN	13,317.17 14,737.41	0.05% 0.05%	2.58% 4.35%	9.50% 10.50%	12.20% 15.08%	0.0060% 0.0082%
Hanesbrands Inc	HBI	5,221.68	0.02%	4.16%	3.00%	7.22%	0.0014%
HCA Healthcare Inc	HCA	49,882.38	0.19%	1.09%	12.50%	13.66%	0.0253%
Home Depot Inc/The	HD	254,678.50	0.95%	2.74%	9.00%	11.86%	0.1121%
Hess Corp	HES	20,134.04	N/A	1.50%	N/A	N/A	N/A
HollyFrontier Corp	HFC	7,478.07	0.03%	3.03%	17.00%	20.29%	0.0056% 0.0116%
Hartford Financial Services Group Inc/Th Huntington Ingalls Industries Inc	HIG HII	21,229.41 11,361.10	0.08% 0.04%	2.07% 1.49%	12.50% 7.00%	14.70% 8.54%	0.0036%
Hilton Worldwide Holdings Inc	HLT	31,436.08	0.12%	0.54%	17.00%	17.59%	0.0205%
Harley-Davidson Inc	HOG	5,438.79	0.02%	4.26%	8.50%	12.94%	0.0026%
Hologic Inc	HOLX	14,372.74	0.05%	0.00%	12.00%	12.00%	0.0064%
Honeywell International Inc	HON	128,315.80	0.48%	2.01%	8.50%	10.60%	0.0505%
Helmerich & Payne Inc	HP HPE	4,670.60 19,622.63	N/A	6.65%	N/A	N/A	N/A
Hewlett Packard Enterprise Co HP Inc	HPQ	32,221.80	0.07% 0.12%	3.17% 3.17%	8.00% 7.00%	11.30% 10.28%	0.0082% 0.0123%
H&R Block Inc	HRB	4,756.19	0.02%	4.35%	7.00%	11.50%	0.0020%
Hormel Foods Corp	HRL	25,115.59	0.09%	1.98%	10.50%	12.58%	0.0117%
Henry Schein Inc	HSIC	10,384.11	0.04%	0.00%	7.00%	7.00%	0.0027%
Host Hotels & Resorts Inc	HST	12,919.98	0.05%	4.76%	-1.50%	3.22%	0.0015%
Hershey Co/The Humana Inc	HSY	32,184.31	0.12%	2.08%	7.00%	9.15%	0.0109%
International Business Machines Corp	HUM IBM	49,301.45 126.531.00	0.18% 0.47%	0.63% 4.60%	12.00% 1.00%	12.67% 5.62%	0.0232% 0.0264%
Intercontinental Exchange Inc	ICE	54,293.40	0.20%	1.13%	10.50%	11.69%	0.0236%
IDEXX Laboratories Inc	IDXX	24,555.38	0.09%	0.00%	13.00%	13.00%	0.0118%
IDEX Corp	IEX	13,210.67	0.05%	1.15%	9.50%	10.70%	0.0052%
International Flavors & Fragrances Inc	IFF	14,526.87	0.05%	2.27%	8.00%	10.36%	0.0056%
Illumina Inc	ILMN	48,069.00	0.18%	0.00%	14.00%	14.00%	0.0250%
Incyte Corp IHS Markit Ltd	INCY INFO	16,850.86 31,667.68	N/A 0.12%	0.00% 0.84%	N/A 18.00%	N/A 18.92%	N/A 0.0222%
Intel Corp	INFO	275,442.00	1.02%	1.99%	10.50%	12.59%	0.1288%
Intuit Inc	INTU	75,133.25	0.28%	0.74%	14.50%	15.29%	0.0426%
International Paper Co	IP	17,511.19	0.06%	4.59%	9.00%	13.80%	0.0090%
Interpublic Group of Cos Inc/The	IPG	9,107.63	0.03%	3.99%	11.00%	15.21%	0.0051%
IPG Photonics Corp	IPGP	7,787.81	0.03%	0.00%	8.00%	8.00%	0.0023%
IQVIA Holdings Inc	IQV	31,216.54	0.12%	0.00%	12.50%	12.50%	0.0145%
Ingersoll-Rand PLC Iron Mountain Inc	IR IRM	31,696.29 9,162.48	0.12% 0.03%	1.60% 7.77%	12.50% 8.50%	14.20% 16.60%	0.0167% 0.0056%
Intuitive Surgical Inc	ISRG	71,094.00	0.26%	0.00%	14.00%	14.00%	0.0369%
		,					
Gartner Inc	IT	14,430.12	0.05%	0.00%	13.50%	13.50%	0.0072%
	IT ITW IVZ	14,430.12 57,723.44 8,383.42	0.05% 0.21% 0.03%	0.00% 2.38% 6.71%	13.50% 9.50% 3.50%	13.50% 11.99% 10.33%	0.0072% 0.0257% 0.0032%

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		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Jacobs Engineering Group Inc	J	13,049.66	0.05%	0.79%	14.50%	15.35%	0.0074%
JB Hunt Transport Services Inc	JBHT	12,416.34	0.05%	0.94%	9.50%	10.48%	0.0048%
Johnson Controls International plc	JCI	32,466.09	0.12%	2.49%	8.00%	10.59%	0.0128%
Jack Henry & Associates Inc Johnson & Johnson	JKHY JNJ	11,724.60 390,776.60	0.04% 1.45%	1.05% 2.56%	12.00% 12.00%	13.11% 14.71%	0.0057% 0.2134%
Juniper Networks Inc	JNPR	8,351.09	0.03%	3.19%	5.50%	8.78%	0.0027%
JPMorgan Chase & Co	JPM	428,255.70	1.59%	2.71%	8.50%	11.33%	0.1800%
Nordstrom Inc	JWN K	6,105.57	0.02%	3.76% 3.29%	5.00%	8.85%	0.0020%
Kellogg Co KeyCorp	KEY	24,026.66 19,602.71	0.09% 0.07%	3.78%	3.50% 10.50%	6.85% 14.48%	0.0061% 0.0105%
Keysight Technologies Inc	KEYS	19,561.25	0.07%	0.00%	21.50%	21.50%	0.0156%
Kraft Heinz Co/The	KHC	37,460.28	N/A	5.22%	N/A	N/A	N/A
Kimco Realty Corp KLA Corp	KIM KLAC	8,617.41 28,805.29	0.03% 0.11%	5.53% 1.86%	5.00% 11.00%	10.67% 12.96%	0.0034% 0.0139%
Kimberly-Clark Corp	KMB	49,629.41	0.18%	2.85%	7.50%	10.46%	0.0193%
Kinder Morgan Inc/DE	KMI	49,284.39	0.18%	4.60%	35.50%	40.92%	0.0748%
CarMax Inc	KMX	16,069.93	0.06%	0.00%	10.50%	10.50%	0.0063%
Coca-Cola Co/The Kroger Co/The	KO KR	247,743.70 22,808.88	0.92% 0.08%	2.87% 2.39%	6.50% 4.00%	9.46% 6.44%	0.0870% 0.0055%
Kohl's Corp	KSS	7,256.54	0.03%	6.40%	6.50%	13.11%	0.0035%
Kansas City Southern	KSU	16,524.78	0.06%	0.96%	12.00%	13.02%	0.0080%
Loews Corp	L	15,398.17	0.06%	0.49%	14.00%	14.52%	0.0083%
L Brands Inc Leidos Holdings Inc	LB LDOS	5,796.00 14,470.83	0.02% 0.05%	5.71% 1.33%	-2.50% 9.00%	3.14% 10.39%	0.0007% 0.0056%
Leggett & Platt Inc	LEG	6,752.55	0.03%	3.12%	9.00%	12.26%	0.0031%
Lennar Corp	LEN	21,366.23	0.08%	0.74%	8.50%	9.27%	0.0074%
Laboratory Corp of America Holdings	LH	17,509.60	0.06%	0.00%	8.00%	8.00%	0.0052%
L3Harris Technologies Inc Linde PLC	LHX LIN	N/A 112,745.60	N/A N/A	0.00% 1.81%	N/A N/A	N/A N/A	N/A N/A
LKQ Corp	LKQ	10,524.91	0.04%	0.00%	10.00%	10.00%	0.0039%
Eli Lilly & Co	LLY	135,568.10	0.50%	2.10%	12.00%	14.23%	0.0716%
Lockheed Martin Corp	LMT	120,946.40	0.45%	2.24%	12.50%	14.88%	0.0668%
Lincoln National Corp Alliant Energy Corp	LNC LNT	11,568.41 14,050.45	0.04% 0.05%	2.79% 2.60%	9.00% 6.50%	11.92% 9.18%	0.0051% 0.0048%
Lowe's Cos Inc	LOW	94,241.28	0.35%	1.92%	11.50%	13.53%	0.0473%
Lam Research Corp	LRCX	45,260.59	0.17%	1.47%	9.00%	10.54%	0.0177%
Southwest Airlines Co	LUV	29,155.69	0.11%	1.30%	10.50%	11.87%	0.0128%
Las Vegas Sands Corp Lamb Weston Holdings Inc	LVS LW	53,337.60 13,270.21	0.20% 0.05%	4.55% 1.01%	7.50% 11.00%	12.22% 12.07%	0.0242% 0.0059%
LyondellBasell Industries NV	LYB	28,753.11	0.03%	4.87%	5.50%	10.50%	0.0112%
Live Nation Entertainment Inc	LYV	15,889.79	N/A	0.00%	N/A	N/A	N/A
Macy's Inc	М	5,274.03	0.02%	8.85%	2.00%	10.94%	0.0021%
Mastercard Inc Mid-America Apartment Communities Inc	MA MAA	328,229.80 15,529.46	1.22% 0.06%	0.49% 2.93%	16.00% 1.00%	16.53% 3.94%	0.2014% 0.0023%
Marriott International Inc/MD	MAR	47,387.42	0.18%	1.33%	11.50%	12.91%	0.0227%
Masco Corp	MAS	14,134.87	0.05%	1.09%	9.50%	10.64%	0.0056%
McDonald's Corp	MCD	160,726.60	0.60%	2.34%	8.50%	10.94%	0.0653%
Microchip Technology Inc	MCHP MCK	26,326.01	0.10%	1.33%	9.50%	10.89%	0.0106%
McKesson Corp Moody's Corp	MCO	27,948.96 48,526.00	0.10% 0.18%	1.06% 0.78%	10.50% 11.50%	11.62% 12.32%	0.0120% 0.0222%
Mondelez International Inc	MDLZ	79,871.08	0.30%	2.13%	8.50%	10.72%	0.0318%
Medtronic PLC	MDT	162,145.30	0.60%	1.79%	8.50%	10.37%	0.0624%
MetLife Inc MGM Resorts International	MET MGM	47,635.39	0.18%	3.40%	7.50%	11.03%	0.0195% 0.0097%
Mohawk Industries Inc	MHK	16,609.70 10,332.03	0.06% 0.04%	1.61% 0.00%	14.00% 1.50%	15.72% 1.50%	0.0097%
McCormick & Co Inc/MD	MKC	22,963.21	0.09%	1.44%	8.00%	9.50%	0.0081%
MarketAxess Holdings Inc	MKTX	13,876.21	0.05%	0.56%	14.50%	15.10%	0.0078%
Martin Marietta Materials Inc	MLM	16,741.88	0.06%	0.83%	9.50%	10.37%	0.0064%
Marsh & McLennan Cos Inc 3M Co	MMC MMM	57,685.92 102,209.60	0.21% 0.38%	1.61% 3.24%	9.00% 6.00%	10.68% 9.34%	0.0229% 0.0354%
Monster Beverage Corp	MNST	36,635.86	0.14%	0.00%	14.50%	14.50%	0.0197%
Altria Group Inc	MO	94,452.40	0.35%	6.65%	8.50%	15.43%	0.0541%
Mosaic Co/The Marathon Petroleum Corp	MOS MPC	7,581.92 35,964.50	0.03% 0.13%	1.25% 3.83%	18.00% 11.00%	19.36% 15.04%	0.0054% 0.0201%
Marathon Petroleum Corp Merck & Co Inc	MRK	225,906.70	0.84%	3.83% 2.76%	9.00%	11.88%	0.0996%
Marathon Oil Corp	MRO	9,788.22	N/A	1.64%	N/A	N/A	N/A
Morgan Stanley	MS	90,157.78	0.33%	2.52%	10.00%	12.65%	0.0423%
MSCI Inc	MSCI	23,645.96	0.09%	1.01%	18.50%	19.60%	0.0172%
Microsoft Corp Motorola Solutions Inc	MSFT MSI	1,272,741.00 30,273.84	4.72% 0.11%	1.22% 1.45%	14.00% 10.50%	15.31% 12.03%	0.7230% 0.0135%
M&T Bank Corp	MTB	22,532.45	0.08%	2.58%	9.50%	12.20%	0.0102%
Mettler-Toledo International Inc	MTD	20,241.10	0.08%	0.00%	10.00%	10.00%	0.0075%
Micron Technology Inc	MU	65,593.59	0.24%	0.00%	14.00%	14.00%	0.0341%
Maxim Integrated Products Inc Mylan NV	MXIM MYL	17,208.03 11,427.36	0.06% 0.04%	3.02% 0.00%	5.50% 3.50%	8.60% 3.50%	0.0055% 0.0015%
Noble Energy Inc	NBL	10,689.96	N/A	2.15%	N/A	N/A	N/A
Norwegian Cruise Line Holdings Ltd	NCLH	12,386.77	0.05%	0.00%	16.00%	16.00%	0.0074%
Nasdaq Inc	NDAQ	17,967.70	0.07%	1.72%	8.00%	9.79%	0.0065%
NextEra Energy Inc Newmont Corp	NEE NEM	127,120.90 35,826.96	0.47% 0.13%	2.11% 1.28%	10.50% 11.50%	12.72% 12.85%	0.0600% 0.0171%
Netflix Inc	NFLX	153,212.50	0.13%	0.00%	32.00%	32.00%	0.1820%
NiSource Inc	NI	10,900.92	0.04%	2.74%	12.50%	15.41%	0.0062%
NIKE Inc	NKE	160,608.20	0.60%	0.95%	17.50%	18.53%	0.1105%
NortonLifeLock Inc Nielsen Holdings PLC	NLOK NLSN	17,693.20 7,603.66	0.07% 0.03%	1.76% 1.12%	7.00% 45.50%	8.82% 46.87%	0.0058% 0.0132%
Northrop Grumman Corp	NOC	64,359.81	0.03%	1.38%	45.50% 9.50%	46.87%	0.0261%
National Oilwell Varco Inc	NOV	8,766.51	N/A	0.88%	N/A	N/A	N/A
ServiceNow Inc	NOW	58,728.59	N/A	0.00%	N/A	N/A	N/A

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NetApp Inc         NTAP         13,870.53         0.05%         3.17%         10.00%         13.33%         0.0069%           Northern Trust Corp         NTRS         22,050.56         0.08%         2.69%         8.50%         11.30%         0.0093%           Nucor Corp         NUE         15,639.63         0.06%         3.11%         13.00%         16.31%         0.0095%           NVIDIA Corp         NVDA         154,750.30         0.57%         0.25%         11.50%         11.76%         0.0676%           NVR Inc         NVR         14,896.43         0.06%         0.00%         13.50%         0.0075%           Newell Brands Inc         NWL         8,533.73         0.03%         4.56%         4.00%         8.65%         0.0027%           News Corp         NWSA         8,439.55         N/A         1.39%         N/A         N/A         N/A           Realty Income Corp         O         23,461.03         0.09%         3.63%         4.50%         8.21%         0.0072%           Ola Dominion Freight Line Inc         ODFL         16,405.78         0.06%         0.35%         9.50%         9.87%         0.0066%           ORAL Cr         OKE         31,513.56         0.12%         4.								
Company         Total         Capabilitation         Wayn in hose         Deck mail         Deck mail <thdeck mail<="" th=""> <thdeck mail<="" th=""> <t< th=""><th></th><th></th><th></th><th>[5]</th><th></th><th></th><th>[8]</th><th></th></t<></thdeck></thdeck>				[5]			[8]	
NRG Example:         NRG         Dist.         NR         NR         NR         NR         NR         NR           Nacci Sum         Control Corp         NRC         4.3014         0.3074         1.4015         0.40074         0.40074           Norther Truel Corp         NRE         1.2014         0.20174         0.4116         0.00074           Norther Truel Corp         NRE         1.4016         0.10074         0.00074         0.00074           NRC Form         NRE         1.4024         0.00754         0.4074         0.00074         0.00074           NRE Form         NR         1.44444         0.0074         0.4074         0.00074         0.00074         0.00074           NRE Form         NR         1.44444         0.00074         0.4074         0.00074	Company	Ticker		Weight in Index			DCF Result	
Nords Southern Corp         NSC         9.4394.48         0.2076         1.87%         4.407%         15.35%         0.0020%           Nape Inco         NAPS         1.8518.80         0.07%         3.17%         1.307%         0.0207%           Nape Corp Op         NAPS         1.8578.80         0.06%         3.17%         1.307%         0.0267%           NAPD Corp Op         NAPS         1.8578.70         0.07%         0.207%         1.157%         0.0267%           NAPL Corp Op         NAPS         1.8578.70         0.07%         0.207%         1.157%         0.027%           Need Corp         NAPS         1.4676.41         0.07%         0.027%         0.07%         0.07%         0.07%           Need Corp         NAPS         0.4461.53         0.07%<								
Nontrient Carp         NTRS         2.2005.8         0.005%         1.201%         0.0025%           Near Carp         NULL         1.401%         0.005%         1.101%         0.0025%           NNR Inc         NNR Inc         NNR Inc         1.001%         0.005%         1.101%         0.0025%           NNR Inc         NNR Inc         1.401%         0.005%         1.101%         0.0025%           NNR Inc         1.401%         0.005%         1.105%         0.0075%         0.0075%           NNR Inc         0.005%         0.005%         0.105%         4.401%         0.0075%           Scaly may Carp         0.005%         0.105%         4.401%         0.0075%         0.0076%           OHCON Ins         0.006%         0.105%         4.205%         0.0076%         0.0076%           OHCON Ins         0.016%         1.205%         0.0076%         0.0076%         0.0076%           OHCON Ins         0.016%         1.205%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.0076%         0.00776%         0.00776%         0.0076% <td>Norfolk Southern Corp</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Norfolk Southern Corp							
Nuor Corp         NUE         15.598.63         0.05%         0.21%         15.07%         16.30%         60.37%           Newel Corp         NVIL         15.598.63         0.05%         1.25%         0.05%         0.05%           Newel Corp         NVIL         15.537.63         0.37%         0.25%         1.15%         0.05%         0.05%           Newel Corp         NVILS         6.533.73         0.03%         1.65%         4.05%         8.07%         0.07%           Ready Amore Corp         OVEL         2.14.01.08         0.05%         4.05%         4.05%         8.27%         0.017%         0.027%           Orector Line No         OVEL         1.15.13.8         0.12%         1.05%         1.05%         0.								
NUBL Colp         NUBA         15.27%         0.25%         11.56%         11.56%         0.007%           Near Long Inc         NUBA         6.490.30         NUBA         0.25%         13.26%         0.007%           Near Long Inc         NUBA         6.490.30         NUA         13.06%         NUA         NUA         NUA           Near Long Inc         NUBA         6.490.30         NUA         13.06%         14.07%         0.0072%           Near Long Inc         Char Long Inc         0.0074.40         0.009%         3.56%         1.0078%         0.0078%           Old Domice Inc         OLD C         11.464.71         0.009%         3.56%         1.0078%         1.0078%         0.0078%           Orace Con         ORC L         17.76.35         0.009%         3.25%         0.0078%								
NNR ker         NNR         1.466.43         0.00%         15.67%         15.67%         0.007%           Novall Broch me         NNR         1.466.43         0.00%         1.357%         4.60%         0.007%           Neab more Corp         OD         1.466.78         0.00%         0.35%         4.50%         0.207%           Neab more Corp         OR         1.51.38         0.17%         0.207%         0.007%           ONE Corp         OR         1.51.38         0.12%         0.207%         0.007%           ONE Corp         OR         1.51.38         0.12%         1.007%         1.10.49%         0.027%           Onesc Corp         OR         1.10.17%         0.007%         1.10.07%         1.00.67%         0.10.57%           Orabit Derivation for         OR         1.10.17%         2.40.7%         1.00.57%         0.0147%           Orabit Derivation for         PC/CT         4.61.12         0.02%         1.207%         0.025%         0.0147%           Pachot Instantion         PC/CT         4.61.12         0.02%         1.207%         0.207%         0.025%         0.025%         0.025%         0.025%         0.025%         0.025%         0.025%         0.025%         0.025%	•							
Nexel Gram         NVL         6.533.7         0.03%         4.50%         A.04%         8.0%         N.NA           Nack Corp         VVSA         6.459.5         NA         1.30%         NA         NA           Oth Demons Fright Line Inc         ODE         2.456.9         0.05%         0.35%         0.25%         0.25%         0.05%								
Benky Income Corp         O         23.441.03         0.00%         3.35%         4.50%         4.21%         0.0172%           Common Group Inc         CMC         17.146.38         0.00%         4.35%         0.0172%           Common Group Inc         CMC         17.146.38         0.00%         4.35%         0.00%         1.56%         0.0172%           Common Group Inc         CMCL         17.146.38         0.00%         1.26%         0.00%         1.56%         0.0172%           Common Group Inc         CMCL         17.467.05         0.00%         1.20%         1.20%         0.0172%           Common Group Inc         CMCL         15.20%         1.20%         1.20%         0.0172%           Common Form         PAYC         1.513.30         0.12%         2.30%         0.0172%           Payons Soltwarm Inc         PAYC         1.513.30         0.07%         0.00%         3.25%         0.0172%           Payons Soltwarm Inc         PAYC         1.533.31         0.07%         4.00%         3.25%         0.0172%           Payons Soltwarm Inc         PAYC         1.533.51         0.07%         4.00%         3.25%         0.007%           Payonsoltwarm Inc         PAYA         1.538.540								
Old Deminis Preight Line iso         OPFL         14.067.78         0.05%         9.5%         9.5%         2.24%         0.052%           OREOK Inc         ORC         13.73.58         0.05%         1.7%         1.00%         1.14%         0.0726%           Orable Accornels Inc         ORC         13.73.58         0.075%         12.00%         11.04%         0.0726%           Orable Accornels Inc         ORC         13.74.56         0.016%         1.7%         12.00%         0.0171%           Orable Accornels Inc         ORC         13.76.56         0.014%         2.4.0%         22.50%         22.37%         0.4426%           Pergles Inc         PRC         6.40.15.2         0.02%         4.4.4%         8.00%         12.20%         0.0125%           Pergles Ince         PRC         4.4.05%         2.3.4%         0.010%         4.4.1%         7.5%         6.50%         8.3.4%         0.012%           Pergles Ince         PRC         22.2.0.0.15%         0.11%         4.4.1%         7.5%         6.50%         8.3.4%         0.012%           Pergles Ince         PRC         22.2.0.0.15%         0.12%         3.7%         10.05%         2.3.4%         0.012%           Pergles Ince <td< td=""><td>News Corp</td><td>NWSA</td><td>8,439.55</td><td>N/A</td><td>1.39%</td><td>N/A</td><td>N/A</td><td>N/A</td></td<>	News Corp	NWSA	8,439.55	N/A	1.39%	N/A	N/A	N/A
ONEOK inc.         ONE         31/5136         0.12%         4.98%         17.00%         22.49%         0.0026%           Oracia Corp         ORCU         17.14.8.38         0.007%         15.95%         6.50%         15.95%         0.007%         15.95%         6.007%         15.95%         6.007%         15.95%         0.007%         15.95%         0.007%         15.95%         0.007%         15.95%         0.007%         15.95%         0.007%         15.95%         0.007								
Omison Group Inc         OMC         17,145.39         0.06%         1.7%         10.07% <th1< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th1<>								
Oracle Corp         ORCL         (17,705,70)         0.66%         1.75%         10.00%         11.84%         0.0776%           Octed waterweine         ORLY         33.061.18         0.147%         0.75%         12.00%         12.00%         0.147%           Octed waterweine         ORLY         33.061.18         0.147%         7.45%         22.05%         12.07%         0.047%           Perglets Vander Francial Inc         PECT         6.401.52         0.12%         4.44%         8.00%         12.08%         0.038%           Perglets Vander Francial Inc         PECR         6.401.52         0.12%         4.44%         8.00%         12.24%         0.017%           Perglets Vander Francial Inc         PECR         13.118.80         0.11%         4.314%         -2.01%         0.017%           Perglets Vander Francial Inc         PER         22.55.20         0.17%         4.57%         6.50%         3.34%         0.017%           Perglets Vander Francial Inc         PER         22.55.22         0.17%         0.52%         10.00%         10.35%         0.025%           Perglets Vander Francial Inc         PER         22.55.22         0.17%         1.50%         10.00%         0.025%           Perglets Vander Francial Inc </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Occolsmin         OXY         9789384         0.14%         7.46%         24.50%         22.87%         0.045%           Psychns for moments         PAVCX         12.13.83         0.07%         2.27%         10.50%         22.50%         22.87%         0.067%           Psychns for moments         PAVCX         12.13.83         0.07%         2.07%         10.50%         12.52%         0.0162%           Psychns for moments         PAVCX         17.868         0.07%         4.01%         7.59%         12.27%         0.025%           Heathpack Froperties for         PEG         22.52.84         0.02%         2.34%         6.05%         8.23%         0.017%           Photor for         PEG         22.52.84         0.04%         2.34%         6.05%         9.55%         0.116%           Photor for         PEG         22.52.84         0.04%         2.35%         6.05%         0.047%         0.025%           Photor for         PEG         22.52.84         0.04%         1.16%         9.05%         0.05%         0.047%           Photor for         PEG         22.55%         0.05%         0.05%         0.025%         0.05%         0.025%           Photor for for         PEG         22.5%	•							
Paycon Software Inc         PAVC         18,153.30         0.07%         0.07%         25,57%         0.0712%           Prochos Inc         PB/T         6.01,12%         2,07%         1.057%         1.057%         0.0712%           Prochos Inc         PB/T         6.01,12%         0.07%         4.07%         0.057%         0.07%	O'Reilly Automotive Inc	ORLY	33,021.19	0.12%	0.00%	12.00%	12.00%	0.0147%
Paydex Inc         PAYX         32,315.69         0.12%         2.27%         10.60%         12.80%         0.0016%           Paydes Suried Financial Inc         PECT         30.28%         30.28%         4.44%         5.00%         12.28%         0.0102%           PALCAR Inc         PCAR Inc         PCAR Inc         PCAR Inc         PCAR Inc         0.028%         4.44%         5.00%         9.228%         0.0107%           Paydes Swite Entrance Incompton         PEFE         200.553.040         0.12%         3.34%         5.00%         9.34%         0.006%           Principal Financial Group Inc         PFE         200.553.040         0.04%         3.38%         5.50%         10.00%         0.026%           Principal Financial Group Inc         PFE         20.528.24         0.044%         1.32%         0.0406%         0.026%           Principal Financial Group Annutca         PFG         11.83%         0.044%         1.04%         5.50%         0.026% <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Pelopics United Financial Inc.         PEOR 1         6.401/s         2.001%         4.44%         9.007%         12.66%         0.0030%           Heathroadt Reporting Group Inc.         PEAR         828.23.23         0.015%         4.01%         3.20%         0.012%         0.012%           Pelopic Inc.         PEP         2013/56.40         0.074%         4.20%         0.30%         0.02%         0.012%           Pinter Inc.         PEP         225.284.10         0.44%         3.37%         10.00%         9.95%         0.116%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.015%         0.017%         Pinter Stopping         Pinter Stopping <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>								
PACÓZAR Inc         PCAR         28.263.23         0.10%         4.41%         7.20%         0.12%         0.012%           Public Sorvice Enterples Group Inc         PEGA         31.116.80         0.17%         3.14%         6.00%         0.00%         0.00%         1.00%         0.00%         0.00%         1.00%         0.00%         1.122%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.128%         0.00%         1.00%         0.00%								
Healthpack         PEAK         17.86.88         0.07%         4.00%         -5.30%         0.03%         0.003%           Phylick Swite Entreprised Group Inc         PEG         200.53.40         0.72%         2.14%         6.00%         B.23%         0.0007%           Physick Inc         PEG         200.53.40         0.74%         2.75%         6.50%         B.57%         0.0007%           Proceal Foundal Group Inc         PEG         308.66.00         0.17%         0.23%         1.50%         0.005%         0.005%           Proceal Foundal Foundation         PEG         308.66.00         0.17%         0.23%         0.001%         0.0026%           Parker-Hannin Carp         PH         25.25.25         0.10%         1.14%         8.50%         0.003%           Parker-Hannin Carp         PHG         113.25.23         0.01%         1.24%         0.003%         0.003%           Parker-Hannin Carp         PHG         113.45.30         0.045%         0.24%         0.005%         0.047%         0.003%           Parker-Danin Carp         PHG         15.34.40         0.05%         0.022%         0.03%         0.017%         0.003%           Pholosition International Inc         PHC         1.03.84.00 <th0< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th0<>								
PageSci Inc         PEP         200.553:40         0.74%         2.75%         6.50%         3.44%         0.068%           Piner Inc         PFE         225.244.10         0.04%         3.73%         10.00%         13.24%         0.1164%           Piner Inc         PFE         15.51%         10.00%         3.75%         10.00%         11.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%         10.00%	Healthpeak Properties Inc	PEAK	17,681.68	0.07%	4.00%	-3.50%	0.43%	0.0003%
Price Inc.         PFE         225,294.10         0.44%         3.73%         10.00%         13.22%         0.1164%           Principal Financia Group Inc.         PFG         308,856.00         1.15%         2.38%         0.00%         11.44%         0.015%           Protex & Gamble CorThe         PG         308,856.00         1.15%         2.38%         0.00%         11.44%         0.015%           PateGroup Inc.         PHM         11.882.08         0.04%         1.10%         9.50%         6.00%         0.044%           PateGroup Inc.         PHM         11.882.08         0.04%         2.25%         6.00%         9.004%         0.004%           Perking Inc.         PHD         10.325.42         0.04%         2.25%         6.00%         7.67%         0.0026%           Philip Moria International Inc.         PHD         10.254.22         0.04%         3.38%         4.00%         7.48%         0.005%           Prinace Concor Locar         PMN         10.787.24         0.03%         1.35%         6.00%         7.47%         0.0025%           Prinace Concor Locar         PMN         7.463.38         0.114%         4.27%         1.50%         0.0025%           Prinace Concor         PHC         2								
Principal Financial Group Inc         PFG         15.88         3.89%         5.50%         9.69%         0.0055%           Proder & Gamble CoThe         PG         3.88,655.90         1.15%         0.23%         15.00%         11.45%         0.1014%           Progressore Cont/The         PG         4.44,22.22         0.17%         0.23%         15.00%         11.65%         0.0024%           Packagreg Corp of America         PKG         10.38.28         0.04%         2.23%         6.00%         11.00%         11.30%         0.0024%           Prologis In         PKI         11.01%         13.048.20         0.04%         2.23%         6.00%         11.60%         11.30%         0.0024%           Prologis In         PKI         7.838.39         0.05%         15.37%         6.00%         17.8%         0.0025%           Penale Vect Control         PNN         7.087.39         0.035%         1.55%         6.006%         17.8%         0.0025%           Penale Vect Control         PNN         7.087.39         0.035%         1.55%         0.0025%           Penale Vect Control         PNN         7.087.39         0.035%         1.55%         0.0005%         1.57%         0.0025%         0.0025%         0.0026%								
Processive ComPThe         PG         308,688.60         1.15%         2.38%         9.00%         11.44%         0.1316%           Perdersburg ComPThe         PF         44,822.52         0.07%         0.52%         15.50%         16.06%         0.0266%           Parker-Inamin Comp         PH         25,855.25         0.07%         1.74%         8.50%         11.32%         0.010%           Parker-Inamical Inc         PH         11.325.46         0.04%         0.28%         11.00%         0.024%           Perker-Inamical Inc         PH         10.0254.26         0.23%         6.50%         8.65%         0.0207%           Philp Moris International Inc         PM         15,848.30         0.03%         5.37%         6.00%         7.67%         0.0027%           PH Canduatines Group Inc/The         PN         7.673.83         0.03%         1.55%         6.00%         7.67%         0.0027%           PH Canduatines Incorp         PPG         2.2856.86         0.11%         4.52%         1.50%         6.05%         0.022%           PH Canduatines Incorp         PPG         2.2856.86         0.11%         4.52%         1.50%         0.022%           PH Canduatines Incorp         PPG         2.2856.86								
Progressive Corp/The         PCR         44,822.52         0.17%         0.52%         15.57%         10.05%         0.0289%           Patkert-hannillin Corp         PHM         11,822.63         0.04%         1.10%         9.550%         10.82%         0.009%           Packaging Corp of America         PK0         10.138.53         0.04%         1.10%         9.550%         10.04%         0.009%           Phologine         PLD         00.254.25         0.22%         2.38%         6.00%         1.33%         0.0280%           Philo Moris International Inc         PMC         67.039.69         0.23%         3.01%         8.00%         11.13%         0.0227%           Pernation MC         PNC         67.039.69         0.25%         3.01%         8.00%         7.45%         0.0023%           Prenation MC         PNR         7.88%         0.03%         1.63%         0.00%         7.45%         0.0023%           Pernation MC         PRGO         8.095.82         0.03%         1.51%         2.00%         3.53%         0.0011%           Perluoto Strong         PPHC         PPH Corp         PPL Corp         PPL Corp         PPL Corp         PPL Corp         1.51%         0.005%         1.01%         0.007% <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Public Storage         PHM         11,882.08         0.04%         1.10%         9.50%         10.85%         0.0047%           Perking Ener Iner         PK0         10,1385         0.04%         2.25%         10.00%         10,0336           Perking Ener Iner         PLD         0.02476         2.23%         10.00%         11.33%         0.0045%           Philip Moris International Inc         PLD         0.02474         0.28%         15.07%         8.09%         0.02075%           Prinspic Moris International Inc         PM         0.787.24         0.04%         3.38%         6.00%         7.43%         0.0022%           Prinspic Must Copital FLC         PMR         0.787.24         0.04%         3.38%         6.00%         7.43%         0.0022%           Prinspic OPLC         PPR         28.055.25         0.11%         1.52%         1.50%         6.00%         0.0055%           PUIG Corp         PPL         28.0515.89         0.14%         4.15%         5.55%         0.022%           Puide Storage         PSA         38.866.01         1.44%         3.75%         4.55%         10.05%         0.022%           Puide Storage         PSA         38.866.01         1.44%         3.75%         4.55%		PGR	44,622.52	0.17%		15.50%	16.06%	0.0266%
Packaging Corp of America         PKG         10.335.58         0.04%         2.95%         5.0%         9.04%         0.0034%           Prologia In         PLD         60.254.25         0.22%         2.38%         6.50%         11.37%         0.0046%           Prologia In         PM         13.544.3         0.55%         5.37%         6.50%         11.53%         0.0046%           Prologia Inc         PM         7.983.33         0.03%         1.65%         6.00%         17.8%         0.0025%           Prologia Inc         PM         7.983.33         0.03%         1.65%         6.00%         7.67%         0.0025%           PPG Industries Inc         PPG         2.855.82         0.11%         1.62%         1.00%         7.67%         0.0085%           PPIC Corp         PPL 2         2.855.82         0.11%         4.22%         1.00%         4.13%         0.0085%         0.001%         0.001%         0.015%         0.001%         0.015%         0.001%         0.015%         0.001%         0.015%         0.001%         0.015%         0.001%         0.015%         0.001%         0.015%         0.022%         0.015%         0.001%         0.015%         0.001%         0.015%         0.001%         0.015%<								
PerkinEmir Inc         PKI         11,041.53         0.04%         0.28%         11.00%         11.30%         0.049%           Prilogis Inc         PM         13,649.30         0.50%         5.37%         6.50%         11.35%         0.0620%           Prilogis Inc         PM         13,649.30         0.50%         5.37%         6.00%         7.69%         0.0207%           Perkins PLC         Capital Corp         PNV         7.077.24         0.04%         13.55%         6.00%         7.69%         0.0025%           PFC Industries         PPL         22,655.82         0.11%         1.62%         6.00%         7.69%         0.0065%         0.0066%           Priligo Co PLC         PRG         0.8048.32         0.11%         4.20%         6.50%         10.83%         0.011%           Priligo So PLC         PRG         3.8048.36         0.14%         3.76%         4.50%         8.34%         0.013%           Priligo So PLC         PRU         3.8048.30         0.027%         3.25%         0.007%         1.33%         0.0113%           Prilic Storage         PSA         4.3800.70         0.17%         3.82%         0.100%         8.34%         0.0033%           Printas Breinsin								
Pickogis Inc         PLD         60.254.25         0.22%         2.38%         6.60%         8.96%         0.0200%           PIIG Moris International Inc         PM         135.443         0.50%         5.17%         6.00%         11.53%         0.025%           PNC Financial Services Group Inc/The         PNC         67.033.69         0.25%         3.01%         6.00%         7.48%         0.0022%           Prinace West Capital Corp         PNW         10.772.41         0.04%         3.38%         6.00%         7.45%         0.0023%           Perligo Co PLC         PRGO         2.0658.22         0.11%         1.55%         2.00%         3.55%         0.0011%           Pudential Financial Inc         PRGO         3.058.83         0.14%         4.19%         6.50%         8.34%         0.0123%           Public Storage         PSA         3.866.04         0.14%         3.76%         4.60%         8.34%         0.023%           PUH Corp         PVH         7.102.33         0.03%         0.16%         2.00%         3.47%         0.0028%           Proper Natural Resources Co         PVD         2.32.81.24         0.09%         2.00%         3.47%         0.0028%           Proper Natural Resources Co								
Philip Morris International Inc         PM         135,484.30         0.50%         5.37%         6.00%         11.53%         0.0827%           Pentale IPLC         PNR         7,883.39         0.03%         1.63%         6.00%         7.68%         0.0227%           Prinacle Wast Capital Corp         PNR         7,883.39         0.03%         1.63%         6.00%         7.43%         0.003%           PPL Corp         PNR         7,883.39         0.03%         1.63%         6.00%         7.43%         0.003%           PPL Corp         PPL 2         28.515.82         0.11%         1.62%         6.00%         7.43%         0.006%%           PhiLop         PSA         38.048.38         0.14%         4.16%         6.55%         1.038%         0.012%           Public Storage         PSX         45.300.07         0.17%         3.82%         1.000%         1.033%         0.002%           Clanata Services Inc         PVH         7.102.33         0.03%         1.64%         9.00%         9.07%         0.022%           Public Storage         PVH         7.023.30         0.03%         1.06%         0.027%         0.035%           Public Storage         PVH         7.023.30         0.02%								
Pentale VEC         PNR         7,883.39         0.03%         1.63%         6.00%         7.48%         0.0023%           PPG Industries Inc         PPG         28,855.82         0.11%         1.62%         6.00%         7.67%         0.0025%           PPL Corp         PPL Corp         PPL Corp         PPL Corp         PPG         28,855.82         0.11%         1.62%         1.50%         6.05%         0.0005%           Pudential Financial Inc         PRGO         8,065.82         0.03%         1.51%         6.20%         10.35%         0.0173%           Pudential Financial Inc         PRU         33,086.01         1.4%         3.1%         6.45%         0.0017%         0.0123%           Pudential Financial Inc         PVR         5.848.88         0.02%         0.49%         1.25%         5.00%         6.34%         0.012%           Quartal Services Inc         PVR         5.848.88         0.02%         0.49%         1.25%         5.00%         0.62%         0.00%         8.45%         0.005%         0.00%         8.45%         0.005%         0.00%         6.250%         0.022%         0.00%         0.20%         0.20%         0.20%         0.005%         0.00%         6.250%         0.0230%         0.0320%		PM						
Pinnabe West Capital Corp         PNW         10,767.24         0.04%         3.36%         4.00%         7.43%         0.0035%           PPC Industries Inc         PPS         28,558.2         0.11%         1.62%         6.00%         7.67%         0.0035%           PPL Corp         PPL         28,515.89         0.10%         4.52%         1.50%         6.05%         0.0005%           Pudential Financial Inc         PRU         38,048.36         0.14%         4.19%         6.50%         10.33%         0.013%           Public Storage         PSX         45,800.07         0.17%         3.82%         10.00%         1.401%         0.0236%           Public Storage         PSX         45,800.07         0.17%         3.82%         10.00%         2.07%         0.0244%           Poner Intural Resources Co         PXD         2.261.24         0.09%         1.25%         10.00%         2.00%         0.1027%           QLALCOMM Inc         QCOM         13.042.00         0.157%         0.00%         2.20%         0.50%         0.0327%           Regetron Pharmaceuticals Inc         REG         10.793.35         0.04%         2.23%         18.50%         0.045%         12.07%         0.000%         12.07%         0.0								
PPG Industries Inc         PPG         28,855.82         0.11%         1.62%         6.00%         7.67%         0.0085%           Perigo Co PLC         PPG         8,055.82         0.03%         1.51%         6.00%         1.03%         0.011%           Puladnial Financial Inc         PPL         38,086.04         0.14%         3.76%         4.50%         10.33%         0.0123%           Publics Storage         PSA         38,866.04         0.14%         3.76%         4.50%         14.41%         0.023%           PUH Corp         PVH         7.102.33         0.03%         0.16%         17.07%         0.023%           Quarta Services Inc         PVM         5.848.8         0.02%         2.00%         2.00%         0.012%           Quarta Services Inc         PVM         23.281.24         0.09%         2.00%         2.00%         0.012%           Quarta Services Inc         PVM         13.462.80         0.51%         0.00%         2.00%         0.012%           Quarta Services Inc         PVPL         13.462.80         0.55%         10.00%         0.022%           Quarta Services Inc         PVPL         13.462.80         0.55%         10.00%         0.025%         0.00%         0.025%								
PPL Corp         PPL         26,515.88         0.10%         4.52%         1.50%         6.60%         0.0000%           Prudential Financial Inc         PRU         38,048.36         0.14%         4.19%         6.50%         1.033%         0.0113%           Public Stargap         PSA         38,060.4         0.14%         3.47%         4.50%         8.34%         0.0123%           Phills 66         PSX         45,380.07         0.17%         3.82%         10.00%         9.17%         0.0024%           Quanta Services Inc         PVR         5,848.88         0.02%         0.49%         17.0%         0.60%         0.62%         6.60%         6.60%         6.60%         6.60%         6.60%         6.60%         6.60%         6.60%         6.60%         9.00%         1.50%         6.10.34%         0.003% <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Peringo Co PLC         PRGO         8.085.82         0.03%         1.51%         2.00%         3.53%         0.0011%           Pudnets Financial Inc         PSA         38,886.04         0.14%         3.76%         4.50%         6.03%         0.0123%           Publics Storage         PSA         38,886.04         0.14%         3.76%         4.50%         6.03%         0.0123%           PVH Corp         PVH         7.102.33         0.03%         0.16%         9.00%         9.17%         0.028%           Quarta Services Inc         PVT         5.248.88         0.03%         0.16%         9.00%         2.00%         0.038%           Prioner Natural Resources Co         PXD         2.3281.24         0.09%         1.25%         50.00%         3.647%         0.0335%           QUALCOMM Inc         CCOM         112.056.00         0.42%         2.70%         10.50%         10.34%         0.0329%           Royator Re Comp Lid         RE         E         1.7163.45         0.04%         2.21%         10.94%         0.038%           Regenor Centrate Comp         RE         1.565.49         0.04%         10.00%         1.04%         0.008%           Regenor Senaters Financial Com         RL         8.804.29								
Public Storage         PSA         38,866,04         0.14%         3.76%         4.60%         8.34%         0.0120%           PVH Cop         PVH         7,102,33         0.03%         0.16%         9.00%         9.17%         0.0024%           Quanta Services Inc         PVH         7,848,88         0.03%         0.16%         9.00%         20.00%         0.0038%           Pioneer Natural Resources Co         PXD         2.32,61.24         0.09%         1.25%         35.00%         36.47%         0.0315%           QUALCOMM Inc         QCOM         112,056.00         0.42%         2.70%         10.50%         13.34%         0.055%           Gorvo Inc         QCVM         13.801.77         0.05%         0.00%         12.50%         62.60%         0.0320%           Regencron Pharmaceuticals Inc         REG         10.759.35         0.04%         3.65%         16.00%         10.00%         0.008%         Regencron Pharmaceuticals Inc         REG         10.759.35         0.04%         3.65%         16.00%         11.00%         0.0048%         0.008%         0.048%         0.006%         10.00%         10.00%         0.008%         0.0148%         Regeneron Pharmaceuticals Inc         REG         10.27%         0.0016%         0								
Philles 6         PSX         45.360.07         0.17%         3.82%         10.00%         14.01%         0.028%           Quarta Services Inc         PVW R         5.448.88         0.02%         0.49%         17.00%         17.53%         0.0028%           Poncer Natural Resources Co         PVR         5.348.88         0.02%         0.49%         17.00%         17.53%         0.0028%           PayPal Hodings Inc         PVPL         138.402.90         0.51%         0.00%         20.00%         0.027%           QUALCOMM Inc         QRVO         13.807.77         0.05%         0.00%         62.50%         0.0328%           Regenor Centres Corp         RE         11.444.96         0.04%         2.23%         18.50%         20.94%         0.0089%           Regenor Dharmaceuticals Inc         REG         10.759.35         0.04%         3.65%         16.00%         10.90%         0.0162%           Regions Financial Corp         RF         15.596.49         0.066%         4.08%         10.25%         14.79%         0.0048%           Regions Financial Corp         RL         8.304.29         0.33%         8.00%         10.47%         0.0048%           Regions Financial Corp         RL         8.304.29 <td< td=""><td>Prudential Financial Inc</td><td></td><td>38,048.36</td><td>0.14%</td><td>4.19%</td><td>6.50%</td><td>10.83%</td><td>0.0153%</td></td<>	Prudential Financial Inc		38,048.36	0.14%	4.19%	6.50%	10.83%	0.0153%
PVH Corp         PVH         7.102.33         0.03%         0.14%         9.00%         9.17%         0.0024%           Quanta Services Inc         PXD         23.261.24         0.09%         1.25%         35.00%         36.47%         0.0315%           PayPal Holdings Inc         PYPL         13.840.29         0.051%         0.000%         20.00%         0.200%         0.020%         0.000%         62.50%         0.032%           QUALCOMM Inc         QCOM         112.065.00         0.42%         2.70%         10.50%         13.34%         0.055%           Qorvo Inc         QCOM         112.065.00         0.42%         2.70%         15.05%         0.032%           Regence Contras Corp         RE         11.444.96         0.04%         2.23%         18.50%         0.049%         0.008%           Regenceron Pharmaceuticals Inc         REGN         39.953.46         0.15%         0.00%         10.00%         10.00%         0.008%         Resenceron Pharmacinal Inc         RH         7.250.71         0.03%         2.33%         8.00%         9.7%         0.0004%         Resenceron Pharmacinal Inc         RVH         2.260.71         0.05%         1.44%         0.0045%         Resenceron Pharmacinal Inc         RVH         2.32%	6							
Quanta Services Inc         PWR         5,484.88         0.02%         0.49%         17.00%         17.53%         0.00315%           PayPal Holdings Inc         PYPL         138,402.90         0.51%         0.00%         20.00%         0.0315%           QuALCOMM Inc         QCW         112,065.00         0.54%         0.00%         62.50%         62.50%         0.0320%           Qaval Carbbean Cruises Lid         RCL         27.762.97         0.10%         2.41%         12.50%         15.00%         0.0089%           Regenory Centres Corp         REG         11,444.96         0.04%         2.23%         18.50%         20.94%         0.0089%           Regenory Centres Corp         REG         10,759.35         0.04%         3.65%         16.00%         10.90%         0.0086%           Regions Financial Corp         RF         1.596.49         0.035%         2.14%         9.00%         11.20%         0.0086%           Regions Financial Corp         RH         7.260.71         0.035         2.63%         8.00%         19.47%         0.0045%           Regions Financial Inc         RH         7.260.71         0.035         2.03%         8.00%         10.47%         0.0045%           Raymond Jamees Financial Inc								
Pioner Natural Resources Co         PXD         23,261,24         0.09%         1.25%         35.00%         36.47%         0.0315%           PayPal Holdings Inc         QCOM         112,065,00         0.42%         2.70%         10.50%         13.34%         0.055%           QUALCOMM Inc         QCOM         112,065,00         0.42%         2.70%         10.50%         62.50%         0.0320%           Royal Cambbean Cruises Ltd         RCL         27,162,97         0.10%         2.21%         12.50%         15.06%         0.0152%           Regenory Centers Corp         REG         10,759,35         0.04%         3.65%         16.00%         19.94%         0.0089%           Regenory Financial Corp         RF         15.586,49         0.06%         4.04%         10.00%         11.40%         0.0039%           Raymond James Financial Inc         RH         7.260,71         0.05%         16.44%         8.00%         9.71%         0.004%           Rayber Latin International Inc         RUF         12.576,11         0.05%         16.44%         8.00%         9.71%         0.004%           Rayber Latinonal Corp         RL         8.8042,97         0.15%         13.00%         14.22%         0.0045%           Rocheel I								
QLÁLCOMM         COM         112,056,00         0.42%         2.7%         10.50%         13.34%         0.055%           Royal Cambbean Cruises Ltd         RCL         27,162,97         0.10%         2.41%         12.50%         15.06%         0.0182%           Regency Canters Corp         REG         10,759,35         0.04%         3.65%         16.00%         19.94%         0.0089%           Regeneror Pharmacoulicals         REG         10,759,35         0.04%         3.65%         16.00%         19.94%         0.0089%           Regeneror Pharmacoulicals         REG         12,576,71         0.03%         2.01%         10.00%         11.20%         0.009%           Raymond James Financial Inc         RJF         12,576,71         0.03%         2.33%         8.00%         9.71%         0.0045%           Raymond James Financial Inc         RUF         12,376,71         0.03%         2.33%         8.00%         10.11%         0.0045%           Reskel Inc         ROP         2.32,406,11         0.09%         2.03%         8.00%         10.11%         0.0045%           Rockwell Automation Inc         ROL         11,987,65         0.44%         11.50%         10.50%         10.55%         2.00175%         Reskel Inc								
Onvo Inc         QRVO         13,801.77         0.05%         0.00%         62.50%         62.50%         0.0320%           Evenest Re Group Lid         RE         11,444.96         0.04%         2.23%         18.50%         20.04%         0.0089%           Regency Centrest Corp         REG         10.759.35         0.04%         3.65%         16.00%         19.04%         0.0089%           Regency Centrest Corp         REG         3.953.46         0.15%         0.00%         10.00%         10.00%         0.0148%           Regions Financial Inc         RHI         7.260.71         0.03%         2.11%         9.00%         11.20%         0.008%           Raynond James Financial Inc         RJF         12.567.71         0.03%         2.33%         8.00%         10.14%         0.008%           Raynond James Financial Inc         RJF         12.567.71         0.03%         2.33%         8.00%         10.11%         0.0083%           Raynond James Financial Inc         RJF         12.567.71         0.03%         2.03%         8.00%         10.11%         0.0083%           Raynon Lander Inc         RD         RJF         2.33%         8.00%         10.11%         0.0083%           Rockwall Automation Inc								
Royal Caribbean Cruises Lid         RCL         27,162.97         0.10%         2.14%         12.50%         10.06%         0.0152%           Regencrop Lenters Corp         REG         10,759.35         0.04%         3.65%         16.00%         19.94%         0.0089%           Regencron Pharmaceuticals Inc         REG         10,759.35         0.04%         3.65%         10.00%         10.00%         0.014%           Regions Financial Corp         RF         15,595.49         0.06%         4.08%         10.50%         14.79%         0.0086%           Raymond James Financial Inc         RJF         12,576.71         0.03%         2.11%         9.00%         11.20%         0.0034%           Raymond James Financial Inc         RJF         12,576.71         0.03%         2.33%         8.00%         10.42%         0.0034%           Raymond James Financial Inc         RJF         12,576.71         0.03%         2.33%         8.00%         10.14%         0.006%           Rayben Inc         ROK         23,406.11         0.09%         0.33%         8.00%         10.11%         0.036%           Robuel I Automation Inc         ROC         23,431.79         0.15%         0.45%         11.50%         13.25%         0.0165%								
Evense Re Group Ltd         RE         11,444.96         0.04%         2.23%         18.50%         20.94%         0.0089%           Regency Centers Corp         REG         10.759.35         0.04%         3.65%         16.00%         10.94%         0.0089%           Regency Centers Corp         RF         15.595.49         0.06%         4.08%         10.50%         14.79%         0.0030%           Raymond James Financial Inc         RHI         7.200.71         0.03%         2.11%         9.00%         11.20%         0.0030%           Raymond James Financial Inc         RHI         7.200.71         0.03%         2.13%         8.00%         9.71%         0.0045%           Rayh Lauren Corp         RL         8.804.29         0.03%         2.33%         8.00%         10.42%         0.003%           Rockwell Automation Inc         ROK         2.300.88         0.99%         2.03%         8.00%         10.42%         0.004%           Robit Stores Inc         ROL         1.987.65         0.04%         1.15%         13.00%         14.22%         0.0068%           Robit Stores Inc         RSG         33.355.05         0.14%         1.5%         1.50%         1.07%         1.15%         1.000%         11.72%								
Regency Centers Corp         REG         10.759.35         0.04%         36.65%         16.00%         19.94%         0.0080%           Regencenon Phramaceuticals Inc         RF         15.595.49         0.06%         4.08%         10.50%         14.79%         0.0039%           Robert Half International Inc         RHI         7.260.71         0.03%         2.11%         9.00%         11.20%         0.0039%           Raymond James Financial Inc         RJF         12.576.71         0.05%         1.64%         8.00%         9.71%         0.0045%           Raymond James Financial Inc         RJF         12.576.71         0.05%         1.64%         8.00%         10.142%         0.0039%           RasMed Inc         RMD         2.320.28         0.09%         2.33%         8.00%         10.142%         0.0045%           Robins Inc         ROL         11.997.65         0.04%         1.15%         13.00%         14.22%         0.0063%           Robins Inc         ROS         33.35.05         0.12%         1.15%         11.00%         11.72%         0.0176%           Ross Stores Inc         RSG         33.35.05         0.11%         0.58%         29.50%         30.17%         0.0321%           Starbucks Corp </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Regions Financial Corp         RF         15,595,49         0.06%         4.08%         10,50%         14,79%         0.0086%           Robert Half International Inc         RJH         7,25071         0.03%         2.11%         9.00%         11,20%         0.0030%           Raymond James Financial Inc         RJF         12,576,71         0.05%         1.64%         8.00%         9.71%         0.0045%           ResMed Inc         RJM         2.32,406,11         0.09%         0.37%         8.00%         10.142%         0.0034%           Rockwell Automation Inc         ROK         23,406,11         0.09%         2.03%         8.00%         10.11%         0.0085%           Roper Technologies Inc         ROP         39,381,79         0.15%         0.54%         11.50%         12.32%         0.0165%           Rayben Co         RTM         64,003,94         0.24%         1.64%         10.00%         11.72%         0.027%           Starbucks Corp         SBAC         28,175         0.11%         0.55%         29,50%         30.17%         0.0027%           Starbucks Corp         SBAC         28,87,114         0.02%         1.55%         12.00%         13,64%         0.0074%           Starbucks Corp								
Robert Half International Inc         RHI         7,260.71         0.03%         2.11%         9.00%         11.20%         0.0030%           Raymond James Financial Inc         RJF         12,576.71         0.03%         2.33%         8.00%         10.42%         0.0030%           ResMed Inc         RMD         23,202.88         0.09%         0.97%         18.00%         19.06%         0.0164%           Rockwell Automation Inc         ROK         23,202.88         0.09%         0.97%         18.00%         10.11%         0.0063%           Rollins Inc         ROL         11,987.65         0.04%         1.15%         13.00%         14.22%         0.0063%           Roper Technologies Inc         ROST         42,482.07         0.16%         0.95%         9.50%         10.50%         0.0165%           Raythen Co         RTN         64,003.340         0.24%         1.64%         10.00%         11.72%         0.0165%           Starbucks Corp         SBLX         13.109.40         0.42%         1.80%         13.50%         0.53%         25.05%         30.17%         0.0023%           Starbucks Corp         SEL         5.887.14         0.02%         0.87%         15.05%         0.25%         22.50%         24.								
Raymond James Financial IncRJF12,576,710.05%1.64%8.00%9.71%0.0045%Ralph Lauren CorpRMD23,202.880.03%2.33%8.00%10.42%0.0034%ResMed IncROK23,406.110.09%2.03%8.00%10.11%0.0088%Rockwell Automation IncROK23,406.110.09%2.03%8.00%10.11%0.0088%Roper Technologies IncROP39,381.790.15%0.54%11.50%12.07%0.0176%Ross Stores IncROST42,420.70.16%0.95%3.50%10.50%0.065%Raytheon CoRTN64,003.940.24%1.64%10.00%11.72%0.0278%SBA Communications CorpSBAC28,715.150.11%0.58%29.50%30.17%0.0321%Starbucks CorpSBAC28,714.10.90.23%1.55%12.00%13.42%0.0063%Sealed Air CorpSEE5,887.140.02%1.68%22.50%24.37%0.0053%Sherwin-Willings CorTheSHW50,606.20.09%1.68%22.50%24.37%0.0053%Sherwin-Willings CorTheSLB5,887.140.02%1.68%15.00%1.64%0.0074%Sherwin-Willings CorTheSLB5,887.140.02%1.68%22.50%24.37%0.0053%Sherwin-Willings CorTheSHW5,066.20.09%1.20%1.65%0.00%0.0074%Sherwin-Willings CorTheSHW5,066.20.09%								
Raiph Lauren Corp         RL         8,604.29         0.03%         2.33%         8.00%         10.42%         0.0034%           ResMed Inc         RMD         23,202.88         0.09%         2.03%         8.00%         10.11%         0.0088%           Rolins Inc         ROL         11,987.65         0.04%         1.15%         13.00%         14.22%         0.0083%           Ropper Technologies Inc         ROF         39.381.79         0.15%         0.54%         11.50%         12.07%         0.0176%           Ropbilic Services Inc         ROST         42.482.07         0.16%         0.95%         9.50%         10.50%         0.0165%           Republic Services Inc         RSG         33.55.05         0.12%         1.75%         11.50%         13.35%         0.0278%           Starbucks Corp         SBAC         28.7115.15         0.11%         0.58%         29.50%         30.17%         0.0321%           Starbucks Corp         SBAC         28.714         0.02%         1.65%         12.00%         13.42%         0.0233%           Sherwin-Williams Co/The         SHW         55.066.02         0.20%         0.87%         15.00%         11.42%         0.0233%           Sherwin-Williams Co/The <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
ResMed Inc         RND         23.202.88         0.09%         0.97%         18.00%         19.06%         0.0164%           Rockwell Automation Inc         ROK         23.406.11         0.09%         2.03%         8.00%         10.11%         0.0088%           Roper Technologies Inc         ROP         39.381.79         0.15%         0.54%         11.50%         12.07%         0.0165%           Rops Stores Inc         ROS         TASG         33.355.05         0.12%         1.75%         11.50%         13.35%         0.0165%           Raytheon Co         RTN         64.003.94         0.24%         1.64%         10.00%         11.72%         0.027%           SBA Communications Corp         SBAC         28.171.15         0.11%         0.58%         29.50%         30.17%         0.0321%           Starbucks Corp         SBLX         113.109.40         0.42%         1.80%         13.50%         15.42%         0.0647%           Charles Schwab Corp/The         SCHW         62.410.09         0.23%         1.55%         12.00%         13.64%         0.003%           Sherwin-Williams CorThe         SHW         5.367.14         0.02%         1.68%         22.50%         24.37%         0.003%           Sh								
Rolling Inc         ROL         11,987,65         0.04%         1.15%         13.00%         14.22%         0.0063%           Roper Technologies Inc         ROP         39,381.79         0.15%         0.54%         11.50%         12.07%         0.0176%           Ross Stores Inc         ROST         42,482.07         0.16%         0.95%         9.50%         10.50%         0.0165%           Republic Services Inc         RSG         33,355.05         0.12%         1.75%         11.50%         13.35%         0.0127%           SBA Communications Corp         SBAC         28,715.15         0.11%         0.58%         29.50%         30.17%         0.0321%           Starbucks Corp         SDIV         62,410.09         0.23%         1.55%         12.00%         13.64%         0.0063%           Sealed Air Corp         SEE         5,887.14         0.02%         1.86%         22.50%         24.37%         0.0023%           Sherwin-Williams Co/The         SIW         13,357.13         0.05%         0.00%         15.00%         0.0074%           JM Smucker Co/The         SLG         7,971.40         0.03%         3.81%         5.50%         0.9.09%         0.003%           Schlumberger Ld         SNA         <								
Roper Technologies Inc         ROP         39,381.79         0.15%         0.54%         11.50%         12.07%         0.0176%           Ross Stores Inc         ROST         42,482.07         0.16%         0.95%         9.50%         10.50%         0.0165%           Raytheon Co         RTN         64,003.94         0.24%         1.64%         10.00%         11.72%         0.0278%           SBA Communications Corp         SBAC         28,715.15         0.11%         0.58%         29.50%         30.17%         0.0321%           Starbucks Corp         SBUX         113,109.40         0.42%         1.80%         13.50%         15.42%         0.0647%           Charles Schwab Corp/The         SCHW         62,410.09         0.23%         1.55%         12.00%         13.64%         0.00336           Sealed Air Corp         SEE         5,887.14         0.02%         0.87%         10.50%         1.142%         0.0233%           SvB Financial Group         SIVB         13.357.13         0.05%         3.29%         3.50%         6.85%         0.0031%           Schlumberger Ltd         SLB         50,433.29         0.19%         5.49%         15.00%         0.009%         0.029%         0.301%         0.0380% <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
Ross Stores Inc         ROST         42,482.07         0.16%         0.95%         9.50%         10.50%         0.0165%           Republic Services Inc         RSG         33,355.05         0.12%         1.75%         11.50%         13.35%         0.0165%           Raytheon Co         RTN         64,003.94         0.24%         1.64%         10.00%         11.72%         0.0278%           SBA Communications Corp         SBAC         28.715.15         0.11%         0.58%         29.50%         30.17%         0.0321%           Starbucks Corp         SBUX         113,109.40         0.42%         1.80%         13.50%         15.42%         0.0647%           Charles Schwab Corp/The         SCHW         62,410.09         0.23%         1.55%         12.00%         13.60%         0.0074%           Sherwin-Williams Co/The         SHW         55,066.02         0.20%         0.87%         15.00%         15.00%         0.0074%           SVB Financial Group         SIM         12,3357.13         0.05%         0.29%         3.50%         6.85%         0.0031%           Schlumberger Ltd         SLB         50,433.29         0.19%         5.49%         15.00%         2.0.90%         0.0391%           Sup opsys Inc								
Republic Services Inc         RSG         33,355.05         0.12%         1.75%         11.50%         13.35%         0.0165%           Raytheon Co         RTN         64,003.94         0.24%         1.64%         10.00%         11.72%         0.0278%           SBA Communications Corp         SBAC         28,715.15         0.11%         0.58%         29.50%         30.17%         0.0321%           Charles Schwab Corp/The         SCHW         62,410.09         0.42%         1.80%         13.50%         15.42%         0.0647%           Charles Schwab Corp/The         SCHW         62,410.09         0.23%         1.55%         12.00%         13.64%         0.0316%           Sealed Air Corp         SEE         5.887.14         0.02%         0.87%         10.50%         11.42%         0.0233%           SVB Financial Group         SIVB         13.357.13         0.05%         0.00%         15.00%         0.0074%           JM Smucker Co/The         SLM         12.361.82         0.05%         3.29%         3.50%         6.85%         0.0031%           Schumberger Ltd         SLB         50.433.29         0.19%         5.50%         9.41%         0.028%           Snap-on Inc         SNA         9.238.26								
Raytheon Co         RTN         64,003.94         0.24%         1.64%         10.00%         11.72%         0.0278%           SBA Communications Corp         SBAC         28,715.15         0.11%         0.58%         29,50%         30.17%         0.0321%           Starbucks Corp         SBUX         113,109.40         0.42%         1.80%         13.50%         15.42%         0.0063%           Charles Schwab Corp/The         SCHW         62,410.09         0.23%         1.55%         12.00%         13.64%         0.00316%           Seleid Air Corp         SEE         5,887.14         0.02%         0.87%         10.50%         11.42%         0.0033%           Sherwin-Williams Co/The         SHW         55,066.02         0.20%         0.87%         15.00%         15.00%         0.0074%           JM Smucker Co/The         SJM         12,357.13         0.05%         3.29%         3.50%         6.86%         0.0031%           Schlumberger Lid         SLB         50.433.29         0.19%         5.49%         15.00%         2.090%         0.0028%           Subter Corp         SLG         7.971.40         0.03%         3.81%         5.50%         9.41%         0.0028%           Supopsy Inc         SNA <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
SBA Communications Corp         SBAC         28,715.15         0.11%         0.58%         29.50%         30.17%         0.0321%           Starbucks Corp         SBUX         113,109.40         0.42%         1.80%         13.50%         15.42%         0.00647%           Charles Schwab Corp/The         SCHW         62.410.09         0.23%         1.55%         12.00%         13.64%         0.0316%           Sealed Air Corp         SEE         5,887.14         0.02%         1.68%         22.50%         24.37%         0.0053%           Sherwin-Williams Co/The         SHW         55,066.02         0.20%         0.87%         10.50%         11.42%         0.023%           JM Smucker Co/The         SJM         13,357.13         0.05%         3.29%         3.50%         6.85%         0.031%           Schlumberger Ltd         SLB         50,433.29         0.19%         5.49%         15.00%         29.90%         0.038%           Snap-on Inc         SNA         9.238.26         0.03%         2.57%         6.00%         8.65%         0.039%           Simon Property Group Inc         SPG         45,5157         0.17%         5.88%         4.50%         10.61%         0.014%           Sempra Energy <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
Charles Schwab Corp/TheSCHW62,410.090.23%1.55%12.00%13.64%0.0316%Sealed Air CorpSEE5,887.140.02%1.68%22.50%24.37%0.0053%Sherwin-Williams Co/TheSHW55,066.020.20%0.87%10.50%11.42%0.0233%SVB Financial GroupSIVB13,357.130.05%0.00%15.00%15.00%0.0074%JM Smucker Co/TheSJM12,361.820.05%3.29%3.50%6.85%0.031%Schlumberger LtdSLB50,433.290.19%5.49%15.00%20.90%0.0028%Snap-on IncSNA9,238.260.03%2.57%6.00%8.65%0.030%Sympsys IncSUPS23,301.800.09%0.00%12.00%12.00%0.014%Sumor Property Group IncSPG72,520.700.27%3.68%3.50%7.24%0.014%S&F Global IncSPGI72,633.230.27%0.85%11.00%11.90%0.023%State Street CorpSTT29,257.110.11%2.62%5.00%7.69%0.0083%Seagate Technology PLCSTX16,482.350.06%4.14%4.00%8.22%0.0050%Constellation Brands IncSTZ37,013.160.14%1.62%8.50%10.19%0.019%Skyworks Solutions IncSWK29,862.2770.08%1.37%8.00%9.42%0.0076%Synchrony FinancialSYF23,662.380.09%1.30% <td>SBA Communications Corp</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	SBA Communications Corp							
Sealed Air CorpSEE5,887.140.02%1.68%22.50%24.37%0.0053%Sherwin-Williams Co/TheSHW55,066.020.20%0.87%10.50%11.42%0.0233%SVB Financial GroupSIVB13,357.130.05%0.00%15.00%15.00%0.0074%JM Smucker Co/TheSJM12,361.820.05%3.29%3.50%6.85%0.031%Schlumberger LtdSLB50,433.290.19%5.49%15.00%20.90%0.0391%SL Green Realty CorpSLG7,971.400.03%3.81%5.50%9.41%0.0028%Snap-on IncSNA9,238.260.03%2.57%6.00%8.65%0.0030%Synopsys IncSNPS23,301.800.09%0.00%12.00%12.00%0.104%Southern Co/TheSO72,320.700.27%3.68%3.50%7.24%0.0194%Simon Property Group IncSPG45,501.570.17%5.98%4.50%10.61%0.0321%Sempra EnergySRE45,136.920.17%2.62%11.00%13.76%0.0231%State Street CorpSTT29,257.110.11%2.62%5.00%7.69%0.005%Seagate Technology PLCSTX16,482.350.06%4.14%4.00%8.22%0.005%State Street CorpSTX16,482.370.08%1.37%8.00%9.42%0.005%Stanley Black & Decker IncSWK29,804.620.11%1.66%9.00%								
Sherwin-Williams Co/The         SHW         55,066.02         0.20%         0.87%         10.50%         11.42%         0.0233%           SVB Financial Group         SIVB         13,357.13         0.05%         0.00%         15.00%         15.00%         0.0074%           JM Smucker Co/The         SJM         12,361.82         0.05%         3.29%         3.50%         6.85%         0.0031%           Schlumberger Ltd         SLB         50,433.29         0.19%         5.49%         15.00%         20.90%         0.0391%           SL Green Realty Corp         SLG         7,971.40         0.03%         3.81%         5.50%         9.41%         0.0028%           Synopsys Inc         SNA         9,238.26         0.03%         2.57%         6.00%         8.65%         0.003%           Southern Co/The         SO         72,320.70         0.27%         3.68%         3.50%         7.24%         0.0194%           Simon Property Group Inc         SPGI         72,633.23         0.27%         0.85%         11.00%         11.9%         0.0231%           Stempra Energy         SRE         45,136.92         0.17%         2.62%         11.00%         13.76%         0.0231%           State Street Corp         STT								
SVB Financial Group         SIVB         13,357.13         0.05%         0.00%         15.00%         15.00%         0.0074%           JM Smucker Co/The         SJM         12,361.82         0.05%         3.29%         3.50%         6.85%         0.0031%           Schlumberger Ltd         SLB         50,433.29         0.19%         5.49%         15.00%         20.90%         0.0391%           SL Green Realty Corp         SLG         7,971.40         0.03%         3.81%         5.50%         9.41%         0.0028%           Snap-on Inc         SNA         9.238.26         0.03%         2.57%         6.00%         8.65%         0.0039%           Southern Co/The         SO         72,320.70         0.27%         3.68%         3.50%         7.24%         0.014%           Simon Property Group Inc         SPGI         72,633.23         0.27%         0.85%         11.00%         11.90%         0.0231%           Strengy         SRE         45,136.92         0.17%         2.62%         11.00%         13.76%         0.0231%           Strengy         STE         12,873.03         0.05%         0.98%         10.00%         11.03%         0.0053%           Strengy         STT         29,257.11								
JM Smucker Co/TheSJM12,361.820.05%3.29%3.50%6.85%0.0031%Schlumberger LtdSLB50,433.290.19%5.49%15.00%20.90%0.0391%SL Green Realty CorpSLG7,971.400.03%3.81%5.50%9.41%0.0028%Snap-on IncSNA9,238.260.03%2.57%6.00%8.65%0.030%Synopsys IncSNPS23,301.800.09%0.00%12.00%12.00%0.0104%Southern Co/TheSO72,320.700.27%3.68%3.50%7.24%0.0194%Simon Property Group IncSPG45,501.570.17%5.98%4.50%10.61%0.0179%S&P Global IncSPGI72,633.230.27%0.85%11.00%11.90%0.0321%STERIS PLCSTE12,873.030.05%0.98%10.00%11.03%0.0053%State Street CorpSTT29,257.110.11%2.62%5.00%7.69%0.0083%Seagate Technology PLCSTX16,482.350.06%4.14%4.00%8.22%0.0050%Constellation Brands IncSTZ37,013.160.14%1.62%8.50%10.17%0.014%Skyworks Solutions IncSWKS21,840.370.08%1.37%8.00%9.42%0.0076%Synchrony FinancialSYF23,662.380.09%2.49%9.50%12.11%0.0106%Synchrony FinancialSYF23,662.770.30%1.06%13.00%<								
SL Green Realty Corp         SLG         7,971.40         0.03%         3.81%         5.50%         9.41%         0.0028%           Snap-on Inc         SNA         9,238.26         0.03%         2.57%         6.00%         8.65%         0.003%           Synopsys Inc         SNPS         23,301.80         0.09%         0.00%         12.00%         12.00%         0.0104%           Southern Co/The         SO         72,320.70         0.27%         3.68%         3.50%         7.24%         0.0194%           Simon Property Group Inc         SPG         45,501.57         0.17%         5.98%         4.50%         10.61%         0.0179%           S&P Global Inc         SPGI         72,633.23         0.27%         0.85%         11.00%         13.76%         0.0231%           STERIS PLC         STE         12,873.03         0.05%         0.98%         10.00%         11.03%         0.0053%           State Street Corp         STT         29,257.11         0.11%         2.62%         5.00%         7.69%         0.0083%           Seagate Technology PLC         STX         16,482.35         0.06%         4.14%         4.00%         8.22%         0.005%           Statel Street Corp         STZ <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
Snap-on Inc         SNA         9,238.26         0.03%         2.57%         6.00%         8.65%         0.0030%           Synopsys Inc         SNPS         23,301.80         0.09%         0.00%         12.00%         12.00%         0.0104%           Southern Co/The         SO         72,320.70         0.27%         3.68%         3.50%         7.24%         0.0194%           Simon Property Group Inc         SPG         45,501.57         0.17%         5.98%         4.50%         10.61%         0.0179%           S&P Global Inc         SPGI         72,633.23         0.27%         0.85%         11.00%         11.90%         0.0321%           Sempra Energy         SRE         45,136.92         0.17%         2.62%         11.00%         13.76%         0.0231%           STERIS PLC         STE         12,873.03         0.05%         0.98%         10.00%         11.03%         0.0053%           State Street Corp         STT         29,257.11         0.11%         2.62%         5.00%         7.69%         0.0083%           Seagate Technology PLC         STX         16,482.35         0.06%         4.14%         4.00%         8.22%         0.005%           Constellation Brands Inc         STZ					5.49%		20.90%	0.0391%
Synopsys Inc         SNPS         23,301.80         0.09%         0.00%         12.00%         12.00%         0.0104%           Southern Co/The         SO         72,320.70         0.27%         3.68%         3.50%         7.24%         0.0194%           Simon Property Group Inc         SPG         45,501.57         0.17%         5.98%         4.50%         10.61%         0.0179%           S&P Giobal Inc         SPG         72,633.23         0.27%         0.85%         11.00%         11.90%         0.0231%           Sempra Energy         SRE         45,136.92         0.17%         2.62%         11.00%         11.03%         0.0053%           StERIS PLC         STE         12,873.03         0.05%         0.98%         10.00%         11.03%         0.0053%           Seagate Technology PLC         STX         16,482.35         0.06%         4.14%         4.00%         8.22%         0.0050%           Constellation Brands Inc         STZ         37,013.16         0.14%         1.62%         8.50%         10.19%         0.014%           Skyworks Solutions Inc         SWKS         21,840.37         0.08%         1.37%         8.00%         9.42%         0.0076%           Synchrony Financial         SY								
Southern Co/The         SO         72,320.70         0.27%         3.68%         3.50%         7.24%         0.0194%           Simon Property Group Inc         SPG         45,501.57         0.17%         5.98%         4.50%         10.61%         0.0179%           S&P Global Inc         SPG         45,501.57         0.17%         5.98%         4.50%         10.61%         0.0321%           Sempra Energy         SRE         45,136.92         0.17%         2.62%         11.00%         13.76%         0.0231%           STERIS PLC         STE         12,873.03         0.05%         0.98%         10.00%         11.03%         0.0053%           State Street Corp         STT         29,257.11         0.11%         2.62%         5.00%         7.69%         0.005%           Seagate Technology PLC         STX         16,482.35         0.06%         4.14%         4.00%         8.22%         0.005%           Constellation Brands Inc         STZ         37,013.16         0.14%         1.66%         9.00%         10.73%         0.0119%           Skyworks Solutions Inc         SWKS         21,840.37         0.08%         1.37%         8.00%         9.42%         0.0076%           Synchrony Financial         SY								
Simon Property Group Inc         SPG         45,501.57         0.17%         5.98%         4.50%         10.61%         0.0179%           S&P Global Inc         SPGI         72,633.23         0.27%         0.85%         11.00%         11.90%         0.0321%           Sempra Energy         SRE         45,136.92         0.17%         2.62%         11.00%         13.76%         0.0231%           STERIS PLC         STE         12,873.03         0.05%         0.98%         10.00%         11.03%         0.0053%           State Street Corp         STT         29,257.11         0.11%         2.62%         5.00%         7.69%         0.0083%           Seagate Technology PLC         STX         16,482.35         0.06%         4.14%         4.00%         8.22%         0.005%           Constellation Brands Inc         STZ         37,013.16         0.14%         1.62%         8.50%         10.19%         0.0140%           Stately Black & Decker Inc         SWK         29,804.62         0.11%         1.66%         9.00%         10.73%         0.0119%           Skyworks Solutions Inc         SWKS         21,840.37         0.08%         1.37%         8.00%         9.42%         0.0076%           Stryker Corp								
S&P Global Inc         SPGI         72,633.23         0.27%         0.85%         11.00%         11.90%         0.0321%           Sempra Energy         SRE         45,136.92         0.17%         2.62%         11.00%         13.76%         0.0231%           STERIS PLC         STE         12,873.03         0.05%         0.98%         10.00%         11.03%         0.0053%           State Street Corp         STT         29,257.11         0.11%         2.62%         5.00%         7.69%         0.0083%           Seagate Technology PLC         STX         16,482.35         0.06%         4.14%         4.00%         8.22%         0.005%           Constellation Brands Inc         STZ         37,013.16         0.14%         1.62%         8.50%         10.19%         0.014%           Stanley Black & Decker Inc         SWK         29,804.62         0.11%         1.66%         9.00%         10.73%         0.014%           Synchrony Financial         SYF         23,662.38         0.09%         2.49%         9.50%         12.11%         0.0106%           Stryker Corp         SYK         80,952.77         0.30%         10.66%         13.00%         14.13%         0.0425%           Sysco Corp         SYY								
Sempra Energy         SRE         45,136.92         0.17%         2.62%         11.00%         13.76%         0.0231%           STERIS PLC         STE         12,873.03         0.05%         0.98%         10.00%         11.03%         0.0053%           State Street Corp         STT         29,257.11         0.11%         2.62%         5.00%         7.69%         0.0083%           Seagate Technology PLC         STX         16,482.35         0.06%         4.14%         4.00%         8.22%         0.0050%           Constellation Brands Inc         STZ         37,013.16         0.14%         1.62%         8.50%         10.19%         0.0140%           Stanley Black & Decker Inc         SWK         29,804.62         0.11%         1.66%         9.00%         10.73%         0.0119%           Stynorks Solutions Inc         SWKS         21,840.37         0.08%         1.37%         8.00%         9.42%         0.0076%           Synchrony Financial         SYF         23,662.38         0.09%         2.49%         9.50%         12.11%         0.0106%           Stryker Corp         SYK         80,952.77         0.30%         1.06%         13.00%         14.13%         0.425%           Sysco Corp         SYY	S&P Global Inc	SPGI	72,633.23		0.85%	11.00%		0.0321%
State Street Corp         STT         29,257.11         0.11%         2.62%         5.00%         7.69%         0.0083%           Seagate Technology PLC         STX         16,482.35         0.06%         4.14%         4.00%         8.22%         0.0050%           Constellation Brands Inc         STZ         37,013.16         0.14%         1.62%         8.50%         10.19%         0.0140%           Stanley Black & Decker Inc         SWK         29,804.62         0.11%         1.66%         9.00%         10.73%         0.0119%           Skyworks Solutions Inc         SWKS         21,840.37         0.08%         1.37%         8.00%         9.42%         0.006%           Synchrony Financial         SYF         23,662.38         0.09%         2.49%         9.50%         12.11%         0.0106%           Stryker Corp         SYK         80,952.77         0.30%         1.06%         13.00%         14.13%         0.0425%           Sysco Corp         SYY         42,703.12         0.16%         2.15%         10.50%         12.76%         0.0202%							13.76%	
Seagate Technology PLC         STX         16,482.35         0.06%         4.14%         4.00%         8.22%         0.0050%           Constellation Brands Inc         STZ         37,013.16         0.14%         1.62%         8.50%         10.19%         0.0140%           Stanley Black & Decker Inc         SWK         29,804.62         0.11%         1.66%         9.00%         10.73%         0.0119%           Skyworks Solutions Inc         SWKS         21,840.37         0.08%         1.37%         8.00%         9.42%         0.0076%           Synchrony Financial         SYF         23,662.38         0.09%         2.49%         9.50%         12.11%         0.0146%           Stryker Corp         SYK         80,952.77         0.30%         1.06%         13.00%         14.13%         0.0425%           Sysco Corp         SYY         42,703.12         0.16%         2.15%         10.50%         12.76%         0.0202%								
Constellation Brands Inc         STZ         37,013.16         0.14%         1.62%         8.50%         10.19%         0.0140%           Stanley Black & Decker Inc         SWK         29,804.62         0.11%         1.66%         9.00%         10.73%         0.0119%           Skyworks Solutions Inc         SWKS         21,840.37         0.08%         1.37%         8.00%         9.42%         0.0076%           Synchrony Financial         SYF         23,662.38         0.09%         2.49%         9.50%         12.11%         0.0106%           Stryker Corp         SYK         80,952.77         0.30%         1.06%         13.00%         14.13%         0.425%           Sysco Corp         SYY         42,703.12         0.16%         2.15%         10.50%         12.76%         0.020%								
Stanley Black & Decker Inc         SWK         29,804.62         0.11%         1.66%         9.00%         10.73%         0.0119%           Skyworks Solutions Inc         SWKS         21,840.37         0.08%         1.37%         8.00%         9.42%         0.0076%           Synchrony Financial         SYF         23,662.38         0.09%         2.49%         9.50%         12.11%         0.0106%           Stryker Corp         SYK         80,952.77         0.30%         1.06%         13.00%         14.13%         0.0425%           Sysco Corp         SYY         42,703.12         0.16%         2.15%         10.50%         12.76%         0.020%								
Skyworks Solutions Inc         SWKS         21,840.37         0.08%         1.37%         8.00%         9.42%         0.0076%           Synchrony Financial         SYF         23,662.38         0.09%         2.49%         9.50%         12.11%         0.0106%           Stryker Corp         SYK         80,952.77         0.30%         1.06%         13.00%         14.13%         0.0425%           Sysco Corp         SYY         42,703.12         0.16%         2.15%         10.50%         12.76%         0.0202%								
Synchrony Financial         SYF         23,662.38         0.09%         2.49%         9.50%         12.11%         0.0106%           Stryker Corp         SYK         80,952.77         0.30%         1.06%         13.00%         14.13%         0.0425%           Sysco Corp         SYY         42,703.12         0.16%         2.15%         10.50%         12.76%         0.0202%		SWKS				8.00%		
Sysco Corp         SYY         42,703.12         0.16%         2.15%         10.50%         12.76%         0.0202%	Synchrony Financial		23,662.38	0.09%	2.49%	9.50%	12.11%	0.0106%
A CALINO I 202,123.30 1.03% 3.30% 3.30% 11.03% 0.1155%								
		I	202,129.30	1.00%	3.30%	0.0070	11.03%	0.1133%

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		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Aolson Coors Beverage Co	TAP	12,272.86	0.05%	4.02%	2.50%	6.57%	0.0030%
TransDigm Group Inc	TDG	37,018.43	0.14%	0.00%	11.50%	11.50%	0.0158%
E Connectivity Ltd	TEL	33,765.47	0.13%	1.83%	6.50%	8.39%	0.0105%
ruist Financial Corp	TFC	43,188.84	0.16%	3.27%	8.00%	11.40%	0.0183%
eleflex Inc	TFX	17,815.63	0.07%	0.35%	15.00%	15.38%	0.0102%
arget Corp	TGT	58,536.51	0.22%	2.29%	9.50%	11.90%	0.0259%
Tiffany & Co	TIF	16,091.78	0.06%	1.77%	10.50%	12.36%	0.0074%
JX Cos Inc/The	TJX	75,138.84	0.28%	1.47%	13.50%	15.07%	0.0420%
Thermo Fisher Scientific Inc	TMO	145,564.30	0.54%	0.23%	10.00%	10.24%	0.0553%
Γ-Mobile US Inc	TMUS	70,309.75	0.26%	0.00%	18.50%	18.50%	0.0483%
Tapestry Inc T Rowe Price Group Inc	TPR TROW	7,708.65 31,264.65	0.03% 0.12%	4.83% 2.37%	10.50% 10.00%	15.58% 12.49%	0.0045% 0.0145%
Travelers Cos Inc/The	TRV	34,634.44	0.12%	2.44%	9.00%	11.55%	0.0148%
Fractor Supply Co	TSCO	11,096.84	0.04%	1.62%	11.50%	13.21%	0.0054%
Tyson Foods Inc	TSN	32,193.36	0.12%	1.91%	8.00%	9.99%	0.0119%
ake-Two Interactive Software Inc	TTWO	14,610.08	0.05%	0.00%	23.50%	23.50%	0.0127%
Twitter Inc	TWTR	26,289.08	N/A	0.00%	N/A	N/A	N/A
Texas Instruments Inc	TXN	125,547.60	0.47%	2.68%	6.00%	8.76%	0.0408%
Textron Inc	TXT	10,293.40	0.04%	0.18%	13.00%	13.19%	0.0050%
Jnder Armour Inc	UAA	9,586.02	0.04%	0.00%	17.50%	17.50%	0.0062%
Jnited Airlines Holdings Inc	UAL	21,527.61	0.08%	0.00%	12.00%	12.00%	0.0096%
JDR Inc	UDR	13,275.81	0.05%	2.84%	5.50%	8.42%	0.0041%
Jniversal Health Services Inc	UHS	12,942.87	0.05%	0.54%	11.00%	11.57%	0.0056%
JIta Beauty Inc	ULTA	15,592.43	0.06%	0.00%	13.00%	13.00%	0.0075%
JnitedHealth Group Inc	UNH	283,588.70	1.05%	1.44%	13.50%	15.04%	0.1583%
Jnum Group	UNM	5,912.59	0.02%	3.98%	7.50%	11.63%	0.0026%
Jnion Pacific Corp	UNP	130,189.90	0.48%	2.07%	13.00%	15.20%	0.0735%
United Parcel Service Inc	UPS	100,279.20	0.37%	3.39%	8.00%	11.53%	0.0429%
Jnited Rentals Inc	URI USB	11,752.77 86,224.32	0.04% 0.32%	0.00%	14.50% 6.00%	14.50% 9.22%	0.0063% 0.0295%
IS Bancorp Inited Technologies Corp	USB	132,770.80	0.32%	3.13% 1.91%	9.00%	9.22%	0.0295%
/isa Inc	V	410.148.70	1.52%	0.58%	18.00%	18.63%	0.2836%
/arian Medical Systems Inc	VAR	13,566.43	0.05%	0.00%	10.50%	10.50%	0.0053%
/F Corp	VFC	34,067.15	0.13%	2.25%	7.00%	9.33%	0.0118%
/iacomCBS Inc	VIAC	13,871.25	0.05%	2.60%	12.00%	14.76%	0.0076%
/alero Energy Corp	VLO	36,771.60	0.14%	4.19%	11.50%	15.93%	0.0217%
/ulcan Materials Co	VMC	18,867.82	0.07%	0.87%	14.50%	15.43%	0.0108%
/ornado Realty Trust	VNO	13,094.22	0.05%	3.85%	-1.50%	2.32%	0.0011%
/erisk Analytics Inc	VRSK	27,018.95	0.10%	0.61%	10.00%	10.64%	0.0107%
/eriSign Inc	VRSN	25,308.93	0.09%	0.00%	11.00%	11.00%	0.0103%
/ertex Pharmaceuticals Inc	VRTX	60,176.86	0.22%	0.00%	50.00%	50.00%	0.1117%
/entas Inc	VTR	20,852.33	0.08%	5.54%	4.00%	9.65%	0.0075%
/erizon Communications Inc	VZ	250,256.30	0.93%	4.07%	4.00%	8.15%	0.0757%
Westinghouse Air Brake Technologies Corp		15,330.25	0.06%	0.60%	13.50%	14.14%	0.0080%
Waters Corp	WAT WBA	15,753.75	0.06% 0.18%	0.00% 3.43%	13.00% 9.00%	13.00% 12.58%	0.0076% 0.0221%
Walgreens Boots Alliance Inc Western Digital Corp	WDC	47,335.20 21,137.14	0.08%	2.82%	1.00%	3.83%	0.0030%
WEC Energy Group Inc	WEC	31,133.53	0.12%	2.56%	6.00%	8.64%	0.0100%
Welltower Inc	WELL	33,472.25	0.12%	4.13%	10.50%	14.85%	0.0184%
Vells Fargo & Co	WFC	205,858.00	0.76%	4.27%	5.50%	9.89%	0.0755%
Whirlpool Corp	WHR	9,495.36	0.04%	3.19%	6.50%	9.79%	0.0035%
Villis Towers Watson PLC	WLTW	26,565.52	0.10%	1.26%	17.50%	18.87%	0.0186%
Vaste Management Inc	WM	51,382.74	0.19%	1.69%	8.50%	10.26%	0.0196%
Villiams Cos Inc/The	WMB	27,197.28	0.10%	6.77%	20.00%	27.45%	0.0277%
Valmart Inc	WMT	328,784.60	1.22%	1.87%	7.50%	9.44%	0.1152%
VR Berkley Corp	WRB	13,110.65	0.05%	0.62%	12.00%	12.66%	0.0062%
Vestrock Co	WRK	10,840.49	0.04%	4.42%	8.00%	12.60%	0.0051%
Vestern Union Co/The	WU	11,652.22	0.04%	2.88%	6.50%	9.47%	0.0041%
Veyerhaeuser Co	WY	22,963.09	0.09%	4.41%	15.00%	19.74%	0.0168%
Vynn Resorts Ltd	WYNN	14,935.26	0.06%	2.88%	14.50%	17.59%	0.0098%
Cimarex Energy Co	XEC	4,900.60	0.02%	1.66%	8.50%	10.23%	0.0019%
Ccel Energy Inc	XEL	35,081.29	0.13%	2.57%	5.50%	8.14%	0.0106%
(ilinx Inc Exxon Mobil Corp	XLNX XOM	25,752.63	0.10%	1.45%	8.00%	9.51%	0.0091%
EXXON MODIL CORP DENTSPLY SIRONA Inc	XRAY	282,503.90 13,262.42	1.05% 0.05%	5.27% 0.59%	11.00% 4.50%	16.56% 5.10%	0.1736% 0.0025%
(erox Holdings Corp	XRX	7,933.03	0.03%	2.76%	4.50%	5.10% 15.43%	0.0025%
(vlem Inc/NY	XYL	14,824.80	0.06%	2.76%	12.50%	15.25%	0.0045%
/um! Brands Inc	YUM	32,111.94	0.12%	1.64%	12.00%	13.74%	0.0084%
Zimmer Biomet Holdings Inc	ZBH	30,739.26	0.12%	0.66%	4.50%	5.17%	0.0059%
Zebra Technologies Corp	ZBRA	13,747.39	0.05%	0.00%	15.50%	15.50%	0.0079%
Zions Bancorp NA	ZION	8,142.13	0.03%	2.85%	9.50%	12.49%	0.0038%
Zoetis Inc	ZTS	65,953.04	0.24%	0.58%	13.50%	14.12%	0.0346%
Total Market Capitalization:	-	26,942,730.24					14.51%

Notes: [1] Equals sum of Col. [9] [2] Source: Bloomberg Professional [3] Equals [1] – [2] [4] Source: Value Line [5] Equals weight in S&P 500 based on market capitalization [6] Source: Value Line [7] Source: Value Line [8] Equals ([6] x (1 + (0.5 x [7]))) + [7] [9] Equals Col. [5] x Col. [8]

#### Bloomberg and Value Line Beta Coefficients

		[1]	[2]
Company	Ticker	Bloomberg	Value Line
ALLETE, Inc.	ALE	0.484	0.65
Alliant Energy Corporation	LNT	0.537	0.60
Ameren Corporation	AEE	0.486	0.55
American Electric Power Company, Inc.	AEP	0.538	0.55
Avangrid, Inc.	AGR	0.508	0.40
Avista	AVA	0.492	0.60
CMS Energy Corporation	CMS	0.486	0.50
DTE Energy Company	DTE	0.528	0.55
Duke Energy Corporation	DUK	0.447	0.50
Evergy, Inc	EVRG	0.437	0.51
Hawaiian Electric Industries, Inc.	HE	0.511	0.55
NextEra Energy, Inc.	NEE	0.523	0.55
NorthWestern Corporation	NWE	0.528	0.60
OGE Energy Corp.	OGE	0.583	0.75
Otter Tail Corporation	OTTR	0.631	0.70
Pinnacle West Capital Corporation	PNW	0.426	0.50
PNM Resources, Inc.	PNM	0.528	0.60
Portland General Electric Company	POR	0.524	0.55
Southern Company	SO	0.512	0.50
WEC Energy Group, Inc.	WEC	0.471	0.50
Xcel Energy Inc.	XEL	0.517	0.50
Mean		0.509	0.558

Notes: [1] Source: Bloomberg Professional

[2] Source: Value Line. Value Line does not report a beta coefficient for Evergy, Inc. Therefore, the beta coefficient for Evergy has been manually calculated according to Value Line's methodology.

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

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
			Ex-Ante Marke	t Risk Premium	CAPM	Result	ECAPN	/I Result
			Bloomberg	Value Line			Bloomberg	Value Line
		Average Beta	Market DCF	Market DCF	Bloomberg	Value Line	Market DCF	Market DCF
	Risk-Free Rate	Coefficient	Derived	Derived	MRP	MRP	Derived	Derived
PROXY GROUP AVERAGE BLOOMBERG BET	A COEFFICIENT							
Current 30-Year Treasury [9]	2.25%	0.509	11.18%	12.25%	7.95%	8.50%	9.32%	10.00%
Near-Term Projected 30-Year Treasury [10]	2.42%	0.509	11.18%	12.25%	8.11%	8.66%	9.49%	10.16%
Mean					8.03%	8.58%	9.40%	10.08%

			Ex-Ante Marke	t Risk Premium	CAPM	Result	ECAPN	/I Result
			Bloomberg	Value Line			Bloomberg	Value Line
		Average Beta	Market DCF	Market DCF	Bloomberg	Value Line	Market DCF	Market DCF
	Risk-Free Rate	Coefficient	Derived	Derived	MRP	MRP	Derived	Derived
PROXY GROUP AVERAGE VALUE LINE AVER	RAGE BETA COEF	FICIENT						
Current 30-Year Treasury [9]	2.25%	0.558	11.18%	12.25%	8.49%	9.09%	9.73%	10.44%
Near-Term Projected 30-Year Treasury [10]	2.42%	0.558	11.18%	12.25%	8.65%	9.25%	9.89%	10.61%
Mean					8.57%	9.17%	9.81%	10.52%

Notes: [1] See Notes [9], [10] [2] Source: Schedule RBH-R3 [3] Source: Schedule RBH-R2 [4] Source: Schedule RBH-R2 [5] Equals Col. [1] + (Col. [2] x Col. [3]) [6] Equals Col. [1] + (Col. [2] x Col. [4]) [7] Equals Col. [1] + 0.25 x Col. [3] + 0.75 x Col. [2] x Col. [3] [8] Equals Col. [1] + 0.25 x Col. [4] + 0.75 x Col. [2] x Col. [4] [9] Source: Bloomberg Professional

[10] Source: Blue Chip Financial Forecasts, Vol. 39, No. 2, February 1, 2020, at 2.

#### Bond Yield Plus Risk Premium

	[1]	[2]	[3] 30-Year	[4]	[5]
			Treasury	Risk	Return on
	Constant	Slope	Yield	Premium	Equity
	-2.44%	-2.67%			
	Current 30-Y	ear Treasury	2.25%	7.67%	9.92%
Near-Term P	rojected 30-Y	ear Treasury	2.42%	7.48%	9.90%
Long-Term P	rojected 30-Y	ear Treasury	3.45%	6.53%	9.98%



#### Notes:

- [1] Constant of regression equation
- [2] Slope of regression equation
- [3] Source: Current = Bloomberg Professional;
   Near Term Projected = Blue Chip Financial Forecasts, Vol. 39, No. 2, February 1, 2020, at 2;
   Long Term Projected = Blue Chip Financial Forecasts, Vol. 38, No. 12, December 1, 2019, at 14.
- [4] Equals [1] + ln([3]) x [2]
- [5] Equals [3] + [4]
- [6] Source: S&P Global Market Intelligence
- [7] Source: S&P Global Market Intelligence
- [8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
- [9] Equals [7] [8]

Bor	d Yield Plus	Pick Promiur	n
[6]	[7]		[9]
Date of		30-Year	
Electric	Return on	Treasury	Risk
Rate Case 1/1/1980	Equity 14.50%	Yield 9.36%	Premium 5.14%
1/7/1980	14.39%	9.39%	5.00%
1/9/1980	15.00%	9.40%	5.60%
1/14/1980	15.17%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980 1/30/1980	15.50% 13.86%	9.47% 9.52%	6.03% 4.34%
1/31/1980	12.61%	9.53%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980	12.80%	9.64%	3.16%
2/14/1980	13.00%	9.65%	3.35%
2/19/1980 2/27/1980	13.50% 13.75%	9.68% 9.78%	3.82% 3.97%
2/29/1980	13.75%	9.81%	3.94%
2/29/1980	14.00%	9.81%	4.19%
2/29/1980	14.77%	9.81%	4.96%
3/7/1980	12.70%	9.90%	2.80%
3/14/1980 3/26/1980	13.50% 14.16%	9.97% 10.11%	3.53% 4.05%
3/27/1980	14.24%	10.11%	4.12%
3/28/1980	14.50%	10.14%	4.36%
4/11/1980	12.75%	10.28%	2.47%
4/14/1980	13.85%	10.29%	3.56%
4/16/1980 4/22/1980	15.50% 13.25%	10.32% 10.36%	5.18% 2.89%
4/22/1980	13.20%	10.36%	2.09 <i>%</i> 3.54%
4/24/1980	16.80%	10.38%	6.42%
4/29/1980	15.50%	10.41%	5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980 5/8/1980	15.00% 13.75%	10.46% 10.47%	4.54% 3.28%
5/9/1980	14.35%	10.47%	3.88%
5/13/1980	13.60%	10.49%	3.11%
5/15/1980	13.25%	10.50%	2.75%
5/19/1980	13.75%	10.52%	3.23%
5/27/1980 5/27/1980	13.62% 14.60%	10.55% 10.55%	3.07% 4.05%
5/29/1980	14.00%	10.56%	4.03 <i>%</i> 5.44%
5/30/1980	13.80%	10.57%	3.23%
6/2/1980	15.63%	10.58%	5.05%
6/9/1980	15.90%	10.61%	5.29%
6/10/1980 6/12/1980	13.78% 14.25%	10.61% 10.62%	3.17% 3.63%
6/19/1980	13.40%	10.62%	2.77%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980	14.75%	10.68%	4.07%
7/10/1980 7/15/1980	15.00% 15.80%	10.69% 10.70%	4.31% 5.10%
7/18/1980	13.80%	10.72%	3.08%
7/22/1980	14.10%	10.73%	3.37%
7/24/1980	15.00%	10.73%	4.27%
7/25/1980 7/31/1980	13.48%	10.74%	2.74%
8/8/1980	14.58% 13.50%	10.76% 10.78%	3.82% 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 8/25/1980	16.25% 13.75%	10.79% 10.82%	5.46% 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 9/15/1980	13.93% 15.80%	10.88% 10.88%	3.05% 4.92%
9/15/1980 9/24/1980	15.80%	10.88%	4.92% 1.57%
9/24/1980	15.00%	10.93%	4.07%

Bor	nd Yield Plus	Risk Promiur	n
[6]	[7]	[8]	[9]
Date of	Deturner	30-Year	Diale
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
9/26/1980	13.75%	10.95%	2.80%
9/30/1980 9/30/1980	14.10% 14.20%	10.96% 10.96%	3.14% 3.24%
10/1/1980	13.90%	10.90%	2.93%
10/3/1980	15.50%	10.99%	4.51%
10/7/1980	12.50%	11.00%	1.50%
10/9/1980 10/9/1980	13.25% 14.50%	11.01% 11.01%	2.24% 3.49%
10/9/1980	14.50%	11.01%	3.49%
10/16/1980	16.10%	11.03%	5.07%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980 10/31/1980	13.75% 14.25%	11.11% 11.11%	2.64% 3.14%
11/4/1980	14.25%	11.12%	3.88%
11/5/1980	13.75%	11.13%	2.62%
11/5/1980	14.00%	11.13%	2.87%
11/8/1980 11/10/1980	13.75% 14.85%	11.15% 11.15%	2.60% 3.70%
11/17/1980	14.00%	11.13%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980 11/26/1980	14.00% 14.00%	11.20% 11.21%	2.80% 2.79%
12/8/1980	14.00%	11.22%	2.79%
12/8/1980	15.10%	11.22%	3.88%
12/9/1980	15.35%	11.22%	4.13%
12/12/1980 12/17/1980	15.45% 13.25%	11.22%	4.23%
12/17/1980	15.80%	11.23% 11.23%	2.02% 4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.22%	2.23%
12/22/1980 12/30/1980	15.00% 14.50%	11.22% 11.21%	3.78% 3.29%
12/30/1980	14.95%	11.21%	3.74%
12/31/1980	13.39%	11.21%	2.18%
1/2/1981	15.25%	11.21%	4.04%
1/7/1981 1/19/1981	14.30% 15.25%	11.21% 11.19%	3.09% 4.06%
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 1/31/1981	15.00% 13.47%	11.20% 11.21%	3.80% 2.26%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981 3/11/1981	15.25% 15.40%	11.34% 11.50%	3.91% 3.90%
3/12/1981	14.51%	11.51%	3.00%
3/12/1981	16.00%	11.51%	4.49%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981 3/19/1981	16.19% 13.75%	11.55% 11.56%	4.64% 2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.61%	3.69%
4/1/1981	14.53%	11.69%	2.84%
4/3/1981 4/9/1981	19.10% 15.00%	11.72% 11.79%	7.38% 3.21%
4/9/1981	15.30%	11.79%	3.51%
4/9/1981	16.50%	11.79%	4.71%
4/9/1981	17.00%	11.79%	5.21%
4/10/1981 4/13/1981	13.75% 13.57%	11.81% 11.83%	1.94% 1.74%
4/13/1981 4/15/1981	13.57%	11.83%	3.44%
4/16/1981	13.50%	11.88%	1.62%
4/17/1981	14.10%	11.88%	2.22%
4/21/1981	14.00%	11.91%	2.09%

Bor	nd Yield Plus I	Dick Dromiur	n
[6]	[7]		[9]
Date of	_	30-Year	
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
4/21/1981	16.80%	11.91%	4.89%
4/24/1981	16.00%	11.96%	4.04%
4/27/1981	12.50%	11.98%	0.52%
4/27/1981	13.61%	11.98%	1.63%
4/29/1981 4/30/1981	13.65% 13.50%	12.01% 12.02%	1.64% 1.48%
5/4/1981	16.22%	12.02%	4.16%
5/5/1981	14.40%	12.08%	2.32%
5/7/1981	16.25%	12.12%	4.13%
5/7/1981	16.27%	12.12%	4.15%
5/8/1981 5/8/1981	13.00% 16.00%	12.14% 12.14%	0.86% 3.86%
5/12/1981	13.50%	12.14%	1.33%
5/15/1981	15.75%	12.23%	3.52%
5/18/1981	14.88%	12.24%	2.64%
5/20/1981	16.00%	12.27%	3.73%
5/21/1981	14.00% 14.90%	12.28% 12.31%	1.72%
5/26/1981 5/27/1981	14.90%	12.31%	2.59% 2.68%
5/29/1981	15.50%	12.32%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.38%	2.29%
6/5/1981	13.00%	12.40%	0.60%
6/10/1981	16.75% 14.40%	12.42%	4.33%
6/17/1981 6/18/1981	14.40%	12.46% 12.47%	1.94% 3.86%
6/25/1981	14.75%	12.52%	2.23%
6/26/1981	16.00%	12.53%	3.47%
6/30/1981	15.25%	12.55%	2.70%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981 7/10/1981	17.50% 16.00%	12.56% 12.62%	4.94% 3.38%
7/10/1981	16.00%	12.62%	3.36% 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 7/31/1981	13.48% 13.50%	12.75% 12.79%	0.73% 0.71%
7/31/1981	15.00%	12.79%	2.21%
7/31/1981	16.00%	12.79%	3.21%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981 8/20/1981	13.50% 16.50%	12.95% 12.95%	0.55% 3.55%
8/24/1981	15.00%	12.93%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.06%	1.44%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%
9/16/1981 9/17/1981	16.00% 16.50%	13.15% 13.16%	2.85% 3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.34%	2.41%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50% 16.50%	13.39%	2.11% 3.11%
10/16/1981 10/19/1981	16.50% 14.25%	13.39% 13.40%	3.11% 0.85%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.46%	2.54%
10/27/1981	10.00%	13.49%	-3.49%
10/29/1981 10/29/1981	14.75% 16.50%	13.52% 13.52%	1.23% 2.98%
11/3/1981	15.17%	13.52%	2.98% 1.63%
11/5/1981	16.60%	13.56%	3.04%

Bor	nd Yield Plus	Risk Promiur	n
[6]	[7]	[8]	[9]
Date of	Determine	30-Year	Diale
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
11/6/1981	15.17%	13.57%	1.60%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981 11/25/1981	15.25% 15.35%	13.61% 13.61%	1.64% 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 12/1/1981	16.00% 16.49%	13.61% 13.61%	2.39% 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 12/15/1981	14.00% 15.81%	13.63% 13.63%	0.37% 2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.64%	2.86%
12/18/1981	15.45%	13.64%	1.81%
12/30/1981 12/30/1981	14.25% 16.00%	13.67% 13.67%	0.58% 2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.68%	2.47%
1/4/1982	15.50%	13.68%	1.82%
1/11/1982 1/11/1982	14.50% 17.00%	13.73% 13.73%	0.77% 3.27%
1/13/1982	14.75%	13.73%	3.27% 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 1/27/1982	16.25% 16.84%	13.80% 13.81%	2.45% 3.03%
1/28/1982	13.00%	13.81%	-0.82%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.83%	2.02%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982 2/11/1982	15.50% 16.00%	13.86% 13.88%	1.64% 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 3/1/1982	15.25%	13.89% 13.89%	1.36% 1.14%
3/1/1982	15.03% 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 3/22/1982	17.30% 15.10%	13.88% 13.89%	3.42% 1.21%
3/27/1982	15.40%	13.90%	1.50%
3/30/1982	15.50%	13.91%	1.59%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982 4/1/1982	14.70% 16.50%	13.92% 13.92%	0.78% 2.58%
4/1/1982	15.50%	13.92%	2.58%
4/5/1982	15.50%	13.93%	1.57%
4/8/1982	16.40%	13.94%	2.46%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982 4/27/1982	15.75% 15.00%	13.94% 13.94%	1.81% 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 5/4/1982	16.60% 16.00%	13.94% 13.94%	2.66% 2.06%
5/4/1982	15.50%	13.94%	2.06% 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%

Bor	nd Yield Plus	Dick Dromiur	n
[6]	[7]		[9]
Date of	_	30-Year	
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982 5/28/1982	15.00% 15.50%	13.89% 13.89%	1.11% 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 6/14/1982	17.86% 15.75%	13.88% 13.88%	3.98% 1.87%
6/15/1982	14.85%	13.87%	0.98%
6/18/1982	15.50%	13.86%	1.64%
6/21/1982	14.90%	13.86%	1.04%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982 6/24/1982	16.17% 14.85%	13.86% 13.86%	2.31% 0.99%
6/25/1982	14.85%	13.85%	0.99%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.83%	1.79%
7/2/1982	17.00%	13.83%	3.17%
7/13/1982 7/13/1982	14.00% 16.80%	13.82% 13.82%	0.18% 2.98%
7/14/1982	15.76%	13.81%	1.95%
7/14/1982	16.02%	13.81%	2.21%
7/19/1982	16.50%	13.79%	2.71%
7/22/1982	14.50%	13.76%	0.74%
7/22/1982 7/27/1982	17.00% 16.75%	13.76% 13.74%	3.24% 3.01%
7/29/1982	16.50%	13.74%	2.77%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.62%	3.45%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982 8/26/1982	16.00% 15.50%	13.57% 13.56%	2.43% 1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.51%	-0.43%
9/15/1982 9/16/1982	16.25% 16.00%	13.51% 13.50%	2.74% 2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.47%	1.03%
9/27/1982 10/1/1982	15.25%	13.46% 13.42%	1.79% 2.08%
10/15/1982	15.50% 15.90%	13.42%	2.08%
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 11/3/1982	15.50% 17.20%	13.14% 13.12%	2.36% 4.08%
11/4/1982	16.25%	13.12%	3.15%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.88%	2.62%
11/23/1982 11/30/1982	15.85% 16.50%	12.88% 12.80%	2.97% 3.70%
12/1/1982	17.04%	12.00%	4.26%
12/6/1982	15.00%	12.72%	2.28%
12/6/1982	16.35%	12.72%	3.63%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982 12/14/1982	16.00% 15.30%	12.64% 12.62%	3.36% 2.68%
12/14/1982	16.40%	12.62%	3.78%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.55%	2.20%
12/21/1982	15.85%	12.55%	3.30%

Bor	nd Yield Plus	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of Electric	Return on	30-Year Treasury	Risk
Rate Case	Equity	Yield	Premium
12/22/1982 12/22/1982	16.25% 16.58%	12.54% 12.54%	3.71% 4.04%
12/22/1982	16.75%	12.54%	4.04%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982 12/30/1982	16.00% 16.35%	12.46% 12.46%	3.54% 3.89%
12/30/1982	16.35%	12.46%	3.89% 4.31%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983 1/12/1983	14.63% 15.50%	12.32% 12.32%	2.31% 3.18%
1/20/1983	17.75%	12.32 %	5.52%
1/21/1983	15.00%	12.21%	2.79%
1/24/1983	14.50%	12.20%	2.30%
1/24/1983 1/25/1983	15.50% 15.85%	12.20% 12.19%	3.30% 3.66%
1/23/1983	16.14%	12.19%	3.98%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.09%	1.91%
2/10/1983	15.00%	12.05%	2.95%
2/21/1983 2/22/1983	15.50% 15.50%	11.98% 11.96%	3.52% 3.54%
2/22/1983	15.10%	11.95%	3.15%
2/23/1983	16.00%	11.95%	4.05%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983 3/18/1983	13.00% 15.25%	11.76% 11.72%	1.24% 3.53%
3/23/1983	15.40%	11.68%	3.72%
3/24/1983	15.00%	11.66%	3.34%
3/29/1983	15.50%	11.62%	3.88%
3/30/1983	16.71%	11.60%	5.11%
3/31/1983 4/4/1983	15.00% 15.20%	11.58% 11.57%	3.42% 3.63%
4/8/1983	15.50%	11.49%	4.01%
4/11/1983	14.81%	11.48%	3.33%
4/19/1983	14.50%	11.36%	3.14%
4/20/1983 4/29/1983	16.00% 16.00%	11.35% 11.23%	4.65% 4.77%
5/1/1983	14.50%	11.23%	4.77% 3.27%
5/9/1983	15.50%	11.14%	4.36%
5/11/1983	16.46%	11.11%	5.35%
5/12/1983	14.14%	11.10%	3.04%
5/18/1983 5/23/1983	15.00% 14.90%	11.04% 11.00%	3.96% 3.90%
5/23/1983	15.50%	11.00%	4.50%
5/25/1983	15.50%	10.97%	4.53%
5/27/1983	15.00%	10.95%	4.05%
5/31/1983 5/31/1983	14.00% 15.50%	10.94% 10.94%	3.06% 4.56%
6/2/1983	14.50%	10.94%	4.50 <i>%</i> 3.58%
6/17/1983	15.03%	10.83%	4.20%
7/1/1983	14.80%	10.77%	4.03%
7/1/1983	14.90%	10.77%	4.13%
7/8/1983 7/13/1983	16.25% 13.20%	10.75% 10.75%	5.50% 2.45%
7/19/1983	15.00%	10.73%	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% 16.34%	10.74% 10.75%	5.16% 5.50%
8/3/1983 8/3/1983	16.34% 16.50%	10.75% 10.75%	5.59% 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 9/7/1983	14.75% 15.00%	10.85% 10.87%	3.90% 4.13%
5/7/1000	10.0078	10.07 /0	1070

Bor	nd Yield Plus	Risk Promiur	n
[6]	[7]	[8]	[9]
Date of	Deturner	30-Year	Diale
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983 9/28/1983	16.50% 14.50%	10.91% 10.94%	5.59% 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 10/13/1983	16.00% 15.52%	10.97% 10.99%	5.03% 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 10/27/1983	15.00% 15.20%	11.04% 11.04%	3.96% 4.16%
11/1/1983	16.00%	11.04%	4.10%
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 12/5/1983	15.00% 15.25%	11.14% 11.15%	3.86% 4.10%
12/6/1983	15.07%	11.16%	3.91%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.18%	3.32%
12/15/1983	15.56%	11.20%	4.36%
12/19/1983 12/20/1983	14.80% 14.69%	11.21% 11.22%	3.59% 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 1/10/1984	14.75% 15.90%	11.27% 11.30%	3.48% 4.60%
1/12/1984	15.60%	11.30%	4.00%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984	15.90%	11.33%	4.57%
1/30/1984	16.10%	11.37%	4.73%
1/31/1984	15.25%	11.38% 11.39%	3.87%
2/1/1984 2/6/1984	14.80% 13.75%	11.39%	3.41% 2.34%
2/6/1984	14.75%	11.41%	3.34%
2/9/1984	15.25%	11.43%	3.82%
2/15/1984	15.70%	11.45%	4.25%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984 2/22/1984	15.00%	11.46% 11.48%	3.54% 3.27%
2/22/1984	14.75% 14.50%	11.40%	2.98%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.65%	4.35%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
4/2/1984 4/6/1984	15.50% 14.74%	11.72% 11.76%	3.78% 2.98%
4/0/1984	15.72%	11.78%	2.98%
4/17/1984	15.00%	11.81%	3.19%
4/18/1984	16.20%	11.82%	4.38%
4/25/1984	14.64%	11.85%	2.79%
4/30/1984	14.40%	11.88%	2.52%
5/16/1984 5/16/1984	14.69% 15.00%	11.99% 11.99%	2.70% 3.01%
5/16/1984 5/22/1984	15.00% 14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.16%	3.09%
6/15/1984	15.60%	12.17%	3.43%

Bor	nd Yield Plus I	Dick Dromiur	n
[6]	[7]		[9]
Date of	<b>D</b> /	30-Year	<b>D</b> : 1
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984 7/12/1984	16.00% 16.50%	12.31% 12.33%	3.69% 4.17%
7/13/1984	16.25%	12.34%	3.91%
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 7/24/1984	14.30% 16.79%	12.37% 12.40%	1.93% 4.39%
7/31/1984	16.00%	12.43%	3.57%
8/3/1984	14.25%	12.45%	1.80%
8/17/1984	14.30%	12.49%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984 8/31/1984	16.30% 15.55%	12.51% 12.53%	3.79% 3.02%
9/6/1984	16.00%	12.53%	3.46%
9/10/1984	14.75%	12.55%	2.20%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984 9/28/1984	14.50% 15.00%	12.57% 12.57%	1.93% 2.43%
9/28/1984 9/28/1984	16.25%	12.57%	2.43%
10/9/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.59%	3.81%
10/31/1984 11/7/1984	16.25% 15.60%	12.59% 12.58%	3.66% 3.02%
11/9/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.59%	3.16%
11/20/1984	15.25%	12.58%	2.67%
11/20/1984	15.92%	12.58%	3.34%
11/23/1984 11/28/1984	15.00% 16.15%	12.58% 12.57%	2.42% 3.58%
12/3/1984	15.80%	12.57%	3.23%
12/4/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.54%	3.86%
12/19/1984	14.75%	12.53%	2.22%
12/19/1984 12/20/1984	15.00% 16.00%	12.53% 12.53%	2.47% 3.47%
12/28/1984	16.00%	12.53%	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 1/24/1985	15.80% 15.82%	12.43% 12.43%	3.37% 3.39%
1/25/1985	16.75%	12.43%	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 3/8/1985	13.84% 16.85%	12.30% 12.28%	1.54% 4.57%
3/14/1985	15.50%	12.26%	4.57 %
3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.16%	3.46%
4/3/1985	14.60%	12.13%	2.47%
4/9/1985	15.50%	12.10%	3.40%
4/16/1985 4/22/1985	15.70% 14.00%	12.05% 12.01%	3.65% 1.99%
4/22/1985	15.50%	12.01%	3.53%
4/29/1985	15.00%	11.96%	3.04%
5/2/1985	14.68%	11.93%	2.75%
5/8/1985	15.62%	11.88%	3.74%
5/10/1985 5/29/1985	16.50% 14.61%	11.86% 11.73%	4.64% 2.88%
5/31/1985	16.00%	11.71%	4.29%
			0,0

Bor	nd Yield Plus	Risk Promiur	n
[6]	[7]	[8]	[9]
Date of	<b>D</b> /	30-Year	D' 1
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
6/14/1985	15.50%	11.60%	3.90%
7/9/1985	15.00%	11.44%	3.56%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985 8/2/1985	14.50% 14.80%	11.32% 11.29%	3.18% 3.51%
8/7/1985	15.00%	11.26%	3.74%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985 9/9/1985	14.50% 14.60%	11.14% 11.11%	3.36% 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 9/27/1985	15.50% 15.80%	11.04% 11.04%	4.46% 4.76%
10/2/1985	14.00%	11.04%	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% 10.96%	4.44%
10/24/1985 10/24/1985	15.82% 15.85%	10.96%	4.86% 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 11/7/1985	14.50% 15.50%	10.91% 10.89%	3.59% 4.61%
11/8/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.66%	3.84%
12/20/1985 12/20/1985	14.50% 15.00%	10.66% 10.66%	3.84% 4.34%
1/24/1986	15.40%	10.40%	5.00%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986 2/10/1986	15.75% 13.30%	10.32% 10.29%	5.43% 3.01%
2/11/1986	12.50%	10.27%	2.23%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.22%	5.78%
2/24/1986 2/26/1986	14.50% 14.00%	10.17% 10.15%	4.33% 3.85%
3/5/1986	14.90%	10.13%	4.83%
3/11/1986	14.50%	10.01%	4.49%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986 3/31/1986	14.10% 13.50%	9.85% 9.84%	4.25% 3.66%
4/1/1986	14.00%	9.82%	4.18%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986 4/23/1986	13.40% 15.00%	9.68% 9.57%	3.72% 5.43%
5/16/1986	14.50%	9.31%	5.19%
5/16/1986	14.50%	9.31%	5.19%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986 6/2/1986	15.10% 12.81%	9.17% 9.16%	5.93% 3.65%
6/11/1986	14.00%	9.10%	3.05 <i>%</i> 4.94%
6/24/1986	16.63%	8.93%	7.70%
6/26/1986	12.00%	8.90%	3.10%
6/26/1986	14.75%	8.90%	5.85%
6/30/1986 7/10/1986	13.00% 14.34%	8.86% 8.74%	4.14% 5.60%
7/11/1986	12.75%	8.72%	4.03%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.65%	3.75%
7/25/1986 8/6/1986	14.25% 13.50%	8.56% 8.43%	5.69% 5.07%
0.0/1000	10.0070	0.7070	0.07 /0

Bor	nd Yield Plus I	Risk Promiur	n
[6]	[7]	[8]	[9]
Date of	Determine	30-Year	Dist
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
8/14/1986	13.50%	8.34%	5.16%
9/16/1986 9/19/1986	12.75% 13.25%	8.06% 8.02%	4.69% 5.23%
10/1/1986	14.00%	7.94%	5.23 <i>%</i> 6.06%
10/3/1986	13.40%	7.92%	5.48%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986 12/3/1986	13.00% 12.90%	7.74% 7.58%	5.26% 5.32%
12/3/1986	12.90%	7.57%	5.32% 6.87%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.50%	6.30%
12/30/1986	13.00%	7.49%	5.51%
1/2/1987 1/12/1987	13.00% 12.40%	7.48% 7.46%	5.52% 4.94%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987 3/10/1987	12.38%	7.47% 7.47%	4.91% 6.03%
3/10/1987 3/13/1987	13.50% 13.00%	7.47%	6.03% 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 4/27/1987	14.50% 12.00%	7.50% 7.54%	7.00% 4.46%
5/5/1987	12.00%	7.58%	4.40 <i>%</i> 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 6/30/1987	15.00% 12.50%	7.84% 7.84%	7.16% 4.66%
7/8/1987	12.00%	7.86%	4.00%
7/10/1987	12.90%	7.87%	5.03%
7/15/1987	13.50%	7.88%	5.62%
7/16/1987	13.50%	7.88%	5.62%
7/16/1987 7/27/1987	15.00% 13.00%	7.88% 7.92%	7.12% 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 8/26/1987	12.63% 12.75%	8.06% 8.06%	4.57% 4.69%
8/26/1987	12.75%	8.06%	4.69% 5.18%
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 10/15/1987	11.50% 13.00%	8.33% 8.44%	3.17% 4.56%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.69%	3.31%
12/3/1987	14.20%	8.71%	5.49%
12/15/1987 12/16/1987	13.25% 13.50%	8.78% 8.79%	4.47% 4.71%
12/16/1987	13.72%	8.79%	4.93%
12/17/1987	11.75%	8.80%	2.95%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81% 8.82%	3.20%
12/22/1987 12/22/1987	12.00% 12.00%	8.82% 8.82%	3.18% 3.18%
12/22/1987	12.75%	8.82%	3.93%
12/22/1987	13.00%	8.82%	4.18%
1/20/1988	13.80%	8.94%	4.86%
1/26/1988 1/29/1988	13.90% 13.20%	8.96% 8.96%	4.94% 4.24%
2/4/1988	13.20% 12.60%	8.96% 8.96%	4.24% 3.64%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%

Bor	nd Yield Plus	Risk Promiur	n
[6]	[7]	[8]	[9]
Date of	Deturner	30-Year	Diale
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
3/24/1988	11.24%	8.92%	2.32%
3/30/1988 4/1/1988	12.72% 12.50%	8.92% 8.92%	3.80% 3.58%
4/1/1900	12.50%	8.92% 8.93%	3.56% 4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.98%	3.93%
5/11/1988 5/16/1988	13.50% 13.00%	8.99% 8.99%	4.51% 4.01%
6/30/1988	12.75%	8.99%	4.01% 3.76%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.91%	3.84%
8/23/1988 8/29/1988	11.70% 12.75%	8.93% 8.94%	2.77% 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 12/20/1988	13.00% 12.25%	9.02% 9.02%	3.98% 3.23%
12/20/1988	12.25%	9.02% 9.02%	3.23% 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 1/27/1989	13.40% 13.00%	9.04% 9.06%	4.36% 3.94%
1/31/1989	13.00%	9.06%	3.94 <i>%</i> 3.94%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989 3/30/1989	13.00% 14.00%	9.05% 9.05%	3.95% 4.95%
4/5/1989	14.00%	9.05%	4.95 % 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 6/27/1989	13.50% 13.25%	8.98% 8.91%	4.52% 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 11/9/1989	12.50% 13.00%	8.54% 8.48%	3.96% 4.52%
12/15/1989	13.00%	0.40% 8.33%	4.52% 4.67%
12/20/1989	12.90%	8.31%	4.59%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989 1/10/1990	13.00% 12.80%	8.29% 8.24%	4.71% 4.56%
1/11/1990	12.90%	8.23%	4.67%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.19%	3.81%
2/9/1990	12.10%	8.17%	3.93% 4.71%
2/24/1990 3/30/1990	12.86% 12.90%	8.15% 8.16%	4.71%
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 5/29/1990	12.10% 12.40%	8.28% 8.30%	3.82% 4.10%
5/29/1990	12.40%	8.30% 8.30%	4.10% 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 6/27/1990	12.92% 12.90%	8.32% 8.33%	4.60% 4.57%
6/29/1990	12.90%	8.34%	4.16%
7/6/1990	12.10%	8.34%	3.76%
7/6/1990	12.35%	8.34%	4.01%

Bor	nd Yield Plus I	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of	Datum an	30-Year	Diale
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
8/10/1990	12.55%	8.41%	4.14%
8/16/1990 8/22/1990	13.21% 13.10%	8.43% 8.45%	4.78% 4.65%
8/24/1990	13.10%	8.45% 8.46%	4.65%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%
10/5/1990 10/19/1990	12.84% 13.00%	8.63% 8.67%	4.21% 4.33%
10/19/1990	12.30%	8.68%	4.33%
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 12/19/1990	13.10% 12.00%	8.67% 8.66%	4.43% 3.34%
12/20/1990	12.00%	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 1/4/1991	13.10% 12.50%	8.66% 8.65%	4.44% 3.85%
1/15/1991	12.50%	8.65%	3.85% 4.10%
1/25/1991	11.70%	8.63%	3.07%
2/4/1991	12.50%	8.60%	3.90%
2/7/1991	12.50%	8.59%	3.91%
2/12/1991 2/14/1991	13.00% 12.72%	8.57% 8.56%	4.43% 4.16%
2/22/1991	12.72%	8.55%	4.10%
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 5/7/1991	13.00% 13.50%	8.49% 8.47%	4.51% 5.03%
5/13/1991	13.25%	8.47%	4.78%
5/30/1991	12.75%	8.43%	4.32%
6/12/1991	12.00%	8.41%	3.59%
6/25/1991	11.70% 12.50%	8.38%	3.32%
6/28/1991 7/1/1991	12.50%	8.38% 8.37%	4.12% 3.63%
7/3/1991	12.50%	8.36%	4.14%
7/19/1991	12.10%	8.34%	3.76%
8/1/1991	12.90%	8.32%	4.58%
8/16/1991 9/27/1991	13.20% 12.50%	8.29% 8.23%	4.91% 4.27%
9/30/1991	12.30%	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 10/31/1991	12.55% 11.80%	8.20% 8.19%	4.35% 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 11/26/1991	12.40% 11.60%	8.18% 8.18%	4.22% 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 12/19/1991	12.60% 12.80%	8.15% 8.15%	4.45% 4.65%
12/19/1991	12.65%	8.15% 8.14%	4.65%
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 1/27/1992	13.00% 12.65%	8.06% 8.05%	4.94% 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%

Bor	nd Yield Plus	Risk Promiur	n
[6]	[7]	[8]	[9]
Date of		30-Year	
Electric Boto Coso	Return on	Treasury Yield	Risk Premium
Rate Case 3/18/1992	Equity 12.28%	7.98%	4.30%
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.93%	3.52%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.92%	3.58%
5/5/1992 5/12/1992	11.50% 11.87%	7.89% 7.88%	3.61% 3.99%
5/12/1992	12.46%	7.88%	3.99 <i>%</i> 4.58%
6/1/1992	12.30%	7.86%	4.44%
6/12/1992	10.90%	7.85%	3.05%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992 7/13/1992	13.00% 11.90%	7.85% 7.84%	5.15% 4.06%
7/13/1992	13.50%	7.84%	4.00 <i>%</i> 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 9/30/1992	11.40% 11.75%	7.71% 7.71%	3.69% 4.04%
10/2/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.71%	5.45%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992 12/15/1992	11.85% 11.00%	7.68% 7.66%	4.17% 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 12/30/1992	12.25% 12.00%	7.63% 7.63%	4.62% 4.37%
12/31/1992	11.90%	7.62%	4.28%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993 2/26/1993	11.90% 11.80%	7.49% 7.48%	4.41% 4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.24%	4.51%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50% 11.00%	7.22%	4.28%
5/28/1993 6/3/1993	12.00%	7.22% 7.21%	3.78% 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 9/21/1993	11.50% 10.50%	6.95% 6.80%	4.55% 3.70%
9/29/1993	11.47%	6.76%	4.71%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.56%	5.44%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993 12/16/1993	10.55% 10.60%	6.48% 6.48%	4.07% 4.12%
12/21/1993	11.30%	6.47%	4.12 %
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%

# Schedule RBH-R5 Page 15 of 25

Bor	nd Yield Plus	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of	_	30-Year	
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994 3/1/1994	12.00% 11.00%	6.35% 6.35%	5.65% 4.65%
3/4/1994	11.00%	6.34%	4.66%
4/25/1994	11.00%	6.40%	4.60%
5/10/1994	11.75%	6.44%	5.31%
5/13/1994 6/3/1994	10.50% 11.00%	6.46% 6.54%	4.04% 4.46%
6/27/1994	11.40%	6.65%	4.40%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.40%	3.45%
11/9/1994 11/18/1994	10.85% 11.20%	7.40% 7.46%	3.45% 3.74%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.50%	3.56%
12/8/1994	11.50%	7.55%	3.95%
12/8/1994 12/14/1994	11.70% 10.95%	7.55% 7.57%	4.15% 3.38%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%
1/9/1995	12.28%	7.64%	4.64%
1/31/1995 2/10/1995	11.00% 12.60%	7.69% 7.70%	3.31% 4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.72%	3.78%
3/20/1995	12.00%	7.72%	4.28%
3/23/1995 3/29/1995	12.81% 11.60%	7.72% 7.72%	5.09% 3.88%
4/6/1995	11.10%	7.72%	3.38%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995 5/25/1995	11.63% 11.20%	7.68% 7.65%	3.95% 3.55%
6/9/1995	11.20%	7.60%	3.65%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.51%	3.59%
9/11/1995	11.30%	7.20%	4.10% 4.18%
9/27/1995 9/27/1995	11.30% 11.50%	7.12% 7.12%	4.18% 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%	6.89%	4.49%
11/9/1995 11/17/1995	12.36% 11.00%	6.89% 6.85%	5.47% 4.15%
12/4/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.69%	4.91%
12/27/1995 2/5/1996	12.00% 12.25%	6.66% 6.48%	5.34% 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 4/30/1996	11.25% 11.00%	6.43% 6.43%	4.82% 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 8/12/1996	11.20% 10.40%	6.48% 6.57%	4.72% 3.83%
9/27/1996	11.00%	6.71%	3.83 <i>%</i> 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%

Bor	nd Yield Plus	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of Electric	Return on	30-Year Treasury	Risk
Rate Case	Equity	Yield	Premium
12/18/1996	11.75%	6.84%	4.91%
12/31/1996 1/3/1997	11.50% 10.70%	6.83% 6.83%	4.67% 3.87%
2/13/1997	11.80%	6.82%	3.87 % 4.98%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.80%	3.22%
4/2/1997 4/28/1997	11.65%	6.80%	4.85%
4/28/1997	11.50% 11.70%	6.81% 6.81%	4.69% 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 3/2/1998	12.75% 11.25%	6.39% 6.28%	6.36% 4.97%
3/6/1998	10.75%	6.27%	4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998 9/15/1998	11.40% 11.90%	5.94% 5.78%	5.46%
9/15/1998	12.60%	5.78% 5.58%	6.12% 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 4/6/1999	10.50% 10.94%	5.34% 5.32%	5.16% 5.62%
7/29/1999	10.34%	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 2/17/2000	11.50% 10.60%	6.05% 6.17%	5.45% 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 11/28/2000	11.16% 12.90%	6.03% 5.89%	5.13% 7.01%
11/30/2000	12.30%	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 6/26/2001	10.75% 11.00%	5.62% 5.62%	5.13% 5.38%
7/25/2001	11.00%	5.60%	5.30% 5.42%
7/25/2001	11.02%	5.60%	5.42%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001 9/7/2001	10.50%	5.56%	4.94% 5.20%
9/10/2001	10.75% 11.00%	5.55% 5.55%	5.20% 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 12/20/2001	12.88% 12.50%	5.49% 5.50%	7.39% 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 6/10/2002	10.17% 12.00%	5.46% 5.47%	4.71% 6.53%
6/18/2002	12.00%	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 9/26/2002	12.30% 10.45%	5.45% 5.41%	6.85% 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 1/31/2003	11.10% 12.45%	5.19% 5.13%	5.91% 7.32%
1,01,2000	12.4070	0.1070	1.02/0

Bor	nd Yield Plus	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of	<b>D</b> /	30-Year	D' 1
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
2/28/2003	12.30%	5.04%	7.26%
3/6/2003	10.75%	5.02%	5.73%
3/7/2003	9.96%	5.02% 4.98%	4.94%
3/20/2003 4/3/2003	12.00% 12.00%	4.96%	7.02% 7.05%
4/15/2003	11.15%	4.93%	6.22%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003 7/16/2003	9.75% 9.75%	4.79% 4.79%	4.96% 4.96%
7/25/2003	9.75%	4.79%	4.90%
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 12/19/2003	11.50% 12.00%	4.94% 4.94%	6.56% 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 4/5/2004	10.25% 11.25%	5.02% 5.03%	5.23% 6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.07%	5.18%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004 6/30/2004	10.50% 10.50%	5.10% 5.10%	5.40% 5.40%
7/16/2004	11.60%	5.10%	5.40 <i>%</i> 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 12/14/2004	11.00% 10.97%	5.06% 5.07%	5.94% 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 1/6/2005	9.85% 10.70%	5.08% 5.08%	4.77% 5.62%
2/18/2005	10.70%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%
3/24/2005	10.30%	4.89%	5.41%
4/4/2005 4/7/2005	10.00% 10.25%	4.87% 4.87%	5.13% 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 7/19/2005	9.75%	4.75%	5.00%
8/5/2005	11.50% 11.75%	4.64% 4.62%	6.86% 7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.53%	6.22%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005 12/21/2005	10.75% 10.29%	4.55% 4.54%	6.20% 5.75%
12/21/2005	10.20%	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 12/28/2005	10.00% 10.00%	4.54% 4.54%	5.46% 5.46%
1/5/2005	11.00%	4.54%	5.46% 6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.62%	5.58%
4/26/2006	10.60%	4.64%	5.96%

Bor	nd Yield Plus	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of Electric	Return on	30-Year Treasury	Risk
Rate Case	Equity	Yield	Premium
5/17/2006	11.60%	4.69%	6.91%
6/6/2006 6/27/2006	10.00% 10.75%	4.75% 4.80%	5.25% 5.95%
7/6/2006	10.75%	4.80%	5.37%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006 8/23/2006	10.05% 9.55%	4.87% 4.89%	5.18% 4.66%
9/1/2006	9.55%	4.89%	4.00 <i>%</i> 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 11/21/2006	10.08% 10.12%	4.95% 4.95%	5.13% 5.17%
12/1/2006	10.12%	4.96%	5.29%
12/1/2006	10.50%	4.96%	5.54%
12/7/2006	10.75%	4.96%	5.79%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006 12/22/2006	11.25% 10.25%	4.95% 4.95%	6.30% 5.30%
1/5/2007	10.20%	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 1/12/2007	10.90% 10.10%	4.95% 4.95%	5.95% 5.15%
1/12/2007	10.10%	4.95% 4.95%	5.15%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.86%	6.49%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007 5/17/2007	10.00% 10.25%	4.81% 4.80%	5.19% 5.45%
5/17/2007	10.25%	4.80%	5.45%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007 6/15/2007	9.67% 9.90%	4.80% 4.82%	4.87% 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 7/19/2007	9.67% 10.00%	4.86% 4.87%	4.81% 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 10/31/2007	9.10% 9.96%	4.91% 4.90%	4.19% 5.06%
11/29/2007	9.90%	4.90%	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 12/19/2007	10.80% 10.20%	4.86% 4.86%	5.94% 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 1/8/2008	11.25% 10.75%	4.85% 4.83%	6.40% 5.92%
1/0/2008	10.75%	4.83% 4.81%	5.92% 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 3/12/2008	10.25% 10.25%	4.75% 4.73%	5.50% 5.52%
3/25/2008	9.10%	4.68%	4.42%
4/22/2008	10.25%	4.60%	5.65%
4/24/2008	10.10%	4.60%	5.50%
5/1/2008	10.70%	4.58%	6.12%

Bor	nd Yield Plus	Risk Promiur	n
[6]	[7]	[8]	[9]
Date of	Determine	30-Year	Diale
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
5/19/2008	11.00%	4.56%	6.44%
5/27/2008	10.00%	4.55%	5.45%
6/10/2008 6/27/2008	10.70% 10.50%	4.54% 4.54%	6.16% 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% 10.80%	4.51% 4.51%	4.89%
7/30/2008 7/31/2008	10.80%	4.51%	6.29% 6.19%
8/11/2008	10.25%	4.50%	5.75%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008 9/24/2008	10.30%	4.50%	5.80%
9/24/2008 9/24/2008	10.65% 10.65%	4.48% 4.48%	6.17% 6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.47%	5.73%
10/8/2008 11/13/2008	10.15% 10.55%	4.46% 4.45%	5.69%
11/13/2008	10.55%	4.45% 4.44%	6.10% 5.76%
12/1/2008	10.25%	4.39%	5.86%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008 12/31/2008	10.20% 10.75%	4.24% 4.22%	5.96% 6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.11%	6.39%
1/21/2009	10.50%	4.11%	6.39%
1/21/2009 1/27/2009	10.50% 10.76%	4.11% 4.09%	6.39% 6.67%
1/30/2009	10.50%	4.07%	6.43%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009 4/2/2009	11.50% 11.10%	3.93% 3.85%	7.57% 7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.78%	6.22%
4/30/2009	11.25%	3.77%	7.48%
5/4/2009 5/20/2009	10.74% 10.25%	3.77% 3.74%	6.97% 6.51%
5/28/2009	10.20%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.76%	7.04%
7/8/2009 7/17/2009	10.63% 10.50%	3.76% 3.77%	6.87% 6.73%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.02%	6.68%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009 11/3/2009	10.70% 10.70%	4.10% 4.10%	6.60% 6.60%
11/24/2009	10.25%	4.16%	6.09%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009 12/7/2009	10.50% 10.70%	4.18% 4.19%	6.32% 6.51%
12/16/2009	10.90%	4.22%	6.68%
12/16/2009	11.00%	4.22%	6.78%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009 12/22/2009	10.40% 10.20%	4.22% 4.23%	6.18% 5.97%
12/22/2009	10.20%	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 1/11/2010	10.80% 11.00%	4.28% 4.31%	6.52% 6.69%
1/26/2010	10.13%	4.31%	6.69% 5.78%
1/27/2010	10.40%	4.36%	6.04%
1/27/2010	10.40%	4.36%	6.04%
1/27/2010	10.70%	4.36%	6.34%
Bor	nd Yield Plus	Risk Promiur	n
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[6]	[7]	[8]	[9]
Date of	Determine	30-Year	Diale
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41% 4.41%	5.77%
3/2/2010 3/4/2010	9.63% 10.50%	4.41%	5.22% 6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010 3/25/2010	10.00% 10.15%	4.41% 4.42%	5.59% 5.73%
4/2/2010	10.15%	4.42%	5.73%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010 4/29/2010	10.06% 10.26%	4.46% 4.46%	5.60% 5.80%
5/12/2010	10.20%	4.40%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.10%	4.44%	5.66%
5/28/2010 6/7/2010	10.20% 10.30%	4.44% 4.44%	5.76% 5.86%
6/16/2010	10.30%	4.44%	5.66%
6/28/2010	9.67%	4.43%	5.24%
6/28/2010	10.50%	4.43%	6.07%
6/30/2010	9.40% 10.25%	4.43%	4.97% 5.82%
7/1/2010 7/15/2010	10.25%	4.43% 4.43%	5.82% 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 8/25/2010	9.83% 9.90%	4.41% 4.37%	5.42% 5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.32%	5.68%
9/16/2010 9/30/2010	10.00% 9.75%	4.32% 4.28%	5.68% 5.47%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010 11/19/2010	10.70% 10.20%	4.19% 4.17%	6.51% 6.03%
11/22/2010	10.00%	4.17%	5.83%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010 12/13/2010	10.25% 10.70%	4.15% 4.15%	6.10% 6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.14%	5.86%
12/20/2010 12/21/2010	10.60% 10.30%	4.14% 4.14%	6.46% 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 1/13/2011	10.30% 10.30%	4.12% 4.12%	6.18% 6.18%
1/18/2011	10.30%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.11%	5.49% 5.80%
2/3/2011 2/25/2011	10.00% 10.00%	4.11% 4.14%	5.89% 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 4/26/2011	10.74% 9.67%	4.23% 4.24%	6.51% 5.43%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.25%	5.75%

Bor	nd Yield Plus	Risk Promiur	n
[6]	[7]	[8]	[9]
Date of	Determine	30-Year	Diala
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
5/4/2011	10.00%	4.25%	5.75%
5/24/2011	10.50%	4.27%	6.23%
6/8/2011	10.75%	4.30%	6.45%
6/16/2011 6/17/2011	9.20% 9.95%	4.32% 4.32%	4.88% 5.63%
7/13/2011	10.20%	4.37%	5.83%
8/1/2011	9.20%	4.39%	4.81%
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011 8/19/2011	10.35% 10.25%	4.38% 4.36%	5.97% 5.89%
9/2/2011	12.88%	4.32%	3.56%
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 12/14/2011	10.90% 10.00%	3.87% 3.79%	7.03% 6.21%
12/14/2011	10.00%	3.79%	6.51%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.75%	6.45%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%
12/23/2011 1/25/2012	10.19% 10.50%	3.74% 3.57%	6.45% 6.93%
1/27/2012	10.50%	3.55%	6.95%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.43%	6.47%
2/27/2012	10.25%	3.42%	6.83%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012 4/4/2012	10.37% 10.00%	3.31% 3.29%	7.06% 6.71%
4/26/2012	10.00%	3.29%	6.80%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.16%	6.64%
5/15/2012	10.00%	3.14%	6.86%
5/29/2012	10.05%	3.11%	6.94%
6/7/2012 6/14/2012	10.30% 9.40%	3.07% 3.06%	7.23% 6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.05%	6.55%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012 7/9/2012	10.00% 10.20%	3.04% 3.03%	6.96%
7/16/2012	9.80%	3.03%	7.17% 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 9/26/2012	10.05% 9.50%	2.94% 2.94%	7.11% 6.56%
10/12/2012	9.60%	2.94%	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 11/29/2012	9.75% 9.88%	2.89% 2.89%	6.86% 6.99%
12/5/2012	9.00% 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 12/19/2012	10.40% 9.71%	2.88% 2.87%	7.52% 6.84%
12/19/2012	10.25%	2.87%	0.84 <i>%</i> 7.38%
12/20/2012	9.50%	2.87%	6.63%

Bor	nd Yield Plus	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of Electric	Return on	30-Year	Risk
Rate Case	Equity	Treasury Yield	Premium
12/20/2012	9.80%	2.87%	6.93%
12/20/2012 12/20/2012	10.25% 10.25%	2.87% 2.87%	7.38% 7.38%
12/20/2012	10.25%	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 12/26/2012	10.20% 9.80%	2.87% 2.86%	7.33% 6.94%
1/9/2013	9.70%	2.84%	6.86%
1/9/2013	9.70%	2.84%	6.86%
1/9/2013 1/16/2013	9.70% 9.60%	2.84% 2.84%	6.86% 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 3/14/2013	10.00% 9.30%	2.86% 2.88%	7.14% 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 5/31/2013	10.20% 9.00%	2.98% 2.98%	7.22% 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 8/8/2013	9.36% 9.83%	3.08% 3.14%	6.28% 6.69%
8/14/2013	9.15%	3.14%	5.99%
9/11/2013	10.20%	3.27%	6.93%
9/11/2013	10.25%	3.27%	6.98%
9/24/2013 10/3/2013	10.20% 9.65%	3.31% 3.33%	6.89% 6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013 12/3/2013	10.00% 10.25%	3.45% 3.47%	6.55% 6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.49%	5.23%
12/9/2013 12/13/2013	9.75% 9.75%	3.49% 3.50%	6.26% 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 12/17/2013	9.50% 10.95%	3.51% 3.51%	5.99% 7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013 12/30/2013	10.15% 9.50%	3.51% 3.54%	6.64% 5.96%
2/20/2013	9.30%	3.69%	5.51%
2/26/2014	9.75%	3.70%	6.05%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014 3/26/2014	9.40% 9.96%	3.73% 3.73%	5.67% 6.23%
4/2/2014	9.70%	3.73%	0.23 <i>%</i> 5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014 6/30/2014	10.40% 9.55%	3.67% 3.64%	6.73% 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 7/31/2014	9.45% 9.90%	3.60% 3.60%	5.85% 6.30%
8/20/2014	9.75%	3.56%	6.19%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%

Bor	nd Yield Plus	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of	Determine	30-Year	Diala
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
9/11/2014	9.60%	3.51%	6.09%
9/15/2014	10.25%	3.51%	6.74%
10/9/2014 11/6/2014	9.80% 9.56%	3.44% 3.37%	6.36% 6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014 11/26/2014	9.70% 10.20%	3.32% 3.32%	6.38% 6.88%
12/4/2014	9.68%	3.30%	6.38%
12/10/2014	9.25%	3.29%	5.96%
12/10/2014	9.25%	3.29%	5.96%
12/11/2014 12/12/2014	10.07% 10.20%	3.28% 3.28%	6.79% 6.92%
12/17/2014	9.17%	3.27%	5.90%
12/18/2014	9.83%	3.26%	6.57%
1/23/2015 2/24/2015	9.50%	3.14%	6.36%
3/18/2015	9.83% 9.75%	3.04% 2.98%	6.79% 6.77%
3/25/2015	9.50%	2.95%	6.55%
3/26/2015	9.72%	2.95%	6.77%
4/23/2015 4/29/2015	10.20% 9.53%	2.87% 2.86%	7.33% 6.67%
4/29/2015 5/1/2015	9.53%	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% 6.71%
9/2/2015 9/10/2015	9.50% 9.30%	2.79% 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 12/3/2015	10.30% 10.00%	2.88% 2.90%	7.42% 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 12/17/2015	9.60% 9.70%	2.91% 2.91%	6.69% 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 3/16/2016	9.75% 9.85%	2.94% 2.91%	6.81% 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 6/15/2016	9.00% 9.00%	2.78% 2.78%	6.22% 6.22%
7/18/2016	9.98%	2.71%	7.27%
8/9/2016	9.85%	2.66%	7.19%
8/18/2016 8/24/2016	9.50% 9.75%	2.63% 2.61%	6.87% 7.14%
9/1/2016	9.75%	2.61%	6.91%
9/8/2016	10.00%	2.57%	7.43%
9/28/2016	9.58%	2.53%	7.05%
9/30/2016 11/9/2016	9.90% 9.80%	2.53% 2.48%	7.37% 7.32%
11/10/2016	9.80%	2.48%	7.02%
11/15/2016	9.55%	2.49%	7.06%
11/18/2016	10.00%	2.50%	7.50%
11/29/2016 12/1/2016	10.55% 10.00%	2.51% 2.51%	8.04% 7.49%
12/6/2016	8.64%	2.52%	6.12%
12/6/2016	8.64%	2.52%	6.12%
12/7/2016	10.10%	2.52%	7.58%
12/12/2016 12/14/2016	9.60% 9.10%	2.53% 2.53%	7.07% 6.57%
12/19/2016	9.00%	2.54%	6.46%
12/19/2016	9.37%	2.54%	6.83%

Bor	nd Yield Plus	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of Electric	Return on	30-Year Treasury	Risk
Rate Case	Equity	Yield	Premium
12/22/2016 12/22/2016	9.60% 9.90%	2.55% 2.55%	7.05% 7.35%
12/22/2016	9.90 <i>%</i> 9.50%	2.55%	6.95%
1/12/2017	9.60%	2.58%	7.02%
1/18/2017	9.45%	2.58%	6.87%
1/24/2017 1/31/2017	9.00% 10.10%	2.59% 2.60%	6.41% 7.50%
2/15/2017	9.60%	2.62%	6.98%
2/22/2017	9.60%	2.64%	6.96%
2/24/2017 2/28/2017	9.75% 10.10%	2.64% 2.64%	7.11% 7.46%
3/2/2017	9.41%	2.65%	6.76%
3/20/2017	9.50%	2.68%	6.82%
4/4/2017	10.25%	2.72%	7.53%
4/12/2017 4/20/2017	9.40% 9.50%	2.74% 2.76%	6.66% 6.74%
5/3/2017	9.50%	2.79%	6.71%
5/11/2017	9.20%	2.81%	6.39%
5/18/2017 5/23/2017	9.50% 9.70%	2.83% 2.84%	6.67% 6.86%
6/16/2017	9.70% 9.65%	2.84%	6.76%
6/22/2017	9.70%	2.90%	6.80%
6/22/2017	9.70%	2.90%	6.80%
7/24/2017 8/15/2017	9.50% 10.00%	2.95% 2.97%	6.55% 7.03%
9/22/2017	9.60%	2.93%	6.67%
9/28/2017	9.80%	2.92%	6.88%
10/20/2017	9.50%	2.91%	6.59%
10/26/2017 10/26/2017	10.20% 10.25%	2.91% 2.91%	7.29% 7.34%
10/26/2017	10.30%	2.91%	7.39%
11/6/2017	10.25%	2.90%	7.35%
11/15/2017 11/30/2017	11.95% 10.00%	2.89% 2.88%	9.06% 7.12%
11/30/2017	10.00%	2.88%	7.12%
12/5/2017	9.50%	2.88%	6.62%
12/6/2017	8.40%	2.87%	5.53%
12/6/2017 12/7/2017	8.40% 9.80%	2.87% 2.87%	5.53% 6.93%
12/14/2017	9.60%	2.86%	6.74%
12/14/2017	9.65%	2.86%	6.79%
12/18/2017	9.50%	2.86%	6.64% 6.73%
12/20/2017 12/21/2017	9.58% 9.10%	2.85% 2.85%	6.73% 6.25%
12/28/2017	9.50%	2.85%	6.65%
12/29/2017	9.51%	2.85%	6.66%
1/18/2018 1/31/2018	9.70% 9.30%	2.84% 2.84%	6.86% 6.46%
2/2/2018	9.98%	2.84%	7.14%
2/23/2018	9.90%	2.85%	7.05%
3/12/2018	9.25%	2.86%	6.39%
3/15/2018 3/29/2018	9.00% 10.00%	2.87% 2.88%	6.13% 7.12%
4/12/2018	9.90%	2.89%	7.01%
4/13/2018	9.73%	2.89%	6.84%
4/18/2018	9.25%	2.89%	6.36%
4/18/2018 4/26/2018	10.00% 9.50%	2.89% 2.90%	7.11% 6.60%
5/30/2018	9.95%	2.94%	7.01%
5/31/2018	9.50%	2.94%	6.56%
6/14/2018 6/22/2018	8.80% 9.50%	2.96% 2.97%	5.84% 6.53%
6/22/2018	9.90%	2.97%	6.93%
6/28/2018	9.35%	2.97%	6.38%
6/29/2018	9.50%	2.97%	6.53%
8/8/2018 8/21/2018	9.53% 9.70%	2.99% 3.00%	6.54% 6.70%
8/24/2018	9.28%	3.01%	6.27%

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Bor	nd Yield Plus	Risk Premiur	n
[6]	[7]	[8]	[9]
Date of	_	30-Year	
Electric	Return on	Treasury	Risk
Rate Case 9/5/2018	Equity 9.56%	Yield 3.02%	Premium 6.54%
9/14/2018	10.00%	3.02 %	6.97%
9/20/2018	9.80%	3.04%	6.76%
9/26/2018	9.77%	3.05%	6.72%
9/26/2018	10.00%	3.05%	6.95%
9/27/2018	9.30%	3.05%	6.25%
10/4/2018	9.85%	3.06%	6.79%
10/29/2018	9.60%	3.10%	6.50%
10/31/2018 11/1/2018	9.99% 8.69%	3.11% 3.11%	6.88% 5.58%
12/4/2018	8.69%	3.11%	5.56%
12/13/2018	9.30%	3.14%	6.16%
12/14/2018	9.50%	3.14%	6.36%
12/19/2018	9.84%	3.14%	6.70%
12/20/2018	9.65%	3.14%	6.51%
12/21/2018	9.30%	3.14%	6.16%
1/9/2019	10.00%	3.14%	6.86%
2/27/2019	9.75%	3.12%	6.63%
3/13/2019	9.60%	3.12%	6.48%
3/14/2019	9.00%	3.12%	5.88%
3/14/2019	9.40%	3.12%	6.28%
3/22/2019	9.65%	3.12% 3.11%	6.53%
4/30/2019 4/30/2019	9.73% 9.73%	3.11%	6.62% 6.62%
5/1/2019	9.73%	3.11%	6.39%
5/2/2019	10.00%	3.11%	6.89%
5/8/2019	9.50%	3.10%	6.40%
5/14/2019	8.75%	3.10%	5.65%
5/16/2019	9.50%	3.09%	6.41%
5/23/2019	9.90%	3.09%	6.81%
8/12/2019	9.60%	2.89%	6.71%
8/29/2019	9.06%	2.81%	6.25%
9/4/2019	10.00%	2.78%	7.22%
9/30/2019	9.60%	2.70%	6.90% 7.40%
10/31/2019 10/31/2019	10.00% 10.00%	2.60% 2.60%	7.40%
11/7/2019	9.35%	2.58%	6.77%
11/29/2019	9.50%	2.52%	6.98%
12/4/2019	8.91%	2.51%	6.40%
12/4/2019	9.75%	2.51%	7.24%
12/16/2019	8.91%	2.48%	6.43%
12/17/2019	9.70%	2.47%	7.23%
12/17/2019	10.50%	2.47%	8.03%
12/19/2019	10.20%	2.47%	7.73%
12/19/2019	10.25%	2.47%	7.78%
12/19/2019	10.30%	2.47%	7.83%
12/20/2019 12/20/2019	9.45% 9.65%	2.46% 2.46%	6.99% 7.19%
12/20/2019	9.65%	2.46%	7.19%
1/8/2020	10.02%	2.40%	7.59%
1/16/2020	8.80%	2.41%	6.39%
1/22/2020	9.50%	2.39%	7.11%
1/23/2020	9.86%	2.39%	7.47%
		# of Casas:	1 617

# of Cases:	1,617
Average:	4.71%

### Expected Earnings Analysis

		[1] Expected	[2]	[3]	[4]	[5]	[6]
		ROE	Sh	ares Outstand	ina	Adjustment	Adjusted
Company	Ticker	2022-24	2019	2022-24	% Increase	Factor	ROE
ALLETE, Inc.	ALE	9.00%	51.75	52.75	0.48%	1.002	9.02%
Alliant Energy Corporation	LNT	10.00%	240.00	250.00	1.03%	1.005	10.05%
Ameren Corporation	AEE	10.50%	246.00	259.00	1.30%	1.006	10.57%
American Electric Power Company, Inc.	AEP	10.50%	494.65	525.50	1.52%	1.008	10.58%
Avangrid, Inc.	AGR	5.50%	309.00	309.00	0.00%	1.000	5.50%
Avista	AVA	8.00%	67.00	71.00	1.46%	1.007	8.06%
CMS Energy Corporation	CMS	13.50%	284.00	296.00	1.04%	1.005	13.57%
DTE Energy Company	DTE	9.50%	194.00	212.00	2.24%	1.011	9.61%
Duke Energy Corporation	DUK	8.50%	733.00	770.00	1.24%	1.006	8.55%
Evergy, Inc	EVRG	8.50%	220.00	212.00	-0.92%	0.995	8.46%
Hawaiian Electric Industries, Inc.	HE	9.00%	109.00	113.00	0.91%	1.005	9.04%
NextEra Energy, Inc.	NEE	12.50%	489.00	495.00	0.31%	1.002	12.52%
NorthWestern Corporation	NWE	9.00%	50.50	51.60	0.54%	1.003	9.02%
OGE Energy Corp.	OGE	11.50%	200.00	200.00	0.00%	1.000	11.50%
Otter Tail Corporation	OTTR	11.00%	40.00	41.80	1.11%	1.006	11.06%
Pinnacle West Capital Corporation	PNW	10.00%	113.00	118.00	1.09%	1.005	10.05%
PNM Resources, Inc.	PNM	9.00%	79.65	90.00	3.10%	1.015	9.14%
Portland General Electric Company	POR	9.00%	89.40	90.00	0.17%	1.001	9.01%
Southern Company	SO	12.50%	1050.00	1080.00	0.71%	1.004	12.54%
WEC Energy Group, Inc.	WEC	12.00%	315.50	315.50	0.00%	1.000	12.00%
Xcel Energy Inc.	XEL	10.50%	525.00	546.00	0.99%	1.005	10.55%
						Median	10.05%
						Average	10.02%

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

[3] Source: Value Line [4] Equals =([3] / [2])^(1/4)-1; ([3] / [2])^(1/5)-1

[5] Equals (2 x (1 + [4])) / (2 + [4]) [6] Equals [1] x [5]

Proxy Group Capital Structure

					% Comm	on Equity				
Company	Ticker	2019Q3	2019Q2	2019Q1	2018Q4	2018Q3	2018Q2	2018Q1	2017Q4	Average
ALLETE, Inc.	ALE	58.68%	59.66%	59.53%	59.12%	58.50%	58.84%	63.09%	62.51%	59.99%
Alliant Energy Corporation	LNT	51.73%	50.38%	53.18%	53.11%	51.13%	51.00%	49.74%	49.77%	51.26%
Ameren Corporation	AEE	53.67%	53.03%	52.81%	52.69%	53.22%	52.01%	53.04%	52.65%	52.89%
American Electric Power Company, Inc.	AEP	50.28%	49.12%	49.89%	49.90%	49.29%	49.18%	48.83%	49.38%	49.48%
Avangrid, Inc.	AGR	54.38%	56.33%	56.51%	55.72%	56.13%	54.93%	56.55%	55.69%	55.78%
Avista Corporation	AVA	55.80%	56.32%	56.10%	55.09%	55.75%	55.76%	56.34%	55.76%	55.86%
CMS Energy Corporation	CMS	51.70%	53.64%	52.52%	50.27%	53.01%	52.86%	53.13%	52.25%	52.42%
DTE Energy Company	DTE	49.40%	48.76%	48.69%	50.96%	49.97%	49.23%	51.12%	51.02%	49.89%
Duke Energy Corporation	DUK	52.89%	54.48%	53.14%	54.35%	55.03%	54.94%	54.46%	54.30%	54.20%
Evergy, Inc.	EVRG	60.28%	60.51%	58.16%	59.56%	59.86%	58.51%	58.73%	58.62%	59.28%
Hawaiian Electric Industries, Inc.	HE	58.43%	58.17%	58.06%	57.98%	56.09%	55.78%	57.44%	57.42%	57.42%
NextEra Energy, Inc.	NEE	56.15%	61.22%	61.05%	62.05%	60.06%	57.87%	57.75%	57.06%	59.15%
NorthWestern Corporation	NWE	47.80%	48.07%	48.74%	47.88%	48.36%	48.41%	47.48%	49.89%	48.33%
OGE Energy Corp.	OGE	54.96%	53.47%	55.38%	53.20%	53.05%	54.25%	53.59%	53.36%	53.91%
Otter Tail Corporation	OTTR	55.43%	53.75%	53.90%	53.58%	53.49%	53.11%	52.67%	57.34%	54.16%
Pinnacle West Capital Corporation	PNW	54.25%	54.41%	54.48%	54.36%	53.68%	53.71%	53.18%	53.14%	53.90%
PNM Resources, Inc.	PNM	45.33%	43.86%	43.45%	45.63%	48.01%	46.68%	46.20%	46.06%	45.65%
Portland General Electric Company	POR	51.78%	51.56%	50.60%	50.19%	50.51%	50.29%	50.14%	49.80%	50.61%
Southern Company	SO	52.36%	52.93%	52.80%	52.38%	50.22%	48.78%	48.55%	45.49%	50.44%
Wisconsin Energy Corporation	WEC	55.79%	56.71%	55.73%	53.46%	58.30%	57.72%	61.62%	54.62%	56.74%
Xcel Energy Inc.	XEL	53.98%	54.70%	54.51%	54.22%	53.37%	53.63%	54.15%	53.95%	54.06%
Mean		53.57%	53.86%	53.77%	53.60%	53.67%	53.21%	53.70%	53.34%	53.59%

### Operating Company Capital Structure

Operating Company   Parent   2019Q3   2019Q4   2018Q4   2018Q2   2018Q1   2017Q4   Average     ALLE TE: (Minnesolar Dower)   ALE   53.33%   60.34%   61.34%						% Comm	on Equity				
ALLETE (Minnesota Power)   ALE   53.33%   60.94%   60.34%   60.33%   60.38%   60.49%   60.44%     Superior Water, Light and Power Company   LNT   53.10%   55.33%   55.52%   49.44%   65.03%   57.34%   65.03%   57.34%   65.03%   55.32%   49.44%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   65.03%   57.34%   67.34%   57.33%   60.34%   65.03%   57.34%   67.34%   57.34%   67.34%   57.34%   67.34%   57.34%   67.34%	Operating Company	Parent	2019Q3	2019Q2	2019Q1			2018Q2	2018Q1	2017Q4	Average
Interstate Power and Light Company   LNT   50.00%   51.77%   53.33%   53.52%   49.67%   49.27%   50.31%   51.13     Ameran Illinois Company   AEE   54.46%   54.00%   53.65%   52.86%   52.74%   64.24%   53.38%   53.57     ALP Texas Central Company   AEE   52.86%   52.86%   52.86%   52.86%   52.86%   52.86%   53.26%   51.26%   51.26%   51.26%   51.26%   51.26%   51.26%   51.26%   51.26%   51.26%   51.26%   51.26%   53.26%   51.26%   52.86%   51.31%   51.32%   51.26%		ALE	59.33%	60.94%	60.87%	61.39%	60.43%	60.33%	60.38%	60.04%	60.46%
Nisconair   LNT   53.40%   49.01%   53.03%   52.69%   52.62%   51.28%   49.27%   49.23%   51.38     Mareran Illinois Company   AEE   54.49%   54.03%   52.69%   54.69%   54.39%   52.69%   54.29%   45.19%   45.39%   44.16%   46.59%   45.39%   44.16%   46.59%   45.39%   44.29%   45.20%   44.29%   44.29%   45.20%   45.29%   44.29%   45.20%   45.59%   46.29%   45.20%   46.29%   45.20%   46.29%   45.20%   46.29%   45.20%   46.29%   45.20%   46.29%   45.20%   46.29%   45.20%   46.29%   45.20%   45.20%   45.20%   47.7%   46.23% <td< td=""><td>Superior Water, Light and Power Company</td><td>ALE</td><td>58.03%</td><td>58.38%</td><td>58.19%</td><td>56.86%</td><td>56.58%</td><td>57.34%</td><td>65.80%</td><td>64.99%</td><td>59.52%</td></td<>	Superior Water, Light and Power Company	ALE	58.03%	58.38%	58.19%	56.86%	56.58%	57.34%	65.80%	64.99%	59.52%
American Illinois Company   AEE   54.46%   55.86%   52.86%   52.86%   52.86%   51.88%   52.24%   53.88%   51.88%   52.24%   53.88%   51.88%   52.24%   53.88%   51.88%   52.24%   53.88%   51.88%   52.24%   53.88%   51.88%   52.24%   53.88%   51.88%   52.24%   51.88%   52.28%   53.88%   51.88%   52.28%   54.88%   52.88%   44.83%   44.15%   44.64%   45.37%   44.15%   44.64%   45.37%   44.15%   44.64%   45.37%   44.15%   44.64%   45.37%   44.15%   44.64%   45.37%   44.15%   44.64%   45.37%   44.25%   44.25%   44.25%   44.25%   44.25%   44.25%   44.15%   44.64%   44.35%   44.15%   44.85%   44.15%   44.85%   44.15%   46.35%   71.11%   52.21%   54.85%   57.11%   52.21%   54.21%   54.27%   54.27%   54.27%   54.27%   54.27%   54.27%   54.27%   54.27%   54.27%   54.27%	Interstate Power and Light Company	LNT	50.06%	51.76%	53.33%	53.52%	49.64%	50.47%	49.92%	50.31%	51.13%
Union Electric Company   AEE   52.80%   51.28%   62.3%   42.57%   44.53%   44.15%   44.15%   44.15%   44.15%   44.15%   44.15%   44.15%   44.15%   44.15%   44.15%   44.15%   44.15%   44.25%   44.25%   44.25%   44.25%   44.25%   44.25%   44.25%   44.25%   44.25%   47.28%   45.53%   45.55%   45.55%   48.55%   47.28%   48.25%   45.25%   47.28%   48.25%   45.25%   47.28%   48.25%   47.28%   42.28%   42.28%   42.28%   42.28%   42.28%   42.28%   42.28%	Wisconsin Power and Light Company	LNT	53.40%	49.01%	53.03%	52.69%	52.62%	51.52%	49.57%	49.23%	51.38%
AEP Texas Contral Company   AEP   NA   NA  NA   NA  N	Ameren Illinois Company	AEE	54.46%	54.05%	53.65%	52.86%	53.18%	52.74%	54.24%	53.38%	53.57%
AEP   NA	Union Electric Company	AEE	52.88%	52.00%	51.96%	52.52%	53.26%	51.28%	51.84%	51.92%	52.21%
Appatachian Power Company   AEP   48.74%   49.17%   49.30%   49.30%   49.35%   48.25%   48.25%   48.25%   45.46%   45.35%     Kentucky Power Company   AEP   46.51%   45.83%   54.35%   55.25%   57.43%   57.43%<	AEP Texas Central Company	AEP	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indiana Power Company   AEP   46.51%   45.43%   44.53%   44.53%   44.15%   46.64%   46.23%   45.23%	AEP Texas North Company	AEP	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kentucky Power Company   AEP   64.64%   46.2%   67.2%   64.2%<	Appalachian Power Company	AEP	48.74%	48.19%	47.77%	49.51%	49.30%	48.93%	49.35%	48.72%	48.81%
Kentucky Power Company   AEP   46.50%   46.20%   45.20%   45.28%   44.89%   44.40%   43.52%   45.42%     Chio Power Company   AEP   53.33%   52.92%   58.86%   57.01%   57.64%   58.85%   57.11%   52.91%   58.85%   65.05%   45.91%   54.80%   46.00%   46.00%   46.00%   46.00%   46.00%   46.00%   46.00%   46.00%   46.00%   46.00%   46.00%   46.00%   46.00%   47.91%   47.28%   46.20%   47.01%   47.91%   47.27%   48.20%   47.28%   46.20%   47.01%   54.10%   54.27%   54.20%   54.27%   54.20%   54.27%   54.20%   54.27%   54.20%   54.27%   54.25%   54.27%   54.81%   53.30%   54.31%   53.25%   50.25%   56.65%   56.45%   56.45%   56.45%   56.45%   56.45%   56.15%   56.45%   56.25%   56.25%   56.25%   56.25%   56.25%   56.25%   56.25%   56.25%   56.25%   56.25%   56.13%		AEP	46.51%	45.83%	45.43%	44.62%	44.53%	44.15%	46.64%	46.33%	45.50%
Ohio Power Company   AEP   53.33%   52.92%   58.86%   77.11%   52.81%   56.85%   67.11%   52.81%   56.80%   48.10%   48.00%   48.00%   48.00%   48.00%   48.00%   48.00%   48.00%   48.00%   48.00%   48.00%   48.00%   48.00%   48.00%   48.00%   47.20%   54.27% <t< td=""><td></td><td>AEP</td><td>46.94%</td><td>46.50%</td><td>46.42%</td><td>45.72%</td><td>45.28%</td><td>44.89%</td><td>44.40%</td><td>43.52%</td><td>45.46%</td></t<>		AEP	46.94%	46.50%	46.42%	45.72%	45.28%	44.89%	44.40%	43.52%	45.46%
Public Service Company Of Oklahoma   AEP   49.89%   48.02%   47.19%   49.15%   49.55%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   44.10%	Kingsport Power Company	AEP	54.24%	50.18%	51.54%	50.79%	50.71%	47.69%	47.28%	46.53%	49.87%
Public Service Company Or Oklahoma   AEP   49.89%   48.02%   47.19%   49.15%   49.55%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   48.10%   47.26%   47.26%   45.97%   46.97%   54.33%   54.17%   55.42%   54.17%   55.84%   56.31%   56.21%   54.17%   55.85%   50.39%   54.33%   50.39%   54.34%   57.39%   50.39%   54.34%   57.39%   50.39%   54.34%   57.39%   50.39%   54.34%   57.39%   50.39%   54.34%   57.39%   50.39%   54.34%   57.39%   50.39%   54.34%   57.39%   50.39%   54.34%   57.39%   50.39%   54.34%   57.36%   50.30%   52.84%   57.34%   57.30%   57.34%		AEP	53.63%	52.92%	58.86%	57.80%	56.85%	57.11%	52.91%	58.63%	56.09%
Southwestern Electric Power Company   AEP   48.63%   47.43%   47.95%   49.23%   47.23%   44.72%   44.52%   47.23%   44.72%   54.26%   53.36%   54.36%   54.36%   53.36%   54.36%   53.36%   54.36%   53.36%   53.36%   54.36%   53.26%   57.37%   50.50%   54.24%   51.27%   50.27%   50.31%   61.35%   51.6%   50.44%   51.37%   50.27%   50.31%   54.46%   52.25%   52.44%   52.17%   52.26%   52.27%   52.26%   52.27%   52.16%   52.26%   52.27%   52.16%   52.26%   52.46%   52.44%   52.10%   51.70%   52.26%   52.27%   52.26%		AEP	49.89%	48.02%	47.19%	49.16%	49.55%	48.59%	48.10%	48.50%	48.62%
Wheeling Power Company   AEP   53.86%   54.27%   54.26%   54.17%   54.27%   50.27%   50.23%   51.39%   53.35%   61.37%   63.23%   54.47%   51.07%   56.07%   56.25%   50.46%   58.23%   57.26%   56.85%   56.46%   58.23%   57.27%   50.25%   50.27%		AEP		47.45%	47.59%	46.97%		47.91%	47.72%		47.28%
Central Maine Power Company   AGR   62.19%   61.91%   63.21%   64.17%   63.33%   64.18%   63.82%   63.82%   63.21%   64.18%   63.33%   64.18%   63.82%   63.33%   64.18%   63.82%   63.33%   64.18%   63.82%   63.43%   64.18%   63.84%   63.13%   64.18%   63.84%   64.18%   63.13%   64.18%   63.84%   64.18%   61.28%   61.28%   61.28%   61.28%   61.28%   61.28%   61.12%   61.28%   61.12%   61.28%   61.12%   61.28%   61.12%   61.28%   61.12%   61.28%   61.12%   61.28%   61.12%   61.28%   61.12%   61.28%   61.12%   61.28%   61.12%   61.28%		AEP	53.66%	53.83%	54.27%	54.62%	54.70%	54.19%	54.27%	54.26%	54.23%
New York State Electric & Gas Corporation   AGR   44.79%   55.83%   55.93%   50.99%   54.51%   53.30%   53.30%   53.30%   53.30%   53.30%   53.30%   43.50%   44.50%   44.16%   77.77%   50.60%   46.53%   49.50%   44.16%   57.43%   56.70%   50.60%   56.85%   56.46%   58.23%   57.43%   56.70%   50.00%   46.53%   49.55%   49.74%   51.13%   60.77%   50.25%   50.25%   50.46%   52.25%   52.26%   53.33%   52.25%   52.26%   53.13%   52.25%   52.26%   53.13%   52.25%   50.96%   50.96%   50.96%   50.96%   50.96%   50.96%   50.96%   50.96%   50.95%   50.70%   49.23%   51.12%   50.26%   50.96%   50.95%   50.70%   49.23%   51.12%   50.85%   50.96%   50.95%   50.70%   49.23%   51.95%   50.65%   50.70%   52.45%   52.98%   52.98%   52.98%   52.98%   52.98%   52.98%   52.98%   52.98% <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>63.32%</td></th<>											63.32%
Rochester Gas and Electric Corporation   AGR   50.50%   50.25%   49.96%   48.89%   48.16%   47.77%   50.80%   56.80%   56.85%   56.46%   57.43%   56.70%   50.80%   56.85%   56.85%   56.46%   58.23%   57.43%   56.70%   50.80%   56.85%   56.46%   58.23%   57.43%   56.70%   50.00%   56.85%     Avista Corporation   AVA   61.23%   61.12%   60.12%   60.12%   61.73%   61.73%   61.73%   51.75%   50.50%   49.97%   49.25%   49.77%   49.23%   51.12%   51.02%   49.86%   49.97%   49.23%   51.12%   51.02%   49.86%   52.10%   52.10%   52.10%   52.24%   51.2%   54.86%   50.96%   52.10%   52.10%   52.17%   53.11%   52.80%   52.17%   53.21%   52.17%   53.21%   52.19%   52.24%   51.2%   54.28%   54.29%   52.10%   52.24%   52.24%   52.24%   52.24%   52.24%   53.24%   52.24%   53.24%											53.45%
United Illuminating Company   AGR   56.05%   57.28%   56.46%   58.23%   57.43%   56.70%   56.00%   56.85     Alaska Electric Light and Power Company   AVA   50.33%   51.40%   51.18%   49.89%   49.55%   49.74%   51.16%   50.75%   50.50%     Consumers Energy Company   DTE   49.40%   48.69%   50.95%   59.27%   53.01%   52.28%   52.29%   52.28%   52.29%   52.29%   52.29%   52.29%   52.29%   52.29%   50.19%   50.46%   51.75%   55.79%   57.72%   57.19%   52.28%   52.29%   52.29%   52.29%   52.29%   52.27%   51.33%     Duke Energy Progress, LLC   DUK   64.45%   52.49%   51.70%   53.76%   51.74%   52.84%   52.27%   51.33%	-										49.50%
Alaska Electric Light and Power Company AVA 61.24% 61.24% 61.24% 61.24% 61.24% 61.76% 61.76% 61.76% 61.53% 60.77% 61.23%   Avista Corporation AVA 50.33% 51.40% 51.18% 49.89% 49.55% 49.74% 51.16% 50.75% 50.25% 52.25% 52.27% 52.26% 52.27% 52.28% 51.12% 51.12% 51.20% 49.89% 49.93% 49.23% 51.12% 51.20% 49.89% 49.23% 51.12% 52.89% 52.22% 50.22% 50.22% 50.23% 51.70% 52.46% 52.10% 51.70% 52.46% 52.70% 52.44% 51.20% 54.83% 52.28% <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>56.85%</td></td<>											56.85%
Avista Corporation AVA 50.33% 51.40% 51.40% 51.8% 49.89% 49.5% 49.74% 51.11% 50.25% 52.42%   Consumers Energy Company DTE 49.40% 48.76% 52.52% 50.27% 53.01% 52.86% 53.13% 52.25% 52.42%   Duke Energy Carolinas, LLC DUK 51.80% 52.94% 52.52% 50.02% 49.25% 51.52% 49.85% 49.25% 50.32% 51.70% 52.94% 52.94% 52.64% 52.64% 52.64% 52.94% 52.94% 52.84% 52.54% 51.92% 49.25% 50.32 Duke Energy Prodress, LLC DUK 51.82% 54.83% 52.94% 55.28% 55.79% 53.21% 53.11% 52.82% 52.24% 51.92% 56.80% 57.79% 53.11% 52.82% 52.94% 66.24% 65.44% 66.44% 65.44% 66.24% 65.44% 66.24% 65.44% 65.44% 67.94% 67.14% 74.45% 74.94% 74.94% 74.94% 74.94% 74.94% 74.94% 74.94% 74.94% 74.94% 74.94% 74.94% 74.94% <td></td> <td></td> <td>61.28%</td> <td>61.24%</td> <td>61.02%</td> <td>60.29%</td> <td>61.94%</td> <td>61.78%</td> <td>61.53%</td> <td>60.77%</td> <td>61.23%</td>			61.28%	61.24%	61.02%	60.29%	61.94%	61.78%	61.53%	60.77%	61.23%
Consumers   Energy Company   CMS   61.70%   63.64%   62.25%   60.27%   53.01%   52.26%   52.25%   52.25%   52.26%   53.13%   52.25%   52.26%   53.13%   52.25%   51.12%   51.02%   49.89%     Duke Energy Carolinas, LLC   DUK   52.82%   51.55%   50.66%   50.04%   49.65%   48.79%   49.92%   49.25%   50.32%     Duke Energy Indiana, LLC   DUK   52.82%   51.55%   50.64%   52.14%   52.47%   51.33%   74.97%   74.91%   74.45%   74.29%   74.18%   76.44   49.64%   54.74%   55.79%   52.03%   52.40%   52.40%   52.40%   52.40%   52.40%   52.40%   52.40%   52.40%   52.40%   54											50.50%
DTE Electric Company   DTE   49.40%   48.76%   48.69%   50.96%   49.97%   49.23%   51.12%   51.02%   49.85%     Duke Energy Carolinas, LLC   DUK   52.82%   51.55%   50.56%   50.04%   49.65%   48.79%   49.92%   49.22%   49.25%   52.54%   52.79%   53.27%   53.17%   52.64%   52.54%   51.78%   52.64%   52.54%   51.94%   52.26%   53.26%   55.79%   53.27%   53.11%   52.64%   52.27%   53.11%   52.64%   52.27%   53.11%   52.64%   52.27%   53.11%   52.62%   52.27%   53.11%   52.62%   52.27%   53.11%   52.62%   52.27%   51.33%   74.418%   74.18%   74.41%   52.62%   52.27%   51.33%   76.44%   54.04%   49.69%   61.70%   60.76%   52.27%   52.27%   51.32%   49.65%   49.65%   48.87%   49.65%   48.87%   49.65%   48.87%   49.65%   48.87%   49.65%   48.66%   52.27%   51.15%   56.27%<	•										52.42%
Duke Energy Carolina, LLC   DUK   51.80%   52.94%   52.32%   51.78%   52.64%   52.19%   51.70%   52.28%   52.28     Duke Energy Florida, LLC   DUK   52.82%   51.55%   50.66%   50.04%   49.65%   48.79%   49.92%   49.25%   50.32     Duke Energy Indiana, LLC   DUK   45.42%   53.04%   52.27%   55.79%   53.72%   53.72%   53.72%   53.17%   52.80%   55.79%   53.27%   52.27%   51.31%   52.46%   51.94%   52.82%   52.27%   51.31%   52.46%   51.44%   50.46%   50.09%   67.73%   67.10%   66.09%   66.44%   65.48%     Duke Energy Progress, LLC   DUK   50.43%   49.62%   40.04%   49.49%   74.45%   74.29%   74.18%   76.41     Evergy Missouri West, Inc.   EVRG   51.76%   52.08%   54.71%   55.70%   52.03%   52.40%   52.74%   51.74%   52.63%   57.74%   57.44%   57.42%   57.42%   57.42%   57.42% <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>49.89%</td></t<>											49.89%
Duke Energy Florida, LLC   DUK   52.82%   51.55%   50.66%   50.04%   49.65%   48.79%   49.92%   49.25%   50.32     Duke Energy Indian, LLC   DUK   51.85%   50.46%   52.26%   52.79%   52.64%   52.54%   52.99%   68.09%   67.13%   67.10%   66.06%   66.24%   65.42%   51.95%   50.06%   50.09%   67.73%   67.10%   66.06%   66.24%   65.42%   52.27%   52.82%   52.27%   51.35%   50.06%   50.09%   49.05%   51.95%   50.06%   50.09%   67.73%   67.10%   66.06%   66.24%   65.48%     Duke Energy Progress, LLC   DUK   50.86%   50.09%   74.91%   74.45%   74.29%   74.18%   76.41   52.03%   52.03%   52.03%   52.63%   52.44%   52.88%     Vestar Energy (RPL)   EVRG   51.81%   51.87%   58.06%   55.03%   55.03%   52.03%   52.63%   52.44%   57.42%   57.42%     Hawaiia Electric Company, Inc.   HE   N											52.28%
Duke Energy Indiana, LLC   DUK   51.52%   54.28%   53.28%   52.79%   52.64%   52.4%   51.91%   50.28%     Duke Energy Kentucky, Inc.   DUK   45.44%   53.04%   52.81%   56.58%   55.79%   53.72%   53.11%   52.80%     Duke Energy Progress, LLC   DUK   50.86%   50.09%   49.60%   51.00%   50.76%   53.22%   52.82%   52.27%   51.33     Evergy Kansas South, Inc.   EVRG   81.84%   81.49%   75.13%   74.97%   74.91%   74.45%   74.29%   74.18%   76.40%   52.86%   55.70%   52.03%   52.64%   58.76%   58.75%   52.73%   52.63%   58.75%   58.75%   58.76%<											50.32%
Duke Energy Kentucky, Inc.   DUK   45.44%   53.04%   52.81%   51.95%   56.58%   55.79%   53.72%   53.11%   52.80     Duke Energy Ohio, Inc.   DUK   64.49%   64.48%   59.29%   68.09%   67.73%   67.10%   66.06%   66.24%   65.48     Duke Energy Progress, LLC   DUK   50.80%   49.06%   51.00%   50.75%   53.22%   52.82%   62.27%   51.33     Evergy Metro, Inc.   EVRG   81.84%   81.49%   75.13%   74.97%   74.91%   74.45%   74.29%   74.18%   76.44     Evergy Missouri West, Inc.   EVRG   51.74%   52.86%   54.71%   55.00%   52.83%   58.74%   58.76%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   59.24%   49.15%   49.05%   49.15%   49.05%   49.15%   49.05%   49.15%   49.05%   49.15%   49.05%   49.15%   58.74%   58.74%   58.74%   58.75											52.98%
Duke Energy Ohio, Inc.   DUK   64.90%   64.45%   59.29%   68.09%   67.73%   67.10%   66.06%   66.24%   65.48     Duke Energy Progress, LLC   DUK   50.86%   50.09%   49.60%   51.00%   50.76%   53.22%   52.28%   52.27%   51.33   74.18%   74.18%   76.41     Evergy Kansas South, Inc.   EVRG   50.43%   49.62%   46.04%   49.49%   49.50%   48.88%   49.25%   49.15%   49.05     Evergy Missouri West, Inc.   EVRG   57.66%   59.18%   58.80%   59.03%   58.03%   58.75%   58.74%   58.76%   58.74%   58.76%   58.74%   57.44%   57.42% <td></td> <td>52.80%</td>											52.80%
Duke Energy Progress, LLC   DUK   50.86%   50.09%   49.60%   51.00%   50.76%   53.22%   52.82%   52.27%   51.33     Evergy Kansas South, Inc.   EVRG   81.84%   81.49%   75.13%   74.97%   74.91%   74.45%   74.29%   74.18%   76.41     Evergy Missouri West, Inc.   EVRG   51.18%   51.74%   52.68%   54.71%   55.70%   52.03%   52.63%   52.40%   52.88%     Westar Energy (KPL)   EVRG   57.66%   59.18%   58.06%   57.98%   56.09%   55.78%   57.44%   57.42% <td></td> <td>DUK</td> <td>64.90%</td> <td>64.45%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>66.24%</td> <td>65.48%</td>		DUK	64.90%	64.45%						66.24%	65.48%
Evergy Kansas South, Inc.   EVRG   81.84%   81.49%   75.13%   74.97%   74.91%   74.45%   74.29%   74.18%   76.41     Evergy Metro, Inc.   EVRG   50.43%   49.62%   46.04%   49.49%   49.50%   48.88%   49.25%   49.15%   49.15%   49.05%     Westar Energy (KPL)   EVRG   57.66%   59.18%   58.80%   59.34%   58.68%   58.75%   52.40%   52.88     Hawaii Electric Light Company, Inc.   HE   NA   S2.09%   S2.49%   S2.49%											51.33%
Everay Metro, Inc.   EVRG   50.43%   49.62%   46.04%   49.49%   49.50%   48.88%   49.25%   49.15%   49.05     Everay Missouri West, Inc.   EVRG   51.18%   51.74%   52.68%   54.71%   55.70%   52.03%   52.63%   52.40%   52.87%     Mawaii Electric Light Company, Inc.   HE   NA   S3.48%   64.03%   64.03%   64.03%   64.03%   64.25%   54.27%   54.19%   56.27%   53.39%   53.48%   53.14%   57.44%   58.36%   53.48%   <											76.41%
Evergy Missouri West, Inc.   EVRG   51.18%   51.74%   52.68%   54.71%   55.70%   52.03%   52.63%   52.40%   52.88     Westar Energy (KPL)   EVRG   57.66%   59.18%   58.80%   59.04%   58.68%   58.75%   58.74%   58.78   58.74%   58.78   58.74%   58.78   58.74%   58.78   58.74%   58.78   57.44%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.44%   57.42%   57.42%   57.44%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.44%   57.42%   57.44%   59.93%   60.03%   64.37%   64.78%   60.84%   61.23%   59.93%   62.03   61.15%   58.06%   59.73%   53.44%   53.65%   53.45%   53.05%   53.45%   53.05%   53.45%   53.25%   53.26%   53.35%   53.36%   53.11%   52.67%   53.36%   53.11%											49.05%
Westar Energy (KPL)   EVRG   57.66%   59.18%   58.80%   59.08%   59.34%   58.68%   58.75%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   58.74%   57.42%   57.44%   57.42%   57.42%   57.44%   57.42%   57.42%   57.44%   57.42%   57.44%											52.88%
Hawaii Electric Light Company, Inc.   HE   NA											58.78%
Hawaiian Electric Company, Inc.   HE   58.43%   58.17%   58.06%   57.98%   56.09%   55.78%   57.44%   57.42%   57.43%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.42%   57.43%   57.35%   55.34%   55.34%   55.36%   55.36%   55.36% <td></td> <td>NA</td>											NA
Maui Electric Company, Limited   HE   NA											57.42%
Florida Power & Light Company   NEE   59.78%   61.30%   64.03%   64.78%   60.84%   61.23%   59.93%   62.03     Gulf Power Company   NEE   52.52%   61.15%   58.06%   59.73%   55.34%   54.90%   54.27%   54.19%   56.27     North/Western Corporation   NWE   47.80%   48.07%   48.74%   47.88%   48.36%   48.41%   47.48%   49.89%   53.30%   53.05%   54.25%   53.59%   53.30%   53.11%   52.67%   57.34%   54.16%   53.47%   53.88%   53.20%   53.11%   52.67%   57.34%   54.16%   53.47%   53.88%   53.11%   52.67%   57.34%   54.16%     Arizona Public Service Company   PNW   54.25%   51.56%   50.60%   50.19%   50.51%   50.29%   50.14%   53.14%   53.14%   53.14%   53.14%   53.14%   53.14%   53.14%   53.14%   53.14%   53.14%   50.61%   50.51%   50.29%   50.14%   50.90%   50.51%   50.29%   50.14%											
Gulf Power Company   NEE   52.52%   61.15%   58.06%   59.73%   55.34%   54.90%   54.27%   54.19%   56.27     NorthWestern Corporation   NWE   47.80%   48.07%   48.74%   47.88%   48.36%   48.41%   47.48%   49.89%   48.33     Oklahoma Gas and Electric Company   OGE   54.96%   53.47%   55.38%   53.20%   53.05%   54.25%   53.59%   53.36%   53.20%   53.14%   52.67%   57.34%   54.19%   54.25%   53.49%   53.11%   52.67%   57.34%   54.14%   54.48%   54.36%   53.68%   53.71%   53.18%   53.14%   53.99%   54.25%   54.41%   54.48%   54.36%   53.68%   53.71%   53.18%   53.14%   53.99%   50.14%   54.06%   46.06%											62.03%
NorthWestern Corporation   NWE   47.80%   48.07%   48.74%   47.88%   48.36%   48.41%   47.48%   49.89%   48.33%     Oklahoma Gas and Electric Company   OGE   54.96%   53.47%   55.38%   53.20%   53.05%   54.25%   53.59%   53.36%   53.11%   52.67%   57.34%   54.16%   53.68%   53.11%   52.67%   57.34%   54.16%   53.68%   53.11%   52.67%   57.34%   54.16%   53.68%   53.11%   52.67%   57.34%   54.16%   53.68%   53.11%   52.67%   57.34%   54.16%   53.68%   53.11%   52.67%   57.34%   53.68%   53.11%   52.67%   57.34%   53.68%   53.11%   50.60%   50.19%   50.18%   50.29%   50.14%   49.80%   46.06%   45.66%     Portland General Electric Company   POR   51.78%   51.56%   50.20%   57.17%   48.18%   47.51%   48.66%   47.07%   49.44%   49.80%   50.61%   50.19%   50.129%   50.61%   50.29%   5											56.27%
Oklahoma Gas and Electric Company   OGE   54.96%   53.47%   55.38%   53.20%   53.05%   54.25%   53.59%   53.36%   53.91     Otter Tail Power Company   OTTR   55.43%   53.75%   53.90%   53.58%   53.41%   52.67%   57.34%   54.16     Arizona Public Service Company   PNW   54.25%   53.75%   53.90%   53.68%   53.41%   52.67%   57.34%   54.16     Public Service Company of New Mexico   PNW   54.25%   51.68%   50.61%   48.01%   46.68%   46.20%   46.06%   45.66     Portland General Electric Company   POR   51.78%   51.56%   50.60%   50.19%   50.51%   50.29%   50.14%   49.80%   50.61     Alabama Power Company   SO   51.45%   52.54%   52.23%   47.77%   48.13%   47.51%   48.86%   47.07%   49.44     Georgia Power Company   SO   50.23%   66.43%   59.02%   57.27%   54.97%   53.81%   50.06%   55.42%     Mississipi											48.33%
Otter Tail Power Company   OTTR   55.43%   53.75%   53.90%   53.58%   53.49%   53.11%   52.67%   57.34%   54.16%     Arizona Public Service Company   PNW   54.25%   54.41%   54.48%   54.36%   53.68%   53.71%   53.18%   53.11%   52.67%   57.34%   54.16%     Public Service Company   PNW   54.25%   54.41%   54.48%   54.36%   53.68%   53.71%   53.18%   53.14%   53.90%   50.51%   50.29%   50.14%   45.80%   50.61%   66.68%   46.06%   46.06%   45.65%     Portland General Electric Company   POR   51.78%   51.56%   50.60%   50.19%   50.51%   50.29%   50.14%   49.80%   50.61%   44.886%   47.07%   49.44   Georgia Power Company   SO   51.45%   52.54%   59.02%   57.27%   54.97%   53.81%   50.06%   55.42%     Mississipip Power Company   SO   50.23%   49.87%   49.73%   50.35%   54.97%   53.81%   50.04% <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>53.91%</td></td<>											53.91%
Arizona Public Service Company   PNW   54.25%   54.41%   54.48%   54.36%   53.68%   53.71%   53.18%   53.14%   53.90     Public Service Company of New Mexico   PNM   45.33%   43.86%   43.45%   45.63%   48.01%   46.68%   46.20%   46.06%   45.65     Portland General Electric Company   POR   51.78%   51.56%   50.60%   50.19%   50.51%   50.29%   50.14%   49.80%   45.65     Alabama Power Company   SO   51.45%   52.54%   52.23%   47.77%   48.13%   47.51%   48.86%   47.07%   49.44%     Georgia Power Company   SO   55.38%   56.39%   56.43%   59.02%   57.27%   54.97%   53.81%   50.06%   55.42     Mississipi Power Company   SO   55.38%   56.43%   59.02%   57.27%   54.97%   53.81%   50.06%   55.42     Upper Michigan Energy Resources Corporation   WEC   56.09%   54.45%   52.54%   47.01%   55.08%   54.53%   70.04%											54.16%
Public Service Company of New Mexico   PNM   45.33%   43.86%   43.45%   45.63%   48.01%   46.68%   46.20%   46.06%   45.65%     Portland General Electric Company   POR   51.78%   51.56%   50.01%   50.51%   50.29%   50.14%   49.80%   50.61     Alabama Power Company   SO   51.45%   52.54%   52.23%   47.77%   48.13%   47.51%   48.86%   46.06%   45.65%     Georgia Power Company   SO   55.38%   56.39%   56.43%   59.02%   57.27%   54.97%   53.81%   50.06%   55.44%     Upper Michigan Energy Resources Corporation   WEC   56.09%   54.45%   52.54%   55.08%   54.53%   70.04%   49.85%   54.95%     Wisconsin Public Service Corporation   WEC   56.09%   54.45%   52.54%   45.28%   43.87%   43.00%   39.34%   46.46     Upper Michigan Energy Resources Corporation   WEC   56.09%   54.45%   55.08%   50.59%   56.45%   57.38%   50.60%   59.25%											53.90%
Portland General Electric Company   POR   51.78%   51.56%   50.60%   50.19%   50.51%   50.29%   50.14%   49.80%   50.61     Alabama Power Company   SO   51.45%   52.54%   52.23%   47.77%   48.13%   47.51%   48.86%   47.07%   49.44     Georgia Power Company   SO   55.38%   56.39%   59.02%   57.27%   54.97%   53.81%   50.06%   55.42     Mississippi Power Company   SO   50.23%   49.87%   49.73%   50.35%   45.28%   43.87%   43.00%   39.34%   46.46     Upper Michigan Energy Resources Corporation   WEC   56.09%   56.44%   55.78%   56.03%   59.25%   59.09%   56.47%   55.94%   57.01%     Wisconsin Electric Power Company   WEC   56.09%   56.46%   55.78%   56.03%   59.25%   59.09%   56.47%   55.94%   57.01%     Wisconsin Public Service Corporation   WEC   54.37%   59.04%   58.88%   57.33%   60.59%   59.53%   58.35%											45.65%
Alabama Power Company   SO   51.45%   52.54%   52.23%   47.77%   48.13%   47.51%   48.86%   47.07%   49.44     Georgia Power Company   SO   55.38%   56.39%   56.43%   59.02%   57.27%   54.97%   53.81%   50.06%   55.42%     Mississippi Power Company   SO   50.23%   49.87%   49.73%   50.35%   45.28%   43.87%   43.00%   39.34%   46.46     Upper Michigan Energy Resources Corporation   WEC   56.09%   54.45%   52.54%   47.01%   55.08%   54.53%   70.04%   49.85%   54.25%     Wisconsin Electric Power Company   WEC   56.92%   56.64%   55.78%   56.03%   59.25%   59.09%   56.47%   55.94%   57.01     Wisconsin Public Service Corporation   WEC   54.37%   59.04%   58.88%   57.33%   60.59%   59.53%   58.35%   58.06%   58.27%     Northern States Power Company - MN   XEL   53.66%   53.64%   52.81%   52.64%   52.51%   52.38%											50.61%
Georgia Power Company   SO   55.38%   56.39%   56.43%   59.02%   57.27%   54.97%   53.81%   50.06%   55.42%     Mississippi Power Company   SO   50.23%   49.87%   49.73%   50.35%   45.28%   43.87%   43.00%   39.34%   46.46     Upper Michigan Energy Resources Corporation   WEC   56.09%   54.45%   52.54%   47.01%   55.08%   54.53%   70.04%   49.85%   54.95     Wisconsin Electric Power Company   WEC   56.09%   54.45%   55.78%   50.03%   59.25%   59.09%   56.47%   55.94%   57.17%   58.35%   58.35%   58.06%   58.27%     Wisconsin Public Service Corporation   WEC   54.37%   59.04%   58.88%   57.33%   60.59%   59.53%   58.06%   58.27%     Northern States Power Company - MN   XEL   51.79%   53.66%   53.49%   53.59%   52.64%   52.61%   52.59%   52.38%   52.79%   52.38%   52.77%     Northern States Power Company - MI   XEL <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
Mississippi Power Company   SO   50.23%   49.87%   49.73%   50.35%   45.28%   43.87%   43.00%   39.34%   46.46     Upper Michigan Energy Resources Corporation   WEC   56.09%   54.45%   52.54%   47.01%   55.08%   54.53%   70.04%   49.85%   54.95     Wisconsin Electric Power Company   WEC   56.92%   56.64%   55.78%   56.03%   59.25%   59.09%   56.47%   55.94%   57.01     Wisconsin Public Service Corporation   WEC   54.37%   59.04%   57.33%   60.59%   59.53%   58.35%   58.06%   58.27     Northern States Power Company - MN   XEL   51.79%   53.66%   53.64%   52.81%   52.64%   52.61%   52.59%   52.35%   52.37%   52.25%   52.64%   52.											49.44 % 55.42%
Upper Michigan Energy Resources Corporation   WEC   56.09%   54.45%   52.54%   47.01%   55.08%   54.53%   70.04%   49.85%   54.95%     Wisconsin Electric Power Company   WEC   56.92%   56.64%   55.78%   56.03%   59.25%   59.09%   56.47%   55.94%   57.01     Wisconsin Public Service Corporation   WEC   54.37%   59.04%   58.88%   57.33%   60.59%   59.53%   58.35%   58.06%   58.27     Northern States Power Company - MN   XEL   51.79%   53.66%   53.64%   52.81%   52.64%   52.51%   52.64%   52.51%   52.81%   52.64%   52.59%   52.38%   52.77     Northern States Power Company - WI   XEL   53.56%   53.49%   53.61%   53.61%   53.61%   53.85%   53.79%   53.60%   54.17%   56.67%   56.50%   52.94%   52.94%   52.94%   52.94%   52.51%   52.59%   52.38%   52.77     Northern States Power Company - WI   XEL   56.35%   57.53%   56.68%   <											46.46%
Wisconsin Electric Power Company   WEC   56.92%   56.64%   55.78%   56.03%   59.25%   59.09%   56.47%   55.94%   57.01     Wisconsin Public Service Corporation   WEC   54.37%   59.04%   58.88%   57.33%   60.59%   59.53%   58.35%   58.06%   58.27     Northern States Power Company - MN   XEL   51.79%   53.66%   53.64%   52.81%   52.64%   52.59%   52.35%   52.38%   52.38%   52.77     Northern States Power Company - WI   XEL   53.56%   53.49%   53.60%   48.45%   53.85%   53.79%   53.60%   54.17%   56.67%   56.50%   56.29%     Public Service Company of Colorado   XEL   56.35%   57.53%   56.68%   56.31%   56.08%   54.17%   56.67%   56.50%   56.29%											40.40 <i>%</i> 54.95%
Wisconsin Public Service Corporation   WEC   54.37%   59.04%   58.88%   57.33%   60.59%   59.53%   58.35%   58.06%   58.27     Northern States Power Company - MN   XEL   51.79%   53.66%   53.64%   52.81%   52.64%   52.61%   52.59%   52.38%   52.77     Northern States Power Company - WI   XEL   53.56%   53.49%   53.59%   53.60%   48.45%   53.85%   53.79%   53.36%   52.96%   52.96%   52.96%   52.96%   52.96%   52.96%   52.96%   52.38%   52.77%     Public Service Company of Colorado   XEL   56.35%   57.53%   56.68%   56.31%   56.08%   54.17%   56.67%   56.50%   56.29%											57.01%
Northern States Power Company - MN   XEL   51.79%   53.66%   53.64%   52.81%   52.64%   52.61%   52.59%   52.38%   52.77     Northern States Power Company - WI   XEL   53.56%   53.49%   53.59%   53.60%   48.45%   53.85%   53.79%   53.36%   52.96%   52.96%   52.61%   52.59%   52.38%   52.77     Public Service Company of Colorado   XEL   56.35%   57.53%   56.68%   56.31%   56.08%   54.17%   56.67%   56.50%   56.29%											58.27%
Northern States Power Company - WI   XEL   53.56%   53.49%   53.59%   53.60%   48.45%   53.85%   53.79%   53.36%   52.96     Public Service Company of Colorado   XEL   56.35%   57.53%   56.68%   56.31%   56.08%   54.17%   56.67%   56.50%   56.29%											
Public Service Company of Colorado XEL 56.35% 57.53% 56.68% 56.31% 56.08% 54.17% 56.67% 56.50% 56.29											
SOULDWESTERN PUDIIC SERVICE COMDANY ALL 04.21% 04.14% 04.15% 04.17% 00.25% 03.00% 03.04% 03.00% 04.24											
		AEL									53.80%

Source: S&P Global Market Intelligence

Proxy Group Capital Structure

					% L	ong-Term [	Debt			
Company	Ticker	2019Q3	2019Q2	2019Q1	2018Q4	2018Q3	2018Q2	2018Q1	2017Q4	Average
ALLETE, Inc.	ALE	41.32%	40.34%	40.47%	40.88%	41.50%	41.16%	36.91%	37.49%	40.01%
Alliant Energy Corporation	LNT	48.27%	49.62%	46.82%	46.89%	48.87%	49.00%	50.26%	50.23%	48.74%
Ameren Corporation	AEE	46.33%	46.97%	47.19%	47.31%	46.78%	47.99%	46.96%	47.35%	47.11%
American Electric Power Company, Inc.	AEP	49.72%	50.88%	50.11%	50.10%	50.71%	50.82%	51.17%	50.62%	50.52%
Avangrid, Inc.	AGR	45.62%	43.67%	43.49%	44.28%	43.87%	45.07%	43.45%	44.31%	44.22%
Avista Corporation	AVA	44.20%	43.68%	43.90%	44.91%	44.25%	44.24%	43.66%	44.24%	44.14%
CMS Energy Corporation	CMS	48.30%	46.36%	47.48%	49.73%	46.99%	47.14%	46.87%	47.75%	47.58%
DTE Energy Company	DTE	50.60%	51.24%	51.31%	49.04%	50.03%	50.77%	48.88%	48.98%	50.11%
Duke Energy Corporation	DUK	47.11%	45.52%	46.86%	45.65%	44.97%	45.06%	45.54%	45.70%	45.80%
Evergy, Inc.	EVRG	39.72%	39.49%	41.84%	40.44%	40.14%	41.49%	41.27%	41.38%	40.72%
Hawaiian Electric Industries, Inc.	HE	41.57%	41.83%	41.94%	42.02%	43.91%	44.22%	42.56%	42.58%	42.58%
NextEra Energy, Inc.	NEE	43.85%	38.78%	38.95%	37.95%	39.94%	42.13%	42.25%	42.94%	40.85%
NorthWestern Corporation	NWE	52.20%	51.93%	51.26%	52.12%	51.64%	51.59%	52.52%	50.11%	51.67%
OGE Energy Corp.	OGE	45.04%	46.53%	44.62%	46.80%	46.95%	45.75%	46.41%	46.64%	46.09%
Otter Tail Corporation	OTTR	44.57%	46.25%	46.10%	46.42%	46.51%	46.89%	47.33%	42.66%	45.84%
Pinnacle West Capital Corporation	PNW	45.75%	45.59%	45.52%	45.64%	46.32%	46.29%	46.82%	46.86%	46.10%
PNM Resources, Inc.	PNM	54.67%	56.14%	56.55%	54.37%	51.99%	53.32%	53.80%	53.94%	54.35%
Portland General Electric Company	POR	48.22%	48.44%	49.40%	49.81%	49.49%	49.71%	49.86%	50.20%	49.39%
Southern Company	SO	47.64%	47.07%	47.20%	47.62%	49.78%	51.22%	51.45%	54.51%	49.56%
Wisconsin Energy Corporation	WEC	44.21%	43.29%	44.27%	46.54%	41.70%	42.28%	38.38%	45.38%	43.26%
Xcel Energy Inc.	XEL	46.02%	45.30%	45.49%	45.78%	46.63%	46.37%	45.85%	46.05%	45.94%
Mean		46.43%	46.14%	46.23%	46.40%	46.33%	46.79%	46.30%	46.66%	46.41%

### Operating Company Capital Structure

					%	_ong-Term [	Debt			
Operating Company	Parent	2019Q3	2019Q2	2019Q1	2018Q4	2018Q3	2018Q2	2018Q1	2017Q4	Average
ALLETE (Minnesota Power)	ALE	40.67%	39.06%	39.13%	38.61%	39.57%	39.67%	39.62%	39.96%	39.54%
Superior Water, Light and Power Company	ALE	41.97%	41.62%	41.81%	43.14%	43.42%	42.66%	34.20%	35.01%	40.48%
Interstate Power and Light Company	LNT	49.94%	48.24%	46.67%	46.48%	50.36%	49.53%	50.08%	49.69%	48.87%
Wisconsin Power and Light Company	LNT	46.60%	50.99%	46.97%	47.31%	47.38%	48.48%	50.43%	50.77%	48.62%
Ameren Illinois Company	AEE	45.54%	45.95%	46.35%	47.14%	46.82%	47.26%	45.76%	46.62%	46.43%
Union Electric Company	AEE	47.12%	48.00%	48.04%	47.48%	46.74%	48.72%	48.16%	48.08%	47.79%
AEP Texas Central Company	AEP	NA	NA	NA	NA	NA	NA	NA	NA	NA
AEP Texas North Company	AEP	NA	NA	NA	NA	NA	NA	NA	NA	NA
Appalachian Power Company	AEP	51.26%	51.81%	52.23%	50.49%	50.70%	51.07%	50.65%	51.28%	51.19%
Indiana Michigan Power Company	AEP	53.49%	54.17%	54.57%	55.38%	55.47%	55.85%	53.36%	53.67%	54.50%
Kentucky Power Company	AEP	53.06%	53.50%	53.58%	54.28%	54.72%	55.11%	55.60%	56.48%	54.54%
Kingsport Power Company	AEP	45.76%	49.82%	48.46%	49.21%	49.29%	52.31%	52.72%	53.47%	50.13%
Ohio Power Company	AEP	46.37%	47.08%	41.14%	42.20%	43.15%	42.89%	47.09%	41.37%	43.91%
Public Service Company of Oklahoma	AEP	50.11%	51.98%	52.81%	50.84%	50.45%	51.41%	51.90%	51.50%	51.38%
Southwestern Electric Power Company	AEP	51.37%	52.55%	52.41%	53.03%	56.57%	52.09%	52.28%	51.48%	52.72%
Wheeling Power Company	AEP	46.34%	46.17%	45.73%	45.38%	45.30%	45.81%	45.73%	45.74%	45.77%
Central Maine Power Company	AGR	37.81%	38.04%	36.49%	36.79%	35.83%	36.47%	35.82%	36.18%	36.68%
New York State Electric & Gas Corporation	AGR	51.21%	44.16%	44.07%	45.70%	46.05%	49.01%	45.49%	46.70%	46.55%
Rochester Gas and Electric Corporation	AGR	49.50%	49.75%	50.04%	51.11%	51.84%	52.23%	49.20%	50.37%	50.50%
United Illuminating Company	AGR	43.95%	42.74%	43.35%	43.54%	41.77%	42.57%	43.30%	44.00%	43.15%
Alaska Electric Light and Power Company	AVA	38.72%	38.76%	38.98%	39.71%	38.06%	38.22%	38.47%	39.23%	38.77%
Avista Corporation	AVA	49.67%	48.60%	48.82%	50.11%	50.45%	50.26%	48.84%	49.25%	49.50%
Consumers Energy Company	CMS	48.30%	46.36%	47.48%	49.73%	46.99%	47.14%	46.87%	47.75%	47.58%
DTE Electric Company	DTE	50.60%	51.24%	51.31%	49.04%	50.03%	50.77%	48.88%	48.98%	50.11%
Duke Energy Carolinas, LLC	DUK	48.20%	47.06%	47.68%	48.22%	47.36%	47.90%	48.30%	47.02%	47.72%
Duke Energy Florida, LLC	DUK	47.18%	48.45%	49.44%	49.96%	50.35%	51.21%	50.08%	50.75%	49.68%
Duke Energy Indiana, LLC	DUK	48.48%	45.17%	45.71%	46.74%	47.21%	47.36%	47.46%	48.06%	47.02%
Duke Energy Kentucky, Inc.	DUK	54.56%	46.96%	47.19%	48.05%	43.42%	44.21%	46.28%	46.89%	47.20%
Duke Energy Ohio, Inc.	DUK	35.10%	35.55%	40.71%	31.91%	32.27%	32.90%	33.94%	33.76%	34.52%
Duke Energy Progress, LLC	DUK	49.14%	49.91%	50.40%	49.00%	49.24%	46.78%	47.18%	47.73%	48.67%
Evergy Kansas South, Inc.	EVRG	18.16%	18.51%	24.87%	25.03%	25.09%	25.55%	25.71%	25.82%	23.59%
Evergy Metro, Inc.	EVRG	49.57%	50.38%	53.96%	50.51%	50.50%	51.12%	50.75%	50.85%	50.95%
Evergy Missouri West, Inc.	EVRG	48.82%	48.26%	47.32%	45.29%	44.30%	47.97%	47.37%	47.60%	47.12%
Westar Energy (KPL)	EVRG	42.34%	40.82%	41.20%	40.92%	40.66%	41.32%	41.25%	41.26%	41.22%
Hawaii Electric Light Company, Inc.	HE	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hawaiian Electric Company, Inc.	HE	41.57%	41.83%	41.94%	42.02%	43.91%	44.22%	42.56%	42.58%	42.58%
Maui Electric Company, Limited	HE	NA	NA	NA	NA	NA	NA	NA	NA	NA
Florida Power & Light Company	NEE	40.22%	38.70%	35.97%	35.63%	35.22%	39.16%	38.77%	40.07%	37.97%
Gulf Power Company	NEE	47.48%	38.85%	41.94%	40.27%	44.66%	45.10%	45.73%	45.81%	43.73%
NorthWestern Corporation	NWE	52.20%	51.93%	51.26%	52.12%	51.64%	51.59%	52.52%	50.11%	51.67%
Oklahoma Gas and Electric Company	OGE	45.04%	46.53%	44.62%	46.80%	46.95%	45.75%	46.41%	46.64%	46.09%
Otter Tail Power Company	OTTR	44.57%	46.25%	46.10%	46.42%	46.51%	46.89%	47.33%	42.66%	45.84%
Arizona Public Service Company	PNW	45.75%	45.59%	45.52%	45.64%	46.32%	46.29%	46.82%	46.86%	46.10%
Public Service Company of New Mexico	PNM	54.67%	56.14%	56.55%	54.37%	51.99%	53.32%	53.80%	53.94%	54.35%
Portland General Electric Company	POR	48.22%	48.44%	49.40%	49.81%	49.49%	49.71%	49.86%	50.20%	49.39%
Alabama Power Company	SO	48.55%	40.44 %	49.40%	49.01% 52.23%	49.49 <i>%</i> 51.87%	49.71% 52.49%	49.00 % 51.14%	52.93%	49.39% 50.56%
Georgia Power Company	SO	44.62%	43.61%	43.57%	40.98%	42.73%	45.03%	46.19%	49.94%	44.58%
Mississippi Power Company	SO	49.77%	43.01% 50.13%	43.37% 50.27%	40.98%	42.73% 54.72%	45.03% 56.13%	40.19% 57.00%	49.94% 60.66%	44.58% 53.54%
Upper Michigan Energy Resources Corporation	WEC	43.91%	45.55%	47.46%	49.05% 52.99%	44.92%	45.47%	29.96%	50.15%	45.05%
Wisconsin Electric Power Company	WEC	43.91%	43.36%	44.22%	43.97%	44.92%	40.91%	43.53%	44.06%	43.05%
	WEC		43.36% 40.96%	44.22% 41.12%					44.06% 41.94%	
Wisconsin Public Service Corporation		45.63%			42.67%	39.41%	40.47%	41.65%		41.73%
Northern States Power Company - MN	XEL	48.21%	46.34%	46.36%	47.19%	47.36%	47.39%	47.41%	47.62%	47.23%
Northern States Power Company - WI	XEL	46.44%	46.51%	46.41%	46.40%	51.55%	46.15%	46.21%	46.64%	47.04%
Public Service Company of Colorado	XEL	43.65%	42.47%	43.32%	43.69%	43.92%	45.83%	43.33%	43.50%	43.71%
Southwestern Public Service Company	XEL	45.79%	45.86%	45.87%	45.83%	43.71%	46.12%	46.46%	46.45%	45.76%
Mean		46.28%	45.85%	46.05%	46.10%	46.06%	46.55%	46.07%	46.67%	46.20%

Source: S&P Global Market Intelligence

### Staff Bench Analysis ROE Recommendation

	Average Result	Average Result	Average Result
Staff's Current Cost of Equity Estimates for the Electric Proxy Group	6.39%	6.39%	6.39%
Staff's Current Cost of Equity Estimates for the Gas Proxy Group	6.21%	0.00%	100.00%
Staff's Cost of Equity Estimates for the Gas Proxy Group in the Spire Missouri Cases	6.96%	6.96%	6.96%
	Difference	Difference	Difference
Average COE Difference Between Current Electric and Gas Proxy Groups	0.18%	6.39%	-93.61%
Difference in Average COE for Gas Proxy Group Between Rate Cases	-0.75%	-6.96%	93.04%
Implied COE Differential for Electric Proxy Group	-0.57%	-0.57%	-0.57%
	ROE	ROE	ROE
Commission allowed ROE in Spire Missouri rate cases	9.80%	9.80%	9.80%
Implied COE Differential for Electric Proxy Group	-0.57%	-0.57%	-0.57%
Staff recommended allowed ROE for Ameren Missouri Electric	9.23%	9.23%	9.23%
Difference Between Gas Proxy Group in the Spire Missouri Cases and Current Electric Proxy Group	-0.57%	-0.57%	-0.57%

Source: Schedule PC-12

		10-Year Historical Growth Rate EPS	5-Year Historical Growth Rate EPS	Projected 5-Year EPS Growth SNL
Company Name	Ticker			(Mean) (%)
Alliant Energy Corporation	LNT	2.38%	4.99%	5.66%
Ameren Corporation	AEE	-0.39%	6.31%	6.28%
American Electric Power Company, Inc.	AEP	0.28%	0.34%	5.82%
Avista Corporation	AVA	5.37%	4.75%	3.98%
CMS Energy Corporation	CMS	NM	4.47%	6.89%
Duke Energy Corporation	DUK	2.29%	2.42%	4.57%
Evergy, Inc.	EVRG	NM	NM	6.17%
IDACORP, Inc.	IDA	7.11%	3.85%	3.50%
NorthWestern Corporation	NEW	9.56%	6.84%	3.41%
OGE Energy Corp.	OGE	6.12%	4.66%	5.18%
Pinnacle West Capital Corporation	PNW	4.78%	4.73%	5.29%
PNM Resources, Inc.	PNM	NM	-4.94%	6.05%
Portland General Electric Company	POR	3.19%	5.12%	4.63%
Southern Company	SO	-1.75%	-4.80%	4.52%
Xcel Energy Inc.	XEL	5.05%	4.80%	5.43%
Average		3.66%	3.11%	5.16%

### Mr. Chari Schedule PC-9-3 - Recreated As Filed

Source: Schedule PC-9-3

# Mr. Chari Schedule PC-9-3 - Remove Negative Growth Rates

		10-Year Historical Growth Rate	5-Year Historical Growth Rate	Projected 5-Year EPS Growth
		EPS	EPS	SNL
Company Name	Ticker			(Mean) (%)
Alliant Energy Corporation	LNT	2.38%	4.99%	5.66%
Ameren Corporation	AEE		6.31%	6.28%
American Electric Power Company, Inc.	AEP	0.28%	0.34%	5.82%
Avista Corporation	AVA	5.37%	4.75%	3.98%
CMS Energy Corporation	CMS	NM	4.47%	6.89%
Duke Energy Corporation	DUK	2.29%	2.42%	4.57%
Evergy, Inc.	EVRG	NM	NM	6.17%
IDACORP, Inc.	IDA	7.11%	3.85%	3.50%
NorthWestern Corporation	NEW	9.56%	6.84%	3.41%
OGE Energy Corp.	OGE	6.12%	4.66%	5.18%
Pinnacle West Capital Corporation	PNW	4.78%	4.73%	5.29%
PNM Resources, Inc.	PNM	NM		6.05%
Portland General Electric Company	POR	3.19%	5.12%	4.63%
Southern Company	SO			4.52%
Xcel Energy Inc.	XEL	5.05%	4.80%	5.43%
Average		4.61%	4.44%	5.16%

Source: Schedule PC-9-3

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ALE US Equit	ty			LNT US Equity				AEE US	S Equity				AEP US Equity			
Date	TRAIL_12 E	QY_DPS	Payout %	Date	TRAIL_12	EQY_DPS	Payout %	Date		TRAIL_12	EQY_DPS	Payout %	Date	TRAIL_12	EQY_DPS	Payout %
12/31/1990	3.555	2.79	0.78481	12/31/1990	1.115	0.87	0.78027		12/31/1995	2.72	#N/A N/A		12/31/199	2.65	2.4	0.90566
12/31/1991	3.69	2.85	0.77236	12/31/1991	1.215	0.9	0.74074		12/31/1996	2.71	#N/A N/A		12/31/199	1 2.7	2.4	0.88889
12/31/1992	3.705	2.91	0.78543	12/31/1992	1.05	0.93	0.88571		12/31/1997	2.439	0	0	12/31/199	2 2.54	2.4	0.94488
12/31/1993	3.3	2.97	0.9	12/31/1993	1.055	0.95	0.90047		12/31/1998	2.817	2.54	0.90167	12/31/199	3 1.92	2.4	1.25
12/30/1994	3.09	3.03	0.98058	12/30/1994	1.065	0.96	0.90141		12/31/1999	2.81	2.54	0.90391	12/30/199	4 2.71	2.4	0.88561
12/29/1995	3.24	3.06	0.94444	12/29/1995	0.95	0.97	1.02105		12/29/2000		2.54	0.76276	12/29/199		2.4	0.84211
12/31/1996	3.42	3.06	0.89474	12/31/1996	1.17	0.985	0.84188		12/31/2001	3.4	2.54	0.74706	12/31/199		2.4	0.76433
12/31/1997	3.705	3.06	0.82591	12/31/1997	0.9486	1	1.05419		12/31/2002	2.6	2.54	0.97692	12/31/199	2.703	2.4	0.8879
12/31/1998		3.06	0.75836	12/31/1998	0.6285	1	1.59109		12/31/2003		2.54	0.78154	12/31/199		2.4	0.85379
12/31/1999		3.21	1.10309	12/31/1999	1.255	1	0.79681		12/31/2004		2.54	0.89437	12/31/199		2.4	0.79208
12/29/2000	6.33	3.21	0.50711	12/29/2000	2.515	1	0.39761		12/30/2005	3.02	2.54	0.84106	12/29/200		2.4	2.89157
12/31/2001		3.21	0.59116	12/31/2001	1.0271	1	0.97362		12/29/2006	2.66	2.54	0.95489	12/31/200		2.4	0.79734
12/31/2002	5.04	3.3	0.65476	12/31/2002	0.59	1	1.69492		12/31/2007	2.98	2.54	0.85235	12/31/200		2.4	-1.52866
12/31/2003		3.39	0.39789	12/31/2003	#N/A N/A	0.5			12/31/2008	2.88	2.54	0.88194	12/31/200		1.65	5.68966
12/31/2004		2.8425	0.77452	12/31/2004	0.64	0.5063	0.79109		12/31/2009		1.54	0.55396	12/31/200		1.4	0.50909
12/30/2005	0.48	1.245	2.59375	12/30/2005	-0.035	0.525	-15		12/31/2010	0.58	1.54	2.65517	12/30/200	5 2.08	1.42	0.68269
12/29/2006		1.45	0.5292	12/31/2007	1.89	0.635	0.33598		12/30/2011	2.15	1.555	0.72326	12/29/200		1.5	0.59289
12/31/2007		1.64	0.53247	12/31/2008	1.305	0.7	0.5364		12/31/2012		1.6	-0.399	12/31/200		1.58	0.58088
12/31/2008		1.72	0.60993	12/31/2009	0.505	0.75	1.48515		12/31/2013		1.6	1.35593	12/31/200		1.64	0.47953
12/31/2009		1.76	0.93122	12/31/2010	1.3	0.79	0.60769		12/31/2014		1.61	0.67083	12/31/200		1.64	0.55405
12/31/2010		1.76	0.80365	12/30/2011	1.37	0.85	0.62044		12/31/2015		1.655	0.639	12/31/201		1.71	0.67589
12/30/2011		1.78	0.6717	12/31/2012	1.445	0.9	0.62284		12/30/2016		1.715	0.63993	12/30/201		1.85	0.4602
12/31/2012		1.84	0.71318	12/31/2013	1.615	0.94	0.58204		12/29/2017		1.7775	0.83061	12/31/201		1.88	0.72308
12/31/2013		1.9	0.72243	12/31/2014	1.73	1.02	0.5896		12/31/2018	3.32	1.8475	0.55648	12/31/201		1.95	0.64145
12/31/2014		1.96	0.67586	12/31/2015	1.68	1.1	0.65476						12/31/201		2.03	0.60778
12/31/2015		2.02	0.69178	12/30/2016	1.64	1.175	0.71646						12/31/201		2.15	0.51559
12/30/2016	3.14	2.08	0.66242	12/29/2017	1.99	1.26	0.63317						12/30/201		2.27	1.83065
12/29/2017		2.14	0.63314	12/31/2018	2.19	1.34	0.61187						12/29/201		2.39	0.61598
12/31/2018	3.38	2.24	0.66272										12/31/201	3 3.9	2.53	0.64872
	Ν	<i>l</i> ledian	0.72243		I	Median	0.74074				Median	0.80607			Median	0.72308

Electric Universe Average Payout Ratio	65.65%
Gas Universe Average Payout Ratio	63.58%
Utility Universe Average Payout Ratio	65.22%

Source: Bloomberg Professional

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AGR US Eq	uitv				AVA US Equity				BKH US Equit	v			CNP US Equit	v		
Date		TRAIL_12 E	QY_DPS	Payout %		TRAIL_12 E	EQY_DPS	Payout %			EQY_DPS			, TRAIL_12 I	EQY_DPS	Payout %
12/31	1/2015	1.07	0		12/31/1990		1.24		12/31/1990	1.1156	0.7289	0.65337	12/31/1990	1.335	1.48	1.10861
12/30	)/2016	2.04	1.728	0.84706	12/31/1991	1.34	1.24	0.92537	12/31/1991	1.1067	0.7822	0.70679	12/31/1991	1.62	1.48	0.91358
12/29	9/2017	1.23	1.728	1.40488	12/31/1992	1.37	1.24	0.90511	12/31/1992	1.1533	0.8267	0.71681	12/31/1992	1.68	1.49	0.8869
12/31	1/2018	1.92	1.744	0.90833	12/31/1993	1.44	1.24	0.86111	12/31/1993	1.1067	0.8533	0.77103	12/31/1993	1.6	1.5	0.9375
					12/30/1994	1.28	1.24	0.96875	12/30/1994	1.1067	0.88	0.79516	12/30/1994	1.625	1.5	0.92308
					12/29/1995	1.41	1.24	0.87943	12/29/1995	1.1867	0.8933	0.75276	12/29/1995	4.46	1.5	0.33632
					12/31/1996	1.35	1.24	0.91852	12/31/1996	1.4	0.92	0.65714	12/31/1996	1.66	1.5	0.90361
					12/31/1997	1.96	1.24	0.63265	12/31/1997	1.49	0.9467	0.63537	12/31/1997	1.66	1.5	0.90361
					12/31/1998	1.28	1.05	0.82031	12/31/1998	1.19	1	0.84034	12/31/1998	-0.5	1.5	-3
					12/31/1999	0.12	0.48	4	12/31/1999	1.73	1.04	0.60116	12/31/1999	5.18	1.5	0.28958
					12/29/2000	1.47	0.48	0.32653	12/29/2000	2.37	1.08	0.4557	12/29/2000	1.56	1.5	0.96154
					12/31/2001	0.2	0.48	2.4	12/31/2001	3.42	1.12	0.32749	12/31/2001	3.35	1.5	0.44776
					12/31/2002	0.6	0.48	0.8	12/31/2002	2.26	1.16	0.51327	12/31/2002	-13.16	1.07	-0.08131
					12/31/2003	0.89	0.49	0.55056	12/31/2003	1.97	1.2	0.60914	12/31/2003	1.46	0.4	0.27397
					12/31/2004	0.72	0.515	0.71528	12/31/2004	1.76	1.24	0.70455	12/31/2004	-2.48	0.4	-0.16129
					12/30/2005	0.92	0.545	0.59239	12/30/2005	1	1.28	1.28	12/30/2005	0.75	0.4	0.53333
					12/29/2006	1.46	0.57	0.39041	12/29/2006	2.42	1.32	0.54545	12/29/2006	1.33	0.6	0.45113
					12/31/2007	0.72	0.595	0.82639	12/31/2007	2.64	1.37	0.51894	12/31/2007	1.17	0.68	0.5812
					12/31/2008	1.36	0.69	0.50735	12/31/2008	2.75	1.4	0.50909	12/31/2008	1.3	0.73	0.56154
					12/31/2009	1.58	0.81	0.51266	12/31/2009	2.11	1.42	0.67299	12/31/2009	1.01	0.76	0.75248
					12/31/2010	1.65	1	0.60606	12/31/2010	1.76	1.44	0.81818	12/31/2010	1.07	0.78	0.72897
					12/30/2011	1.72	1.1	0.63953	12/30/2011	1.24	1.46	1.17742	12/30/2011	3.17	0.79	0.24921
					12/31/2012	1.32	1.16	0.87879	12/31/2012	1.85	1.48	0.8	12/31/2012	0.97	0.81	0.83505
					12/31/2013	1.85	1.22	0.65946	12/31/2013	2.59	1.52	0.58687	12/31/2013	0.72	0.83	1.15278
					12/31/2014	3.1	1.27	0.40968	12/31/2014	2.93	1.56	0.53242	12/31/2014	1.42	0.95	0.66901
					12/31/2015	1.97	1.32	0.67005	12/31/2015	-0.71	1.62	-2.28169	12/31/2015	-1.61	0.99	-0.61491
					12/30/2016	2.15	1.37	0.63721	12/30/2016	1.37	1.68	1.22628	12/30/2016	1	1.03	1.03
					12/29/2017	1.79	1.43	0.79888	12/29/2017	3.21	1.81	0.56386	12/29/2017	4.13	1.3475	0.32627
					12/31/2018	2.07	1.49	0.71981	12/31/2018	4.66	1.93	0.41416	12/31/2018	0.74	1.12	1.51351
		N	ledian	0.90833		Ν	Median	0.71676			Median	0.65337		1	Median	0.66901

CMS US Equity ED US Equity								D US Equity				DTE US Equ	itv		
	RAIL 12 EQ	Y DPS	Payout %		, TRAIL 12 E	QY DPS			TRAIL 12	EQY DPS			TRAIL 12 E	QY DPS	Payout %
12/31/1990	-6.07	0.42	-0.06919	12/31/1990	2.32	1.82	0.78448	12/31/1990	1.46	1.1167	0.76486	12/31/1990	3.26	1.78	0.54601
12/31/1991	-3.44	0.48	-0.13953	12/31/1991	2.32	1.86	0.80172	12/31/1991	1.47	1.1567	0.78687	12/31/1991	3.64	1.88	0.51648
12/31/1992	-3.72	0.48	-0.12903	12/31/1992	2.46	1.9	0.77236	12/31/1992	1.38	1.2	0.86957	12/31/1992	3.79	1.98	0.52243
12/31/1993	1.9	0.6	0.31579	12/31/1993	2.66	1.94	0.72932	12/31/1993	1.56	1.24	0.79487	12/31/1993	3.34	2.06	0.61677
12/30/1994	2.09	0.78	0.37321	12/30/1994	2.98	2	0.67114	12/30/1994	1.405	1.275	0.90747	12/30/1994	2.67	2.06	0.77154
12/29/1995	2.26	0.9	0.39823	12/29/1995	2.93	2.04	0.69625	12/29/1995	1.225	1.29	1.05306	12/29/1995	2.8	2.06	0.73571
12/31/1996	2.44	1.02	0.41803	12/31/1996	2.93	2.08	0.7099	12/31/1996	1.325	1.29	0.97358	12/31/1996	2.13	2.06	0.96714
12/31/1997	2.37	1.14	0.48101	12/31/1997	2.954	2.1	0.7109	12/31/1997	1.075	1.29	1.2	12/31/1997	2.88	2.06	0.71528
12/31/1998	2.62	1.26	0.48092	12/31/1998	3.042	2.12	0.69691	12/31/1998	1.375	1.29	0.93818	12/31/1998	3.05	2.06	0.67541
12/31/1999	2.17	1.39	0.64055	12/31/1999	3.13	2.14	0.68371	12/31/1999	0.74	1.29	1.74324	12/31/1999	3.33	2.06	0.61862
12/29/2000	0.38	1.46		12/29/2000	2.74	2.18		12/29/2000	0.925	1.29	1.39459	12/29/2000	3.27	2.06	0.62997
12/31/2001	-3.42	1.46	-0.4269	12/31/2001	3.21	2.2	0.68536	12/31/2001	1.075	1.29	1.2	12/31/2001	2.16	2.06	0.9537
12/31/2002	-4.68	1.09	-0.23291	12/31/2002	3.02	2.22	0.7351	12/31/2002	2.41	1.29	0.53527	12/31/2002	3.83	2.06	0.53786
12/31/2003	-0.3 #N			12/31/2003	2.38	2.24	0.94118	12/31/2003	0.5	1.29	2.58	12/31/2003	3.09	2.06	0.66667
12/31/2004	0.64 #N	/A N/A		12/31/2004	2.27	2.26	0.99559	12/31/2004	1.89	1.3	0.68783	12/31/2004	2.49	2.06	0.82731
12/30/2005	-0.44	0		12/30/2005	2.94	2.28		12/30/2005	1.5	1.34	0.89333	12/30/2005	3.05	2.06	0.67541
12/29/2006	-0.41	0	0	12/29/2006	2.95	2.3	0.77966	12/29/2006	1.96	1.38	0.70408	12/29/2006	2.43	2.075	0.85391
12/31/2007	-1.02	0.2	-0.19608	12/31/2007	3.47	2.32		12/31/2007	3.88	1.46	0.37629	12/31/2007	5.7	2.12	0.37193
12/31/2008	1.2	0.36		12/31/2008	4.37	2.34		12/31/2008	3.16	1.58	0.5	12/31/2008	3.36	2.12	0.63095
12/31/2009	0.91	1	1.0989	12/31/2009	3.14	2.36	0.75159	12/31/2009	2.17	1.75	0.80645	12/31/2009	3.24	2.12	0.65432
12/31/2010	1.28	0.66	0.51563	12/31/2010	3.47	2.38	0.68588	12/31/2010	4.76	1.83	0.38445	12/31/2010	3.74	2.18	0.58289
12/30/2011	1.58	0.84	0.53165	12/30/2011	3.57	2.4	0.67227	12/30/2011	2.45	1.97	0.80408	12/30/2011	4.18	2.32	0.55502
12/31/2012	1.42	0.96		12/31/2012	3.86	2.42	0.62694	12/31/2012	0.53	2.11	3.98113	12/31/2012	3.55	2.42	0.68169
12/31/2013	1.66	1.02		12/31/2013	3.61	2.46	0.68144	12/31/2013	2.93	2.25	0.76792	12/31/2013	3.76	2.59	0.68883
12/31/2014	1.74	1.08	0.62069	12/31/2014	3.71	2.52	0.67925	12/31/2014	2.24	2.4	1.07143	12/31/2014	5.1	2.69	0.52745
12/31/2015	1.89	1.16	0.61376	12/31/2015	4.05	2.6	0.64198	12/31/2015	3.2	2.59	0.80938	12/31/2015	4.05	2.84	0.70123
12/30/2016	1.98	1.24	0.62626	12/30/2016	4.12	2.68	0.65049	12/30/2016	3.44	2.8	0.81395	12/30/2016	4.83	3.06	0.63354
12/29/2017	1.64	1.33	0.81098	12/29/2017	4.94	2.76	0.5587	12/29/2017	4.72	3.035	0.64301	12/29/2017	6.32	3.36	0.53165
12/31/2018	2.32	1.43	0.61638	12/31/2018	4.42	2.86	0.64706	12/31/2018	3.74	3.34	0.89305	12/31/2018	6.17	3.6	0.58347
	Me	dian	0.48092		М	edian	0.69625			Median	0.81395		М	edian	0.63354

DUK US Eq	uity			EIX US Equi	ty			EE US Equit	ty			ETR US Equ	lity		
Date	TRAIL_12 E	QY_DPS	Payout %			EQY_DPS				EQY_DPS	Payout %	Date	TRAIL_12 E	QY_DPS	Payout %
12/31/1990	3.6	2.4	0.66667	12/31/1990	1.8	1.31	0.72778	12/31/1996	0.523	0		12/31/1990	2.44	1.05	0.43033
12/31/1991	3.9	2.52	0.64615	12/31/1991	1.605	1.35	0.84112	12/31/1997	0.639	0		12/31/1991	2.64	1.25	0.47348
12/31/1992	3.315	2.64	0.79638	12/31/1992	1.66	1.39	0.83735	12/31/1998	0.754	0		12/31/1992	2.48	1.45	0.58468
12/31/1993	4.2	2.76	0.65714	12/31/1993	1.43	1.415	0.98951	12/31/1999	0.473	0		12/31/1993	3.16	1.65	0.52215
12/30/1994		2.88	0.66667	12/30/1994	1.52	1.105		12/29/2000	1.06	0		12/30/1994	1.49	1.8	1.20805
12/29/1995	4.875	3	0.61538	12/29/1995	1.66	0.75	0.45181	12/31/2001	1.23	0		12/29/1995	2.28	1.8	0.78947
12/31/1996		3.12	0.73498	12/31/1996	1.63	1.25		12/31/2002	0.57	0		12/31/1996	1.83	1.8	0.98361
12/31/1997		3.24		12/31/1997	1.73	1		12/31/2003	1.23	0		12/31/1997	1.03	1.8	1.74757
12/31/1998		3.3	0.64706	12/31/1998	1.84	1.04	0.56522	12/31/2004	0.73	0		12/31/1998	2.997	1.5	0.5005
12/31/1999		3.3		12/31/1999	1.79	1.08		12/30/2005		#N/A N/A		12/31/1999	2.25	1.2	0.53333
12/29/2000		3.3	0.46218	12/29/2000	-5.84	0.84	-0.14384	12/29/2006	1.4	0		12/29/2000	2.97	1.215	0.40909
12/31/2001	7.32	3.3	0.45082	12/31/2001	3.17	#N/A N/A		12/31/2007	1.63	0		12/31/2001	3.23	1.275	0.39474
12/31/2002	3.66	3.3	0.90164	12/31/2002	3.28	0	0	12/31/2008	1.73	0		12/31/2002	2.64	1.34	0.50758
12/31/2003	-4.44	3.3	-0.74324	12/31/2003	2.5	0.2	0.08	12/31/2009	1.5	0		12/31/2003	4.01	1.6	0.399
12/31/2004	4.62	3.3		12/31/2004	2.77	0.85	0.30686	12/31/2010	2.31	0		12/31/2004	3.93	1.89	0.48092
12/30/2005		3.51	0.62234	12/30/2005	3.43	1.02	0.29738	12/30/2011	2.48	0.66	0.26613	12/30/2005	4.19	2.16	0.51551
12/29/2006		3.78		12/29/2006	3.61	1.1		12/31/2012	2.26	0.97	0.4292		5.36	2.16	0.40299
12/31/2007		2.58		12/31/2007	3.31	1.175		12/31/2013	2.2	1.045		12/31/2007	5.6	2.58	0.46071
12/31/2008		2.7		12/31/2008	3.73	1.225		12/31/2014	2.27	1.105		12/31/2008	6.0721	3	0.49406
12/31/2009		2.82		12/31/2009	2.58	1.245		12/31/2015	2.03	1.165		12/31/2009	6.3	3	0.47619
12/31/2010		2.91		12/31/2010	3.8176	1.265		12/30/2016	2.39	1.225		12/31/2010	6.66	3.24	0.48649
12/30/2011	3.84	2.97		12/30/2011	-0.11	1.285		12/29/2017	2.42	1.315		12/30/2011	7.55	3.32	0.43974
12/31/2012		3.03		12/31/2012	-0.56	1.3125		12/31/2018	2.07	1.415	0.68357		4.76	3.32	0.69748
12/31/2013		3.09		12/31/2013	2.78	1.3675	0.49191					12/31/2013	3.99	3.32	0.83208
12/31/2014		3.15	1.18421	12/31/2014	4.89	1.4825	0.30317					12/31/2014	5.22	3.32	0.63602
12/31/2015		3.24		12/31/2015	3.1	1.7325	0.55887					12/31/2015	-0.99	3.34	-3.37374
12/30/2016		3.36	1.08039		3.97	1.9825	0.49937					12/30/2016	-3.26	3.42	-1.04908
12/29/2017		3.49		12/29/2017	1.72	2.2325	1.29797					12/29/2017	2.28	3.44	1.50877
12/31/2018	3.76	3.64	0.96809	12/31/2018	-1.3	2.4275	-1.86731					12/31/2018	4.63	3.58	0.77322
	M	edian	0.77344			Median	0.46718			Median	0.49967		Ν	ledian	0.5005

EVRG US Equity		ES US Equ	ity			EXC US Equ	uity			FE US Equit	v		
Date	TRAIL_12 EQY_D	PS Payout % Date	TRAIL_12	EQY_DPS	Payout %	Date	TRAIL_12	EQY_DPS	Payout %	Date	TRAIL_12 E	EQY_DPS	Payout %
12/31/2018						12/31/1999	-3.4	0.9	-0.26471	12/31/1995		≠N/A N/A	
		12/31/199	2.12	1.76	0.83019	12/29/2000	1.435	0.455	0.31707	12/31/1996	2.1 #	#N/A N/A	
		12/31/199	2 2.02	1.76	0.87129	12/31/2001	2.215	0.634	0.28623	12/31/1997	1.94	1.5	0.7732
		12/31/199	3 2.02	1.76	0.87129	12/31/2002	2.22	0.88	0.3964	12/31/1998	1.82	1.5	0.82418
		12/30/199	4 2.3	1.76	0.76522	12/31/2003	1.375	0.96	0.69818	12/31/1999	2.5	1.5	0.6
		12/29/199	5 2.24	1.76	0.78571	12/31/2004	2.78	1.26	0.45324	12/29/2000	2.69	1.5	0.55762
		12/31/199	6 0.01	1.38		12/30/2005	1.36	1.6		12/31/2001	2.81	1.5	0.53381
		12/31/199	7 -1.01	0.25		12/29/2006	2.35	1.6		12/31/2002	2.14	1.5	0.70093
		12/31/199		0		12/31/2007	4.05	1.76		12/31/2003	1.39	1.5	1.07914
		12/31/199		0.1	0.38462	12/31/2008	4.13	2.03		12/31/2004	2.67	1.9125	0.71629
		12/29/200		#N/A N/A		12/31/2009	4.09	2.1		12/30/2005	2.61	1.705	0.65326
		12/31/200		0.45		12/31/2010	3.87	2.1		12/29/2006	3.81	1.85	0.48556
		12/31/200		0.525		12/30/2011	3.75	2.1		12/31/2007	4.22	2.05	0.48578
		12/31/2003		0.575		12/31/2012	1.42	2.1	1.47887		4.38	2.2	0.50228
		12/31/2004		0.625		12/31/2013	2	1.46		12/31/2009	3.29	2.2	0.66869
		12/30/200		0.675		12/31/2014	1.88	1.24	0.65957		2.42	2.2	0.90909
		12/29/200		0.725		12/31/2015	2.54	1.24		12/30/2011	2.21	2.2	0.99548
		12/31/200		0.775		12/30/2016	1.21	1.264		12/31/2012	1.84	2.2	1.19565
		12/31/200		0.825		12/29/2017	3.99	1.31		12/31/2013	0.94	1.65	1.75532
		12/31/200		0.95	0.49738	12/31/2018	2.07	1.38	0.66667	12/31/2014	0.71	1.44	2.02817
		12/31/201		1.025	0.46804					12/31/2015	1.37	1.44	1.05109
		12/30/201		1.1	0.4955					12/30/2016	-14.49	1.44	-0.09938
		12/31/2012		1.32	0.69841					12/29/2017	-3.88	1.44	-0.37113
		12/31/201		1.47	0.59036					12/31/2018	1.99	1.46	0.73367
		12/31/201		1.57	0.60853								
		12/31/201		1.67	0.60507								
		12/30/201		1.78	0.60135								
		12/29/201		1.9	0.61093								
		12/31/201	3 3.25	2.02	0.62154								
	Median	0.694		Median	0.60321			Median	0.52804		n	Median	0.70861

HE US Equity				IDA US Equi								NEE US Equity				
Date	TRAIL_12 E	QY_DPS	Payout %	Date	TRAIL_12	EQY_DPS	Payout %	Date	TRAIL_12	EQY_DPS	Payout %	Date	TRAIL_12 E	QY_DPS	Payout %	
12/31/1990	1.085	1.085	1	12/31/1990	1.91	1.86	0.97382	12/31/1990	0.9067	0.7644	0.84306	12/31/1990	-1.43	1.17	-0.81818	
12/31/1991	1.2	1.105	0.92083	12/31/1991	1.56	1.86	1.19231	12/31/1991	1.0133	0.7763	0.76611	12/31/1991	0.74	1.195	1.61486	
12/31/1992	-0.24	1.125	-4.6875	12/31/1992	1.55	1.86	1.2	12/31/1992	0.9689	0.7956	0.82114	12/31/1992	1.325	1.215	0.91698	
12/31/1993	0.94	1.145	1.21809	12/31/1993	2.14	1.86	0.86916	12/31/1993	1.0044	0.8178	0.81422	12/31/1993	1.15	1.235	1.07391	
12/30/1994	1.3	1.165	0.89615	12/30/1994	1.8	1.86	1.03333	12/30/1994	1.0178	0.8311	0.81657	12/30/1994	1.455	0.94	0.64605	
12/29/1995	1.33	1.185	0.89098	12/29/1995	2.1	1.86	0.88571	12/29/1995	0.9911	0.84	0.84754	12/29/1995	1.58	0.88	0.55696	
12/31/1996	1.295	1.205	0.9305	12/31/1996	2.21	1.86	0.84163	12/31/1996	0.2667	0.8488	3.1826	12/31/1996	1.665	0.92	0.55255	
12/31/1997	1.3734	1.22	0.88831	12/31/1997	2.32	1.86	0.80172	12/31/1997	0.9333	0.858	0.91932	12/31/1997	1.785	0.96	0.53782	
12/31/1998	1.32	1.24	0.93939	12/31/1998	2.2205	1.86	0.83765	12/31/1998	0.92	0.8667	0.94207	12/31/1998	1.925	1	0.51948	
12/31/1999	1.5	1.24	0.82667	12/31/1999	2.43	1.86	0.76543	12/31/1999	0.9867	0.872	0.88375	12/31/1999	2.035	1.04	0.51106	
12/29/2000	0.7	1.24	1.77143	12/29/2000	3.72	1.86	0.5	12/29/2000	1.1133	0.8787	0.78928	12/29/2000	2.07	1.08	0.52174	
12/31/2001	1.235	1.24	1.00405	12/31/2001	3.35	1.86	0.55522	12/31/2001	1.08	0.8853	0.81972	12/31/2001	2.31	1.12	0.48485	
12/31/2002	1.62	1.24	0.76543	12/31/2002	1.63	1.86	1.1411	12/31/2002	1.1267	0.8933	0.79285	12/31/2002	1.365	1.16	0.84982	
12/31/2003	1.525	1.24	0.81311	12/31/2003	1.22	1.695	1.38934	12/31/2003	1.14	0.9	0.78947	12/31/2003	2.5	1.2	0.48	
12/31/2004	1.38	1.24	0.89855	12/31/2004	1.9	1.2	0.63158	12/31/2004	1.18	0.9067	0.76839	12/31/2004	2.455	1.3	0.52953	
12/30/2005	1.56	1.24	0.79487	12/30/2005	1.5	1.2	0.8	12/30/2005	1.0467	0.9133	0.87255	12/30/2005	2.34	1.42	0.60684	
12/31/2007	1.03	1.24	1.20388	12/29/2006	2.51	1.2	0.47809	12/31/2007	1.5133	0.94	0.62116	12/29/2006	3.23	1.5	0.4644	
12/31/2008	1.07	1.24	1.15888	12/31/2007	1.86	1.2	0.64516	12/31/2008	1.5867	0.9533	0.60081	12/31/2007	3.27	1.64	0.50153	
12/31/2009	0.91	1.24	1.36264	12/31/2008	2.17	1.2	0.553	12/31/2009	1.4733	0.9733	0.66063	12/31/2008	4.07	1.78	0.43735	
12/31/2010	1.21	1.24	1.02479	12/31/2009	2.64	1.2	0.45455	12/31/2010	1.6667	0.9933	0.59597	12/31/2009	3.97	1.89	0.47607	
12/30/2011	1.44	1.24	0.86111	12/31/2010	2.95	1.2	0.40678	12/30/2011	1.76	1.0133	0.57574	12/31/2010	4.74	2	0.42194	
12/31/2012	1.42	1.24	0.87324	12/30/2011	3.36	1.2	0.35714	12/31/2012	1.86	1.04	0.55914	12/30/2011	4.59	2.2	0.4793	
12/31/2013	1.62	1.24	0.76543	12/31/2012	3.46	1.37	0.39595	12/31/2013	2.16	1.07	0.49537	12/31/2012	4.56	2.4	0.52632	
12/31/2014	1.63	1.24	0.76074	12/31/2013	3.64	1.57	0.43132	12/31/2014	2.32	1.11	0.47845	12/31/2013	4.4684	2.64	0.59082	
12/31/2015	1.5	1.24	0.82667	12/31/2014	3.85	1.76	0.45714	12/31/2015	2.06	1.16	0.56311	12/31/2014	5.6	2.9	0.51786	
12/30/2016	2.29	1.24	0.54148	12/31/2015	3.87	1.92	0.49612	12/30/2016	2.18	1.21	0.55505	12/31/2015	6.06	3.08	0.50825	
12/29/2017	1.52	1.24	0.81579	12/30/2016	3.94	2.08	0.52792	12/29/2017	2.82	1.26	0.44681	12/30/2016	6.24	3.48	0.55769	
12/31/2018	1.85	1.24	0.67027	12/29/2017	4.21	2.24	0.53207	12/31/2018	2.43	1.32	0.54321	12/29/2017	11.39	3.93	0.34504	
				12/31/2018	4.49	2.4	0.53452					12/31/2018	13.88	4.44	0.31988	
	М	edian	0.88964		r	Median	0.63158			Median	0.77883		Ν	/ledian	0.51948	

NWE US Eq	uitv			OGE US Eq	uity			OTTR US E	auity			PCG US Equ	uity		
	TRAIL 12 EQ	Y DPS			TRAIL_12	OY DPS			TRAIL 12 EC		Pavout %		TRAIL 12 E	OY DPS	Payout %
12/31/2002	-30.04			12/31/1990	0.845			12/31/1990	0.995			12/31/1990	2.1		0.72381
12/31/2003	-3.44	0		12/31/1991	0.8175	0.645		12/31/1991	1.075	0.8		12/31/1991	2.24	1.64	0.73214
12/31/2004	15.29	ō		12/31/1992	0.605	0.665		12/31/1992	1.085	0.82		12/31/1992	2.58	1.76	0.68217
12/30/2005	1.65	1	0.60606	12/31/1993	0.695	0.665	0.95683	12/31/1993	1.115	0.84	0.75336	12/31/1993	2.33	1.88	0.80687
12/29/2006	1.01	1.24	1.22772	12/30/1994	0.7525	0.665	0.88372	12/30/1994	1.17	0.86	0.73504	12/30/1994	2.21	1.96	0.88688
12/31/2007	1.44	1.28	0.88889	12/29/1995	0.7625	0.665	0.87213	12/29/1995	1.19	0.88	0.7395	12/29/1995	2.99	1.96	0.65552
12/31/2008	1.77	1.32	0.74576	12/31/1996	0.8125	0.665	0.81846	12/31/1996	1.23	0.9	0.73171	12/31/1996	1.75	1.77	1.01143
12/31/2009	2.02	1.34	0.66337	12/31/1997	0.8067	0.665	0.82435	12/31/1997	1.29	0.93	0.72093	12/31/1997	1.75 #	≠N/A N/A	
12/31/2010	2.14	1.36	0.63551	12/31/1998	1.022	0.665	0.65068	12/31/1998	1.36	0.96	0.70588	12/31/1998	1.88	1.2	0.6383
12/30/2011	2.53	1.44	0.56917	12/31/1999	0.97	0.665	0.68557	12/31/1999	1.79	0.99	0.55307	12/31/1999	-0.2	1.2	-6
12/31/2012	2.66	1.48	0.55639	12/29/2000	0.945	0.665	0.7037	12/29/2000	1.59	1.02	0.64151	12/29/2000	-9.29	1.2	-0.12917
12/31/2013	2.46	1.52	0.61789	12/31/2001	0.645	0.665	1.03101	12/31/2001	1.68	1.04	0.61905	12/31/2001	3.02	0	0
12/31/2014	2.99	1.6	0.53512	12/31/2002	0.58	0.665	1.14655	12/31/2002	1.79	1.06	0.59218	12/31/2002	-2.36	0	0
12/31/2015	3.17	1.92	0.60568	12/31/2003	0.79	0.665	0.84177	12/31/2003	1.51	1.08	0.71523	12/31/2003	1.06	0	0
12/30/2016	3.39	2	0.58997	12/31/2004	0.865	0.665	0.76879	12/31/2004	1.58	1.1	0.6962	12/31/2004	10.57	0.33	0.03122
12/29/2017	3.34	2.1	0.62874	12/30/2005	1.16	0.665	0.57328	12/30/2005	2.11	1.12	0.53081	12/30/2005	2.37	1.23	0.51899
12/31/2018	3.92	2.2	0.56122	12/29/2006	1.42	0.6688	0.47099	12/29/2006	1.7	1.15	0.67647	12/29/2006	2.76	1.32	0.47826
				12/31/2007	1.32	0.6838		12/31/2007	1.78	1.17		12/31/2007	2.78	1.44	0.51799
				12/31/2008	1.245	0.6988	0.56129	12/31/2008	1.09	1.19	1.09174	12/31/2008	3.75	1.56	0.416
				12/31/2009	1.33	0.7138		12/31/2009	0.71	1.19		12/31/2009	3.2	1.68	0.525
				12/31/2010	1.495	0.7313		12/31/2010	-0.06			12/31/2010	2.82	1.82	0.64539
				12/30/2011	1.725	0.7588		12/30/2011	-0.4	1.19		12/30/2011	2.1	1.82	0.86667
				12/31/2012	1.79	0.7975		12/31/2012	-0.17	1.19		12/31/2012	1.92	1.82	0.94792
				12/31/2013	1.94	0.8513		12/31/2013	1.39	1.19		12/31/2013	1.83	1.82	0.99454
				12/31/2014	1.98	0.95		12/31/2014	1.57	1.21		12/31/2014	3.06	1.82	0.59477
				12/31/2015	1.36	1.05		12/31/2015	1.58	1.23		12/31/2015	1.79	1.82	1.01676
				12/30/2016	1.69	1.155		12/30/2016	1.61	1.25		12/30/2016	2.78	1.93	0.69424
				12/29/2017	3.1	1.27		12/29/2017	1.82	1.28		12/29/2017	3.21	1.55	0.48287
				12/31/2018	2.12	1.395	0.65802	12/31/2018	2.06	1.34	0.65049	12/31/2018	-13.25	0	0
	Mee	dian	0.60568		,	Median	0.68557		Me	edian	0.71523		n	Median	0.61653

PNW US Equity PNM US Equity								POR US Eq	uity			PPL US Equi	tu i		
	TRAIL 12 E	OY DPS	Pavout %			EQY DPS	Pavout %		TRAIL 12 E	OY DPS			TRAIL 12 E	OY DPS	Pavout %
12/31/1990		N/A N/A		12/31/1990		#N/A N/A	,	12/31/1992	2.3	0		12/31/1990	0.9875		0.75443
12/31/1991	-2.15 #	N/A N/A		12/31/1991	0.2133	#N/A N/A		12/31/1993	2.17	0	0	12/31/1991	1.0025	0.775	0.77307
12/31/1992	1.8 #	N/A N/A		12/31/1992	-1.78	#N/A N/A		12/30/1994	2.29	0	0	12/31/1992	1.01	0.8	0.79208
12/31/1993	2.17	0.2	0.09217	12/31/1993	-1.0933	#N/A N/A		12/29/1995	1.94	0	0	12/31/1993	1.035	0.825	0.7971
12/30/1994	2.3	0.825	0.3587	12/30/1994	1.18	#N/A N/A		12/31/1996	3.58	0	0	12/30/1994	0.705	0.835	1.1844
12/29/1995	2.15	0.925	0.43023	12/29/1995	1.1467	#N/A N/A		12/31/1997	2.899	1.47	0.50707	12/29/1995	1.025	0.835	0.81463
12/31/1996	2.06	1.025	0.49757	12/31/1996	1.14	0.24	0.21053	12/31/1998	3.16	1.15	0.36392	12/31/1996	1.025	0.835	0.81463
12/31/1997	2.74	1.125	0.41058	12/31/1997	1.2733	0.42	0.32985	12/31/1999	2.95	1.89	0.64068	12/31/1997	0.9	0.835	0.92778
12/31/1998	2.85	1.225	0.42982	12/31/1998	1.3	0.5133	0.39485	12/29/2000	3.25	1.89	0.58154	12/31/1998	-1.73	0.6675	-0.38584
12/31/1999	1.97	1.325	0.67259	12/31/1999	1.34	0.5333	0.39799	12/31/2001	0.748	0.935	1.25	12/31/1999	1.42	0.5	0.35211
12/29/2000	3.56	1.425	0.40028	12/29/2000	1.6867	0.5333	0.31618	12/31/2002	1.5	0.63	0.42	12/29/2000	1.72	0.53	0.30814
12/31/2001	3.68	1.525	0.4144	12/31/2001	2.5133	0.5333	0.21219	12/31/2003	1.33	0	0	12/31/2001	0.61	0.53	0.86885
12/31/2002	1.76	1.625	0.9233	12/31/2002	1.0733	0.5733	0.53415	12/31/2004	2.15	0	0	12/31/2002	0.68	0.72	1.05882
12/31/2003	2.63	1.725	0.65589	12/31/2004	1.43	0.665	0.46503	12/30/2005	1.5	3.51	2.34	12/31/2003	2.12	0.77	0.36321
12/31/2004	2.66	1.825	0.68609	12/30/2005	1	0.785	0.785	12/29/2006	1.14	0.675	0.59211	12/31/2004	1.89	0.82	0.43386
12/30/2005	1.82	1.925	1.05769	12/29/2006	1.71	0.88	0.51462	12/31/2007	2.33	0.93	0.39914	12/30/2005	1.77	0.96	0.54237
12/29/2006	3.27	2.025	0.61927		0.96	0.92	0.95833	12/31/2008	1.39	0.97	0.69784	12/29/2006	2.24	1.1	0.49107
12/31/2007	3.05	2.1		12/31/2008	-3.24	0.605		12/31/2009	1.31	1.01		12/31/2007	3.35	1.22	0.36418
12/31/2008	2.4	2.1		12/31/2009	1.36	0.5		12/31/2010	1.66	1.035		12/31/2008	2.47	1.34	0.54251
12/31/2009	0.67	2.1		12/31/2010	-0.49	0.5		12/30/2011	1.95	1.055	0.54103		1.08	1.38	1.27778
12/31/2010	3.27	2.1	0.6422		1.96	0.5	0.2551	12/31/2012	1.87	1.075	0.57487	12/31/2010	2.17	1.4	0.64516
12/30/2011	3.09	2.1	0.67961		1.31	0.58		12/31/2013	1.35	1.095	0.81111		2.7	1.4	0.51852
12/31/2012	3.45	2.12		12/31/2013	1.25	0.68		12/31/2014	2.18	1.115	0.51147		2.6	1.44	0.55385
12/31/2013	3.66	2.23	0.60929		1.45	0.74		12/31/2015	2.04	1.18	0.57843		1.76	1.47	0.83523
12/31/2014	3.58	2.2975		12/31/2015	0.2	0.8		12/30/2016	2.16	1.26	0.58333		2.61	1.49	0.57088
12/31/2015	3.92	2.41		12/30/2016	1.46	0.88		12/29/2017	2.1	1.34	0.6381		1.01	1.5	1.48515
12/30/2016	3.95	2.53	0.64051		1	0.97		12/31/2018	2.37	1.4275	0.60232	12/30/2016	2.79	1.52	0.5448
12/29/2017	4.35	2.7		12/31/2018	1.07	1.06	0.99065					12/29/2017	1.64	1.58	0.96341
12/31/2018	4.54	2.87	0.63216									12/31/2018	2.58	1.64	0.63566

Median 0.62642 Median 0.45389 Median 0.57487 Median 0.64516

PEG US Equ	iity			SRE US Equity			:	SO US Equity				VVC US Equit	y		
Date	TRAIL_12 E	QY_DPS	Payout %	Date	TRAIL_12 E	QY_DPS	Payout %	Date	TRAIL_12	EQY_DPS	Payout %	Date	TRAIL_12 E	QY_DPS	Payout %
12/31/1990	1.28	1.045	0.81641	12/31/1996	1.77 #	N/A N/A		12/31/1990	0.955	1.07	1.12042	12/31/1999	1.48	0.94	0.63514
12/31/1991	1.215	1.065	0.87654	12/31/1997	1.82	1.27	0.6978	12/31/1991	1.39	1.07	0.76978	12/29/2000	1.17	0.74	0.63248
12/31/1992	1.085	1.08	0.99539	12/31/1998	1.24	1.56	1.25806	12/31/1992	1.51	1.1	0.72848	12/31/2001	0.79	1.03	1.3038
12/31/1993	1.3	1.08	0.83077	12/31/1999	1.66	1.56	0.93976	12/31/1993	1.57	1.14	0.72611	12/31/2002	1.68	1.07	0.6369
12/30/1994	1.39	1.08	0.77698	12/29/2000	2.06	1	0.48544	12/30/1994	1.52	1.18	0.77632	12/31/2003	1.57	1.11	0.70701
12/29/1995	1.355	1.08	0.79705	12/31/2001	2.52	1	0.39683	12/29/1995	1.66	1.22	0.73494	12/31/2004	1.42	1.15	0.80986
12/31/1996	1.26	1.08	0.85714	12/31/2002	2.87	1	0.34843	12/31/1996	1.68	1.26	0.75	12/30/2005	1.8	1.19	0.66111
12/31/1997	1.205	1.08	0.89627	12/31/2003	3.03	1	0.33003	12/31/1997	1.419	1.3	0.91614	12/29/2006	1.43	1.23	0.86014
12/31/1998	1.395	1.08	0.77419	12/31/2004	3.83	1	0.2611	12/31/1998	1.402	1.34	0.95578	12/31/2007	1.87	1.27	0.67914
12/31/1999	-0.185	1.08	-5.83784	12/30/2005	3.65	1.16	0.31781	12/31/1999	1.86	1.34	0.72043	12/31/2008	1.63	1.31	0.80368
12/29/2000	1.775	1.08	0.60845	12/29/2006	5.38	1.2	0.22305	12/29/2000	2.01	1.34	0.66667	12/31/2009	1.64	1.345	0.82012
12/31/2001	1.85	1.08	0.58378	12/31/2007	4.16	1.24	0.29808	12/31/2001	1.82	1.34	0.73626	12/31/2010	1.64	1.365	0.83232
12/31/2002	0.565	1.08	1.9115	12/31/2008	4.43	1.37	0.30926	12/31/2002	1.85	1.355	0.73243	12/30/2011	1.73	1.385	0.80058
12/31/2003	2.535	1.08	0.42604	12/31/2009	4.52	1.56	0.34513	12/31/2003	2.02	1.385	0.68564	12/31/2012	1.94	1.405	0.72423
12/31/2004	1.525	1.1	0.72131	12/31/2010	2.98	1.56	0.52349	12/31/2004	2.06	1.415	0.68689	12/31/2013	1.66	1.425	0.85843
12/30/2005	1.355	1.12	0.82657	12/30/2011	5.51	1.92	0.34846	12/30/2005	2.13	1.475	0.69249	12/31/2014	2.02	1.46	0.72277
12/29/2006	1.465	1.14	0.77816	12/31/2012	3.48	2.4	0.68966	12/29/2006	2.1	1.535	0.73095	12/31/2015	2.39	1.54	0.64435
12/31/2007	2.62	0.585	0.22328	12/31/2013	4.01	2.52	0.62843	12/31/2007	2.28	1.595	0.69956	12/30/2016	2.55	1.62	0.63529
12/31/2008	2.34	1.29	0.55128	12/31/2014	4.63	2.64	0.57019	12/31/2008	2.25	1.6625	0.73889	12/29/2017	2.6	1.71	0.65769
12/31/2009	3.14	1.33	0.42357	12/31/2015	5.37	2.8	0.52142	12/31/2009	2.06	1.7325	0.84102				
12/31/2010	3.08	1.37	0.44481	12/30/2016	5.46	3.02	0.55311	12/31/2010	2.36	1.8025	0.76377				
12/30/2011	2.96	1.37	0.46284	12/29/2017	1.01	3.29	3.25743	12/30/2011	2.55	1.8725	0.73431				
12/31/2012	2.51	1.42	0.56574	12/31/2018	3.42	3.58	1.04678	12/31/2012	2.67	1.9425	0.72753				
12/31/2013	2.45	1.44	0.58776					12/31/2013	1.87	2.0125	1.0762				
12/31/2014	2.99	1.48	0.49498					12/31/2014	2.18	2.0825	0.95528				
12/31/2015	3.3	1.56	0.47273					12/31/2015	2.6	2.1525	0.82788				
12/30/2016	1.75	1.64	0.93714					12/30/2016	2.55	2.2225	0.87157				
12/29/2017	3.1	1.72	0.55484					12/29/2017	0.84	2.3	2.7381				
12/31/2018	2.83	1.8	0.63604					12/31/2018	2.17	2.4	1.10599				
	Ν	ledian	0.63604		Ν	ledian	0.50343		r	Median	0.73889		Ν	ledian	0.72277

WEC US Equ	iitv			XEL US Equ	itv			ATO US Equity	,			CPK US Equity			
	TRAIL 12 E	EQY DPS			TRAIL 12 E	EQY DPS			TRAIL 12	EQY DPS			TRAIL 12	EQY DPS	Payout %
12/31/1990	0.9233	0.5783	0.62634	12/31/1990	1.415	1.1475	0.81095	12/31/1990	0.98	0.7733	0.78908	12/31/1990	0.6067	0.5678	0.93588
12/31/1991	0.9367	0.6117	0.65304	12/31/1991	1.645	1.1975	0.72796	12/31/1991	0.8	0.8	1	12/31/1991	0.4933	0.5733	1.16217
12/31/1992	0.835	0.6425	0.76946	12/31/1992	1.52	1.2475	0.82072	12/31/1992	0.9733	0.8267	0.84938	12/31/1992	0.6733	0.5733	0.85148
12/31/1993	0.9	0.6706	0.74511	12/31/1993	1.51	1.2825	0.84934	12/31/1993	1.22	0.8533	0.69943	12/31/1993	0.7333	0.5733	0.78181
12/30/1994	0.835	0.6981	0.83605	12/30/1994	1.73	1.3125	0.75867	12/30/1994	0.97	0.88	0.90722	12/30/1994	0.8	0.5867	0.73338
12/29/1995	1.065	0.7275	0.6831	12/29/1995	1.955	1.3425	0.6867	12/29/1995	1.22	0.92	0.7541	12/29/1995	1.26	0.6	0.47619
12/31/1996	0.985	0.7538	0.76528	12/31/1996	1.91	1.3725	0.71859	12/31/1996	1.42	0.96	0.67606	12/31/1996	1.1133	0.62	0.5569
12/31/1997	0.27	0.3838	1.42148	12/31/1997	1.605	1.4025	0.87383	12/31/1997	0.81	1.005	1.24074	12/31/1997	0.78	0.6467	0.8291
12/31/1998	0.825	0.7775	0.94242	12/31/1998	1.84	1.425	0.77446	12/31/1998	1.84	1.06	0.57609	12/31/1998	0.6933	0.6667	0.96163
12/31/1999	0.895	0.78	0.87151	12/31/1999	1.7	1.445	0.85	12/31/1999	0.58	1.1	1.89655	12/31/1999	1.0467	0.6867	0.65606
12/29/2000	0.635	0.685	1.07874	12/29/2000	1.54	1.482	0.96234	12/29/2000	1.14	1.14	1	12/29/2000	0.9333	0.7133	0.76428
12/31/2001	0.93	0.4	0.43011	12/31/2001	2.3	1.5	0.65217	12/31/2001	1.47	1.16	0.78912	12/31/2001	0.8267	0.73	0.88303
12/31/2002	0.72	0.4	0.55556	12/31/2002	-5.82	1.125	-0.1933	12/31/2002	1.45	1.18	0.81379	12/31/2002	0.4533	0.7333	1.61769
12/31/2003	1.03	0.4		12/31/2003	1.5	0.75	0.5	12/31/2003	1.54	1.2	0.77922	12/31/2003	1.0867	0.7333	0.6748
12/31/2004	1.285	0.415		12/31/2004	0.87	0.81	0.93103	12/31/2004	1.58	1.22	0.77215	12/31/2004	1.08	0.7467	0.69139
12/30/2005	1.305	0.44			1.23	0.8525	0.69309	12/30/2005	1.72	1.24	0.72093	12/30/2005	1.18	0.76	0.64407
12/29/2006	1.335	0.46			1.36	0.8825	0.6489	12/29/2006	1.82	1.26	0.69231	12/29/2006	1.1467	0.7733	0.67437
12/31/2007	1.415	0.5		12/31/2007	1.35	0.91	0.67407	12/31/2007	1.92	1.28	0.66667	12/31/2007	1.2933	0.7867	0.60829
12/31/2008	1.52	0.54		12/31/2008	1.46	0.94	0.64384	12/31/2008	2	1.3	0.65	12/31/2008	1.32	0.8067	0.61114
12/31/2009	1.62	0.675		12/31/2009	1.48	0.97	0.65541	12/31/2009	2.08	1.32	0.63462	12/31/2009	1.4333	0.8333	0.58139
12/31/2010	1.93	0.8		12/31/2010	1.62	1	0.61728	12/31/2010	2.2	1.34	0.60909	12/31/2010	1.82	0.87	0.47802
12/30/2011	2.24	1.04		12/30/2011	1.72	1.03	0.59884	12/30/2011	2.27	1.36	0.59912	12/30/2011	1.9133	0.91	0.47562
12/31/2012	2.35	1.2		12/31/2012	1.85	1.07	0.57838	12/31/2012	2.37	1.38	0.58228	12/31/2012	1.9933	0.96	0.48161
12/31/2013	2.51	1.445		12/31/2013	1.91	1.11	0.58115	12/31/2013	2.64	1.4	0.5303	12/31/2013	2.26	1.0133	0.44836
12/31/2014	2.59	1.56		12/31/2014	2.03	1.2	0.59113	12/31/2014	2.96	1.48	0.5	12/31/2014	2.47	1.067	0.43198
12/31/2015	2.34	1.74			1.94	1.28	0.65979	12/31/2015	3.09	1.56	0.50485	12/31/2015	2.72	1.1325	0.41636
12/30/2016	2.96	1.98		12/30/2016	2.21	1.36	0.61538	12/30/2016	3.38	1.68	0.49704	12/30/2016	2.86	1.2025	0.42045
12/29/2017	3.79	2.08			2.25	1.44	0.64	12/29/2017	3.73	1.8	0.48257	12/29/2017	3.55	1.28	0.36056
12/31/2018	3.34	2.21	0.66168	12/31/2018	2.47	1.52	0.61538	12/31/2018	5.43	1.94	0.35727	12/31/2018	3.45	1.435	0.41594
	Ν	Median	0.60232		Ν	Median	0.65979			Median	0.69231		I	Median	0.64407

NJR US Equ	iitv			NI US Equity	,			NWN US Ed	uitv			OGS US Equi	v		
Date	TRAIL_12 E	EQY DPS				EQY DPS			TRAIL_12	EQY DPS			TRAIL 12 EC	OY DPS	Pavout %
12/31/1990	0.2156			12/31/1990	0.5905			12/31/1990		1.1		12/31/2013		0	.,
12/31/1991	0.1844	0.3333	1.80748	12/31/1991	0.97	0.58	0.59794	12/31/1991	0.6733	1.1267	1.6734	12/31/2014	2.07	0.84	0.4058
12/31/1992	0.3644	0.3378	0.927	12/31/1992	1	0.62	0.62	12/31/1992	0.74	1.1467	1.54959	12/31/2015	2.24	1.2	0.53571
12/31/1993	0.3822	0.3378	0.88383	12/31/1993	1.18	0.66	0.55932	12/31/1993	1.74	1.1667	0.67052	12/30/2016	2.65	1.4	0.5283
12/30/1994	0.4289	0.3378	0.7876	12/30/1994	1.24	0.72	0.58065	12/30/1994	1.6267	1.1733	0.72128	12/29/2017	3.08	1.68	0.54545
12/29/1995	0.3133	0.3378	1.0782	12/29/1995	1.36	0.78	0.57353	12/29/1995	1.6133	1.18	0.73142	12/31/2018	3.25	1.84	0.56615
12/31/1996	0.4578	0.3444	0.75229	12/31/1996	1.44	0.84	0.58333	12/31/1996	1.94	1.2	0.61856				
12/31/1997	0.4911	0.3556	0.72409	12/31/1997	1.53	0.9	0.58824	12/31/1997	1.76	1.205	0.68466				
12/31/1998	0.5178	0.3644	0.70375	12/31/1998	1.59	0.96	0.60377	12/31/1998	1.02	1.22	1.19608				
12/31/1999	0.5533	0.3733	0.67468	12/31/1999	1.27	1.035	0.81496	12/31/1999	1.7	1.225	0.72059				
12/29/2000	0.6089	0.3822	0.62769	12/29/2000	1.11	#N/A N/A		12/29/2000	1.88	1.24	0.65957				
12/31/2001	0.6511	0.3911	0.60068	12/31/2001	1.03	1.16	1.12621	12/31/2001	1.88	1.245	0.66223				
12/31/2002	0.6967	0.4		12/31/2002	1.75	1.16	0.66286	12/31/2002	1.62	1.26	0.77778				
12/31/2003	0.7933	0.4133		12/31/2003	0.33	1.1		12/31/2003		1.27	0.72159				
12/31/2004	0.85	0.4333		12/31/2004	1.64	0.92		12/31/2004	1.86	1.299	0.69839				
12/30/2005	0.9033	0.4533	0.50183	12/30/2005	1.12	0.92	0.82143	12/30/2005	2.11	1.32	0.62559				
12/29/2006	2.6333	0.48	0.18228	12/29/2006	1.03	0.92	0.8932	12/29/2006	2.29	1.39	0.60699				
12/31/2007	0.7767	0.5067		12/31/2007	1.17	0.92		12/31/2007	2.76	1.44	0.52174				
12/31/2008	1.295	0.555		12/31/2008	0.29	0.92		12/31/2008		1.52	0.58238				
12/31/2009	0.32	0.62		12/31/2009	0.79	0.92		12/31/2009		1.6	0.56537				
12/31/2010	1.41	0.68		12/31/2010	1.01	0.92		12/31/2010		1.68	0.61538				
12/30/2011	1.22	0.72		12/30/2011	1.03	0.92		12/30/2011	2.39	1.75	0.73222				
12/31/2012	1.115	0.76		12/31/2012	1.39	0.94		12/31/2012		1.79	0.8211				
12/31/2013	1.375	0.81		12/31/2013	1.7	0.98		12/31/2013		1.83	0.81696				
12/31/2014	1.67	0.855		12/31/2014	1.67	1.02		12/31/2014		1.85	0.85648				
12/31/2015	2.1	0.915		12/31/2015	0.8959	0.83		12/31/2015		1.86	0.94898				
12/30/2016	1.52	0.975		12/30/2016	1.02	0.64		12/30/2016		1.87	0.88208				
12/29/2017	1.52	1.0375		12/29/2017	0.39	0.7		12/29/2017	-1.94	1.88	-0.96907				
12/31/2018	2.64	1.11	0.42045	12/31/2018	-0.18	0.78	-4.33333	12/31/2018	2.24	1.8925	0.84487				
	M	Median	0.64145			Median	0.66956			Median	0.72059		M	edian	0.53571

SJI US Equity				SWX US Eq	uitv			SR US Equity				UGI US Equity			
Date	TRAIL 12 E	QY DPS F	Pavout %		TRAIL 12 E	QY DPS	Pavout %		TRAIL 12 B	EQY DPS			TRAIL 12 I	EQY DPS	Pavout %
12/31/1990	0.3333	0.3505	1.051605161	12/31/1992	0.81	0.7	0.8642	12/31/1990	1.185	1.18	0.99578	12/31/1992	0.2444	0.2822	1.15466
12/31/1991	0.3186	0.3529	1.107658506	12/31/1993	0.71	0.74	1.04225	12/31/1991	1.28	1.2	0.9375	12/31/1993	0.2089	0.2933	1.40402
12/31/1992	0.3946	0.3529	0.894323365	12/30/1994	1.22	0.8	0.65574	12/31/1992	1.165	1.2	1.03004	12/30/1994	0.3111	0.3022	0.97139
12/31/1993	0.3975	0.3582	0.901132075	12/29/1995	-0.66	0.82	-1.24242	12/31/1993	1.61	1.215	0.75466	12/29/1995	-0.0578	0.2322	-4.0173
12/30/1994	0.3025	0.36	1.190082645	12/31/1996	0.25	0.82	3.28	12/30/1994	1.42	1.22	0.85915	12/31/1996	0.2644	0.3133	1.18495
12/29/1995	0.4125	0.36	0.872727273	12/31/1998	1.65	0.82	0.49697	12/29/1995	1.27	1.24	0.97638	12/31/1997	0.3489	0.3178	0.91086
12/31/1996	0.7105	0.36	0.506685433	12/31/1999	1.27	0.82	0.64567	12/31/1996	1.87	1.26	0.6738	12/31/1998	0.2711	0.3222	1.18849
12/31/1997	0.367	0.36	0.980926431	12/29/2000	1.21	0.82	0.67769	12/31/1997	1.84	1.3	0.70652	12/31/1999	0.3867	0.3267	0.84484
12/31/1998	0.255	0.36	1.411764706	12/31/2001	1.15	0.82	0.71304	12/31/1998	1.58	1.32	0.83544	12/29/2000	0.3644	0.3389	0.93002
12/31/1999	0.4975	0.36	0.72361809	12/31/2002	1.32	0.82	0.62121	12/31/1999	1.43	1.34	0.93706	12/31/2001	0.4578	0.35	0.76453
12/29/2000	0.53	0.365	0.688679245	12/31/2003	1.13	0.82	0.72566	12/29/2000	1.37	1.34	0.9781	12/31/2004	0.7667	0.39	0.50867
12/31/2001	0.565	0.37	0.654867257	12/31/2004	1.6	0.82	0.5125	12/31/2001	1.61	1.34	0.8323	12/30/2005	1.18	0.4333	0.3672
12/31/2002	0.5975	0.375	0.627615063	12/30/2005	1.14	0.82	0.7193	12/31/2002	1.18	1.34	1.13559	12/29/2006	1.1	0.46	0.41818
12/31/2003	0.66	0.39	0.590909091	12/29/2006	2.05	0.82	0.4	12/31/2003	1.82	1.34	0.73626	12/31/2007	1.26	0.482	0.38254
12/31/2004	0.765	0.41	0.535947712	12/31/2007	1.95	0.86	0.44103	12/31/2004	1.82	1.355	0.74451	12/31/2008	1.3267	0.5033	0.37936
12/30/2005	0.69	0.43	0.623188406	12/31/2008	1.39	0.9	0.64748	12/30/2005	1.9	1.375	0.72368	12/31/2009	1.5733	0.5233	0.33261
12/29/2006	1.22	0.46	0.37704918	12/31/2009	1.94	0.95	0.48969	12/29/2006	2.3	1.41	0.61304	12/31/2010	1.5733	0.6	0.38136
12/31/2007	1.05	0.505	0.480952381		2.27	1	0.44053	12/31/2007	2.31	1.46	0.63203	12/30/2011	1.3733	0.68	0.49516
12/31/2008	1.29	0.555	0.430232558	12/30/2011	2.43	1.06	0.43621	12/31/2008	3.58	1.5	0.41899	12/31/2012	1.2333	0.7067	0.57302
12/31/2009	0.97	0.61	0.628865979		2.86	1.18	0.41259	12/31/2009	2.92	1.54	0.5274	12/31/2013	1.6067	0.7367	0.45852
12/31/2010	1.11	0.68	0.612612613		3.11	1.32	0.42444	12/31/2010	2.43	1.58	0.65021	12/31/2014	1.92	0.791	0.41198
12/30/2011	1.485	0.75	0.505050505		3.01	1.46	0.48505	12/30/2011	2.86	1.62	0.56643	12/31/2015	1.6	0.89	0.55625
12/31/2012	1.485	0.825	0.555555556		2.92	1.62	0.55479	12/31/2012	2.79	1.66	0.59498	12/30/2016	2.08	0.93	0.44712
12/31/2013	1.275	0.9	0.705882353		3.18	1.8	0.56604	12/31/2013	2.02	1.7	0.84158	12/29/2017	2.46	0.975	0.39634
12/31/2014	1.46	0.96	0.657534247		4.04	2.475	0.61262	12/31/2014	2.35	1.76	0.74894	12/31/2018	4.06	1.02	0.25123
12/31/2015	1.52	1.02	0.671052632	12/31/2018	3.68	2.08	0.56522	12/31/2015	3.16	1.84	0.58228				
12/30/2016	1.56	1.07	0.685897436					12/30/2016	3.24	1.96	0.60494				
12/29/2017	-0.04	1.1	-27.5					12/29/2017	3.43	2.1	0.61224				
12/31/2018	0.21	1.13	5.380952381					12/31/2018	4.33	2.25	0.51963				
	N	ledian	0.657534247		N	<i>A</i> edian	0.56563		N	Median	0.73626		I	Median	0.49516

# Long-Term GDP Growth Rate

		30-Day	30-Day	
		Average of	Average of	
		10-Year	30-Year	Implied 20-Year
		Treasury	Treasury	Forward Rate in 10
	_	Yield	Yield	Years
TIPS	[1]	0.07%	0.46%	0.66%
Nominal Treasury	[1]	1.80%	2.25%	2.48%
Implied Forward				1.82%
Real GDP	[2]			3.21%
Implied Expected Nominal GDP				5.09%

Sources:

[1] Bureau of Economic Analysis[2] Board of Governors of the Federal Reserve System Data as of January 30, 2020

Company Name	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	\$3.78	\$4.14	\$4.26	\$4.34	\$4.65	\$4.96	\$5.27	\$5.58	\$5.89	\$6.19	\$6.50	\$6.83
Alliant Energy Corporation	\$2.41	\$2.55	\$2.71	\$2.86	\$3.02	\$3.18	\$3.35	\$3.52	\$3.71	\$3.89	\$4.09	\$4.30
Ameren Corporation	\$3.46	\$3.81	\$4.00	\$4.24	\$4.49	\$4.75	\$5.01	\$5.29	\$5.56	\$5.85	\$6.14	\$6.46
American Electric Power Company, Inc.	\$4.40	\$4.68	\$5.02	\$5.45	\$5.75	\$6.07	\$6.40	\$6.73	\$7.08	\$7.45	\$7.82	\$8.22
Avangrid, Inc.	\$2.45	\$2.66	\$2.90	\$3.09	\$3.29	\$3.50	\$3.71	\$3.92	\$4.13	\$4.34	\$4.56	\$4.80
Avista Corporation	\$2.00	\$2.15	\$2.43	\$2.52	\$2.62	\$2.73	\$2.85	\$2.98	\$3.13	\$3.29	\$3.45	\$3.63
Black Hills Corporation	\$3.68	\$3.92	\$4.13	\$4.20	\$4.41	\$4.63	\$4.86	\$5.10	\$5.36	\$5.63	\$5.92	\$6.22
CenterPoint Energy, Inc.	\$1.63	\$1.71	\$1.80	\$1.78	\$1.88	\$1.99	\$2.10	\$2.21	\$2.33	\$2.45	\$2.57	\$2.70
CMS Energy Corporation	\$2.67	\$2.88	\$3.08	\$3.31	\$3.54	\$3.77	\$4.01	\$4.24	\$4.47	\$4.70	\$4.94	\$5.19
Consolidated Edison, Inc.	\$4.52	\$4.74	\$4.92	\$5.19	\$5.35	\$5.53	\$5.74	\$5.98	\$6.26	\$6.58	\$6.92	\$7.27
Dominion Energy, Inc.	\$4.38	\$4.63	\$4.87	\$5.15	\$5.37	\$5.61	\$5.87	\$6.15	\$6.45	\$6.78	\$7.12	\$7.48
DTE Energy Company	\$6.61	\$7.11	\$7.61	\$8.20	\$8.71	\$9.23	\$9.76	\$10.30	\$10.85	\$11.40	\$11.98	\$12.59
Duke Energy Corporation	\$5.15	\$5.38	\$5.71	\$5.99	\$6.24	\$6.51	\$6.81	\$7.13	\$7.48	\$7.86	\$8.26	\$8.68
Edison International	\$4.55	\$4.72	\$4.78	\$5.06	\$5.35	\$5.65	\$5.96	\$6.28	\$6.60	\$6.94	\$7.29	\$7.66
El Paso Electric Company	\$2.84	\$3.02	\$3.21	\$3.41	\$3.62	\$3.84	\$4.06	\$4.28	\$4.51	\$4.74	\$4.98	\$5.24
Entergy Corporation	\$5.60	\$5.96	\$6.34	\$6.70	\$6.78	\$6.92	\$7.11	\$7.36	\$7.68	\$8.07	\$8.48	\$8.92
Evergy, Inc.	\$3.13	\$3.28	\$3.45	\$3.62	\$3.93	\$4.23	\$4.53	\$4.83	\$5.11	\$5.37	\$5.64	\$5.93
Eversource Energy	\$3.65	\$3.86	\$4.12	\$4.40	\$4.85	\$5.14	\$5.43	\$5.73	\$6.03	\$6.34	\$6.66	\$7.00
Exelon Corporation	\$3.07	\$3.04	\$3.12	\$3.28	\$3.59	\$3.90	\$4.07	\$4.25	\$4.45	\$4.68	\$4.92	\$5.17
FirstEnergy Corp.	\$2.49	\$2.64	\$2.79	\$2.96	\$3.14	\$3.33	\$3.52	\$3.72	\$3.92	\$4.11	\$4.32	\$4.54
Hawaiian Electric Industries, Inc.	\$2.01	\$2.16	\$2.25	\$2.35	\$2.45	\$2.56	\$2.67	\$2.80	\$2.94	\$3.09	\$3.24	\$3.41
IDACORP. Inc.	\$4.62	\$4.86	\$5.02	\$5.19	\$5.36	\$5.56	\$5.78	\$6.04	\$6.32	\$6.65	\$6.98	\$7.34
MDU Resources Group Inc.	\$1.65	\$1.82	\$1.96	\$2.11	\$2.28	\$2.44	\$2.60	\$2.76	\$2.92	\$3.07	\$3.22	\$3.39
NextEra Energy, Inc.	\$9.06	\$9.85	\$10.66	\$11.50	\$12.40	\$13.31	\$14.21	\$15.09	\$15.94	\$16.75	\$17.60	\$18.5
NiSource Inc.	\$1.38	\$1.46	\$1.55	\$1.61	\$1.72	\$1.80	\$1.88	\$1.98	\$2.07	\$2.18	\$2.29	\$2.41
NorthWestern Corporation	\$3.56	\$3.72	\$3.92	\$4.05	\$4.20	\$4.36	\$4.55	\$4.75	\$4.98	\$5.23	\$5.50	\$5.78
OGE Energy Corp.	\$2.28	\$2.40	\$2.49	\$2.52	\$2.65	\$2.79	\$2.93	\$3.08	\$3.24	\$3.40	\$3.58	\$3.76
Otter Tail Corporation	\$2.41	\$2.52	\$2.70	\$2.88	\$3.08	\$3.29	\$3.49	\$3.70	\$3.90	\$4.10	\$4.30	\$4.52
PG&E Corporation	\$4.19	\$3.41	\$4.45	\$4.72	\$5.00	\$5.29	\$5.59	\$5.89	\$6.20	\$6.52	\$6.85	\$7.20
Pinnacle West Capital Corporation	\$4.86	\$5.16	\$5.45	\$5.74	\$6.04	\$6.35	\$6.68	\$7.02	\$7.38	\$7.76	\$8.15	\$8.57
PNM Resources. Inc.	\$2.21	\$2.39	\$2.54	\$2.70	\$2.87	\$3.03	\$3.20	\$3.37	\$3.54	\$3.72	\$3.91	\$0.57
Portland General Electric Company	\$2.21 \$2.56	\$2.39 \$2.73	\$2.83	\$2.90	\$3.03	\$3.03 \$3.17	\$3.20	\$3.37	\$3.66 \$3.66	\$3.85	\$3.91 \$4.04	\$4.1
PPL Corporation	\$2.50 \$2.54	\$2.73 \$2.52	\$2.65 \$2.66	\$2.90 \$2.74	\$2.82	\$2.92	\$3.03	\$3.49 \$3.16	\$3.31	\$3.48	\$4.04 \$3.65	\$3.84
Public Service Enterprise Group Incorporated	\$3.42	\$3.49	\$3.66	\$3.85	\$4.05	\$4.26	\$4.48	\$4.72	\$4.96	\$5.21	\$5.47	\$5.75
Sempra Energy	\$3.42 \$7.12	\$3.49 \$7.89	\$3.66 \$8.46	\$3.85 \$9.60	\$4.05 \$10.39	\$4.26 \$11.17	\$4.48 \$11.95	\$4.72 \$12.71	\$4.96 \$13.43	\$5.∠⊺ \$14.12	\$5.47 \$14.84	\$5.75 \$15.5
Sempra Energy Southern Company	\$7.12 \$3.17	\$7.89 \$3.28	\$8.46 \$3.51	\$9.60 \$3.85	\$10.39	\$11.17 \$4.21	\$11.95 \$4.41	\$12.71	\$4.85	\$14.12 \$5.10	\$14.84 \$5.36	\$5.63
	\$3.17 \$2.42	\$3.28 \$2.58		\$3.85 \$2.82	\$4.02 \$2.94	\$4.21 \$3.07				\$5.10 \$3.71	\$5.36 \$3.90	ຈວ.ຍ. \$4.10
Unitil Corporation			\$2.67				\$3.21	\$3.37	\$3.53			
WEC Energy Group, Inc.	\$3.74	\$4.00	\$4.26	\$4.40	\$4.67	\$4.94	\$5.22	\$5.51	\$5.80	\$6.09	\$6.40	\$6.73
Xcel Energy Inc.	\$2.78	\$2.97	\$3.12	\$3.32	\$3.51	\$3.70	\$3.90	\$4.11	\$4.33	\$4.55	\$4.78	\$5.02

Dividend Payout Ratios Company	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	65.34%	62.56%	63.49%	64.42%	65.35%	66.28%	67.21%	68.14%	69.07%	70.00%	70.00%	70.00%
Alliant Energy Corporation	63.07%	63.14%	63.47%	64.40%	65.33%	66.27%	67.20%	68.13%	69.07%	70.00%	70.00%	70.00%
Ameren Corporation	58.38%	55.64%	55.75%	57.79%	59.82%	61.86%	63.89%	65.93%	67.96%	70.00%	70.00%	70.00%
American Electric Power Company, Inc.	64.55%	63.89%	62.75%	61.47%	61.74%	63.39%	65.04%	66.70%	68.35%	70.00%	70.00%	70.00%
Avangrid, Inc.	75.51%	71.43%	65.86%	66.45%	67.04%	67.64%	68.23%	68.82%	69.41%	70.00%	70.00%	70.00%
Avista Corporation	80.50%	78.60%	77.53%	76.45%	75.38%	74.30%	73.23%	72.15%	71.08%	70.00%	70.00%	70.00%
Black Hills Corporation	58.97%	59.18%	60.54%	61.89%	63.24%	64.59%	65.94%	67.30%	68.65%	70.00%	70.00%	70.00%
CenterPoint Energy, Inc.	76.07%	71.93%	67.78%	68.54%	68.78%	69.03%	69.27%	69.51%	69.76%	70.00%	70.00%	70.00%
CMS Energy Corporation	61.42%	60.76%	60.71%	61.03%	62.52%	64.02%	65.51%	67.01%	68.50%	70.00%	70.00%	70.00%
Consolidated Edison. Inc.	67.70%	66.88%	66.46%	64.74%	65.62%	66.49%	67.37%	68.25%	69.12%	70.00%	70.00%	70.00%
Dominion Energy, Inc.	86.30%	84.23%	81.11%	78.64%	77.20%	75.76%	74.32%	72.88%	71.44%	70.00%	70.00%	70.00%
DTE Energy Company	61.88%	61.46%	60.05%	57.93%	59.94%	61.95%	63.96%	65.98%	67.99%	70.00%	70.00%	70.00%
Duke Energy Corporation	75.92%	75.46%	71.10%	72.12%	71.77%	71.41%	71.06%	70.71%	70.35%	70.00%	70.00%	70.00%
Edison International	55.82%	55.93%	54.60%	56.80%	59.00%	61.20%	63.40%	65.60%	67.80%	70.00%	70.00%	70.00%
El Paso Electric Company	55.63%	55.93% 57.00%	54.60% 58.63%	60.25%	61.88%	63.50%	65.13%	66.75%	68.38%	70.00%	70.00%	70.00%
Entergy Corporation	55.63% 66.96%	57.00% 65.10%	58.63% 65.77%	60.25% 66.38%	66.98%	63.50% 67.58%	68.19%	68.79%	69.40%	70.00%	70.00%	70.00%
Evergy, Inc.	65.50%	65.10% 67.07%	67.83%	67.13%	67.61%	68.08%	68.56%	69.04%	69.40% 69.52%	70.00%	70.00%	70.00%
Eversource Energy	61.92%	62.18%	62.14%	62.05%	58.97%	61.18%	63.38%	65.59%	67.79%	70.00%	70.00%	70.00%
Exelon Corporation	49.51%	52.63%	53.85%	56.15%	58.46%	60.77%	63.08%	65.38%	67.69%	70.00%	70.00%	70.00%
FirstEnergy Corp.	49.51% 63.45%	52.63% 62.12%	53.85% 61.65%	62.84%	58.46% 64.03%	65.23%	66.42%	65.38% 67.61%	68.81%	70.00%	70.00%	70.00%
Hawaiian Electric Industries, Inc.	65.67%	62.12%	63.84%	62.84% 64.72%	65.60%	66.48%	67.36%	68.24%	69.12%	70.00%	70.00%	70.00%
IDACORP. Inc.	57.58%	59.47%	60.78%	62.10%	63.42%	64.73%	66.05%	67.37%	68.68%	70.00%	70.00%	70.00%
	57.58% 50.91%							67.37% 64.18%	67.09%			
MDU Resources Group Inc. NextEra Energy, Inc.	50.91% 61.92%	46.70% 63.25%	49.62% 65.95%	52.53% 66.53%	55.44% 67.11%	58.35% 67.68%	61.26% 68.26%	68.84%	67.09% 69.42%	70.00% 70.00%	70.00% 70.00%	70.00% 70.00%
NiSource Inc.	61.59% 67.42%	60.96% 66.94%	61.29% 67.32%	63.98% 67.70%	63.37% 68.08%	64.70% 68.47%	66.02% 68.85%	67.35% 69.23%	68.67% 69.62%	70.00% 70.00%	70.00% 70.00%	70.00% 70.00%
NorthWestern Corporation	67.42% 69.74%	70.00%	67.32% 71.08%	70.93%	68.08% 70.77%	70.62%	70.46%	69.23% 70.31%	69.62% 70.15%	70.00%	70.00%	
OGE Energy Corp.												70.00%
Otter Tail Corporation	61.00%	61.11%	62.22%	63.33%	64.44%	65.56%	66.67%	67.78%	68.89%	70.00%	70.00%	70.00%
PG&E Corporation	0.00%	0.00%	44.94%	48.52%	52.10%	55.68%	59.26%	62.84%	66.42%	70.00%	70.00%	70.00%
Pinnacle West Capital Corporation	65.23%	65.50%	65.50%	66.15%	66.79%	67.43%	68.07%	68.72%	69.36%	70.00%	70.00%	70.00%
PNM Resources, Inc.	55.66%	54.39%	56.34%	58.29%	60.25%	62.20%	64.15%	66.10%	68.05%	70.00%	70.00%	70.00%
Portland General Electric Company	63.28%	63.00%	64.66%	65.43%	66.19%	66.95%	67.71%	68.48%	69.24%	70.00%	70.00%	70.00%
PPL Corporation	66.54%	68.65%	68.82%	68.99%	69.16%	69.33%	69.49%	69.66%	69.83%	70.00%	70.00%	70.00%
Public Service Enterprise Group Incorporated	57.60%	59.31%	59.02%	59.46%	61.22%	62.97%	64.73%	66.49%	68.24%	70.00%	70.00%	70.00%
Sempra Energy	59.13%	57.29%	57.57%	59.34%	61.12%	62.89%	64.67%	66.45%	68.22%	70.00%	70.00%	70.00%
Southern Company	80.13%	80.18%	76.92%	75.93%	74.95%	73.96%	72.97%	71.98%	70.99%	70.00%	70.00%	70.00%
Unitil Corporation	61.98%	58.91%	57.68%	56.74%	58.95%	61.16%	63.37%	65.58%	67.79%	70.00%	70.00%	70.00%
WEC Energy Group, Inc.	66.84%	66.50%	67.61%	67.95%	68.29%	68.63%	68.97%	69.32%	69.66%	70.00%	70.00%	70.00%
Xcel Energy Inc.	61.51%	61.62%	61.86%	60.84%	62.37%	63.90%	65.42%	66.95%	68.47%	70.00%	70.00%	70.00%

Estimated Dividends to Shareholders for Infinite Period Cost of

	COSLOI											
Company	Equity	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	8.36%	-82.82	\$2.47	\$2.59	\$2.70	\$2.80	\$3.04	\$3.29	\$3.54	\$3.80	\$4.07	\$4.33
Alliant Energy Corporation	8.31%	-53.14	\$1.52	\$1.61	\$1.72	\$1.84	\$1.97	\$2.11	\$2.25	\$2.40	\$2.56	\$2.73
Ameren Corporation	8.40%	-76.03	\$2.02	\$2.12	\$2.23	\$2.45	\$2.69	\$2.94	\$3.20	\$3.48	\$3.78	\$4.09
American Electric Power Company, Inc.	8.59%	-92.40	\$2.84	\$2.99	\$3.15	\$3.35	\$3.55	\$3.85	\$4.16	\$4.49	\$4.84	\$5.21
Avangrid, Inc.	8.93%	-49.81	\$1.85	\$1.90	\$1.91	\$2.05	\$2.21	\$2.37	\$2.53	\$2.70	\$2.87	\$3.04
Avista Corporation	8.24%	-47.64	\$1.61	\$1.69	\$1.88	\$1.93	\$1.98	\$2.03	\$2.09	\$2.15	\$2.22	\$2.30
Black Hills Corporation	8.29%	-77.06	\$2.17	\$2.32	\$2.50	\$2.60	\$2.79	\$2.99	\$3.20	\$3.43	\$3.68	\$3.94
CenterPoint Energy, Inc.	9.13%	-27.24	\$1.24	\$1.23	\$1.22	\$1.22	\$1.30	\$1.37	\$1.45	\$1.54	\$1.62	\$1.71
CMS Energy Corporation	8.35%	-62.36	\$1.64	\$1.75	\$1.87	\$2.02	\$2.21	\$2.41	\$2.62	\$2.84	\$3.06	\$3.29
Consolidated Edison, Inc.	8.37%	-89.66	\$3.06	\$3.17	\$3.27	\$3.36	\$3.51	\$3.68	\$3.87	\$4.08	\$4.33	\$4.61
Dominion Energy, Inc.	8.94%	-81.70	\$3.78	\$3.90	\$3.95	\$4.05	\$4.15	\$4.25	\$4.36	\$4.48	\$4.61	\$4.74
DTE Energy Company	8.95%	-126.83	\$4.09	\$4.37	\$4.57	\$4.75	\$5.22	\$5.72	\$6.24	\$6.80	\$7.37	\$7.98
Duke Energy Corporation	8.98%	-91.74	\$3.91	\$4.06	\$4.06	\$4.32	\$4.48	\$4.65	\$4.84	\$5.04	\$5.26	\$5.50
Edison International	9.28%	-70.82	\$2.54	\$2.64	\$2.61	\$2.87	\$3.15	\$3.46	\$3.78	\$4.12	\$4.48	\$4.86
El Paso Electric Company	8.13%	-67.37	\$1.58	\$1.72	\$1.88	\$2.05	\$2.24	\$2.44	\$2.64	\$2.86	\$3.09	\$3.32
Entergy Corporation	8.17%	-117.81	\$3.75	\$3.88	\$4.17	\$4.45	\$4.54	\$4.68	\$4.85	\$5.07	\$5.33	\$5.65
Evergy, Inc.	8.76%	-63.81	\$2.05	\$2.20	\$2.34	\$2.43	\$2.65	\$2.88	\$3.11	\$3.33	\$3.55	\$3.76
Eversource Energy	8.38%	-83.19	\$2.26	\$2.40	\$2.56	\$2.73	\$2.86	\$3.14	\$3,44	\$3.76	\$4.09	\$4.44
Exelon Corporation	9.44%	-45.44	\$1.52	\$1.60	\$1.68	\$1.84	\$2.10	\$2.37	\$2.56	\$2.78	\$3.01	\$3.28
FirstEnergy Corp.	8.84%	-47.79	\$1.58	\$1.64	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.69	\$2.88
Hawaiian Electric Industries, Inc.	8.14%	-44.82	\$1.32	\$1.36	\$1.44	\$1.52	\$1.61	\$1.70	\$1.80	\$1.91	\$2.03	\$2.16
IDACORP, Inc.	7.82%	-106.96	\$2.66	\$2.89	\$3.05	\$3.22	\$3.40	\$3.60	\$3.82	\$4.07	\$4.34	\$4.65
MDU Resources Group Inc.	9.50%	-28.70	\$0.84	\$0.85	\$0.97	\$1.11	\$1.26	\$1.42	\$1.60	\$1.77	\$1.96	\$2.15
NextEra Energy, Inc.	8.21%	-233.53	\$5.61	\$6.23	\$7.03	\$7.65	\$8.32	\$9.01	\$9.70	\$10.39	\$11.07	\$11.73
NiSource Inc.	8.56%	-27.45	\$0.85	\$0.89	\$0.95	\$1.03	\$1.09	\$1.16	\$1.24	\$1.33	\$1.42	\$1.53
NorthWestern Corporation	8.34%	-72.11	\$2.40	\$2.49	\$2.64	\$2.74	\$2.86	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66
OGE Energy Corp.	8.63%	-43.23	\$1.59	\$1.68	\$1.77	\$1.79	\$1.88	\$1.97	\$2.06	\$2.17	\$2.27	\$2.38
Otter Tail Corporation	8.51%	-51.93	\$1.47	\$1.54	\$1.68	\$1.83	\$1.99	\$2.16	\$2.33	\$2.50	\$2.69	\$2.87
PG&E Corporation	24.91%	-8.59	\$0.00	\$0.00	\$2.00	\$2.29	\$2.61	\$2.95	\$3.31	\$3.70	\$4.12	\$4.56
Pinnacle West Capital Corporation	8.88%	-90.33	\$3.17	\$3.38	\$3.57	\$3.79	\$4.03	\$4.28	\$4.55	\$4.83	\$5.12	\$5.43
PNM Resources. Inc.	8.28%	-50.23	\$1.23	\$1.30	\$1.43	\$1.57	\$1.73	\$1.89	\$2.05	\$2.23	\$2.41	\$2.61
Portland General Electric Company	8.14%	-55.88	\$1.62	\$1.72	\$1.83	\$1.90	\$2.01	\$2.12	\$2.25	\$2.39	\$2.53	\$2.69
PPL Corporation	9.79%	-33.49	\$1.69	\$1.73	\$1.83	\$1.89	\$1.95	\$2.02	\$2.11	\$2.20	\$2.31	\$2.43
Public Service Enterprise Group Incorporated	8.81%	-60.63	\$1.97	\$2.07	\$2.16	\$2.29	\$2.48	\$2.68	\$2.90	\$3.13	\$3.38	\$3.65
Sempra Energy	9.15%	-146.74	\$4.21	\$4.52	\$4.87	\$5.70	\$6.35	\$7.03	\$7.73	\$8.44	\$9.17	\$9.88
Southern Company	8.84%	-61.97	\$2.54	\$2.63	\$2.70	\$2.92	\$3.02	\$3.11	\$3.22	\$3.33	\$3.44	\$3.57
Unitil Corporation	7.70%	-61.83	\$1.50	\$1.52	\$1.54	\$1.60	\$1.73	\$1.88	\$2.04	\$2.21	\$2.39	\$2.60
WEC Energy Group, Inc.	8.04%	-91.23	\$2.50	\$2.66	\$2.88	\$2.99	\$3.19	\$3.39	\$3.60	\$3.82	\$4.04	\$4.26
Xcel Energy Inc.	8.25%	-62.60	\$1.71	\$1.83	\$1.93	\$2.02	\$2.19	\$2.37	\$2.55	\$2.75	\$2.96	\$3.18
, con Enorgy mo.	0.2070	02.00	ψ	φ00	ψ	φ <u>2</u> .02	φ2.10	φ2.07	φ2.00	<i>q</i> 2.70	φ2.00	φ0.10

### Estimated Dividends to Shareholders for Infinite Period

Estimated Dividends to Shareholders for Infinite	Period														
											2028 +				
	Cost of										Terminal		Terminal		Cost of
Company	Equity	2019	2020	2021	2022	2023	2024	2025	2026	2027	Value	2028	Value	2029	Equity
ALLETE, Inc.	8.39%	-82.82	\$2.47	\$2.59	\$2.70	\$2.80	\$3.04	\$3.29	\$3.54	\$3.80	\$136.46	\$4.07	\$132.39	\$4.33	8.36%
Alliant Energy Corporation	8.33%	-53.14	\$1.52	\$1.61	\$1.72	\$1.84	\$1.97	\$2.11	\$2.25	\$2.40	\$87.33	\$2.56	\$84.77	\$2.73	8.31%
Ameren Corporation	8.42%	-76.03	\$2.02	\$2.12	\$2.23	\$2.45	\$2.69	\$2.94	\$3.20	\$3.48	\$127.52	\$3.78	\$123.74	\$4.09	8.40%
American Electric Power Company, Inc.	8.61%	-92.40	\$2.84	\$2.99	\$3.15	\$3.35	\$3.55	\$3.85	\$4.16	\$4.49	\$153.58	\$4.84	\$148.74	\$5.21	8.59%
Avangrid, Inc.	8.94%	-49.81	\$1.85	\$1.90	\$1.91	\$2.05	\$2.21	\$2.37	\$2.53	\$2.70	\$82.04	\$2.87	\$79.18	\$3.04	8.93%
Avista Corporation	8.26%	-47.64	\$1.61	\$1.69	\$1.88	\$1.93	\$1.98	\$2.03	\$2.09	\$2.15	\$75.39	\$2.22	\$73.17	\$2.30	8.24%
Black Hills Corporation	8.32%	-77.06	\$2.17	\$2.32	\$2.50	\$2.60	\$2.79	\$2.99	\$3.20	\$3.43	\$126.95	\$3.68	\$123.27	\$3.94	8.29%
CenterPoint Energy, Inc.	9.13%	-27.24	\$1.24	\$1.23	\$1.22	\$1.22	\$1.30	\$1.37	\$1.45	\$1.54	\$44.06	\$1.62	\$42.44	\$1.71	9.13%
CMS Energy Corporation	8.37%	-62.36	\$1.64	\$1.75	\$1.87	\$2.02	\$2.21	\$2.41	\$2.62	\$2.84	\$104.05	\$3.06	\$100.98	\$3.29	8.35%
Consolidated Edison, Inc.	8.39%	-89.66	\$3.06	\$3.17	\$3.27	\$3.36	\$3.51	\$3.68	\$3.87	\$4.08	\$144.92	\$4.33	\$140.59	\$4.61	8.37%
Dominion Energy, Inc.	8.95%	-81.70	\$3.78	\$3.90	\$3.95	\$4.05	\$4.15	\$4.25	\$4.36	\$4.48	\$127.84	\$4.61	\$123.23	\$4.74	8.94%
DTE Energy Company	8.96%	-126.83	\$4.09	\$4.37	\$4.57	\$4.75	\$5.22	\$5.72	\$6.24	\$6.80	\$213.96	\$7.37	\$206.58	\$7.98	8.95%
Duke Energy Corporation	8.99%	-91.74	\$3.91	\$4.06	\$4.06	\$4.32	\$4.48	\$4.65	\$4.84	\$5.04	\$146.79	\$5.26	\$141.52	\$5.50	8.98%
Edison International	9.28%	-70.82	\$2.54	\$2.64	\$2.61	\$2.87	\$3.15	\$3.46	\$3.78	\$4.12	\$120.44	\$4.48	\$115.96	\$4.86	9.28%
El Paso Electric Company	8.17%	-67.37	\$1.58	\$1.72	\$1.88	\$2.05	\$2.24	\$2.44	\$2.64	\$2.86	\$112.24	\$3.09	\$109.16	\$3.32	8.13%
Entergy Corporation	8.20%	-117.81	\$3.75	\$3.88	\$4.17	\$4.45	\$4.54	\$4.68	\$4.85	\$5.07	\$189.06	\$5.33	\$183.73	\$5.65	8.17%
Evergy, Inc.	8.78%	-63.81	\$2.05	\$2.20	\$2.34	\$2.43	\$2.65	\$2.88	\$3.11	\$3.33	\$105.76	\$3.55	\$102.21	\$3.76	8.76%
Eversource Energy	8.40%	-83.19	\$2.26	\$2.40	\$2.56	\$2.73	\$2.86	\$3.14	\$3.44	\$3.76	\$139.08	\$4.09	\$134.99	\$4.44	8.38%
Exelon Corporation	9.45%	-45.44	\$1.52	\$1.60	\$1.68	\$1.84	\$2.10	\$2.37	\$2.56	\$2.78	\$78.24	\$3.01	\$75.23	\$3.28	9.44%
FirstEnergy Corp.	8.85%	-47.79	\$1.58	\$1.64	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$79.57	\$2.69	\$76.88	\$2.88	8.84%
Hawaiian Electric Industries, Inc.	8.17%	-44.82	\$1.32	\$1.36	\$1.44	\$1.52	\$1.61	\$1.70	\$1.80	\$1.91	\$72.98	\$2.03	\$70.95	\$2.16	8.14%
IDACORP, Inc.	7.89%	-106.96	\$2.66	\$2.89	\$3.05	\$3.22	\$3.40	\$3.60	\$3.82	\$4.07	\$174.54	\$4.34	\$170.20	\$4.65	7.82%
MDU Resources Group Inc.	9.50%	-28.70	\$0.84	\$0.85	\$0.97	\$1.11	\$1.26	\$1.42	\$1.60	\$1.77	\$50.67	\$1.96	\$48.71	\$2.15	9.50%
NextEra Energy, Inc.	8.24%	-233.53	\$5.61	\$6.23	\$7.03	\$7.65	\$8.32	\$9.01	\$9.70	\$10.39	\$386.78	\$11.07	\$375.71	\$11.73	8.21%
NiSource Inc.	8.58%	-27.45	\$0.85	\$0.89	\$0.95	\$1.03	\$1.09	\$1.16	\$1.24	\$1.33	\$45.33	\$1.42	\$43.91	\$1.53	8.56%
NorthWestern Corporation	8.36%	-72.11	\$2.40	\$2.49	\$2.64	\$2.74	\$2.86	\$2.99	\$3.13	\$3.29	\$116.28	\$3.47	\$112.81	\$3.66	8.34%
OGE Energy Corp.	8.64%	-43.23	\$1.59	\$1.68	\$1.77	\$1.79	\$1.88	\$1.97	\$2.06	\$2.17	\$69.54	\$2.27	\$67.27	\$2.38	8.63%
Otter Tail Corporation	8.53%	-51.93	\$1.47	\$1.54	\$1.68	\$1.83	\$1.99	\$2.16	\$2.33	\$2.50	\$86.46	\$2.69	\$83.77	\$2.87	8.51%
PG&E Corporation	24.91%	-8.59	\$0.00	\$0.00	\$2.00	\$2.29	\$2.61	\$2.95	\$3.31	\$3.70	\$27.15	\$4.12	\$23.03	\$4.56	24.91%
Pinnacle West Capital Corporation	8.89%	-90.33	\$3.17	\$3.38	\$3.57	\$3.79	\$4.03	\$4.28	\$4.55	\$4.83	\$148.40	\$5.12	\$143.28	\$5.43	8.88%
PNM Resources, Inc.	8.31%	-50.23	\$1.23	\$1.30	\$1.43	\$1.57	\$1.73	\$1.89	\$2.05	\$2.23	\$84.16	\$2.41	\$81.74	\$2.61	8.28%
Portland General Electric Company	8.17%	-55.88	\$1.62	\$1.72	\$1.83	\$1.90	\$2.01	\$2.12	\$2.25	\$2.39	\$90.91	\$2.53	\$88.38	\$2.69	8.14%
PPL Corporation	9.79%	-33.49	\$1.69	\$1.73	\$1.83	\$1.89	\$1.95	\$2.02	\$2.11	\$2.20	\$54.05	\$2.31	\$51.74	\$2.43	9.79%
Public Service Enterprise Group Incorporated	8.82%	-60.63	\$1.97	\$2.07	\$2.16	\$2.29	\$2.48	\$2.68	\$2.90	\$3.13	\$101.30	\$3.38	\$97.92	\$3.65	8.81%
Sempra Energy	9.16%	-146.74	\$4.21	\$4.52	\$4.87	\$5.70	\$6.35	\$7.03	\$7.73	\$8.44	\$252.42	\$9.17	\$243.25	\$9.88	9.15%
Southern Company	8.85%	-61.97	\$2.54	\$2.63	\$2.70	\$2.92	\$3.02	\$3.11	\$3.22	\$3.33	\$98.55	\$3.44	\$95.10	\$3.57	8.84%
Unitil Corporation	7.78%	-61.83	\$1.50	\$1.52	\$1.54	\$1.60	\$1.73	\$1.88	\$2.04	\$2.21	\$101.89	\$2.39	\$99.50	\$2.60	7.70%
WEC Energy Group, Inc.	8.08%	-91.23	\$2.50	\$2.66	\$2.88	\$2.99	\$3.19	\$3.39	\$3.60	\$3.82	\$148.47	\$4.04	\$144.43	\$4.26	8.04%
Xcel Energy Inc.	8.28%	-62.60	\$1.71	\$1.83	\$1.93	\$2.02	\$2.19	\$2.37	\$2.55	\$2.75	\$103.57	\$2.96	\$100.61	\$3.18	8.25%
Average	9.03%	-													
Average Regulated EEI	9.08%														
Average w/o EIX, EE, SE, PPL, PCG	8.55%														
je Regulated EEI w/o EIX, EE, SE, PPL, PCG	8.43%														
Average Mostly Pure Play	8.33%														
Average Pure Play	8.41%														
Average Pure Play VI Elec	8.41%														
Combined 2012-2014	8.41% 8.45%														
	8.45% 8.53%														
Companies from 2014 Rate Case	0.03%														

Source: Schedule DM-D-6

	Analysts' Est 5	i-							
Company	Yr CAGR	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	7.10%	Discrete Est.	Discrete Est.	7.10%	6.70%	6.30%	5.89%	5.49%	5.09%
Alliant Energy Corporation	5.49%	Discrete Est.	5.49%	5.49%	5.41%	5.33%	5.25%	5.17%	5.09%
Ameren Corporation	5.94%	Discrete Est.	5.94%	5.94%	5.77%	5.60%	5.43%	5.26%	5.09%
American Electric Power Company, Inc.	5.62%	Discrete Est.	Discrete Est.	Discrete Est.	5.52%	5.41%	5.30%	5.20%	5.09%
Avangrid, Inc.	6.58%	Discrete Est.	6.58%	6.58%	6.28%	5.98%	5.69%	5.39%	5.09%
Avista Corporation	3.90%	Discrete Est.	3.90%	3.90%	4.14%	4.38%	4.62%	4.85%	5.09%
Black Hills Corporation	4.94%	Discrete Est.	Discrete Est.	4.94%	4.97%	5.00%	5.03%	5.06%	5.09%
CenterPoint Energy, Inc.	5.82%	Discrete Est.	Discrete Est.	5.82%	5.67%	5.53%	5.38%	5.24%	5.09%
CMS Energy Corporation	6.94%	Discrete Est.	Discrete Est.	6.94%	6.57%	6.20%	5.83%	5.46%	5.09%
Consolidated Edison, Inc.	3.00%	Discrete Est.	Discrete Est.	3.00%	3.42%	3.84%	4.25%	4.67%	5.09%
Dominion Energy, Inc.	4.27%	Discrete Est.	Discrete Est.	4.27%	4.43%	4.60%	4.76%	4.93%	5.09%
DTE Energy Company	6.20%	Discrete Est.	Discrete Est.	6.20%	5.98%	5.76%	5.53%	5.31%	5.09%
Duke Energy Corporation	4.18%	Discrete Est.	Discrete Est.	4.18%	4.36%	4.54%	4.72%	4.91%	5.09%
Edison International	5.76%	Discrete Est.	5.76%	5.76%	5.62%	5.49%	5.36%	5.22%	5.09%
El Paso Electric Company	6.25%	6.25%	6.25%	6.25%	6.02%	5.79%	5.55%	5.32%	5.09%
Entergy Corporation	1.24%	Discrete Est.	Discrete Est.	1.24%	2.01%	2.78%	3.55%	4.32%	5.09%
Evergy, Inc.	8.48%	Discrete Est.	Discrete Est.	8.48%	7.80%	7.12%	6.45%	5.77%	5.09%
Eversource Energy	6.10%	Discrete Est.	Discrete Est.	Discrete Est.	5.90%	5.70%	5.50%	5.29%	5.09%
Exelon Corporation	3.67%	Discrete Est.	Discrete Est.	Discrete Est.	Discrete Est.	4.24%	4.52%	4.81%	5.09%
FirstEnergy Corp.	6.20%	Discrete Est.	Discrete Est.	6.20%	5.98%	5.76%	5.53%	5.31%	5.09%
Hawaiian Electric Industries, Inc.	4.22%	Discrete Est.	Discrete Est.	4.22%	4.39%	4.57%	4.74%	4.92%	5.09%
IDACORP, Inc.	3.33%	3.33%	3.33%	3.33%	3.68%	4.04%	4.39%	4.74%	5.09%
MDU Resources Group Inc.	7.75%	7.75%	7.75%	7.75%	7.22%	6.69%	6.15%	5.62%	5.09%
NextEra Energy, Inc.	7.86%	Discrete Est.	7.86%	7.86%	7.31%	6.75%	6.20%	5.64%	5.09%
NiSource Inc.	4.49%	Discrete Est.	Discrete Est.	Discrete Est.	4.61%	4.73%	4.85%	4.97%	5.09%
NorthWestern Corporation	3.64%	Discrete Est.	Discrete Est.	3.64%	3.93%	4.22%	4.51%	4.80%	5.09%
OGE Energy Corp.	5.17%	Discrete Est.	Discrete Est.	5.17%	5.16%	5.14%	5.12%	5.11%	5.09%
Otter Tail Corporation	6.97%	6.97%	6.97%	6.97%	6.59%	6.22%	5.84%	5.47%	5.09%
PG&E Corporation	6.00%	Discrete Est.	6.00%	6.00%	5.82%	5.64%	5.45%	5.27%	5.09%
Pinnacle West Capital Corporation	5.23%	Discrete Est.	5.23%	5.23%	5.21%	5.18%	5.15%	5.12%	5.09%
PNM Resources, Inc.	5.75%	Discrete Est.	Discrete Est.	Discrete Est.	5.62%	5.48%	5.35%	5.22%	5.09%
Portland General Electric Company	4.55%	Discrete Est.	Discrete Est.	4.55%	4.66%	4.77%	4.88%	4.98%	5.09%
PPL Corporation	3.00%	Discrete Est.	3.00%	3.00%	3.42%	3.84%	4.25%	4.67%	5.09%
Public Service Enterprise Group Incorporated	5.23%	Discrete Est.	5.23%	5.23%	5.20%	5.17%	5.15%	5.12%	5.09%
Sempra Energy	8.20%	Discrete Est.	Discrete Est.	8.20%	7.58%	6.96%	6.33%	5.71%	5.09%
Southern Company	4.50%	Discrete Est.	Discrete Est.	4.50%	4.62%	4.74%	4.85%	4.97%	5.09%
Unitil Corporation	4.28%	Discrete Est.	Discrete Est.	4.28%	4.44%	4.60%	4.77%	4.93%	5.09%
WEC Energy Group, Inc.	6.06%	Discrete Est.	Discrete Est.	6.06%	5.86%	5.67%	5.48%	5.28%	5.09%
Xcel Energy Inc.	5.67%	Discrete Est.	Discrete Est.	5.67%	5.55%	5.44%	5.32%	5.21%	5.09%

Source: Schedule DM-D-6

Long-Term Growth Rate	2.85%
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Company Name	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	\$3.78	\$4.14	\$4.26	\$4.34	\$4.65	\$4.94	\$5.21	\$5.44	\$5.64	\$5.80	\$5.97	\$6.14
Alliant Energy Corporation	\$2.41	\$2.55	\$2.71	\$2.86	\$3.02	\$3.17	\$3.31	\$3.43	\$3.55	\$3.65	\$3.76	\$3.86
Ameren Corporation	\$3.46	\$3.81	\$4.00	\$4.24	\$4.49	\$4.73	\$4.95	\$5.15	\$5.33	\$5.48	\$5.64	\$5.80
American Electric Power Company, Inc.	\$4.40	\$4.68	\$5.02	\$5.45	\$5.75	\$6.04	\$6.31	\$6.56	\$6.79	\$6.98	\$7.18	\$7.38
Avangrid, Inc.	\$2.45	\$2.66	\$2.90	\$3.09	\$3.29	\$3.49	\$3.66	\$3.82	\$3.96	\$4.07	\$4.19	\$4.31
Avista Corporation	\$2.00	\$2.15	\$2.43	\$2.52	\$2.62	\$2.72	\$2.82	\$2.91	\$3.00	\$3.08	\$3.17	\$3.26
Black Hills Corporation	\$3.68	\$3.92	\$4.13	\$4.20	\$4.41	\$4.61	\$4.80	\$4.97	\$5.14	\$5.28	\$5.43	\$5.59
CenterPoint Energy, Inc.	\$1.63	\$1.71	\$1.80	\$1.78	\$1.88	\$1.98	\$2.07	\$2.16	\$2.23	\$2.30	\$2.36	\$2.43
CMS Energy Corporation	\$2.67	\$2.88	\$3.08	\$3.31	\$3.54	\$3.76	\$3.96	\$4.13	\$4.28	\$4.41	\$4.53	\$4.66
Consolidated Edison, Inc.	\$4.52	\$4.74	\$4.92	\$5.19	\$5.35	\$5.50	\$5.67	\$5.83	\$6.00	\$6.17	\$6.35	\$6.53
Dominion Energy, Inc.	\$4.38	\$4.63	\$4.87	\$5.15	\$5.37	\$5.58	\$5.79	\$5.99	\$6.18	\$6.35	\$6.53	\$6.72
DTE Energy Company	\$6.61	\$7.11	\$7.61	\$8.20	\$8.71	\$9.19	\$9.64	\$10.04	\$10.39	\$10.69	\$10.99	\$11.31
Duke Energy Corporation	\$5.15	\$5.38	\$5.71	\$5.99	\$6.24	\$6.48	\$6.72	\$6.95	\$7.16	\$7.37	\$7.58	\$7.79
Edison International	\$4.55	\$4.72	\$4.78	\$5.06	\$5.35	\$5.62	\$5.88	\$6.12	\$6.33	\$6.51	\$6.69	\$6.88
El Paso Electric Company	\$2.84	\$3.02	\$3.21	\$3.41	\$3.62	\$3.82	\$4.01	\$4.18	\$4.32	\$4.45	\$4.57	\$4.70
Entergy Corporation	\$5.60	\$5.96	\$6.34	\$6.70	\$6.78	\$6.89	\$7.02	\$7.17	\$7.35	\$7.56	\$7.78	\$8.00
Evergy, Inc.	\$3.13	\$3.28	\$3.45	\$3.62	\$3.93	\$4.22	\$4.48	\$4.71	\$4.89	\$5.03	\$5.18	\$5.32
Eversource Energy	\$3.65	\$3.86	\$4.12	\$4.40	\$4.85	\$5.11	\$5.36	\$5.58	\$5.78	\$5.94	\$6.11	\$6.29
Exelon Corporation	\$3.07	\$3.04	\$3.12	\$3.28	\$3.59	\$3.90	\$4.03	\$4.16	\$4.28	\$4.41	\$4.53	\$4.66
FirstEnergy Corp.	\$2.49	\$2.64	\$2.79	\$2.96	\$3.14	\$3.32	\$3.48	\$3.62	\$3.75	\$3.86	\$3.97	\$4.08
Hawaiian Electric Industries, Inc.	\$2.01	\$2.16	\$2.25	\$2.35	\$2.45	\$2.55	\$2.64	\$2.73	\$2.81	\$2.89	\$2.98	\$3.06
IDACORP, Inc.	\$4.62	\$4.86	\$5.02	\$5.19	\$5.36	\$5.54	\$5.71	\$5.88	\$6.06	\$6.23	\$6.41	\$6.59
MDU Resources Group Inc.	\$1.65	\$1.82	\$1.96	\$2.11	\$2.28	\$2.43	\$2.57	\$2.70	\$2.80	\$2.88	\$2.96	\$3.04
NextEra Energy, Inc.	\$9.06	\$9.85	\$10.66	\$11.50	\$12.40	\$13.25	\$14.03	\$14.71	\$15.28	\$15.71	\$16.16	\$16.62
NiSource Inc.	\$1.38	\$1.46	\$1.55	\$1.61	\$1.72	\$1.79	\$1.86	\$1.93	\$1.99	\$2.04	\$2.10	\$2.16
NorthWestern Corporation	\$3.56	\$3.72	\$3.92	\$4.05	\$4.20	\$4.34	\$4.49	\$4.63	\$4.77	\$4.90	\$5.04	\$5.19
OGE Energy Corp.	\$2.28	\$2.40	\$2.49	\$2.52	\$2.65	\$2.78	\$2.89	\$3.00	\$3.10	\$3.19	\$3.28	\$3.37
Otter Tail Corporation	\$2.41	\$2.52	\$2.70	\$2.88	\$3.08	\$3.27	\$3.45	\$3.60	\$3.74	\$3.84	\$3.95	\$4.06
PG&E Corporation	\$4.19	\$3.41	\$4.45	\$4.72	\$5.00	\$5.27	\$5.52	\$5.75	\$5.94	\$6.11	\$6.29	\$6.47
Pinnacle West Capital Corporation	\$4.86	\$5.16	\$5.45	\$5.74	\$6.04	\$6.32	\$6.59	\$6.84	\$7.07	\$7.27	\$7.48	\$7.69
PNM Resources, Inc.	\$2.21	\$2.39	\$2.54	\$2.70	\$2.87	\$3.02	\$3.16	\$3.28	\$3.40	\$3.49	\$3.59	\$3.69
Portland General Electric Company	\$2.56	\$2.73	\$2.83	\$2.90	\$3.03	\$3.16	\$3.28	\$3.40	\$3.51	\$3.61	\$3.71	\$3.81
PPL Corporation	\$2.54	\$2.52	\$2.66	\$2.74	\$2.82	\$2.91	\$2.99	\$3.08	\$3.17	\$3.26	\$3.35	\$3.45
Public Service Enterprise Group Incorporated	\$3.42	\$3.49	\$3.66	\$3.85	\$4.05	\$4.25	\$4.43	\$4.60	\$4.75	\$4.88	\$5.02	\$5.17
Sempra Energy	\$7.12	\$7.89	\$8.46	\$9.60	\$10.39	\$11.13	\$11.80	\$12.39	\$12.88	\$13.24	\$13.62	\$14.01
Southern Company	\$3.17	\$3.28	\$3.51	\$3.85	\$4.02	\$4.19	\$4.35	\$4.50	\$4.65	\$4.78	\$4.92	\$5.06
Unitil Corporation	\$2.42	\$2.58	\$2.67	\$2.82	\$2.94	\$3.06	\$3.17	\$3.28	\$3.38	\$3.48	\$3.58	\$3.68
WEC Energy Group, Inc.	\$3.74	\$4.00	\$4.26	\$4.40	\$4.67	\$4.92	\$5.15	\$5.37	\$5.55	\$5.71	\$5.88	\$6.04
Xcel Energy Inc.	\$2.78	\$2.97	\$3.12	\$3.32	\$3.51	\$3.69	\$3.85	\$4.01	\$4.15	\$4.26	\$4.38	\$4.51
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Source: Schedule DM-D-3.1

# Schedule RBH-R13 Page 2 of 5

Weight by Stage

Company	Stock Price	First	Second	Third	Check	% 3rd Stag
ALLETE, Inc.	-82.82	11.23	8.93	62.66	0.00	76%
Alliant Energy Corporation	-53.14	7.15	5.69	40.30	0.00	76%
Ameren Corporation	-76.03	9.46	8.12	58.46	0.00	77%
American Electric Power Company, Inc.	-92.40	13.01	10.35	69.05	0.00	75%
Avangrid, Inc.	-49.81	8.06	6.09	35.66	0.00	72%
Avista Corporation	-47.64	7.53	5.23	34.88	0.00	73%
Black Hills Corporation	-77.06	10.23	8.13	58.70	0.00	76%
CenterPoint Energy, Inc.	-27.24	5.03	3.44	18.76	0.00	69%
CMS Energy Corporation	-62.36	7.82	6.65	47.89	0.00	77%
Consolidated Edison, Inc.	-89.66	13.54	9.70	66.42	0.00	74%
Dominion Energy, Inc.	-81.70	16.14	10.32	55.24	0.00	68%
DTE Energy Company	-126.83	18.63	15.16	93.04	0.00	73%
Duke Energy Corporation	-91.74	16.91	11.50	63.34	0.00	69%
Edison International	-70.82	11.09	8.95	50.78	0.00	72%
El Paso Electric Company	-67.37	7.84	6.82	52.72	0.00	78%
Entergy Corporation	-117.81	17.26	12.31	88.24	0.00	75%
Evergy, Inc.	-63.81	9.50	7.59	46.72	0.00	73%
Eversource Energy	-83.19	10.56	8.75	63.89	0.00	77%
Exelon Corporation	-45.44	6.95	6.01	32.47	0.00	71%
FirstEnergy Corp.	-47.79	7.16	5.70	34.94	0.00	73%
Hawaiian Electric Industries, Inc.	-44.82	6.02	4.61	34.20	0.00	76%
IDACORP, Inc.	-106.96	12.76	10.04	84.16	0.00	79%
MDU Resources Group Inc.	-28.70	3.98	3.75	20.97	0.00	73%
NextEra Energy, Inc.	-233.53	28.72	24.70	180.10	0.00	77%
NiSource Inc.	-27.45	3.94	3.09	20.42	0.00	74%
NorthWestern Corporation	-72.11	10.85	7.85	53.41	0.00	74%
OGE Energy Corp.	-43.23	7.13	5.05	31.05	0.00	72%
Otter Tail Corporation	-51.93	6.96	5.81	39.16	0.00	75%
PG&E Corporation	-8.59	2.91	2.75	2.93	0.00	34%
Pinnacle West Capital Corporation	-90.33	14.56	10.97	64.80	0.00	72%
PNM Resources, Inc.	-50.23	5.98	5.24	39.00	0.00	78%
Portland General Electric Company	-55.88	7.54	5.75	42.59	0.00	76%
PPL Corporation	-33.49	7.20	4.72	21.57	0.00	64%
Public Service Enterprise Group Incorporated	-60.63	8.93	7.10	44.61	0.00	74%
Sempra Energy	-146.74	20.50	18.49	107.75	0.00	73%
Southern Company	-61.97	11.24	7.69	43.04	0.00	69%
Unitil Corporation	-61.83	6.66	5.44	49.72	0.00	80%
WEC Energy Group, Inc.	-91.23	11.84	9.26	70.14	0.00	77%
Xcel Energy Inc.	-62.60	8.01	6.52	48.07	0.00	77%
Average	22.00	2.01	2.02		2.00	73%

Company	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	65.34%	62.56%	63.49%	64.42%	65.35%	66.28%	67.21%	68.14%	69.07%	70.00
Alliant Energy Corporation	63.07%	63.14%	63.47%	64.40%	65.33%	66.27%	67.20%	68.13%	69.07%	70.00
Ameren Corporation	58.38%	55.64%	55.75%	57.79%	59.82%	61.86%	63.89%	65.93%	67.96%	70.00
American Electric Power Company, Inc.	64.55%	63.89%	62.75%	61.47%	61.74%	63.39%	65.04%	66.70%	68.35%	70.00
Avangrid, Inc.	75.51%	71.43%	65.86%	66.45%	67.04%	67.64%	68.23%	68.82%	69.41%	70.00
Avista Corporation	80.50%	78.60%	77.53%	76.45%	75.38%	74.30%	73.23%	72.15%	71.08%	70.00
Black Hills Corporation	58.97%	59.18%	60.54%	61.89%	63.24%	64.59%	65.94%	67.30%	68.65%	70.00
CenterPoint Energy, Inc.	76.07%	71.93%	67.78%	68.54%	68.78%	69.03%	69.27%	69.51%	69.76%	70.00
CMS Energy Corporation	61.42%	60.76%	60.71%	61.03%	62.52%	64.02%	65.51%	67.01%	68.50%	70.00
Consolidated Edison, Inc.	67.70%	66.88%	66.46%	64.74%	65.62%	66.49%	67.37%	68.25%	69.12%	70.00
Dominion Energy, Inc.	86.30%	84.23%	81.11%	78.64%	77.20%	75.76%	74.32%	72.88%	71.44%	70.00
DTE Energy Company	61.88%	61.46%	60.05%	57.93%	59.94%	61.95%	63.96%	65.98%	67.99%	70.00
Duke Energy Corporation	75.92%	75.46%	71.10%	72.12%	71.77%	71.41%	71.06%	70.71%	70.35%	70.00
Edison International	55.82%	55.93%	54.60%	56.80%	59.00%	61.20%	63.40%	65.60%	67.80%	70.00
El Paso Electric Company	55.63%	57.00%	58.63%	60.25%	61.88%	63.50%	65.13%	66.75%	68.38%	70.00
Entergy Corporation	66.96%	65.10%	65.77%	66.38%	66.98%	67.58%	68.19%	68.79%	69.40%	70.00
Evergy, Inc.	65.50%	67.07%	67.83%	67.13%	67.61%	68.08%	68.56%	69.04%	69.52%	70.00
Eversource Energy	61.92%	62.18%	62.14%	62.05%	58.97%	61.18%	63.38%	65.59%	67.79%	70.00
Exelon Corporation	49.51%	52.63%	53.85%	56.15%	58.46%	60.77%	63.08%	65.38%	67.69%	70.00
FirstEnergy Corp.	63.45%	62.12%	61.65%	62.84%	64.03%	65.23%	66.42%	67.61%	68.81%	70.00
lawaiian Electric Industries, Inc.	65.67%	62.96%	63.84%	64.72%	65.60%	66.48%	67.36%	68.24%	69.12%	70.00
DACORP, Inc.	57.58%	59.47%	60.78%	62.10%	63.42%	64.73%	66.05%	67.37%	68.68%	70.00
MDU Resources Group Inc.	50.91%	46.70%	49.62%	52.53%	55.44%	58.35%	61.26%	64.18%	67.09%	70.00
VextEra Energy, Inc.	61.92%	63.25%	65.95%	66.53%	67.11%	67.68%	68.26%	68.84%	69.42%	70.00
ViSource Inc.	61.59%	60.96%	61.29%	63.98%	63.37%	64.70%	66.02%	67.35%	68.67%	70.00
NorthWestern Corporation	67.42%	66.94%	67.32%	67.70%	68.08%	68.47%	68.85%	69.23%	69.62%	70.00
DGE Energy Corp.	69.74%	70.00%	71.08%	70.93%	70.77%	70.62%	70.46%	70.31%	70.15%	70.00
Otter Tail Corporation	61.00%	61.11%	62.22%	63.33%	64.44%	65.56%	66.67%	67.78%	68.89%	70.00
PG&E Corporation	0.00%	0.00%	44.94%	48.52%	52.10%	55.68%	59.26%	62.84%	66.42%	70.00
Pinnacle West Capital Corporation	65.23%	65.50%	65.50%	66.15%	66.79%	67.43%	68.07%	68.72%	69.36%	70.00
PNM Resources, Inc.	55.66%	54.39%	56.34%	58.29%	60.25%	62.20%	64.15%	66.10%	68.05%	70.00
Portland General Electric Company	63.28%	63.00%	64.66%	65.43%	66.19%	66.95%	67.71%	68.48%	69.24%	70.00
PL Corporation	66.54%	68.65%	68.82%	68,99%	69.16%	69.33%	69.49%	69.66%	69.83%	70.00
Public Service Enterprise Group Incorporated	57.60%	59.31%	59.02%	59,46%	61.22%	62.97%	64.73%	66.49%	68.24%	70.00
Sempra Energy	59.13%	57.29%	57.57%	59.34%	61.12%	62.89%	64.67%	66.45%	68.22%	70.00
Southern Company	80.13%	80.18%	76.92%	75.93%	74.95%	73.96%	72.97%	71.98%	70.99%	70.00
Jnitil Corporation	61.98%	58.91%	57.68%	56.74%	58.95%	61.16%	63.37%	65.58%	67.79%	70.00
VEC Energy Group, Inc.	66.84%	66.50%	67.61%	67.95%	68.29%	68.63%	68.97%	69.32%	69.66%	70.00
(cel Energy Inc.	61.51%	61.62%	61.86%	60.84%	62.37%	63.90%	65.42%	66.95%	68.47%	70.00

Source: Schedule DM-D-3.3

### Estimated Dividends to Shareholders for Infinite Period Cost of

Company ALLETE, Inc. Alliant Energy Corporation	Equity 6.52%	2019	2020 \$2,47	2021 \$2.59	2022	2023	2024	2025	2026	2027	2028	2029
Alliant Energy Corporation		-82.82	\$2.47	¢0 50								
			ψ2.47	\$∠.59	\$2.70	\$2.80	\$3.04	\$3.27	\$3.50	\$3.71	\$3.90	\$4.06
	6.46%	-53.14	\$1.52	\$1.61	\$1.72	\$1.84	\$1.97	\$2.10	\$2.22	\$2.34	\$2.45	\$2.56
Ameren Corporation	6.55%	-76.03	\$2.02	\$2.12	\$2.23	\$2.45	\$2.69	\$2.92	\$3.16	\$3.40	\$3.62	\$3.84
American Electric Power Company, Inc.	6.77%	-92.40	\$2.84	\$2.99	\$3.15	\$3.35	\$3.55	\$3.83	\$4.11	\$4.38	\$4.64	\$4.89
Avangrid, Inc.	7.14%	-49.81	\$1.85	\$1.90	\$1.91	\$2.05	\$2.21	\$2.36	\$2.50	\$2.63	\$2.75	\$2.85
Avista Corporation	6.39%	-47.64	\$1.61	\$1.69	\$1.88	\$1.93	\$1.98	\$2.02	\$2.06	\$2.10	\$2.13	\$2.16
Black Hills Corporation	6.44%	-77.06	\$2.17	\$2.32	\$2.50	\$2.60	\$2.79	\$2.98	\$3.16	\$3.35	\$3.53	\$3.70
CenterPoint Energy, Inc.	7.37%	-27.24	\$1.24	\$1.23	\$1.22	\$1.22	\$1.30	\$1.37	\$1.44	\$1.50	\$1.56	\$1.61
CMS Energy Corporation	6.50%	-62.36	\$1.64	\$1.75	\$1.87	\$2.02	\$2.21	\$2.40	\$2.59	\$2.77	\$2.94	\$3.08
Consolidated Edison, Inc.	6.53%	-89.66	\$3.06	\$3.17	\$3.27	\$3.36	\$3.51	\$3.66	\$3.82	\$3.98	\$4.15	\$4.32
Dominion Energy, Inc.	7.17%	-81.70	\$3.78	\$3.90	\$3.95	\$4.05	\$4.15	\$4.23	\$4.30	\$4.36	\$4.41	\$4.45
DTE Energy Company	7.16%	-126.83	\$4.09	\$4.37	\$4.57	\$4.75	\$5.22	\$5.69	\$6.16	\$6.62	\$7.07	\$7.48
Duke Energy Corporation	7.20%	-91.74	\$3.91	\$4.06	\$4.06	\$4.32	\$4.48	\$4.63	\$4.78	\$4.91	\$5.04	\$5.16
Edison International	7.52%	-70.82	\$2.54	\$2.64	\$2.61	\$2.87	\$3.15	\$3.44	\$3.73	\$4.01	\$4.29	\$4.55
El Paso Electric Company	6.26%	-67.37	\$1.58	\$1.72	\$1.88	\$2.05	\$2.24	\$2.43	\$2.61	\$2.79	\$2.96	\$3.11
Entergy Corporation	6.31%	-117.81	\$3.75	\$3.88	\$4.17	\$4.45	\$4.54	\$4.66	\$4.79	\$4.93	\$5.10	\$5.29
Evergy, Inc.	6.96%	-63.81	\$2.05	\$2.20	\$2.34	\$2.43	\$2.65	\$2.87	\$3.07	\$3.25	\$3.40	\$3.52
Eversource Energy	6.53%	-83.19	\$2.26	\$2.40	\$2.56	\$2.73	\$2.86	\$3.13	\$3.40	\$3.66	\$3.92	\$4.16
Exelon Corporation	7.72%	-45.44	\$1.52	\$1.60	\$1.68	\$1.84	\$2.10	\$2.37	\$2.54	\$2.72	\$2.90	\$3.08
FirstEnergy Corp.	7.04%	-47.79	\$1.58	\$1.64	\$1.72	\$1.86	\$2.01	\$2.16	\$2.31	\$2.45	\$2.58	\$2.70
Hawaiian Electric Industries, Inc.	6.27%	-44.82	\$1.32	\$1.36	\$1.44	\$1.52	\$1.61	\$1.69	\$1.78	\$1.86	\$1.94	\$2.03
IDACORP. Inc.	5.93%	-106,96	\$2.66	\$2.89	\$3.05	\$3.22	\$3.40	\$3.58	\$3.77	\$3.96	\$4.16	\$4.36
MDU Resources Group Inc.	7.75%	-28.70	\$0.84	\$0.85	\$0.97	\$1.11	\$1.26	\$1.42	\$1.58	\$1.73	\$1.88	\$2.01
NextEra Energy, Inc.	6.35%	-233.53	\$5.61	\$6.23	\$7.03	\$7.65	\$8.32	\$8.97	\$9.58	\$10.13	\$10.61	\$11.00
NiSource Inc.	6.74%	-27.45	\$0.85	\$0.89	\$0.95	\$1.03	\$1.09	\$1.16	\$1.23	\$1.30	\$1.36	\$1.43
NorthWestern Corporation	6.50%	-72.11	\$2.40	\$2.49	\$2.64	\$2.74	\$2.86	\$2.97	\$3.09	\$3.21	\$3.32	\$3.43
OGE Energy Corp.	6.82%	-43.23	\$1.59	\$1.68	\$1.77	\$1.79	\$1.88	\$1.96	\$2.04	\$2.11	\$2.18	\$2.23
Otter Tail Corporation	6.68%	-51.93	\$1.47	\$1.54	\$1.68	\$1.83	\$1.99	\$2.15	\$2.30	\$2.44	\$2.57	\$2.69
PG&E Corporation	23.97%	-8.59	\$0.00	\$0.00	\$2.00	\$2.29	\$2.61	\$2.93	\$3.27	\$3.61	\$3.95	\$4.28
Pinnacle West Capital Corporation	7.09%	-90.33	\$3.17	\$3.38	\$3.57	\$3.79	\$4.03	\$4.26	\$4.49	\$4.70	\$4.90	\$5.09
PNM Resources, Inc.	6.43%	-50.23	\$1.23	\$1.30	\$1.43	\$1.57	\$1.73	\$1.88	\$2.03	\$2.17	\$2.31	\$2.44
Portland General Electric Company	6.27%	-55.88	\$1.62	\$1.72	\$1.83	\$1.90	\$2.01	\$2.12	\$2.22	\$2.33	\$2.43	\$2.52
PPL Corporation	8.10%	-33,49	\$1.69	\$1.73	\$1.83	\$1.89	\$1.95	\$2.01	\$2.08	\$2.14	\$2.21	\$2.28
Public Service Enterprise Group Incorporated	7.01%	-60.63	\$1.97	\$2.07	\$2.16	\$2.29	\$2.48	\$2.67	\$2.87	\$3.06	\$3.24	\$3.42
Sempra Energy	7.38%	-146.74	\$4.21	\$4.52	\$4.87	\$5.70	\$6.35	\$7.00	\$7.63	\$8.23	\$8.78	\$9.27
Southern Company	7.06%	-61.97	\$2.54	\$2.63	\$2.70	\$2.92	\$3.02	\$3.10	\$3.18	\$3.24	\$3.30	\$3.35
Unitil Corporation	5.79%	-61.83	\$1.50	\$1.52	\$1.54	\$1.60	\$1.73	\$1.87	\$2.01	\$2.15	\$2.29	\$2.44
WEC Energy Group, Inc.	6.17%	-91.23	\$2.50	\$2.66	\$2.88	\$2.99	\$3.19	\$3.38	\$3.55	\$3.72	\$3.87	\$4.00
												\$2.98

	Analysts' Est 5	i-							
Company	Yr CAGR	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	7.10%	Discrete Est.	Discrete Est.	7.10%	6.25%	5.40%	4.55%	3.70%	2.85%
Alliant Energy Corporation	5.49%	Discrete Est.	5.49%	5.49%	4.96%	4.43%	3.91%	3.38%	2.85%
Ameren Corporation	5.94%	Discrete Est.	5.94%	5.94%	5.32%	4.70%	4.08%	3.47%	2.85%
American Electric Power Company, Inc.	5.62%	Discrete Est.	Discrete Est.	Discrete Est.	5.07%	4.51%	3.96%	3.40%	2.85%
Avangrid, Inc.	6.58%	Discrete Est.	6.58%	6.58%	5.83%	5.09%	4.34%	3.60%	2.85%
Avista Corporation	3.90%	Discrete Est.	3.90%	3.90%	3.69%	3.48%	3.27%	3.06%	2.85%
Black Hills Corporation	4.94%	Discrete Est.	Discrete Est.	4.94%	4.52%	4.10%	3.69%	3.27%	2.85%
CenterPoint Energy, Inc.	5.82%	Discrete Est.	Discrete Est.	5.82%	5.23%	4.63%	4.04%	3.44%	2.85%
CMS Energy Corporation	6.94%	Discrete Est.	Discrete Est.	6.94%	6.12%	5.30%	4.49%	3.67%	2.85%
Consolidated Edison, Inc.	3.00%	Discrete Est.	Discrete Est.	3.00%	2.97%	2.94%	2.91%	2.88%	2.85%
Dominion Energy, Inc.	4.27%	Discrete Est.	Discrete Est.	4.27%	3.99%	3.70%	3.42%	3.13%	2.85%
DTE Energy Company	6.20%	Discrete Est.	Discrete Est.	6.20%	5.53%	4.86%	4.19%	3.52%	2.85%
Duke Energy Corporation	4.18%	Discrete Est.	Discrete Est.	4.18%	3.91%	3.65%	3.38%	3.12%	2.85%
Edison International	5.76%	Discrete Est.	5.76%	5.76%	5.17%	4.59%	4.01%	3.43%	2.85%
El Paso Electric Company	6.25%	6.25%	6.25%	6.25%	5.57%	4.89%	4.21%	3.53%	2.85%
Entergy Corporation	1.24%	Discrete Est.	Discrete Est.	1.24%	1.56%	1.88%	2.20%	2.53%	2.85%
Evergy, Inc.	8.48%	Discrete Est.	Discrete Est.	8.48%	7.35%	6.23%	5.10%	3.98%	2.85%
Eversource Energy	6.10%	Discrete Est.	Discrete Est.	Discrete Est.	5.45%	4.80%	4.15%	3.50%	2.85%
Exelon Corporation	3.67%	Discrete Est.	Discrete Est.	Discrete Est.	Discrete Est.	3.34%	3.18%	3.01%	2.85%
FirstEnergy Corp.	6.20%	Discrete Est.	Discrete Est.	6.20%	5.53%	4.86%	4.19%	3.52%	2.85%
lawaiian Electric Industries, Inc.	4.22%	Discrete Est.	Discrete Est.	4.22%	3.94%	3.67%	3.40%	3.12%	2.85%
DACORP. Inc.	3.33%	3.33%	3.33%	3.33%	3.24%	3.14%	3.04%	2.95%	2.85%
MDU Resources Group Inc.	7.75%	7.75%	7.75%	7.75%	6.77%	5.79%	4.81%	3.83%	2.85%
NextEra Energy, Inc.	7.86%	Discrete Est.	7.86%	7.86%	6.86%	5.86%	4.86%	3.85%	2.85%
NiSource Inc.	4.49%	Discrete Est.	Discrete Est.	Discrete Est.	4.16%	3.83%	3.50%	3.18%	2.85%
NorthWestern Corporation	3.64%	Discrete Est.	Discrete Est.	3.64%	3.48%	3.32%	3.17%	3.01%	2.85%
DGE Energy Corp.	5.17%	Discrete Est.	Discrete Est.	5.17%	4.71%	4.24%	3.78%	3.31%	2.85%
Otter Tail Corporation	6.97%	6.97%	6.97%	6.97%	6.14%	5.32%	4.50%	3.67%	2.85%
PG&E Corporation	6.00%	Discrete Est.	6.00%	6.00%	5.37%	4.74%	4.11%	3.48%	2.85%
Pinnacle West Capital Corporation	5.23%	Discrete Est.	5.23%	5.23%	4.76%	4.28%	3.80%	3.33%	2.85%
PNM Resources. Inc.	5.75%	Discrete Est.	Discrete Est.	Discrete Est.	5.17%	4.59%	4.01%	3.43%	2.85%
Portland General Electric Company	4.55%	Discrete Est.	Discrete Est.	4.55%	4.21%	3.87%	3.53%	3.19%	2.85%
PPL Corporation	3.00%	Discrete Est.	3.00%	3.00%	2.97%	2.94%	2.91%	2.88%	2.85%
Public Service Enterprise Group Incorporated	5.23%	Discrete Est.	5.23%	5.23%	4.75%	4.28%	3.80%	3.33%	2.85%
Sempra Energy	8.20%	Discrete Est.	Discrete Est.	8.20%	7.13%	6.06%	4.99%	3.92%	2.85%
Southern Company	4.50%	Discrete Est.	Discrete Est.	4.50%	4.17%	3.84%	3.51%	3.18%	2.85%
Jnitil Corporation	4.28%	Discrete Est.	Discrete Est.	4.28%	3.99%	3.71%	3.42%	3.14%	2.85%
NEC Energy Group, Inc.	6.06%	Discrete Est.	Discrete Est.	6.06%	5.42%	4.77%	4.13%	3.49%	2.85%
Kcel Energy Inc.	5.67%	Discrete Est.	Discrete Est.	5.67%	5.11%	4.54%	3.98%	3.41%	2.85%

Source: Schedule DM-D-6.2

# **AFFIDAVIT OF ROBERT B. HEVERT**

### **COMMONWEALTH OF MASSACHUSETTS** ) ss COUNTY OF WORCESTER

On the 2<sup>rd</sup> day of March, 2020, before me appeared Bob B. Hevert, to me personally known, who, being by me first duly sworn, states that he a partner at ScottMadden, Inc and acknowledges that he has read the above and foregoing document and believes that the statements therein are true and correct to the best of his information, knowledge and belief.

Robert B. Hevert

Subscribed and sworn to before me this \_\_\_\_\_ day of March, 2020.

Jaca Cr. Derge Notary Public

My commission expires: 100. 8, 2024

