

The Narragansett Electric Company
d/b/a National Grid

INVESTIGATION AS TO THE
PROPRIETY OF PROPOSED TARIFF
CHANGES

Rebuttal
Testimony and Schedules of:

Robert B. Hevert

Book 1 of 7

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REBUTTAL TESTIMONY

OF

ROBERT B. HEVERT

Dated: May 9, 2018

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1 **I. Introduction and Qualifications**

2 **Q. Please state your name and position.**

3 A. My name is Robert B. Hevert. I am a Partner with ScottMadden, Inc. (ScottMadden).
4 I have been retained by The Narragansett Electric Company, d/b/a National Grid
5 (Narragansett Electric or the Company), an indirect, wholly owned subsidiary of
6 National Grid plc (National Grid) to provide testimony regarding the appropriate
7 Return on Equity (ROE) and capital structure.

8

9 **Q. Are you the same Robert B. Hevert who pre-filed Direct Testimony in this**
10 **matter?**

11 A. Yes, I am.

12

13 **Q. Are you sponsoring any schedules as part of your Rebuttal Testimony?**

14 A. Yes, I am sponsoring Rebuttal Schedules RBH-1 through RBH-15, which have been
15 prepared by me or under my direction.

16

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

18 A. The purpose of my Rebuttal Testimony is to respond to the following Intervenor
19 witnesses as they relate the Company's ROE and capital structure:

- 1 • Mr. Matthew I. Kahal, who testifies on behalf of the Division of Public
- 2 Utilities and Carriers (the Division);
- 3 • Mr. Tim Woolf and Ms. Melissa Whited, who also testify on behalf of the
- 4 Division;
- 5 • Mr. Karl R. Rábago, who testifies on behalf of New Energy Rhode Island
- 6 (NERI);
- 7 • Mr. Mark LeBel, who testifies on behalf of the Acadia Center; and
- 8 • Mr. Gregory W. Tillman, who testifies on behalf of Wal-Mart Stores East, LP
- 9 and Sam's East, Inc. (Wal-Mart).

10 I refer to these witnesses collectively as the Opposing Witnesses. My Rebuttal
11 Testimony provides an updated set of calculations and analytical results with respect
12 to the Company's ROE in this proceeding, together with additional analyses provided
13 in response to the Opposing Witnesses.

14

15 **Q. How is the balance of your Rebuttal Testimony Organized?**

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

- 17 • Section II provides a summary and overview of my Rebuttal Testimony;
- 18 • Section III provides a summary of current capital market conditions;
- 19 • Section IV contains my response to Mr. Kahal;

- Section V contains my response to Mr. Woolf and Ms. Whited;
- Section VI contains my response to Mr. Rábago;
- Section VII contains my response to Mr. LeBel;
- Section VIII contains my response to Mr. Tillman; and
- Section IX summarizes my updated analyses, conclusions, and recommendations.

II. Summary and Overview

Q. Please briefly summarize the analyses contained in your Rebuttal Testimony.

A. In my Direct Testimony I concluded that an ROE of 10.10 percent represents the Cost of Equity for the Company, within a range of 10.00 percent to 10.75 percent.¹ As my Direct Testimony discussed, my ROE recommendation considers a variety of factors, including capital market conditions in general and certain risks faced by the Company. Because the application of financial models and the interpretation of their results often are sources of disagreement among analysts in regulatory proceedings, I believe it is important to review and consider a variety of data points. Doing so provides context for quantitative analyses and their associated recommendations. As such, I have updated many of the analyses contained in my Direct Testimony, and

¹ Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Pages 6-7.

1 have provided several new analyses in response to issues raised by the Opposing
2 Witnesses.

3

4 **Q. Have you made any changes to the proxy group presented in your Direct**
5 **Testimony?**

6 A. Yes. Mr. Kahal's proxy group includes 22 of the 24 companies in the proxy group
7 presented in my Direct Testimony, excluding Duke Energy Corporation (Duke
8 Energy) and Dominion Energy, Inc. (Dominion)² Although I disagree with Mr.
9 Kahal's decision to exclude Duke Energy from the proxy group, to narrow the scope
10 of disputed issues, I have accepted his group,³ which I refer to as the Revised Proxy
11 Group.

12

13 **Q. Have you revised your ROE recommendation based on your updated results?**

14 A. No, the updated results support an ROE in the range of 10.00 percent to 10.75
15 percent. Consequently, I continue to recommend that the Rhode Island Public

2 Direct Testimony of Matthew I. Kahal, at 37.

3 *Id.* At page 37 of his Direct Testimony, Mr. Kahal notes he excluded Duke Energy because "it has substantial non-regulated generation it is attempting to divest." However, my research shows most of these transactions closed in 2016 and as such have not had any lingering effects on Duke Energy's stock price. Along with joint owners American Electric Power and Dayton Power and Light, Duke Energy also sold the retired Walter C. Beckjord power plant for an undisclosed amount in February 2018. The Beckjord plant has been retired since 2013. Similarly, Duke Energy's stock price does not appear to have been affected by the sale. On January 2, 2018, Dominion entered into an agreement to acquire SCANA Corporation for \$14.35 billion. As such, Dominion no longer meets my proxy group screening criterion. See, also, Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 25, noting the proxy group screening criterion regarding mergers or other significant transactions.

1 Utilities Commission (the PUC, or the Commission) authorize an ROE of 10.10
2 percent, which remains on the lower end of my recommended range.

3

4 **Q. Please provide an overview of your response to the Opposing Witnesses.**

5 A. Mr. Kahal recommends an ROE of 8.50 percent for the Company's electric
6 operations (including potential earnings from performance incentive mechanisms)
7 and 9.00 percent for the Company's gas operations. If the Commission declines to
8 adopt PIMs, Mr. Kahal recommends an ROE of 9.00 percent for the Company's
9 electric operations.⁴ Division witnesses Mr. Woolf and Ms. Whited support Mr.
10 Kahal's recommendation.⁵

11

12 Mr. Rábago recommends an ROE "no higher than 8.44 percent," however he
13 provides no analyses to support that recommendation.⁶ None of the remaining
14 Opposing Witnesses makes a specific recommendation regarding the Company's
15 ROE; they simply disagree with my 10.10 percent recommendation.⁷

16

4 Direct Testimony of Matthew I. Kahal, at 7-8.

5 Direct Testimony of Tim Woolf and Melissa Whited, at 16-17. Division witnesses Michael R. Ballaban and David J. Effron include Mr. Kahal's ROE recommendation in their testimony regarding the Company's revenue requirement. See, Direct Testimony of Michael R. Ballaban and David J. Effron, at 19.

6 Direct Testimony of Karl R. Rábago, at 28. Mr. Rábago's 8.44 percent ROE recommendation is based on one estimate from the Constant Growth DCF method presented in my Direct Testimony.

7 Because Mr. Kahal is the only witness to perform a Cost of Equity analysis, my Rebuttal Testimony primarily responds to him. However, I also address the remaining Opposing Witnesses to respond to certain of their arguments and recommendations as they relate to the recommended ROE.

1 Mr. Kahal's Discounted Cash Flow (DCF) analyses produce ROE estimates
2 significantly below the returns recently authorized for other electric and gas utilities.
3 For example, Mr. Kahal presents DCF results of 8.20 percent to 8.70 percent, with a
4 midpoint of 8.50 percent.⁸ Because Mr. Kahal relies primarily on his DCF results,
5 his recommendation (if adopted) would be one of the lowest Returns on Equity ever
6 authorized for an electric or natural gas utility, and the lowest in the history of Rhode
7 Island.⁹ Mr. Kahal's emphasis on the DCF approach is a case-in-point as to why it is
8 important to fully consider multiple methods and to assess the reliability of individual
9 model results in the context of current market conditions when estimating the Cost of
10 Equity.

11

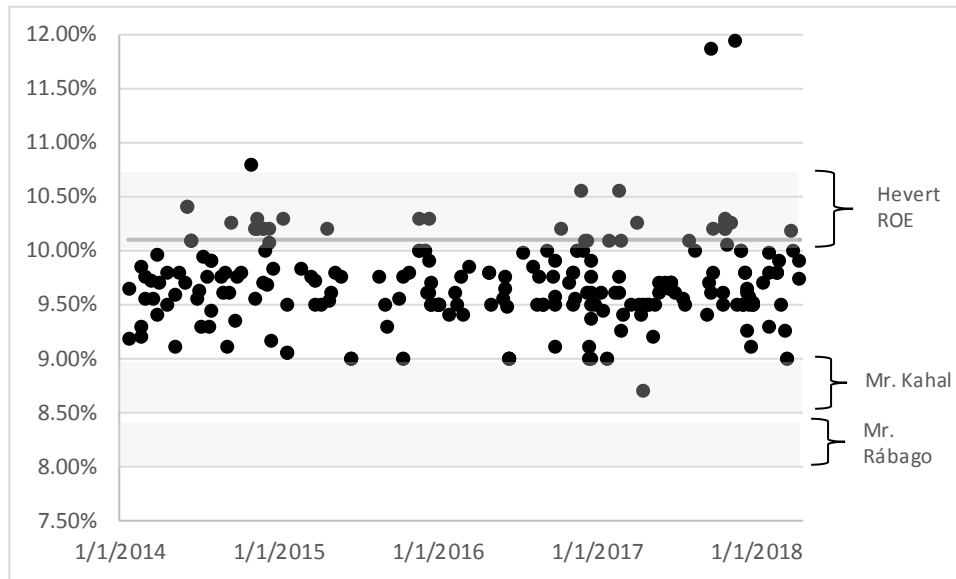
12 Given Mr. Kahal's emphasis on his DCF results, it is not surprising that his
13 recommendation falls below the returns authorized for electric and gas utilities in
14 other jurisdictions. Other regulatory authorities have been reluctant to give undue
15 weight to models and methods that produce unreasonably low results. To that point,
16 Mr. Kahal's 8.50 percent recommendation for the Company's electric operations is
17 121 basis points below the average authorized return for electric utilities since 2014;
18 his 9.00 percent recommendation for the Company's gas operations is below 99.00
19 percent of all returns on equity authorized for electric and gas utilities since January

8 See Direct Testimony of Matthew I. Kahal, Schedule MIK-4, page 1 of 5.

9 Source: S&P Global Market Insights. See also Rebuttal Schedule RBH-7.

2014. Mr. Rábago's proposed 8.44 percent recommendation is even further removed from recently authorized returns on equity (see, Chart 1 below).

Chart 1: Authorized Electric and Natural Gas ROEs and Opposing Witnesses' Ranges¹⁰



Q. Why do returns recently authorized in other jurisdictions provide a practical benchmark to assess the reasonableness of ROE recommendations?

A. First, the Cost of Equity is an “opportunity cost” reflecting the return expected to have been earned if the same capital was invested in a comparable company. Authorized returns are a reasonable and verifiable, measure of that forgone return. Second, the Company must compete with other utilities for the long-term capital needed to provide utility service. Given the choice between two similarly situated

¹⁰ Source: Regulatory Research Associates. Excludes Limited Issue Rider proceedings and Illinois Formula Rate proceedings.

1 utilities, one with a return that falls far below industry averages and another with a
2 return that more closely aligns with industry averages, investors sensibly will choose
3 the latter. If the Commission were to approve an ROE in the ranges recommended by
4 the Opposing Witnesses, a likely outcome would be increasing reluctance on the part
5 of investors to provide capital to the Company at reasonable costs and terms.

6

7 The Company understands the PUC does not set ROEs solely by reference to other
8 jurisdictions. However, regulatory commissions consider the same types of market,
9 methodological, and risk factors at issue in this proceeding. They recognize that
10 financial models are important tools in determining returns, and understand that
11 because all models are subject to assumptions, no one method is most reliable at all
12 times and under all conditions. Given those common considerations, and knowing
13 that they are important to investors, authorized returns from other jurisdictions are
14 relevant and appropriate benchmarks to assess ROE recommendations.

15

16 **Q. Are individual returns authorized for utilities in New York an appropriate**
17 **benchmark for the Company, as certain of the Opposing Witnesses suggest?**

18 A. No. Aside from the fact that investors are not constrained to investing in one or two
19 jurisdictions, there are specific factors that should be considered. As noted by
20 Regulatory Research Associates (RRA), the returns authorized for utilities in New
21 York incorporate fully forecasted test periods, which improve the utilities'

1 opportunity to earn the authorized ROE.¹¹ In addition, the New York decisions were
2 based on multi-year plans that included increasing rate bases over the term of the
3 plans. Further, the cases were settlements, reflecting the give-and-take among the
4 settling parties over multiple, otherwise-litigated issues. In my experience, parties
5 view the terms of settlements as a whole, not on the basis of discrete components.
6 Consequently, the Commission should not look to the outcome of a single case, or
7 even cases, within a single jurisdiction to determine the Company's ROE in this
8 proceeding.¹²

9

10 **Q. Have regulatory commissions recognized the importance of considering multiple**
11 **methods to set authorized ROEs?**

12 A. Yes. For example, in Baltimore Gas and Electric Company's 2016 rate case, the
13 Maryland Public Service Commission discussed the importance of considering
14 multiple analytical methods, given the complexity of determining the required ROE:

15 The ROE witnesses used various analyses to estimate the appropriate
16 return on equity [...] including the DCF model, the IRR/DCF, the
17 traditional CAPM, the ECAPM, and risk premium methodologies.
18 Although the witnesses argued strongly over the correctness of their
19 competing analyses, we are not willing to rule that there can be only
20 one correct method for calculating an ROE. Neither will we eliminate
21 any particular methodology as unworthy of basing a decision. The
22 subject is far too complex to reduce to a single mathematical formula.

11 Regulatory Research Associates, New York Public Service Commission, accessed April 30, 2018.

12 I appreciate that settlements must be found reasonable by the presiding commission. I have included both settled and litigated cases in my Bond Yield Plus Risk Premium analysis. I have done so because they represent multiple cases in multiple jurisdictions, over many years.

1 That conclusion is made apparent, in practice, by the fact that the
2 expert witnesses used discretion to eliminate outlier returns that they
3 testified were too high or too low to be considered reasonable, even
4 when using their own preferred methodologies.¹³

5 Similarly, in Opinion No. 531, the Federal Energy Regulatory Commission (FERC)
6 noted the anomalous nature of prevailing capital markets makes it more difficult to
7 determine the rate of return needed to satisfy the *Hope* and *Bluefield* standards.
8 FERC further expressed concern that economic anomalies may have affected the
9 reliability of DCF analyses.¹⁴ FERC concluded that a mechanical application of the
10 DCF method would be inappropriate and found it necessary to review alternative
11 benchmark approaches, including the Bond Yield Plus Risk Premium and CAPM
12 methods, to gain insight into the effect of market conditions on the Cost of Equity.¹⁵
13 After reviewing the evidence in that case, including economic conditions and the
14 results of multiple ROE methods, FERC determined it would be appropriate to set the
15 ROE at the midpoint of the upper half of the zone of reasonableness established by
16 the DCF methodology.¹⁶

13 *In the matter of the application of Baltimore Gas and Electric Company for adjustments to its electric
and gas base rates*, Public Service Commission of Maryland, Case No. 9406, Order No. 87591, at 153.
Citations omitted.

14 *Martha Coakley v. Bangor Hydro-Electric Company*, Opinion No. 531, 147 FERC ¶ 61,234 (2014), at
P 41 and P 145.

15 *Id.*, at P 142 and PP 145-146.

16 *Id.*, at PP 145-146 and P 152. In April 2017, the United States Circuit Court of Appeals for the District
of Columbia Circuit issued an opinion in *Emera Maine (formerly known as Bangor Hydro-Electric
Company), et al., v. FERC* which vacated and remanded Opinion No. 531 because “FERC did not
meet the first requirement of Section 206 that it demonstrate the unlawfulness of transmission owners’
base ROE” and because FERC had relied on the midpoint of the upper half of the zone of
reasonableness without adequately “citing record evidence” demonstrating the resulting ROE was just

1 **Q. Is stability and predictability of regulatory practice, including authorized**
2 **returns, important to the financial community?**

3 A. Yes, both are important in maintaining investor confidence and assuring financial
4 markets that regulation in Rhode Island is supportive of credit quality and
5 constructive for investors. As Moody's Investors Service (Moody's) states, "[w]hen
6 evaluating the credit quality of a utility, the degree of support that it may depend on
7 from its regulators is typically one of Moody's most significant considerations."¹⁷
8 Moody's further points out that:

9 As the revenues set by the regulator are a primary component of a
10 utility's cash flow, the utility's ability to obtain predictable and
11 supportive treatment within its regulatory framework is one of the
12 most significant factors in assessing a utility's credit quality.¹⁸

13
14 As discussed later in my Rebuttal Testimony, Moody's considers Rhode Island to be
15 a "tougher" regulatory environment; consequently, return recommendations that are
16 far removed from prevailing levels should be viewed with considerable caution.

17

and reasonable. Importantly, the D.C. Circuit decision did not suggest FERC was wrong to consider alternative methods, or that the alternative methods used, or their results, were inappropriate.

17 Regulatory Frameworks – Ratings and Credit Quality for Investor-Owned Utilities: Evaluating a Utility's Regulatory Framework, Moody's Investors Service, June 18, 2010, at 2.

18 *Id.*

1 **Q. What are your conclusions regarding the Opposing Witnesses ROE**
2 **recommendations?**

3 A. First, observable data - including authorized returns - indicate the Opposing ROE
4 Witnesses' recommendations are unreasonably low. If adopted, those returns would
5 significantly compromise the Company's ability to compete effectively for the capital
6 needed to fund its ongoing investment in utility assets. Second, regulatory and
7 industry practice is to consider multiple analytical methods in estimating the Cost of
8 Equity. Therefore, if we are to focus on a single method it remains critically
9 important to apply reasoned judgment to determine where the Cost of Equity falls
10 within that model's range of results. Just as investors consider company-specific and
11 general market factors in determining their return requirements, we should do the
12 same. Those considerations, and that judgment, leads to the conclusion that my ROE
13 range and recommendation are reasonable and appropriate.

14

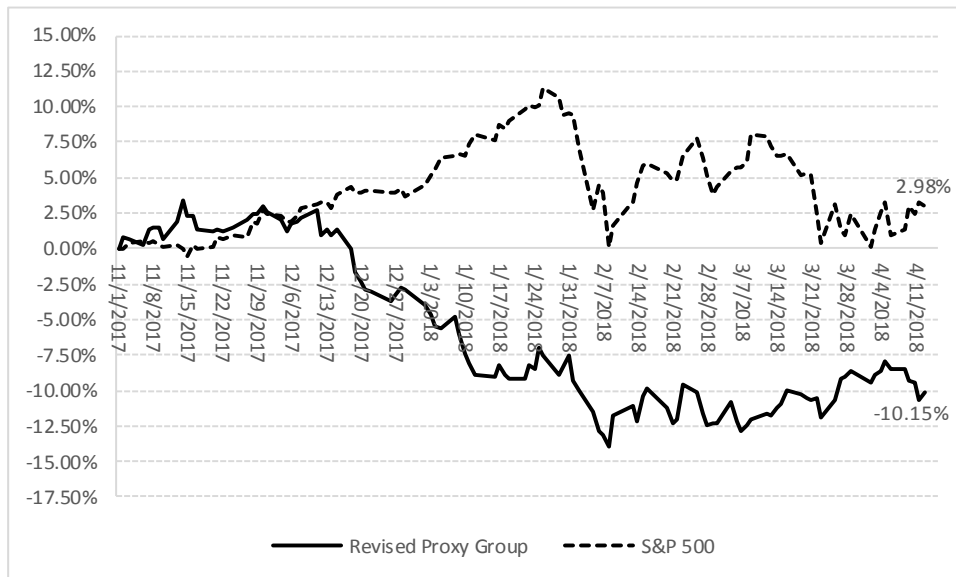
15 **III. Current Capital Market Conditions**

16 **Q. Are you aware of recent market developments that also should be considered in**
17 **setting the Company's ROE in this proceeding?**

18 A. Yes. On December 22, 2017, the President of the United States signed into law the
19 "Tax Cuts and Jobs Act" (referred to herein as the TCJA). Shortly before the TCJA
20 was signed, utilities (as measured by the Revised Proxy Group) significantly
21 underperformed the overall market. As Chart 2 (below) demonstrates, from

November 1, 2017, through April 13, 2018, the S&P 500 gained about 3.00 percent in value. In stark contrast, the Revised Proxy Group lost about 10.15 percent, underperforming the overall market by approximately 13.00 percent.

Chart 2: Relative Performance Since November 2017¹⁹



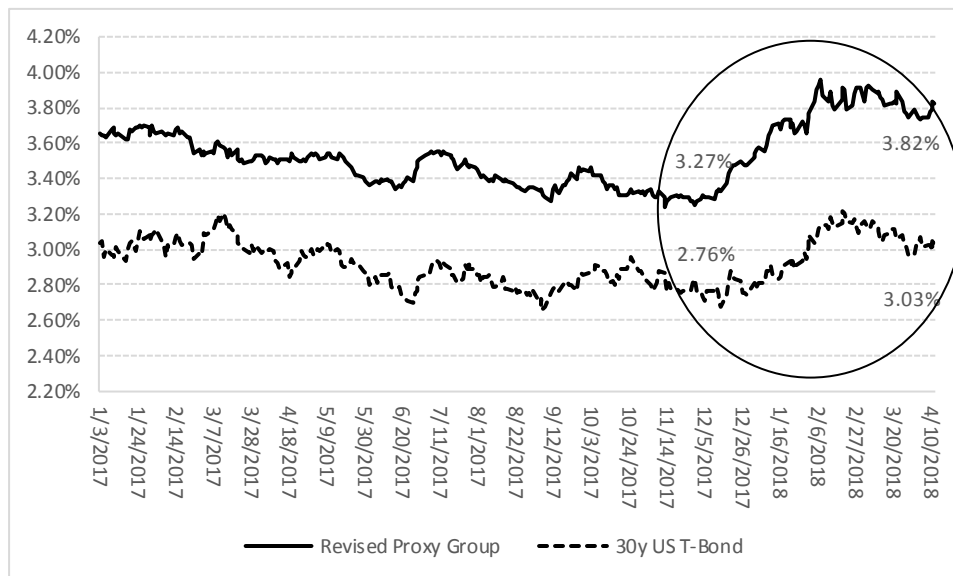
A reasonable inference to be drawn from that data is that investors have been re-evaluating utilities relative to other market sectors. To the extent investors now view utilities as less attractive relative to alternative investments, the proxy companies' prices will fall, and their dividend yields will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

¹⁹ Source: S&P Global Market Intelligence. Revised Proxy Group calculated as an index.

Q. Have the proxy companies' dividend yield increased coincident with the TCJA?

A. Yes, since the beginning of December 2017, the Revised Proxy Group's dividend yield has increased 53 basis points. Also during that time, the difference between the Revised Proxy Group's dividend yield and the 30-year Treasury yield widened (see Chart 3, below), suggesting the fall in utility stock prices may be a matter of relative value. That is, because non-regulated sectors benefit from tax reform in ways utilities cannot, investors may see the utility sector as less advantaged. Regardless of the reason, there is no question utility dividend yields have increased significantly since the TCJA became law.

Chart 3: Revised Proxy Group Dividend Yield vs. 30-Year Treasury Yield²⁰



²⁰ Source: S&P Global Market Intelligence. Revised Proxy Group calculated as an index.

1 **Q. What concerns have rating agencies raised as they consider the implications of**
2 **the TCJA for utilities' cash flow?**

3 A. Rating agencies have observed that a reduction in utilities' revenue associated with
4 lower income taxes and the potential return of excess accumulated deferred income
5 taxes also may reduce utilities' cash flow.²¹ As FitchRatings pointed out "[a]bsent
6 mitigating strategies on the regulatory front, this is expected to lead to weaker credit
7 metrics and negative rating actions for issuers with limited headroom to absorb the
8 leverage creep."²² In a similar vein, Standard & Poor's observed that the TCJA is
9 "...negative for credit quality because the combination of a lower tax rate and the loss
10 of stimulus provisions related to bonus depreciation or full expensing of capital
11 spending will create headwinds in operating cash-flow generation capabilities as
12 customer rates are lowered in response to the new tax code."²³ Moody's stated the
13 following:

14 Tax reform is credit negative for US regulated utilities because
15 the lower 21% statutory tax rate reduces cash collected from
16 customers, while the loss of bonus depreciation reduces tax
17 deferrals, all else being equal. Moody's calculates that the recent
18 changes in tax laws will dilute a utility's ratio of cash flow
19 before changes in working capital to debt by approximately 150
20 - 250 basis points on average, depending to some degree on the
21 size of the company's capital expenditure programs. From a

21 S&P Global Market Intelligence, Rating agencies warn tax reform could drag US utility sector credit
quality, January 25, 2018.

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

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

1 leverage perspective, Moody's estimates that debt to total
2 capitalization ratios will increase, based on the lower value of
3 deferred tax liabilities.²⁴

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

6

7 **Q. Earlier you mentioned that Moody's Investors Service has identified several**
8 **utilities with negative ratings implications. Are any of those companies in the**
9 **Revised Proxy Group?**

10 A. Yes, Consolidated Edison and Southern Company both had their "Outlook" changed
11 to "negative" from "stable" in the wake of the TCJA's enactment.²⁵ Although not a
12 rating change, the move to a "negative" outlook indicates ratings may be lowered for
13 those companies.

14

15 **Q. Is there a common approach to resolving ratemaking issues associated with the**
16 **TCJA across regulatory jurisdictions?**

17 A. Although nearly all jurisdictions have begun to address the implications of the TCJA
18 in some fashion, there does not yet appear to be a common approach.²⁶ In certain

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

25 *Id.* American Electric Power, Inc. had its outlook downgraded to "Stable" from "Positive." I note that the Company's affiliate KeySpan Gas East also had its outlook downgraded to "Negative" from "Stable".

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

1 instances, regulatory commissions have required utilities to calculate a regulatory
2 liability associated with the lower tax rate, with the liability's disposition to be
3 determined in future rate proceedings. Some utilities have proposed alternative
4 mechanisms designed to lower costs to ratepayers while preserving pre-TCJA credit
5 quality.²⁷ Consequently, the eventual effect of the TCJA on the Company's financial
6 profile and credit quality remains unclear. Such uncertainty remains a concern for
7 both debt and equity investors.

8

9 **Q. Have the rating agencies also discussed possible regulatory reactions to the cash**
10 **flow implications of the TCJA?**

11 A. Yes. Moody's, for example, identified approaches to help preserve credit profiles,
12 including "...accelerated cost recovery of certain regulatory assets or future
13 investment; changes to the equity layer or allowed ROEs in rates, and other actions."
14 Moody's also suggested that "[c]hanges to corporate financial policies could include
15 changes to capitalization, the financing of future investments, dividend growth, or
16 others."²⁸ FitchRatings observed the following:

17 A majority of states have opened dockets or requested all utilities in
18 the state to submit an analysis on the implications of the tax reform.
19 While regulators will be keen to provide some sort of rate relief for
20 customers, such actions could take many forms and vary in time
21 frame. Some jurisdictions may be open to a negotiated outcome that

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

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

1 focuses more on benefits of rate stability and creditworthy utilities
2 rather than immediate rate reductions. In the former, many tools could
3 be employed, including the following:

- 4 • Deferral of lower tax expense to use as an offset to expected future
5 rate increases either from the recovery of regulatory deferrals
6 or rate base growth
- 7 • Return of excess unprotected ADIT over a longer-term horizon
- 8 • Increase in authorized equity ratio and/or return on equity
- 9 • Accelerated depreciation on some assets
- 10 • Lower capex²⁹

11 As both rating agencies discussed, regulatory responses may vary by company and
12 jurisdiction, but may include a variety of potential approaches.

13
14 **Q. What conclusions do you draw from the data and information discussed above?**

15 A. There is little question that the TCJA has increased cash flow-related risks for electric
16 and natural gas utilities. Those risks are manifested in the sector's recent
17 underperformance relative to the broad market and in the comments of financial
18 participants such as Moody's, Standard & Poor's, and FitchRatings. If the PUC
19 focuses on Discounted Cash Flow-based methods (as the Division suggests), it should
20 recognize the TCJA's expected effect on utilities, and focus on the upper end of the
21 range of results.

22

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

1 **Q. Please summarize your position regarding the DCF and CAPM models and how**
2 **the results should be considered in determining the Company’s ROE.**

3 A. Based on the full range of DCF and CAPM estimates, and considering other model
4 results and data available to investors, the recent performance of electric and natural
5 gas utility stocks relative to the broad market, and the recent statements by the major
6 rating agencies, I continue to believe the Company’s Cost of Equity falls in the range
7 of 10.00 percent to 10.75 percent, with 10.10 percent as a reasonable point estimate.

8
9 **IV. Response to Division Witness Mr. Kahal**

10 **Q. Please provide a brief summary of Mr. Kahal’s testimony and recommendation.**

11 A. Mr. Kahal recommends an 8.50 percent ROE for the Company’s electric operations,
12 with performance incentive mechanisms, and 9.00 percent for the Company’s gas
13 operations.³⁰ Mr. Kahal relies primarily on the Constant Growth DCF model in
14 arriving at his ROE recommendations. Although he applies the CAPM, Mr. Kahal’s
15 ROE estimates using that method fall in the range of 6.60 percent to 8.80 percent.³¹
16 Mr. Kahal also performs a “high sensitivity” CAPM analysis that produces a 9.50
17 percent result.³² As to his selected proxy companies, Mr. Kahal’s proxy group
18 consists of the companies in my proxy group filed in my Direct Testimony, excluding

30 If the PUC does not approve performance incentive mechanisms, Mr. Kahal recommends an ROE of 9.00 percent for the Company’s electric operations. See Direct Testimony of Matthew I. Kahal, at 7-8.

31 Direct Testimony of Matthew I. Kahal at 50.

32 *Id.*, at 50.

1 Dominion and Duke Energy.³³ Lastly, Mr. Kahal recommends a capital structure of
2 50.91 percent common equity, 47.90 percent long-term debt, 1.11 percent short-term
3 debt, and 0.09 percent preferred stock³⁴ and provisionally agrees with the Company's
4 proposed cost of debt.

5

6 **Q. What are the specific areas in which you disagree with Mr. Kahal's analyses and**
7 **recommendations?**

8 A. As a general matter, there are certain points on which Mr. Kahal is factually incorrect;
9 I discuss those points in the following sections. I also discuss certain arguments Mr.
10 Kahal also has made but for which he has failed to provide empirical evidence or
11 adequate support. The specific areas in which I disagree with Mr. Kahal include: (1)
12 the implications of current and expected capital market conditions on the Company's
13 Cost of Equity; (2) the growth rates applied in his Constant Growth DCF analysis; (3)
14 the relevance and application of the Multi-Stage DCF model; (4) the application of
15 the CAPM and the relevance of the Empirical CAPM (ECAPM); (5) the relevance of
16 the Bond Yield Plus Risk Premium analysis; (6) the business risks faced by the
17 Company and their effect on its Cost of Equity; and (7) the appropriate capital
18 structure for the Company.

19

33 *Id.*, at 37-38.

34 Direct Testimony of Matthew I. Kahal, at 23.

1 **A. Capital Market Conditions**

2 **Q. Please summarize Mr. Kahal’s discussion of current and historical capital**
3 **market trends and their effect on the Cost of Equity.**

4 A. Mr. Kahal’s Schedule MIK-2 presents the annual averages for 2001 through 2017 and
5 monthly averages for January 2007 through February 2018 for annualized inflation
6 (i.e., Consumer Price Index), ten-year U.S. Treasury bond yields, three-month U.S.
7 Treasury bill yields, and A-rated utility bond yields. Mr. Kahal concludes “these data
8 series show a generally declining trend in capital costs.”³⁵ As to the level of U.S.
9 Treasury yields, Mr. Kahal notes rates have been depressed by the Federal Reserve’s
10 desire to inject liquidity into the economy and through its policy of “quantitative
11 easing.”³⁶ In addition to the Federal Reserve’s intervention, Mr. Kahal suggests
12 forces such as the weak overall economy, low inflation outlook, and international
13 events also are causing lower long-term interest rates.³⁷ Regarding equity markets,
14 Mr. Kahal argues investors see “utility stocks and bonds as alternative investment
15 vehicles for portfolio allocation purposes”, because they are “related by market
16 forces”.³⁸

35 *Id.*, at 14.

36 *Id.*, at 15

37 *Id.*, at 15-16.

38 *Id.*, at 14, 16.

1 **Q. What is your response to Mr. Kahal on those points?**

2 A. As to general economic conditions, although long-term Treasury yields had been at
3 historically low levels, they have begun to increase and are expected to increase
4 further, still. As discussed in my Direct Testimony, market data and economists'
5 projections support expected increases in both short and long-term Treasury yields.³⁹
6 Even looking to current yields, the 2017 and 2018 ten-year Treasury yields reported
7 in Mr. Kahal's Schedule MIK-2 are 50 and 95 basis points, respectively, higher than
8 the 1.80 percent yield in 2012, when the Commission authorized the Company's
9 currently authorized 9.50 percent ROE. On that basis alone, Mr. Kahal's position that
10 the Company's return should be reduced by 50 to 100 basis points is not supported.

11

12 **Q. What is your response to Mr. Kahal's view that investors consider utility stocks**
13 **and long-term bonds alternative investment vehicles in portfolio asset allocation**
14 **decisions?**⁴⁰

15 A. I disagree. First, as discussed below, debt and equity are fundamentally different
16 securities, even if both are issued by utility companies. One is not a substitute for the
17 other, and we cannot say both are affected by the same market forces, to the same
18 degree. But even if such inferences could be drawn, Mr. Kahal's Schedule MIK-2
19 tells us there is no difference between the yield on A-rated utility bonds in 2012 (4.10

39 Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Pages 89-94.

40 Direct Testimony of Matthew I. Kahal, at 16.

1 percent, when the Commission issued its decision in Docket 4323) and 2018 (also
2 4.10 percent).⁴¹ From that perspective, there is no reason to conclude the Cost of
3 Equity has fallen by 50 to 100 basis points, as Mr. Kahal suggests.

4
5 Second, although it may be Mr. Kahal's opinion that investors consider utility debt
6 and equity alternative investments, his position fails to recognize fundamental
7 differences between the two, which render them distinct for portfolio allocation
8 purposes. Debt holders are contractually entitled to a series of specified payments
9 over the term of the bond; equity investors receive no such promises. As opposed to
10 debt investors who hold a security with a finite life with a promise to recover the
11 principal over that life, equity investors hold a security that never matures, with no
12 repayment of their investment by the issuing firm. And, whereas debt investors
13 receive interest payments according to a specified schedule, firms are not obligated to
14 pay dividends; any dividend payments and the timing of those payments are at the
15 firm's sole discretion. One certainty is that because equity is riskier than debt, its cost
16 must be higher than the cost of debt.

17
18 Further, portfolio asset allocation is understood to depend critically on the investor's
19 risk preferences and the expected returns, risks, and correlations among the various

41 Mr. Kahal's data also indicates that changes in credit spreads are inversely related to changes Treasury yields.

1 securities that may be included in the portfolio.⁴² If the portfolio is meant to fund
2 specific liabilities, the timing of payments from the assets within the portfolio also is
3 a key objective (and constraint). Because debt and equity are fundamentally different
4 securities, with different risks, different sources of returns, and different payment
5 streams, assuming one is an alternative for the other in the context of portfolio asset
6 allocation simply is incorrect.

7
8 Mr. Kahal also appears to suggest utility debt and equity are alternatives because they
9 are “related by market forces.”⁴³ As he is aware, the “relationship to market forces”
10 is a motivation behind the Beta coefficient within the CAPM; it measures the
11 variability of the subject security’s returns relative to the overall market. If Mr. Kahal
12 is correct, utility debt and equity would have the same, or at least similar Beta
13 coefficients. He has not shown that to be the case.

14
15 **Q. Are you able to determine whether debt and equity Beta coefficients in general**
16 **are similar?**

17 A. Yes. Although I disagree with his full application of the CAPM, Mr. Kahal
18 recommends an average Beta coefficient of 0.72 for the proxy group.⁴⁴ In contrast,

42 William F. Sharpe, Integrated Asset Allocation, Financial Analysts Journal, September-October 1987.

43 Direct Testimony of Matthew I. Kahal, at 16.

44 Exhibit MIK-3, at 1.

1 Duff & Phelps notes that as of December 2017, Beta coefficients for A-rated debt was
2 0.04,⁴⁵ far below the equity Beta coefficient assumed by Mr. Kahal. In fact, debt Beta
3 coefficients in the range of 0.69 to 0.73 are associated with Caa rated debt, which is
4 considered below investment grade.⁴⁶ Those differences are a clear indication that
5 the risks assumed by debt investors are far different than those assumed by utility
6 equity investors, even though both are related – to some degree – to market forces.

7

8 **B. Application of the DCF Model**

9 **Q. Please summarize Mr. Kahal's application of the Constant Growth DCF model.**

10 A. Mr. Kahal presents the results of the Constant Growth DCF model based on the
11 Revised Proxy Group discussed above. The dividend yield component of Mr.
12 Kahal's DCF analyses is based on six months of data ending January 31, 2018. For
13 the expected growth rate, Mr. Kahal presents four alternatives: (1) projected
14 earnings growth rates; (2) projected dividend growth rates; (3) projected book value
15 growth rates; and (4) projected sustainable or retained earnings growth rates.⁴⁷ Based
16 on his 4.50 percent sustainable growth estimate and 5.40 percent projected earnings

45 Duff & Phelps *2018 Valuation Handbook*, John Wiley & Sons, Inc., 2018, at Exhibit 5.7 Chapter 5, page 18.

46 *Id.*

47 Direct Testimony of Matthew I. Kahal, at 40-42.

1 growth rate, Mr. Kahal estimates a range of 5.00 percent to 5.50 percent for the
2 growth component of the DCF model.⁴⁸

3
4 Mr. Kahal's projected earnings growth rates are published by CNNfn, Zacks, Reuters,
5 Yahoo! Finance, and Value Line; projected dividend, book value, and retained
6 earnings growth rates are provided solely by Value Line. He suggests that although
7 securities analyst estimates should be considered and given significant weight, those
8 growth rates should be subject to a "reasonableness test".⁴⁹ Mr. Kahal therefore
9 considers dividend and book-value-per-share growth rates, together with retained
10 earnings growth (as provided solely by Value Line) in applying that test of
11 reasonableness.

12

13 **Q. Is the use of analysts' earnings growth projections in the DCF model supported**
14 **by authoritative literature?**

15 A. Yes. Regardless of whether Mr. Kahal believes analysts' growth rate projections
16 require corroboration, the relevant analytical question is whether investors rely on
17 earnings growth rate projections in making their investment decisions. As noted by
18 Dr. Morin:

48 *Id.*, at 42.

49 *Id.*, at 41.

1 Because of the dominance of institutional investors and their influence
2 on individual investors, analysts' forecasts of long-run growth rates
3 provide a sound basis for estimating required returns. Financial
4 analysts exert a strong influence on the expectations of many investors
5 who do not possess the resources to make their own forecasts, that is,
6 they are a cause of g.⁵⁰

7 The use of security analysts' Earnings Per Share growth rate forecasts, therefore,
8 provides the proper match between investors' expectations of market price
9 appreciation, and the growth rate component of the DCF model.

10
11 The relationship between various growth rates and stock valuation metrics has been
12 the subject of much academic research.⁵¹ In a March 1990 speech before the Institute
13 for Quantitative Research and Finance, Myron Gordon recognized the significance of
14 analysts' Earnings Per Share forecasts:

15 We have seen that earnings and growth estimates by security analysts
16 were found by Malkiel and Cragg to be superior to data obtained from
17 financial statements for the explanation of variation in price among
18 common stocks[...] estimates by security analysts available from
19 sources such as IBES are far superior to the data available to Malkiel
20 and Cragg.

21 * * *

22 Eq (7) is not as elegant as Eq (4), but it has a good deal more
23 intuitive appeal. It says that investors buy earnings, but what they
24 will pay for a dollar of earnings increases with the extent to which

50 *Id.*, at 298.

51 *See e.g.*, Harris, Robert, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management, Spring 1986.

1 the earnings are reflected in the dividend or in appreciation through
2 growth.⁵²

3
4 Professor Gordon recognized that the total return is largely affected by the terminal
5 price, which mostly is affected by earnings (for example, in the context of
6 Price/Earnings multiples). Subsequent academic research clearly and consistently has
7 indicated that measures of earnings and cash flow are related strongly to returns and
8 that analysts' forecasts are superior to other measures of growth in explaining stock
9 prices.⁵³ For example, Vander Weide and Carleton state that, "[our] results...are
10 consistent with the hypothesis that investors use analysts' forecasts, rather than
11 historically oriented growth calculations, in making stock buy-and-sell decisions."⁵⁴

12
13 Other research specifically notes the importance of analysts' growth estimates in
14 determining the Cost of Equity, and in the valuation of equity securities. Dr. Robert
15 Harris noted that "a growing body of knowledge shows that analysts' earnings
16 forecasts are indeed reflected in stock prices." Citing Cragg and Malkiel, Dr. Harris
17 notes that those authors "found that the evaluations of companies that analysts make

52 Myron J. Gordon, *The Pricing of Common Stocks, Presented before the Spring 1990 Seminar*, March 27, 1990 of the Institute for Quantitative Research in Finance, Palm Beach FL., at 12, 14.

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

54 Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management, Spring 1988, at 81.

1 are the sorts of ones on which market valuation is based.”⁵⁵ Similarly, Brigham,
2 Shome and Vinson noted that “evidence in the current literature indicates that (i)
3 analysts’ forecasts are superior to forecasts based solely on time series data, and (ii)
4 investors do rely on analysts’ forecasts.”⁵⁶

5

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

12

13 Studies performed by Cragg and Malkiel⁵⁷ demonstrate that analysts’ forecasts are
14 superior to historical growth rate extrapolations. Although some question the
15 accuracy of analysts’ projections, it does not matter well after the fact whether those
16 forecasts were accurate, or not. What matters is the forecasts reflect widely-held

55 Robert S. Harris, Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rate of Return, Financial Management, Spring 1986, at 59.

56 Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility’s Cost of Equity*, Financial Management, Spring 1985, at 36.

57 John G. Cragg, and Burton G. Malkiel, Expectations and the Structure of Share Prices (University of Chicago Press, 1982) Chapter 4.

1 expectations influencing investors at the time they make asset pricing decisions, *i.e.*,
2 the market prices investors are willing to pay.

3

4 **Q. Do you agree with Mr. Kahal's proposed consensus earnings growth rate**
5 **estimates?**

6 A. Although our sources of consensus estimates differ, the mean results generally are
7 consistent.

8

9 **Q. Do you agree with Mr. Kahal that dividend and book value growth rates are**
10 **appropriate measures of expected growth for the Constant Growth DCF**
11 **model?**⁵⁸

12 A. No. As noted in my Direct Testimony, to reduce growth to a single measure, it is
13 necessary to assume a fixed payout ratio and a constant growth rate for Earnings Per
14 Share, Dividends Per Share, and Book Value Per Share.⁵⁹ As Rebuttal Schedule
15 RBH-8 illustrates, under the Constant Growth DCF model's strict assumptions,
16 earnings, dividends, book value, and stock prices all grow at the same, constant rate
17 in perpetuity.

18

58 See Direct Testimony of Matthew I. Kahal, at 41.

59 See Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 30.

1 Simply, earnings are the fundamental driver of both book value and dividend growth.
2 Book value increases with the amount of earnings not distributed as dividends (that is,
3 retained earnings), and the price at which new equity is issued is a function of the
4 Earnings Per Share and the then-current Price/Earnings ratio. Similarly, the ability to
5 pay dividends depends fundamentally on expected earnings.⁶⁰ Because dividend
6 policy contemplates additional factors, including the disproportionately negative
7 effect on prices resulting from dividend cuts, as opposed to dividend increases,⁶¹ in
8 the short-run dividend growth may be somewhat disconnected from earnings growth.
9 In the long-run, however, dividends cannot be increased without earnings growth.
10 That being the case, and knowing that the Price/Earnings ratio is a principal measure
11 of market valuation, it is reasonable to conclude that investors are focused on
12 earnings growth in forming their investing decisions.

13

14 Lastly, Value Line is the only service on which Mr. Kahal relies that provides
15 Dividends Per Share, Book Value Per Share, or Sustainable Growth projections. To
16 the extent earnings projections services such as Zacks and First Call represent
17 consensus estimates, the results are less likely to be skewed in one direction or
18 another as a result of an individual analyst.

60 See Id; Jing Liu, Doron Nissim, and Jacob Thomas, Is Cash Flow King in Valuations?, *Financial Analysts Journal*, Volume 63, Number 2, 2007.

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

1 **Q. Have you conducted any analyses to determine which measures of growth are**
2 **statistically related to the company stock valuation levels?**

3 A. Yes. My analysis is based on the methodological approach used by Professors
4 Carleton and Vander Weide, who (as noted earlier) compared the predictive
5 capability of historical growth estimates and analysts' forecasts on the valuation
6 levels of sixty-five utility companies.⁶² I structured the analysis to understand
7 whether projected earnings, dividend, or book value growth rates best explain utility
8 stock valuations. In particular, my analysis examined the statistical relationship
9 between the Price/Earnings ratios of companies found in the Value Line Electric and
10 Gas Universe, and the projected Earnings Per Share, Dividends Per Share, and Book
11 Value Per Share reported by Value Line. To determine which, if any, of those growth
12 rates are statistically related to utility stock valuations, I performed a series of
13 regression analyses in which the projected growth rates were explanatory variables
14 and the Price/Earnings ratio was the dependent variable. The results of those analyses
15 are presented in Rebuttal Schedule RBH-9.

16
17 In that analysis, I performed three separate regressions with the Price/Earnings ratio
18 as the dependent variable, and projected Earnings Per Share, Dividends Per Share,
19 and Book Value Per Share growth rates, respectively, as the independent variable. I
20 also performed a single regression with the Price/Earnings ratio as the dependent

62 *Id.*

1 variable and projected Earnings Per Share, Dividends Per Share, and Book Value Per
2 Share growth rates as the independent variables. I then reviewed the T- and F-
3 Statistics to determine whether the variables and equations were statistically
4 significant.⁶³

5
6 **Q. What did those analyses reveal?**

7 A. As shown in Rebuttal Schedule RBH-9, the only growth rate that was statistically
8 significant and positively related to the Price/Earnings ratio was projected Earnings
9 Per Share.⁶⁴ Because projected Earnings Per Share growth is the only growth rate
10 that is both statistically and positively related to utility valuation, projected earnings
11 is the proper measure of growth in the Constant Growth DCF Model.

12
13 **Q. What are your conclusions regarding Mr. Kahal's DCF analysis?**

14 A. Mr. Kahal's 8.50 percent DCF (midpoint) result is an unreasonably low estimate of
15 the Company's ROE and should be given no weight in determining the Company's
16 ROE. Putting aside the fact that his analysis relies on data through the end of January

63 In general, a T-Statistic of 2.00 or greater indicates that the variable is likely to be different than zero, or "statistically significant." The F-Statistic is used to determine whether the model as a whole has statistically significant predictive capability.

64 In the fourth regression scenario with the three growth rates combined as independent variables, the coefficient for both projected dividend growth and projected book value growth was negative, indicating an inverse relationship such that an *increase* in dividend growth was related to a *decrease* in the Price/Earnings ratio. Additionally, neither variable was statistically significant.

1 2018 and does not reflect the more recent market changes discussed in Section III, it
2 is important to recognize the continuing dissonance between the model’s underlying
3 assumptions and prevailing market conditions. That being the case, it remains
4 important to consider other methods used in practice to estimate the Cost of Equity.

5

6 **C. Application of the Multi-Stage DCF Model**

7 **Q. Do you agree with Mr. Kahal’s assertion that the assumptions in your multi-**
8 **stage DCF model are based on your “subjective judgment” that may have “little**
9 **to do with investor expectations”?**⁶⁵

10 A. No. As Mr. Kahal notes, the growth rates used in the first stage of the DCF model are
11 based on securities analysts’ estimated earnings growth rates. The second stage is a
12 transition period from the first stage to the third stage; the third stage assumes
13 dividends will grow at the nominal GDP growth rate.⁶⁶ The sources for the third stage
14 GDP growth rate are verifiable and include the historical change in real GDP as
15 published by the Bureau of Economic Analysis, and the expected inflation rate
16 calculated as the average of (1) the spread on Treasury Inflation Protected Securities
17 (TIPS) as reported by the Federal Reserve Bank, and (2) *Blue Chip Financial*
18 *Forecast* projected Consumer Price Index for 2024-2028.⁶⁷ The remaining inputs

65 Direct Testimony of Matthew I. Kahal, at 55.

66 The model also relies on projected payout ratios for the proxy companies as reported by Value Line and the industry average dividend payout ratio for 1990 through December 2017 as reported by Bloomberg Professional.

67 See Pre-Filed Direct Testimony of Robert B. Hevert at Bates Page 46.

1 include market prices, dividends, and payout ratios that are reported by either
2 Bloomberg or Value Line. The model's inputs therefore are observable, verifiable
3 data considered by investors in making their investing decisions.

4

5 **Q. What is the basis of Mr. Kahal's concern with your assumed long-term growth**
6 **rate based on expected Gross Domestic Product (GDP) growth?**

7 A. Mr. Kahal argues that "the consensus forecast and investor expectations for long-run
8 nominal GDP growth is at least a full percentage point lower – probably in the range
9 of about 4.0 to 4.5 percent."⁶⁸ Despite that concern, Mr. Kahal's 8.50 percent ROE
10 recommendation assumes a perpetual growth rate of 5.00 to 5.50 percent, which is
11 consistent with the 5.36 percent terminal growth rate in my Multi-Stage DCF
12 analysis.⁶⁹ If Mr. Kahal's DCF analysis were to be constrained by his view of long-
13 term growth, his result would be no higher than 7.71 percent, 79 basis points below
14 his recommendation.⁷⁰

15

68 Direct Testimony of Matthew I. Kahal, at 56.

69 See Schedule MIK-4, at 1. Mr. Kahal's 8.50 percent ROE recommendation is based on the midpoint of his Constant Growth DCF analysis. Both the Constant Growth DCF growth rate and the terminal growth rate in my Multi-Stage DCF analysis are assumed constant in perpetuity.

70 $7.71\% = (3.14\% \times (1.0225)) + 4.5\%$. 3.14% is based on Mr. Kahal's dividend yield, as provided in his Schedule MIK-4, page 1 of 5.

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

3 A. Yes. Dr. Morin, for example, notes “[i]t is useful to remember that eventually all
4 company growth rates, especially utility services growth rates, converge to a level
5 consistent with the growth rate of the aggregate economy.”⁷¹ Morningstar also
6 describes an approach for calculating the long-term growth estimate that is similar to
7 the approach in my model.⁷² As with my approach, Morningstar’s method combines
8 the historical average real GDP growth rate with a measure of inflation calculated
9 using the TIPS spread.⁷³

10
11 **Q. Do the *Blue Chip* forecasts provided by Mr. Kahal demonstrate that your**
12 **estimated GDP growth rate is “overstated”⁷⁴?**

13 A. No, they do not. The important distinction between the *Blue Chip* forecasts of long-
14 term GDP growth discussed by Mr. Kahal and my long-term growth rate is their
15 respective forecast horizons. The terminal growth rate in the Multi-Stage DCF Model
16 should reflect the long-term (perpetual) projected GDP growth rate beginning in the
17 terminal year, not a current projection through the terminal year. As Mr. Kahal points

71 Roger A. Morin, New Regulatory Finance, Public Utilities Report, Inc., 2006, at 308.

72 See Ibbotson SBBI 2013 Valuation Yearbook, Morningstar, Inc., at 50-52.

73 Implied Expected Nominal GDP = ((1 + Historical Real GDP Growth) x (1 + Implied Forward Inflation)) – 1, or 5.36% = ((1 + 3.22%) x (1 + 2.09%)) - 1. See Direct Testimony of Robert B. Hevert, at Bates Page 46.

74 Direct Testimony of Matthew I. Kahal, at 57.

1 out, *Blue Chip*'s March 2018 consensus forecasts project nominal GDP growth "over
2 the next ten years."⁷⁵ The *Blue Chip* forecasts therefore do not apply to the terminal
3 period in the Multi-Stage DCF model.⁷⁶ Because we cannot use the *Blue Chip*
4 forecasts for the terminal growth rate, it is reasonable to assume that over the long-
5 run, real GDP growth will revert to its long-term average.⁷⁷

6

7 As to Mr. Kahal's reference to an assumed 4.36 percent nominal GDP growth rate⁷⁸,
8 Charts 4 and 5 below demonstrate that over time, growth rates that low have been
9 infrequent. When measured over five-year periods, average annual GDP growth
10 exceeded 4.36 percent in 70 of 84 periods. The same conclusion holds when growth
11 is measured over ten-year periods; the average annual GDP growth rate was greater
12 than 4.36 percent in 68 of 79 periods. Consequently, I disagree that my 5.36 percent
13 terminal growth rate is overstated.

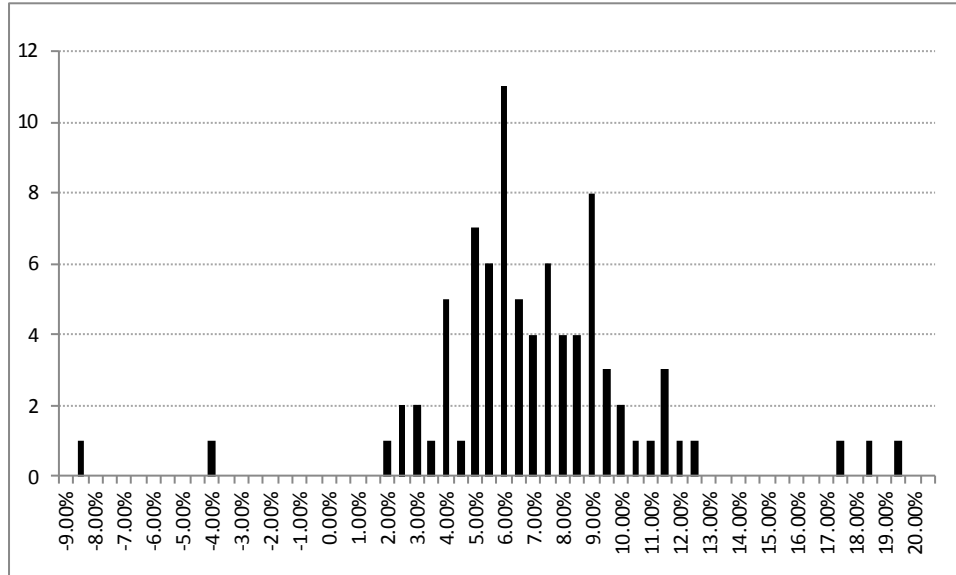
75 Direct Testimony of Matthew I. Kahal, at 57.

76 Updated in my Rebuttal Schedule RBH-3.

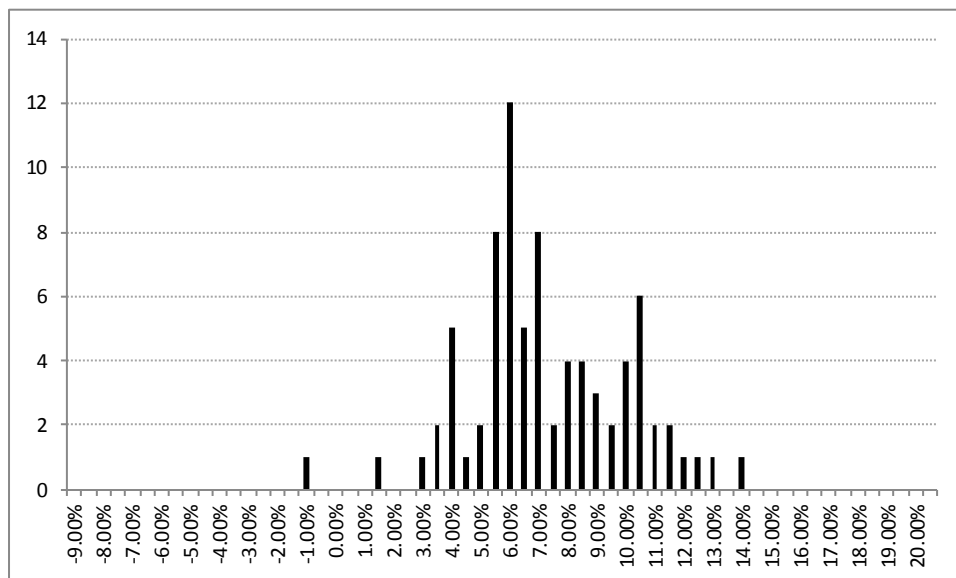
77 There is no statistically significant trend in the residual values of a regression of real GDP growth on time. Source: Bureau of Economic Analysis.

78 See Direct Testimony of Matthew I. Kahal, at 57.

1 **Chart 4: Average Annual GDP Growth Measured over Five-Year Periods⁷⁹**



2
3
4 **Chart 5: Average Annual GDP Growth Measured over Ten-Year Periods⁸⁰**



79 Source: Bureau of Economic Analysis.

80 Source: Bureau of Economic Analysis.

1 **Q. What is Mr. Kahal’s concern with the Terminal Price/Earnings approach to**
2 **your Multi-Stage DCF analysis?**

3 A. Mr. Kahal argues the Terminal Price/Earnings approach to my Multi-Stage DCF
4 analysis is “unsupported and completely unrealistic.”⁸¹ I disagree. As explained in
5 my Direct Testimony, a fundamental assumption underlying the Constant Growth
6 DCF model is that the Price/Earnings ratio remains constant in perpetuity.⁸²
7 Consistent with that assumption, I calculated the terminal value in the Multi-Stage
8 DCF analysis based on the current Price/Earnings ratio.⁸³ If Mr. Kahal believes his
9 Constant Growth DCF method produces results that are so reasonable that they form
10 the basis of his ROE recommendation, he should have no concern with my approach.
11 Mr. Kahal cannot support the low Constant Growth DCF estimates that result from
12 abnormally high Price/Earnings ratios while criticizing the same assumption in my
13 Multi-Stage DCF model.

81 Direct Testimony of Matthew I. Kahal, at 58.

82 Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 40.

83 The current Price/Earnings ratio is calculated as the 30-day average Price/Earnings ratio for the proxy group, calculated as an index, as reported by S&P Global Market Index. Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 47.

1 **D. Application of the CAPM and ECAPM Models**

2 **Q. Please briefly summarize Mr. Kahal’s CAPM analyses.**

3 A. Mr. Kahal’s CAPM analyses assumes a risk-free rate based on the six-month average
4 of the 30-year Treasury yield of 3.00 percent; a Beta coefficient of 0.72 based on a
5 range of Value Line’s Beta coefficients for his proxy companies of 0.50 to 0.95; and a
6 generic Market Risk Premium (MRP) range of 5.00 to 8.00 percent.⁸⁴ He notes there
7 is a great deal of disagreement among analysts regarding the MRP and cites a finance
8 textbook by Brealey, Myers and Allen to support his suggested range. Based on
9 those assumptions, Mr. Kahal’s CAPM analyses produce ROE estimates from 6.60
10 percent to 8.80 percent, with a midpoint of 7.70 percent.⁸⁵ Although he also
11 calculates a “high sensitivity” CAPM estimate of 9.50, assuming an MRP of 9.00
12 percent,⁸⁶ Mr. Kahal believes “the CAPM currently produces cost of equity results
13 that are somewhat lower than normal,” and gives little weight to those estimates.⁸⁷

14
15 **Q. Do you agree with Mr. Kahal’s CAPM analysis?**

16 A. Although I appreciate that Mr. Kahal chose not to give much weight to his CAPM
17 results, there are certain aspects of his analysis with which I disagree, including: (1)

84 Direct Testimony of Matthew I. Kahal, Schedule MIK-5.

85 *Id.*, at 51-52

86 See Direct Testimony of Matthew I. Kahal, Schedule MIK-5, at 1.

87 *Id.*, at 9-10.

1 his range of assumed MRP; and (2) the estimated Returns on Equity that result from
2 his analysis.

3

4 **Q. Please explain how Mr. Kahal establishes an MRP range of 5.00 percent to 8.00**
5 **percent.**

6 A. Mr. Kahal relies on a range established in Principles of Corporate Finance, by
7 Brealey, Myers, and Allen, noting that the range of 5.00 percent to 8.00 percent is
8 specified relative to short-term U.S. Treasury Bill yields, not long-term U.S. Treasury
9 bonds. Mr. Kahal also notes that short-term U.S. Treasury bill yields recently have
10 been near zero, and, as such, the CAPM cannot be specified using short-term yields.
11 He concludes that because the MRP range was established relative to short-term rates,
12 which are near zero, the use of that range may overstate the CAPM results if used
13 with the long-term U.S. Treasury rate as the risk-free rate.⁸⁸

14

15 **Q. Does Mr. Kahal's MRP estimate reflect current and expected market**
16 **conditions?**

17 A. No. Mr. Kahal's source for his MRP estimates (*i.e.*, the 8th Edition of the Principles
18 of Corporate Finance) was first published in 2006. By relying on a range of risk
19 premia that were published then, Mr. Kahal has ignored current market conditions

88 *Id.*, 52.

1 and the effect of those conditions on the required *ex-ante* MRP. As Morningstar
2 observes:

3 It is important to note that the expected equity risk premium, as it is
4 used in discount rates and cost of capital analysis, is a forward-looking
5 concept. That is, the equity risk premium that is used in the discount
6 rate should be reflective of what investors think the risk premium will
7 be going forward.⁸⁹

8 That is why my MRP estimates specifically rely on market-based data to estimate the
9 expected Market Risk Premium. The relevant analytical issue in the application of
10 the CAPM is that all three components of the model (i.e., the risk-free rate, Beta
11 coefficient, and the MRP) are consistent with current market conditions and investor
12 perceptions.

13
14 **Q. What is your response to Mr. Kahal's assertion that your Market Risk Premium**
15 **estimate is unrealistic?**⁹⁰

16 A. Mr. Kahal's conclusion that the expected market returns on which the *ex-ante* MRP
17 estimates rely are "unrealistic" is incorrect. To put those expected returns in context,
18 the arithmetic mean total return on large company stocks for the period 1926 to 2017
19 was 12.06 percent,⁹¹ less than two percentage points from my estimates. Because
20 market returns historically have been volatile, with a standard deviation of nearly

89 Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills, and Inflation Valuation Yearbook, at 53.

90 Direct Testimony of Matthew I. Kahal, at 51.

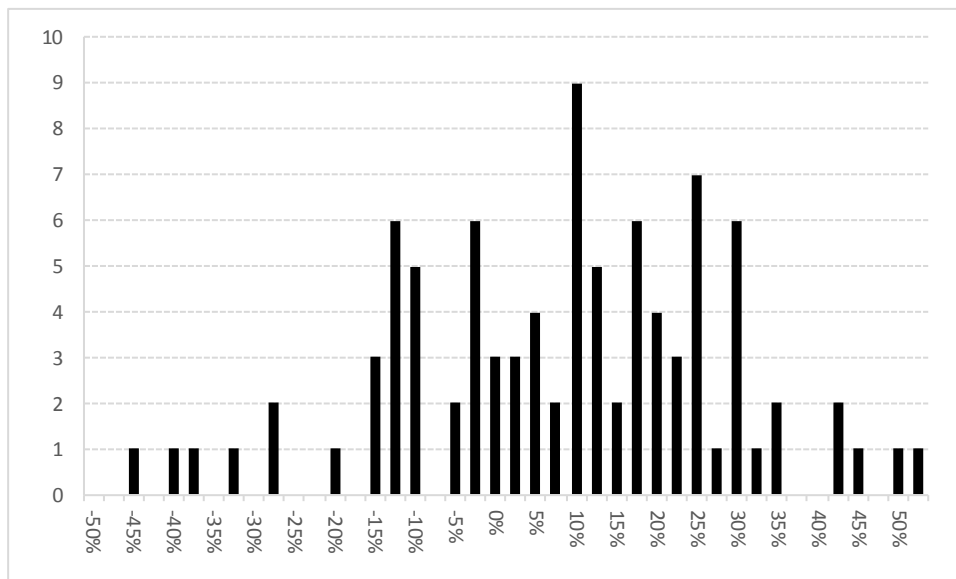
91 Duff and Phelps, 2018 SBBI Yearbook, Large Company Stocks: Appendix A-1.

1 20.00 percent, my market return estimates are statistically indistinguishable from the
2 long-term arithmetic average.

3
4 **Q. Did you consider where your MRP estimates fall within the range of historical**
5 **observations?**

6 A. Yes, I did. Chart 6 below demonstrates that, since 1926, Market Risk Premia of at
7 least 11.49 percent (the highest of MRP estimates in my Direct Testimony) have
8 occurred approximately half the time. Based on that data, I do not believe my
9 estimates are unreasonable.

**Chart 6: Frequency Distribution of Observed Market Risk Premia,
1926 - 2017⁹²**



92 Rebuttal Schedule RBH-10.

1 **Q. What are your conclusions regarding Mr. Kahal’s CAPM analysis?**

2 A. As a practical matter, Mr. Kahal gave his CAPM analysis limited weight in this
3 proceeding. I agree with Mr. Kahal that his CAPM results are unreasonably low and
4 should be given no weight.

5
6 **Q. What are Mr. Kahal’s concerns regarding your Empirical CAPM analysis?**

7 A. Mr. Kahal takes exception to the fact that I did not present the Empirical CAPM
8 analysis in the Company’s last rate case and argues that the Empirical CAPM is
9 “improper” because the Beta coefficients applied in the analysis already adjust for the
10 “tendency of Betas to drift toward 1.0 over time.”⁹³

11
12 **Q. What is your response to Mr. Kahal on those points, and to his recommendation**
13 **that the Commission reject your Empirical CAPM analysis?**

14 A. Mr. Kahal’s principal argument seems to be that the Empirical CAPM addresses Beta
15 coefficients’ tendency to regress toward the market mean and, that in his view, no
16 such adjustment is needed.⁹⁴ Nowhere in my Direct Testimony, however, do I say the
17 purpose of the ECAPM is adjust for that regression tendency. Rather, my Direct
18 Testimony quite clearly states:

19 The Empirical CAPM addresses the tendency of the CAPM to under-
20 estimate the Cost of Equity for companies with low Beta coefficients

93 Direct Testimony of Matthew I. Kahal, at 59-60.

94 Direct Testimony of Matthew I. Kahal, at 61.

1 such as regulated utilities. In that regard, the Empirical CAPM is not
2 redundant to the use of adjusted Beta coefficients. Rather, it
3 recognizes the results of academic research indicating that the risk-
4 return relationship is different (in essence, flatter) than estimated by
5 the CAPM, and that the CAPM under-estimates the “alpha”, or the
6 constant return term.⁹⁵

7 This is an important distinction that Mr. Kahal does not seem to recognize. At page
8 61 of his testimony, Mr. Kahal incorrectly states that “...the argument for the
9 Empirical CAPM is the asserted tendency of stock betas to move to a market average
10 of 1.0, implying that observed betas overstate or understate risk.” Mr. Kahal is
11 incorrect; as explained above, the Empirical CAPM does not address that regression
12 tendency. Rather, it is the “Blume” adjustment reflected in Value Line Beta
13 coefficients that does so, a point Mr. Kahal acknowledges at page 60 of his testimony.
14 Consequently, the regression tendency that Mr. Kahal rejects⁹⁶ is acknowledged by
15 and reflected in the Value Line Beta coefficients he relies on in assessing the
16 comparability of his proxy companies⁹⁷ and in his CAPM analysis.⁹⁸

17
18 To be clear, using adjusted Beta coefficients in the Empirical CAPM does not
19 “constitute a double count”, as Mr. Kahal asserts. As noted by Dr. Morin:

20 Some have argued that the use of the ECAPM is inconsistent with the
21 use of adjusted betas, such as those supplied by Value Line and

95 Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 56.

96 At page 61, Mr. Kahal states “Utility risk and betas simply do not “drift” or regress toward the market
beta of 1.0.”

97 See Schedule MIK-3, Page 1 of 1.

98 See Schedule MIK-5, Page 1 of 2.

1 Bloomberg. This is because the reason for using the ECAPM is to
2 allow for the tendency of betas to regress toward the mean value of
3 1.00 over time, and, since Value Line betas are already adjusted for
4 such trend [sic], an ECAPM analysis results in double-counting. This
5 argument is erroneous. Fundamentally, the ECAPM is not an
6 adjustment, increase or decrease, in beta. This is obvious from the fact
7 that the expected return on high beta securities is actually lower than
8 that produced by the CAPM estimate. The ECAPM is a formal
9 recognition that the observed risk-return tradeoff is flatter than
10 predicted by the CAPM based on myriad empirical evidence. The
11 ECAPM and the use of adjusted betas comprised two separate features
12 of asset pricing. Even if a company's beta is estimated accurately, the
13 CAPM still understates the return for low-beta stocks. Even if the
14 ECAPM is used, the return for low-beta securities is understated if the
15 betas are understated. Referring back to Figure 6-1, the ECAPM is a
16 return (vertical axis) adjustment and not a beta (horizontal axis)
17 adjustment. Both adjustments are necessary.^{99 100}

18 As to the empirical motivation for the Empirical CAPM, academic studies have
19 shown the CAPM to under-estimate the Cost of Equity for companies with low Beta
20 coefficients, including utilities. As discussed in my Direct Testimony,¹⁰¹ the
21 Empirical CAPM reflects the finding that the actual Security Market Line (SML)
22 described by the CAPM formula is not as steeply sloped as the predicted SML.
23 Fama and French state that "[t]he returns on the low beta portfolios are too high, and
24 the returns on the high beta portfolios are too low."¹⁰² Similarly, Dr. Morin states:

99 *Id.*, at 191.

100 In addition to Dr. Roger Morin's textbook, New Regulatory Finance, Public Utilities Reports, Inc., 2006 that I cite in my Direct Testimony in support of the ECAPM approach, at least one additional peer-reviewed academic study supports the use of adjusted Beta coefficients in an ECAPM analysis: Robert Litzenberger, Krishna Ramaswamy, and Howard Sosin, "On the CAPM Approach to the Estimation of A Public Utility's Cost of Equity Capital", *The Journal of Finance*, Vol. XXXV, No. 2, May 1980.

101 See Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 56.

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

1 With few exceptions, the empirical studies agree that ... low-beta
2 securities earn returns somewhat higher than the CAPM would predict,
3 and high-beta securities earn less than predicted.¹⁰³

4
5 **Q. Have you undertaken your own analyses to determine whether the CAPM is**
6 **likely to under-estimate returns for low-Beta coefficient companies, even if**
7 **adjusted Beta coefficients are used?**

8 A. Yes. I compared the actual return of the S&P 500 companies to that predicted by the
9 CAPM and calculated the difference to determine the “excess return” (that is, actual
10 returns exceeding the CAPM-predicted return). I then analyzed the excess return by
11 Beta coefficient decile¹⁰⁴ over the ten years ended 2016. That analysis supported the
12 finding that lower Beta coefficient stocks tend to earn higher returns than those
13 predicted by the CAPM, whereas higher Beta coefficient stocks earn lower returns.
14 Chart 7 below summarizes those results (*see also* Rebuttal Schedule RBH-11). As
15 Chart 7 demonstrates, the excess return is positive¹⁰⁵ for the lower Beta coefficient
16 deciles, whereas the excess return is negative for the higher Beta coefficient deciles.
17 The relationship between excess return and Beta coefficient deciles is strong, with
18 deciles explaining nearly 80.00 percent of the Excess Return. Chart 7 also notes that

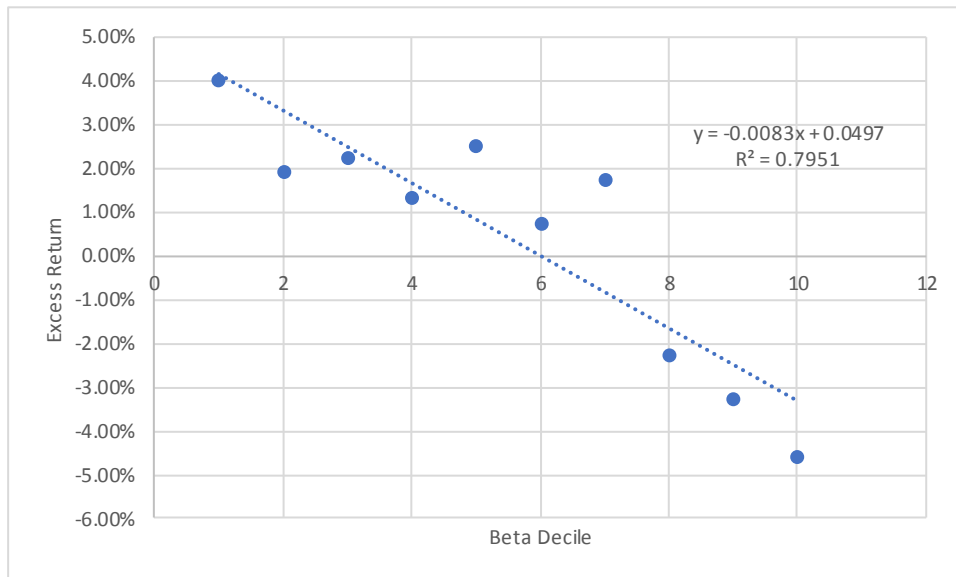
103 Roger A. Morin, New Regulatory Finance (Public Utility Reports, Inc., 2006), at 175 and 190.

104 That is, Beta coefficients in the 1st decile are the Beta coefficients in the bottom 10.00 percent of all Beta coefficients for the S&P 500 Index companies. As shown in Rebuttal Schedule RBH-11, for 2016, the Beta coefficients in the 1st decile range from 0.34 to 0.72. The 2nd decile includes Beta coefficients in the range of 0.71 to 0.81. These ranges are consistent with the proxy companies’ Beta coefficients.

105 That is, the earned return is greater than the return predicted by the CAPM.

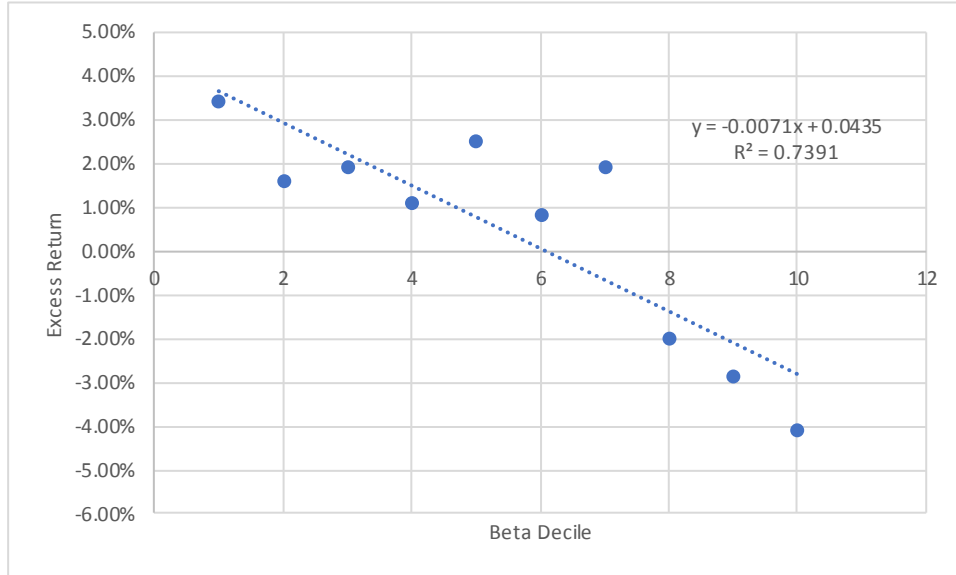
1 at the 6th decile, the expected excess return is approximately zero, suggesting
2 companies with Beta coefficients that are neither relatively large nor relatively small
3 see no excess returns.

4 **Chart 7: Excess Return by Beta Decile (CAPM)**



5
6
7 Using the same data and performing the same analysis by reference to the Empirical
8 CAPM (as defined at Bates Page 55 of my Direct Testimony), produces the same
9 downward sloping relationship, but not to the same degree (see Chart 8, below).

Chart 8: Excess Return by Beta Decile (Empirical CAPM)



There are three observations to be drawn from the data presented in Charts 7 and 8. First, under the Empirical CAPM the slope coefficient falls somewhat, suggesting a flatter relationship between Beta coefficient deciles and the excess return. The flatter slope moves closer to the point at which the excess return is zero across all deciles. Second, the excess return values are somewhat moderated under the Empirical CAPM; the high excess returns are lower than under the CAPM, and the low excess returns are higher. Again, that finding suggests the Empirical CAPM mitigates, but does not solve the issue of the CAPM underestimating returns for low Beta coefficient firms. Third, the point at which the excess return is zero remains at the sixth decile, indicating that firms with Beta coefficients toward the middle of the range earn the expected return.

1 In summary, Charts 7 and 8 support the position that the CAPM tends to
2 underestimate returns for low-Beta coefficient firms, even when adjusted Beta
3 coefficients are used. Although the Empirical CAPM moderates that effect to some
4 extent, it does not appear to eliminate it. Consequently, Mr. Kahal's assertions are
5 incorrect and should be disregarded.

6

7 **Q. Has the Empirical CAPM methodology been accepted in other jurisdictions?**

8 A. Yes. In my experience the Empirical CAPM (sometimes referred to as the "zero-
9 beta" Capital Asset Pricing Model) has been accepted in prior rate cases in Alaska,
10 Mississippi, and New York. Additionally, the Empirical CAPM has been presented
11 in prior rate cases by state regulatory commission staff in Maryland and Nevada, as
12 well as by the Department of Commerce in Minnesota.¹⁰⁶

13

14 **E. Relevance and Application of Bond Yield Plus Risk Premium**
15 **Approach**

16 **Q. Mr. Kahal asserts that the Bond Yield Plus Risk Premium analysis should not be**
17 **relied on in this proceeding. Do you agree?**

18 A. No, I do not. Mr. Kahal's principal argument is that "commission allowed returns
19 cannot be assumed to be the same thing as the market Cost of Equity"¹⁰⁷; he does not

106 See Response to PUC-3-19.

107 Direct Testimony of Matthew I. Kahal, at 63.

1 see that approach as a “true cost of equity method.”¹⁰⁸ I disagree. In my practical
2 experience working with clients contemplating investments in utility companies,
3 investors often frame their return expectations and requirements, at least in part, by
4 reference to Returns on Equity authorized in other jurisdictions. That makes sense,
5 given that (as noted in my Direct Testimony) the Cost of Equity is an opportunity cost
6 reflecting the returns available on alternative investments of comparable risk. The
7 fact that authorized returns are important to investors is made clear by the fact that
8 they are frequently disclosed in utility SEC Forms 10-K.¹⁰⁹

9

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

109 *Id.*

109 *See e.g.*, American Electric Power Company, Inc., SEC Form 10-K for the year ended December 31, 2017, at 4; Ameren Corporation, SEC Form 10-K for the year ended December 31, 2017, at 7; Otter Tail Corporation, SEC Form 10-K for the year ended December 31, 2017, at 10-16.

1 Plus Risk Premium analysis is relevant to this proceeding and should be considered in
2 setting the Company's ROE.

3
4 Further, Mr. Kahal's description of my calculation of the Equity Risk Premium is
5 inaccurate and should be corrected. He asserts that I calculate the historical Equity
6 Risk Premium as "the average state commission allowed return on equity in a given
7 calendar quarter minus the prevailing yield on 30-year Treasury bonds in that same
8 quarter."¹¹⁰ As explained in my Direct Testimony, I gathered data from 1,522 electric
9 utility and 1,063 natural gas utility rate proceedings between January 1, 1980 and
10 October 13, 2017, and calculated the difference between the authorized ROE and the
11 prevailing level of long-term (i.e., 30-year) Treasury yields *for each rate case* as the
12 Equity Risk Premium.¹¹¹ That approach allows the analysis to more accurately
13 capture changes in the Equity Risk Premium relative to changes in interest rates. As
14 discussed below, the regression analyses' high degree of statistical significance and
15 explanatory value clearly demonstrates the validity of the approach.

110 Direct Testimony of Matthew I. Kahal, at 62.

111 As explained in my Direct Testimony, to reflect the prevailing level of interest rates during each proceeding, I calculated the average 30-year Treasury yield over the average lag period (approximately 201 days for electric rate cases, and 187 days for natural gas rate cases). *See* Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 58. Updated in Rebuttal Schedule RBH-7.

1 **Q. Is it appropriate to apply the historical average Equity Risk Premium calculated**
2 **in my Bond Yield Plus Risk Premium analysis with current interest rates as Mr.**
3 **Kahal suggests?**

4 A. No. Mr. Kahal states that if the historical average risk premium of about 4.60 percent
5 were combined with the current Treasury yield of 3.10 percent, it would “imply a risk
6 premium-derived cost of equity of just under 8.00 percent.”¹¹² Although the average
7 Equity Risk Premium is provided in Schedule RBH-8 of my Direct Testimony, it is
8 never used as a basis for my ROE recommendation. That is because applying the
9 average Equity Risk Premium ignores the inverse relationship between the Equity
10 Risk Premium and the Treasury yield. If Mr. Kahal prefers to apply the historical
11 average Equity Risk Premium, he also should apply the historical average Treasury
12 yield of 8.11 percent (electric Bond Yield Plus Risk Premium analysis) or 7.74
13 percent (gas Bond Yield Plus Risk Premium analysis).¹¹³ Doing so would produce
14 results of 12.69 percent (electric) and 12.33 percent (gas).

15
16 **Q. Mr. Kahal also suggests that a “convincing, logical theory” has not been**
17 **provided in support of the position that the Equity Risk Premium moves**
18 **inversely to changes in rates and as a consequence, it may be “spurious – merely**

112 Direct Testimony of Matthew I. Kahal, at 62.

113 The average 30-year Treasury Yield presented in Schedule RBH-8 over the 1980 – 2017 time period.

1 **a meaningless statistical correlation.”¹¹⁴ What is your response to Mr. Kahal on**
2 **that point?**

3 A. Mr. Kahal is incorrect. Footnote 37 of my Direct Testimony provided citations to
4 three published articles, each of which addressed the relationship that Mr. Kahal
5 argues may be “meaningless” and “spurious”. For example, Brigham, Shome, and
6 Vinson explain that because utility stocks provided a better hedge against inflation
7 than did bonds, when interest rates increased (due to higher inflation expectations),
8 the required return on those stocks increased less than the required return on bonds
9 increased. So, the Equity Risk Premium fell with increasing interest rates.¹¹⁵

10

11 In their review of relevant literature, Maddox, Pippert, and Sullivan, two of whom
12 were in the Division of Economics and Finance at the Virginia State Corporation
13 Commission, noted the same relationship. Maddox, Pippert, and Sullivan also found
14 a statistically significant inverse relationship between interest rates and utility Equity
15 Risk Premiums.¹¹⁶ Harris and Marston note “...investor sentiment about future
16 business conditions likely affects attitudes about the riskiness of equity investments
17 compared to investments in the bond markets” and found that “market equity risk
18 premium change over time and appear inversely related to the level of government

114 Direct Testimony of Matthew I. Kahal, at 63.

115 Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at 43.

116 Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, *An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry*, Financial Management, Autumn 1995, at 90 – 91, 94.

1 interest rates but positively related to the bond yield spread, which proxies for the
2 incremental risk of investing in equity as opposed to government bonds.”¹¹⁷

3

4 Therefore, Mr. Kahal’s assertion is incorrect. The model is supported by convincing,
5 logical underlying theory, and its finding that the Equity Risk Premium is inversely
6 related to interest rates is consistent with long-standing, peer-reviewed research.

7

8 **Q. What is your response to Mr. Kahal’s assertion that the Bond Yield Plus Risk**
9 **Premium model “has virtually no explanatory value”?**¹¹⁸

10 A. As shown in Charts 2a and 2b of my Direct Testimony, my electric utility Bond Yield
11 Plus Risk Premium analysis has an R-squared of 0.73, and the natural gas utility Bond
12 Yield Plus Risk Premium analysis has an R-squared of 0.77. That is, the analysis
13 demonstrates that the change in the 30-year Treasury yield explains approximately
14 73.00 to 77.00 percent of the change in the Equity Risk Premium. Additionally, the t-
15 statistic of the independent variable is greater than 60.00 for both analyses. For
16 reference, a t-statistic of 2.00 generally indicates that the independent variable (in this
17 case, the 30-year Treasury yield) is statistically significant at the 95.00 percent
18 confidence level. A t-statistic of approximately 3.30 indicates that the independent

117 Robert S. Harris and Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts’ Growth Forecasts*, Financial Management, Summer 1992, at 68-69.

118 Direct Testimony of Matthew I. Kahal, at 62-63.

1 variable is statistically significant at the 99.90 percent confidence level. A t-statistic
2 of more than 60.00 is well above those levels. Here again, my analyses, are
3 theoretically sound, supported by previous academic studies, and have significant
4 statistical explanatory value.

5

6 **F. Business Risks**

7 **Q. What is Mr. Kahal's assessment of the Company's risk?**

8 A. Mr. Kahal asserts that the "clear consensus of credit rating agencies" is that the
9 Company is a "low-risk utility company".¹¹⁹

10

11 **Q. What is your response to Mr. Kahal on that point?**

12 A. Regulated utilities are less risky than companies in non-regulated sectors; that issue is
13 not in dispute. That position is captured in the proxy company Beta coefficients,
14 which are less than 1.00. The reasonableness of Mr. Kahal's recommended ROE
15 should be considered relative to other utilities and the financial community's view of
16 utility risk. To that point, the factors on which Moody's rates the Company lowest
17 include "Sufficiency of Rates and Returns," "Market Position," and three of the four
18 financial metrics that measure "Financial Strength."¹²⁰ Moody's also notes that a
19 decrease in the Commission's "overall supportiveness" is a factor that could lead to a

119 Direct Testimony of Matthew I. Kahal, at 10.

120 Market Position relates to the economic diversity of a company's service territory and the diversity of its regulatory regimes. See Moody's Investors Service, Credit Opinion, Narragansett Electric Company, August 9, 2016, at 5, provided in Attachment PUC 1-10-3.

1 downgrade, and that it considers the Company’s regulatory environment to be
2 “tough”, despite its ratemaking mechanisms.¹²¹ In my view, such utility-specific
3 factors do not support Mr. Kahal’s ROE recommendation.

4

5 **Q. What is your response to Mr. Kahal’s assertion that the small size premium is**
6 **not relevant to utilities in general, or to the Company specifically?**

7 A. Mr. Kahal’s concerns are misplaced for several reasons. First, counter to Mr. Kahal’s
8 assertion that the evidence I cited regarding the small size premium pertains only to
9 non-regulated companies, my Direct Testimony included evidence from the
10 investment community and its views on the small size effect for *utilities*.
11 Specifically, I cited an article from an analyst for Ibbotson Associates in which the
12 analyst discussed and analyzed the small size effect as it related to utilities.¹²²

13

14 Second, although Mr. Kahal points to the size of the Company’s parent, National Grid
15 USA, the relevant point of reference is the Company, itself. The Company has
16 approximately 498,000 electric customers,¹²³ 266,000 natural gas customers,¹²⁴ and

121 See Moody’s Investors Service, Credit Opinion, Narragansett Electric Company, August 9, 2016, at 2-3.

122 Direct Testimony of Robert B. Hevert, at Bates Page 62; Michael Annin, *Equity and the Small-Stock Effect*, Public Utilities Fortnightly, October 15, 1995.

123 Source: FERC Form 1 for Year Ended December 31, 2016, at 123.1.

124 *Id.*

1 \$2.39 billion of net electric and gas plant in service.¹²⁵ As discussed in my Direct
2 Testimony, the Company is somewhat smaller than its peers, which implies relatively
3 greater risks for investors.

4

5 In this proceeding, we are evaluating the return required by investors to invest in
6 Narragansett Electric Company, not National Grid USA. That approach is consistent
7 with the standard of stand-alone ratemaking, in which the risk of the subject utility is
8 considered, not that of its parent or affiliates. As explained in my response to Mr.
9 Rábago, the stand-alone principle is meant to ensure ratepayers are funding only the
10 costs required to support regulated operations and are not taking on risks beyond
11 regulated operations. Ratepayers realize the benefits associated with the Company's
12 relationship to National Grid and by virtue of the standalone principle, are insulated
13 from risks beyond the Company's regulated operations.

14

15 Lastly, I note that Duff and Phelps, the publisher of the Valuation Handbook that
16 calculated the size premium deciles used in my analysis, states:

17 The Risk Premium Report Study can be used to develop estimates of cost of
18 equity capital for **divisions, reporting units and closely held**
19 **businesses** without "guessing" at the value of the business before one
20 begins the analysis. Rather, fundamental measures of firm size (e.g.,
21 sales, net income, EBITDA) and risk (e.g., operating margin) can be

125 Source: FERC Form 1 for the year ended December 31, 2016, at 200-201, lines 3, 6, and 18. See Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 24, Table 2.

1 used to directly estimate cost of equity capital for non-public
2 businesses.¹²⁶

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

6
7 **Q. What is your response to Mr. Kahal's assertion there is no basis to support a**
8 **risk premium in connection with the Company's planned capital expenditures?**

9 A. First, I did not make an explicit adjustment to account for a "risk premium," as Mr.
10 Kahal suggests. Rather, I recognized that utilities are capital-intensive enterprises,
11 with an obligation to provide safe and reliable service that is not contingent on market
12 conditions. I appreciate that utilities have an ongoing need to finance long-lived
13 investments regardless of whether capital markets are accommodating or constrained,
14 and I understand that when markets are constrained, only those utilities with
15 sufficient financial strength are able to attract capital at reasonable terms. The ability
16 to attract capital in both accommodating and constrained markets benefits both
17 investors and customers. Those considerations support the reasonableness of my
18 ROE recommendation.

19

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

1 The Company's Power Sector Transformation plan involves significant capital, much
2 of which is non-revenue producing. That is, the investment does not increase the
3 number of customers or sales. Such investments can strain credit metrics because
4 they do not produce the revenue and cash flow to offset the investment. The allowed
5 ROE should enable the subject utility to finance capital expenditures and working
6 capital requirements at reasonable rates, and to maintain its financial integrity even in
7 strained capital market conditions. In my view, Mr. Kahal's ROE recommendation
8 does not support those objectives.

9

10 **Q. What is your response to Mr. Kahal regarding the Company's decoupling and**
11 **cost recovery mechanisms?**

12 A. Mr. Kahal asserts I argue that the Company's ratemaking mechanisms "do not
13 materially reduce a utility's business risk and therefore cost of capital, as compared to
14 'traditional ratemaking' through base rates."¹²⁷ He is incorrect. My Direct
15 Testimony argued that the Company's ratemaking mechanisms do not materially
16 reduce its business risk relative to the proxy group.¹²⁸ Moody's has noted that the
17 Company's ratemaking mechanisms have not reduced its overall regulatory risk,
18 stating:

127 Direct Testimony of Matthew I. Kahal, at 28.

128 See Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 70.

1 Despite the introduction of a number of de-risking provisions, including full
2 revenue decoupling and capital trackers, we view the regulatory
3 environment in Rhode Island as tougher than in some other states due
4 to the RIPUC's history of allowing lower returns than other regulators,
5 and its use of backward-looking test years. Utilities operating under
6 backward-looking test years are generally expected to have more
7 difficulties in recovering their [operating expenses], resulting in a need
8 to file more frequently for a new rate case, a source of regulatory
9 risk...¹²⁹

10 As to Mr. Kahal's concern that not all utilities in the proxy group have decoupling
11 and cost recovery mechanisms "to the same extent as the Company,"¹³⁰ as stated in
12 my Direct Testimony, utilities have implemented various mechanisms and rate design
13 strategies to address regulatory lag, cost recovery, and revenue stability. Because no
14 two companies are identical, regulatory mechanisms adopted to address company-
15 specific issues also are not likely to be identical.¹³¹

16
17 Analysts and investors are concerned with utilities' capacity to meet their fixed
18 obligations; their focus is on whether rate structures support that capacity, rather than
19 differences across rate structures. For example, some jurisdictions address cost
20 recovery through straight fixed variable rate design in which a larger portion of fixed
21 costs are recovered through a higher customer charge, rather than through cost
22 recovery mechanisms. Such rate designs have the effect of reducing revenue

129 Moody's Investors Service, Credit Opinion, Narragansett Electric Company, August 9, 2016, at 3.
Provided in Attachment PUC 1-10-3.

130 Direct Testimony of Matthew I. Kahal, at 29.

131 Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 69.

1 volatility, similar to decoupling. Rebuttal Schedule RBH-12 presents the percentage
2 of residential revenue that is recovered through the residential customer charge for the
3 proxy group operating companies and for the Company.

4

5 As shown in Rebuttal Schedule RBH-12, revenue from the residential customer
6 charge represented approximately 5.00 percent (electric) and 15.70 percent (gas) of
7 the Company's residential operating revenue in 2016, which is below all but two of
8 the electric operating companies, and below all but seven of the gas operating
9 companies. On average, the monthly electric residential customer charge for the
10 operating companies within the proxy group is \$10.75, and represents approximately
11 11.00 percent of total residential operating revenue. For the gas companies, the
12 average monthly residential customer charge is \$13.00 and represents approximately
13 26.00 percent of total residential operating revenue. That is, the proxy group
14 operating companies, on average, collect more of their residential revenue through the
15 monthly fixed customer charge than the Company collects.

16

17 Lastly, although it likely is not possible to accurately determine the portion of
18 revenues covered by the proxy companies' decoupling mechanisms and cost recovery
19 mechanisms from publicly available information, it also is the case that companies
20 are valued on measures of cash flow, not revenue. Therefore, it is possible to look to
21 the variability in measures of cash flow across companies to understand the relative

1 effect of decoupling on measures of risk and assess whether that effect is likely to
2 affect the Cost of Equity.

3
4 **Q. Please explain how the variability of profit relates to decoupling mechanisms**
5 **and measures of risk.**

6 A. The argument that decoupling mechanisms reduce risk stems from the position that
7 decoupling mechanisms reduce revenue volatility. Because revenue can come from
8 various rate structures (*i.e.*, customer charges, volumetric rates, cost recovery
9 mechanisms, decoupling mechanisms, etc.), it is difficult to discern from publicly
10 available data the extent to which decoupling affects changes in revenue. As
11 explained in my Direct Testimony, even if it were the case that revenue stabilization
12 mechanisms mitigate some measure of “risk,” they would affect the Company’s Cost
13 of Equity only if: (1) the effect of the mechanism was to reduce the Company’s risk
14 below that of its peers; and (2) investors knowingly reduced their return requirements
15 as a direct consequence of the mechanisms.¹³² Because rating agencies and investors
16 tend to focus on measures of profit and cash flow, relevant considerations are whether
17 cash flow variability differs across companies and what those differences, if any, may
18 imply for the Cost of Equity.

19

132 Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 74.

1 **Q. Have you performed any analysis of the Company’s profit variability relative to**
2 **the proxy group?**

3 A. Yes, I have. In its discussion of profitability, and how profitability weighs in its
4 assessment of financial risk, S&P notes that it bases “the volatility of profitability on
5 the standard error of the regression (SER) for a company’s historical EBITDA,¹³³
6 EBITDA margins, or return on capital.” Under that approach S&P divides the SER
7 by the average (SER/Average), “to ensure better comparability across companies.”¹³⁴
8 S&P further notes:

9 The SER is a statistical measure that is an estimate of the deviation
10 around a 'best fit' linear trend line. We regress the company's
11 EBITDA, EBITDA margins, or return on capital against time. A key
12 advantage of SER over standard deviation or coefficient of variation is
13 that it doesn't view upwardly trending data as inherently more
14 volatile.¹³⁵

15 Consistent with S&P’s approach, I plotted the proxy group’s¹³⁶ and the Company’s
16 annual EBITDA from 2010 to 2016 and graphed the “best fit” linear trend line. As
17 shown in Chart 9 below, the deviations around the best-fit trend line are similar for
18 the two. In fact, time explains about 98.00 percent of the change in the Proxy
19 Group’s average EBITDA and about 92.00 percent of the change in the Company’s
20 EBITDA. Although the Company’s EBITDA is slightly more variable, there is little
21 difference between the two.

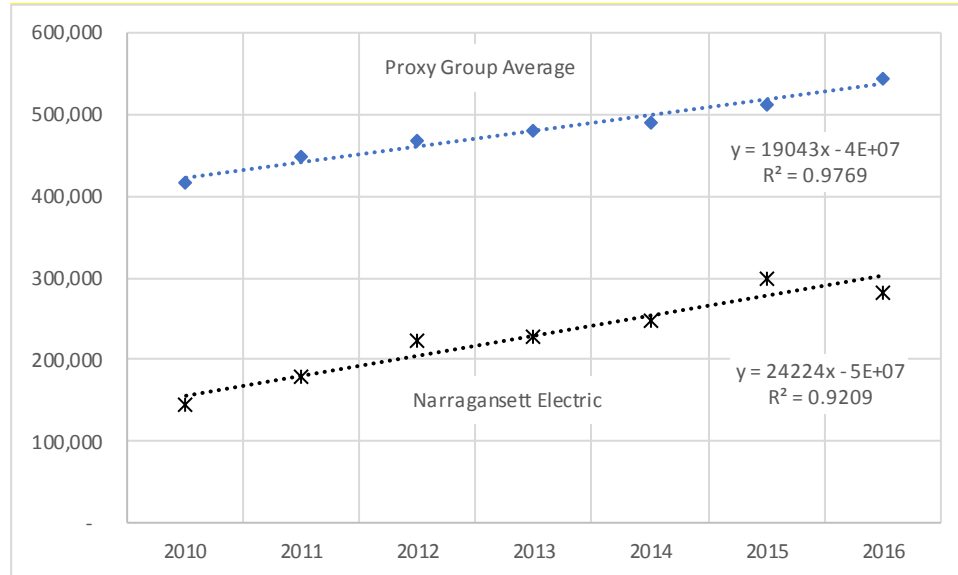
133 Earnings Before Interest, Taxes, Depreciation, and Amortization.

134 Standard & Poor’s RatingsDirect, Corporate Methodology, November 19, 2013, at 27.

135 *Id.*

136 Proxy group average at the operating company level.

Chart 9: Annual EBITDA 2010 – 2017¹³⁷



That observation is consistent with S&P's metric; the Company's ratio of the SER/Average EBITDA (.07) is somewhat above (that is, more variable) the Proxy Group average (.01). On balance, that data suggests the Company is no less risky than its peers.¹³⁸

Q. What conclusion do you draw from those analyses?

A. Mr. Kahal's conclusions regarding the revenue recovery of the Company's rate structures relative to the proxy group are overly simplistic and incomplete. By

¹³⁷ See Rebuttal Schedule RBH-13.

¹³⁸ As shown in Rebuttal Schedule RBH-13, the conclusion also holds if the analysis is performed for the proxy companies' combined operations or performed separately for electric and gas operations. In each instance, the Company's ratio of SER/Average EBITDA is slightly above (more variable), but consistent with that of the proxy companies.

1 focusing on the decoupling mechanism, Mr. Kahal overlooks other rate design
2 structures used to set rates to recover a utility's revenue requirement. The portion of
3 revenue covered by decoupling structures does not directly address the underlying
4 measures of variability considered important by rating agencies such as S&P. As
5 Chart 9 and the associated SER/Average calculations indicate, even with its
6 decoupling structure in place, the Company's EBITDA (which is a principal measure
7 of profitability and a component of one of S&P's two "core" credit metrics) has been
8 more somewhat more variable, but similar to its peers.

9

10 Because the Company's EBITDA is similar to its peers, a reasonable conclusion is
11 that its decoupling structure is credit-supportive, rather than credit-enhancing. That
12 is, but for its decoupling structure, the Company's credit metrics may face greater
13 pressure. From that perspective, decoupling supports the Company's current credit
14 profile, but does not improve it.¹³⁹

15

16 **G. Capital Structure and Cost of Debt**

17 **Q. Has the Company updated its proposed capital structure since the filing of your**
18 **direct testimony?**

19 **A.** Yes. The Company has updated its proposed capital structure as of June 30, 2017.
20 The Company's proposed capital structure as of June 30, 2017 consists of 50.92

139 I address this point further in my response to Mr. Rábago.

1 percent common equity, 0.11 percent preferred stock, 0.45 percent short-term debt,
2 and 48.53 percent long-term debt.¹⁴⁰

3

4 **Q. Please summarize Mr. Kahal's recommendation regarding the Company's**
5 **capital structure.**

6 A. Mr. Kahal adjusts the Company's proposed capital structure by reversing the
7 Company's proposed adjustment for Other Comprehensive Income (OCI) and thereby
8 reducing the Company's proposed common equity percentage from 50.97 percent to
9 50.95 percent. Mr. Kahal also reduces long-term debt by \$14.5 million and increases
10 short-term debt by \$14.5 million. Mr. Kahal's resulting recommended capital
11 structure includes 50.91 percent common equity, 47.90 percent long-term debt, 1.11
12 percent short-term debt, and 0.09 percent preferred stock.¹⁴¹

13

14 **Q. Do you agree with Mr. Kahal's reversal of the OCI adjustment?**

15 A. No. As stated in response to data request DIV-4-2, the Company's balance of OCI is
16 a noncash valuation adjustment recorded as an offset to another balance sheet account
17 on the Company's books and does not support permanent assets in rate base. It
18 therefore would be appropriate to remove the balance sheet effect of those amounts

140 See Response to Data Request DIV-4-3.

141 Direct Testimony of Matthew I. Kahal, at 23.

1 from the Company's ratemaking capital structure. Mr. Kahal's assertion that the
2 resulting increase in the common equity balance that results from the proposed OCI
3 adjustment is a "fiction" that "does not actually exist and has not been supplied by
4 investors"¹⁴² is incorrect because the common equity component of the capital
5 structure proposed by the Company represents the Company's actual balance in
6 common equity, adjusted for the (potentially temporary) pension and asset gains and
7 losses discussed above.

8

9 **Q. Do other state regulatory commissions accept adjustments to remove OCI from**
10 **regulated utility capital structures?**

11 A. Yes. It is common practice for utilities to remove OCI from regulated capital
12 structures, and that practice has been accepted by state regulators. For instance, the
13 Massachusetts Department of Public Utilities explicitly authorized the exclusion of
14 OCI from the capital structures of Massachusetts Electric Company and Nantucket
15 Electric Company in 2009.¹⁴³ Other states have approved similar adjustments. As
16 stated by the Oklahoma Corporation Commission:

17 Since these additional special equity reductions or equity additions
18 [reflected in OCI] apply to the balance sheet but not the income
19 statement and therefore will not be included in current pension and

142 Direct Testimony of Matthew I. Kahal, at 22.

143 Massachusetts Department of Public Utilities, *Petition of Massachusetts Electric Company and Nantucket Electric Company, pursuant to G. L. c. 164, § 94, and 220 C.M.R. § 5.00 et seq., for a General Increase in Electric Rates and Approval of a Revenue Decoupling Mechanism*, D.P.U. 09-39, November 30, 2009, at 337.

1 postretirement benefit costs for book accounting and ratemaking
2 purposes, such future pension and postretirement special equity
3 reductions or equity additions should be eliminated from the
4 capital structure when they occur. The Commission finds that these
5 types of accumulated other comprehensive income adjustments to
6 equity related to pensions and post-retirement benefits should be
7 excluded from capital structure for ratemaking purposes.¹⁴⁴
8

9 **Q. Have you compared the Company's proposed capital structure with those of the**
10 **proxy companies?**

11 A. Yes. As discussed in my Direct Testimony, the Company's proposed equity ratio of
12 50.97 percent is below the mean equity ratio of the proxy companies of 51.19 percent,
13 and the long- and short-term debt ratios are within the range of those for the proxy
14 group companies.¹⁴⁵
15

16 **Q. Does Mr. Kahal agree with the proposed costs of short and long-term debt?**

17 A. Not entirely. Mr. Kahal agrees with the calculated cost of debt for the Company's
18 electric service, but he disagrees with the gas utility debt cost. In particular he argues
19 that the First Mortgage Bond of \$14.5 million that matured in March 2018 should be
20 removed. To narrow the scope of contested issues, I have removed that issuance and

144 Oklahoma Corporation Commission, Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges for Electric Service in the State of Oklahoma, Cause No. PUD 200600285; Order No. 545168, October 9, 2007.

145 Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 80.

1 recalculated the cost of debt for the gas operations as 5.09 percent (see Rebuttal
2 Schedule RBH-14).

3

4 **V. Response to Division Witnesses Mr. Woolf and Ms. Whited**

5 **Q. Please summarize Mr. Woolf and Ms. Whited's testimony regarding the**
6 **Company's ROE.**

7 A. Division witnesses Mr. Woolf and Ms. Whited support the Division's ROE
8 recommendation of 8.50 percent for electric operations (with performance incentive
9 mechanisms) and 9.00 percent for gas operations. Mr. Woolf and Ms. Whited argue
10 that the Division's 8.50 percent ROE recommendation for electric operations is
11 reasonable because performance incentive mechanisms "reduce the utility's risk by
12 providing regulatory guidance and assurance that costs associated with PIMs will be
13 allowed in rates."¹⁴⁶ Further, they assert that revenues to shareholders from existing
14 and proposed performance incentive mechanisms could be "200 basis points or
15 higher".¹⁴⁷

16

146 Direct Testimony of Tim Woolf and Melissa Whited, at 17.

147 *Id.*, at 9.

1 **Q. What is your response to Mr. Woolf and Ms. Whited that PIMs reduce risk?**

2 A. Mr. Woolf and Ms. Whited have provided no evidence to support their claim that
3 performance incentive mechanisms reduce risk relative to the current framework.
4 Putting aside any potential merits of Rhode Island shifting from a cost-of-service
5 based framework to a performance-based framework, there is no question that the
6 current framework provides more regulatory stability and certainty than does the
7 process that is pending before the Commission, simply because the PST process is
8 unfolding and there is considerable uncertainty surrounding the outcome. Further,
9 even after the Commission issues its final order on the Company's PST proposals, it
10 is reasonable to expect guidelines and processes to evolve as the parties gain more
11 experience and information. I disagree that performance incentive mechanisms –
12 which have not been decided upon formally and for which there is disagreement
13 around the appropriate targets and incentives¹⁴⁸ – are somehow less risky than a
14 framework for which there is decades-long precedent and guidelines. Uncertainty
15 implies risk, and there is no question that the ongoing PST process and performance
16 incentive mechanisms introduce more regulatory uncertainty relative to the current
17 framework.

18

148 Mr. Woolf and Ms. Whited acknowledge this uncertainty. See Direct Testimony of Tim Woolf and Melissa Whited, at 17.

1 **Q. Do the proposed performance incentive mechanisms provide more certainty**
2 **regarding the Company’s earnings?**

3 A. No. Under the traditional cost-of-service framework, a utility’s allowed return is set
4 at the authorized overall rate of return multiplied by the rate base. The utility’s actual
5 profit could be higher or lower depending on actual sales and O&M expenses. To a
6 certain extent, the Company’s ability to control costs (*i.e.*, its “performance”)
7 influences its earned return. The performance-based framework envisions shifting
8 some of the authorized return to instead be based on achieving certain targets. That
9 is, a higher proportion of the Company’s potential return is dependent upon its
10 performance, and therefore is “at risk”. Again, performance incentive mechanisms
11 likely provide more earnings uncertainty and variability than the current framework.
12 In fact, the Division’s proposed performance incentive mechanism incentives range
13 from a low of 71 basis points in 2019 to 206 basis points in 2021, a range of 135 basis
14 points.¹⁴⁹ It is important to note that even with its existing Energy Efficiency
15 performance incentive, the Company has been unable to earn its authorized ROE
16 since its last rate case.¹⁵⁰

149 Excluding existing Energy Efficiency performance incentive mechanisms. *See* Direct Testimony of
Tim Woolf and Melissa Whited, at 18, Table 6.

150 Direct Testimony of Tim Woolf and Melissa Whited, at 18, Table 5.

1 **Q. Do you agree that the Division’s recommended ROE is just and reasonable**
2 **because the Company has the opportunity to earn “200 basis points or higher”**
3 **from existing and proposed PIMs if the Division’s proposal is approved?**

4 A. No. According to Mr. Woolf and Ms. Whited, the Company’s existing performance
5 incentive mechanisms together with the proposed performance incentive mechanisms
6 would provide the Company with the opportunity to earn up to 292 basis points,¹⁵¹
7 including the current incentive for Energy Efficiency. However, the Division’s
8 proposed changes to the Earning Sharing Mechanism (ESM) effectively reduces
9 potential shareholder revenues from PIMs to a maximum of 148 basis points. The
10 Division proposes that the Company be allowed to retain 100.00 percent of earnings
11 up to 100 basis points above the allowed ROE (i.e., 9.50 percent if the Division’s 8.50
12 percent ROE recommendation is accepted). Any excess earnings above 100 basis
13 points would be shared 75/25 in favor of ratepayers.¹⁵² That is, the 192 basis points
14 in shareholder incentive above the 100 basis points they assert the Company can
15 retain, in actuality, is 48 basis points.¹⁵³ That is assuming the Company can achieve
16 the higher targets the Division has proposed.

151 *Id.*, at 18. Table 6, 2021 (high) estimate of PIMs incentive revenue.

152 *Id.*, at 54.

153 $48 = 192 \times 0.25$. The proposed Earning Sharing Mechanism includes “all PIMs earned on the electric side of the business,” including the energy efficiency incentive and any new PIMs approved. *Id.* at 54.

1 **Q. Please summarize your conclusions regarding Mr. Woolf and Ms. Whited’s**
2 **recommendations.**

3 A. The Division’s proposal recommends a lower ROE and higher performance targets,
4 yet removes much of the financial incentive with its proposed ESM. Further, I
5 disagree that the Division’s proposed 8.50 percent ROE (with performance incentive
6 mechanisms) for the Company’s electric operations “ensures that shareholders are not
7 exposed to the risk of not recovering enough revenues” as Mr. Woolf and Ms. Whited
8 suggest.¹⁵⁴

9

10 **VI. Response to NERI Witness Mr. Rábago**

11 **Q. Please summarize Mr. Rábago’s testimony regarding the Company’s ROE.**

12 A. Mr. Rábago recommends an ROE no higher than 8.44 percent¹⁵⁵ and criticizes several
13 areas of my testimony and analyses. Mr. Rábago’s specific concerns relate to (1) my
14 proxy group, (2) my analysis of the Company’s relatively small size; (3) the effect of
15 the Company’s corporate structure; and (4) the effect of the Company’s rate
16 mechanisms on its Cost of Equity. Despite his concerns, Mr. Rábago has not
17 performed any independent analyses, nor has he provided empirical evidence to
18 support his position that the Company’s Cost of Equity is no more than 8.44 percent.

19

154 Direct Testimony of Tim Woolf and Melissa Whited, at 17.

155 Direct Testimony of Karl R. Rábago, at 28.

1 **Q. Is Mr. Rábago’s recommendation that the Company’s ROE should be “no**
2 **higher than 8.44 percent” a just and reasonable estimate of the Company’s Cost**
3 **of Equity?**

4 A. No, Mr. Rábago has not provided any evidence to demonstrate how his
5 recommendation (1) is consistent with returns available to other businesses of similar
6 risk; (2) supports the Company’s financial integrity; or (3) is adequate to maintain
7 and support the Company’s credit and attract capital.¹⁵⁶ The Commission therefore
8 cannot evaluate whether his recommendation is supported by market data, determine
9 whether it is comparable to the returns available to companies of comparable risk, or
10 how it might support the Company’s financial integrity and ability to access capital at
11 reasonable costs and terms. Consequently, Mr. Rábago’s recommendation should be
12 rejected.

13

14 **Q. Has Mr. Rábago considered the effect of his recommendation on the Company’s**
15 **financial profile?**

16 A. No, he has not. As discussed in my Direct Testimony, the financial community
17 carefully monitors utility companies’ financial conditions, both current and expected
18 as well as the regulatory environment in which those companies operate.¹⁵⁷ Here, Mr.
19 Rábago suggests the Commission reduce the Company’s authorized ROE by more

156 See Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 22.

157 *Id.*, at 66.

1 than 100 basis points without undertaking any market-based, comparative analyses to
2 support his recommendation. In my view, Mr. Rábago has not reasonably considered
3 the effect of his recommendation on the Company's financial and risk profile and,
4 therefore, its ability to attract capital and maintain its financial integrity.

5

6 **Q. At page 18 of his testimony, Mr. Rábago suggests three “general principles” that**
7 **the Commission “should bear in mind when determining the appropriate ROE**
8 **for the Company.” Do you have any observations regarding Mr. Rábago’s**
9 **proposed principles?**

10 A. Yes. As discussed on pages 18 and 19 of my Direct Testimony, the Commission
11 upholds the *Hope* and *Bluefield* standards, which generally address risk
12 comparability, financial integrity, and capital attraction. Mr. Rábago's principles
13 include “(1) capital attraction and utility profitability, (2) affordability of electric
14 service, and (3) consistency with broader policy, especially in the current Rhode
15 Island utility regulatory environment.”¹⁵⁸ Mr. Rábago's first principle appears to be
16 generally aligned with the capital attraction and financial integrity standards, although
17 he does not describe them in those terms. His second and third principles appear to
18 be his view of factors the PUC may consider as it balances the interests of investors
19 and ratepayers.

20

158 Direct Testimony of Karl R. Rábago, at 18.

1 The PUC has the difficult task of balancing the interests of ratepayers and investors,
2 in the context of the *Hope* and *Bluefield* standards. Mr. Rábago's principles appear to
3 go beyond that, including broad policy points whose relevance to estimating the Cost
4 of Equity is unclear at best. If his point is that the PUC may consider factors it deems
5 relevant in setting just and reasonable rates, such that the final rates are consistent
6 with the "end result" doctrine, I do not disagree. The purpose of my testimony,
7 however, is to estimate the investor-required Return on Equity based on the methods
8 and factors considered by investors and to apply the financial methods and principles
9 used in practice. That, I have done. Mr. Rábago has not.

10

11 **Q. Mr. Rábago asserts that your concern with the Constant Growth DCF model's**
12 **assumptions relative to investors' "reach for yield" is akin to suggesting they**
13 **have suffered losses like those experienced "in Bernard Madoff's Ponzi**
14 **scheme."¹⁵⁹ Is Mr. Rábago's analogy appropriate?**

15 A. No, it is not. The term "reach for yield" is not derivative of the "Bernard Madoff
16 Ponzi scheme," nor have I argued, as Mr. Rábago asserts, that the term suggests an
17 investment strategy that is "without due regard [for] the added risk incurred by such
18 behavior."¹⁶⁰ Rather, as explained in my Direct Testimony at pages 93 and 94, the
19 term relates to periods in which utility Price/Earnings ratios expanded relative to their
20 historical levels, and relative to the market Price/Earnings ratio, in response to low

159 Direct Testimony of Karl R. Rábago, at 20-21.

160 Direct Testimony of Karl R. Rábago, at 20.

1 interest rates. During those periods, some investors would turn to dividend-paying
2 sectors, such as utilities, as an alternative source of income (that is, for the dividend
3 yield).¹⁶¹ Then, when interest rates increased, investors rotated out of the utility
4 sector, causing prices to fall.

5

6 Data relating to the rise and fall of Price/Earnings ratios during those periods is
7 provided in Chart A5 to my Direct Testimony. That data, and my assessment of it,
8 are consistent with observations made by Value Line, which noted that “[t]akeover
9 speculation has buoyed some stocks, and investors continue to reach for yield in a
10 low interest-rate environment.”¹⁶²

11

12 An important point is that investors in utility stocks may “reach for yield” because
13 they have the option to sell when market conditions change. That option includes the
14 ability to defer transactions based on current and expected market conditions; it exists
15 because utility equity shares generally trade in a liquid market. When investors
16 exercise the option to sell with rising interest rates, prices fall. There is nothing
17 irrational or untoward about that practice. Mr. Rábago’s notion that I somehow have
18 tied utility investor behavior to Ponzi schemes and risk-neutral behavior is incorrect.

161 The relationship between utility prices and utility dividend yields is given in Equation [2], Bates page 29 of my Direct Testimony.

162 Value Line, Electric Utility (Central) Industry, December 15, 2017.

1 Mr. Rábago also ties the term “reach for yield” to utility capital investment
2 decisions.¹⁶³ Here too, his reference is inapt. As explained above, utility stocks
3 generally trade in liquid markets, giving investors options to invest, divest, or defer
4 investment decisions. A utility, however, invests in long-lived, largely irreversible
5 assets, and must do so regardless of capital market conditions. That is, utility
6 companies do not have the options available to utility stock investors. Because
7 options are a source of value, the lack of options represents a cost and a source of
8 risk. Consequently, Mr. Rábago’s analogy of a “kind of utility reach for yield” is
9 misplaced.

10

11 Lastly, Mr. Rábago’s “utility reach for yield” scenario is one in which “a utility
12 unwisely pursues risky and ineffective capital investments in an effort to realize
13 higher returns.”¹⁶⁴ In that context, he asserts that I assume “...utilities are on a
14 constant search for ever-increasing capital investments, even under PST” and that I
15 do not “...address the potential for DER, Power Sector Transformation, and
16 performance-based rate making to reduce rate base investments while maintaining or
17 even enhancing utility profitability.”¹⁶⁵ Mr. Rábago is mistaken. The three discovery
18 responses to which he refers make clear that utilities undergoing Power Sector
19 Transformation will require continuing access to capital. I have not suggested that

163 Direct Testimony of Karl R. Rábago, at 19.

164 *Id.*

165 *Id.*

1 utilities are on a “constant search for ever-increasing capital investments,” much less
2 that they would pursue improper investments “in an effort to realize higher returns.”

3
4 Mr. Rábago’s interpretation of my testimony disregards the fundamental point that,
5 given their capital needs and their tendency to be cash flow neutral or negative,
6 capital access will remain important to utilities such as Narragansett Electric. The
7 authorized ROE has direct implications for the Company’s ability to maintain its
8 financial integrity and, therefore, for its ability to attract capital at reasonable terms,
9 regardless of capital market conditions.

10
11 **A. Proxy Group Selection**

12 **Q. What are Mr. Rábago’s criticisms regarding your proxy group?**

13 A. Mr. Rábago argues that the Companies in my proxy group “differ significantly” from
14 the Company and therefore the data in my analyses are “not reliable for
15 benchmarking the Company’s ROE.”¹⁶⁶ In particular, he is critical of the fact that the
16 proxy group includes companies that are vertically integrated, are not diversified
17 electric and gas companies, operate in a different energy or geographic market, or do
18 not operate in jurisdictions that are not undergoing a “transformation.” He makes a
19 point that one of my proxy companies “operates on an island,” and asserts that

166 *Id.*, at 22.

1 because I do not “make adjustments to the values relating to these utilities and used
2 raw market data about those utilities in [my] analysis,” it is “unreliable.”¹⁶⁷

3

4 **Q. What is your response to those criticisms?**

5 A. They are misplaced. The selection of any proxy group requires the balancing of two
6 practical objectives: selecting companies that are fundamentally comparable to the
7 subject, and ensuring a group of sufficient size to have confidence in the analytical
8 results. Although Mr. Rábago disagrees with my criteria, there are perhaps three
9 companies that may meet his - Eversource Energy, Consolidated Edison, and
10 CenterPoint Energy. In my experience, a proxy group of companies is not of
11 sufficient size to provide a statistically sound basis for estimating the Cost of Equity.
12 As such, it is reasonable, and necessary, to include vertically integrated utilities as
13 proxy companies.

14

15 Mr. Rábago’s reference to Consolidated Edison (ED) is a case-in-point as to the risks
16 associated with a small proxy group, and the consequences of focusing on a single
17 data point. He notes, for example, that ED has “the lowest beta coefficients in the
18 group.”¹⁶⁸ But he does not point out that the next three lowest (Beta coefficient)
19 companies, Xcel Energy, Southern Company, and Wisconsin Energy all are vertically

167 *Id.*

168 Direct Testimony of Karl R. Rábago, at 23.

1 integrated utilities.¹⁶⁹ Nor does Mr. Rábago observe that Eversource Energy's
2 average Beta coefficient falls in the top one-half of the group (13th highest of 24
3 companies), or that CenterPoint Energy, which also does not operate a vertically
4 integrated electric utility has the third-highest (21st of 24) average Beta coefficient.
5 The point simply is that Mr. Rábago's focus on a single data point within a single
6 method is a limited perspective that if followed, would lead to an unreasonably low
7 return.¹⁷⁰

8
9 Lastly, my proxy group includes companies with gas operations, companies that
10 operate in restructured markets, and companies in jurisdictions that are considering
11 regulatory reform in some capacity.¹⁷¹ The mean and median credit rating for the
12 holding companies and operating companies in my proxy group falls between BBB+
13 and A- (S&P), and Baa1 and A3 (Moody's); both are within one ratings "notch" of
14 the Company's credit rating.¹⁷² Although Mr. Rábago disagrees with my proxy
15 group, he has provided no evidence to demonstrate it is at odds with the Company's
16 risk profile. He certainly has not demonstrated that it is so dissimilar that it requires a

169 Based on average of the Bloomberg and Value Line Beta coefficients provided in Schedule RBH-6 to my Direct Testimony.

170 Although Mr. Rábago's recommendation is based on my Constant Growth DCF analysis results, he does not mention that the lowest estimate from that method is the 6.02 percent result associated with Hawaiian Electric Company, presumably the business that Mr. Rábago notes "operates on an island." , Direct Testimony of Karl R. Rábago, at 22

171 See Response to Data Request NERI 2-14.

172 Source: S&P Global Market Intelligence.

1 return that would be virtually the lowest ever authorized for either a gas or an electric
2 utility, and more than 100 basis points below the Company's currently authorized
3 ROE.

4

5 **Q. What is your response to Mr. Rábago's suggestion that you should "adjust"¹⁷³**
6 **the market data to account for the proxy group differences?**

7 A. I disagree. Subjectively adjusting market data as Mr. Rábago recommends would
8 inappropriately introduce bias to the analysis. My practice has been to present the
9 results of my analytical models and to determine, based on company-specific and
10 market-based factors, to judge where within the range of results the Cost of Equity
11 appropriately lies. For example, as noted in response to NERI 2-14, in
12 recommending a return on common equity on the lower end of my recommended
13 range, my recommendation considers the fact that the Company is a distribution-only
14 utility.

15

16 **B. Small Size Risk and the Standalone Principle**

17 **Q. What is your response to Mr. Rábago's criticisms regarding your small size**
18 **analysis?**

19 A. Mr. Rábago states that I applied a small size premium, and that my analysis of the
20 Company on a standalone basis is unreasonable.¹⁷⁴ Mr. Rábago is incorrect. As

173 Direct Testimony of Karl R. Rábago, at 22.

1 clearly stated in my Direct Testimony at Bates page 65 (and explained in my response
2 to Mr. Kahal), rather than propose an explicit adjustment, I found the Company’s
3 relatively small size to support my conclusion that the proposed 10.10 percent ROE is
4 reasonable, if not somewhat conservative.

5

6 Mr. Rábago also suggests that my observation regarding the Decoupling Act’s
7 requirement to set rates for the Company on a stand-alone basis, which supports the
8 approach of considering the implications of its relatively small size, is unreasonable.
9 He concludes by suggesting that industry standards are to “evaluate and set rates for
10 the Company that reflects its actual financial and organizational posture, and not
11 ignore these facts in favor of some hypothetical construct that does not apply in
12 reality.”¹⁷⁵

13

14 In my experience, the stand-alone principle is a very common regulatory construct
15 that is consistent with finance practice and principles. Simply, the Cost of Equity
16 depends on the risks to which equity capital is exposed. As Dr. Roger Morin states,
17 “[t]he fact that an operating utility is a wholly owned subsidiary of a parent company
18 is immaterial.”¹⁷⁶ As a matter of policy, Dr. Morin notes that the stand-alone

174 Direct Testimony of Karl R. Rábago, at 23.

175 Direct Testimony of Karl R. Rábago, at 25.

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

1 principle "...is essential if efficient allocation of capital resources is to be promoted
2 and cross-subsidies avoided."¹⁷⁷ That approach , and the stand-alone principle, are
3 consistent with the financial practice of "sum-of-the-parts" valuation, under which the
4 equity value of a company is estimated by summing the individual values of its
5 component segments. Here, the capital will be invested in the Company alone, and
6 the risks associated with that capital should be based on the Company alone. In my
7 view, Mr. Rábago's suggestion that the stand-alone principle somehow is outside "the
8 norm of industry standards" is contrary to regulatory and finance practice and
9 principles.

10

11 Mr. Rábago also suggests my position regarding the stand-alone principle "ignores
12 the reduced risk and other financial benefits that Narragansett Electric enjoys because
13 of its relationship to its parent company."¹⁷⁸ Again, Mr. Rábago's suggestion is
14 misplaced. At Bates pages 76 and 77 of my Direct Testimony, for example, I explain
15 that the Company participates in the National Grid regulated money pool for its short-
16 term debt needs. These types of money pool arrangements generally are an efficient
17 means of accessing short-term credit; the costs of establishing, administering, and
18 maintaining a commercial paper program on a company-by-company basis would be
19 far greater. Consequently, the money pool is a benefit to ratepayers and is one that

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

178 Direct Testimony of Karl R. Rábago, at 23.

1 would not be available but for the Company's relationship with National Grid. But
2 the stand-alone principle is meant to ensure ratepayers are funding only the costs
3 required to support regulated operations and are not taking on risks beyond regulated
4 operations. Ratepayers therefore realize the benefits associated with the Company's
5 relationship to National Grid and, by virtue of the standalone principle, are insulated
6 from risks not associated with its regulated operations.

7

8 **C. Revenue Stabilization Clauses and the Cost of Equity**

9 **Q. Please briefly summarize Mr. Rábago's position regarding your assessment of**
10 **revenue stabilization clauses and their implications for the Company's Cost of**
11 **Equity.**

12 A. Mr. Rábago seems to be concerned that my comparison of rate structures in place
13 among the proxy companies does not support my conclusion that the presence of
14 decoupling does not support a finding that the ROE must be reduced. Second, he
15 asserts that I did not analyze the stability of the Company's revenues relative to its
16 peers, owing to the complexity of that type of analysis. Lastly, Mr. Rábago asserts
17 that my position "is an argument for repealing revenue stabilization mechanisms in
18 Rhode Island as ineffective in accomplishing their intended purpose."¹⁷⁹

19

179 Direct Testimony of Karl R. Rábago, at 26-27.

1 **Q. What is your response to Mr. Rábago’s last point, that your position is an**
2 **argument in favor of repealing revenue stabilization mechanisms?**

3 A. Mr. Rábago is incorrect. The finding that decoupling does not reduce the Cost of
4 Equity does not mean those mechanisms are “ineffective in accomplishing their
5 intended purpose.” From the perspective of credit ratings, Mr. Rábago’s argument
6 appears to be that revenue stabilization mechanisms must be *credit enhancing* – that
7 they should materially improve the utility’s financial integrity thereby reducing its
8 cost of capital. He fails to consider that rate structures such as decoupling
9 mechanisms are more likely to be *credit supportive* – helping utilities maintain their
10 credit profiles notwithstanding declining use. That is, but for the structure, the
11 utility’s credit profile would come under pressure, likely increasing its cost of
12 capital.¹⁸⁰

13
14 Credit supportive structures therefore provide a significant benefit and, in the case of
15 revenue decoupling, support the intended purpose of encouraging utilities to pursue
16 energy conservation while maintaining their financial integrity. On that very
17 fundamental point, Mr. Rábago is incorrect, and his characterization of my position is
18 mistaken.

180 As discussed in my response to Mr. Kahal, over time the Company’s EBITDA has been no less variable than its peers. That consistency may be viewed as credit supportive.

1 **Q. Does financial theory dictate that a reduction in revenue volatility requires a**
2 **reduction in the Cost of Equity?**

3 A. No. Rather, Mr. Rábago's position that a reduction in revenue volatility necessarily
4 requires a reduction in the Cost of Equity runs counter to Modern Portfolio Theory,
5 which is the fundamental basis of the CAPM. Under Modern Portfolio Theory, risk is
6 defined as the uncertainty, or variability, of returns. Modern Portfolio Theory was
7 advanced by recognizing that total risk may be separated into two distinct
8 components: non-diversifiable risk, which is that portion of risk that can be attributed
9 to the market as a whole; and non-systematic (or diversifiable) risk, which is
10 attributable to the idiosyncratic nature of the subject company, itself. As discussed in
11 my Direct Testimony, non-diversifiable risk is measured by the Beta coefficient
12 within the CAPM structure.¹⁸¹

13
14 Under Modern Portfolio Theory (and the CAPM) an investor would not be indifferent
15 to a reduction in expected ROE in return for a reduction in volatility of revenues,
16 unless the reduction in volatility specifically relates to reduced non-diversifiable risk.
17 That is, any reduction in the Cost of Equity depends on the type of risk that is
18 reduced; if the risk assumed to be mitigated by decoupling is diversifiable, there
19 would be no reduction in the Cost of Equity even if total risk (diversifiable plus non-
20 diversifiable risk) has been reduced. If, however, decoupling mitigates increased

181 Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 48-49.

1 systematic risk associated with the factors that drove the Decoupling Act in the first
2 place, there likewise would be no effect on the Cost of Equity. Mr. Rábago assumes,
3 but does not demonstrate that any risks he believes to be mitigated by decoupling are
4 systematic in nature, that systematic risk was not increased before decoupling was
5 implemented and, therefore that decoupling necessarily reduces the Company's Cost
6 of Equity.

7
8 Lastly, under the "comparable risk" standard and the economic principle of
9 opportunity costs, the Cost of Equity cannot be considered in isolation, it must be
10 viewed on a comparative basis. Putting aside his disregard of Modern Portfolio
11 Theory, Mr. Rábago simply has not shown the Company is so much less risky than its
12 peers because of decoupling that its Cost of Equity is no more than 8.44 percent.

13

14 **VII. Response to Acadia Center Witness Mr. LeBel**

15 **Q. Please summarize Mr. LeBel's testimony regarding the Company's ROE.**

16 A. Mr. LeBel asserts that the Company's proposed 10.10 percent ROE is "likely too
17 high" because it is above the 9.00 percent ROE authorized for Niagara Mohawk.¹⁸²

182 Direct Testimony of Mark LeBel, at 3. Niagara Mohawk is a wholly-owned subsidiary of National Grid with electric and gas operations in New York state. As discussed in Section II above, the ROE authorized for Niagara Mohawk was the outcome of a Settlement Agreement, which involved tradeoffs agreed to by the parties to settle otherwise contentious issues. In order to make any comparisons to the Company's situation, the entire overall agreement would have to be evaluated in the context in which Niagara Mohawk operates.

1 Additionally, he states that high ROEs are “contrary to the objectives” of Rhode
2 Island state law and “perpetuate incentives for utilities to make as many capital
3 investments as possible.”¹⁸³

4

5 **Q. What is your response to Mr. LeBel on those points?**

6 A. As with Mr. Rábago, Mr. LeBel’s analysis is far too limited to provide a reasonable
7 assessment of the Company’s Cost of Equity. For example, in concluding that the
8 Company’s proposed ROE is “too high” because it is above the ROE authorized for
9 Niagara Mohawk, Mr. LeBel fails to acknowledge that the Company’s Massachusetts
10 affiliate recently was authorized a 9.90 percent ROE.¹⁸⁴ Nor does Mr. LeBel
11 recognize that the vast majority of returns authorized for electric and natural gas
12 utilities have been significantly greater than 9.00 percent (*see* Chart 1 above).

13

14 With respect to his assertion that high ROEs are “contrary” to Rhode Island state law,
15 the PUC upholds the *Hope* and *Bluefield* standards, which provide for a fair and
16 reasonable return that is sufficient to maintain financial integrity and is comparable to

183 *Id.*

184 See *Investigation by the Department of Public Utilities on its own motion as to the propriety of the rates and charges proposed by Massachusetts Electric Company and Nantucket Electric Company in their petition for approval of an increase in base distribution rates for electric service pursuant to G.L. c. 164, § 94 and 220 C.M.R. § 5.00 et seq., filed with the Department on November 6, 2015, to be effective December 1, 2015*, D.P.U. 15-155, Final Order, September 30, 2016, at 382. As noted earlier, the New York decisions represent negotiations of otherwise contentious issues. Additionally, the multi-year rate plans approved for New York incorporate fully forecasted test periods.

1 the returns available to companies of comparable risk.¹⁸⁵ In my view, looking to a
2 single company in a single jurisdiction, without considering the returns available
3 elsewhere, is contrary to those fundamental principles.

4

5 **VIII. Response to Wal-Mart Witness Mr. Tillman**

6 **Q. Please summarize Mr. Tillman's testimony regarding the Company's ROE.**

7 A. Mr. Tillman raises concerns with my recommendation because it is higher than
8 average returns since 2015.¹⁸⁶ Mr. Tillman did not, however, undertake an
9 independent, market-based analysis of the Company's Cost of Equity.

10

11 **Q. Are there other distinctions that are important to consider when reviewing**
12 **authorized returns?**

13 A. Yes. As noted earlier in my Rebuttal Testimony, the Company's credit rating and
14 outlook depend substantially on the extent to which rating agencies view the
15 regulatory environment as credit supportive, or not. I noted, for example, that
16 Moody's finds the regulatory environment to be so important that 50.00 percent of the
17 factors that weigh in its ratings determination are determined by the nature of
18 regulation.

19

185 , Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 21-22.

186 Direct Testimony of Gregory W. Tillman, at 14-16.

1 Given the Company's need to access external capital and the weight rating agencies
2 place on the nature of the regulatory environment, it is important to consider the
3 extent to which the jurisdictions that recently have authorized ROEs for electric
4 utilities are viewed as having constructive regulatory environments.

5

6 **Q. Have you reviewed and updated the information contained in Mr. Tillman'**
7 **Exhibit GWT-2?**

8 A. Yes. As shown in Rebuttal Schedule RBH-15, I updated Mr. Tillman's Exhibit
9 GWT-2 and added jurisdictional rankings from Regulatory Research Associates
10 (RRA). RRA, which is the source of Mr. Tillman's rate case data, provides an
11 assessment of the extent to which regulatory jurisdictions are constructive from
12 investors' perspectives, or not. As RRA explains, less constructive environments are
13 associated with higher levels of risk:

14 RRA maintains three principal rating categories, Above Average,
15 Average, and Below Average, with Above Average indicating a
16 relatively more constructive, lower-risk regulatory environment
17 from an investor viewpoint, and Below Average indicating a less
18 constructive, higher-risk regulatory climate from an investor
19 viewpoint. Within the three principal rating categories, the
20 numbers 1, 2, and 3 indicate relative position. The designation 1
21 indicates a stronger or more constructive rating; 2, a mid-range
22 rating; and, 3, a less constructive rating within each higher-level
23 category.¹⁸⁷

187 Source: Regulatory Research Associates, accessed April 17, 2018.

1 Sorting the data relating to Mr. Tillman's Exhibit GWT-2 by RRA's ranking, two
2 points become apparent. First, looking at all cases there is a 28 basis point difference
3 between the average return for jurisdictions ranked "Average / 2" and higher and
4 jurisdictions ranked lower than "Average / 2" (the higher-ranked jurisdictions
5 providing the higher authorized returns, see Table 1, below).¹⁸⁸ As Table 1 indicates,
6 ROEs for electric utilities in jurisdictions ranked "Average / 2" and higher range from
7 9.00 percent to 10.55 percent, with a median of 9.80 percent.

8 **Table 1: Average Authorized ROE by RRA Ranking**¹⁸⁹

<i>RRA Ranking</i>	Authorized ROE: Electric Utility	
	Average / 2 and Higher	Average / 3 and Lower
Total Cases	60	40
Minimum	9.00%	9.10%
Mean	9.73%	9.62%
Median	9.80%	9.52%
Maximum	10.55%	11.95%

14
15 Those observations are important given that the authorized ROE is a very visible
16 measure of the regulatory environment in which utilities operate. The supportiveness
17 of the regulatory environment, in turn, is important to utility analysts and investors.

188 Source: Regulatory Research Associates. Rhode Island is currently ranked as "Average / 2"

189 Excludes ROEs authorized in Illinois Formula Rate proceedings.

1 **Q. Has Mr. Tillman considered the effect of his recommendation on the Company's**
2 **financial profile?**

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

12

13 **IX. Conclusions and Recommendation**

14 **Q. Please summarize the analytical updates contained in your Rebuttal Testimony.**

15 A. Tables 2 and 3 (below) summarizes my updated analytical results (see also Rebuttal
16 Schedule RBH-1 through RBH-15). As discussed in my Direct Testimony, all of the
17 models used to estimate the Cost of Equity are subject to limiting assumptions or
18 other methodological constraints.¹⁹⁰ As also noted in my Direct Testimony,
19 adherence to any single approach, or the results of any one approach, can result in

190 See Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Page 7.

1 misleading conclusions; a reasonable ROE estimate, therefore, weighs the individual
2 and collective results of multiple methodologies.¹⁹¹ Because the capital markets have
3 become increasingly unsettled, with several measures indicating capital costs have
4 increased, it is especially important to consider the breadth of quantitative and
5 qualitative information contained in my Rebuttal Testimony.

191 *Id.*, at 9.

1

Table 2: Summary of DCF Results

<i>Without Sustainable Growth</i>			
Constant Growth DCF	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	7.90%	8.96%	10.05%
90-Day Average	7.80%	8.86%	9.95%
180-Day Average	7.67%	8.73%	9.82%
Multi-Stage DCF - Gordon Method	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	8.93%	9.22%	9.54%
90-Day Average	8.83%	9.12%	9.43%
180-Day Average	8.71%	8.99%	9.29%
Multi-Stage DCF - Terminal P/E Method	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	10.03%	10.78%	11.54%
90-Day Average	9.77%	10.51%	11.28%
180-Day Average	9.42%	10.16%	10.92%
<i>With Sustainable Growth</i>			
Constant Growth DCF	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	7.59%	8.76%	10.05%
90-Day Average	7.49%	8.66%	9.95%
180-Day Average	7.36%	8.53%	9.82%
Multi-Stage DCF - Gordon Method	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	8.85%	9.17%	9.54%
90-Day Average	8.76%	9.06%	9.43%
180-Day Average	8.63%	8.93%	9.29%

Multi-Stage DCF - Terminal P/E Method	<i>Mean Low</i>	<i>Mean</i>	<i>Mean High</i>
30-Day Average	9.81%	10.64%	11.54%
90-Day Average	9.55%	10.37%	11.28%
180-Day Average	9.21%	10.02%	10.92%

1

1

Table 3: Summary of Risk Premium Results

Risk Premium			
CAPM Results		Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
Average Bloomberg Beta Coefficient			
Current 30-Year Treasury (3.07%)		9.81%	10.34%
Near Term Projected 30-Year Treasury (3.52%)		10.26%	10.79%
Average Value Line Beta Coefficient			
Current 30-Year Treasury (3.07%)		11.31%	11.95%
Near Term Projected 30-Year Treasury (3.52%)		11.76%	12.40%
ECAPM Results		Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
Average Bloomberg Beta Coefficient			
Current 30-Year Treasury (3.07%)		11.04%	11.66%
Near Term Projected 30-Year Treasury (3.52%)		11.49%	12.11%
Average Value Line Beta Coefficient			
Current 30-Year Treasury (3.07%)		12.16%	12.88%
Near Term Projected 30-Year Treasury (3.52%)		12.61%	13.32%
Bond Yield Risk Premium			
	Low	Mid	High
Electric Rate Cases	9.97%	10.04%	10.25%
Natural Gas Rate Cases	9.93%	10.00%	10.19%

2

1 Developing and establishing a Cost of Equity recommendation requires an element of
2 judgment. That judgment, however, should consider the reasonableness of model
3 results and the economic environment in which the analyses were undertaken. As
4 discussed in my Direct Testimony, no model should be applied without considerable
5 judgment in the interpretation of results.¹⁹² The recent trends in the Constant Growth
6 DCF results are difficult to reconcile with observable, prevailing market conditions.

7
8 My recommendations, therefore, take into consideration the results of my Cost of
9 Equity analyses in the context of current and expected capital market conditions and
10 the need for utilities such as the Company to maintain a level of financial integrity
11 that enables access to capital at reasonable costs under a variety of economic and
12 financial market conditions. With such considerations in mind, the analyses and data
13 discussed throughout my Rebuttal Testimony continue to support my recommended
14 Cost of Equity of 10.10 percent, within a range of 10.00 percent to 10.75 percent.

15
16 **Q. Have you considered whether your recommended returns meet the standard of a**
17 **fair rate of return?**

18 A. Yes. As I noted in my Direct Testimony, my recommendation is based upon my
19 understanding of the *Hope* and *Bluefield* cases, wherein those decisions established
20 the standards for determining a fair and reasonable allowed return on equity

192 See Pre-Filed Direct Testimony of Robert B. Hevert, at Bates Pages 18-19.

1 including: consistency of the allowed return with other businesses having similar risk;
2 adequacy of the return to provide access to capital and support credit quality; and that
3 the end result must lead to just and reasonable rates.¹⁹³

4

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

9

10 **Q. Does this conclude your Rebuttal Testimony?**

11 **A.** Yes, it does.

193 *Id.*, at Bates Page 10.

Rebuttal Schedules of
Robert B. Hevert

Index of Schedules

Schedule RBH-1R	Constant Growth Discounted Cash Flow Model
Schedule RBH-2R	Sustainable Growth Estimate
Schedule RBH-3R	Multi-Stage Growth Discounted Cash Flow Model
Schedule RBH-4R	Ex-Ante Market Risk Premium
Schedule RBH-5R	Bloomberg and Value Line Beta Coefficients
Schedule RBH-6R	Capital Asset Pricing Model Results
Schedule RBH-7R	Bond Yield Plus Risk Premium
Schedule RBH-8R	Proof Concept: Earnings, Dividends, Book Value and Stock Price Growth Rate Equivalence in Constant Growth DCF
Schedule RBH-9R	Growth Rate Regression Analysis
Schedule RBH-10R	Frequency Distribution of Market Risk Premium 1926 - 2017
Schedule RBH-11R	CAPM vs. Actual Returns
Schedule RBH-12R	Proxy Group Residential Customer Charge
Schedule RBH-13R	Utility EBITDA
Schedule RBH-14R	Cost of Long –Term Debt
Schedule RBH-15R	Authorized ROEs by RRA Ranking

Schedule __ (RBH-1R)

Constant Growth Discounted Cash Flow Model

Constant Growth Discounted Cash Flow Model
30 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth	[9] Low ROE	[10] Mean ROE	[11] High ROE
ALLETE, Inc.	ALE	\$2.24	\$70.43	3.18%	3.27%	6.60%	6.00%	4.50%	5.70%	7.75%	8.97%	9.89%
Alliant Energy Corporation	LNT	\$1.34	\$39.93	3.36%	3.45%	5.30%	5.45%	6.50%	5.75%	8.74%	9.20%	9.96%
Ameren Corporation	AEE	\$1.83	\$55.35	3.31%	3.42%	6.90%	6.37%	7.50%	6.92%	9.78%	10.34%	10.93%
American Electric Power Company, Inc.	AEP	\$2.48	\$67.20	3.69%	3.79%	5.40%	5.63%	4.50%	5.18%	8.27%	8.96%	9.42%
Black Hills Corporation	BKH	\$1.90	\$53.02	3.58%	3.68%	4.60%	4.07%	7.50%	5.39%	7.73%	9.07%	11.22%
CenterPoint Energy, Inc.	CNP	\$1.11	\$26.97	4.12%	4.26%	5.90%	8.49%	NA	7.20%	10.14%	11.46%	12.78%
CMS Energy Corporation	CMS	\$1.43	\$44.02	3.25%	3.37%	6.30%	7.04%	8.50%	7.28%	9.65%	10.65%	11.89%
Consolidated Edison, Inc.	ED	\$2.86	\$76.71	3.73%	3.79%	4.00%	3.11%	3.00%	3.37%	6.78%	7.16%	7.80%
DTE Energy Company	DTE	\$3.53	\$102.48	3.44%	3.55%	6.00%	5.58%	6.50%	6.03%	9.12%	9.58%	10.06%
El Paso Electric Company	EE	\$1.34	\$49.44	2.71%	2.78%	5.10%	5.20%	5.00%	5.10%	7.78%	7.88%	7.98%
Eversource Energy	ES	\$2.02	\$58.10	3.48%	3.58%	5.80%	5.65%	6.50%	5.98%	9.23%	9.56%	10.09%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$33.92	3.66%	3.76%	6.70%	8.50%	1.50%	5.57%	5.18%	9.32%	12.31%
IDACORP, Inc.	IDA	\$2.36	\$85.10	2.77%	2.82%	4.10%	3.10%	3.50%	3.57%	5.92%	6.39%	6.93%
NorthWestern Corporation	NWE	\$2.20	\$52.38	4.20%	4.27%	2.40%	3.12%	4.50%	3.34%	6.65%	7.61%	8.79%
OGE Energy Corp.	OGE	\$1.33	\$31.83	4.18%	4.28%	6.00%	5.80%	2.50%	4.77%	6.73%	9.04%	10.30%
Otter Tail Corporation	OTTR	\$1.34	\$42.67	3.14%	3.27%	NA	9.00%	7.00%	8.00%	10.25%	11.27%	12.28%
Pinnacle West Capital Corporation	PNW	\$2.78	\$78.03	3.56%	3.63%	3.00%	3.63%	5.50%	4.04%	6.62%	7.68%	9.16%
PNM Resources, Inc.	PNM	\$1.06	\$37.00	2.87%	2.95%	5.40%	4.30%	7.50%	5.73%	7.23%	8.68%	10.47%
Portland General Electric Company	POR	\$1.36	\$39.86	3.41%	3.48%	2.90%	3.50%	6.00%	4.13%	6.36%	7.62%	9.51%
Southern Company	SO	\$2.32	\$44.14	5.26%	5.35%	4.50%	2.70%	4.00%	3.73%	8.03%	9.09%	9.87%
WEC Energy Group, Inc.	WEC	\$2.21	\$61.60	3.59%	3.67%	4.20%	4.34%	6.00%	4.85%	7.86%	8.52%	9.70%
Xcel Energy Inc.	XEL	\$1.52	\$44.30	3.43%	3.53%	5.80%	6.15%	4.50%	5.48%	8.01%	9.01%	9.69%
PROXY GROUP MEAN				3.54%	3.63%	5.09%	5.31%	5.36%	5.32%	7.90%	8.96%	10.05%
PROXY GROUP MEDIAN				3.46%	3.56%	5.40%	5.52%	5.50%	5.44%	7.82%	9.03%	9.93%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of April 13, 2018
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model
90 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth	[9] Low ROE	[10] Mean ROE	[11] High ROE
ALLETE, Inc.	ALE	\$2.24	\$71.97	3.11%	3.20%	6.60%	6.00%	4.50%	5.70%	7.68%	8.90%	9.82%
Alliant Energy Corporation	LNT	\$1.34	\$40.49	3.31%	3.40%	5.30%	5.45%	6.50%	5.75%	8.70%	9.15%	9.92%
Ameren Corporation	AEE	\$1.83	\$56.61	3.23%	3.34%	6.90%	6.37%	7.50%	6.92%	9.71%	10.27%	10.85%
American Electric Power Company, Inc.	AEP	\$2.48	\$69.11	3.59%	3.68%	5.40%	5.63%	4.50%	5.18%	8.17%	8.86%	9.32%
Black Hills Corporation	BKH	\$1.90	\$54.72	3.47%	3.57%	4.60%	4.07%	7.50%	5.39%	7.61%	8.96%	11.10%
CenterPoint Energy, Inc.	CNP	\$1.11	\$27.48	4.04%	4.19%	5.90%	8.49%	NA	7.20%	10.06%	11.38%	12.70%
CMS Energy Corporation	CMS	\$1.43	\$44.96	3.18%	3.30%	6.30%	7.04%	8.50%	7.28%	9.58%	10.58%	11.82%
Consolidated Edison, Inc.	ED	\$2.86	\$79.65	3.59%	3.65%	4.00%	3.11%	3.00%	3.37%	6.64%	7.02%	7.66%
DTE Energy Company	DTE	\$3.53	\$104.99	3.36%	3.46%	6.00%	5.58%	6.50%	6.03%	9.04%	9.49%	9.97%
El Paso Electric Company	EE	\$1.34	\$51.94	2.58%	2.65%	5.10%	5.20%	5.00%	5.10%	7.64%	7.75%	7.85%
Eversource Energy	ES	\$2.02	\$60.18	3.36%	3.46%	5.80%	5.65%	6.50%	5.98%	9.10%	9.44%	9.97%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$34.52	3.59%	3.69%	6.70%	8.50%	1.50%	5.57%	5.12%	9.26%	12.24%
IDACORP, Inc.	IDA	\$2.36	\$86.65	2.72%	2.77%	4.10%	3.10%	3.50%	3.57%	5.87%	6.34%	6.88%
NorthWestern Corporation	NWE	\$2.20	\$54.69	4.02%	4.09%	2.40%	3.12%	4.50%	3.34%	6.47%	7.43%	8.61%
OGE Energy Corp.	OGE	\$1.33	\$32.08	4.15%	4.24%	6.00%	5.80%	2.50%	4.77%	6.70%	9.01%	10.27%
Otter Tail Corporation	OTTR	\$1.34	\$42.77	3.13%	3.26%	NA	9.00%	7.00%	8.00%	10.24%	11.26%	12.27%
Pinnacle West Capital Corporation	PNW	\$2.78	\$80.50	3.45%	3.52%	3.00%	3.63%	5.50%	4.04%	6.51%	7.57%	9.05%
PNM Resources, Inc.	PNM	\$1.06	\$38.09	2.78%	2.86%	5.40%	4.30%	7.50%	5.73%	7.14%	8.60%	10.39%
Portland General Electric Company	POR	\$1.36	\$42.23	3.22%	3.29%	2.90%	3.50%	6.00%	4.13%	6.17%	7.42%	9.32%
Southern Company	SO	\$2.32	\$45.61	5.09%	5.18%	4.50%	2.70%	4.00%	3.73%	7.86%	8.92%	9.70%
WEC Energy Group, Inc.	WEC	\$2.21	\$63.20	3.50%	3.58%	4.20%	4.34%	6.00%	4.85%	7.77%	8.43%	9.60%
Xcel Energy Inc.	XEL	\$1.52	\$45.71	3.33%	3.42%	5.80%	6.15%	4.50%	5.48%	7.90%	8.90%	9.58%
PROXY GROUP MEAN				3.45%	3.54%	5.09%	5.31%	5.36%	5.32%	7.80%	8.86%	9.95%
PROXY GROUP MEDIAN				3.36%	3.46%	5.40%	5.52%	5.50%	5.44%	7.73%	8.91%	9.87%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of April 13, 2018
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Equals Average([5], [6], [7])
[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model
180 Day Average Stock Price

Company	Ticker	Annualized Dividend	Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth	[9] Low ROE	[10] Mean ROE	[11] High ROE
ALLETE, Inc.	ALE	\$2.24	\$74.60	3.00%	3.09%	6.60%	6.00%	4.50%	5.70%	7.57%	8.79%	9.70%
Alliant Energy Corporation	LNT	\$1.34	\$41.66	3.22%	3.31%	5.30%	5.45%	6.50%	5.75%	8.60%	9.06%	9.82%
Ameren Corporation	AEE	\$1.83	\$58.45	3.13%	3.24%	6.90%	6.37%	7.50%	6.92%	9.60%	10.16%	10.75%
American Electric Power Company, Inc.	AEP	\$2.48	\$71.18	3.48%	3.57%	5.40%	5.63%	4.50%	5.18%	8.06%	8.75%	9.21%
Black Hills Corporation	BKH	\$1.90	\$60.62	3.13%	3.22%	4.60%	4.07%	7.50%	5.39%	7.27%	8.61%	10.75%
CenterPoint Energy, Inc.	CNP	\$1.11	\$28.43	3.90%	4.05%	5.90%	8.49%	NA	7.20%	9.92%	11.24%	12.56%
CMS Energy Corporation	CMS	\$1.43	\$46.48	3.08%	3.19%	6.30%	7.04%	8.50%	7.28%	9.47%	10.47%	11.71%
Consolidated Edison, Inc.	ED	\$2.86	\$82.04	3.49%	3.54%	4.00%	3.11%	3.00%	3.37%	6.54%	6.91%	7.56%
DTE Energy Company	DTE	\$3.53	\$107.87	3.27%	3.37%	6.00%	5.58%	6.50%	6.03%	8.94%	9.40%	9.88%
El Paso Electric Company	EE	\$1.34	\$54.13	2.48%	2.54%	5.10%	5.20%	5.00%	5.10%	7.54%	7.64%	7.74%
Eversource Energy	ES	\$2.02	\$61.36	3.29%	3.39%	5.80%	5.65%	6.50%	5.98%	9.03%	9.37%	9.90%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$34.56	3.59%	3.69%	6.70%	8.50%	1.50%	5.57%	5.11%	9.25%	12.24%
IDACORP, Inc.	IDA	\$2.36	\$88.70	2.66%	2.71%	4.10%	3.10%	3.50%	3.57%	5.80%	6.27%	6.82%
NorthWestern Corporation	NWE	\$2.20	\$57.20	3.85%	3.91%	2.40%	3.12%	4.50%	3.34%	6.29%	7.25%	8.43%
OGE Energy Corp.	OGE	\$1.33	\$34.04	3.91%	4.00%	6.00%	5.80%	2.50%	4.77%	6.46%	8.77%	10.02%
Otter Tail Corporation	OTTR	\$1.34	\$43.36	3.09%	3.21%	NA	9.00%	7.00%	8.00%	10.20%	11.21%	12.23%
Pinnacle West Capital Corporation	PNW	\$2.78	\$84.48	3.29%	3.36%	3.00%	3.63%	5.50%	4.04%	6.34%	7.40%	8.88%
PNM Resources, Inc.	PNM	\$1.06	\$40.17	2.64%	2.71%	5.40%	4.30%	7.50%	5.73%	7.00%	8.45%	10.24%
Portland General Electric Company	POR	\$1.36	\$44.58	3.05%	3.11%	2.90%	3.50%	6.00%	4.13%	5.99%	7.25%	9.14%
Southern Company	SO	\$2.32	\$47.85	4.85%	4.94%	4.50%	2.70%	4.00%	3.73%	7.61%	8.67%	9.46%
WEC Energy Group, Inc.	WEC	\$2.21	\$64.49	3.43%	3.51%	4.20%	4.34%	6.00%	4.85%	7.70%	8.36%	9.53%
Xcel Energy Inc.	XEL	\$1.52	\$47.40	3.21%	3.29%	5.80%	6.15%	4.50%	5.48%	7.78%	8.78%	9.46%
PROXY GROUP MEAN				3.32%	3.41%	5.09%	5.31%	5.36%	5.32%	7.67%	8.73%	9.82%
PROXY GROUP MEDIAN				3.24%	3.33%	5.40%	5.52%	5.50%	5.44%	7.59%	8.76%	9.76%

Notes:

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

Constant Growth Discounted Cash Flow Model with Sustainable Growth
30 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Sustainable Growth Estimate	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.24	\$70.43	3.18%	3.27%	6.60%	6.00%	4.50%	4.87%	5.49%	7.75%	8.76%	9.89%
Alliant Energy Corporation	LNT	\$1.34	\$39.93	3.36%	3.45%	5.30%	5.45%	6.50%	4.44%	5.42%	7.87%	8.87%	9.96%
Ameren Corporation	AEE	\$1.83	\$55.35	3.31%	3.41%	6.90%	6.37%	7.50%	4.73%	6.38%	8.12%	9.79%	10.93%
American Electric Power Company, Inc.	AEP	\$2.48	\$67.20	3.69%	3.79%	5.40%	5.63%	4.50%	5.37%	5.22%	8.27%	9.01%	9.42%
Black Hills Corporation	BKH	\$1.90	\$53.02	3.58%	3.68%	4.60%	4.07%	7.50%	5.22%	5.35%	9.88%	9.03%	11.22%
CenterPoint Energy, Inc.	CNP	\$1.11	\$26.97	4.12%	4.25%	5.90%	8.49%	NA	5.65%	6.68%	9.88%	10.93%	12.78%
CMS Energy Corporation	CMS	\$1.43	\$44.02	3.25%	3.37%	6.30%	7.04%	8.50%	7.13%	7.24%	9.65%	10.61%	11.89%
Consolidated Edison, Inc.	ED	\$2.86	\$76.71	3.73%	3.79%	4.00%	3.11%	3.00%	2.82%	3.23%	6.61%	7.02%	7.80%
DTE Energy Company	DTE	\$3.53	\$102.48	3.44%	3.55%	6.00%	5.58%	6.50%	6.31%	6.10%	9.12%	9.65%	10.06%
El Paso Electric Company	EE	\$1.34	\$49.44	2.71%	2.78%	5.10%	5.20%	5.00%	4.08%	4.84%	6.85%	7.62%	7.98%
Eversource Energy	ES	\$2.02	\$58.10	3.48%	3.57%	5.80%	5.65%	6.50%	4.12%	5.52%	7.67%	9.09%	10.09%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$33.92	3.66%	3.75%	6.70%	8.50%	1.50%	3.47%	5.04%	5.18%	8.79%	12.31%
IDACORP, Inc.	IDA	\$2.36	\$85.10	2.77%	2.82%	4.10%	3.10%	3.50%	3.56%	3.56%	5.92%	6.39%	6.93%
NorthWestern Corporation	NWE	\$2.20	\$52.38	4.20%	4.27%	2.40%	3.12%	4.50%	3.76%	3.45%	6.65%	7.72%	8.79%
OGE Energy Corp.	OGE	\$1.33	\$31.83	4.18%	4.27%	6.00%	5.80%	2.50%	2.89%	4.30%	6.73%	8.57%	10.30%
Otter Tail Corporation	OTTR	\$1.34	\$42.67	3.14%	3.27%	NA	9.00%	7.00%	7.88%	7.96%	10.25%	11.23%	12.28%
Pinnacle West Capital Corporation	PNW	\$2.78	\$78.03	3.56%	3.63%	3.00%	3.63%	5.50%	4.03%	4.04%	6.62%	7.68%	9.16%
PNM Resources, Inc.	PNM	\$1.06	\$37.00	2.87%	2.94%	5.40%	4.30%	7.50%	3.54%	5.19%	6.46%	8.12%	10.47%
Portland General Electric Company	POR	\$1.36	\$39.86	3.41%	3.48%	2.90%	3.50%	6.00%	4.24%	4.16%	6.36%	7.64%	9.51%
Southern Company	SO	\$2.32	\$44.14	5.26%	5.36%	4.50%	2.70%	4.00%	4.02%	3.81%	8.03%	9.16%	9.87%
WEC Energy Group, Inc.	WEC	\$2.21	\$61.60	3.59%	3.67%	4.20%	4.34%	6.00%	4.23%	4.69%	7.86%	8.36%	9.70%
Xcel Energy Inc.	XEL	\$1.52	\$44.30	3.43%	3.52%	5.80%	6.15%	4.50%	3.90%	5.09%	7.40%	8.61%	9.69%
PROXY GROUP MEAN				3.54%	3.63%	5.09%	5.31%	5.36%	4.56%	5.13%	7.59%	8.76%	10.05%
PROXY GROUP MEDIAN				3.46%	3.56%	5.40%	5.52%	5.50%	4.17%	5.14%	7.70%	8.78%	9.93%

Notes:

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[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Source: Value Line, RBH-2
[9] Equals Average([5], [6], [7], [8])
[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])
[11] Equals [4] + [9]
[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

Constant Growth Discounted Cash Flow Model with Sustainable Growth
90 Day Average Stock Price

Company	Ticker	Annualized Dividend	Average Stock Price	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
						Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Sustainable Growth Estimate	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.24	\$71.97			3.11%	3.20%	6.60%	6.00%	4.50%	4.87%	5.49%	7.68%	8.69%	9.82%
Alliant Energy Corporation	LNT	\$1.34	\$40.49			3.31%	3.40%	5.30%	5.45%	6.50%	4.44%	5.42%	7.83%	8.82%	9.92%
Ameren Corporation	AEE	\$1.83	\$56.61			3.23%	3.34%	6.90%	6.37%	7.50%	4.73%	6.38%	8.04%	9.71%	10.85%
American Electric Power Company, Inc.	AEP	\$2.48	\$69.11			3.59%	3.68%	5.40%	5.63%	4.50%	5.37%	5.22%	8.17%	8.91%	9.32%
Black Hills Corporation	BKH	\$1.90	\$54.72			3.47%	3.56%	4.60%	4.07%	7.50%	5.22%	5.35%	7.61%	8.91%	11.10%
CenterPoint Energy, Inc.	CNP	\$1.11	\$27.48			4.04%	4.17%	5.90%	8.49%	NA	5.65%	6.68%	9.80%	10.85%	12.70%
CMS Energy Corporation	CMS	\$1.43	\$44.96			3.18%	3.30%	6.30%	7.04%	8.50%	7.13%	7.24%	9.58%	10.54%	11.82%
Consolidated Edison, Inc.	ED	\$2.86	\$79.65			3.59%	3.65%	4.00%	3.11%	3.00%	2.82%	3.23%	6.47%	6.88%	7.66%
DTE Energy Company	DTE	\$3.53	\$104.99			3.36%	3.46%	6.00%	5.58%	6.50%	6.31%	6.10%	9.04%	9.56%	9.97%
El Paso Electric Company	EE	\$1.34	\$51.94			2.58%	2.64%	5.10%	5.20%	5.00%	4.08%	4.84%	6.71%	7.49%	7.85%
Eversource Energy	ES	\$2.02	\$60.18			3.36%	3.45%	5.80%	5.65%	6.50%	4.12%	5.52%	7.54%	8.97%	9.97%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$34.52			3.59%	3.68%	6.70%	8.50%	1.50%	3.47%	5.04%	5.12%	8.73%	12.24%
IDACORP, Inc.	IDA	\$2.36	\$86.65			2.72%	2.77%	4.10%	3.10%	3.50%	3.56%	3.56%	5.87%	6.34%	6.88%
NorthWestern Corporation	NWE	\$2.20	\$54.69			4.02%	4.09%	2.40%	3.12%	4.50%	3.76%	3.45%	6.47%	7.54%	8.61%
OGE Energy Corp.	OGE	\$1.33	\$32.08			4.15%	4.23%	6.00%	5.80%	2.50%	2.89%	4.30%	6.70%	8.53%	10.27%
Otter Tail Corporation	OTTR	\$1.34	\$42.77			3.13%	3.26%	NA	9.00%	7.00%	7.88%	7.96%	10.24%	11.22%	12.27%
Pinnacle West Capital Corporation	PNW	\$2.78	\$80.50			3.45%	3.52%	3.00%	3.63%	5.50%	4.03%	4.04%	6.51%	7.56%	9.05%
PNM Resources, Inc.	PNM	\$1.06	\$38.09			2.78%	2.85%	5.40%	4.30%	7.50%	3.54%	5.19%	6.37%	8.04%	10.39%
Portland General Electric Company	POR	\$1.36	\$42.23			3.22%	3.29%	2.90%	3.50%	6.00%	4.24%	4.16%	6.17%	7.45%	9.32%
Southern Company	SO	\$2.32	\$45.61			5.09%	5.18%	4.50%	2.70%	4.00%	4.02%	3.81%	7.86%	8.99%	9.70%
WEC Energy Group, Inc.	WEC	\$2.21	\$63.20			3.50%	3.58%	4.20%	4.34%	6.00%	4.23%	4.69%	7.77%	8.27%	9.60%
Xcel Energy Inc.	XEL	\$1.52	\$45.71			3.33%	3.41%	5.80%	6.15%	4.50%	3.90%	5.09%	7.29%	8.50%	9.58%
PROXY GROUP MEAN						3.45%	3.53%	5.09%	5.31%	5.36%	4.56%	5.13%	7.49%	8.66%	9.95%
PROXY GROUP MEDIAN						3.36%	3.46%	5.40%	5.52%	5.50%	4.17%	5.14%	7.58%	8.71%	9.87%

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[11] Equals [4] + [9]
[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

Constant Growth Discounted Cash Flow Model with Sustainable Growth
180 Day Average Stock Price

Company	Ticker	Annualized Dividend	Average Stock Price	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
				Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Sustainable Growth Estimate	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.24	\$74.60	3.00%	3.09%	6.60%	6.00%	4.50%	4.87%	5.49%	7.57%	8.58%	9.70%
Alliant Energy Corporation	LNT	\$1.34	\$41.66	3.22%	3.30%	5.30%	5.45%	6.50%	4.44%	5.42%	7.73%	8.73%	9.82%
Ameren Corporation	AEE	\$1.83	\$58.45	3.13%	3.23%	6.90%	6.37%	7.50%	4.73%	6.38%	7.94%	9.61%	10.75%
American Electric Power Company, Inc.	AEP	\$2.48	\$71.18	3.48%	3.58%	5.40%	5.63%	4.50%	5.37%	5.22%	8.06%	8.80%	9.21%
Black Hills Corporation	BKH	\$1.90	\$60.62	3.13%	3.22%	4.60%	4.07%	7.50%	5.22%	5.35%	7.27%	8.57%	10.75%
CenterPoint Energy, Inc.	CNP	\$1.11	\$28.43	3.90%	4.04%	5.90%	8.49%	NA	5.65%	6.68%	9.66%	10.71%	12.56%
CMS Energy Corporation	CMS	\$1.43	\$46.48	3.08%	3.19%	6.30%	7.04%	8.50%	7.13%	7.24%	9.47%	10.43%	11.71%
Consolidated Edison, Inc.	ED	\$2.86	\$82.04	3.49%	3.54%	4.00%	3.11%	3.00%	2.82%	3.23%	6.36%	6.78%	7.56%
DTE Energy Company	DTE	\$3.53	\$107.87	3.27%	3.37%	6.00%	5.58%	6.50%	6.31%	6.10%	8.94%	9.47%	9.88%
El Paso Electric Company	EE	\$1.34	\$54.13	2.48%	2.54%	5.10%	5.20%	5.00%	4.08%	4.84%	6.61%	7.38%	7.74%
Eversource Energy	ES	\$2.02	\$61.36	3.29%	3.38%	5.80%	5.65%	6.50%	4.12%	5.52%	7.48%	8.90%	9.90%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$34.56	3.59%	3.68%	6.70%	8.50%	1.50%	3.47%	5.04%	5.11%	8.72%	12.24%
IDACORP, Inc.	IDA	\$2.36	\$88.70	2.66%	2.71%	4.10%	3.10%	3.50%	3.56%	3.56%	5.80%	6.27%	6.82%
NorthWestern Corporation	NWE	\$2.20	\$57.20	3.85%	3.91%	2.40%	3.12%	4.50%	3.76%	3.45%	6.29%	7.36%	8.43%
OGE Energy Corp.	OGE	\$1.33	\$34.04	3.91%	3.99%	6.00%	5.80%	2.50%	2.89%	4.30%	6.46%	8.29%	10.02%
Otter Tail Corporation	OTTR	\$1.34	\$43.36	3.09%	3.21%	NA	9.00%	7.00%	7.88%	7.96%	10.20%	11.17%	12.23%
Pinnacle West Capital Corporation	PNW	\$2.78	\$84.48	3.29%	3.36%	3.00%	3.63%	5.50%	4.03%	4.04%	6.34%	7.40%	8.88%
PNM Resources, Inc.	PNM	\$1.06	\$40.17	2.64%	2.71%	5.40%	4.30%	7.50%	3.54%	5.19%	6.23%	7.89%	10.24%
Portland General Electric Company	POR	\$1.36	\$44.58	3.05%	3.11%	2.90%	3.50%	6.00%	4.24%	4.16%	5.99%	7.27%	9.14%
Southern Company	SO	\$2.32	\$47.85	4.85%	4.94%	4.50%	2.70%	4.00%	4.02%	3.81%	7.61%	8.75%	9.46%
WEC Energy Group, Inc.	WEC	\$2.21	\$64.49	3.43%	3.51%	4.20%	4.34%	6.00%	4.23%	4.69%	7.70%	8.20%	9.53%
Xcel Energy Inc.	XEL	\$1.52	\$47.40	3.21%	3.29%	5.80%	6.15%	4.50%	3.90%	5.09%	7.17%	8.38%	9.46%
PROXY GROUP MEAN				3.32%	3.40%	5.09%	5.31%	5.36%	4.56%	5.13%	7.36%	8.53%	9.82%
PROXY GROUP MEDIAN				3.24%	3.33%	5.40%	5.52%	5.50%	4.17%	5.14%	7.37%	8.57%	9.76%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional equals indicated number of trading day average as of April 13, 2018
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [9])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Source: Value Line, RBH-2
[9] Equals Average([5], [6], [7], [8])
[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])
[11] Equals [4] + [9]
[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

Schedule __ (RBH-2R)
Sustainable Growth Estimate

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC Docket No. 4770
Schedule RBH-2R
Page 1 of 1

Sustainable Growth Estimate

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]
Company	Ticker	Projected Earnings per share (3-5 year)	Projected Dividend Declared (3-5 year)	Retention Ratio (B)	Projected Book Value per Share (3-5 year)	Return on Book Value (R)	Projected Common Shares Outstanding 2018	Projected Common Shares Outstanding (3-5 year)	Common Shares Growth Rate	2017 High Price	2017 Low Price	2017 Price Midpoint	Projected Book Value per Share 2018	Market/Book Ratio	"S"	"Y"	S x V	BR + SV
ALLETE, Inc.	ALE	4.25	2.70	36.47%	49.25	8.63%	52.00	56.00	2.48%	\$ 81.20	\$ 61.60	\$ 71.40	42.10	1.70	4.20%	41.04%	1.72%	4.87%
Alliant Energy Corporation	LNT	2.60	1.66	36.15%	22.85	11.38%	233.00	235.00	0.28%	\$ 45.60	\$ 36.60	\$ 41.10	19.00	2.16	0.61%	53.77%	0.33%	4.40%
AEP	AEP	3.75	2.25	40.00%	37.25	10.07%	244.00	250.00	0.80%	\$ 64.90	\$ 51.40	\$ 58.15	31.00	1.88	1.51%	46.69%	1.20%	4.73%
American Electric Power Company, Inc.	BKH	5.00	3.05	39.00%	46.75	10.70%	493.50	515.00	1.48%	\$ 78.10	\$ 61.80	\$ 69.95	38.70	1.81	2.68%	44.67%	1.07%	5.27%
Black Hills Corporation	CPH	4.25	2.30	45.88%	40.00	10.63%	60.25	61.00	0.41%	\$ 72.00	\$ 57.00	\$ 64.50	35.00	1.84	0.75%	45.74%	0.34%	5.65%
CenterPoint Energy, Inc.	CNP	2.00	1.27	36.50%	14.00	14.29%	431.00	435.00	0.31%	\$ 30.50	\$ 24.50	\$ 27.50	11.35	2.42	0.74%	58.73%	0.43%	7.13%
CMS Energy Corporation	CMS	3.00	1.85	38.33%	22.25	13.48%	284.00	294.00	1.15%	\$ 50.80	\$ 41.10	\$ 45.95	16.95	2.71	3.11%	63.11%	1.97%	2.82%
Consolidated Edison, Inc.	ED	4.75	3.30	30.53%	56.50	8.41%	312.00	316.00	0.42%	\$ 89.70	\$ 72.10	\$ 80.90	50.15	1.61	0.68%	38.01%	0.26%	6.31%
DTE Energy Company	DTE	7.50	4.55	39.33%	68.50	10.95%	182.50	195.00	2.21%	\$ 116.70	\$ 96.60	\$ 106.65	55.95	1.91	4.21%	47.54%	2.00%	4.08%
El Paso Electric Company	EE	3.00	1.75	41.67%	32.25	9.30%	40.70	41.00	0.24%	\$ 61.20	\$ 44.70	\$ 52.95	28.80	1.84	0.45%	45.61%	0.20%	4.12%
Eversource Energy	ES	4.25	2.50	41.18%	42.50	10.00%	316.89	316.89	0.00%	\$ 66.10	\$ 54.10	\$ 60.10	36.30	1.66	0.00%	39.60%	0.00%	3.47%
Hawaiian Electric Industries, Inc.	HE	2.00	1.40	30.00%	22.00	9.09%	108.60	112.00	0.96%	\$ 38.70	\$ 31.70	\$ 35.20	19.85	1.77	1.70%	43.61%	0.74%	3.56%
IDACORP, Inc.	IDA	4.75	2.90	38.95%	52.00	9.13%	50.40	50.40	0.00%	\$ 100.00	\$ 77.50	\$ 88.75	46.30	1.92	0.00%	47.83%	0.00%	3.76%
NorthWestern Corporation	NWE	4.00	2.50	37.50%	42.00	9.52%	50.00	50.50	0.33%	\$ 64.50	\$ 55.70	\$ 60.10	38.05	1.58	0.52%	36.69%	0.19%	2.89%
OGE Energy Corp.	OGE	2.50	1.85	26.00%	22.50	11.11%	199.70	199.70	0.00%	\$ 37.40	\$ 32.60	\$ 35.00	19.95	1.75	0.00%	43.00%	0.00%	7.88%
Other Tail Corporation	OTT	2.50	1.55	38.00%	24.45	10.22%	40.00	44.00	3.20%	\$ 48.70	\$ 35.70	\$ 42.20	18.75	2.25	7.19%	55.57%	4.00%	4.03%
Pinnacle West Capital Corporation	PNW	5.25	3.35	36.19%	51.75	10.14%	112.50	114.00	0.44%	\$ 92.50	\$ 75.80	\$ 84.15	46.15	1.82	0.80%	45.16%	0.36%	4.03%
PNM Resources, Inc.	PNM	2.25	1.40	37.78%	24.00	9.38%	79.65	79.65	0.00%	\$ 46.00	\$ 33.30	\$ 39.65	22.30	1.78	0.00%	43.76%	0.00%	3.54%
Portland General Electric Company	POR	3.00	1.70	43.33%	31.75	9.45%	89.40	90.00	0.22%	\$ 50.10	\$ 42.40	\$ 46.25	28.20	1.64	0.36%	39.03%	0.14%	4.24%
Southern Company	SO	3.75	2.70	28.00%	28.00	13.39%	1008.00	1016.00	0.26%	\$ 53.50	\$ 46.70	\$ 50.10	24.50	2.04	0.53%	51.10%	0.27%	4.02%
WEC Energy Group, Inc.	WEC	4.25	2.75	35.29%	35.50	11.97%	315.60	315.60	0.00%	\$ 70.10	\$ 56.10	\$ 63.10	30.95	2.04	0.00%	50.95%	0.00%	4.23%
Xcel Energy Inc.	XEL	2.75	1.80	34.55%	26.25	10.48%	509.50	514.00	0.29%	\$ 52.20	\$ 40.00	\$ 46.10	23.35	1.97	0.57%	49.35%	0.28%	3.90%
Average:																		4.56%

Notes:

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

Schedule __ (RBH-3R)

Multi-Stage Growth Discounted Cash Flow Model

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

Inputs		[1]	[2]	[3]	[4]	Value		[5]	[6]	[7]	Payout Ratio		[8]	[9]	[10]	[11]	[12]	[13]
		Stock																
			Zacks	First Call	Line	Average	Growth											
		Ticker	Price															
Company	ALLETE, Inc.	ALE	\$70.43	6.00%	4.50%	5.70%	5.43%	66.00%	64.00%	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio	Terminal	
	Alliant Energy Corporation	LNT	\$39.93	5.30%	5.45%	5.75%	5.43%	64.00%	64.00%	65.57%	65.57%	65.57%	\$0.00	8.67%	19.78	3.64	4.14	
	Ameren Corporation	AEE	\$55.35	6.90%	6.37%	7.50%	6.92%	5.43%	61.00%	60.00%	65.57%	65.57%	\$0.00	9.52%	17.79	3.28	3.28	
	American Electric Power Company, Inc.	AEP	\$67.20	5.40%	5.63%	4.50%	5.18%	63.00%	63.00%	65.57%	65.57%	65.57%	\$0.00	10.19%	15.31	2.82	2.82	
	Black Hills Corporation	BKH	\$53.02	4.60%	4.07%	7.50%	5.39%	52.00%	54.00%	65.57%	65.57%	65.57%	\$0.00	9.10%	19.86	3.66	3.66	
	CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA	7.20%	71.00%	64.00%	65.57%	65.57%	65.57%	\$0.00	8.68%	22.38	4.12	4.12	
	CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.50%	7.28%	61.00%	61.00%	65.57%	65.57%	65.57%	\$0.00	9.34%	18.62	3.43	3.43	
	Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%	3.37%	67.00%	67.00%	65.57%	65.57%	65.57%	\$0.00	8.84%	21.37	3.94	3.94	
	DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.00%	6.03%	5.43%	62.00%	61.00%	65.57%	65.57%	65.57%	\$0.00	9.18%	19.44	3.58	3.58
	El Paso Electric Company	EE	\$49.44	5.10%	5.20%	5.00%	5.10%	52.00%	59.00%	65.57%	65.57%	65.57%	\$0.00	8.97%	20.59	3.79	3.79	
	Eversource Energy	ES	\$58.10	5.80%	5.65%	5.00%	5.98%	5.43%	61.00%	58.00%	65.57%	65.57%	65.57%	\$0.00	9.43%	18.19	3.35	3.35
	Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%	5.57%	5.43%	69.00%	71.00%	65.57%	65.57%	65.57%	\$0.00	10.83%	13.49	2.49	2.49
	IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%	3.57%	57.00%	60.00%	65.57%	65.57%	65.57%	\$0.00	8.47%	23.96	4.42	4.42	
	NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	4.50%	3.34%	5.43%	63.00%	62.00%	65.57%	65.57%	65.57%	\$0.00	9.67%	17.16	3.16	3.16
	OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%	4.77%	5.43%	68.00%	74.00%	65.57%	65.57%	65.57%	\$0.00	9.42%	18.26	3.37	3.37
	Otter Tail Corporation	OTTR	\$42.67	NA	9.00%	7.00%	8.00%	5.43%	72.00%	63.00%	65.57%	65.57%	65.57%	\$0.00	8.92%	20.89	3.85	3.85
	Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.50%	4.04%	5.43%	64.00%	62.00%	65.57%	65.57%	65.57%	\$0.00	8.92%	20.89	3.85	3.85
PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%	5.73%	5.43%	57.00%	56.00%	65.57%	65.57%	65.57%	\$0.00	8.46%	24.05	4.43	4.43	
Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%	4.13%	5.43%	59.00%	55.00%	65.57%	65.57%	65.57%	\$0.00	9.11%	19.77	3.64	3.64	
Southern Company	SO	\$44.14	4.50%	2.70%	4.00%	3.73%	5.43%	78.00%	72.00%	65.57%	65.57%	65.57%	\$0.00	9.96%	16.08	2.96	2.96	
WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%	4.85%	5.43%	67.00%	66.00%	65.57%	65.57%	65.57%	\$0.00	8.98%	20.49	3.78	3.78	
Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%	5.48%	5.43%	63.00%	67.00%	65.57%	65.57%	65.57%	\$0.00	9.29%	18.85	3.47	3.47	
													MEAN	9.22%				
													MAX	10.83%				
													MIN	8.46%				
Projected Annual Earnings per Share																		
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	\$31.14	\$3.32	\$3.51	\$3.71	\$3.92	\$4.14	\$4.38	\$4.63	\$4.89	\$5.16	\$5.44	\$5.74	\$6.05	\$6.38	\$6.73	\$7.09	\$7.48
Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.85	\$1.95	\$2.06	\$2.18	\$2.31	\$2.44	\$2.58	\$2.72	\$2.87	\$3.03	\$3.19	\$3.37	\$3.55	\$3.74	\$3.94
Ameren Corporation	AEE	\$2.68	\$2.87	\$3.06	\$3.28	\$3.50	\$3.75	\$4.00	\$4.27	\$4.55	\$4.83	\$5.11	\$5.40	\$5.70	\$6.01	\$6.33	\$6.68	\$7.04
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.92	\$5.18	\$5.44	\$5.73	\$6.02	\$6.34	\$6.68	\$7.03	\$7.41	\$7.82	\$8.24	\$8.69	\$9.16	\$9.66
Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$3.42	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$4.69	\$4.94	\$5.21	\$5.50	\$5.79	\$6.11
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.07	\$1.15	\$1.23	\$1.32	\$1.42	\$1.52	\$1.62	\$1.73	\$1.84	\$1.95	\$2.06	\$2.17	\$2.29	\$2.41	\$2.55	\$2.68
CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.02	\$3.23	\$3.44	\$3.66	\$3.88	\$4.11	\$4.33	\$4.56	\$4.81	\$5.07	\$5.35
Consolidated Edison, Inc.	ED	\$3.94	\$4.07	\$4.21	\$4.35	\$4.50	\$4.65	\$4.81	\$4.99	\$5.19	\$5.42	\$5.67	\$5.96	\$6.28	\$6.63	\$6.98	\$7.36	\$7.76
DTE Energy Company	DTE	\$4.83	\$5.12	\$5.43	\$5.76	\$6.10	\$6.47	\$6.86	\$7.27	\$7.69	\$8.13	\$8.59	\$9.06	\$9.56	\$10.08	\$10.62	\$11.20	\$11.81
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.64	\$2.77	\$2.92	\$3.06	\$3.22	\$3.39	\$3.56	\$3.75	\$3.95	\$4.16	\$4.39	\$4.63	\$4.88	\$5.14	\$5.42
Eversource Energy	ES	\$2.96	\$3.14	\$3.32	\$3.52	\$3.73	\$3.96	\$4.19	\$4.40	\$4.70	\$4.97	\$5.25	\$5.54	\$5.84	\$6.15	\$6.49	\$6.84	\$7.21
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$3.00	\$3.17	\$3.35	\$3.53	\$3.72	\$3.93	\$4.14	\$4.37	\$4.60	\$4.85	\$5.12	\$5.39
IDACORP, Inc.	IDA	\$3.94	\$4.08	\$4.23	\$4.38	\$4.53	\$4.69	\$4.86	\$5.05	\$5.26	\$5.50	\$5.76	\$6.06	\$6.39	\$6.73	\$7.10	\$7.48	\$7.89
NorthWestern Corporation	NWE	\$3.39	\$3.50	\$3.62	\$3.74	\$3.87	\$4.00	\$4.13	\$4.28	\$4.45	\$4.65	\$4.87	\$5.12	\$5.42	\$5.69	\$6.00	\$6.32	\$6.66
OGE Energy Corp.	OGE	\$1.69	\$1.77	\$1.85	\$1.94	\$2.04	\$2.13	\$2.23	\$2.34	\$2.46	\$2.59	\$2.72	\$2.87	\$3.02	\$3.18	\$3.36	\$3.54	\$3.73
Otter Tail Corporation	OTTR	\$1.60	\$1.73	\$1.87	\$2.02	\$2.18	\$2.35	\$2.54	\$2.73	\$2.93	\$3.12	\$3.32	\$3.51	\$3.72	\$3.91	\$4.12	\$4.34	\$4.58
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.11	\$4.28	\$4.45	\$4.63	\$4.82	\$5.01	\$5.22	\$5.46	\$5.72	\$6.00	\$6.31	\$6.66	\$7.02	\$7.40	\$7.80	\$8.22
PNM Resources, Inc.	PNM	\$1.46	\$1.54	\$1.63	\$1.73	\$1.82	\$1.93	\$2.04	\$2.16	\$2.28	\$2.40	\$2.54	\$2.68	\$2.82	\$2.97	\$3.14	\$3.31	\$3.49
Portland General Electric Company	POR	\$2.16	\$2.25	\$2.34	\$2.44	\$2.54	\$2.64	\$2.75	\$2.87	\$3.01	\$3.15	\$3.31	\$3.48	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53
Southern Company	SO	\$2.83	\$2.94	\$3.05	\$3.16	\$3.28	\$3.40	\$3.53	\$3.67	\$3.83	\$4.00	\$4.20	\$4.41	\$4.65	\$4.90	\$5.17	\$5.45	\$5.74
WEC Energy Group, Inc.	WEC	\$2.96	\$3.10	\$3.25	\$3.41	\$3.58	\$3.75	\$3.93	\$4.13	\$4.33	\$4.56	\$4.80	\$5.05	\$5.33	\$5.61	\$5.94	\$6.24	\$6.58
Xcel Energy Inc.	XEL	\$2.21	\$2.33	\$2.46	\$2.59	\$2.74	\$2.89	\$3.04	\$3.21	\$3.37	\$3.57	\$3.77	\$3.97	\$4.19	\$4.41	\$4.65	\$4.90	\$5.17

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	53.33%	54.00%	55.66%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	62.96%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	67.00%	61.00%	61.00%	67.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	68.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	72.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.42	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$4.90	\$147.86
Alliant Energy Corporation	LNT	\$1.18	\$1.25	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$2.59	\$84.07
Ameren Corporation	AEE	\$1.87	\$1.99	\$2.11	\$2.25	\$2.43	\$2.63	\$2.84	\$3.05	\$3.27	\$3.50	\$3.74	\$3.94	\$4.15	\$4.38	\$4.61	\$118.78
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$6.33	\$140.27
Black Hills Corporation	BKH	\$1.52	\$1.62	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$4.00	\$115.03
CenterPoint Energy, Inc.	CNP	\$0.82	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$1.76	\$56.96
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$3.51	\$94.45
Consolidated Edison, Inc.	ED	\$2.82	\$2.92	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$5.09	\$157.37
DTE Energy Company	DTE	\$3.37	\$3.55	\$3.74	\$3.95	\$4.23	\$4.53	\$4.84	\$5.17	\$5.52	\$5.88	\$6.27	\$6.61	\$6.96	\$7.34	\$7.74	\$217.74
El Paso Electric Company	EE	\$1.37	\$1.51	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$3.56	\$105.89
Eversource Energy	ES	\$2.03	\$2.11	\$2.20	\$2.30	\$2.48	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$4.73	\$124.38
Hawaiian Electric Industries, Inc.	HE	\$1.76	\$1.88	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$3.54	\$69.05
IDACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$179.34
NorthWestern Corporation	NWE	\$2.28	\$2.41	\$2.47	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$4.37	\$108.48
OGE Energy Corp.	OGE	\$1.26	\$1.36	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$2.45	\$64.65
Other Tail Corporation	OTTR	\$1.34	\$1.39	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$90.65
Pinnacle West Capital Corporation	PNW	\$2.74	\$2.82	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$5.39	\$162.93
PNM Resources, Inc.	PNM	\$0.93	\$0.98	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$2.29	\$79.51
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$2.97	\$84.96
Southern Company	SO	\$2.38	\$2.40	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.21	\$3.39	\$3.57	\$3.77	\$87.60
WEC Energy Group, Inc.	WEC	\$2.18	\$2.27	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$2.98	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$4.31	\$127.87
Xcel Energy Inc.	XEL	\$1.55	\$1.67	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$92.45

Projected Annual Data		Investor Cash Flows																	
		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	
Initial																			
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.66	\$2.38	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$152.77	
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.85	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$86.66	
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.34	\$1.93	\$2.11	\$2.25	\$2.43	\$2.63	\$2.84	\$3.05	\$3.27	\$3.50	\$3.74	\$3.94	\$4.15	\$4.38	\$123.39	
American Electric Power Company, Inc.	AEP	(\$67.20)	\$0.00	\$2.22	\$3.17	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$146.60	
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$119.04	
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.59	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$58.72	
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$97.96	
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.02	\$2.87	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$162.46	
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.42	\$3.47	\$3.74	\$3.95	\$4.23	\$4.53	\$4.84	\$5.17	\$5.52	\$5.88	\$6.27	\$6.61	\$6.96	\$7.34	\$225.48	
El Paso Electric Company	EE	(\$49.43)	\$0.00	\$0.99	\$1.41	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$109.44	
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.46	\$2.09	\$2.20	\$2.30	\$2.48	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$129.11	
Hawaiian Electric Industries, Inc.	HE	(\$33.92)	\$0.00	\$1.26	\$1.81	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$72.58	
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$184.52	
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.64	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$112.85	
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.91	\$1.29	\$1.47	\$1.58	\$1.68	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$93.65	
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.96	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$93.65	
Pinnacle West Capital Corporation	PNM	(\$78.03)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$168.32	
PNM Resources, Inc.	PNM	(\$37.00)	\$0.00	\$0.67	\$0.96	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$81.79	
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$87.93	
Southern Company	SO	(\$44.14)	\$0.00	\$1.71	\$2.42	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.21	\$3.39	\$3.57	\$91.37	
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.56	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$132.19	
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.11	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$95.84	

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Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.33%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	68.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	47.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.42	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$4.90	\$151.14
Alliant Energy Corporation	LNT	\$1.18	\$1.25	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$2.59	\$85.26
Ameren Corporation	AEE	\$3.09	\$3.20	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$6.33	\$121.45
American Electric Power Company, Inc.	AEP	\$1.52	\$1.62	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$4.00	\$118.66
Black Hills Corporation	BKH	\$0.82	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$1.76	\$58.03
CenterPoint Energy, Inc.	CNP	\$1.39	\$1.49	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$3.51	\$96.45
CMS Energy Corporation	CMS	\$2.82	\$2.92	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$5.09	\$163.59
Consolidated Edison, Inc.	ED	\$1.37	\$1.51	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$3.56	\$111.21
DTE Energy Company	DTE	\$2.03	\$2.11	\$2.20	\$2.30	\$2.48	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$4.73	\$128.81
El Paso Electric Company	EE	\$1.76	\$1.88	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$3.54	\$70.32
Eversource Energy	ES	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$182.63
Hawaiian Electric Industries, Inc.	HE	\$2.28	\$2.34	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$4.37	\$113.39
IDACORP, Inc.	IDA	\$1.26	\$1.36	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$2.45	\$65.18
NorthWestern Corporation	NWE	\$1.34	\$1.39	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$90.87
OGE Energy Corp.	OGE	\$2.74	\$2.82	\$2.90	\$2.99	\$3.17	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$5.39	\$168.17
Other Tail Corporation	OTTR	\$0.93	\$0.98	\$1.03	\$1.08	\$1.13	\$1.17	\$1.27	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$2.29	\$81.84
Pinnacle West Capital Corporation	PNW	\$0.93	\$0.98	\$1.03	\$1.08	\$1.13	\$1.17	\$1.27	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$2.29	\$81.84
PNM Resources, Inc.	PNM	\$1.38	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$2.97	\$90.00
Portland General Electric Company	POR	\$2.38	\$2.40	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.17	\$3.29	\$3.41	\$3.57	\$90.69
Southern Company	SO	\$2.18	\$2.27	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$4.31	\$131.27
WEC Energy Group, Inc.	WEC	\$1.55	\$1.67	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$95.44
Xcel Energy Inc.	XEL																

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Company	Ticket	Initial																
		Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.66	\$2.38	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$156.04
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.85	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$87.85
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.34	\$1.93	\$2.11	\$2.25	\$2.43	\$2.63	\$2.84	\$3.05	\$3.27	\$3.50	\$3.74	\$3.94	\$4.15	\$4.38	\$126.07
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.22	\$3.17	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$150.64
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$122.67
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.59	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$59.79
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$99.96
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.02	\$2.87	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$168.68
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.42	\$3.47	\$3.74	\$3.95	\$4.23	\$4.53	\$4.84	\$5.17	\$5.52	\$5.88	\$6.27	\$6.61	\$6.96	\$7.34	\$230.81
El Paso Electric Company	EE	(\$1.94)	\$0.00	\$0.99	\$1.41	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$114.76
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.46	\$2.09	\$2.20	\$2.30	\$2.48	\$2.67	\$2.86	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$133.53
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.26	\$1.81	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$73.86
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$187.81
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.64	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$117.76
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.91	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$67.62
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.96	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$93.87
Pinnacle West Capital Corporation	PNW	(\$80.50)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$173.56
PNM Resources, Inc.	PNM	(\$38.09)	\$0.00	\$0.67	\$0.96	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$84.13
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$92.97
Southern Company	SO	(\$45.61)	\$0.00	\$1.71	\$2.42	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.21	\$3.39	\$3.57	\$94.45
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.56	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$135.59
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.11	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$98.83

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Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.33%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.33%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	47.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.42	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$4.90	\$156.72
Alliant Energy Corporation	LNT	\$1.18	\$1.25	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$2.59	\$87.74
Ameren Corporation	AEE	\$3.09	\$3.20	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$6.33	\$125.37
American Electric Power Company, Inc.	AEP	\$1.52	\$1.62	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$4.00	\$148.70
Black Hills Corporation	BKH	\$0.82	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$1.76	\$131.21
CenterPoint Energy, Inc.	CNP	\$1.39	\$1.49	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$3.51	\$60.05
CMS Energy Corporation	CMS	\$2.82	\$2.92	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$5.09	\$99.68
Consolidated Edison, Inc.	ED	\$3.37	\$3.55	\$3.74	\$3.95	\$4.23	\$4.53	\$4.84	\$5.17	\$5.52	\$5.88	\$6.27	\$6.61	\$6.96	\$7.34	\$7.74	\$188.65
DTE Energy Company	DTE	\$1.37	\$1.51	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$3.56	\$229.19
El Paso Electric Company	EE	\$2.03	\$2.11	\$2.20	\$2.30	\$2.48	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$4.73	\$115.86
Eversource Energy	ES	\$1.76	\$1.88	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$3.54	\$131.32
Hawaiian Electric Industries, Inc.	HE	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$70.42
IDACORP, Inc.	IDA	\$2.28	\$2.34	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$4.37	\$186.98
NorthWestern Corporation	NWE	\$1.26	\$1.36	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$2.45	\$118.70
OGE Energy Corp.	OGE	\$1.34	\$1.39	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$69.31
Other Tail Corporation	OTTR	\$2.74	\$2.82	\$2.90	\$2.99	\$3.17	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$5.39	\$92.11
Pinnacle West Capital Corporation	PNW	\$0.93	\$0.98	\$1.03	\$1.08	\$1.13	\$1.17	\$1.27	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$2.29	\$176.61
PNM Resources, Inc.	PNM	\$0.93	\$0.98	\$1.03	\$1.08	\$1.13	\$1.17	\$1.27	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$2.29	\$86.26
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$2.97	\$94.99
Southern Company	SO	\$2.38	\$2.40	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.19	\$3.39	\$3.57	\$3.77	\$95.41
WEC Energy Group, Inc.	WEC	\$2.18	\$2.27	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$4.31	\$133.99
Xcel Energy Inc.	XEL	\$1.55	\$1.67	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$99.02

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Company	Ticket	Initial																
		Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.66	\$2.38	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$161.62
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.85	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$90.33
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.34	\$1.93	\$2.11	\$2.25	\$2.43	\$2.63	\$2.84	\$3.05	\$3.27	\$3.50	\$3.74	\$3.94	\$4.15	\$4.38	\$129.98
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.22	\$3.17	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$155.04
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$135.21
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.59	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$61.81
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$103.19
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.02	\$2.87	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$173.74
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.42	\$3.47	\$3.74	\$3.95	\$4.23	\$4.53	\$4.84	\$5.17	\$5.52	\$5.88	\$6.27	\$6.61	\$6.96	\$7.34	\$236.93
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.99	\$1.41	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$119.41
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.46	\$2.09	\$2.20	\$2.30	\$2.48	\$2.67	\$2.86	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$136.05
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.26	\$1.81	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$73.95
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$192.15
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.64	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$123.07
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.91	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$71.76
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.96	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$95.11
Pinnacle West Capital Corporation	PNM	(\$84.48)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$162.00
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.67	\$0.96	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$88.54
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$97.96
Southern Company	SO	(\$47.85)	\$0.00	\$1.71	\$2.42	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.21	\$3.39	\$3.57	\$99.18
WEC Energy Group, Inc.	WEC	(\$64.48)	\$0.00	\$1.56	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$138.31
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.11	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$102.42

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]								
		Stock	Zacks	First Call	Value Estimates			Long-Term			Payout Ratio			Iterative Solution		Terminal	Terminal					
		Price			Low	High	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio								
Company	Ticker																					
ALLETE, Inc.	ALE	\$70.43	6.60%	6.00%	4.50%	5.43%	5.43%	66.00%	64.00%	65.57%	\$0.00	8.62%	21.64	3.99								
	LNT	\$39.93	5.30%	5.45%	7.50%	5.30%	5.43%	64.00%	60.00%	65.57%	\$0.00	8.56%	22.04	4.06								
	AEE	\$55.35	6.90%	6.37%	7.50%	6.37%	5.43%	61.00%	64.00%	65.57%	\$0.00	9.36%	17.57	3.24								
	American Electric Power Company, Inc.	BKH	\$67.20	5.40%	5.63%	4.50%	4.50%	66.00%	63.00%	65.57%	\$0.00	9.96%	15.27	2.81								
	Black Hills Corporation	BEK	\$53.02	4.60%	4.07%	7.50%	5.43%	52.00%	54.00%	65.57%	\$0.00	8.76%	20.77	3.83								
	CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA	5.90%	71.00%	64.00%	65.57%	(\$0.00)	8.38%	23.38	4.31								
	CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.00%	6.30%	61.00%	61.00%	65.57%	\$0.00	9.07%	18.96	3.49								
	Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%	5.43%	67.00%	67.00%	65.57%	\$0.00	8.74%	20.86	3.84								
	DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.50%	5.58%	62.00%	61.00%	65.57%	\$0.00	9.05%	19.06	3.51								
	El Paso Electric Company	EEL	\$49.44	5.10%	5.20%	5.00%	5.43%	52.00%	59.00%	65.57%	\$0.00	8.94%	19.67	3.63								
	Eversource Energy	ES	\$58.10	5.80%	5.65%	6.50%	5.65%	5.43%	58.00%	58.00%	65.57%	\$0.00	9.34%	17.67	3.26							
	Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%	1.50%	5.43%	69.00%	71.00%	65.57%	\$0.00	9.40%	17.40	3.21							
	IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%	3.10%	5.43%	57.00%	60.00%	65.57%	(\$0.00)	8.36%	23.56	4.34							
	NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	4.50%	2.40%	5.43%	63.00%	62.00%	65.57%	(\$0.00)	9.38%	17.48	3.22							
	OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%	2.50%	5.43%	68.00%	74.00%	65.57%	\$0.00	8.78%	20.63	3.80							
	Other Tail Corporation	OTTR	\$42.67	NA	9.00%	7.00%	7.00%	5.43%	72.00%	63.00%	65.57%	\$0.00	8.67%	21.31	3.93							
	Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.00%	3.00%	5.43%	64.00%	62.00%	65.57%	(\$0.00)	8.65%	21.45	3.95							
	PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%	5.43%	57.00%	56.00%	65.00%	65.57%	(\$0.00)	8.15%	25.40	4.68							
	Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%	2.90%	5.43%	59.00%	55.00%	65.57%	(\$0.00)	8.79%	20.58	3.79							
	Southern Company	SO	\$44.14	4.50%	2.70%	4.00%	2.70%	5.43%	78.00%	72.00%	65.57%	\$0.00	9.62%	16.51	3.04							
	WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%	4.20%	5.43%	67.00%	66.00%	65.57%	\$0.00	8.81%	20.41	3.76							
	Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%	4.50%	5.43%	63.00%	67.00%	65.57%	\$0.00	9.02%	19.24	3.55							
			MEAN													8.93%						
			MAX													9.96%						
			MIN													8.15%						
	Projected Annual Earnings per Share															[24]	[25]	[26]	[27]	[28]	[29]	[30]
	Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
	ALLETE, Inc.	ALE	\$31.14	\$3.28	\$3.43	\$3.58	\$3.74	\$3.91	\$4.09	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.49	\$5.79	\$6.10	\$6.44	\$6.79			
	Alliant Energy Corporation	LNT	\$16.65	\$1.74	\$1.83	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$3.42	\$3.61	\$3.80			
	Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.88	\$4.12	\$4.37	\$4.63	\$4.90	\$5.17	\$5.45	\$5.75	\$6.06	\$6.39	\$6.73			
American Electric Power Company, Inc.	BKH	\$2.63	\$4.42	\$4.62	\$4.83	\$5.04	\$5.27	\$5.51	\$5.76	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$7.80	\$8.22	\$8.67	\$9.14				
Black Hills Corporation	BEK	\$2.74	\$2.74	\$2.85	\$2.96	\$3.09	\$3.21	\$3.34	\$3.48	\$3.64	\$3.82	\$4.01	\$4.21	\$4.44	\$4.68	\$4.94	\$5.21	\$5.49				
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.41	\$1.49	\$1.58	\$1.67	\$1.76	\$1.86	\$1.96	\$2.06	\$2.18	\$2.30	\$2.42				
CMS Energy Corporation	CMS	\$1.98	\$2.10	\$2.24	\$2.38	\$2.53	\$2.69	\$2.86	\$3.03	\$3.21	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$4.69	\$4.95				
Consolidated Edison, Inc.	ED	\$3.94	\$4.06	\$4.18	\$4.31	\$4.43	\$4.57	\$4.70	\$4.86	\$5.05	\$5.26	\$5.51	\$5.78	\$6.10	\$6.43	\$6.78	\$7.14	\$7.53				
El Paso Electric Company	DTE	\$2.83	\$5.10	\$5.38	\$5.68	\$6.00	\$6.34	\$6.69	\$7.06	\$7.45	\$7.86	\$8.29	\$8.75	\$9.22	\$9.72	\$10.25	\$10.80	\$11.39				
DTE Energy Corporation	EE	\$2.39	\$2.51	\$2.63	\$2.77	\$2.91	\$3.05	\$3.20	\$3.37	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.59	\$4.84	\$5.10	\$5.38				
Eversource Energy	ES	\$2.96	\$3.13	\$3.30	\$3.49	\$3.69	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.11	\$5.39	\$5.68	\$5.99	\$6.32	\$6.66	\$7.02				
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.32	\$2.36	\$2.39	\$2.43	\$2.47	\$2.50	\$2.56	\$2.63	\$2.72	\$2.83	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87				
IDACORP, Inc.	IDA	\$3.94	\$4.06	\$4.19	\$4.32	\$4.45	\$4.59	\$4.73	\$4.90	\$5.09	\$5.30	\$5.55	\$5.83	\$6.15	\$6.48	\$6.83	\$7.20	\$7.59				
NorthWestern Corporation	NWE	\$3.39	\$3.47	\$3.55	\$3.64	\$3.73	\$3.82	\$3.91	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.99	\$5.26	\$5.55	\$5.85	\$6.17				
OGE Energy Corp.	OGE	\$1.69	\$1.73	\$1.82	\$1.87	\$1.92	\$1.91	\$1.96	\$2.02	\$2.09	\$2.17	\$2.27	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10				
Other Tail Corporation	OTTR	\$1.60	\$1.71	\$1.83	\$1.96	\$2.10	\$2.24	\$2.40	\$2.58	\$2.73	\$2.90	\$3.07	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23				
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.07	\$4.19	\$4.32	\$4.45	\$4.58	\$4.72	\$4.88	\$5.06	\$5.28	\$5.52	\$5.80	\$6.11	\$6.44	\$6.79	\$7.16	\$7.55				
PNM Resources, Inc.	PNM	\$1.46	\$1.52	\$1.59	\$1.66	\$1.73	\$1.80	\$1.88	\$1.96	\$2.06	\$2.16	\$2.26	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10				
Portland General Electric Company	POR	\$2.16	\$2.22	\$2.29	\$2.35	\$2.42	\$2.49	\$2.56	\$2.65	\$2.75	\$2.86	\$2.99	\$3.14	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09				
Southern Company	SO	\$2.83	\$2.91	\$2.98	\$3.07	\$3.15	\$3.23	\$3.32	\$3.43	\$3.55	\$3.69	\$3.86	\$4.05	\$4.27	\$4.50	\$4.75	\$5.01	\$5.28				
WEC Energy Group, Inc.	WEC	\$2.96	\$3.08	\$3.21	\$3.35	\$3.49	\$3.64	\$3.79	\$3.96	\$4.14	\$4.34	\$4.55	\$4.79	\$5.04	\$5.33	\$5.62	\$5.92	\$6.24				
Xcel Energy Inc.	XEL	\$2.21	\$2.31	\$2.41	\$2.52	\$2.64	\$2.75	\$2.88	\$3.01	\$3.16	\$3.31	\$3.48	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53	\$4.78				

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$146.86
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$2.49	\$83.86
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$4.42	\$118.29
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$139.54
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$113.95
CenterPoint Energy, Inc.	CNP	\$0.80	\$0.82	\$0.83	\$0.85	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$1.59	\$56.56
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$93.80
Consolidated Edison, Inc.	ED	\$2.80	\$2.88	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$4.94	\$157.07
El Paso Electric Company	DTE	\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$3.53	\$105.82
Eversource Energy	EE	\$2.02	\$2.09	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$4.60	\$124.07
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$67.27
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$178.89
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$107.80
OGE Energy Corp.	OGE	\$1.21	\$1.27	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$63.95
Other Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$90.10
Pinnacle West Capital Corporation	PNM	\$2.73	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95	\$5.20	\$161.97
PNM Resources, Inc.	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$78.85
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$84.26
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$87.10
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$127.41
Xcel Energy Inc.	XEL	\$1.52	\$1.62	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$3.13	\$91.90

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.84	\$1.20	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$2.50
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$4.42
American Electric Power Company, Inc.	AEP	(\$67.20)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.58
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.57	\$0.82	\$0.93	\$0.95	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$1.57
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.01	\$2.84	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$4.92
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$7.44
El Paso Electric Company	EE	(\$49.43)	\$0.00	\$0.98	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$3.53
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.45	\$2.07	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$4.60
Hawaiian Electric Industries, Inc.	HE	(\$33.91)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.52
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.71	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.96
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77
Pinnacle West Capital Corporation	PNW	(\$78.03)	\$0.00	\$1.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$4.94
PNM Resources, Inc.	PNM	(\$37.00)	\$0.00	\$0.65	\$0.92	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.03
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.68
Southern Company	SO	(\$44.14)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.44
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.07
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.09	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$3.11

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Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$150.13
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$2.49	\$85.05
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$4.42	\$120.96
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$143.58
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$117.58
CenterPoint Energy, Inc.	CNP	\$0.80	\$0.82	\$0.83	\$0.85	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$1.59	\$57.63
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$95.80
Consolidated Edison, Inc.	ED	\$2.80	\$2.88	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$4.94	\$163.30
DTE Energy Company	DTE	\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$3.53	\$111.14
El Paso Electric Company	EE	\$2.02	\$2.09	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$4.60	\$128.49
Eversource Energy	ES	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$68.55
Hawaiian Electric Industries, Inc.	HE	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$182.18
IDACORP, Inc.	IDA	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$112.71
NorthWestern Corporation	NWE	\$1.21	\$1.27	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$64.47
OGE Energy Corp.	OGE	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$90.31
Other Tail Corporation	OTTR	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$167.21
Pinnacle West Capital Corporation	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$81.18
PNM Resources, Inc.	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$81.18
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$89.29
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$90.18
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$130.81
Xcel Energy Inc.	XEL	\$1.52	\$1.62	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$3.13	\$94.89

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Company	Ticket	Initial																
		Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$154.58
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.84	\$1.20	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$87.55
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$125.37
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$149.57
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$121.18
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.57	\$0.82	\$0.93	\$0.95	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$59.21
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$99.04
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.01	\$2.84	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$168.24
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$229.88
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.98	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$114.66
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.45	\$2.07	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$133.10
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$71.08
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.71	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$187.16
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$116.75
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$66.51
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$93.09
Pinnacle West Capital Corporation	PNW	(\$80.50)	\$0.00	\$1.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$172.16
PNM Resources, Inc.	PNM	(\$38.09)	\$0.00	\$0.65	\$0.92	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$83.22
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$91.97
Southern Company	SO	(\$45.61)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$93.64
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$134.90
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.09	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$98.02

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Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$155.70
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$2.49	\$87.53
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$4.42	\$124.87
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$147.97
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$130.11
CenterPoint Energy, Inc.	CNP	\$0.80	\$0.82	\$0.83	\$0.85	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$1.59	\$59.64
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$99.02
Consolidated Edison, Inc.	ED	\$2.80	\$2.88	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$4.94	\$168.35
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$7.47	\$228.53
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$3.53	\$115.78
Eversource Energy	ES	\$2.02	\$2.09	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$4.60	\$131.01
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$68.64
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$166.53
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$118.01
OGE Energy Corp.	OGE	\$1.21	\$1.27	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$68.61
Other Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$91.56
Pinnacle West Capital Corporation	PNW	\$2.73	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95	\$5.20	\$175.65
PNM Resources, Inc.	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$65.60
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$94.27
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$94.91
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$133.53
Xcel Energy Inc.	XEL	\$1.52	\$1.62	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$3.13	\$98.47

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Company	Ticket	Initial																
		Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$160.15
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.84	\$1.20	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$90.03
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$129.29
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$153.96
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$133.71
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.57	\$0.82	\$0.93	\$0.95	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$61.23
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$102.27
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.01	\$2.84	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$173.29
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$236.00
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.98	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$119.31
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.45	\$2.07	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$135.61
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$71.18
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.71	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$191.51
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$122.06
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$70.64
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$94.33
Pinnacle West Capital Corporation	PNM	(\$84.48)	\$0.00	\$1.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$160.60
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.65	\$0.92	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$87.63
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$96.96
Southern Company	SO	(\$47.85)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$98.37
WEC Energy Group, Inc.	WEC	(\$64.48)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$137.62
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.09	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$101.61

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

Inputs	EPS Growth Rate Estimates																			Iterative Solution									
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	Payout Ratio										[10]	[11]	[12]	[13]						
	Stock	Zacks	First Call	Value	High	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio	Terminal	Terminal	Terminal	Terminal	Terminal											
Company	Ticker	Price	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033										
ALLETE, Inc.	ALE	\$70.43	6.60%	6.00%	4.50%	6.60%	5.43%	66.00%	64.00%	65.57%	\$0.00	9.16%	18.51	3.41															
Alliant Energy Corporation	LNT	\$39.93	5.30%	5.45%	6.50%	6.50%	5.43%	64.00%	64.00%	65.57%	\$0.00	8.86%	20.16	3.71															
Ameren Corporation	AEE	\$55.35	6.90%	6.37%	7.50%	7.50%	5.43%	61.00%	60.00%	65.57%	\$0.00	9.70%	16.20	2.98															
American Electric Power Company, Inc.	AEP	\$67.20	5.40%	5.63%	4.50%	5.63%	66.00%	63.00%	65.57%	\$0.00	10.34%	14.06	2.59																
Black Hills Corporation	BKH	\$53.02	4.60%	4.07%	7.50%	7.50%	5.43%	52.00%	54.00%	65.57%	\$0.06	9.70%	16.17	2.98															
CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA	8.49%	71.00%	64.00%	65.57%	\$0.00	9.01%	19.32	3.56																
CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.50%	8.50%	61.00%	61.00%	65.57%	\$0.00	9.70%	16.19	2.98																
Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%	4.00%	67.00%	67.00%	65.57%	\$0.00	9.01%	19.32	3.56																
DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.50%	6.50%	61.00%	61.00%	65.57%	\$0.00	9.31%	17.82	3.28																
El Paso Electric Company	EE	\$49.44	5.10%	5.20%	5.00%	5.20%	52.00%	59.00%	65.57%	\$0.00	8.99%	19.39	3.57																
Eversource Energy	ES	\$58.10	5.80%	5.65%	6.50%	6.50%	54.00%	58.00%	65.57%	\$0.00	9.59%	16.62	3.06																
Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%	8.50%	69.00%	71.00%	65.57%	\$0.00	12.07%	10.41	1.92																
IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%	4.10%	57.00%	60.00%	65.57%	\$0.00	8.59%	21.83	4.02																
NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	4.50%	4.50%	63.00%	62.00%	65.57%	\$0.00	10.06%	14.94	2.75																
OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%	6.00%	74.00%	65.57%	\$0.00	9.80%	15.80	2.91																	
Otter Tail Corporation	OTTR	\$42.67	NA	9.00%	7.00%	9.00%	68.00%	63.00%	65.57%	\$0.00	9.18%	18.44	3.40																
Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.50%	5.50%	62.00%	62.00%	65.57%	\$0.00	9.32%	17.77	3.27																
PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%	7.50%	63.00%	56.00%	65.57%	\$0.00	8.88%	20.04	3.69																
Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%	6.00%	59.00%	55.00%	65.57%	\$0.00	9.65%	16.36	3.01																
Southern Company	SO	\$44.14	4.50%	2.70%	4.00%	4.50%	78.00%	72.00%	65.57%	\$0.00	10.23%	14.39	2.65																
WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%	6.00%	67.00%	66.00%	65.57%	\$0.00	9.30%	17.82	3.29																
Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%	6.15%	63.00%	67.00%	65.57%	\$0.00	9.49%	17.02	3.14																
										MEAN	9.54%																		
										MAX	12.07%																		
										MIN	8.59%																		
Projected Annual Earnings per Share																			[24]	[25]	[26]	[27]	[28]	[29]	[30]				
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033										
ALLETE, Inc.	ALE	\$3.14	\$3.35	\$3.57	\$3.80	\$4.05	\$4.32	\$4.61	\$4.90	\$5.21	\$5.52	\$5.84	\$6.17	\$6.50	\$6.86	\$7.23	\$7.62	\$8.04											
Alliant Energy Corporation	LNT	\$1.65	\$1.76	\$1.87	\$1.99	\$2.12	\$2.26	\$2.41	\$2.56	\$2.72	\$2.88	\$3.05	\$3.22	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19											
Ameren Corporation	AEE	\$2.68	\$2.88	\$3.10	\$3.33	\$3.58	\$3.85	\$4.14	\$4.43	\$4.73	\$5.04	\$5.35	\$5.66	\$5.96	\$6.29	\$6.63	\$6.99	\$7.37											
American Electric Power Company, Inc.	AEP	\$4.23	\$4.47	\$4.72	\$4.99	\$5.27	\$5.56	\$5.88	\$6.20	\$6.55	\$6.91	\$7.29	\$7.69	\$8.11	\$8.55	\$9.01	\$9.50	\$10.02											
Black Hills Corporation	BKH	\$2.63	\$2.83	\$3.04	\$3.27	\$3.51	\$3.78	\$4.06	\$4.35	\$4.65	\$4.95	\$5.25	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23											
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.08	\$1.18	\$1.28	\$1.39	\$1.50	\$1.63	\$1.76	\$1.89	\$2.02	\$2.15	\$2.28	\$2.41	\$2.54	\$2.67	\$2.82	\$2.97											
CMS Energy Corporation	CMS	\$1.98	\$2.15	\$2.33	\$2.53	\$2.74	\$2.98	\$3.23	\$3.49	\$3.75	\$4.01	\$4.27	\$4.52	\$4.77	\$5.03	\$5.30	\$5.59	\$5.89											
Consolidated Edison, Inc.	ED	\$3.94	\$4.10	\$4.26	\$4.43	\$4.61	\$4.79	\$4.99	\$5.20	\$5.43	\$5.69	\$5.97	\$6.28	\$6.62	\$6.98	\$7.35	\$7.75	\$8.17											
DTE Energy Company	DTE	\$4.83	\$5.14	\$5.48	\$5.83	\$6.21	\$6.62	\$7.05	\$7.49	\$7.95	\$8.43	\$8.92	\$9.41	\$9.93	\$10.46	\$11.03	\$11.63	\$12.26											
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$4.66	\$4.92	\$5.18	\$5.47											
Eversource Energy	ES	\$2.96	\$3.15	\$3.36	\$3.58	\$3.81	\$4.06	\$4.32	\$4.59	\$4.87	\$5.16	\$5.46	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.51											
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.48	\$2.70	\$2.92	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.51	\$5.81	\$6.13	\$6.46	\$6.81											
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.01	\$6.33	\$6.67	\$7.03	\$7.41	\$7.82	\$8.24											
NorthWestern Corporation	NWE	\$3.39	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.08	\$5.34	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33											
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.41	\$2.54	\$2.69	\$2.84	\$3.00	\$3.16	\$3.34	\$3.52	\$3.71	\$3.91	\$4.12											
Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.58	\$3.80	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95											
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.17	\$4.40	\$4.64	\$4.89	\$5.16	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74	\$7.11	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25											
PNM Resources, Inc.	PNM	\$1.46	\$1.57	\$1.69	\$1.81	\$1.95	\$2.10	\$2.25	\$2.41	\$2.58	\$2.75	\$2.91	\$3.08	\$3.25	\$3.43	\$3.61	\$3.81	\$4.01											
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.24	\$3.43	\$3.63	\$3.83	\$4.05	\$4.26	\$4.50	\$4.74	\$5.00	\$5.27											
Southern Company	SO	\$2.83	\$2.96	\$3.09	\$3.23	\$3.37	\$3.53	\$3.69	\$3.86	\$4.04	\$4.24	\$4.46	\$4.70	\$4.95	\$5.22	\$5.50	\$5.80	\$6.12											
WEC Energy Group, Inc.	WEC	\$2.96	\$3.14	\$3.33	\$3.53	\$3.74	\$3.96	\$4.20	\$4.45	\$4.71	\$4.97	\$5.25	\$5.54	\$5.84	\$6.16	\$6.50	\$6.85	\$7.22											
Xcel Energy Inc.	XEL	\$2.21	\$2.35	\$2.49	\$2.64	\$2.81	\$2.98	\$3.16	\$3.35	\$3.55	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.46											

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	61.12%	61.35%	61.57%	61.57%	61.57%	61.57%	61.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.91%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$148.71
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$84.44
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$119.32
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$140.78
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$116.92
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$57.42
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$95.35
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$157.90
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$218.47
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$105.96
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$124.88
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$70.91
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$179.89
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$109.41
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$65.12
Other Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$91.26
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.20	\$3.40	\$3.62	\$3.89	\$4.15	\$4.49	\$4.83	\$5.19	\$5.56	\$5.93	\$6.30	\$6.67	\$7.04	\$164.46
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$80.45
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$86.19
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$88.02
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$128.78
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$92.86

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Company	Ticket	Initial																
		Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$53.97
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$87.19
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$124.15
American Electric Power Company, Inc.	AEP	(\$87.20)	\$0.00	\$2.24	\$3.20	\$3.57	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$147.35
Black Hills Corporation	BKH	(\$52.96)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$121.66
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$59.37
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$99.21
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$163.26
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$226.51
El Paso Electric Company	EE	(\$49.43)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$109.55
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$129.81
Hawaiian Electric Industries, Inc.	HE	(\$33.91)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$75.38
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.75	\$2.48	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$185.29
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$114.22
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$67.83
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$94.50
Pinnacle West Capital Corporation	PNM	(\$78.03)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$170.53
PNM Resources, Inc.	PNM	(\$37.00)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$83.08
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$89.65
Southern Company	SO	(\$44.14)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$92.03
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$133.51
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$96.43

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

Inputs		[1]	[2]	EPS Growth Rate Estimates					Long-Term					Payout Ratio			Iterative Solution			Terminal												
Company	Ticker	Price	Zacks	First Call	Value	High	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio	[13]																	
															[12]	[11]	[28]	[27]	[26]	[30]												
ALLETE, Inc.	ALE	\$71.97	6.60%	6.00%	4.50%	6.80%	5.43%	66.00%	64.00%	65.57%	(9.00)	9.08%	18.91	3.49	2032																	
Alliant Energy Corporation	LNT	\$40.49	5.30%	5.45%	6.50%	6.50%	5.43%	64.00%	60.00%	65.57%	(9.00)	8.81%	20.44	3.77																		
Ameren Corporation	AEE	\$56.61	6.90%	6.37%	7.50%	7.50%	5.43%	61.00%	60.00%	65.57%	(9.00)	9.60%	16.56	3.05																		
American Electric Power Company, Inc.	AEP	\$69.11	5.40%	5.63%	4.50%	5.63%	5.43%	66.00%	63.00%	65.57%	(9.00)	10.21%	14.46	2.66																		
Black Hills Corporation	BKH	\$54.72	4.60%	4.07%	7.50%	7.50%	5.43%	52.00%	54.00%	65.57%	9.00	9.57%	16.69	3.08																		
CenterPoint Energy, Inc.	CNP	\$27.48	5.90%	8.49%	NA	8.49%	5.43%	71.00%	64.00%	65.57%	9.00	8.94%	19.68	3.63																		
CMS Energy Corporation	CMS	\$44.96	6.30%	7.04%	8.00%	8.50%	5.43%	61.00%	61.00%	65.57%	(9.00)	9.61%	16.53	3.05																		
Consolidated Edison, Inc.	ED	\$79.65	4.00%	3.11%	4.00%	4.00%	5.43%	67.00%	67.00%	65.57%	(9.00)	8.87%	20.08	3.70																		
DTE Energy Company	DTE	\$104.99	6.00%	5.58%	6.50%	6.50%	5.43%	62.00%	61.00%	65.57%	(9.00)	9.21%	18.25	3.36																		
El Paso Electric Company	EE	\$51.94	5.10%	5.20%	5.00%	5.20%	5.43%	52.00%	59.00%	65.57%	9.00	8.82%	20.36	3.75																		
Eversource Energy	ES	\$60.18	5.80%	5.65%	6.50%	6.50%	5.43%	69.00%	58.00%	65.57%	(9.00)	9.44%	17.21	3.17																		
Hawaiian Electric Industries, Inc.	HE	\$34.52	6.70%	8.50%	1.50%	8.50%	5.43%	61.00%	71.00%	65.57%	9.00	11.95%	10.60	1.95																		
IDACORP, Inc.	IDA	\$86.65	4.10%	3.10%	3.50%	4.10%	5.43%	57.00%	60.00%	65.57%	(9.00)	8.54%	22.23	4.10																		
NorthWestern Corporation	NWE	\$54.69	2.40%	3.12%	4.50%	4.50%	5.43%	63.00%	62.00%	65.57%	(9.00)	9.86%	15.61	2.88																		
OGE Energy Corp.	OGE	\$32.08	6.00%	5.80%	2.50%	6.00%	5.43%	68.00%	74.00%	65.57%	(9.00)	9.77%	15.93	2.93																		
Other Tail Corporation	OTTR	\$42.77	NA	9.00%	7.00%	9.00%	5.43%	63.00%	62.00%	65.57%	(9.00)	9.17%	18.48	3.41																		
Pinnacle West Capital Corporation	PNW	\$80.50	3.00%	3.63%	5.00%	5.00%	5.43%	64.00%	63.00%	65.57%	(9.00)	9.20%	18.34	3.38																		
PNM Resources, Inc.	PNM	\$38.09	5.40%	4.30%	7.00%	7.50%	5.43%	57.00%	56.00%	65.57%	(9.00)	8.78%	20.63	3.80																		
Portland General Electric Company	POR	\$42.23	2.90%	3.50%	6.00%	6.00%	5.43%	59.00%	55.00%	65.57%	(9.00)	9.42%	17.32	3.19																		
Southern Company	SO	\$45.61	4.50%	2.70%	4.00%	4.50%	5.43%	78.00%	72.00%	65.57%	(9.00)	10.07%	14.90	2.75																		
WEC Energy Group, Inc.	WEC	\$63.20	4.20%	4.34%	6.00%	6.00%	5.43%	67.00%	66.00%	65.57%	(9.00)	9.20%	18.31	3.37																		
Xcel Energy Inc.	XEL	\$45.71	5.80%	6.15%	4.50%	6.15%	5.43%	63.00%	67.00%	65.57%	9.00	9.36%	17.57	3.24																		
															MEAN	9.43%																
															MAX	11.95%																
															MIN	8.54%																
Projected Annual Earnings per Share																				[25]	[24]	[23]	[22]	[21]	[20]	[19]	[18]	[17]	[16]	[15]	[14]	[30]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032														
ALLETE, Inc.	ALE	\$3.14	\$3.35	\$3.57	\$3.80	\$4.05	\$4.32	\$4.61	\$4.90	\$5.21	\$5.52	\$5.84	\$6.17	\$6.50	\$6.86	\$7.23	\$7.62	\$8.04														
Alliant Energy Corporation	LNT	\$1.65	\$1.76	\$1.87	\$1.99	\$2.12	\$2.26	\$2.41	\$2.56	\$2.72	\$2.88	\$3.05	\$3.22	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19														
Ameren Corporation	AEE	\$2.68	\$2.88	\$3.10	\$3.33	\$3.58	\$3.85	\$4.14	\$4.43	\$4.73	\$5.04	\$5.35	\$5.66	\$5.96	\$6.29	\$6.63	\$6.99	\$7.37														
American Electric Power Company, Inc.	AEP	\$4.23	\$4.47	\$4.72	\$4.99	\$5.27	\$5.56	\$5.88	\$6.20	\$6.55	\$6.91	\$7.29	\$7.69	\$8.11	\$8.55	\$9.01	\$9.50	\$10.02														
Black Hills Corporation	BKH	\$2.63	\$2.83	\$3.04	\$3.27	\$3.51	\$3.78	\$4.06	\$4.35	\$4.65	\$4.95	\$5.25	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23														
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.08	\$1.18	\$1.28	\$1.39	\$1.50	\$1.63	\$1.76	\$1.89	\$2.02	\$2.15	\$2.28	\$2.41	\$2.54	\$2.67	\$2.82	\$2.97														
CMS Energy Corporation	CMS	\$1.98	\$2.15	\$2.33	\$2.53	\$2.74	\$2.98	\$3.23	\$3.49	\$3.75	\$4.01	\$4.27	\$4.52	\$4.77	\$5.03	\$5.30	\$5.59	\$5.89														
Consolidated Edison, Inc.	ED	\$3.94	\$4.10	\$4.26	\$4.43	\$4.61	\$4.79	\$4.99	\$5.20	\$5.43	\$5.69	\$5.97	\$6.28	\$6.62	\$6.98	\$7.35	\$7.75	\$8.17														
DTE Energy Company	DTE	\$4.83	\$5.14	\$5.48	\$5.83	\$6.21	\$6.62	\$7.05	\$7.49	\$7.95	\$8.43	\$8.92	\$9.41	\$9.93	\$10.46	\$11.03	\$11.63	\$12.26														
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$4.66	\$4.92	\$5.18	\$5.47														
Eversource Energy	ES	\$2.96	\$3.15	\$3.36	\$3.58	\$3.81	\$4.06	\$4.32	\$4.59	\$4.87	\$5.16	\$5.46	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.51														
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.48	\$2.70	\$2.92	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.51	\$5.81	\$6.13	\$6.46	\$6.81														
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.01	\$6.33	\$6.67	\$7.03	\$7.41	\$7.82	\$8.24														
NorthWestern Corporation	NWE	\$3.99	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.08	\$5.34	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33														
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.41	\$2.54	\$2.69	\$2.84	\$3.00	\$3.16	\$3.34	\$3.52	\$3.71	\$3.91	\$4.12														
Other Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.58	\$3.80	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95														
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.17	\$4.40	\$4.64	\$4.89	\$5.16	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74	\$7.11	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25														
PNM Resources, Inc.	PNM	\$1.46	\$1.57	\$1.69	\$1.81	\$1.95	\$2.10	\$2.25	\$2.41	\$2.58	\$2.75	\$2.91	\$3.08	\$3.25	\$3.43	\$3.61	\$3.81	\$4.01														
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.24	\$3.43	\$3.63	\$3.83	\$4.05	\$4.26	\$4.50	\$4.74	\$5.00	\$5.27														
Southern Company	SO	\$2.83	\$2.96	\$3.09	\$3.23	\$3.37	\$3.53	\$3.69	\$3.86	\$4.04	\$4.24	\$4.46	\$4.70	\$4.95	\$5.22	\$5.50	\$5.80	\$6.12														
WEC Energy Group, Inc.	WEC	\$2.96	\$3.14	\$3.33	\$3.53	\$3.74	\$3.96	\$4.20	\$4.45	\$4.71	\$4.97	\$5.25	\$5.54	\$5.84	\$6.16	\$6.50	\$6.85	\$7.22														
Xcel Energy Inc.	XEL	\$2.21	\$2.35	\$2.49	\$2.64	\$2.81	\$2.98	\$3.16	\$3.35	\$3.55	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.46														

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	63.18%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$151.98
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$85.64
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$122.00
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$144.83
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$120.68
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$58.49
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$97.35
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$164.12
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$223.80
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$111.28
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$129.31
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$72.19
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$183.18
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$114.33
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$65.65
Otter Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$91.47
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.20	\$3.40	\$3.62	\$3.89	\$4.15	\$4.46	\$4.80	\$5.14	\$5.48	\$5.82	\$6.16	\$6.50	\$6.84	\$169.71
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$82.78
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$91.24
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$91.10
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$132.18
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$95.85

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$157.25
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$88.38
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$126.83
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$151.40
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$125.42
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$60.44
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$101.21
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$169.48
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$231.84
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$114.87
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$134.24
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$76.66
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.75	\$2.48	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$188.58
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$119.13
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$68.35
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$94.72
Pinnacle West Capital Corporation	PNM	(\$80.50)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$175.77
PNM Resources, Inc.	PNM	(\$80.09)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$85.41
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$94.69
Southern Company	SO	(\$45.61)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$95.11
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$136.91
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$99.43

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Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	61.12%	61.35%	61.57%	61.57%	61.57%	61.57%	61.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.91%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.33%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$157.56
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$88.12
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$125.92
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$149.23
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$133.26
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$60.51
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$100.58
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$169.18
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$229.92
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$115.93
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$131.83
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$72.29
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$187.52
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$119.64
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$69.79
Other Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$92.72
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.20	\$3.40	\$3.62	\$3.89	\$4.15	\$4.46	\$4.80	\$5.14	\$5.50	\$5.86	\$6.23	\$6.60	\$7.00	\$178.15
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$87.21
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$96.24
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$95.63
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$134.90
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$99.43

Projected Annual Data		Investor Cash Flows																			
Company	Ticket	Initial		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	
		Outflow	Inflow																		
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32		
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.26	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$5.54	
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.81	\$5.04	
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.55	\$6.87	\$7.19	
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.73	\$4.96	\$5.18	
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.60	\$0.87	\$0.87	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.94	\$2.03	\$2.12	
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$4.04	\$4.23	
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.34	\$5.60	\$5.86	
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.03	\$8.43	\$8.83	
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.57	\$3.75	\$3.93	
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.91	\$5.15	\$5.39	
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$4.69	\$4.91	
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.75	\$2.48	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$5.67	\$5.93	
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$5.04	\$5.28	
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.69	\$2.82	\$2.95	
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.23	\$3.38	\$3.53	
Pinnacle West Capital Corporation	PNW	(\$84.48)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$6.04	\$6.32	\$6.60	
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$2.76	\$2.89	
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$3.61	\$3.78	
Southern Company	SO	(\$47.85)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$3.99	\$4.18	\$4.37	
WEC Energy Group, Inc.	WEC	(\$64.48)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.71	\$4.94	\$5.16	
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.56	\$3.73	\$3.90	

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Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.31	\$2.41	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$4.82	\$147.68
Alliant Energy Corporation	LNT	\$1.17	\$1.24	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$83.91
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$4.42	\$118.29
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$6.36	\$140.32
Black Hills Corporation	BKH	\$1.52	\$1.62	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$3.99	\$115.00
CenterPoint Energy, Inc.	CNP	\$0.81	\$0.83	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$1.69	\$56.79
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$3.50	\$94.43
Consolidated Edison, Inc.	ED	\$2.81	\$2.90	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$5.03	\$157.26
DTE Energy Company	DTE	\$3.37	\$3.56	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$7.79	\$217.85
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$105.71
Eversource Energy	ES	\$2.01	\$2.09	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55	\$123.95
Hawaiian Electric Industries, Inc.	HE	\$1.74	\$1.85	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$68.77
IDACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$179.34
NorthWestern Corporation	NWE	\$2.29	\$2.35	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$4.41	\$108.56
OGE Energy Corp.	OGE	\$1.25	\$1.34	\$1.44	\$1.54	\$1.68	\$1.83	\$1.97	\$2.13	\$2.30	\$2.48	\$2.67	\$2.86	\$3.05	\$3.24	\$3.43	\$94.49
Otter Tail Corporation	OTTR	\$1.34	\$1.39	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$90.63
Pinnacle West Capital Corporation	PNW	\$2.74	\$2.82	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$5.39	\$162.92
PNM Resources, Inc.	PNM	\$0.92	\$0.96	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$2.19	\$79.25
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$2.98	\$84.98
Southern Company	SO	\$2.38	\$2.41	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$3.79	\$87.64
WEC Energy Group, Inc.	WEC	\$2.17	\$2.26	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$127.76
Xcel Energy Inc.	XEL	\$1.54	\$1.65	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$3.28	\$92.22

Projected Annual Data		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
Investor Cash Flows		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.66	\$2.37	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$152.50
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.84	\$1.21	\$1.30	\$1.38	\$1.46	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$86.43
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$122.71
American Electric Power Company, Inc.	AEP	(\$67.20)	\$0.00	\$2.22	\$3.17	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$146.68
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$118.99
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.58	\$0.84	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$58.48
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$97.92
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.02	\$2.86	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$162.29
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.42	\$3.47	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$225.63
El Paso Electric Company	EE	(\$49.43)	\$0.00	\$0.98	\$1.40	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$109.19
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.44	\$2.07	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$128.50
Hawaiian Electric Industries, Inc.	HE	(\$33.91)	\$0.00	\$1.25	\$1.79	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$72.16
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$184.51
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.64	\$2.32	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$112.96
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.90	\$1.28	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$66.84
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.96	\$1.40	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$93.62
Pinnacle West Capital Corporation	PNW	(\$78.03)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$168.32
PNM Resources, Inc.	PNM	(\$36.99)	\$0.00	\$0.66	\$0.94	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$81.43
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$87.95
Southern Company	SO	(\$44.14)	\$0.00	\$1.71	\$2.42	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$91.43
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.56	\$2.22	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$132.02
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.10	\$1.58	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$95.51

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

Inputs		[1]	[2]	EPS Growth Rate Estimates				Long-Term				Payout Ratio				Iterative Solution				Terminal						
		Stock	Zacks	First Call	Line	Sustainable	Average	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio											
Company	Ticker	Price																								
ALLETE, Inc.	ALE	\$71.97	6.60%	6.00%	4.50%	4.87%	5.49%	5.43%	66.00%	64.00%	65.57%	\$0.00	8.79%	20.53	3.78											
Alliant Energy Corporation	LNT	\$40.49	5.30%	5.45%	6.50%	4.44%	5.42%	5.43%	64.00%	64.00%	65.57%	\$0.00	8.55%	22.15	4.08											
Ameren Corporation	AEE	\$56.61	6.90%	6.37%	7.50%	4.73%	6.38%	5.43%	61.00%	60.00%	65.57%	\$0.00	9.28%	17.96	3.31											
American Electric Power Company, Inc.	AEP	\$69.11	5.40%	5.63%	4.50%	5.37%	5.22%	5.43%	66.00%	63.00%	65.57%	\$0.00	10.07%	14.89	2.74											
Black Hills Corporation	BKH	\$54.72	4.60%	4.07%	7.50%	5.22%	5.35%	5.43%	52.00%	54.00%	65.57%	\$0.00	8.97%	19.49	3.59											
CenterPoint Energy, Inc.	CNP	\$27.48	5.90%	8.49%	NA	5.65%	6.68%	5.43%	71.00%	64.00%	65.57%	\$0.00	8.50%	22.47	4.14											
CMS Energy Corporation	CMS	\$44.96	6.30%	7.04%	8.50%	7.13%	7.24%	5.43%	61.00%	61.00%	65.57%	\$0.00	9.25%	18.08	3.33											
Consolidated Edison, Inc.	ED	\$79.65	4.00%	3.11%	3.00%	2.82%	3.23%	5.43%	67.00%	67.00%	65.57%	\$0.00	8.67%	21.29	3.92											
DTE Energy Company	DTE	\$104.99	6.00%	5.58%	6.50%	6.31%	6.10%	5.43%	62.00%	61.00%	65.57%	\$0.00	9.10%	18.80	3.46											
El Paso Electric Company	EE	\$51.94	5.10%	5.20%	5.00%	4.08%	4.84%	5.43%	52.00%	59.00%	65.57%	\$0.00	8.73%	20.90	3.85											
Eversource Energy	ES	\$60.18	5.80%	5.65%	6.50%	4.12%	5.52%	5.43%	61.00%	58.00%	65.57%	\$0.00	9.17%	18.48	3.41											
Hawaiian Electric Industries, Inc.	HE	\$34.52	6.70%	8.50%	1.50%	3.47%	5.04%	5.43%	69.00%	71.00%	65.57%	\$0.00	10.53%	13.54	2.50											
IDACORP, Inc.	IDA	\$86.65	4.10%	3.10%	3.50%	3.56%	3.56%	5.43%	57.00%	60.00%	65.57%	\$0.00	8.41%	23.15	4.27											
NorthWestern Corporation	NWE	\$54.69	2.40%	3.12%	4.50%	3.76%	3.45%	5.43%	63.00%	62.00%	65.57%	\$0.00	9.52%	16.88	3.11											
OGE Energy Corp.	OGE	\$32.08	6.00%	5.80%	2.50%	2.89%	4.30%	5.43%	68.00%	74.00%	65.57%	\$0.00	9.25%	18.10	3.33											
Otter Tail Corporation	OTTR	\$42.77	NA	9.00%	7.00%	7.88%	7.96%	5.43%	72.00%	63.00%	65.57%	\$0.00	8.90%	19.91	3.67											
Pinnacle West Capital Corporation	PNW	\$80.50	3.00%	3.63%	5.50%	4.03%	4.04%	5.43%	64.00%	62.00%	65.57%	\$0.00	8.81%	20.45	3.77											
PNM Resources, Inc.	PNM	\$38.09	5.40%	4.30%	7.50%	3.54%	5.19%	5.43%	57.00%	56.00%	65.57%	\$0.00	8.25%	24.46	4.51											
Portland General Electric Company	POR	\$42.23	2.90%	3.50%	6.00%	4.24%	4.16%	5.43%	59.00%	55.00%	65.57%	\$0.00	8.91%	19.83	3.65											
Southern Company	SO	\$45.61	4.50%	2.70%	4.00%	4.02%	3.81%	5.43%	78.00%	72.00%	65.57%	\$0.00	9.83%	15.70	2.89											
WEC Energy Group, Inc.	WEC	\$63.20	4.20%	4.34%	6.00%	4.69%	4.23%	5.43%	67.00%	66.00%	65.57%	\$0.00	8.85%	20.19	3.72											
Xcel Energy Inc.	XEL	\$45.71	5.80%	6.15%	4.50%	3.90%	5.09%	5.43%	63.00%	67.00%	65.57%	MEAN	9.06%	19.01	3.50											
															MAX				10.53%							
															MIN				8.25%							
Projected Annual Earnings per Share																										
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032								
ALLETE, Inc.	ALE	\$3.14	\$3.31	\$3.49	\$3.69	\$3.89	\$4.10	\$4.33	\$4.56	\$4.81	\$5.08	\$5.35	\$5.65	\$5.95	\$6.27	\$6.62	\$6.97	\$7.35								
Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$2.65	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$3.64	\$3.84								
Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.88	\$4.12	\$4.37	\$4.63	\$4.90	\$5.17	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74								
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.93	\$5.19	\$5.46	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$7.44	\$7.85	\$8.27	\$8.72	\$9.19	\$9.69								
Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.92	\$3.07	\$3.24	\$3.41	\$3.60	\$3.79	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$5.19	\$5.48	\$5.77	\$6.09								
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.07	\$1.14	\$1.21	\$1.30	\$1.38	\$1.47	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.44	\$2.58								
CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.01	\$3.22	\$3.44	\$3.65	\$3.87	\$4.10	\$4.32	\$4.55	\$4.80	\$5.06	\$5.33								
Consolidated Edison, Inc.	ED	\$3.94	\$4.07	\$4.20	\$4.33	\$4.47	\$4.62	\$4.77	\$4.94	\$5.14	\$5.36	\$5.61	\$5.89	\$6.21	\$6.55	\$6.91	\$7.28	\$7.68								
DTE Energy Company	DTE	\$4.83	\$5.12	\$5.44	\$5.77	\$6.12	\$6.49	\$6.89	\$7.30	\$7.73	\$8.18	\$8.64	\$9.12	\$9.61	\$10.13	\$10.68	\$11.26	\$11.87								
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.63	\$2.75	\$2.89	\$3.03	\$3.17	\$3.33	\$3.50	\$3.68	\$3.87	\$4.08	\$4.30	\$4.53	\$4.78	\$5.04	\$5.31								
Eversource Energy	ES	\$2.96	\$3.12	\$3.30	\$3.48	\$3.67	\$3.87	\$4.09	\$4.31	\$4.55	\$4.80	\$5.06	\$5.33	\$5.62	\$5.93	\$6.25	\$6.59	\$6.94								
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.41	\$2.53	\$2.65	\$2.79	\$2.93	\$3.08	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$4.19	\$4.41	\$4.65	\$4.90	\$5.17								
IDACORP, Inc.	IDA	\$3.94	\$4.08	\$4.23	\$4.38	\$4.53	\$4.69	\$4.86	\$5.05	\$5.26	\$5.50	\$5.76	\$6.06	\$6.39	\$6.73	\$7.10	\$7.48	\$7.89								
NorthWestern Corporation	NWE	\$3.39	\$3.51	\$3.63	\$3.75	\$3.88	\$4.02	\$4.15	\$4.31	\$4.49	\$4.69	\$4.91	\$5.16	\$5.44	\$5.74	\$6.05	\$6.38	\$6.72								
OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.84	\$1.92	\$2.00	\$2.09	\$2.18	\$2.27	\$2.38	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.23	\$3.41	\$3.59								
Otter Tail Corporation	OTTR	\$1.60	\$1.73	\$1.86	\$2.01	\$2.17	\$2.35	\$2.53	\$2.72	\$2.92	\$3.11	\$3.31	\$3.50	\$3.69	\$3.89	\$4.10	\$4.33	\$4.56								
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.11	\$4.28	\$4.45	\$4.63	\$4.82	\$5.01	\$5.22	\$5.46	\$5.72	\$6.00	\$6.31	\$6.66	\$7.02	\$7.40	\$7.80	\$8.22								
PNM Resources, Inc.	PNM	\$1.46	\$1.54	\$1.62	\$1.70	\$1.79	\$1.88	\$1.98	\$2.08	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$3.16	\$3.34								
Portland General Electric Company	POR	\$2.16	\$2.25	\$2.34	\$2.44	\$2.54	\$2.65	\$2.76	\$2.88	\$3.01	\$3.15	\$3.31	\$3.49	\$3.67	\$3.87	\$4.08	\$4.31	\$4.54								
Southern Company	SO	\$2.83	\$2.94	\$3.05	\$3.17	\$3.29	\$3.41	\$3.54	\$3.69	\$3.85	\$4.02	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.48	\$5.78								
WEC Energy Group, Inc.	WEC	\$2.96	\$3.10	\$3.24	\$3.40	\$3.56	\$3.72	\$3.90	\$4.08	\$4.29	\$4.50	\$4.74	\$4.99	\$5.26	\$5.54	\$5.84	\$6.16	\$6.50								
Xcel Energy Inc.	XEL	\$2.21	\$2.32	\$2.44	\$2.56	\$2.70	\$2.83	\$2.98	\$3.13	\$3.29	\$3.47	\$3.65	\$3.85	\$4.05	\$4.27	\$4.51	\$4.75	\$5.01								

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	61.12%	61.35%	61.57%	61.57%	61.57%	61.57%	61.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
OTTR	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	56.51%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.31	\$2.41	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$4.82	\$150.96
Alliant Energy Corporation	LNT	\$1.17	\$1.24	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$85.11
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$4.42	\$120.96
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$6.36	\$144.37
Black Hills Corporation	BKH	\$1.52	\$1.62	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$3.99	\$118.63
CenterPoint Energy, Inc.	CNP	\$0.81	\$0.83	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$1.69	\$57.86
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$3.50	\$96.43
ED	ED	\$2.81	\$2.90	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$5.03	\$163.48
DTE Energy Company	DTE	\$3.37	\$3.56	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$7.79	\$223.18
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$111.03
Eversource Energy	ES	\$2.01	\$2.09	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55	\$128.37
Hawaiian Electric Industries, Inc.	HE	\$1.74	\$1.85	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$70.04
IDACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$182.63
NorthWestern Corporation	NWE	\$2.29	\$2.35	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$4.41	\$113.47
OGE Energy Corp.	OGE	\$1.25	\$1.34	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$2.36	\$65.01
OTTR	OTTR	\$1.34	\$1.39	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$90.84
Pinnacle West Capital Corporation	PNW	\$2.74	\$2.82	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$5.39	\$168.17
PNM Resources, Inc.	PNM	\$0.92	\$0.96	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$2.19	\$81.58
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$2.98	\$90.01
Southern Company	SO	\$2.38	\$2.41	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$3.76	\$90.72
WEC Energy Group, Inc.	WEC	\$2.17	\$2.26	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.63	\$3.83	\$4.04	\$4.26	\$131.16
Xcel Energy Inc.	XEL	\$1.54	\$1.65	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$3.28	\$95.21

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.66	\$2.37	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$155.78
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.84	\$1.21	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$87.63
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$125.38
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.22	\$3.17	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$150.72
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$122.62
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.58	\$0.84	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$59.55
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$99.92
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.02	\$2.86	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$168.51
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.42	\$3.47	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$230.96
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.98	\$1.40	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$114.51
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.44	\$2.07	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$132.93
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.25	\$1.79	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$73.43
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$187.80
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.64	\$2.32	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$117.88
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.90	\$1.28	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$67.37
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.96	\$1.40	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$93.83
Pinnacle West Capital Corporation	PNM	(\$80.50)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$173.56
PNM Resources, Inc.	PNM	(\$80.09)	\$0.00	\$0.66	\$0.94	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$83.76
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$92.99
Southern Company	SO	(\$45.60)	\$0.00	\$0.71	\$2.42	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$94.51
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.56	\$2.22	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$135.42
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.10	\$1.58	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$98.50

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

Inputs		EPS Growth Rate Estimates														Long-Term		Payout Ratio				Iterative Solution		Terminal			
Stock		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]												
Company		Ticker	Price	Zacks	First Call	Line	Growth	Average	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio											
ALLETE, Inc.	ALLETE, Inc.	ALE	\$74.60	6.60%	6.00%	4.50%	4.87%	5.49%	5.43%	66.00%	64.00%	65.57%	\$0.00	8.67%	21.29	3.92											
	Alliant Energy Corporation	LNT	\$41.66	5.30%	5.45%	6.50%	4.44%	5.42%	5.43%	64.00%	64.00%	65.57%	\$0.00	8.46%	22.80	4.20											
	Ameren Corporation	AEE	\$58.45	6.90%	6.37%	7.50%	4.73%	6.38%	5.43%	61.00%	60.00%	65.57%	\$0.00	9.16%	18.54	3.42											
	American Electric Power Company, Inc.	AEP	\$71.18	5.40%	5.63%	4.50%	5.37%	5.22%	5.43%	66.00%	63.00%	65.57%	\$0.00	9.93%	15.35	2.83											
	Black Hills Corporation	BKH	\$60.62	4.60%	4.07%	7.50%	5.22%	5.35%	5.43%	52.00%	54.00%	65.57%	\$0.00	8.63%	21.55	3.97											
	CenterPoint Energy, Inc.	CNP	\$28.43	5.90%	8.49%	NA	5.65%	6.68%	5.43%	71.00%	64.00%	65.57%	\$0.00	8.40%	23.25	4.28											
	CMS Energy Corporation	CMS	\$46.48	6.30%	7.04%	8.50%	7.13%	7.24%	5.43%	61.00%	61.00%	65.57%	\$0.00	9.13%	18.68	3.44											
	Consolidated Edison, Inc.	ED	\$82.04	4.00%	3.11%	3.00%	2.82%	3.23%	5.43%	67.00%	67.00%	65.57%	\$0.00	8.58%	21.95	4.05											
	DTE Energy Company	DE	\$107.87	6.00%	5.58%	6.50%	6.31%	6.10%	5.43%	62.00%	61.00%	65.57%	\$0.00	9.01%	19.31	3.56											
	El Paso Electric Company	EE	\$54.13	5.10%	5.20%	5.00%	4.08%	4.84%	5.43%	52.00%	59.00%	65.57%	\$0.00	8.60%	21.78	4.01											
	Eversource Energy	ES	\$61.36	5.80%	5.65%	6.50%	5.47%	5.52%	5.43%	61.00%	61.00%	65.57%	\$0.00	9.09%	18.85	3.47											
	Hawaiian Electric Industries, Inc.	HE	\$34.56	6.70%	8.50%	1.50%	3.47%	5.04%	5.43%	69.00%	71.00%	65.57%	\$0.00	10.52%	13.56	2.50											
	IDACORP, Inc.	IDA	\$88.70	4.10%	3.10%	3.50%	3.56%	3.56%	5.43%	57.00%	60.00%	65.57%	\$0.00	8.34%	23.70	4.37											
	NorthWestern Corporation	NWE	\$57.20	2.40%	3.12%	4.50%	3.76%	4.30%	5.43%	63.00%	62.00%	65.57%	\$0.00	9.34%	17.67	3.26											
	OGE Energy Corp.	OGE	\$34.04	6.00%	5.80%	2.50%	2.89%	4.30%	5.43%	68.00%	74.00%	65.57%	\$0.00	9.02%	19.25	3.55											
	Other Tail Corporation	OTTR	\$43.36	NA	9.00%	7.00%	7.88%	7.96%	5.43%	72.00%	63.00%	65.57%	\$0.00	8.85%	20.19	3.72											
	Pinnacle West Capital Corporation	PNM	\$84.48	3.00%	3.63%	5.50%	4.03%	4.04%	5.43%	64.00%	62.00%	65.57%	\$0.00	8.65%	21.48	3.96											
	PNM Resources, Inc.	PNM	\$40.17	5.00%	4.30%	7.50%	3.54%	5.19%	5.43%	57.00%	55.00%	65.57%	\$0.00	8.11%	25.78	4.75											
	Portland General Electric Company	POR	\$44.58	2.90%	3.50%	6.00%	4.24%	4.16%	5.43%	59.00%	55.00%	65.57%	\$0.00	8.73%	20.93	3.86											
	Southern Company	SO	\$47.85	4.50%	2.70%	4.00%	4.02%	3.81%	5.43%	78.00%	72.00%	65.57%	\$0.00	9.61%	16.52	3.04											
WEC Energy Group, Inc.	WEC	\$64.49	4.20%	4.34%	6.00%	4.23%	4.69%	5.43%	67.00%	66.00%	65.57%	\$0.00	8.78%	20.61	3.80												
Xcel Energy Inc.	XEL	\$47.40	5.80%	6.15%	4.50%	3.90%	5.09%	5.43%	63.00%	67.00%	65.57%	\$0.00	8.93%	19.72	3.63												
Projected Annual Earnings per Share		[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]									
Company		Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032								
ALLETE, Inc.	ALLETE, Inc.	ALE	\$31.14	\$3.31	\$3.49	\$3.69	\$3.89	\$4.10	\$4.33	\$4.56	\$4.81	\$5.08	\$5.35	\$5.65	\$5.95	\$6.27	\$6.62	\$6.97	\$7.35								
	Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$2.65	\$2.80	\$2.92	\$3.11	\$3.28	\$3.46	\$3.64	\$3.84								
	Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.88	\$4.12	\$4.37	\$4.63	\$4.90	\$5.17	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74								
	American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.93	\$5.19	\$5.46	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$7.44	\$7.85	\$8.27	\$8.72	\$9.19	\$9.69								
	Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.92	\$3.07	\$3.24	\$3.41	\$3.60	\$3.79	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$5.19	\$5.48	\$5.77	\$6.09								
	CenterPoint Energy, Inc.	CNP	\$1.00	\$1.07	\$1.14	\$1.21	\$1.30	\$1.38	\$1.47	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.44	\$2.58								
	CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.01	\$3.22	\$3.44	\$3.65	\$3.87	\$4.10	\$4.32	\$4.55	\$4.80	\$5.06	\$5.33								
	Consolidated Edison, Inc.	ED	\$3.94	\$4.07	\$4.20	\$4.33	\$4.47	\$4.62	\$4.77	\$4.94	\$5.14	\$5.36	\$5.61	\$5.89	\$6.21	\$6.55	\$6.91	\$7.28	\$7.68								
	El Paso Electric Company	EE	\$4.83	\$5.12	\$5.44	\$5.75	\$6.12	\$6.49	\$6.89	\$7.30	\$7.73	\$8.18	\$8.64	\$9.12	\$9.61	\$10.13	\$10.68	\$11.26	\$11.87								
	ETP Energy Company	ETE	\$2.39	\$2.51	\$2.63	\$2.75	\$2.89	\$3.03	\$3.17	\$3.33	\$3.50	\$3.68	\$3.87	\$4.08	\$4.30	\$4.53	\$4.78	\$5.04	\$5.31								
	Eversource Energy	ES	\$2.96	\$3.12	\$3.30	\$3.48	\$3.67	\$3.87	\$4.09	\$4.31	\$4.55	\$4.80	\$5.06	\$5.33	\$5.62	\$5.93	\$6.25	\$6.59	\$6.94								
	Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.41	\$2.53	\$2.65	\$2.79	\$2.93	\$3.08	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$4.19	\$4.41	\$4.65	\$4.90	\$5.17								
	IDACORP, Inc.	IDA	\$3.94	\$4.08	\$4.23	\$4.38	\$4.53	\$4.69	\$4.86	\$5.05	\$5.26	\$5.50	\$5.76	\$6.06	\$6.39	\$6.73	\$7.10	\$7.49	\$7.89								
	NorthWestern Corporation	NWE	\$3.39	\$3.51	\$3.63	\$3.75	\$3.88	\$4.02	\$4.15	\$4.31	\$4.49	\$4.69	\$4.91	\$5.16	\$5.44	\$5.74	\$6.05	\$6.38	\$6.72								
	OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.84	\$1.92	\$2.00	\$2.09	\$2.18	\$2.27	\$2.38	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.23	\$3.41	\$3.59								
	Other Tail Corporation	OTTR	\$1.95	\$1.73	\$1.86	\$2.01	\$2.17	\$2.35	\$2.53	\$2.72	\$2.92	\$3.11	\$3.31	\$3.50	\$3.69	\$3.89	\$4.10	\$4.33	\$4.56								
	Pinnacle West Capital Corporation	PNM	\$3.95	\$4.11	\$4.28	\$4.45	\$4.63	\$4.82	\$5.01	\$5.22	\$5.46	\$5.72	\$6.00	\$6.31	\$6.66	\$7.02	\$7.40	\$7.80	\$8.22								
	PNM Resources, Inc.	PNM	\$1.45	\$1.54	\$1.62	\$1.70	\$1.79	\$1.88	\$1.98	\$2.08	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$3.16	\$3.34								
	Portland General Electric Company	POR	\$2.16	\$2.25	\$2.34	\$2.44	\$2.54	\$2.65	\$2.76	\$2.88	\$3.01	\$3.15	\$3.31	\$3.49	\$3.67	\$3.87	\$4.08	\$4.31	\$4.54								
	Southern Company	SO	\$2.83	\$2.94	\$3.05	\$3.17	\$3.29	\$3.41	\$3.54	\$3.69	\$3.85	\$4.02	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.48	\$5.78								
WEC Energy Group, Inc.	WEC	\$2.96	\$3.10	\$3.24	\$3.40	\$3.56	\$3.72	\$3.90	\$4.08	\$4.29	\$4.54	\$4.74	\$4.99	\$5.26	\$5.54	\$5.84	\$6.16	\$6.50									
Xcel Energy Inc.	XEL	\$2.21	\$2.32	\$2.44	\$2.56	\$2.70	\$2.83	\$2.98	\$3.13	\$3.29	\$3.47	\$3.65	\$3.85	\$4.05	\$4.27	\$4.51	\$4.75	\$5.01									

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	67.00%	67.00%	67.00%	67.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
OTTR	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	56.51%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.31	\$2.41	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$4.82	\$156.53
Alliant Energy Corporation	LNT	\$1.17	\$1.24	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$87.59
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$4.42	\$124.88
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$6.36	\$148.76
Black Hills Corporation	BKH	\$1.52	\$1.62	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$3.99	\$131.17
CenterPoint Energy, Inc.	CNP	\$0.81	\$0.83	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$1.69	\$59.88
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$3.50	\$99.65
Consolidated Edison, Inc.	ED	\$2.81	\$2.90	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$5.03	\$168.54
DTE Energy Company	DTE	\$3.37	\$3.56	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$7.79	\$229.30
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$115.67
Eversource Energy	ES	\$2.01	\$2.09	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55	\$130.89
Hawaiian Electric Industries, Inc.	HE	\$1.74	\$1.85	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$70.14
IDACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$186.97
NorthWestern Corporation	NWE	\$2.29	\$2.35	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$4.41	\$118.78
OGE Energy Corp.	OGE	\$1.25	\$1.34	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$2.36	\$69.15
OTTR	OTTR	\$1.34	\$1.39	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$92.09
Pinnacle West Capital Corporation	PNM	\$2.74	\$2.82	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$5.39	\$176.61
PNM Resources, Inc.	PNM	\$0.92	\$0.96	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$2.19	\$85.99
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$2.98	\$95.00
Southern Company	SO	\$2.38	\$2.41	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$3.79	\$95.45
WEC Energy Group, Inc.	WEC	\$2.17	\$2.26	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.63	\$3.83	\$4.04	\$4.26	\$133.88
Xcel Energy Inc.	XEL	\$1.54	\$1.65	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$3.28	\$98.80

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.66	\$2.37	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$161.35
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.84	\$1.21	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$90.11
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$129.29
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.22	\$3.17	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$155.11
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$135.16
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.58	\$0.84	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$61.57
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$103.15
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.02	\$2.86	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$173.57
DTE Energy Company	DTE	(\$107.86)	\$0.00	\$2.42	\$3.47	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$237.08
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.98	\$1.40	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$119.16
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.44	\$2.07	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$135.44
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.25	\$1.79	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$73.53
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$192.15
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.64	\$2.32	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$123.18
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.90	\$1.28	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$71.50
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.96	\$1.40	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$95.08
Pinnacle West Capital Corporation	PNW	(\$84.48)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$182.00
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.66	\$0.94	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$88.18
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$97.98
Southern Company	SO	(\$47.84)	\$0.00	\$1.71	\$2.42	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$99.24
WEC Energy Group, Inc.	WEC	(\$64.49)	\$0.00	\$1.56	\$2.22	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$138.14
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.10	\$1.58	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$102.08

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

Inputs		EPS Growth Rate Estimates																	Projected Annual Earnings per Share				
Company	Ticker	Price	Value				Low	Growth	Payoff Ratio				Proof	IRR	Terminal	Terminal	Terminal						
			Zacks	First Call	Line	Growth			2018	2021	2028	[10]						[11]	[12]	[13]	[14]		
ALLETE, Inc.	ALE	\$70.43	6.60%	6.00%	4.50%	4.87%	4.50%	5.43%	66.00%	64.00%	65.57%	\$0.00	8.62%	21.64	3.99								
Alliant Energy Corporation	LNT	\$39.93	5.30%	5.45%	6.50%	4.44%	4.44%	5.43%	64.00%	64.00%	65.57%	\$0.00	8.37%	23.52	4.33								
Ameren Corporation	AEE	\$55.35	6.90%	6.37%	7.50%	4.73%	4.73%	5.43%	61.00%	60.00%	65.57%	\$0.00	8.91%	19.82	3.65								
American Electric Power Company, Inc.	AEP	\$67.20	5.40%	5.63%	4.50%	5.37%	4.50%	5.43%	66.00%	63.00%	65.57%	\$0.00	9.96%	15.27	2.81								
Black Hills Corporation	BKH	\$53.02	4.60%	4.07%	7.50%	5.22%	4.07%	5.43%	52.00%	54.00%	65.57%	\$0.00	8.76%	20.77	3.83								
CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA	5.65%	5.65%	5.43%	71.00%	64.00%	65.57%	\$0.00	8.33%	23.82	4.39								
CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.50%	7.13%	6.30%	5.43%	61.00%	61.00%	65.57%	\$0.00	9.07%	18.96	3.49								
Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%	2.82%	2.82%	5.43%	67.00%	67.00%	65.57%	\$0.00	8.70%	21.14	3.90								
DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.50%	6.31%	5.58%	5.43%	62.00%	61.00%	65.57%	\$0.00	9.05%	19.06	3.51								
El Paso Electric Company	EE	\$49.44	5.10%	5.20%	5.00%	4.08%	4.08%	5.43%	52.00%	59.00%	65.57%	\$0.00	8.71%	21.08	3.88								
Eversource Energy	ES	\$58.10	5.80%	5.65%	6.50%	4.12%	4.12%	5.43%	61.00%	58.00%	65.57%	\$0.00	8.92%	19.80	3.65								
Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%	3.47%	1.50%	5.43%	69.00%	71.00%	65.57%	\$0.00	9.40%	17.40	3.21								
IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%	3.56%	3.10%	5.43%	57.00%	60.00%	65.57%	\$0.00	8.36%	23.56	4.34								
NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	4.50%	3.76%	2.40%	5.43%	63.00%	62.00%	65.57%	\$0.00	9.38%	17.48	3.22								
OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%	2.89%	2.50%	5.43%	68.00%	74.00%	65.57%	\$0.00	8.78%	20.63	3.80								
Otter Tail Corporation	OTTR	\$42.67	NA	9.00%	7.00%	7.88%	7.00%	5.43%	72.00%	63.00%	65.57%	\$0.00	8.67%	21.31	3.93								
Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.50%	4.03%	3.00%	5.43%	64.00%	62.00%	65.57%	\$0.00	8.65%	21.45	3.95								
PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%	3.54%	3.54%	5.43%	57.00%	55.00%	65.57%	\$0.00	7.99%	26.92	4.96								
Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%	4.24%	2.90%	5.43%	59.00%	55.00%	65.57%	\$0.00	8.79%	20.58	3.79								
Southern Company	SO	\$44.14	4.50%	2.70%	4.00%	4.02%	2.70%	5.43%	78.00%	72.00%	65.57%	\$0.00	9.62%	16.51	3.04								
WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%	4.23%	4.20%	5.43%	67.00%	66.00%	65.57%	\$0.00	8.81%	20.41	3.76								
Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%	3.90%	3.90%	5.43%	63.00%	67.00%	65.57%	\$0.00	8.86%	20.14	3.71								
																	MEAN	8.85%					
																	MAX	9.96%					
																	MIN	7.99%					
Company																	[25]	[26]	[27]	[28]	[29]	[30]	[31]
ALLETE, Inc.	ALE	\$3.14	\$3.28	\$3.43	\$3.58	\$3.74	\$3.91	\$4.09	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.49	\$5.79	\$6.10	\$6.44	\$6.79					
Alliant Energy Corporation	LNT	\$1.65	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.14	\$2.24	\$2.35	\$2.46	\$2.59	\$2.72	\$2.87	\$3.03	\$3.19	\$3.37	\$3.55					
Ameren Corporation	AEE	\$2.68	\$2.81	\$2.94	\$3.08	\$3.22	\$3.38	\$3.54	\$3.71	\$3.89	\$4.09	\$4.30	\$4.53	\$4.78	\$5.04	\$5.31	\$5.60	\$5.90					
American Electric Power Company, Inc.	AEP	\$4.23	\$4.42	\$4.62	\$4.83	\$5.04	\$5.27	\$5.51	\$5.76	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$7.80	\$8.22	\$8.67	\$9.14					
Black Hills Corporation	BKH	\$2.63	\$2.74	\$2.85	\$2.96	\$3.09	\$3.21	\$3.34	\$3.48	\$3.64	\$3.82	\$4.01	\$4.21	\$4.44	\$4.68	\$4.94	\$5.21	\$5.49					
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.06	\$1.12	\$1.18	\$1.25	\$1.32	\$1.39	\$1.47	\$1.55	\$1.64	\$1.73	\$1.82	\$1.92	\$2.02	\$2.13	\$2.25	\$2.37					
CMS Energy Corporation	CMS	\$1.98	\$2.10	\$2.24	\$2.38	\$2.53	\$2.69	\$2.86	\$3.03	\$3.21	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$4.69	\$4.95					
Consolidated Edison, Inc.	ED	\$3.94	\$4.05	\$4.17	\$4.28	\$4.40	\$4.53	\$4.66	\$4.81	\$4.99	\$5.19	\$5.43	\$5.70	\$6.01	\$6.33	\$6.68	\$7.04	\$7.42					
DTE Energy Company	DTE	\$4.83	\$5.10	\$5.38	\$5.68	\$6.00	\$6.34	\$6.69	\$7.06	\$7.45	\$7.86	\$8.29	\$8.75	\$9.22	\$9.72	\$10.25	\$10.80	\$11.39					
El Paso Electric Company	EE	\$2.39	\$2.49	\$2.59	\$2.69	\$2.80	\$2.92	\$3.04	\$3.17	\$3.31	\$3.47	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$4.99					
Eversource Energy	ES	\$2.96	\$3.08	\$3.21	\$3.34	\$3.48	\$3.62	\$3.77	\$3.93	\$4.11	\$4.31	\$4.52	\$4.76	\$5.02	\$5.29	\$5.58	\$5.88	\$6.20					
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.32	\$2.36	\$2.39	\$2.43	\$2.47	\$2.50	\$2.56	\$2.63	\$2.72	\$2.83	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87					
IDACORP, Inc.	IDA	\$3.94	\$4.06	\$4.19	\$4.32	\$4.45	\$4.59	\$4.73	\$4.90	\$5.09	\$5.30	\$5.55	\$5.83	\$6.15	\$6.48	\$6.83	\$7.20	\$7.59					
NorthWestern Corporation	NWE	\$3.39	\$3.47	\$3.55	\$3.64	\$3.73	\$3.82	\$3.91	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.99	\$5.26	\$5.55	\$5.85	\$6.17					
OGE Energy Corp.	OGE	\$1.69	\$1.73	\$1.78	\$1.82	\$1.87	\$1.91	\$1.96	\$2.02	\$2.09	\$2.17	\$2.27	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10					
Otter Tail Corporation	OTTR	\$1.60	\$1.71	\$1.83	\$1.96	\$2.10	\$2.24	\$2.40	\$2.56	\$2.73	\$2.90	\$3.07	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23					
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.07	\$4.19	\$4.32	\$4.45	\$4.58	\$4.72	\$4.88	\$5.06	\$5.28	\$5.52	\$5.80	\$6.11	\$6.44	\$6.79	\$7.16	\$7.55					
PNM Resources, Inc.	PNM	\$1.46	\$1.51	\$1.57	\$1.62	\$1.68	\$1.74	\$1.80	\$1.87	\$1.95	\$2.03	\$2.13	\$2.24	\$2.36	\$2.49	\$2.63	\$2.77	\$2.92					
Portland General Electric Company	POR	\$2.16	\$2.22	\$2.29	\$2.35	\$2.42	\$2.49	\$2.56	\$2.65	\$2.75	\$2.86	\$2.99	\$3.14	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09					
Southern Company	SO	\$2.83	\$2.91	\$2.98	\$3.07	\$3.15	\$3.23	\$3.32	\$3.43	\$3.55	\$3.69	\$3.86	\$4.05	\$4.27	\$4.50	\$4.75	\$5.01	\$5.28					
WEC Energy Group, Inc.	WEC	\$2.96	\$3.08	\$3.21	\$3.35	\$3.49	\$3.64	\$3.79	\$3.96	\$4.14	\$4.34	\$4.55	\$4.79	\$5.05	\$5.33	\$5.62	\$5.92	\$6.24					
Xcel Energy Inc.	XEL	\$2.21	\$2.30	\$2.39	\$2.48	\$2.58	\$2.68	\$2.78	\$2.90	\$3.02	\$3.16	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$4.31	\$4.55					

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	63.61%	62.31%	60.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.00%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$146.86
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$2.33	\$83.48
Ameren Corporation	AEE	\$1.79	\$1.87	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$116.97
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$139.54
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$113.95
CenterPoint Energy, Inc.	CNP	\$0.79	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$1.55	\$56.49
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$93.80
Consolidated Edison, Inc.	ED	\$2.79	\$2.87	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$4.87	\$156.94
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$7.47	\$217.09
El Paso Electric Company	EE	\$1.35	\$1.46	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$3.27	\$105.19
Eversource Energy	ES	\$1.96	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$122.76
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$67.27
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$178.89
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$107.80
OGE Energy Corp.	OGE	\$1.21	\$1.28	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$63.95
Other Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$90.10
Pinnacle West Capital Corporation	PNW	\$2.68	\$2.73	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95	\$161.97
PNM Resources, Inc.	PNM	\$0.89	\$0.92	\$0.95	\$0.97	\$1.03	\$1.07	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$1.91	\$78.54
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$84.26
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$87.10
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$127.41
Xcel Energy Inc.	XEL	\$1.50	\$1.59	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$2.98	\$91.60

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$151.30
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.83	\$1.18	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$85.81
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.29	\$1.84	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$120.84
American Electric Power Company, Inc.	AEP	(\$67.20)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$145.53
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$117.55
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.57	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$58.04
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$97.04
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.00	\$2.83	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$161.81
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$224.56
El Paso Electric Company	EE	(\$49.43)	\$0.00	\$0.97	\$1.37	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$108.46
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.41	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$126.82
Hawaiian Electric Industries, Inc.	HE	(\$33.91)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$69.81
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.71	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$183.87
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$111.84
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$65.98
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$92.87
Pinnacle West Capital Corporation	PNW	(\$78.03)	\$0.00	\$0.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$166.92
PNM Resources, Inc.	PNM	(\$36.99)	\$0.00	\$0.64	\$0.91	\$0.95	\$0.97	\$1.03	\$1.10	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$80.45
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$86.94
Southern Company	SO	(\$44.14)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$90.56
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$131.51
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.08	\$1.53	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$94.58

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Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.00%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$150.13
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$2.33	\$84.68
Ameren Corporation	AEE	\$1.79	\$1.87	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$119.64
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$143.58
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$117.58
CenterPoint Energy, Inc.	CNP	\$0.79	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$1.55	\$57.56
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$95.80
Consolidated Edison, Inc.	ED	\$2.79	\$2.87	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$4.87	\$163.16
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$7.47	\$222.42
El Paso Electric Company	EE	\$1.35	\$1.46	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$3.27	\$110.51
Eversource Energy	ES	\$1.96	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$127.18
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$68.55
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$182.18
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$112.71
OGE Energy Corp.	OGE	\$1.21	\$1.24	\$1.27	\$1.30	\$1.33	\$1.36	\$1.39	\$1.43	\$1.47	\$1.51	\$1.55	\$1.59	\$1.63	\$1.67	\$1.71	\$64.47
Other Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$90.31
Pinnacle West Capital Corporation	PNW	\$2.68	\$2.73	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95	\$167.21
PNM Resources, Inc.	PNM	\$0.89	\$0.92	\$0.95	\$0.97	\$1.03	\$1.07	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$1.91	\$80.87
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$89.29
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$90.18
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$130.81
Xcel Energy Inc.	XEL	\$1.50	\$1.59	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$2.98	\$94.59

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow																
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$154.58
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.83	\$1.18	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$87.00
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.29	\$1.84	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$123.50
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$149.57
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$121.18
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.57	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$59.11
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$99.04
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.00	\$2.83	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$168.03
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$229.88
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.97	\$1.37	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$113.76
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.41	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$131.24
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$71.08
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.71	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$187.16
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$116.75
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$66.51
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$93.09
Pinnacle West Capital Corporation	PNW	(\$80.50)	\$0.00	\$0.93	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$172.16
PNM Resources, Inc.	PNM	(\$80.09)	\$0.00	\$0.64	\$0.91	\$0.95	\$0.97	\$1.03	\$1.10	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$82.78
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$91.97
Southern Company	SO	(\$45.61)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$93.64
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$134.90
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.08	\$1.53	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$97.57

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Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	61.00%	66.33%	64.00%	64.22%	64.45%	64.67%	63.61%	62.31%	60.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	67.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	61.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.00%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$155.70
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$2.33	\$87.16
Ameren Corporation	AEE	\$1.79	\$1.87	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$123.54
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$147.97
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$130.11
CenterPoint Energy, Inc.	CNP	\$0.79	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$1.55	\$59.57
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$99.02
Consolidated Edison, Inc.	ED	\$2.79	\$2.87	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$4.87	\$168.22
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$7.47	\$228.53
El Paso Electric Company	EE	\$1.35	\$1.46	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$3.27	\$115.15
Eversource Energy	ES	\$1.96	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$129.69
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$68.64
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$186.53
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$118.01
OGE Energy Corp.	OGE	\$1.21	\$1.28	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$68.61
Other Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$91.56
Pinnacle West Capital Corporation	PNM	\$2.68	\$2.73	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95	\$175.65
PNM Resources, Inc.	PNM	\$0.89	\$0.92	\$0.95	\$0.97	\$1.03	\$1.07	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$1.91	\$85.28
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$94.27
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$94.91
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$133.53
Xcel Energy Inc.	XEL	\$1.50	\$1.59	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$2.98	\$98.17

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
Company	Ticket	Initial																
		Outflow																
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$160.15
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.83	\$1.18	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$89.48
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.29	\$1.84	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$127.41
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$153.96
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$133.71
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.57	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$61.13
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$102.27
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.00	\$2.83	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$173.08
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$236.00
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.97	\$1.37	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$118.42
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.41	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$133.76
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$71.18
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.71	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$191.51
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$122.06
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$70.64
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$94.33
Pinnacle West Capital Corporation	PNW	(\$84.48)	\$0.00	\$1.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$180.60
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.64	\$0.91	\$0.95	\$0.97	\$1.03	\$1.10	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$87.19
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$96.96
Southern Company	SO	(\$47.85)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$98.37
WEC Energy Group, Inc.	WEC	(\$64.48)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$137.62
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.08	\$1.53	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$101.15

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

Inputs	Stock			EPS Growth Rate Estimates				Long-Term	Payout Ratio				Iterative Solution	IRR	Terminal	Terminal		
	Company	Ticker	Price	Value		Sustainable	High		Growth	2018	2021	2028						
				Zacks	First Call												Line	Growth
	ALLETE, Inc.	ALE	\$70.43	6.60%	6.00%	4.50%	4.87%	6.60%	5.43%	66.00%	64.00%	65.57%	0.00	9.16%	18.51	3.41		
	Alliant Energy Corporation	LNT	\$39.93	5.30%	5.45%	6.50%	4.44%	6.50%	5.43%	64.00%	64.00%	65.57%	0.00	8.86%	20.16	3.71		
	Ameren Corporation	AEE	\$55.35	6.90%	6.37%	7.50%	4.73%	7.50%	5.43%	61.00%	60.00%	65.57%	0.00	9.70%	16.20	2.98		
	American Electric Power Company, Inc.	AEP	\$67.20	5.40%	5.63%	4.50%	5.37%	5.63%	5.43%	66.00%	63.00%	65.57%	0.00	10.34%	14.06	2.59		
	Black Hills Corporation	BKH	\$53.02	4.60%	4.07%	7.50%	5.22%	7.50%	5.43%	52.00%	54.00%	65.57%	0.00	9.70%	16.19	2.98		
	CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA	5.65%	8.49%	5.43%	71.00%	64.00%	65.57%	0.00	9.01%	19.32	3.56		
	CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.50%	7.13%	8.50%	5.43%	61.00%	61.00%	65.57%	0.00	9.70%	16.19	2.98		
	Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%	2.82%	4.00%	5.43%	67.00%	67.00%	65.57%	0.00	9.01%	19.32	3.56		
	DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.50%	6.31%	6.50%	5.43%	62.00%	61.00%	65.57%	0.31	9.32%	17.76	3.27		
	El Paso Electric Company	EE	\$49.44	5.10%	5.20%	5.00%	4.08%	5.20%	5.43%	52.00%	59.00%	65.57%	0.00	8.99%	19.39	3.57		
	Eversource Energy	ES	\$58.10	5.80%	5.65%	6.50%	4.12%	6.50%	5.43%	61.00%	57.00%	65.57%	0.00	9.59%	16.62	3.06		
	Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%	3.47%	8.50%	5.43%	69.00%	71.00%	65.57%	0.00	12.07%	10.41	1.92		
	IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%	3.56%	4.10%	5.43%	57.00%	60.00%	65.57%	0.00	8.59%	21.83	4.02		
	NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	4.50%	3.76%	4.50%	5.43%	63.00%	74.00%	65.57%	0.00	10.06%	14.94	2.75		
	OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%	2.89%	6.00%	5.43%	68.00%	62.00%	65.57%	0.00	9.80%	15.80	2.91		
	Otter Tail Corporation	OTTR	\$42.67	NA	9.00%	7.00%	7.88%	9.00%	5.43%	72.00%	63.00%	65.57%	0.00	9.18%	18.44	3.40		
	Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.50%	4.03%	5.50%	5.43%	64.00%	62.00%	65.57%	0.00	9.32%	17.77	3.27		
	PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%	3.54%	7.50%	5.43%	57.00%	55.00%	65.57%	0.00	8.88%	20.04	3.69		
	Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%	4.24%	6.00%	5.43%	59.00%	56.00%	65.57%	0.00	9.65%	16.36	3.01		
	Southern Company	SO	\$44.14	4.50%	2.70%	4.00%	4.02%	4.50%	5.43%	78.00%	72.00%	65.57%	0.00	10.23%	14.39	2.65		
	WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%	4.23%	6.00%	5.43%	67.00%	66.00%	65.57%	0.00	9.30%	17.84	3.29		
	Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%	3.90%	6.15%	5.43%	63.00%	67.00%	65.57%	0.00	9.49%	17.02	3.14		
													MEAN	9.54%				
													MAX	12.07%				
													MIN	8.59%				
Projected Annual Earnings per Share	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]	[32]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	\$3.14	\$3.35	\$3.57	\$3.80	\$4.05	\$4.32	\$4.61	\$4.90	\$5.21	\$5.52	\$5.84	\$6.17	\$6.50	\$6.86	\$7.23	\$7.62	\$8.04
Alliant Energy Corporation	LNT	\$1.65	\$1.76	\$1.87	\$1.99	\$2.12	\$2.26	\$2.41	\$2.56	\$2.72	\$2.88	\$3.05	\$3.22	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19
Ameren Corporation	AEE	\$2.68	\$2.88	\$3.10	\$3.33	\$3.58	\$3.85	\$4.14	\$4.43	\$4.73	\$5.04	\$5.35	\$5.66	\$5.96	\$6.29	\$6.63	\$6.99	\$7.37
American Electric Power Company, Inc.	AEP	\$4.23	\$4.47	\$4.72	\$4.99	\$5.27	\$5.56	\$5.88	\$6.20	\$6.55	\$6.91	\$7.29	\$7.69	\$8.11	\$8.55	\$9.01	\$9.50	\$10.02
Black Hills Corporation	BKH	\$2.63	\$2.83	\$3.04	\$3.27	\$3.51	\$3.78	\$4.06	\$4.35	\$4.65	\$4.95	\$5.25	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.08	\$1.18	\$1.28	\$1.39	\$1.50	\$1.63	\$1.76	\$1.89	\$2.02	\$2.15	\$2.28	\$2.41	\$2.54	\$2.67	\$2.82	\$2.97
CMS Energy Corporation	CMS	\$1.98	\$2.15	\$2.33	\$2.53	\$2.74	\$2.98	\$3.23	\$3.49	\$3.75	\$4.01	\$4.27	\$4.52	\$4.77	\$5.03	\$5.30	\$5.59	\$5.89
Consolidated Edison, Inc.	ED	\$3.94	\$4.10	\$4.26	\$4.43	\$4.61	\$4.79	\$4.99	\$5.20	\$5.43	\$5.69	\$5.97	\$6.28	\$6.62	\$6.98	\$7.35	\$7.75	\$8.17
DTE Energy Company	DTE	\$4.83	\$5.14	\$5.48	\$5.83	\$6.21	\$6.62	\$7.05	\$7.49	\$7.95	\$8.43	\$8.92	\$9.41	\$9.93	\$10.46	\$11.03	\$11.63	\$12.26
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$4.66	\$4.92	\$5.18	\$5.47
Eversource Energy	ES	\$2.96	\$3.15	\$3.36	\$3.58	\$3.81	\$4.06	\$4.32	\$4.59	\$4.87	\$5.16	\$5.46	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.51
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.48	\$2.70	\$2.92	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.51	\$5.81	\$6.13	\$6.46	\$6.81
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.01	\$6.33	\$6.67	\$7.03	\$7.41	\$7.82	\$8.24
NorthWestern Corporation	NWE	\$3.39	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.08	\$5.34	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.84	\$3.00	\$3.16	\$3.34	\$3.52	\$3.71	\$3.91	\$4.12
Otter Tail Corporation	OTTR	\$3.60	\$3.74	\$3.89	\$4.04	\$4.19	\$4.34	\$4.49	\$4.64	\$4.79	\$4.94	\$5.09	\$5.24	\$5.39	\$5.54	\$5.69	\$5.84	\$5.99
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.17	\$4.40	\$4.64	\$4.89	\$5.16	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74	\$7.11	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25
PNM Resources, Inc.	PNM	\$1.46	\$1.57	\$1.69	\$1.81	\$1.95	\$2.10	\$2.25	\$2.41	\$2.58	\$2.75	\$2.93	\$3.08	\$3.25	\$3.43	\$3.61	\$3.81	\$4.01
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.24	\$3.43	\$3.63	\$3.83	\$4.05	\$4.26	\$4.50	\$4.74	\$5.00	\$5.27
Southern Company	SO	\$2.83	\$2.96	\$3.09	\$3.23	\$3.37	\$3.53	\$3.69	\$3.86	\$4.04	\$4.24	\$4.46	\$4.70	\$4.95	\$5.22	\$5.50	\$5.80	\$6.12
WEC Energy Group, Inc.	WEC	\$2.96	\$3.14	\$3.33	\$3.53	\$3.74	\$3.96	\$4.20	\$4.45	\$4.71	\$4.97	\$5.25	\$5.54	\$5.84	\$6.16	\$6.50	\$6.85	\$7.22
Xcel Energy Inc.	XEL	\$2.21	\$2.35	\$2.49	\$2.64	\$2.81	\$2.98	\$3.16	\$3.35	\$3.55	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.46

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.20%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
OTter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$148.71
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$84.44
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$119.32
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$140.78
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$117.05
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$57.42
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$95.35
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$157.90
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$217.81
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$105.96
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$124.88
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$70.91
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$179.89
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$109.41
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$65.12
OTter Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$91.26
Pinnacle West Capital Corporation	PNM	\$2.81	\$2.93	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$6.07	\$164.46
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$80.45
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$86.19
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$86.02
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$128.78
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$92.86

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$153.97
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$87.19
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$124.15
American Electric Power Company, Inc.	AEP	(\$67.20)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$147.35
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$121.79
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$59.37
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$99.21
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$163.26
DTE Energy Company	DTE	(\$102.17)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$225.85
El Paso Electric Company	EE	(\$49.43)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$109.55
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$129.81
Hawaiian Electric Industries, Inc.	HE	(\$33.91)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$75.38
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.75	\$2.48	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$185.29
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$114.22
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$67.83
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$94.50
Pinnacle West Capital Corporation	PNM	(\$78.03)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$170.53
PNM Resources, Inc.	PNM	(\$37.00)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$83.08
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$89.65
Southern Company	SO	(\$44.14)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$92.03
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$133.51
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$96.43

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth
90 Day High Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		EPS Growth Rate Estimates														Iterative Solution									
Stock		[1]	[2]	[3]	[4]	[5]	[6]	Long-Term		[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]								
Company	Ticker	Price	Zacks	First Call	Line	Sustainable	High	Growth	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	Terminal	Terminal								
ALLETE, Inc.	ALE	\$71.97	6.60%	6.00%	4.50%	4.87%	6.60%	5.43%	66.00%	64.00%	64.00%	65.57%	(80.00)	9.08%	18.91	3.49									
Alliant Energy Corporation	LNT	\$40.49	5.30%	5.45%	6.50%	4.44%	6.50%	5.43%	64.00%	64.00%	64.00%	65.57%	(80.00)	8.81%	20.44	3.77									
Ameren Corporation	AEE	\$56.61	6.90%	6.37%	7.50%	4.73%	7.50%	5.43%	61.00%	60.00%	60.00%	65.57%	(80.00)	9.60%	16.56	3.05									
American Electric Power Company, Inc.	AEP	\$69.11	5.40%	5.63%	4.50%	5.37%	5.63%	5.43%	66.00%	63.00%	63.00%	65.57%	(80.00)	10.21%	14.46	2.66									
Black Hills Corporation	BKH	\$54.72	4.60%	4.07%	7.50%	5.22%	7.50%	5.43%	52.00%	54.00%	54.00%	65.57%	(80.00)	9.57%	16.69	3.08									
CenterPoint Energy, Inc.	CNP	\$27.48	5.90%	8.49%	NA	5.65%	8.49%	5.43%	71.00%	64.00%	64.00%	65.57%	(80.00)	8.94%	19.68	3.63									
CMS Energy Corporation	CMS	\$44.96	6.30%	7.04%	8.50%	7.13%	8.50%	5.43%	61.00%	61.00%	61.00%	65.57%	(80.00)	9.61%	16.53	3.05									
Consolidated Edison, Inc.	ED	\$79.65	4.00%	3.11%	3.00%	2.82%	4.00%	5.43%	67.00%	67.00%	67.00%	65.57%	(80.00)	8.87%	20.08	3.70									
DTE Energy Company	DTE	\$104.99	6.00%	5.58%	6.50%	6.31%	6.50%	5.43%	62.00%	61.00%	61.00%	65.57%	(80.00)	9.21%	18.25	3.36									
El Paso Electric Company	EE	\$51.94	5.10%	5.20%	5.00%	4.08%	5.20%	5.43%	52.00%	59.00%	59.00%	65.57%	(80.00)	8.82%	20.36	3.75									
Eversource Energy	ES	\$60.18	5.80%	5.65%	6.50%	4.12%	6.50%	5.43%	61.00%	61.00%	61.00%	65.57%	(80.00)	9.44%	17.21	3.17									
Hawaiian Electric Industries, Inc.	HE	\$34.52	6.70%	8.50%	1.50%	3.47%	8.50%	5.43%	69.00%	71.00%	71.00%	65.57%	(80.00)	11.95%	10.60	1.95									
IDACORP, Inc.	IDA	\$86.65	4.10%	3.10%	3.50%	3.56%	4.10%	5.43%	57.00%	60.00%	60.00%	65.57%	(80.00)	8.54%	22.23	4.10									
NorthWestern Corporation	NWE	\$54.69	2.40%	3.12%	4.50%	3.76%	4.50%	5.43%	63.00%	62.00%	62.00%	65.57%	(80.00)	9.86%	15.61	2.88									
OGE Energy Corp.	OGE	\$32.08	6.00%	5.80%	2.50%	2.89%	6.00%	5.43%	68.00%	74.00%	74.00%	65.57%	(80.00)	9.77%	15.93	2.93									
Otter Tail Corporation	OTTR	\$42.77	NA	9.00%	7.00%	7.88%	9.00%	5.43%	72.00%	63.00%	63.00%	65.57%	(80.00)	9.17%	18.48	3.41									
Pinnacle West Capital Corporation	PNW	\$80.50	3.00%	3.63%	5.50%	4.03%	5.50%	5.43%	64.00%	62.00%	62.00%	65.57%	(80.00)	9.20%	18.34	3.38									
PNM Resources, Inc.	PNM	\$38.09	5.40%	4.30%	7.50%	3.54%	7.50%	5.43%	57.00%	59.00%	59.00%	65.57%	(80.00)	8.78%	20.63	3.80									
Portland General Electric Company	POR	\$42.23	2.90%	3.50%	6.00%	4.24%	6.00%	5.43%	59.00%	78.00%	78.00%	65.57%	(80.00)	9.42%	17.32	3.19									
Southern Company	SO	\$45.61	4.50%	2.70%	4.00%	4.02%	4.50%	5.43%	78.00%	72.00%	72.00%	65.57%	(80.00)	10.07%	14.90	2.75									
WEC Energy Group, Inc.	WEC	\$63.20	4.20%	4.34%	6.00%	4.23%	6.00%	5.43%	67.00%	66.00%	66.00%	65.57%	(80.00)	9.20%	18.31	3.37									
Xcel Energy Inc.	XEL	\$45.71	5.80%	6.15%	4.50%	3.90%	6.15%	5.43%	63.00%	67.00%	67.00%	65.57%	(80.00)	9.36%	17.57	3.24									
		MEAN														9.43%									
																MAX	11.95%								
																MIN	8.54%								
Projected Annual Earnings per Share																									
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032							
ALLETE, Inc.	ALE	\$3.14	\$3.35	\$3.57	\$3.80	\$4.05	\$4.32	\$4.61	\$4.90	\$5.21	\$5.52	\$5.84	\$6.17	\$6.50	\$6.86	\$7.23	\$7.62	\$8.04							
Alliant Energy Corporation	LNT	\$1.65	\$1.76	\$1.87	\$1.99	\$2.12	\$2.26	\$2.41	\$2.56	\$2.72	\$2.88	\$3.05	\$3.22	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19							
Ameren Corporation	AEE	\$2.68	\$2.88	\$3.10	\$3.33	\$3.58	\$3.85	\$4.14	\$4.43	\$4.73	\$5.04	\$5.35	\$5.66	\$5.96	\$6.29	\$6.63	\$6.99	\$7.37							
American Electric Power Company, Inc.	AEP	\$4.23	\$4.47	\$4.72	\$4.99	\$5.27	\$5.56	\$5.88	\$6.20	\$6.55	\$6.91	\$7.29	\$7.69	\$8.11	\$8.55	\$9.01	\$9.50	\$10.02							
Black Hills Corporation	BKH	\$2.63	\$2.83	\$3.04	\$3.27	\$3.51	\$3.78	\$4.06	\$4.35	\$4.65	\$4.95	\$5.25	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23							
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.08	\$1.18	\$1.28	\$1.39	\$1.50	\$1.63	\$1.76	\$1.89	\$2.02	\$2.15	\$2.28	\$2.41	\$2.54	\$2.67	\$2.82	\$2.97							
CMS Energy Corporation	CMS	\$1.98	\$2.15	\$2.33	\$2.53	\$2.74	\$2.98	\$3.23	\$3.49	\$3.75	\$4.01	\$4.27	\$4.52	\$4.77	\$5.03	\$5.30	\$5.59	\$5.89							
Consolidated Edison, Inc.	ED	\$3.94	\$4.10	\$4.26	\$4.43	\$4.61	\$4.79	\$4.99	\$5.20	\$5.43	\$5.69	\$5.97	\$6.28	\$6.62	\$6.98	\$7.35	\$7.75	\$8.17							
El Paso Electric Company	EE	\$4.83	\$5.14	\$5.48	\$5.83	\$6.21	\$6.62	\$7.05	\$7.49	\$7.95	\$8.43	\$8.92	\$9.41	\$9.93	\$10.46	\$11.03	\$11.63	\$12.26							
Eversource Energy	ES	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$4.66	\$4.92	\$5.18	\$5.47							
Hawaiian Electric Industries, Inc.	HE	\$2.96	\$3.15	\$3.36	\$3.58	\$3.81	\$4.06	\$4.32	\$4.59	\$4.87	\$5.16	\$5.46	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.51							
IDACORP, Inc.	IDA	\$2.29	\$2.48	\$2.70	\$2.92	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.51	\$5.81	\$6.13	\$6.46	\$6.81							
NorthWestern Corporation	NWE	\$3.39	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.08	\$5.34	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33							
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.84	\$3.00	\$3.16	\$3.34	\$3.52	\$3.71	\$3.91	\$4.12							
Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.58	\$3.80	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95							
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.17	\$4.40	\$4.64	\$4.89	\$5.16	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74	\$7.11	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25							
PNM Resources, Inc.	PNM	\$1.45	\$1.57	\$1.69	\$1.81	\$1.95	\$2.10	\$2.25	\$2.41	\$2.58	\$2.75	\$2.91	\$3.08	\$3.25	\$3.43	\$3.61	\$3.81	\$4.01							
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.24	\$3.43	\$3.63	\$3.83	\$4.05	\$4.26	\$4.50	\$4.74	\$5.00	\$5.27							
Southern Company	SO	\$2.83	\$2.96	\$3.09	\$3.23	\$3.37	\$3.53	\$3.69	\$3.86	\$4.04	\$4.24	\$4.46	\$4.70	\$4.95	\$5.22	\$5.50	\$5.80	\$6.12							
WEC Energy Group, Inc.	WEC	\$2.96	\$3.14	\$3.33	\$3.53	\$3.74	\$3.96	\$4.20	\$4.45	\$4.71	\$5.00	\$5.25	\$5.54	\$5.84	\$6.16	\$6.50	\$6.85	\$7.22							
Xcel Energy Inc.	XEL	\$2.91	\$2.35	\$2.49	\$2.64	\$2.81	\$2.98	\$3.16	\$3.35	\$3.55	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.46							

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$151.98
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$85.64
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$122.00
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$144.83
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$120.68
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$58.49
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$97.35
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$164.12
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$223.80
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$111.28
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$129.31
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$72.19
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$183.18
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$114.33
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$65.65
Other Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$91.47
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$6.07	\$169.71
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$82.78
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$91.24
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$91.10
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$132.18
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$95.85

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$157.25
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$88.38
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$126.83
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$151.40
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$125.42
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$60.44
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$101.21
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$169.48
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$231.84
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$114.87
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$134.24
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$76.66
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.75	\$2.38	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$188.58
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$119.13
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$68.35
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$94.72
Pinnacle West Capital Corporation	PNM	(\$80.50)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$175.77
PNM Resources, Inc.	PNM	(\$80.09)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$85.41
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$94.69
Southern Company	SO	(\$45.61)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$95.11
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$136.91
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$99.43

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

Inputs	Stock			EPS Growth Rate Estimates				Long-Term	Payoff Ratio				Iterative Solution	Terminal	Terminal				
	Ticker	Price	Zacks	Value		Sustainable	High		Growth	2018	2021	2028				Proof	IRR	P/E Ratio	PEG Ratio
				First Call	Line														
Company	ALE	\$74.60	6.60%	6.00%	4.50%	4.87%	6.60%	5.43%	66.00%	64.00%	65.57%	(\$0.00)	8.95%	19.61	3.61				
ALLETE, Inc.	LNT	\$41.66	5.30%	5.45%	6.50%	4.44%	6.50%	5.43%	64.00%	64.00%	65.57%	\$0.00	8.71%	21.04	3.88				
Alliant Energy Corporation	AEE	\$58.45	6.90%	6.37%	7.50%	4.73%	7.50%	5.43%	61.00%	60.00%	65.57%	\$0.00	9.47%	17.09	3.15				
Ameren Corporation	AEP	\$71.18	5.40%	5.63%	4.50%	5.37%	5.63%	5.43%	66.00%	63.00%	65.57%	(\$0.00)	10.07%	14.90	2.75				
American Electric Power Company, Inc.	BKH	\$60.62	4.60%	4.07%	7.50%	5.22%	7.50%	5.43%	52.00%	54.00%	65.57%	\$0.00	9.18%	18.43	3.40				
Black Hills Corporation	CNP	\$28.43	5.90%	8.49%	NA	5.65%	8.49%	5.43%	71.00%	64.00%	65.57%	(\$0.00)	8.82%	20.36	3.75				
CenterPoint Energy, Inc.	CMS	\$46.48	6.30%	7.04%	8.50%	7.13%	8.50%	5.43%	61.00%	61.00%	65.57%	(\$0.00)	9.47%	17.08	3.15				
CMS Energy Corporation	ED	\$82.04	4.00%	3.11%	3.00%	2.82%	4.00%	5.43%	67.00%	67.00%	65.57%	(\$0.00)	8.77%	20.70	3.81				
Consolidated Edison, Inc.	DTE	\$107.87	6.00%	5.58%	6.50%	6.31%	6.50%	5.43%	62.00%	61.00%	65.57%	\$0.00	9.11%	18.75	3.46				
DTE Energy Company	EE	\$54.13	5.10%	5.20%	5.00%	4.08%	5.20%	5.43%	52.00%	59.00%	65.57%	\$0.00	8.69%	21.21	3.91				
El Paso Electric Company	ES	\$61.36	5.80%	5.65%	6.50%	4.12%	6.50%	5.43%	61.00%	58.00%	65.57%	\$0.00	9.37%	17.54	3.23				
Eversource Energy	HE	\$34.56	6.70%	8.50%	1.50%	3.47%	8.50%	5.43%	69.00%	71.00%	65.57%	\$0.00	11.94%	10.61	1.96				
Hawaiian Electric Industries, Inc.	IDACORP, Inc.	\$88.70	4.10%	3.10%	3.50%	3.56%	4.10%	5.43%	57.00%	60.00%	65.57%	(\$0.00)	8.46%	22.75	4.19				
NorthWestern Corporation	NWE	\$57.20	2.40%	3.12%	4.50%	3.76%	4.50%	5.43%	63.00%	62.00%	65.57%	(\$0.00)	9.66%	16.33	3.01				
OGE Energy Corp.	OGE	\$34.04	6.00%	5.80%	2.50%	2.89%	6.00%	5.43%	68.00%	74.00%	65.57%	(\$0.00)	9.51%	16.93	3.12				
Otter Tail Corporation	OTTR	\$43.36	NA	9.00%	7.00%	7.88%	9.00%	5.43%	72.00%	63.00%	65.57%	\$0.00	9.12%	18.73	3.45				
Pinnacle West Capital Corporation	PNW	\$84.48	3.00%	3.63%	5.50%	4.03%	5.50%	5.43%	64.00%	62.00%	65.57%	(\$0.00)	9.02%	19.25	3.55				
PNM Resources, Inc.	PNM	\$40.17	5.40%	7.50%	6.00%	3.54%	7.50%	5.43%	57.00%	55.00%	65.57%	(\$0.00)	8.61%	21.73	4.00				
Portland General Electric Company	POR	\$44.58	2.90%	3.50%	6.00%	4.24%	6.00%	5.43%	59.00%	56.00%	65.57%	(\$0.00)	9.21%	18.27	3.37				
Southern Company	SO	\$47.85	4.50%	2.70%	4.00%	4.02%	4.50%	5.43%	78.00%	72.00%	65.57%	(\$0.00)	9.84%	15.67	2.89				
WEC Energy Group, Inc.	WEC	\$64.49	4.20%	4.34%	6.00%	4.23%	6.00%	5.43%	67.00%	66.00%	65.57%	\$0.00	9.13%	18.68	3.44				
Xcel Energy Inc.	XEL	\$47.40	5.80%	6.15%	4.50%	3.90%	6.15%	5.43%	63.00%	67.00%	65.57%	\$0.00	9.22%	18.23	3.36				
											MEAN	9.29%							
											MAX	11.94%							
											MIN	8.46%							
Projected Annual Earnings per Share	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]		
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
ALLETE, Inc.	ALE	\$3.14	\$3.35	\$3.57	\$3.80	\$4.05	\$4.32	\$4.61	\$4.90	\$5.21	\$5.52	\$5.84	\$6.17	\$6.50	\$6.86	\$7.23	\$7.62	\$8.04	
Alliant Energy Corporation	LNT	\$1.65	\$1.76	\$1.87	\$1.99	\$2.12	\$2.26	\$2.41	\$2.56	\$2.72	\$2.88	\$3.05	\$3.22	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19	
Ameren Corporation	AEE	\$2.68	\$2.88	\$3.10	\$3.33	\$3.58	\$3.85	\$4.14	\$4.43	\$4.73	\$5.04	\$5.35	\$5.66	\$5.96	\$6.29	\$6.63	\$6.99	\$7.37	
American Electric Power Company, Inc.	AEP	\$4.23	\$4.47	\$4.72	\$4.99	\$5.27	\$5.56	\$5.88	\$6.20	\$6.55	\$6.91	\$7.29	\$7.69	\$8.11	\$8.55	\$9.01	\$9.50	\$10.02	
Black Hills Corporation	BKH	\$2.63	\$2.83	\$3.04	\$3.27	\$3.51	\$3.78	\$4.06	\$4.35	\$4.65	\$4.95	\$5.25	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23	
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.08	\$1.18	\$1.28	\$1.39	\$1.50	\$1.63	\$1.76	\$1.89	\$2.02	\$2.15	\$2.28	\$2.41	\$2.54	\$2.67	\$2.82	\$2.97	
CMS Energy Corporation	CMS	\$1.98	\$2.15	\$2.33	\$2.53	\$2.74	\$2.98	\$3.23	\$3.49	\$3.75	\$4.01	\$4.27	\$4.52	\$4.77	\$5.03	\$5.30	\$5.59	\$5.89	
Consolidated Edison, Inc.	ED	\$3.94	\$4.10	\$4.26	\$4.43	\$4.61	\$4.79	\$4.99	\$5.20	\$5.43	\$5.69	\$5.97	\$6.28	\$6.62	\$6.98	\$7.35	\$7.75	\$8.17	
DTE Energy Company	DTE	\$4.83	\$5.14	\$5.48	\$5.83	\$6.21	\$6.62	\$7.05	\$7.49	\$7.95	\$8.43	\$8.92	\$9.41	\$9.93	\$10.46	\$11.03	\$11.63	\$12.26	
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$4.66	\$4.92	\$5.18	\$5.47	
Eversource Energy	ES	\$2.96	\$3.15	\$3.36	\$3.58	\$3.81	\$4.06	\$4.32	\$4.59	\$4.87	\$5.16	\$5.46	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.51	
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.48	\$2.70	\$2.92	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.51	\$5.81	\$6.13	\$6.46	\$6.81	
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.01	\$6.33	\$6.67	\$7.03	\$7.41	\$7.82	\$8.24	
NorthWestern Corporation	NWE	\$3.99	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.08	\$5.34	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33	
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.84	\$3.00	\$3.16	\$3.34	\$3.52	\$3.71	\$3.91	\$4.12	
Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.58	\$3.80	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95	
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.17	\$4.40	\$4.64	\$4.89	\$5.16	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74	\$7.11	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25	
PNM Resources, Inc.	PNM	\$1.46	\$1.57	\$1.69	\$1.81	\$1.95	\$2.10	\$2.25	\$2.41	\$2.58	\$2.75	\$2.91	\$3.08	\$3.25	\$3.43	\$3.61	\$3.81	\$4.01	
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.24	\$3.43	\$3.63	\$3.83	\$4.05	\$4.26	\$4.50	\$4.74	\$5.00	\$5.27	
Southern Company	SO	\$2.63	\$2.96	\$3.09	\$3.23	\$3.37	\$3.53	\$3.69	\$3.86	\$4.04	\$4.24	\$4.46	\$4.70	\$4.95	\$5.22	\$5.50	\$5.80	\$6.12	
WEC Energy Group, Inc.	WEC	\$2.96	\$3.14	\$3.33	\$3.53	\$3.74	\$3.96	\$4.20	\$4.45	\$4.71	\$4.97	\$5.25	\$5.54	\$5.84	\$6.16	\$6.50	\$6.85	\$7.22	
Xcel Energy Inc.	XEL	\$2.21	\$2.35	\$2.49	\$2.64	\$2.81	\$2.98	\$3.16	\$3.35	\$3.55	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.46	

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EES	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
OTTR	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$157.56
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$88.12
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$125.92
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$149.23
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$133.26
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$60.51
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$100.58
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$169.18
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$229.92
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$115.93
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$131.83
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$72.29
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$187.52
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$119.64
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$69.79
OTTR	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$92.72
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$6.07	\$178.15
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$87.21
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$96.24
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$95.83
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$134.90
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$99.43

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$162.83
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$90.86
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$130.75
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$155.79
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$138.00
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$62.46
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$104.45
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$174.54
DTE Energy Company	DTE	(\$107.86)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$237.96
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$119.51
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$136.76
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$76.76
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.75	\$2.38	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$192.93
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$124.44
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$72.49
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$95.96
Pinnacle West Capital Corporation	PNM	(\$64.48)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$184.22
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$89.84
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$99.69
Southern Company	SO	(\$47.85)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$99.84
WEC Energy Group, Inc.	WEC	(\$64.48)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$139.64
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$103.01

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 23.91
30 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	EPS Growth Rate Estimates				Long-Term				Payout Ratio				Iterative Solution				[12]	[13]
	Stock			[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]							
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2018	2021	2028	Proof	IRR	PIE Ratio	PEG Ratio							
ALLETE, Inc.	ALE	\$70.43	6.60%	6.00%	4.50%	5.70%	5.43%	66.00%	64.00%	65.57%	(9.00)	10.07%	23.91	4.41							
Alliant Energy Corporation	LNT	\$39.93	5.30%	5.45%	6.50%	5.75%	5.43%	64.00%	64.00%	65.57%	(9.00)	9.37%	23.91	4.41							
Ameren Corporation	AEE	\$55.35	6.90%	6.37%	7.50%	6.92%	5.43%	61.00%	60.00%	65.57%	(9.00)	11.60%	23.91	4.41							
American Electric Power Company, Inc.	AEP	\$67.20	5.40%	5.63%	4.50%	5.18%	5.43%	66.00%	63.00%	65.57%	(9.00)	13.08%	23.91	4.41							
Black Hills Corporation	BKH	\$53.02	4.60%	4.07%	7.50%	5.39%	5.43%	52.00%	54.00%	65.57%	(9.00)	10.55%	23.91	4.41							
CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA	7.20%	5.43%	71.00%	64.00%	65.57%	(9.00)	9.41%	23.91	4.41							
CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.50%	7.28%	5.43%	61.00%	61.00%	65.57%	(9.00)	11.16%	23.91	4.41							
Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%	3.37%	5.43%	67.00%	67.00%	65.57%	(9.00)	9.83%	23.91	4.41							
DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.50%	6.03%	5.43%	62.00%	61.00%	65.57%	(9.00)	10.74%	23.91	4.41							
El Paso Electric Company	EE	\$49.44	5.10%	5.20%	5.00%	5.10%	5.43%	52.00%	59.00%	65.57%	(9.00)	10.20%	23.91	4.41							
Eversource Energy	ES	\$58.10	5.80%	5.65%	6.50%	5.98%	5.43%	61.00%	58.00%	65.57%	(9.00)	11.39%	23.91	4.41							
Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%	5.57%	5.43%	69.00%	71.00%	65.57%	(9.00)	14.35%	23.91	4.41							
IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%	3.57%	5.43%	57.00%	60.00%	65.57%	(9.00)	8.78%	23.91	4.41							
NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	2.50%	3.34%	5.43%	63.00%	62.00%	65.57%	(9.00)	11.94%	23.91	4.41							
OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%	4.77%	5.43%	68.00%	74.00%	65.57%	(9.00)	11.32%	23.91	4.41							
Otter Tail Corporation	OTTR	\$42.67	NA	9.00%	7.00%	8.00%	5.43%	72.00%	63.00%	65.57%	(9.00)	10.06%	23.91	4.41							
Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.50%	4.04%	5.43%	64.00%	62.00%	65.57%	(9.00)	10.05%	23.91	4.41							
PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%	5.73%	5.43%	57.00%	56.00%	65.57%	(9.00)	8.75%	23.91	4.41							
Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%	4.13%	5.43%	59.00%	55.00%	65.57%	(9.00)	10.58%	23.91	4.41							
Southern Company	SO	\$44.14	4.50%	2.70%	4.00%	3.73%	5.43%	78.00%	72.00%	65.57%	(9.00)	12.56%	23.91	4.41							
WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%	4.85%	5.43%	67.00%	66.00%	65.57%	(9.00)	10.23%	23.91	4.41							
Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%	5.48%	5.43%	63.00%	67.00%	65.57%	(9.00)	11.03%	23.91	4.41							
MEAN															10.78%						
MAX															14.35%						
MIN															8.75%						
Projected Annual Earnings per Share															[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
ALLETE, Inc.	ALE	\$3.14	\$3.32	\$3.51	\$3.71	\$3.92	\$4.14	\$4.38	\$4.63	\$4.89	\$5.16	\$5.44	\$5.74	\$6.05	\$6.38	\$6.73	\$7.09	\$7.48			
Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.85	\$1.95	\$2.06	\$2.18	\$2.31	\$2.44	\$2.58	\$2.72	\$2.87	\$3.03	\$3.19	\$3.37	\$3.55	\$3.74	\$3.94			
Ameren Corporation	AEE	\$2.68	\$2.87	\$3.06	\$3.28	\$3.50	\$3.75	\$4.00	\$4.27	\$4.55	\$4.83	\$5.11	\$5.40	\$5.70	\$6.01	\$6.33	\$6.68	\$7.04			
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.92	\$5.18	\$5.44	\$5.73	\$6.02	\$6.34	\$6.68	\$7.03	\$7.41	\$7.82	\$8.24	\$8.69	\$9.16	\$9.66			
Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$3.42	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$4.69	\$4.94	\$5.21	\$5.50	\$5.79	\$6.11			
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.07	\$1.15	\$1.23	\$1.32	\$1.42	\$1.52	\$1.62	\$1.73	\$1.84	\$1.95	\$2.06	\$2.17	\$2.29	\$2.41	\$2.55	\$2.68			
CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.02	\$3.23	\$3.44	\$3.66	\$3.88	\$4.11	\$4.33	\$4.56	\$4.81	\$5.07	\$5.35			
Consolidated Edison, Inc.	ED	\$3.94	\$4.07	\$4.21	\$4.35	\$4.50	\$4.65	\$4.81	\$4.99	\$5.19	\$5.42	\$5.67	\$5.96	\$6.28	\$6.63	\$6.98	\$7.36	\$7.76			
DTE Energy Company	DTE	\$4.83	\$5.12	\$5.43	\$5.76	\$6.10	\$6.47	\$6.86	\$7.27	\$7.69	\$8.13	\$8.59	\$9.06	\$9.56	\$10.08	\$10.62	\$11.20	\$11.81			
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.64	\$2.77	\$2.92	\$3.06	\$3.22	\$3.39	\$3.56	\$3.75	\$3.95	\$4.16	\$4.39	\$4.63	\$4.88	\$5.14	\$5.42			
Eversource Energy	ES	\$2.96	\$3.14	\$3.32	\$3.52	\$3.73	\$3.96	\$4.19	\$4.44	\$4.70	\$4.97	\$5.25	\$5.54	\$5.84	\$6.15	\$6.49	\$6.84	\$7.21			
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$3.00	\$3.17	\$3.35	\$3.53	\$3.72	\$3.93	\$4.14	\$4.37	\$4.60	\$4.85	\$5.12	\$5.39			
IDACORP, Inc.	IDA	\$3.94	\$4.08	\$4.23	\$4.38	\$4.53	\$4.69	\$4.86	\$5.05	\$5.26	\$5.50	\$5.76	\$6.06	\$6.39	\$6.73	\$7.10	\$7.48	\$7.89			
NorthWestern Corporation	NWE	\$3.39	\$3.50	\$3.62	\$3.74	\$3.87	\$4.00	\$4.13	\$4.28	\$4.45	\$4.65	\$4.87	\$5.12	\$5.39	\$5.69	\$6.00	\$6.32	\$6.66			
OGE Energy Corp.	OGE	\$1.69	\$1.77	\$1.85	\$1.94	\$2.04	\$2.13	\$2.23	\$2.34	\$2.46	\$2.59	\$2.72	\$2.87	\$3.02	\$3.18	\$3.36	\$3.54	\$3.73			
Otter Tail Corporation	OTTR	\$1.60	\$1.73	\$1.87	\$2.02	\$2.18	\$2.35	\$2.54	\$2.73	\$2.93	\$3.12	\$3.32	\$3.51	\$3.70	\$3.91	\$4.12	\$4.34	\$4.58			
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.11	\$4.28	\$4.45	\$4.63	\$4.82	\$5.01	\$5.22	\$5.46	\$5.72	\$6.00	\$6.31	\$6.66	\$7.02	\$7.40	\$7.80	\$8.22			
PNM Resources, Inc.	PNM	\$1.46	\$1.54	\$1.63	\$1.73	\$1.82	\$1.93	\$2.04	\$2.16	\$2.28	\$2.40	\$2.54	\$2.68	\$2.82	\$2.97	\$3.14	\$3.31	\$3.49			
Portland General Electric Company	POR	\$2.16	\$2.25	\$2.34	\$2.44	\$2.54	\$2.64	\$2.75	\$2.87	\$3.01	\$3.15	\$3.31	\$3.48	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53			
Southern Company	SO	\$2.83	\$2.94	\$3.05	\$3.16	\$3.28	\$3.40	\$3.53	\$3.67	\$3.83	\$4.00	\$4.20	\$4.41	\$4.65	\$4.90	\$5.17	\$5.45	\$5.74			
WEC Energy Group, Inc.	WEC	\$2.96	\$3.10	\$3.25	\$3.41	\$3.58	\$3.75	\$3.93	\$4.13	\$4.33	\$4.56	\$4.80	\$5.05	\$5.33	\$5.61	\$5.92	\$6.24	\$6.58			
Xcel Energy Inc.	XEL	\$2.21	\$2.33	\$2.46	\$2.59	\$2.74	\$2.89	\$3.04	\$3.21	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19	\$4.41	\$4.65	\$4.90	\$5.17			

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.33%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	68.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	47.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.42	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$4.90	\$178.79
Alliant Energy Corporation	LNT	\$1.18	\$1.25	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$2.59	\$94.33
Ameren Corporation	AEE	\$3.09	\$3.20	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$6.33	\$168.29
American Electric Power Company, Inc.	AEP	\$1.52	\$1.62	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$4.00	\$230.90
Black Hills Corporation	BKH	\$0.82	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$1.76	\$146.06
CenterPoint Energy, Inc.	CNP	\$1.39	\$1.49	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$3.51	\$64.17
CMS Energy Corporation	CMS	\$2.82	\$2.92	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$5.09	\$127.91
Consolidated Edison, Inc.	ED	\$1.37	\$1.51	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$3.56	\$185.65
El Paso Electric Company	EE	\$2.03	\$2.11	\$2.20	\$2.30	\$2.48	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$4.73	\$129.66
Eversource Energy	ES	\$1.76	\$1.88	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$3.54	\$172.42
Hawaiian Electric Industries, Inc.	HE	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$129.00
IDACORP, Inc.	IDA	\$2.28	\$2.34	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$4.37	\$188.67
NorthWestern Corporation	NWE	\$1.26	\$1.36	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$2.45	\$159.35
OGE Energy Corp.	OGE	\$1.34	\$1.39	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$109.43
Other Tail Corporation	OTTR	\$2.74	\$2.82	\$2.90	\$2.99	\$3.17	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$5.39	\$196.67
Pinnacle West Capital Corporation	PNW	\$0.93	\$0.98	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$2.29	\$83.35
PNM Resources, Inc.	PNM	\$1.38	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$2.97	\$108.34
Portland General Electric Company	POR	\$2.38	\$2.40	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.21	\$3.39	\$3.57	\$3.77	\$137.38
Southern Company	SO	\$2.18	\$2.27	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$4.31	\$157.32
WEC Energy Group, Inc.	WEC	\$1.55	\$1.67	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$123.66
Xcel Energy Inc.	XEL																

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Company	Ticket	Initial																
		Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.66	\$2.38	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$183.69
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.85	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$96.91
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.34	\$1.93	\$2.11	\$2.25	\$2.43	\$2.63	\$2.84	\$3.05	\$3.27	\$3.50	\$3.74	\$3.94	\$4.15	\$4.38	\$172.91
American Electric Power Company, Inc.	AEP	(\$87.20)	\$0.00	\$2.22	\$3.17	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$237.23
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$150.06
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.59	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$65.93
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$131.42
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.02	\$2.87	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$190.74
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.42	\$3.47	\$3.74	\$3.95	\$4.23	\$4.53	\$4.84	\$5.17	\$5.52	\$5.88	\$6.27	\$6.61	\$6.96	\$7.34	\$290.07
El Paso Electric Company	EE	(\$49.44)	\$0.00	\$0.99	\$1.41	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$133.21
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.46	\$2.09	\$2.20	\$2.30	\$2.48	\$2.67	\$2.86	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$177.15
Hawaiian Electric Industries, Inc.	HE	(\$33.92)	\$0.00	\$1.26	\$1.81	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$132.54
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$193.84
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.64	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$163.71
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.91	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$91.69
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.96	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$112.43
Pinnacle West Capital Corporation	PNW	(\$78.03)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$202.06
PNM Resources, Inc.	PNM	(\$37.00)	\$0.00	\$0.67	\$0.96	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$85.64
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$111.31
Southern Company	SO	(\$44.14)	\$0.00	\$1.71	\$2.42	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.21	\$3.39	\$3.57	\$141.15
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.56	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$161.63
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.11	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$127.05

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 23.91
90 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	EPS Growth Rate Estimates					Long-Term					Payout Ratio					Iterative Solution					[12]	[13]			
		Stock	Zacks	First Call	Value	Average	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio						Terminal	Terminal							
Company	Ticker	Price		Line	Line	Line	Line																					
ALLETE, Inc.	ALE	\$71.97	6.60%	6.00%	4.50%	5.70%	5.43%	66.00%	64.00%	65.57%	(9.00)	9.86%	23.91	4.41						23.91	4.41							
Alliant Energy Corporation	LNT	\$40.49	5.30%	5.45%	7.50%	5.75%	5.43%	64.00%	60.00%	65.57%	(9.00)	9.24%	23.91	4.41						23.91	4.41							
Ameren Corporation	AEE	\$56.61	6.90%	6.37%	7.50%	6.92%	5.43%	61.00%	60.00%	65.57%	(9.00)	11.38%	23.91	4.41						23.91	4.41							
American Electric Power Company, Inc.	AEP	\$69.11	5.40%	5.63%	4.05%	5.18%	5.43%	66.00%	63.00%	65.57%	(9.00)	12.79%	23.91	4.41						23.91	4.41							
Black Hills Corporation	BKH	\$54.72	4.60%	4.07%	7.50%	5.39%	5.43%	52.00%	54.00%	65.57%	(9.00)	10.25%	23.91	4.41						23.91	4.41							
CenterPoint Energy, Inc.	CNP	\$27.48	5.90%	8.49%	NA	7.20%	5.43%	71.00%	64.00%	65.57%	(9.00)	9.24%	23.91	4.41						23.91	4.41							
CMS Energy Corporation	CMS	\$44.96	6.30%	7.04%	8.00%	7.28%	5.43%	61.00%	61.00%	65.57%	(9.00)	10.96%	23.91	4.41						23.91	4.41							
Consolidated Edison, Inc.	ED	\$79.65	4.00%	3.11%	3.00%	3.37%	5.43%	67.00%	67.00%	65.57%	(9.00)	9.47%	23.91	4.41						23.91	4.41							
DTE Energy Company	DTE	\$104.99	6.00%	5.58%	6.50%	6.03%	5.43%	62.00%	61.00%	65.57%	(9.00)	10.51%	23.91	4.41						23.91	4.41							
El Paso Electric Company	EE	\$51.94	5.10%	5.20%	5.00%	5.10%	5.43%	52.00%	59.00%	65.57%	(9.00)	9.73%	23.91	4.41						23.91	4.41							
Eversource Energy	ES	\$60.18	5.80%	5.65%	6.50%	5.98%	5.43%	61.00%	58.00%	65.57%	(9.00)	11.05%	23.91	4.41						23.91	4.41							
Hawaiian Electric Industries, Inc.	HE	\$34.52	6.70%	8.50%	1.50%	5.87%	5.43%	69.00%	71.00%	65.57%	(9.00)	14.16%	23.91	4.41						23.91	4.41							
IDACORP, Inc.	IDA	\$86.65	4.10%	3.10%	3.50%	3.57%	5.43%	57.00%	60.00%	65.57%	(9.00)	8.61%	23.91	4.41						23.91	4.41							
NorthWestern Corporation	NWE	\$54.69	2.40%	3.12%	2.50%	3.34%	5.43%	63.00%	62.00%	65.57%	(9.00)	11.51%	23.91	4.41						23.91	4.41							
OGE Energy Corp.	OGE	\$32.08	6.00%	5.80%	2.50%	4.77%	5.43%	68.00%	74.00%	65.57%	(9.00)	11.24%	23.91	4.41						23.91	4.41							
Other Tail Corporation	OTTR	\$47.77	NA	9.00%	7.00%	8.00%	5.43%	72.00%	63.00%	65.57%	(9.00)	10.04%	23.91	4.41						23.91	4.41							
Pinnacle West Capital Corporation	PNW	\$80.50	3.00%	3.63%	5.00%	4.04%	5.43%	64.00%	62.00%	65.57%	(9.00)	9.76%	23.91	4.41						23.91	4.41							
PNM Resources, Inc.	PNM	\$38.09	5.40%	4.30%	7.50%	5.73%	5.43%	57.00%	56.00%	65.57%	(9.00)	8.48%	23.91	4.41						23.91	4.41							
Portland General Electric Company	POR	\$42.23	2.90%	3.50%	6.00%	4.13%	5.43%	59.00%	55.00%	65.57%	(9.00)	10.04%	23.91	4.41						23.91	4.41							
Southern Company	SO	\$45.61	4.50%	2.70%	4.00%	3.73%	5.43%	78.00%	72.00%	65.57%	(9.00)	12.22%	23.91	4.41						23.91	4.41							
WEC Energy Group, Inc.	WEC	\$63.20	4.20%	4.34%	6.00%	4.85%	5.43%	67.00%	66.00%	65.57%	(9.00)	9.98%	23.91	4.41						23.91	4.41							
Xcel Energy Inc.	XEL	\$45.71	5.80%	6.15%	4.50%	5.48%	5.43%	63.00%	67.00%	65.57%	(9.00)	10.72%	23.91	4.41						23.91	4.41							
MEAN														10.51%														
MAX														14.16%														
MIN														8.48%														
Projected Annual Earnings per Share																					[24]	[25]	[26]	[27]	[28]	[29]	[30]	
Company		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032										
ALLETE, Inc.	ALE	\$3.14	\$3.32	\$3.51	\$3.71	\$3.92	\$4.14	\$4.38	\$4.63	\$4.89	\$5.16	\$5.44	\$5.74	\$6.05	\$6.38	\$6.73	\$7.09	\$7.48										
Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.85	\$1.95	\$2.06	\$2.18	\$2.31	\$2.44	\$2.58	\$2.72	\$2.87	\$3.03	\$3.19	\$3.37	\$3.55	\$3.74	\$3.94										
Ameren Corporation	AEE	\$2.68	\$2.87	\$3.06	\$3.28	\$3.50	\$3.75	\$4.00	\$4.27	\$4.55	\$4.83	\$5.11	\$5.40	\$5.70	\$6.01	\$6.33	\$6.68	\$7.04										
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.92	\$5.18	\$5.44	\$5.73	\$6.02	\$6.34	\$6.68	\$7.03	\$7.41	\$7.82	\$8.24	\$8.69	\$9.16	\$9.66										
Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$3.42	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$4.69	\$4.94	\$5.21	\$5.50	\$5.79	\$6.11										
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.07	\$1.15	\$1.23	\$1.32	\$1.42	\$1.52	\$1.62	\$1.73	\$1.84	\$1.95	\$2.06	\$2.17	\$2.29	\$2.41	\$2.55	\$2.68										
CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.02	\$3.23	\$3.44	\$3.66	\$3.88	\$4.11	\$4.33	\$4.56	\$4.81	\$5.07	\$5.35										
Consolidated Edison, Inc.	ED	\$3.94	\$4.07	\$4.21	\$4.35	\$4.50	\$4.65	\$4.81	\$4.99	\$5.19	\$5.42	\$5.67	\$5.96	\$6.28	\$6.63	\$6.98	\$7.36	\$7.76										
DTE Energy Company	DTE	\$4.83	\$5.12	\$5.43	\$5.76	\$6.10	\$6.47	\$6.86	\$7.27	\$7.69	\$8.13	\$8.59	\$9.06	\$9.56	\$10.08	\$10.62	\$11.20	\$11.81										
El Paso Electric Company	EE	\$2.96	\$3.14	\$3.32	\$3.52	\$3.73	\$3.96	\$4.19	\$4.44	\$4.70	\$4.97	\$5.25	\$5.54	\$5.84	\$6.15	\$6.49	\$6.84	\$7.21										
Eversource Energy	ES	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$3.00	\$3.17	\$3.35	\$3.53	\$3.72	\$3.93	\$4.14	\$4.37	\$4.60	\$4.85	\$5.12	\$5.39										
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.42	\$2.55	\$2.69	\$2.84	\$3.00	\$3.17	\$3.35	\$3.53	\$3.72	\$3.93	\$4.14	\$4.37	\$4.60	\$4.85	\$5.12	\$5.39										
IDACORP, Inc.	IDA	\$3.94	\$4.08	\$4.23	\$4.38	\$4.53	\$4.69	\$4.86	\$5.05	\$5.26	\$5.50	\$5.76	\$6.06	\$6.39	\$6.73	\$7.10	\$7.48	\$7.89										
NorthWestern Corporation	NWE	\$3.99	\$3.50	\$3.62	\$3.74	\$3.87	\$4.00	\$4.13	\$4.28	\$4.45	\$4.65	\$4.87	\$5.12	\$5.39	\$5.69	\$6.00	\$6.32	\$6.66										
OGE Energy Corp.	OGE	\$1.69	\$1.77	\$1.85	\$1.94	\$2.04	\$2.13	\$2.23	\$2.34	\$2.45	\$2.59	\$2.72	\$2.87	\$3.02	\$3.18	\$3.36	\$3.54	\$3.73										
Other Tail Corporation	OTTR	\$1.60	\$1.73	\$1.87	\$2.02	\$2.18	\$2.35	\$2.54	\$2.73	\$2.93	\$3.12	\$3.32	\$3.51	\$3.70	\$3.91	\$4.12	\$4.34	\$4.58										
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.11	\$4.28	\$4.45	\$4.63	\$4.82	\$5.01	\$5.22	\$5.46	\$5.72	\$6.00	\$6.31	\$6.66	\$7.02	\$7.40	\$7.80	\$8.22										
PNM Resources, Inc.	PNM	\$1.46	\$1.54	\$1.63	\$1.73	\$1.82	\$1.93	\$2.04	\$2.16	\$2.28	\$2.40	\$2.54	\$2.68	\$2.82	\$2.97	\$3.14	\$3.31	\$3.49										
Portland General Electric Company	POR	\$2.16	\$2.25	\$2.34	\$2.44	\$2.54	\$2.64	\$2.75	\$2.87	\$3.01	\$3.15	\$3.31	\$3.48	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53										
Southern Company	SO	\$2.83	\$2.94	\$3.05	\$3.16	\$3.28	\$3.40	\$3.53	\$3.67	\$3.83	\$4.00	\$4.20	\$4.41	\$4.65	\$4.90	\$5.17	\$5.45	\$5.74										
WEC Energy Group, Inc.	WEC	\$2.96	\$3.10	\$3.25	\$3.41	\$3.58	\$3.75	\$3.93	\$4.13	\$4.33	\$4.56	\$4.80	\$5.05	\$5.33	\$5.61	\$5.92	\$6.24	\$6.58										
Xcel Energy Inc.	XEL	\$2.21	\$2.33	\$2.46	\$2.59	\$2.74	\$2.89	\$3.04	\$3.21	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19	\$4.41	\$4.65	\$4.90	\$5.17										

Projected Annual
Earnings per Share

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	61.12%	61.35%	61.57%	61.57%	61.57%	61.57%	61.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.33%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	68.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	47.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.42	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$4.90	\$178.79
Alliant Energy Corporation	LNT	\$1.18	\$1.25	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$2.59	\$94.33
Ameren Corporation	AEE	\$3.09	\$3.20	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$6.33	\$168.29
American Electric Power Company, Inc.	AEP	\$1.52	\$1.62	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$4.00	\$230.90
Black Hills Corporation	BKH	\$0.82	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$1.76	\$146.06
CenterPoint Energy, Inc.	CNP	\$1.39	\$1.49	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$3.51	\$64.17
CMS Energy Corporation	CMS	\$2.82	\$2.92	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$5.09	\$127.91
Consolidated Edison, Inc.	ED	\$1.37	\$1.51	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$3.56	\$185.65
DTE Energy Company	DTE	\$2.03	\$2.11	\$2.20	\$2.30	\$2.48	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$4.73	\$282.33
El Paso Electric Company	EE	\$1.76	\$1.88	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$3.54	\$129.66
Eversource Energy	ES	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$172.42
Hawaiian Electric Industries, Inc.	HE	\$2.28	\$2.34	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$4.37	\$129.00
IDACORP, Inc.	IDA	\$1.26	\$1.36	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$2.45	\$188.67
NorthWestern Corporation	NWE	\$1.34	\$1.39	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$159.35
Other Tail Corporation	OTTR	\$2.74	\$2.82	\$2.90	\$2.99	\$3.17	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$5.39	\$89.24
Pinnacle West Capital Corporation	PNW	\$0.93	\$0.98	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$2.29	\$109.43
PNM Resources, Inc.	PNM	\$1.38	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$2.97	\$196.67
Portland General Electric Company	POR	\$2.38	\$2.40	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.19	\$3.39	\$3.57	\$3.77	\$108.34
Southern Company	SO	\$2.18	\$2.27	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$4.31	\$137.38
WEC Energy Group, Inc.	WEC	\$1.55	\$1.67	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$157.32
Xcel Energy Inc.	XEL																\$123.66

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.66	\$2.38	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$183.69
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.85	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$96.91
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.34	\$1.93	\$2.11	\$2.25	\$2.43	\$2.63	\$2.84	\$3.05	\$3.27	\$3.50	\$3.74	\$3.94	\$4.15	\$4.38	\$172.91
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.22	\$3.17	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$237.23
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$150.06
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.59	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$65.93
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$131.42
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.02	\$2.87	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$190.74
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.42	\$3.47	\$3.74	\$3.95	\$4.23	\$4.53	\$4.84	\$5.17	\$5.52	\$5.88	\$6.27	\$6.61	\$6.96	\$7.34	\$290.07
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.99	\$1.41	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$133.21
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.46	\$2.09	\$2.20	\$2.30	\$2.48	\$2.67	\$2.86	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$177.15
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.26	\$1.81	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$132.54
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$193.84
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.64	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$163.71
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.91	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$91.69
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.96	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$112.43
Pinnacle West Capital Corporation	PNM	(\$80.50)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$202.06
PNM Resources, Inc.	PNM	(\$80.09)	\$0.00	\$0.67	\$0.96	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$85.64
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$111.31
Southern Company	SO	(\$45.61)	\$0.00	\$1.71	\$2.42	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.21	\$3.39	\$3.57	\$141.15
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.56	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$161.63
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.11	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$127.05

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Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.33%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.33%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	47.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.42	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$4.90	\$178.79
Alliant Energy Corporation	LNT	\$1.18	\$1.25	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$2.59	\$94.33
Ameren Corporation	AEE	\$3.09	\$3.20	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$6.33	\$168.29
American Electric Power Company, Inc.	AEP	\$1.52	\$1.62	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$4.00	\$230.90
Black Hills Corporation	BKH	\$0.82	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$1.76	\$146.06
CenterPoint Energy, Inc.	CNP	\$1.39	\$1.49	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$3.51	\$64.17
CMS Energy Corporation	CMS	\$2.82	\$2.92	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$5.09	\$127.91
Consolidated Edison, Inc.	ED	\$1.37	\$1.51	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$3.56	\$185.65
El Paso Electric Company	EE	\$2.03	\$2.11	\$2.20	\$2.30	\$2.48	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$4.73	\$292.33
Eversource Energy	ES	\$1.76	\$1.88	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$3.54	\$129.66
Hawaiian Electric Industries, Inc.	HE	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$172.42
IDACORP, Inc.	IDA	\$2.28	\$2.34	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$4.37	\$129.00
NorthWestern Corporation	NWE	\$1.26	\$1.36	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$2.45	\$188.67
OGE Energy Corp.	OGE	\$1.34	\$1.39	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$159.35
Other Tail Corporation	OTTR	\$2.74	\$2.82	\$2.90	\$2.99	\$3.17	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$5.39	\$89.24
Pinnacle West Capital Corporation	PNM	\$0.93	\$0.98	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$2.29	\$109.43
PNM Resources, Inc.	PNM	\$1.38	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$2.97	\$196.67
Portland General Electric Company	POR	\$2.38	\$2.40	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.18	\$3.30	\$3.43	\$3.57	\$108.34
Southern Company	SO	\$2.18	\$2.27	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$4.31	\$137.38
WEC Energy Group, Inc.	WEC	\$1.55	\$1.67	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$157.32
Xcel Energy Inc.	XEL																\$123.66

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Company	Ticket	Initial																
		Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.66	\$2.38	\$2.53	\$2.65	\$2.81	\$2.98	\$3.16	\$3.35	\$3.54	\$3.75	\$3.97	\$4.18	\$4.41	\$4.65	\$183.69
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.85	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.09	\$2.21	\$2.33	\$2.45	\$96.91
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.34	\$1.93	\$2.11	\$2.25	\$2.43	\$2.63	\$2.84	\$3.05	\$3.27	\$3.50	\$3.74	\$3.94	\$4.15	\$4.38	\$172.91
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.22	\$3.17	\$3.31	\$3.43	\$3.63	\$3.84	\$4.07	\$4.31	\$4.56	\$4.83	\$5.12	\$5.40	\$5.70	\$6.01	\$237.23
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.85	\$2.01	\$2.18	\$2.36	\$2.56	\$2.77	\$3.00	\$3.24	\$3.42	\$3.60	\$3.80	\$150.06
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.59	\$0.85	\$0.88	\$0.91	\$0.97	\$1.05	\$1.12	\$1.19	\$1.27	\$1.35	\$1.42	\$1.50	\$1.58	\$1.67	\$65.93
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.33	\$2.50	\$2.67	\$2.84	\$2.99	\$3.16	\$3.33	\$131.42
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.02	\$2.87	\$3.01	\$3.12	\$3.21	\$3.32	\$3.44	\$3.58	\$3.74	\$3.92	\$4.12	\$4.34	\$4.58	\$4.83	\$190.74
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.42	\$3.47	\$3.74	\$3.95	\$4.23	\$4.53	\$4.84	\$5.17	\$5.52	\$5.88	\$6.27	\$6.61	\$6.96	\$7.34	\$290.07
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.99	\$1.41	\$1.65	\$1.81	\$1.93	\$2.06	\$2.20	\$2.35	\$2.52	\$2.69	\$2.88	\$3.03	\$3.20	\$3.37	\$133.21
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.46	\$2.09	\$2.20	\$2.30	\$2.48	\$2.67	\$2.86	\$3.10	\$3.33	\$3.57	\$3.83	\$4.03	\$4.25	\$4.48	\$177.15
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.26	\$1.81	\$2.00	\$2.13	\$2.23	\$2.32	\$2.42	\$2.53	\$2.64	\$2.75	\$2.86	\$3.02	\$3.18	\$3.36	\$132.54
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$193.84
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.64	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.83	\$2.98	\$3.14	\$3.33	\$3.54	\$3.73	\$3.93	\$4.14	\$163.71
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.91	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.73	\$1.79	\$1.85	\$1.91	\$1.98	\$2.09	\$2.20	\$2.32	\$91.69
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.96	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.01	\$2.15	\$2.29	\$2.43	\$2.56	\$2.70	\$2.85	\$112.43
Pinnacle West Capital Corporation	PNM	(\$84.48)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.37	\$4.60	\$4.85	\$5.11	\$202.06
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.67	\$0.96	\$1.03	\$1.08	\$1.17	\$1.27	\$1.37	\$1.48	\$1.59	\$1.72	\$1.85	\$1.95	\$2.06	\$2.17	\$85.64
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.92	\$2.07	\$2.23	\$2.40	\$2.54	\$2.67	\$2.82	\$111.31
Southern Company	SO	(\$47.85)	\$0.00	\$1.71	\$2.42	\$2.42	\$2.45	\$2.51	\$2.57	\$2.65	\$2.73	\$2.83	\$2.93	\$3.05	\$3.21	\$3.39	\$3.57	\$141.15
WEC Energy Group, Inc.	WEC	(\$64.49)	\$0.00	\$1.56	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.85	\$3.00	\$3.15	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$161.63
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.11	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.36	\$2.48	\$2.61	\$2.74	\$2.89	\$3.05	\$3.22	\$127.05

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 23.91
30 Day Low Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	Long-Term			[7]	Payout Ratio			[8]	[9]	[10]	[11]	[12]	[13]		
		Stock	Zacks	First Call	Value Estimates			Low	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio	Terminal	Terminal	Terminal		
Company	Ticker	Price			Line																
ALLETE, Inc.	ALE	\$70.43	6.60%	6.00%	4.50%		4.50%	5.43%	66.00%	64.00%	65.57%	(9.00)	9.23%	23.91	4.41						
Alliant Energy Corporation	LNT	\$39.93	5.30%	5.45%	6.50%		5.30%	5.43%	64.00%	64.00%	65.57%	(9.00)	9.06%	23.91	4.41						
Ameren Corporation	AEE	\$55.35	6.90%	6.37%	7.50%		6.37%	5.43%	61.00%	60.00%	65.57%	(9.00)	11.21%	23.91	4.41						
American Electric Power Company, Inc.	AEP	\$67.20	5.40%	5.63%	4.50%		4.50%	5.43%	66.00%	63.00%	65.57%	(9.00)	12.58%	23.91	4.41						
Black Hills Corporation	BKH	\$53.02	4.60%	4.07%	7.50%		4.07%	5.43%	52.00%	54.00%	65.57%	(9.00)	9.62%	23.91	4.41						
CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA		5.90%	5.43%	71.00%	64.00%	65.57%	(9.00)	8.52%	23.91	4.41						
CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.50%		6.30%	5.43%	61.00%	67.00%	65.57%	(9.00)	10.47%	23.91	4.41						
Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%		3.00%	5.43%	67.00%	61.00%	65.57%	(9.00)	9.57%	23.91	4.41						
DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.50%		5.58%	5.43%	62.00%	61.00%	65.57%	(9.00)	10.42%	23.91	4.41						
El Paso Electric Company	EE	\$49.44	5.10%	5.20%	5.00%		5.00%	5.43%	52.00%	59.00%	65.57%	(9.00)	10.12%	23.91	4.41						
Eversource Energy	ES	\$58.10	5.80%	5.65%	6.50%		5.65%	5.43%	61.00%	58.00%	65.57%	(9.00)	11.15%	23.91	4.41						
Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%		1.50%	5.43%	69.00%	71.00%	65.57%	(9.00)	11.27%	23.91	4.41						
IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%		3.10%	5.43%	57.00%	60.00%	65.57%	(9.00)	8.45%	23.91	4.41						
NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	4.50%		2.40%	5.43%	63.00%	62.00%	65.57%	(9.00)	11.24%	23.91	4.41						
OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%		2.50%	5.43%	68.00%	74.00%	65.57%	(9.00)	9.66%	23.91	4.41						
Otter Tail Corporation	OTTR	\$42.67	NA	9.00%	7.00%		7.00%	5.43%	72.00%	63.00%	65.57%	(9.00)	9.37%	23.91	4.41						
Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.50%		3.00%	5.43%	64.00%	62.00%	65.57%	(9.00)	9.31%	23.91	4.41						
PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%		4.30%	5.43%	57.00%	56.00%	65.57%	(9.00)	7.77%	23.91	4.41						
Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%		2.90%	5.43%	59.00%	55.00%	65.57%	(9.00)	9.70%	23.91	4.41						
Southern Company	SO	\$44.14	4.50%	2.70%	4.00%		2.70%	5.43%	78.00%	72.00%	65.57%	(9.00)	11.78%	23.91	4.41						
WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%		4.20%	5.43%	67.00%	66.00%	65.57%	(9.00)	9.77%	23.91	4.41						
Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%		4.50%	5.43%	63.00%	67.00%	65.57%	(9.00)	10.32%	23.91	4.41						
MEAN													10.03%								
MAX													12.58%								
MIN													7.77%								
Projected Annual Earnings per Share																					
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
ALLETE, Inc.	ALE	\$3.14	\$3.28	\$3.43	\$3.58	\$3.74	\$3.91	\$4.09	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.49	\$5.79	\$6.10	\$6.44	\$6.79	\$7.14		
Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.83	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01		
Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.88	\$4.12	\$4.37	\$4.63	\$4.90	\$5.17	\$5.45	\$5.75	\$6.06	\$6.39	\$6.73	\$7.07		
American Electric Power Company, Inc.	AEP	\$4.23	\$4.42	\$4.62	\$4.83	\$5.04	\$5.27	\$5.51	\$5.76	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$7.80	\$8.22	\$8.67	\$9.14	\$9.61		
Black Hills Corporation	BKH	\$2.63	\$2.74	\$2.85	\$2.96	\$3.09	\$3.21	\$3.34	\$3.48	\$3.64	\$3.82	\$4.01	\$4.21	\$4.44	\$4.68	\$4.94	\$5.21	\$5.49	\$5.79		
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.41	\$1.49	\$1.58	\$1.67	\$1.76	\$1.86	\$1.96	\$2.06	\$2.18	\$2.30	\$2.42	\$2.54		
CMS Energy Corporation	CMS	\$1.98	\$2.10	\$2.24	\$2.38	\$2.53	\$2.69	\$2.86	\$3.03	\$3.21	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$4.69	\$4.95	\$5.21		
Consolidated Edison, Inc.	ED	\$3.94	\$4.06	\$4.18	\$4.31	\$4.43	\$4.57	\$4.70	\$4.86	\$5.05	\$5.26	\$5.51	\$5.78	\$6.10	\$6.43	\$6.78	\$7.14	\$7.53	\$7.93		
DTE Energy Company	DTE	\$4.83	\$5.10	\$5.38	\$5.68	\$6.00	\$6.34	\$6.69	\$7.06	\$7.45	\$7.86	\$8.29	\$8.75	\$9.22	\$9.72	\$10.25	\$10.80	\$11.39	\$11.99		
El Paso Electric Company	EE	\$2.96	\$3.13	\$3.30	\$3.49	\$3.69	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.11	\$5.39	\$5.68	\$5.99	\$6.32	\$6.66	\$7.02	\$7.39		
Eversource Energy	ES	\$2.29	\$2.32	\$2.36	\$2.39	\$2.43	\$2.47	\$2.50	\$2.56	\$2.63	\$2.72	\$2.83	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$4.07		
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.32	\$2.36	\$2.39	\$2.43	\$2.47	\$2.50	\$2.56	\$2.63	\$2.72	\$2.83	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$4.07		
IDACORP, Inc.	IDA	\$3.94	\$4.06	\$4.18	\$4.32	\$4.45	\$4.59	\$4.73	\$4.90	\$5.09	\$5.30	\$5.55	\$5.83	\$6.15	\$6.48	\$6.83	\$7.20	\$7.59	\$7.99		
NorthWestern Corporation	NWE	\$3.39	\$3.47	\$3.55	\$3.64	\$3.73	\$3.82	\$3.91	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.96	\$5.26	\$5.55	\$5.85	\$6.17	\$6.50		
OGE Energy Corp.	OGE	\$1.69	\$1.73	\$1.78	\$1.82	\$1.87	\$1.91	\$1.96	\$2.02	\$2.09	\$2.17	\$2.27	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10	\$3.27		
Otter Tail Corporation	OTTR	\$1.60	\$1.71	\$1.83	\$1.96	\$2.10	\$2.24	\$2.40	\$2.56	\$2.73	\$2.90	\$3.07	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23	\$4.45		
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.07	\$4.19	\$4.32	\$4.45	\$4.58	\$4.72	\$4.88	\$5.06	\$5.28	\$5.52	\$5.80	\$6.11	\$6.44	\$6.79	\$7.16	\$7.55	\$7.94		
PNM Resources, Inc.	PNM	\$1.46	\$1.52	\$1.59	\$1.66	\$1.73	\$1.80	\$1.88	\$1.96	\$2.06	\$2.16	\$2.26	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10	\$3.27		
Portland General Electric Company	POR	\$2.16	\$2.22	\$2.29	\$2.35	\$2.42	\$2.49	\$2.56	\$2.65	\$2.75	\$2.86	\$2.99	\$3.14	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$4.30		
Southern Company	SO	\$2.83	\$2.91	\$2.98	\$3.07	\$3.15	\$3.23	\$3.32	\$3.43	\$3.55	\$3.69	\$3.86	\$4.05	\$4.27	\$4.50	\$4.75	\$5.01	\$5.28	\$5.55		
WEC Energy Group, Inc.	WEC	\$2.96	\$3.08	\$3.21	\$3.35	\$3.49	\$3.64	\$3.79	\$3.96	\$4.14	\$4.34	\$4.55	\$4.79	\$5.05	\$5.33	\$5.62	\$5.92	\$6.24	\$6.57		
Xcel Energy Inc.	XEL	\$2.21	\$2.31	\$2.41	\$2.52	\$2.64	\$2.75	\$2.88	\$3.01	\$3.16	\$3.31	\$3.48	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53	\$4.78	\$5.03		

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$162.26
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$2.49	\$90.97
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$4.42	\$161.02
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$218.58
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$131.23
CenterPoint Energy, Inc.	CNP	\$0.80	\$0.82	\$0.83	\$0.85	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$1.59	\$57.86
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$118.30
Consolidated Edison, Inc.	ED	\$2.80	\$2.88	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$4.94	\$180.09
DTE Energy Company	DTE	\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$3.53	\$128.61
El Paso Electric Company	EE	\$2.02	\$2.09	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$4.60	\$167.86
Eversource Energy	ES	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$92.44
Hawaiian Electric Industries, Inc.	HE	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$181.58
IDACORP, Inc.	IDA	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$147.47
NorthWestern Corporation	NWE	\$1.21	\$1.27	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$74.13
OGE Energy Corp.	OGE	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$101.09
Other Tail Corporation	OTTR	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$180.55
Pinnacle West Capital Corporation	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$174.23
PNM Resources, Inc.	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$174.23
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$97.92
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$126.20
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$149.27
Xcel Energy Inc.	XEL	\$1.52	\$1.62	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$3.13	\$114.20

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$166.71
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.84	\$1.20	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$93.46
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$165.44
American Electric Power Company, Inc.	AEP	(\$87.20)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$224.58
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$134.83
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.57	\$0.82	\$0.93	\$0.95	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$59.45
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$121.54
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.01	\$2.84	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$185.03
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$279.84
El Paso Electric Company	EE	(\$49.44)	\$0.00	\$0.98	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$132.14
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.45	\$2.07	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$172.47
Hawaiian Electric Industries, Inc.	HE	(\$33.92)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$94.98
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.71	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$186.56
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$151.51
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$76.16
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$103.86
Pinnacle West Capital Corporation	PNW	(\$78.03)	\$0.00	\$1.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$185.50
PNM Resources, Inc.	PNM	(\$37.00)	\$0.00	\$0.65	\$0.92	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$76.26
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$100.61
Southern Company	SO	(\$44.14)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$129.66
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$153.36
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.09	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$117.33

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 23.91
90 Day Low Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	EPS Growth Rate Estimates			Long-Term			Payout Ratio			[10]	[11]	[12]	[13]			
Company	Ticker	Stock Price	Zacks	First Call	Value Line	Low	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	Terminal	Terminal				
ALLETE, Inc.	ALE	\$71.97	6.60%	6.00%	4.50%	4.50%	5.43%	66.00%	64.00%	65.57%	(9.00)	9.03%	23.91	4.41					
Alliant Energy Corporation	LNT	\$40.49	5.30%	5.45%	6.50%	5.30%	5.43%	64.00%	60.00%	65.57%	(9.00)	8.93%	23.91	4.41					
Ameren Corporation	AEE	\$56.61	6.90%	6.37%	7.50%	6.37%	5.43%	61.00%	60.00%	65.57%	(9.00)	10.99%	23.91	4.41					
American Electric Power Company, Inc.	AEP	\$69.11	5.40%	5.63%	4.50%	4.50%	5.43%	66.00%	63.00%	65.57%	(9.00)	12.29%	23.91	4.41					
Black Hills Corporation	BKH	\$54.72	4.60%	4.07%	7.50%	4.07%	5.43%	52.00%	54.00%	65.57%	(9.00)	9.33%	23.91	4.41					
CenterPoint Energy, Inc.	CNP	\$27.48	5.90%	8.49%	NA	5.90%	5.43%	71.00%	64.00%	65.57%	(9.00)	8.35%	23.91	4.41					
CMS Energy Corporation	CMS	\$44.96	6.30%	7.04%	8.50%	6.30%	5.43%	61.00%	61.00%	65.57%	(9.00)	10.27%	23.91	4.41					
Consolidated Edison, Inc.	ED	\$79.65	4.00%	3.11%	3.00%	3.00%	5.43%	67.00%	67.00%	65.57%	(9.00)	9.21%	23.91	4.41					
DTE Energy Company	DTE	\$104.99	6.00%	5.58%	6.50%	5.58%	5.43%	62.00%	61.00%	65.57%	(9.00)	10.19%	23.91	4.41					
El Paso Electric Company	EE	\$51.94	5.10%	5.20%	5.00%	5.00%	5.43%	52.00%	59.00%	65.57%	(9.00)	9.66%	23.91	4.41					
Eversource Energy	ES	\$60.18	5.80%	5.65%	6.50%	5.65%	5.43%	61.00%	58.00%	65.57%	(9.00)	10.81%	23.91	4.41					
Hawaiian Electric Industries, Inc.	HE	\$34.52	6.70%	8.50%	1.50%	1.50%	5.43%	69.00%	71.00%	65.57%	(9.00)	11.09%	23.91	4.41					
IDACORP, Inc.	IDA	\$86.65	4.10%	3.10%	3.50%	3.10%	5.43%	57.00%	60.00%	65.57%	(9.00)	8.29%	23.91	4.41					
NorthWestern Corporation	NWE	\$54.69	2.40%	3.12%	4.50%	2.40%	5.43%	63.00%	62.00%	65.57%	(9.00)	8.29%	23.91	4.41					
OGE Energy Corp.	OGE	\$32.08	6.00%	5.80%	2.50%	2.50%	5.43%	68.00%	74.00%	65.57%	(9.00)	10.81%	23.91	4.41					
Otter Tail Corporation	OTTR	\$42.77	NA	9.00%	7.00%	7.00%	5.43%	68.00%	62.00%	65.57%	(9.00)	9.59%	23.91	4.41					
Pinnacle West Capital Corporation	PNW	\$80.50	3.00%	3.63%	5.50%	3.00%	5.43%	64.00%	63.00%	65.57%	(9.00)	9.35%	23.91	4.41					
PNM Resources, Inc.	PNM	\$38.09	5.40%	4.30%	7.50%	4.30%	5.43%	72.00%	62.00%	65.57%	(9.00)	9.02%	23.91	4.41					
Portland General Electric Company	POR	\$42.23	2.90%	3.50%	6.00%	2.90%	5.43%	59.00%	55.00%	65.57%	(9.00)	7.51%	23.91	4.41					
Southern Company	SO	\$45.61	4.50%	2.70%	4.00%	2.70%	5.43%	78.00%	72.00%	65.57%	(9.00)	11.44%	23.91	4.41					
WEC Energy Group, Inc.	WEC	\$63.20	4.20%	4.34%	6.00%	4.20%	5.43%	67.00%	66.00%	65.57%	(9.00)	9.53%	23.91	4.41					
Xcel Energy Inc.	XEL	\$45.71	5.80%	6.15%	4.50%	4.50%	5.43%	63.00%	67.00%	65.57%	(9.00)	10.02%	23.91	4.41					
MEAN												9.77%							
MAX												12.29%							
MIN												7.51%							
Projected Annual Earnings per Share																			
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	\$3.14	\$3.28	\$3.43	\$3.58	\$3.74	\$3.91	\$4.09	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.49	\$5.79	\$6.10	\$6.44	\$6.79	\$7.14
Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.83	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01
Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.88	\$4.12	\$4.37	\$4.63	\$4.90	\$5.17	\$5.45	\$5.75	\$6.06	\$6.39	\$6.73	\$7.08
American Electric Power Company, Inc.	AEP	\$4.23	\$4.42	\$4.62	\$4.83	\$5.04	\$5.27	\$5.51	\$5.76	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$7.80	\$8.22	\$8.67	\$9.14	\$9.61
Black Hills Corporation	BKH	\$2.63	\$2.74	\$2.85	\$2.96	\$3.09	\$3.21	\$3.34	\$3.48	\$3.64	\$3.82	\$4.01	\$4.21	\$4.44	\$4.68	\$4.94	\$5.21	\$5.49	\$5.79
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.41	\$1.49	\$1.58	\$1.67	\$1.76	\$1.86	\$1.96	\$2.06	\$2.18	\$2.30	\$2.42	\$2.54
CMS Energy Corporation	CMS	\$1.98	\$2.10	\$2.24	\$2.38	\$2.53	\$2.69	\$2.86	\$3.03	\$3.21	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$4.69	\$4.95	\$5.21
Consolidated Edison, Inc.	ED	\$3.94	\$4.06	\$4.18	\$4.31	\$4.43	\$4.57	\$4.70	\$4.86	\$5.05	\$5.26	\$5.51	\$5.78	\$6.10	\$6.43	\$6.78	\$7.14	\$7.53	\$7.93
DTE Energy Company	DTE	\$4.83	\$5.10	\$5.38	\$5.68	\$6.00	\$6.34	\$6.69	\$7.06	\$7.45	\$7.86	\$8.29	\$8.75	\$9.22	\$9.72	\$10.25	\$10.80	\$11.39	\$11.99
El Paso Electric Company	EE	\$2.99	\$3.13	\$3.26	\$3.39	\$3.69	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.11	\$5.39	\$5.68	\$5.99	\$6.32	\$6.66	\$7.02	\$7.38
Eversource Energy	ES	\$2.96	\$3.13	\$3.30	\$3.49	\$3.69	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.11	\$5.39	\$5.68	\$5.99	\$6.32	\$6.66	\$7.02	\$7.38
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.32	\$2.36	\$2.39	\$2.43	\$2.47	\$2.50	\$2.56	\$2.63	\$2.72	\$2.83	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$4.07
IDACORP, Inc.	IDA	\$3.94	\$4.06	\$4.19	\$4.32	\$4.45	\$4.59	\$4.73	\$4.90	\$5.09	\$5.30	\$5.55	\$5.83	\$6.15	\$6.48	\$6.83	\$7.20	\$7.59	\$7.99
NorthWestern Corporation	NWE	\$3.39	\$3.47	\$3.55	\$3.64	\$3.73	\$3.82	\$3.91	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.99	\$5.26	\$5.55	\$5.85	\$6.17	\$6.49
OGE Energy Corp.	OGE	\$1.69	\$1.73	\$1.78	\$1.82	\$1.87	\$1.91	\$1.96	\$2.02	\$2.09	\$2.17	\$2.27	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26
Otter Tail Corporation	OTTR	\$1.60	\$1.71	\$1.83	\$1.96	\$2.10	\$2.24	\$2.40	\$2.56	\$2.73	\$2.90	\$3.07	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23	\$4.45
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.07	\$4.19	\$4.32	\$4.45	\$4.58	\$4.72	\$4.88	\$5.06	\$5.28	\$5.52	\$5.80	\$6.11	\$6.44	\$6.79	\$7.16	\$7.55	\$7.94
PNM Resources, Inc.	PNM	\$1.46	\$1.52	\$1.59	\$1.66	\$1.73	\$1.80	\$1.88	\$1.96	\$2.06	\$2.16	\$2.26	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26
Portland General Electric Company	POR	\$2.16	\$2.22	\$2.29	\$2.35	\$2.42	\$2.49	\$2.56	\$2.65	\$2.75	\$2.86	\$2.99	\$3.14	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$4.30
Southern Company	SO	\$2.83	\$2.91	\$2.98	\$3.07	\$3.15	\$3.23	\$3.32	\$3.43	\$3.55	\$3.69	\$3.86	\$4.05	\$4.27	\$4.50	\$4.75	\$5.01	\$5.28	\$5.55
WEC Energy Group, Inc.	WEC	\$2.96	\$3.08	\$3.21	\$3.35	\$3.49	\$3.64	\$3.79	\$3.96	\$4.14	\$4.34	\$4.55	\$4.79	\$5.05	\$5.33	\$5.62	\$5.92	\$6.24	\$6.56
Xcel Energy Inc.	XEL	\$2.21	\$2.31	\$2.41	\$2.52	\$2.64	\$2.75	\$2.88	\$3.01	\$3.16	\$3.31	\$3.48	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53	\$4.78	\$5.03

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.39%	66.39%	66.18%	65.77%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$162.26
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$2.49	\$90.97
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$4.42	\$161.02
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$218.58
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$131.23
CenterPoint Energy, Inc.	CNP	\$0.80	\$0.82	\$0.83	\$0.85	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$1.59	\$57.86
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$118.30
Consolidated Edison, Inc.	ED	\$2.80	\$2.88	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$4.94	\$180.09
DTE Energy Company	DTE	\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$3.53	\$128.61
El Paso Electric Company	EE	\$2.02	\$2.09	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$4.60	\$167.86
Eversource Energy	ES	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$92.44
Hawaiian Electric Industries, Inc.	HE	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$181.58
IDACORP, Inc.	IDA	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$147.47
NorthWestern Corporation	NWE	\$1.21	\$1.27	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$74.13
OGE Energy Corp.	OGE	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$101.09
Other Tail Corporation	OTTR	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$180.55
Pinnacle West Capital Corporation	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$180.55
PNM Resources, Inc.	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$180.55
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$97.92
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$126.20
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$149.27
Xcel Energy Inc.	XEL	\$1.52	\$1.62	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$3.13	\$114.20

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$166.71
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.84	\$1.20	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$93.46
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$165.44
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$224.58
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$134.83
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.57	\$0.82	\$0.93	\$0.95	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$59.45
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$121.54
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.01	\$2.84	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$185.03
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$279.84
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.98	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$132.14
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.45	\$2.07	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$172.47
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$94.98
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.71	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$186.56
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$151.51
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$76.16
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$103.86
Pinnacle West Capital Corporation	PNW	(\$80.50)	\$0.00	\$1.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$185.50
PNM Resources, Inc.	PNM	(\$38.09)	\$0.00	\$0.65	\$0.92	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$76.26
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$100.61
Southern Company	SO	(\$45.61)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$129.66
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$153.36
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.09	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$117.33

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 23.91
180 Day Low Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	EPS Growth Rate Estimates			Long-Term			Payout Ratio			[10]	[11]	[12]	[13]			
Company	Stock											Iterative Solution	Terminal	Terminal					
	Ticker	Price	Zacks	First Call	Value	Low	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio					
ALLETE, Inc.	ALE	\$74.60	6.60%	6.00%	4.50%	4.50%	5.43%	66.00%	64.00%	65.57%	(9.00)	8.69%	23.91	4.41					
Alliant Energy Corporation	LNT	\$41.66	5.30%	5.45%	6.50%	5.30%	5.43%	64.00%	60.00%	65.57%	(9.00)	8.67%	23.91	4.41					
Ameren Corporation	AEE	\$58.45	6.90%	6.37%	7.50%	6.37%	5.43%	61.00%	60.00%	65.57%	(9.00)	10.69%	23.91	4.41					
American Electric Power Company, Inc.	AEP	\$71.18	5.40%	5.63%	4.50%	4.50%	5.43%	66.00%	63.00%	65.57%	(9.00)	12.00%	23.91	4.41					
Black Hills Corporation	BKH	\$60.62	4.60%	4.07%	7.50%	4.07%	5.43%	52.00%	54.00%	65.57%	(9.00)	8.40%	23.91	4.41					
CenterPoint Energy, Inc.	CNP	\$28.43	5.90%	8.49%	NA	5.90%	5.43%	71.00%	64.00%	65.57%	(9.00)	8.04%	23.91	4.41					
CMS Energy Corporation	CMS	\$64.48	6.30%	7.04%	8.50%	6.30%	5.43%	61.00%	61.00%	65.57%	(9.00)	9.96%	23.91	4.41					
Consolidated Edison, Inc.	ED	\$82.04	4.00%	3.11%	3.00%	3.00%	5.43%	67.00%	67.00%	65.57%	(9.00)	8.93%	23.91	4.41					
DTE Energy Company	DTE	\$107.87	6.00%	5.58%	6.50%	5.58%	5.43%	62.00%	61.00%	65.57%	(9.00)	9.94%	23.91	4.41					
El Paso Electric Company	EE	\$54.13	5.10%	5.20%	5.00%	5.00%	5.43%	52.00%	59.00%	65.57%	(9.00)	9.28%	23.91	4.41					
Eversource Energy	ES	\$61.36	5.80%	5.65%	6.50%	5.65%	5.43%	61.00%	58.00%	65.57%	(9.00)	10.63%	23.91	4.41					
Hawaiian Electric Industries, Inc.	HE	\$34.56	6.70%	8.50%	1.50%	1.50%	5.43%	69.00%	71.00%	65.57%	(9.00)	11.07%	23.91	4.41					
IDACORP, Inc.	IDA	\$88.70	4.10%	3.10%	3.50%	3.10%	5.43%	57.00%	60.00%	65.57%	(9.00)	8.07%	23.91	4.41					
NorthWestern Corporation	NWE	\$57.20	2.40%	3.12%	4.50%	2.40%	5.43%	63.00%	62.00%	65.57%	(9.00)	10.38%	23.91	4.41					
OGE Energy Corp.	OGE	\$34.04	6.00%	5.80%	2.50%	2.50%	5.43%	68.00%	74.00%	65.57%	(9.00)	9.02%	23.91	4.41					
Otter Tail Corporation	OTTR	\$43.36	NA	9.00%	7.00%	7.00%	5.43%	72.00%	63.00%	65.57%	(9.00)	9.22%	23.91	4.41					
Pinnacle West Capital Corporation	PNW	\$94.48	3.00%	3.63%	5.50%	3.00%	5.43%	64.00%	62.00%	65.57%	(9.00)	8.57%	23.91	4.41					
PNM Resources, Inc.	PNM	\$40.17	5.40%	4.30%	7.50%	4.30%	5.43%	57.00%	56.00%	65.57%	(9.00)	7.04%	23.91	4.41					
Portland General Electric Company	POR	\$44.58	2.90%	3.50%	6.00%	2.90%	5.43%	59.00%	55.00%	65.57%	(9.00)	8.66%	23.91	4.41					
Southern Company	SO	\$47.85	4.50%	2.70%	4.00%	2.70%	5.43%	78.00%	72.00%	65.57%	(9.00)	10.95%	23.91	4.41					
WEC Energy Group, Inc.	WEC	\$64.49	4.20%	4.34%	6.00%	4.20%	5.43%	67.00%	66.00%	65.57%	(9.00)	9.34%	23.91	4.41					
Xcel Energy Inc.	XEL	\$47.40	5.80%	6.15%	4.50%	4.50%	5.43%	63.00%	67.00%	65.57%	(9.00)	9.68%	23.91	4.41					
MEAN											9.42%								
MAX											12.00%								
MIN											7.04%								
Projected Annual Earnings per Share																			
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	\$3.14	\$3.28	\$3.43	\$3.58	\$3.74	\$3.91	\$4.09	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.49	\$5.79	\$6.10	\$6.44	\$6.79	\$7.14
Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.83	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01
Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.88	\$4.12	\$4.37	\$4.63	\$4.90	\$5.17	\$5.45	\$5.75	\$6.06	\$6.39	\$6.73	\$7.08
American Electric Power Company, Inc.	AEP	\$4.23	\$4.42	\$4.62	\$4.83	\$5.04	\$5.27	\$5.51	\$5.76	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$7.80	\$8.22	\$8.67	\$9.14	\$9.61
Black Hills Corporation	BKH	\$2.63	\$2.74	\$2.85	\$2.96	\$3.09	\$3.21	\$3.34	\$3.48	\$3.64	\$3.82	\$4.01	\$4.21	\$4.44	\$4.68	\$4.94	\$5.21	\$5.49	\$5.79
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.41	\$1.49	\$1.58	\$1.67	\$1.76	\$1.86	\$1.96	\$2.06	\$2.18	\$2.30	\$2.42	\$2.54
CMS Energy Corporation	CMS	\$1.98	\$2.10	\$2.24	\$2.38	\$2.53	\$2.69	\$2.86	\$3.03	\$3.21	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$4.69	\$4.95	\$5.21
Consolidated Edison, Inc.	ED	\$3.94	\$4.06	\$4.18	\$4.31	\$4.43	\$4.57	\$4.70	\$4.86	\$5.05	\$5.26	\$5.51	\$5.78	\$6.10	\$6.43	\$6.78	\$7.14	\$7.53	\$7.93
DTE Energy Company	DTE	\$4.83	\$5.10	\$5.38	\$5.68	\$6.00	\$6.34	\$6.69	\$7.06	\$7.45	\$7.86	\$8.29	\$8.75	\$9.22	\$9.72	\$10.25	\$10.80	\$11.39	\$11.99
El Paso Electric Company	EE	\$2.96	\$3.13	\$3.30	\$3.49	\$3.69	\$3.90	\$4.12	\$4.35	\$4.59	\$4.84	\$5.11	\$5.39	\$5.68	\$5.99	\$6.32	\$6.66	\$7.02	\$7.39
Eversource Energy	ES	\$2.29	\$2.32	\$2.36	\$2.39	\$2.43	\$2.47	\$2.50	\$2.56	\$2.63	\$2.72	\$2.83	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$4.07
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.32	\$2.36	\$2.39	\$2.43	\$2.47	\$2.50	\$2.56	\$2.63	\$2.72	\$2.83	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$4.07
IDACORP, Inc.	IDA	\$3.94	\$4.06	\$4.18	\$4.32	\$4.45	\$4.59	\$4.73	\$4.90	\$5.09	\$5.30	\$5.55	\$5.83	\$6.15	\$6.48	\$6.83	\$7.20	\$7.59	\$7.99
NorthWestern Corporation	NWE	\$3.99	\$3.47	\$3.55	\$3.64	\$3.73	\$3.82	\$3.91	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.99	\$5.26	\$5.55	\$5.85	\$6.17	\$6.49
OGE Energy Corp.	OGE	\$1.69	\$1.73	\$1.78	\$1.82	\$1.87	\$1.91	\$1.96	\$2.02	\$2.09	\$2.17	\$2.27	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26
Otter Tail Corporation	OTTR	\$1.60	\$1.71	\$1.83	\$1.96	\$2.10	\$2.24	\$2.40	\$2.56	\$2.74	\$2.90	\$3.07	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23	\$4.45
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.07	\$4.19	\$4.32	\$4.45	\$4.58	\$4.72	\$4.88	\$5.06	\$5.28	\$5.52	\$5.80	\$6.11	\$6.44	\$6.79	\$7.16	\$7.55	\$7.94
PNM Resources, Inc.	PNM	\$1.46	\$1.52	\$1.59	\$1.66	\$1.73	\$1.80	\$1.88	\$1.96	\$2.06	\$2.16	\$2.26	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10	\$3.26
Portland General Electric Company	POR	\$2.16	\$2.22	\$2.29	\$2.35	\$2.42	\$2.49	\$2.56	\$2.65	\$2.75	\$2.86	\$2.99	\$3.14	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$4.30
Southern Company	SO	\$2.83	\$2.91	\$2.98	\$3.07	\$3.15	\$3.23	\$3.32	\$3.43	\$3.55	\$3.69	\$3.86	\$4.05	\$4.27	\$4.50	\$4.75	\$5.01	\$5.28	\$5.55
WEC Energy Group, Inc.	WEC	\$2.96	\$3.08	\$3.21	\$3.35	\$3.49	\$3.64	\$3.79	\$3.96	\$4.14	\$4.34	\$4.55	\$4.79	\$5.05	\$5.33	\$5.62	\$5.92	\$6.24	\$6.56
Xcel Energy Inc.	XEL	\$2.21	\$2.31	\$2.41	\$2.52	\$2.64	\$2.75	\$2.88	\$3.01	\$3.16	\$3.31	\$3.48	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53	\$4.78	\$5.03

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	61.12%	61.35%	61.57%	61.57%	61.57%	61.57%	61.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	68.80%	69.60%	70.39%	71.18%	71.97%	72.76%	73.55%	73.55%	73.55%	73.55%	73.55%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61] Terminal Value
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$162.26
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$2.49	\$90.97
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$4.42	\$161.02
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$218.58
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$131.23
CenterPoint Energy, Inc.	CNP	\$0.80	\$0.82	\$0.83	\$0.85	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$1.59	\$57.86
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$118.30
Consolidated Edison, Inc.	ED	\$2.80	\$2.88	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$4.94	\$180.09
DTE Energy Company	DTE	\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$3.53	\$128.61
El Paso Electric Company	EE	\$2.02	\$2.09	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$4.60	\$167.86
Eversource Energy	ES	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$92.44
Hawaiian Electric Industries, Inc.	HE	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$181.58
IDACORP, Inc.	IDA	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$147.47
NorthWestern Corporation	NWE	\$1.21	\$1.27	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$74.13
OGE Energy Corp.	OGE	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$101.09
Other Tail Corporation	OTTR	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$180.55
Pinnacle West Capital Corporation	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$74.23
PNM Resources, Inc.	PNM	\$0.91	\$0.94	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$180.55
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$97.92
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$126.20
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$149.27
Xcel Energy Inc.	XEL	\$1.52	\$1.62	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$3.13	\$114.20

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$166.71
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.84	\$1.20	\$1.30	\$1.37	\$1.44	\$1.53	\$1.61	\$1.71	\$1.80	\$1.91	\$2.02	\$2.13	\$2.24	\$2.37	\$93.46
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.57	\$3.77	\$3.97	\$4.19	\$165.44
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$224.58
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$134.83
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.57	\$0.82	\$0.93	\$0.95	\$0.91	\$0.96	\$1.02	\$1.08	\$1.15	\$1.21	\$1.28	\$1.35	\$1.43	\$1.50	\$59.45
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$121.54
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.01	\$2.84	\$2.97	\$3.06	\$3.14	\$3.24	\$3.35	\$3.48	\$3.63	\$3.80	\$4.00	\$4.21	\$4.44	\$4.68	\$185.03
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$279.84
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.98	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.50	\$2.67	\$2.85	\$3.01	\$3.17	\$3.35	\$132.14
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.45	\$2.07	\$2.18	\$2.26	\$2.43	\$2.62	\$2.81	\$3.02	\$3.24	\$3.48	\$3.73	\$3.93	\$4.14	\$4.37	\$172.47
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$94.98
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.71	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$186.56
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$151.51
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$76.16
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$103.86
Pinnacle West Capital Corporation	PNW	(\$84.48)	\$0.00	\$1.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$185.50
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.65	\$0.92	\$0.97	\$1.01	\$1.08	\$1.15	\$1.24	\$1.33	\$1.42	\$1.53	\$1.65	\$1.74	\$1.83	\$1.93	\$76.26
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$100.61
Southern Company	SO	(\$47.85)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$129.66
WEC Energy Group, Inc.	WEC	(\$64.49)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$153.36
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.09	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.19	\$2.30	\$2.41	\$2.53	\$2.67	\$2.82	\$2.97	\$117.33

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 23.91
30 Day High Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs	EPS Growth Rate Estimates																	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]					
	Stock	Zacks	First Call	Value	High	Growth	2018	2021	2028	Proof	Iterative Solution	Terminal	Terminal					
Company	Ticker	Price	Value										P/E Ratio	PEG Ratio				
ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CenterPoint Energy, Inc. CMS Energy Corporation Consolidated Edison, Inc. DTE Energy Company El Paso Electric Company Eversource Energy Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc. Portland General Electric Company Southern Company WEC Energy Group, Inc. Xcel Energy Inc.	ALE	\$70.43	6.00%	4.50%	6.60%	5.43%	66.00%	64.00%	65.57%	(\$0.00)	10.70%	23.91	4.41					
	LNT	\$39.93	5.30%	5.45%	6.50%	5.43%	64.00%	64.00%	65.57%	(\$0.00)	9.89%	23.91	4.41					
	AEE	\$55.35	6.90%	6.37%	7.50%	5.43%	61.00%	60.00%	65.57%	(\$0.00)	12.01%	23.91	4.41					
	AEP	\$67.20	5.40%	5.63%	4.50%	5.63%	66.00%	63.00%	65.57%	(\$0.00)	13.42%	23.91	4.41					
	BKH	\$53.02	4.60%	4.07%	7.50%	5.43%	52.00%	54.00%	65.57%	(\$0.00)	12.03%	23.91	4.41					
	CNP	\$26.97	5.90%	8.49%	NA	8.49%	71.00%	64.00%	65.57%	(\$0.00)	10.30%	23.91	4.41					
	CMS	\$44.02	6.30%	7.04%	8.50%	8.50%	61.00%	61.00%	65.57%	(\$0.00)	12.02%	23.91	4.41					
	ED	\$76.71	4.00%	3.11%	3.00%	5.43%	67.00%	67.00%	65.57%	(\$0.00)	10.29%	23.91	4.41					
	DTE	\$102.48	6.00%	5.58%	6.50%	5.43%	62.00%	61.00%	65.57%	(\$0.00)	11.07%	23.91	4.41					
	EE	\$49.44	5.10%	5.20%	5.00%	5.20%	52.00%	59.00%	65.57%	(\$0.00)	10.27%	23.91	4.41					
	ES	\$58.10	5.80%	5.65%	6.50%	5.43%	61.00%	58.00%	65.57%	(\$0.00)	11.76%	23.91	4.41					
	HE	\$33.92	6.70%	8.50%	1.50%	8.50%	69.00%	71.00%	65.57%	(\$0.00)	16.60%	23.91	4.41					
	IDA	\$85.10	4.10%	3.10%	3.50%	4.10%	57.00%	60.00%	65.57%	(\$0.00)	9.15%	23.91	4.41					
	NWE	\$52.38	2.40%	3.12%	4.50%	4.50%	63.00%	62.00%	65.57%	(\$0.00)	12.80%	23.91	4.41					
	OGE	\$31.83	6.00%	5.80%	2.50%	5.43%	68.00%	74.00%	65.57%	(\$0.00)	12.22%	23.91	4.41					
	OTTR	\$42.67	NA	9.00%	7.00%	9.00%	5.43%	72.00%	63.00%	65.57%	(\$0.00)	10.75%	23.91	4.41				
	PNW	\$78.03	3.00%	3.63%	5.50%	5.50%	64.00%	62.00%	65.57%	(\$0.00)	11.09%	23.91	4.41					
	PNM	\$37.00	5.40%	4.30%	7.50%	7.50%	57.00%	56.00%	65.57%	(\$0.00)	9.96%	23.91	4.41					
	POR	\$39.86	2.90%	3.50%	6.00%	6.00%	59.00%	55.00%	65.57%	(\$0.00)	11.92%	23.91	4.41					
	SO	\$44.14	4.50%	2.70%	4.00%	4.50%	78.00%	72.00%	65.57%	(\$0.00)	13.14%	23.91	4.41					
	WEC	\$61.60	4.20%	4.34%	6.00%	6.00%	67.00%	66.00%	65.57%	(\$0.00)	11.05%	23.91	4.41					
	XEL	\$44.30	5.80%	6.15%	4.50%	5.43%	63.00%	67.00%	65.57%	(\$0.00)	11.51%	23.91	4.41					
											MEAN	11.54%						
											MAX	16.60%						
											MIN	9.15%						
	Projected Annual Earnings per Share																	
	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	\$3.14	\$3.35	\$3.57	\$3.80	\$4.05	\$4.32	\$4.61	\$4.90	\$5.21	\$5.52	\$5.84	\$6.17	\$6.50	\$6.86	\$7.23	\$7.62	\$8.04
Alliant Energy Corporation	LNT	\$1.65	\$1.76	\$1.87	\$1.99	\$2.12	\$2.26	\$2.41	\$2.56	\$2.72	\$2.88	\$3.05	\$3.22	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19
Ameren Corporation	AEE	\$2.68	\$2.88	\$3.10	\$3.33	\$3.58	\$3.85	\$4.14	\$4.43	\$4.73	\$5.04	\$5.35	\$5.66	\$5.96	\$6.29	\$6.63	\$6.99	\$7.37
American Electric Power Company, Inc.	AEP	\$4.23	\$4.47	\$4.72	\$4.99	\$5.27	\$5.56	\$5.88	\$6.20	\$6.55	\$6.91	\$7.29	\$7.69	\$8.11	\$8.55	\$9.01	\$9.50	\$10.02
Black Hills Corporation	BKH	\$2.63	\$2.83	\$3.04	\$3.27	\$3.51	\$3.78	\$4.06	\$4.35	\$4.65	\$4.95	\$5.25	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.08	\$1.18	\$1.28	\$1.39	\$1.50	\$1.63	\$1.76	\$1.89	\$2.02	\$2.15	\$2.28	\$2.41	\$2.54	\$2.67	\$2.82	\$2.97
CMS Energy Corporation	CMS	\$1.98	\$2.15	\$2.33	\$2.53	\$2.74	\$2.98	\$3.23	\$3.49	\$3.75	\$4.01	\$4.27	\$4.52	\$4.77	\$5.03	\$5.30	\$5.59	\$5.89
Consolidated Edison, Inc.	ED	\$3.94	\$4.10	\$4.26	\$4.43	\$4.61	\$4.79	\$4.99	\$5.20	\$5.43	\$5.69	\$5.97	\$6.28	\$6.62	\$6.98	\$7.35	\$7.75	\$8.17
DTE Energy Company	DTE	\$4.83	\$5.14	\$5.48	\$5.83	\$6.21	\$6.62	\$7.05	\$7.49	\$7.95	\$8.43	\$8.92	\$9.41	\$9.93	\$10.46	\$11.03	\$11.63	\$12.26
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$4.66	\$4.92	\$5.18	\$5.47
Eversource Energy	ES	\$2.96	\$3.15	\$3.36	\$3.58	\$3.81	\$4.06	\$4.32	\$4.59	\$4.87	\$5.16	\$5.46	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.51
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.48	\$2.70	\$2.92	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.51	\$5.81	\$6.13	\$6.46	\$6.81
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.01	\$6.33	\$6.67	\$7.03	\$7.41	\$7.82	\$8.24
NorthWestern Corporation	NWE	\$3.39	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.08	\$5.34	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.41	\$2.54	\$2.69	\$2.84	\$3.00	\$3.16	\$3.34	\$3.52	\$3.71	\$3.91	\$4.12
Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.58	\$3.80	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.17	\$4.40	\$4.64	\$4.89	\$5.16	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74	\$7.11	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25
PNM Resources, Inc.	PNM	\$1.46	\$1.57	\$1.69	\$1.81	\$1.95	\$2.10	\$2.25	\$2.41	\$2.58	\$2.75	\$2.91	\$3.08	\$3.25	\$3.43	\$3.61	\$3.81	\$4.01
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.24	\$3.43	\$3.63	\$3.83	\$4.05	\$4.26	\$4.50	\$4.74	\$5.00	\$5.27
Southern Company	SO	\$2.83	\$2.96	\$3.09	\$3.23	\$3.37	\$3.53	\$3.69	\$3.86	\$4.04	\$4.24	\$4.46	\$4.70	\$4.95	\$5.22	\$5.50	\$5.80	\$6.12
WEC Energy Group, Inc.	WEC	\$2.96	\$3.14	\$3.33	\$3.53	\$3.74	\$3.96	\$4.20	\$4.45	\$4.71	\$4.97	\$5.25	\$5.54	\$5.82	\$6.16	\$6.50	\$6.85	\$7.22
Xcel Energy Inc.	XEL	\$2.21	\$2.35	\$2.49	\$2.64	\$2.81	\$2.98	\$3.16	\$3.35	\$3.55	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.46

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.91%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$182.16
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$100.17
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$176.18
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$239.50
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$172.89
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$71.08
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$140.85
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$195.48
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$293.23
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$130.71
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$179.70
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$162.91
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$197.08
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$175.18
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.85	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$98.57
Other Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$118.37
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.20	\$3.40	\$3.62	\$3.89	\$4.15	\$4.49	\$4.83	\$5.16	\$5.49	\$5.81	\$6.13	\$6.46	\$6.79	\$221.32
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$95.98
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$125.99
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$146.24
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$172.65
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$130.47

Projected Annual Data		Investor Cash Flows																	
Company	Ticket	Initial		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Outflow	4/13/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32		
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$5.54
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.74	\$2.87
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.81	\$5.04
American Electric Power Company, Inc.	AEP	(\$67.20)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.55	\$6.87
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.73	\$4.96
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$2.03
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.84	\$4.01
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.34	\$5.60
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.01	\$8.39
El Paso Electric Company	EE	(\$49.44)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.57	\$3.74
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.91	\$5.14
Hawaiian Electric Industries, Inc.	HE	(\$33.92)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.46	\$4.67
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.75	\$2.48	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$5.67
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.79	\$5.02
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.68	\$2.80
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.23	\$3.38
Pinnacle West Capital Corporation	PNW	(\$78.03)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$6.04	\$6.32
PNM Resources, Inc.	PNM	(\$37.00)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$2.75
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$3.61
Southern Company	SO	(\$44.14)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.00	\$4.19
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.71	\$4.93
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.56	\$3.73

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 23.91
90 Day High Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs	EPS Growth Rate Estimates													Payout Ratio						Iterative Solution				Terminal	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]												
	Stock	Zacks	First Call	Value	High	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio												
Company	Ticker	Price																							
ALLETE, Inc.	ALE	\$71.97	6.60%	4.50%	6.80%	5.43%	66.00%	64.00%	65.57%	(9.00)	10.50%	23.91	4.41												
Alliant Energy Corporation	LNT	\$40.49	5.30%	5.45%	6.50%	5.43%	64.00%	64.00%	65.57%	(9.00)	9.76%	23.91	4.41												
Ameren Corporation	AEE	\$56.61	6.90%	7.50%	7.50%	5.43%	61.00%	60.00%	65.57%	(9.00)	11.79%	23.91	4.41												
American Electric Power Company, Inc.	AEP	\$69.11	5.40%	5.63%	5.63%	5.43%	66.00%	63.00%	65.57%	(9.00)	13.13%	23.91	4.41												
Black Hills Corporation	BKH	\$54.72	4.60%	4.07%	7.50%	5.43%	52.00%	54.00%	65.57%	(9.00)	11.73%	23.91	4.41												
CenterPoint Energy, Inc.	CNP	\$27.48	5.90%	8.49%	NA	5.43%	71.00%	64.00%	65.57%	(9.00)	10.12%	23.91	4.41												
CMS Energy Corporation	CMS	\$44.96	6.30%	7.04%	8.50%	5.43%	61.00%	61.00%	65.57%	(9.00)	11.81%	23.91	4.41												
Consolidated Edison, Inc.	ED	\$79.65	4.00%	3.11%	4.00%	5.43%	67.00%	67.00%	65.57%	(9.00)	9.92%	23.91	4.41												
DTE Energy Company	DTE	\$104.99	6.00%	5.58%	6.50%	5.43%	62.00%	61.00%	65.57%	(9.00)	10.84%	23.91	4.41												
El Paso Electric Company	EE	\$51.94	5.10%	5.20%	5.00%	5.43%	52.00%	59.00%	65.57%	(9.00)	9.80%	23.91	4.41												
Eversource Energy	ES	\$60.18	5.80%	5.65%	6.50%	5.43%	61.00%	58.00%	65.57%	(9.00)	11.42%	23.91	4.41												
Hawaiian Electric Industries, Inc.	HE	\$34.52	6.70%	8.50%	1.50%	5.43%	69.00%	71.00%	65.57%	(9.00)	16.40%	23.91	4.41												
IDACORP, Inc.	IDA	\$86.65	4.10%	3.10%	3.50%	5.43%	57.00%	60.00%	65.57%	(9.00)	8.99%	23.91	4.41												
NorthWestern Corporation	NWE	\$54.69	2.40%	3.12%	4.50%	5.43%	63.00%	62.00%	65.57%	(9.00)	12.36%	23.91	4.41												
OGE Energy Corp.	OGE	\$32.08	6.00%	5.80%	6.00%	5.43%	68.00%	74.00%	65.57%	(9.00)	12.14%	23.91	4.41												
Otter Tail Corporation	OTTR	\$42.77	NA	9.00%	7.00%	5.43%	72.00%	63.00%	65.57%	(9.00)	10.72%	23.91	4.41												
Pinnacle West Capital Corporation	PNW	\$80.50	3.00%	3.63%	5.50%	5.43%	64.00%	62.00%	65.57%	(9.00)	10.79%	23.91	4.41												
PNM Resources, Inc.	PNM	\$38.09	5.40%	4.30%	7.50%	5.43%	57.00%	56.00%	65.57%	(9.00)	9.69%	23.91	4.41												
Portland General Electric Company	POR	\$42.23	2.90%	3.50%	6.00%	5.43%	59.00%	55.00%	65.57%	(9.00)	11.36%	23.91	4.41												
Southern Company	SO	\$45.61	4.50%	2.70%	4.00%	5.43%	78.00%	72.00%	65.57%	(9.00)	12.79%	23.91	4.41												
WEC Energy Group, Inc.	WEC	\$63.20	4.20%	4.34%	6.00%	5.43%	67.00%	66.00%	65.57%	(9.00)	10.80%	23.91	4.41												
Xcel Energy Inc.	XEL	\$45.71	5.80%	6.15%	4.50%	5.43%	63.00%	67.00%	65.57%	(9.00)	11.20%	23.91	4.41												
MEAN													11.28%												
													MAX	16.40%											
													MIN	8.99%											
Projected Annual Earnings per Share																									
	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]								
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032							
ALLETE, Inc.	ALE	\$3.14	\$3.35	\$3.57	\$3.80	\$4.05	\$4.32	\$4.61	\$4.90	\$5.21	\$5.52	\$5.84	\$6.17	\$6.50	\$6.86	\$7.23	\$7.62	\$8.04							
Alliant Energy Corporation	LNT	\$1.65	\$1.76	\$1.87	\$1.99	\$2.12	\$2.26	\$2.41	\$2.56	\$2.72	\$2.88	\$3.05	\$3.22	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19							
Ameren Corporation	AEE	\$2.68	\$2.88	\$3.10	\$3.33	\$3.58	\$3.85	\$4.14	\$4.43	\$4.73	\$5.04	\$5.35	\$5.66	\$5.96	\$6.29	\$6.63	\$6.99	\$7.37							
American Electric Power Company, Inc.	AEP	\$4.23	\$4.47	\$4.72	\$4.99	\$5.27	\$5.56	\$5.88	\$6.20	\$6.55	\$6.91	\$7.29	\$7.69	\$8.11	\$8.55	\$9.01	\$9.50	\$10.02							
Black Hills Corporation	BKH	\$2.63	\$2.83	\$3.04	\$3.27	\$3.51	\$3.78	\$4.06	\$4.35	\$4.65	\$4.95	\$5.25	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23							
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.08	\$1.18	\$1.28	\$1.39	\$1.50	\$1.63	\$1.76	\$1.89	\$2.02	\$2.15	\$2.28	\$2.41	\$2.54	\$2.67	\$2.82	\$2.97							
CMS Energy Corporation	CMS	\$1.98	\$2.15	\$2.33	\$2.53	\$2.74	\$2.98	\$3.23	\$3.49	\$3.75	\$4.01	\$4.27	\$4.52	\$4.77	\$5.03	\$5.30	\$5.59	\$5.89							
Consolidated Edison, Inc.	ED	\$3.94	\$4.10	\$4.26	\$4.43	\$4.61	\$4.79	\$4.99	\$5.20	\$5.43	\$5.69	\$5.97	\$6.28	\$6.62	\$6.98	\$7.35	\$7.75	\$8.17							
DTE Energy Company	DTE	\$4.83	\$5.14	\$5.48	\$5.83	\$6.21	\$6.62	\$7.05	\$7.49	\$7.95	\$8.43	\$8.92	\$9.41	\$9.93	\$10.46	\$11.03	\$11.63	\$12.26							
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$4.66	\$4.92	\$5.18	\$5.47							
Eversource Energy	ES	\$2.96	\$3.15	\$3.36	\$3.58	\$3.81	\$4.06	\$4.32	\$4.59	\$4.87	\$5.16	\$5.46	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.51							
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.48	\$2.70	\$2.92	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.51	\$5.81	\$6.13	\$6.46	\$6.81							
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.01	\$6.33	\$6.67	\$7.03	\$7.41	\$7.82	\$8.24							
NorthWestern Corporation	NWE	\$3.39	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.08	\$5.34	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33							
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.41	\$2.54	\$2.69	\$2.84	\$3.00	\$3.16	\$3.34	\$3.52	\$3.71	\$3.91	\$4.12							
Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.58	\$3.80	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95							
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.17	\$4.40	\$4.64	\$4.89	\$5.16	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74	\$7.11	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25							
PNM Resources, Inc.	PNM	\$1.46	\$1.57	\$1.69	\$1.81	\$1.95	\$2.10	\$2.25	\$2.41	\$2.58	\$2.75	\$2.91	\$3.08	\$3.25	\$3.43	\$3.61	\$3.81	\$4.01							
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.24	\$3.43	\$3.63	\$3.83	\$4.05	\$4.26	\$4.50	\$4.74	\$5.00	\$5.27							
Southern Company	SO	\$2.83	\$2.96	\$3.09	\$3.23	\$3.37	\$3.53	\$3.69	\$3.86	\$4.04	\$4.24	\$4.46	\$4.70	\$4.95	\$5.22	\$5.50	\$5.80	\$6.12							
WEC Energy Group, Inc.	WEC	\$2.96	\$3.14	\$3.33	\$3.53	\$3.74	\$3.96	\$4.20	\$4.45	\$4.71	\$4.97	\$5.25	\$5.54	\$5.84	\$6.16	\$6.50	\$6.85	\$7.22							
Xcel Energy Inc.	XEL	\$2.21	\$2.35	\$2.49	\$2.64	\$2.81	\$2.98	\$3.16	\$3.35	\$3.55	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.46							

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.91%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$182.16
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$100.17
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$176.18
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$239.50
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$172.89
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$71.08
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$140.85
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$195.48
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$293.23
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$130.71
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$179.70
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$162.91
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$197.08
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$175.18
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$98.57
Other Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$118.37
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.20	\$3.40	\$3.62	\$3.89	\$4.15	\$4.46	\$4.80	\$5.14	\$5.49	\$5.84	\$6.18	\$6.56	\$6.97	\$221.32
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$95.98
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$125.99
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$146.24
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$172.65
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$130.47

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$197.43
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$102.92
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$181.01
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$246.07
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$177.64
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$73.03
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$144.71
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$200.84
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$301.27
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$134.29
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$184.63
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$167.37
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.75	\$2.48	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$202.48
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$179.98
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$101.28
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$121.62
Pinnacle West Capital Corporation	PNM	(\$80.50)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$227.39
PNM Resources, Inc.	PNM	(\$38.09)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$98.61
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$129.44
Southern Company	SO	(\$45.61)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$150.25
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$177.39
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$134.04

Multi-Stage Growth Discounted Cash Flow Model - Setting Terminal P/E at 23.91
180 Day High Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	EPS Growth Rate Estimates			[5]	Long-Term			[6]	[7]	Payout Ratio			[8]	[9]	Iterative Solution			[10]	[11]	[12]	[13]
		Stock	Zacks	First Call	Value	High	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio	Terminal	Terminal								
Company	Ticker	Price																						
ALLETE, Inc.	ALE	\$74.60	6.00%	4.50%	6.80%	5.43%	66.00%	64.00%	65.57%			10.15%	23.91	4.41										
Alliant Energy Corporation	LNT	\$41.66	5.45%	6.50%	6.50%	5.43%	64.00%	64.00%	65.57%			9.49%	23.91	4.41										
Ameren Corporation	AEE	\$58.45	6.90%	7.50%	7.50%	5.43%	61.00%	60.00%	65.57%			11.48%	23.91	4.41										
American Electric Power Company, Inc.	AEP	\$71.18	5.40%	5.63%	4.50%	5.63%	66.00%	63.00%	65.57%			12.83%	23.91	4.41										
Black Hills Corporation	BKH	\$60.62	4.60%	4.07%	7.50%	5.43%	52.00%	54.00%	65.57%			10.76%	23.91	4.41										
CenterPoint Energy, Inc.	CNP	\$28.43	5.90%	8.49%	NA	5.43%	71.00%	64.00%	65.57%			9.80%	23.91	4.41										
CMS Energy Corporation	CMS	\$64.48	6.30%	7.04%	8.50%	5.43%	61.00%	61.00%	65.57%			11.49%	23.91	4.41										
Consolidated Edison, Inc.	ED	\$82.04	4.00%	3.11%	4.00%	5.43%	67.00%	67.00%	65.57%			9.64%	23.91	4.41										
DTE Energy Company	DTE	\$107.87	6.00%	5.58%	6.50%	5.43%	62.00%	61.00%	65.57%			10.58%	23.91	4.41										
El Paso Electric Company	EE	\$54.13	5.10%	5.20%	5.00%	5.20%	52.00%	59.00%	65.57%			9.42%	23.91	4.41										
Eversource Energy	ES	\$61.36	5.80%	5.65%	6.50%	5.43%	61.00%	58.00%	65.57%			11.23%	23.91	4.41										
Hawaiian Electric Industries, Inc.	HE	\$34.56	6.70%	8.50%	1.50%	5.43%	69.00%	71.00%	65.57%			16.39%	23.91	4.41										
IDACORP, Inc.	IDA	\$88.70	4.10%	3.10%	3.50%	4.10%	57.00%	60.00%	65.57%			8.77%	23.91	4.41										
NorthWestern Corporation	NWE	\$57.20	2.40%	3.12%	4.50%	5.43%	63.00%	62.00%	65.57%			8.77%	23.91	4.41										
OGE Energy Corp.	OGE	\$34.04	6.00%	5.80%	2.50%	5.43%	68.00%	74.00%	65.57%			11.91%	23.91	4.41										
Otter Tail Corporation	OTTR	\$43.36	NA	9.00%	7.00%	9.00%	5.43%	72.00%	63.00%	65.57%		10.59%	23.91	4.41										
Pinnacle West Capital Corporation	PNW	\$84.48	3.00%	3.63%	5.50%	5.43%	64.00%	62.00%	65.57%			10.33%	23.91	4.41										
PNM Resources, Inc.	PNM	\$40.17	5.40%	4.30%	7.50%	5.43%	57.00%	56.00%	65.57%			9.20%	23.91	4.41										
Portland General Electric Company	POR	\$44.58	2.90%	3.50%	6.00%	5.43%	59.00%	55.00%	65.57%			10.84%	23.91	4.41										
Southern Company	SO	\$47.85	4.50%	2.70%	4.00%	4.50%	78.00%	72.00%	65.57%			12.29%	23.91	4.41										
WEC Energy Group, Inc.	WEC	\$64.49	4.20%	4.34%	6.00%	5.43%	67.00%	66.00%	65.57%			10.61%	23.91	4.41										
Xcel Energy Inc.	XEL	\$47.40	5.80%	6.15%	4.50%	5.43%	63.00%	67.00%	65.57%			10.84%	23.91	4.41										
										MEAN	10.92%													
										MAX	16.39%													
										MIN	8.77%													
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]						
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032						
ALLETE, Inc.	ALE	\$3.14	\$3.35	\$3.57	\$3.80	\$4.05	\$4.32	\$4.61	\$4.90	\$5.21	\$5.52	\$5.84	\$6.17	\$6.50	\$6.86	\$7.23	\$7.62	\$8.04						
Alliant Energy Corporation	LNT	\$1.65	\$1.76	\$1.87	\$1.99	\$2.12	\$2.26	\$2.41	\$2.56	\$2.72	\$2.88	\$3.05	\$3.22	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19						
Ameren Corporation	AEE	\$2.68	\$2.88	\$3.10	\$3.33	\$3.58	\$3.85	\$4.14	\$4.43	\$4.73	\$5.04	\$5.35	\$5.66	\$5.96	\$6.29	\$6.63	\$6.99	\$7.37						
American Electric Power Company, Inc.	AEP	\$4.23	\$4.47	\$4.72	\$4.99	\$5.27	\$5.56	\$5.88	\$6.20	\$6.55	\$6.91	\$7.29	\$7.69	\$8.11	\$8.55	\$9.01	\$9.50	\$10.02						
Black Hills Corporation	BKH	\$2.63	\$2.83	\$3.04	\$3.27	\$3.51	\$3.78	\$4.06	\$4.35	\$4.65	\$4.95	\$5.25	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23						
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.08	\$1.18	\$1.28	\$1.39	\$1.50	\$1.63	\$1.76	\$1.89	\$2.02	\$2.15	\$2.28	\$2.41	\$2.54	\$2.67	\$2.82	\$2.97						
CMS Energy Corporation	CMS	\$1.98	\$2.15	\$2.33	\$2.53	\$2.74	\$2.98	\$3.23	\$3.49	\$3.75	\$4.01	\$4.27	\$4.52	\$4.77	\$5.03	\$5.30	\$5.59	\$5.89						
Consolidated Edison, Inc.	ED	\$3.94	\$4.10	\$4.26	\$4.43	\$4.61	\$4.79	\$4.99	\$5.20	\$5.43	\$5.69	\$5.97	\$6.28	\$6.62	\$6.98	\$7.35	\$7.75	\$8.17						
DTE Energy Company	DTE	\$4.83	\$5.14	\$5.48	\$5.83	\$6.21	\$6.62	\$7.05	\$7.49	\$7.95	\$8.43	\$8.92	\$9.41	\$9.93	\$10.46	\$11.03	\$11.63	\$12.26						
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$4.66	\$4.92	\$5.18	\$5.47						
Eversource Energy	ES	\$2.96	\$3.15	\$3.36	\$3.58	\$3.81	\$4.06	\$4.32	\$4.59	\$4.87	\$5.16	\$5.46	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.51						
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.48	\$2.70	\$2.92	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.51	\$5.81	\$6.13	\$6.46	\$6.81						
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.01	\$6.33	\$6.67	\$7.03	\$7.41	\$7.82	\$8.24						
NorthWestern Corporation	NWE	\$3.39	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.08	\$5.34	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33						
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.41	\$2.54	\$2.69	\$2.84	\$3.00	\$3.16	\$3.34	\$3.52	\$3.71	\$3.91	\$4.12						
Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.58	\$3.80	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95						
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.17	\$4.40	\$4.64	\$4.89	\$5.16	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74	\$7.11	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25						
PNM Resources, Inc.	PNM	\$1.46	\$1.57	\$1.69	\$1.81	\$1.95	\$2.10	\$2.25	\$2.41	\$2.58	\$2.75	\$2.91	\$3.08	\$3.25	\$3.43	\$3.61	\$3.81	\$4.01						
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.24	\$3.43	\$3.63	\$3.83	\$4.05	\$4.26	\$4.50	\$4.74	\$5.00	\$5.27						
Southern Company	SO	\$2.83	\$2.96	\$3.09	\$3.23	\$3.37	\$3.53	\$3.69	\$3.86	\$4.04	\$4.24	\$4.46	\$4.70	\$4.95	\$5.22	\$5.50	\$5.80	\$6.12						
WEC Energy Group, Inc.	WEC	\$2.96	\$3.14	\$3.33	\$3.53	\$3.74	\$3.96	\$4.20	\$4.45	\$4.71	\$4.97	\$5.25	\$5.54	\$5.82	\$6.16	\$6.50	\$6.85	\$7.22						
Xcel Energy Inc.	XEL	\$2.21	\$2.35	\$2.49	\$2.64	\$2.81	\$2.98	\$3.16	\$3.35	\$3.55	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.46						

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	61.12%	61.35%	61.57%	61.57%	61.57%	61.57%	61.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.91%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.91%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$182.16
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$100.17
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$176.18
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$239.50
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$172.89
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$71.08
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$140.85
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$195.48
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$293.23
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$130.71
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$179.70
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$162.91
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$197.08
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$175.18
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$98.57
Other Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$118.37
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.20	\$3.40	\$3.62	\$3.89	\$4.15	\$4.46	\$4.80	\$5.14	\$5.51	\$5.88	\$6.25	\$6.63	\$7.01	\$221.32
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$95.98
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$125.99
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$146.24
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$172.65
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$130.47

Projected Annual Data Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$197.43
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$102.92
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$181.01
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$246.07
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$177.64
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$73.03
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$144.71
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$200.84
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$301.27
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$134.29
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$184.63
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$167.37
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.75	\$2.48	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$202.48
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$179.98
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$101.28
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$121.62
Pinnacle West Capital Corporation	PNM	(\$84.48)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$227.39
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$98.61
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$129.44
Southern Company	SO	(\$47.85)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$150.25
WEC Energy Group, Inc.	WEC	(\$64.49)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$177.39
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$134.04

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth - Setting Terminal P/E at 23.91
30 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]				
		Stock		EPS Growth Rate Estimates				Long-Term		Payout Ratio		Iterative Solution		Terminal					
		Ticker	Price	Zacks	First Call	Line	Average	Growth	2018	2021	2028	Proof	JRR	P/E Ratio	PEG Ratio				
Company																			
ALLETE, Inc.	Alliant Energy Corporation	LNT	\$39.93	5.30%	5.45%	6.50%	5.49%	5.43%	66.00%	64.00%	65.57%	\$0.00	9.93%	23.91	4.41				
	Ameren Corporation	AEE	\$55.35	6.90%	6.37%	7.50%	6.38%	5.43%	61.00%	60.00%	65.57%	\$0.00	11.21%	23.91	4.41				
	American Electric Power Company, Inc.	AEP	\$67.20	5.40%	5.63%	4.50%	5.37%	5.43%	66.00%	63.00%	65.57%	\$0.00	13.12%	23.91	4.41				
	Black Hills Corporation	BKH	\$53.02	4.60%	4.07%	7.50%	5.35%	5.43%	62.00%	54.00%	65.57%	\$0.00	10.52%	23.91	4.41				
	CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA	6.68%	5.43%	71.00%	64.00%	65.57%	\$0.00	9.06%	23.91	4.41				
	CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.50%	7.24%	5.43%	61.00%	61.00%	65.57%	\$0.00	11.14%	23.91	4.41				
	Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%	2.82%	5.43%	67.00%	67.00%	65.57%	\$0.00	9.74%	23.91	4.41				
	DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.50%	6.31%	5.43%	62.00%	61.00%	65.57%	\$0.00	10.79%	23.91	4.41				
	El Paso Electric Company	EE	\$49.44	5.10%	5.20%	5.00%	4.08%	5.43%	52.00%	59.00%	65.57%	\$0.00	10.02%	23.91	4.41				
	Eversource Energy	ES	\$58.10	5.80%	5.65%	6.50%	4.12%	5.43%	61.00%	58.00%	65.57%	\$0.00	11.06%	23.91	4.41				
	Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%	3.47%	5.43%	69.00%	71.00%	65.57%	\$0.00	13.95%	23.91	4.41				
	IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%	3.56%	5.43%	57.00%	60.00%	65.57%	\$0.00	8.78%	23.91	4.41				
	NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	4.50%	3.76%	5.43%	62.00%	62.00%	65.57%	\$0.00	12.02%	23.91	4.41				
	OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%	2.89%	5.43%	68.00%	74.00%	65.57%	\$0.00	10.97%	23.91	4.41				
	Otter Tail Corporation	OTTR	\$42.67	NA	9.00%	7.00%	7.88%	5.43%	72.00%	63.00%	65.57%	\$0.00	10.03%	23.91	4.41				
	Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.50%	4.03%	5.43%	64.00%	62.00%	65.57%	\$0.00	10.05%	23.91	4.41				
	PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%	3.54%	5.19%	5.43%	57.00%	56.00%	65.57%	\$0.00	8.38%	23.91	4.41			
	Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%	4.24%	4.16%	5.43%	59.00%	55.00%	65.57%	\$0.00	10.60%	23.91	4.41			
	Southern Company	SO	\$44.14	4.50%	2.70%	4.00%	4.02%	3.81%	5.43%	78.00%	72.00%	65.57%	\$0.00	12.61%	23.91	4.41			
	WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%	4.23%	4.69%	5.43%	67.00%	66.00%	65.57%	\$0.00	10.12%	23.91	4.41			
Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%	3.90%	5.09%	5.43%	63.00%	67.00%	65.57%	\$0.00	10.74%	23.91	4.41				
												MEAN		10.64%					
												MAX		13.95%					
												MIN		8.38%					
Projected Annual Earnings per Share		[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]	
Company		Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	Alliant Energy Corporation	ALE	\$3.14	\$3.31	\$3.49	\$3.69	\$3.89	\$4.10	\$4.33	\$4.56	\$4.81	\$5.08	\$5.35	\$5.65	\$5.95	\$6.27	\$6.62	\$6.97	\$7.35
	Ameren Corporation	LNT	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$2.65	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$3.64	\$3.84
	American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.93	\$5.19	\$5.46	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$7.44	\$7.85	\$8.27	\$8.72	\$9.19	\$9.69
	Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.92	\$3.07	\$3.24	\$3.41	\$3.60	\$3.79	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$5.19	\$5.48	\$5.77	\$6.09
	CenterPoint Energy, Inc.	CNP	\$1.00	\$1.07	\$1.14	\$1.21	\$1.30	\$1.38	\$1.47	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.44	\$2.58
	CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.01	\$3.22	\$3.44	\$3.65	\$3.87	\$4.10	\$4.32	\$4.55	\$4.80	\$5.06	\$5.33
	Consolidated Edison, Inc.	ED	\$3.94	\$4.07	\$4.20	\$4.33	\$4.47	\$4.62	\$4.77	\$4.94	\$5.14	\$5.36	\$5.61	\$5.89	\$6.21	\$6.55	\$6.91	\$7.28	\$7.68
	DTE Energy Company	DTE	\$4.83	\$5.12	\$5.44	\$5.77	\$6.12	\$6.49	\$6.89	\$7.30	\$7.73	\$8.18	\$8.64	\$9.12	\$9.61	\$10.13	\$10.68	\$11.26	\$11.87
	El Paso Electric Company	EE	\$2.39	\$2.51	\$2.63	\$2.75	\$2.89	\$3.03	\$3.17	\$3.33	\$3.50	\$3.68	\$3.87	\$4.08	\$4.30	\$4.53	\$4.78	\$5.04	\$5.31
	Eversource Energy	ES	\$2.96	\$3.12	\$3.30	\$3.48	\$3.67	\$3.87	\$4.09	\$4.31	\$4.55	\$4.80	\$5.06	\$5.33	\$5.62	\$5.93	\$6.25	\$6.59	\$6.94
	Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.41	\$2.53	\$2.65	\$2.79	\$2.93	\$3.08	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$4.19	\$4.41	\$4.65	\$4.90	\$5.17
	IDACORP, Inc.	IDA	\$3.94	\$4.08	\$4.23	\$4.38	\$4.53	\$4.69	\$4.86	\$5.05	\$5.26	\$5.50	\$5.76	\$6.06	\$6.39	\$6.73	\$7.10	\$7.48	\$7.89
	NorthWestern Corporation	NWE	\$3.39	\$3.51	\$3.63	\$3.75	\$3.88	\$4.02	\$4.15	\$4.31	\$4.49	\$4.69	\$4.91	\$5.16	\$5.44	\$5.74	\$6.05	\$6.38	\$6.72
	OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.84	\$1.92	\$2.00	\$2.09	\$2.18	\$2.27	\$2.38	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.23	\$3.41	\$3.59
	Otter Tail Corporation	OTTR	\$1.60	\$1.73	\$1.86	\$2.01	\$2.17	\$2.35	\$2.53	\$2.72	\$2.92	\$3.11	\$3.31	\$3.50	\$3.69	\$3.89	\$4.10	\$4.33	\$4.56
	Pinnacle West Capital Corporation	PNW	\$3.95	\$4.11	\$4.28	\$4.45	\$4.63	\$4.82	\$5.01	\$5.22	\$5.46	\$5.72	\$6.00	\$6.31	\$6.66	\$7.02	\$7.40	\$7.80	\$8.22
	PNM Resources, Inc.	PNM	\$1.46	\$1.54	\$1.62	\$1.70	\$1.79	\$1.88	\$1.98	\$2.08	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$3.16	\$3.34
	Portland General Electric Company	POR	\$2.16	\$2.25	\$2.34	\$2.44	\$2.54	\$2.65	\$2.76	\$2.88	\$3.01	\$3.15	\$3.31	\$3.49	\$3.67	\$3.87	\$4.08	\$4.31	\$4.54
	Southern Company	SO	\$2.83	\$2.94	\$3.05	\$3.17	\$3.29	\$3.41	\$3.54	\$3.69	\$3.85	\$4.02	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.48	\$5.78
	WEC Energy Group, Inc.	WEC	\$2.96	\$3.10	\$3.24	\$3.40	\$3.56	\$3.72	\$3.90	\$4.08	\$4.29	\$4.50	\$4.74	\$4.99	\$5.26	\$5.54	\$5.84	\$6.16	\$6.50
Xcel Energy Inc.	XEL	\$2.21	\$2.32	\$2.44	\$2.56	\$2.70	\$2.83	\$2.98	\$3.13	\$3.29	\$3.47	\$3.65	\$3.85	\$4.05	\$4.27	\$4.51	\$4.75	\$5.01	

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	58.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.31	\$2.41	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$4.82	\$175.83
Alliant Energy Corporation	LNT	\$1.17	\$1.24	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$91.88
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$4.42	\$161.09
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$6.36	\$231.80
Black Hills Corporation	BKH	\$1.52	\$1.62	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$3.99	\$145.56
CenterPoint Energy, Inc.	CNP	\$0.81	\$0.83	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$1.69	\$61.59
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$3.50	\$127.54
Consolidated Edison, Inc.	ED	\$2.81	\$2.90	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$5.03	\$183.59
DTE Energy Company	DTE	\$3.37	\$3.56	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$7.79	\$283.93
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$127.01
Eversource Energy	ES	\$2.01	\$2.09	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55	\$166.07
Hawaiian Electric Industries, Inc.	HE	\$1.74	\$1.85	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$123.66
IDACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$188.64
NorthWestern Corporation	NWE	\$2.29	\$2.35	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$4.41	\$160.73
OGE Energy Corp.	OGE	\$1.25	\$1.34	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$2.36	\$85.90
Otter Tail Corporation	OTTR	\$1.34	\$1.39	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$109.08
Pinnacle West Capital Corporation	PNW	\$2.74	\$2.82	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$5.39	\$196.62
PNM Resources, Inc.	PNM	\$0.92	\$0.96	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$2.19	\$79.75
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$2.98	\$108.56
Southern Company	SO	\$2.38	\$2.41	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$3.79	\$138.19
WEC Energy Group, Inc.	WEC	\$2.17	\$2.26	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$155.35
Xcel Energy Inc.	XEL	\$1.54	\$1.65	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$3.28	\$119.78

Projected Annual Data Investor Cash Flows																		
		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
	Initial																	
	Outflow																	
Company	ALE	(\$70.43)	\$0.00	\$1.66	\$2.37	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$180.65
American Electric Power Company, Inc.	LNT	(\$39.93)	\$0.00	\$0.84	\$1.21	\$1.30	\$1.38	\$1.46	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$94.40
	AEE	(\$55.35)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$165.51
	AEP	(\$67.20)	\$0.00	\$2.22	\$3.17	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$238.15
	BKH	(\$53.02)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$149.55
	CNP	(\$26.97)	\$0.00	\$0.58	\$0.84	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$63.28
	CMS	(\$44.02)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$131.04
	ED	(\$76.71)	\$0.00	\$2.02	\$2.86	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$188.62
	DTE	(\$102.48)	\$0.00	\$2.42	\$3.47	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$291.72
	EE	(\$49.43)	\$0.00	\$0.98	\$1.40	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$130.49
	Eversource Energy	ES	(\$88.10)	\$0.00	\$1.44	\$2.07	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32
Hawaiian Electric Industries, Inc.	HE	(\$33.91)	\$0.00	\$1.25	\$1.79	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$127.05
	IDA	(\$85.10)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$193.81
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.64	\$2.32	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$165.14
	OGE	(\$31.83)	\$0.00	\$0.90	\$1.28	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$88.26
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.96	\$1.40	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$112.08
Pinnacle West Capital Corporation	PNW	(\$78.03)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$202.01
	PNM	(\$37.00)	\$0.00	\$0.66	\$0.94	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$81.94
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$111.54
Southern Company	SO	(\$44.14)	\$0.00	\$1.71	\$2.42	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$141.98
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.56	\$2.22	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$159.61
	XEL	(\$44.30)	\$0.00	\$1.10	\$1.58	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$123.06

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth - Setting Terminal P/E at 23.91
90 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	
		Stock				EPS Growth Rate Estimates				Long-Term				Iterative Solution		Terminal
		Value				Sustainable				Payout Ratio				IRR		P/E Ratio
		Line				Growth				Average				Growth		PEG Ratio
		First Call				Growth				2018				2027		
		Zacks				2020				2021				2028		
		Price				2021				2022				2025		
		2016				2017				2018				2024		
		2017				2018				2019				2026		
		2018				2019				2020				2027		
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Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	60.45%	60.67%	60.90%	61.12%	61.35%	61.57%	61.57%	61.57%	61.57%	61.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%	67.00%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EEL	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
OTTR	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	56.51%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.31	\$2.41	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$4.82	\$175.83
Alliant Energy Corporation	LNT	\$1.17	\$1.24	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$91.88
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$4.42	\$161.09
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$6.36	\$231.80
Black Hills Corporation	BKH	\$1.52	\$1.62	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$3.99	\$145.56
CenterPoint Energy, Inc.	CNP	\$0.81	\$0.83	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$1.69	\$61.59
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$3.50	\$127.54
Consolidated Edison, Inc.	ED	\$2.81	\$2.90	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$5.03	\$183.59
DTE Energy Company	DTE	\$3.37	\$3.56	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$7.79	\$283.93
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$127.01
Eversource Energy	ES	\$2.01	\$2.09	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55	\$166.07
Hawaiian Electric Industries, Inc.	HE	\$1.74	\$1.85	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$123.66
IDACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$188.64
NorthWestern Corporation	NWE	\$2.29	\$2.35	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$4.41	\$160.73
OGE Energy Corp.	OGE	\$1.25	\$1.34	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$2.36	\$85.90
OTTR	OTTR	\$1.34	\$1.39	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$109.08
Pinnacle West Capital Corporation	PNW	\$2.74	\$2.82	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$5.39	\$196.62
PNM Resources, Inc.	PNM	\$0.92	\$0.96	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$2.19	\$79.75
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$2.98	\$108.56
Southern Company	SO	\$2.38	\$2.41	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$3.79	\$138.19
WEC Energy Group, Inc.	WEC	\$2.17	\$2.26	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.63	\$3.83	\$4.04	\$4.26	\$155.35
Xcel Energy Inc.	XEL	\$1.54	\$1.65	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$3.28	\$119.78

Projected Annual Data																			
Investor Cash Flows																			
		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]	
Company	Ticker	Initial	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.66	\$2.37	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$180.65	
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.84	\$1.21	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$94.40	
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$165.51	
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.22	\$3.17	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$238.15	
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$149.55	
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.58	\$0.84	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$63.28	
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$131.04	
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.02	\$2.86	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$188.62	
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.42	\$3.47	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$291.72	
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.98	\$1.40	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$130.49	
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.44	\$2.07	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$170.63	
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.25	\$1.79	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$127.05	
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$193.81	
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.64	\$2.32	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$165.14	
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.90	\$1.28	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$88.26	
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.96	\$1.40	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$112.08	
Pinnacle West Capital Corporation	PNW	(\$80.50)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$202.01	
PNM Resources, Inc.	PNM	(\$38.09)	\$0.00	\$0.66	\$0.94	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$81.94	
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$111.54	
Southern Company	SO	(\$45.61)	\$0.00	\$1.71	\$2.42	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$141.98	
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.56	\$2.22	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$159.61	
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.10	\$1.58	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$123.06	

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth - Setting Terminal P/E at 23.91
180 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]				
		Stock				EPS Growth Rate Estimates				Payout Ratio				Terminal					
		Value				Long-Term				Iterative Solution				Terminal					
		Sustainable				Average				Proof				Terminal					
		Line				Growth				2021				Terminal					
		First Call				Growth				2021				Terminal					
		Zacks				Growth				2021				Terminal					
		Price				Growth				2021				Terminal					
		Ticket				Growth				2021				Terminal					
		[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]	
Company		Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALLETE, Inc.	ALE	\$3.14	\$3.31	\$3.49	\$3.69	\$3.89	\$4.10	\$4.33	\$4.56	\$4.81	\$5.08	\$5.35	\$5.65	\$5.95	\$6.27	\$6.62	\$6.97	\$7.35
	Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$2.65	\$2.80	\$2.92	\$3.11	\$3.28	\$3.46	\$3.64	\$3.84
	Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.88	\$4.12	\$4.37	\$4.63	\$4.90	\$5.17	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74
	American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.93	\$5.19	\$5.46	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$7.44	\$7.85	\$8.27	\$8.72	\$9.19	\$9.69
	Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.92	\$3.07	\$3.24	\$3.41	\$3.60	\$3.79	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$5.19	\$5.48	\$5.77	\$6.09
	CenterPoint Energy, Inc.	CNP	\$2.43	\$2.59	\$2.76	\$2.94	\$3.13	\$3.34	\$3.56	\$3.79	\$4.04	\$4.30	\$4.58	\$4.87	\$5.17	\$5.48	\$5.80	\$6.13	\$6.48
	CMS Energy Corporation	CMS	\$4.68	\$4.90	\$5.13	\$5.38	\$5.65	\$5.94	\$6.24	\$6.55	\$6.87	\$7.20	\$7.55	\$7.91	\$8.28	\$8.67	\$9.07	\$9.48	\$9.91
	Consolidated Edison, Inc.	ED	\$82.04	\$84.00	\$86.00	\$88.00	\$90.00	\$92.00	\$94.00	\$96.00	\$98.00	\$100.00	\$102.00	\$104.00	\$106.00	\$108.00	\$110.00	\$112.00	\$114.00
	DTE Energy Company	DTE	\$107.87	\$110.00	\$112.00	\$114.00	\$116.00	\$118.00	\$120.00	\$122.00	\$124.00	\$126.00	\$128.00	\$130.00	\$132.00	\$134.00	\$136.00	\$138.00	\$140.00
	El Paso Electric Company	EE	\$54.13	\$56.00	\$58.00	\$60.00	\$62.00	\$64.00	\$66.00	\$68.00	\$70.00	\$72.00	\$74.00	\$76.00	\$78.00	\$80.00	\$82.00	\$84.00	\$86.00
	Eversource Energy	ES	\$61.36	\$63.00	\$65.00	\$67.00	\$69.00	\$71.00	\$73.00	\$75.00	\$77.00	\$79.00	\$81.00	\$83.00	\$85.00	\$87.00	\$89.00	\$91.00	\$93.00
	Hawaiian Electric Industries, Inc.	HE	\$34.56	\$36.00	\$37.50	\$39.00	\$40.50	\$42.00	\$43.50	\$45.00	\$46.50	\$48.00	\$49.50	\$51.00	\$52.50	\$54.00	\$55.50	\$57.00	\$58.50
	IDACORP, Inc.	IDA	\$88.70	\$91.00	\$93.00	\$95.00	\$97.00	\$99.00	\$101.00	\$103.00	\$105.00	\$107.00	\$109.00	\$111.00	\$113.00	\$115.00	\$117.00	\$119.00	\$121.00
	NorthWestern Corporation	NWE	\$57.20	\$59.00	\$61.00	\$63.00	\$65.00	\$67.00	\$69.00	\$71.00	\$73.00	\$75.00	\$77.00	\$79.00	\$81.00	\$83.00	\$85.00	\$87.00	\$89.00
	OGE Energy Corp.	OGE	\$34.04	\$35.00	\$36.00	\$37.00	\$38.00	\$39.00	\$40.00	\$41.00	\$42.00	\$43.00	\$44.00	\$45.00	\$46.00	\$47.00	\$48.00	\$49.00	\$50.00
	Other Tail Corporation	OTTR	\$43.36	\$45.00	\$47.00	\$49.00	\$51.00	\$53.00	\$55.00	\$57.00	\$59.00	\$61.00	\$63.00	\$65.00	\$67.00	\$69.00	\$71.00	\$73.00	\$75.00
	Pinnacle West Capital Corporation	PNM	\$84.48	\$87.00	\$90.00	\$93.00	\$96.00	\$99.00	\$102.00	\$105.00	\$108.00	\$111.00	\$114.00	\$117.00	\$120.00	\$123.00	\$126.00	\$129.00	\$132.00
	PNM Resources, Inc.	PNM	\$40.17	\$42.00	\$44.00	\$46.00	\$48.00	\$50.00	\$52.00	\$54.00	\$56.00	\$58.00	\$60.00	\$62.00	\$64.00	\$66.00	\$68.00	\$70.00	\$72.00
	Portland General Electric Company	POR	\$44.58	\$46.00	\$47.50	\$49.00	\$50.50	\$52.00	\$53.50	\$55.00	\$56.50	\$58.00	\$59.50	\$61.00	\$62.50	\$64.00	\$65.50	\$67.00	\$68.50
	Southern Company	SO	\$47.85	\$49.00	\$50.20	\$51.40	\$52.60	\$53.80	\$55.00	\$56.20	\$57.40	\$58.60	\$59.80	\$61.00	\$62.20	\$63.40	\$64.60	\$65.80	\$67.00
WEC Energy Group, Inc.	WEC	\$64.49	\$66.00	\$67.50	\$69.00	\$70.50	\$72.00	\$73.50	\$75.00	\$76.50	\$78.00	\$79.50	\$81.00	\$82.50	\$84.00	\$85.50	\$87.00	\$88.50	
Xcel Energy Inc.	XEL	\$47.40	\$49.00	\$50.50	\$52.00	\$53.50	\$55.00	\$56.50	\$58.00	\$59.50	\$61.00	\$62.50	\$64.00	\$65.50	\$67.00	\$68.50	\$70.00	\$71.50	
		MEAN 10.02% MAX 13.75% MIN 7.64%																	
Projected Annual Earnings per Share		Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALLETE, Inc.	ALE	\$3.14	\$3.31	\$3.49	\$3.69	\$3.89	\$4.10	\$4.33	\$4.56	\$4.81	\$5.08	\$5.35	\$5.65	\$5.95	\$6.27	\$6.62	\$6.97	\$7.35
	Alliant Energy Corporation	LNT	\$1.65	\$1.74	\$1.83	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$2.65	\$2.80	\$2.92	\$3.11	\$3.28	\$3.46	\$3.64	\$3.84
	Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.88	\$4.12	\$4.37	\$4.63	\$4.90	\$5.17	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74
	American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.93	\$5.19	\$5.46	\$5.74	\$6.04	\$6.36	\$6.70	\$7.06	\$7.44	\$7.85	\$8.27	\$8.72	\$9.19	\$9.69
	Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.92	\$3.07	\$3.24	\$3.41	\$3.60	\$3.79	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$5.19	\$5.48	\$5.77	\$6.09
	CenterPoint Energy, Inc.	CNP	\$1.00	\$1.07	\$1.14	\$1.21	\$1.30	\$1.38	\$1.47	\$1.57	\$1.67	\$1.77	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.44	\$2.58
	CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.01	\$3.22	\$3.44	\$3.65	\$3.87	\$4.10	\$4.32	\$4.55	\$4.80	\$5.06	\$5.33
	Consolidated Edison, Inc.	ED	\$3.94	\$4.07	\$4.20	\$4.33	\$4.47	\$4.62	\$4.77	\$4.94	\$5.14	\$5.36	\$5.61	\$5.89	\$6.21	\$6.55	\$6.91	\$7.28	\$7.68
	El Paso Electric Company	EPE	\$4.83	\$5.12	\$5.44	\$5.75	\$6.12	\$6.49	\$6.89	\$7.30	\$7.73	\$8.18	\$8.64	\$9.12	\$9.61	\$10.13	\$10.68	\$11.26	\$11.87
	DTI Energy Company	DTI	\$2.39	\$2.51	\$2.63	\$2.75	\$2.89	\$3.03	\$3.17	\$3.33	\$3.50	\$3.68	\$3.87	\$4.08	\$4.30	\$4.53	\$4.78	\$5.04	\$5.31
	Eversource Energy	ES	\$2.96	\$3.12	\$3.30	\$3.48	\$3.67	\$3.87	\$4.09	\$4.31	\$4.55	\$4.80	\$5.06	\$5.33	\$5.62	\$5.93	\$6.25	\$6.59	\$6.94
	Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.41	\$2.53	\$2.65	\$2.79	\$2.93	\$3.08	\$3.23	\$3.40	\$3.58	\$3.77	\$3.97	\$4.19	\$4.41	\$4.65	\$4.90	\$5.17
	IDACORP, Inc.	IDA	\$3.94	\$4.08	\$4.23	\$4.38	\$4.53	\$4.69	\$4.86	\$5.05	\$5.26	\$5.50	\$5.76	\$6.06	\$6.39	\$6.73	\$7.10	\$7.48	\$7.89
	NorthWestern Corporation	NWE	\$3.39	\$3.51	\$3.63	\$3.75	\$3.88	\$4.02	\$4.15	\$4.31	\$4.49	\$4.69	\$4.91	\$5.16	\$5.44	\$5.74	\$6.05	\$6.38	\$6.72
OGE Energy Corp.	OGE	\$1.69	\$1.76	\$1.84	\$1.92	\$2.00	\$2.09	\$2.18	\$2.27	\$2.38	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.23	\$3.41	\$3.59	
Other Tail Corporation	OTTR	\$1.90	\$1.73	\$1.86	\$2.01	\$2.17	\$2.35	\$2.53	\$2.72	\$2.92	\$3.11	\$3.31	\$3.50	\$3.69	\$3.89	\$4.10	\$4.33	\$4.56	
Pinnacle West Capital Corporation	PNM	\$3.95	\$4.11	\$4.28	\$4.45	\$4.63	\$4.82	\$5.01	\$5.22	\$5.46	\$5.72	\$6.00	\$6.31	\$6.66	\$7.02	\$7.40	\$7.80	\$8.22	
PNM Resources, Inc.	PNM	\$1.45	\$1.54	\$1.62	\$1.70	\$1.79	\$1.88	\$1.98	\$2.08	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$2.85	\$3.00	\$3.16	\$3.34	
Portland General Electric Company	POR	\$2.16	\$2.25	\$2.34	\$2.44	\$2.54	\$2.65	\$2.76	\$2.88	\$3.01	\$3.15	\$3.31	\$3.49	\$3.67	\$3.87	\$4.08	\$4.31	\$4.54	
Southern Company	SO	\$2.83	\$2.94	\$3.05	\$3.17	\$3.29	\$3.41	\$3.54	\$3.69	\$3.85	\$4.02	\$4.22	\$4.44	\$4.68	\$4.93	\$5.20	\$5.48	\$5.78	
WEC Energy Group, Inc.	WEC	\$2.96	\$3.10	\$3.24	\$3.40	\$3.56	\$3.72	\$3.90	\$4.08	\$4.29	\$4.54	\$4.74	\$4.99	\$5.26	\$5.54	\$5.84	\$6.16	\$6.50	
Xcel Energy Inc.	XEL	\$2.21	\$2.32	\$2.44	\$2.56	\$2.70	\$2.83	\$2.98	\$3.13	\$3.29	\$3.47	\$3.65	\$3.85	\$4.05	\$4.27	\$4.51	\$4.75	\$5.01	

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.20%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.67%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	67.00%	67.00%	67.00%	67.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
OTTR	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	56.51%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.31	\$2.41	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$4.82	\$175.83
Alliant Energy Corporation	LNT	\$1.17	\$1.24	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$2.52	\$91.88
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$4.42	\$161.09
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$6.36	\$231.80
Black Hills Corporation	BKH	\$1.52	\$1.62	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$3.99	\$145.56
CenterPoint Energy, Inc.	CNP	\$0.81	\$0.83	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$1.69	\$61.59
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$3.50	\$127.54
Consolidated Edison, Inc.	ED	\$2.81	\$2.90	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$5.03	\$183.59
DTE Energy Company	DTE	\$3.37	\$3.56	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$7.79	\$283.93
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$127.01
Eversource Energy	ES	\$2.01	\$2.09	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55	\$166.07
Hawaiian Electric Industries, Inc.	HE	\$1.74	\$1.85	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$3.39	\$123.66
IDACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$5.17	\$188.64
NorthWestern Corporation	NWE	\$2.29	\$2.35	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$4.41	\$160.73
OGE Energy Corp.	OGE	\$1.25	\$1.34	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$2.36	\$85.90
OTTR	OTTR	\$1.34	\$1.39	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$109.08
Pinnacle West Capital Corporation	PNW	\$2.74	\$2.82	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$5.39	\$196.62
PNM Resources, Inc.	PNM	\$0.92	\$0.96	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$2.19	\$79.75
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$2.98	\$108.56
Southern Company	SO	\$2.38	\$2.41	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$3.79	\$138.19
WEC Energy Group, Inc.	WEC	\$2.17	\$2.26	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.63	\$3.83	\$4.04	\$4.26	\$155.35
Xcel Energy Inc.	XEL	\$1.54	\$1.65	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$3.28	\$119.78

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.66	\$2.37	\$2.51	\$2.63	\$2.78	\$2.94	\$3.11	\$3.30	\$3.49	\$3.69	\$3.90	\$4.11	\$4.34	\$4.57	\$180.65
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.84	\$1.21	\$1.30	\$1.38	\$1.45	\$1.54	\$1.63	\$1.72	\$1.82	\$1.93	\$2.04	\$2.15	\$2.27	\$2.39	\$94.40
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.33	\$1.91	\$2.07	\$2.19	\$2.36	\$2.54	\$2.73	\$2.93	\$3.13	\$3.35	\$3.58	\$3.77	\$3.97	\$4.19	\$165.51
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.22	\$3.17	\$3.32	\$3.44	\$3.64	\$3.85	\$4.08	\$4.32	\$4.58	\$4.85	\$5.14	\$5.42	\$5.72	\$6.03	\$238.15
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.09	\$1.56	\$1.73	\$1.84	\$2.00	\$2.17	\$2.35	\$2.55	\$2.76	\$2.99	\$3.23	\$3.41	\$3.59	\$3.79	\$149.55
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.58	\$0.84	\$0.86	\$0.88	\$0.95	\$1.01	\$1.08	\$1.15	\$1.22	\$1.29	\$1.37	\$1.44	\$1.52	\$1.60	\$63.28
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$1.00	\$1.44	\$1.60	\$1.71	\$1.86	\$2.01	\$2.16	\$2.32	\$2.49	\$2.66	\$2.83	\$2.98	\$3.15	\$3.32	\$131.04
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.02	\$2.86	\$3.00	\$3.10	\$3.19	\$3.29	\$3.41	\$3.55	\$3.70	\$3.88	\$4.07	\$4.30	\$4.53	\$4.77	\$188.62
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.42	\$3.47	\$3.75	\$3.96	\$4.25	\$4.55	\$4.87	\$5.20	\$5.55	\$5.92	\$6.30	\$6.64	\$7.00	\$7.38	\$291.72
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.98	\$1.40	\$1.64	\$1.79	\$1.90	\$2.03	\$2.16	\$2.31	\$2.47	\$2.64	\$2.82	\$2.97	\$3.13	\$3.30	\$130.49
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.44	\$2.07	\$2.16	\$2.25	\$2.41	\$2.59	\$2.78	\$2.99	\$3.21	\$3.44	\$3.69	\$3.89	\$4.10	\$4.32	\$170.63
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.25	\$1.79	\$1.96	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.89	\$3.05	\$3.22	\$127.05
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.73	\$2.45	\$2.67	\$2.82	\$2.96	\$3.11	\$3.28	\$3.47	\$3.69	\$3.92	\$4.19	\$4.41	\$4.65	\$4.91	\$193.81
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.64	\$2.32	\$2.42	\$2.49	\$2.60	\$2.72	\$2.85	\$3.00	\$3.17	\$3.36	\$3.57	\$3.76	\$3.97	\$4.18	\$165.14
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.90	\$1.28	\$1.44	\$1.54	\$1.58	\$1.63	\$1.67	\$1.73	\$1.78	\$1.84	\$1.91	\$2.01	\$2.12	\$2.23	\$88.26
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.96	\$1.40	\$1.43	\$1.48	\$1.61	\$1.74	\$1.87	\$2.01	\$2.15	\$2.28	\$2.42	\$2.55	\$2.69	\$2.84	\$112.08
Pinnacle West Capital Corporation	PNW	(\$84.48)	\$0.00	\$1.96	\$2.79	\$2.90	\$2.99	\$3.13	\$3.29	\$3.47	\$3.66	\$3.87	\$4.11	\$4.36	\$4.60	\$4.85	\$5.11	\$202.01
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.66	\$0.94	\$1.01	\$1.05	\$1.13	\$1.22	\$1.32	\$1.42	\$1.53	\$1.64	\$1.77	\$1.87	\$1.97	\$2.07	\$81.94
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$0.99	\$1.41	\$1.43	\$1.46	\$1.56	\$1.67	\$1.79	\$1.93	\$2.07	\$2.23	\$2.41	\$2.54	\$2.68	\$2.82	\$111.54
Southern Company	SO	(\$47.84)	\$0.00	\$1.71	\$2.42	\$2.43	\$2.46	\$2.52	\$2.59	\$2.66	\$2.75	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.59	\$141.98
WEC Energy Group, Inc.	WEC	(\$64.49)	\$0.00	\$1.56	\$2.22	\$2.36	\$2.46	\$2.57	\$2.69	\$2.82	\$2.96	\$3.11	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$159.61
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.10	\$1.58	\$1.77	\$1.90	\$1.99	\$2.08	\$2.19	\$2.29	\$2.41	\$2.53	\$2.66	\$2.80	\$2.95	\$3.12	\$123.06

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth - Setting Terminal P/E at 23.91
30 Day Low Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	EPS Growth Rate Estimates			[6]	Long-Term			Payout Ratio			[11]	[12]	[13]	[14]	
		Stock			Value	Sustainable							Iterative Solution	Terminal	Terminal			
Company	Ticker	Price	Zacks	First Call	Line	Growth	Low	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio			
ALLETE, Inc.	ALE	\$70.43	6.60%	6.00%	4.50%	4.87%	4.50%	5.43%	66.00%	64.00%	65.57%	\$0.00	9.23%	23.91	4.41			
Alliant Energy Corporation	LNT	\$39.93	5.30%	5.45%	6.50%	4.44%	4.44%	5.43%	64.00%	64.00%	65.57%	\$0.00	8.47%	23.91	4.41			
Ameren Corporation	AEE	\$55.35	6.90%	6.37%	7.50%	4.73%	4.73%	5.43%	61.00%	60.00%	65.57%	\$0.00	10.05%	23.91	4.41			
American Electric Power Company, Inc.	AEP	\$67.20	5.40%	5.63%	4.50%	5.37%	4.50%	5.43%	66.00%	63.00%	65.57%	\$0.00	12.58%	23.91	4.41			
Black Hills Corporation	BKH	\$53.02	4.60%	4.07%	7.50%	5.22%	4.07%	5.43%	52.00%	54.00%	65.57%	\$0.00	9.62%	23.91	4.41			
CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA	5.65%	5.65%	5.43%	71.00%	64.00%	65.57%	\$0.00	8.35%	23.91	4.41			
CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.50%	7.13%	6.30%	5.43%	61.00%	61.00%	65.57%	\$0.00	10.47%	23.91	4.41			
Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%	2.82%	2.82%	5.43%	67.00%	67.00%	65.57%	\$0.00	9.44%	23.91	4.41			
DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.50%	6.31%	5.58%	5.43%	62.00%	61.00%	65.57%	\$0.00	10.42%	23.91	4.41			
El Paso Electric Company	EE	\$49.44	5.10%	5.20%	5.00%	4.08%	4.08%	5.43%	52.00%	59.00%	65.57%	\$0.00	9.48%	23.91	4.41			
Eversource Energy	ES	\$58.10	5.80%	5.65%	6.50%	4.12%	4.12%	5.43%	61.00%	58.00%	65.57%	\$0.00	10.06%	23.91	4.41			
Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%	3.47%	1.50%	5.43%	69.00%	71.00%	65.57%	\$0.00	11.27%	23.91	4.41			
IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%	3.56%	3.10%	5.43%	57.00%	60.00%	65.57%	\$0.00	8.45%	23.91	4.41			
NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	4.50%	3.76%	2.40%	5.43%	63.00%	62.00%	65.57%	\$0.00	11.24%	23.91	4.41			
OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%	2.89%	2.50%	5.43%	68.00%	74.00%	65.57%	\$0.00	9.66%	23.91	4.41			
Otter Tail Corporation	OTTR	\$47.67	NA	9.00%	7.00%	7.88%	7.00%	5.43%	72.00%	63.00%	65.57%	\$0.00	9.37%	23.91	4.41			
Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.50%	4.03%	3.00%	5.43%	64.00%	62.00%	65.57%	\$0.00	9.31%	23.91	4.41			
PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%	3.54%	3.54%	5.43%	57.00%	56.00%	65.57%	\$0.00	7.26%	23.91	4.41			
Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%	4.24%	2.90%	5.43%	59.00%	55.00%	65.57%	\$0.00	9.70%	23.91	4.41			
Southern Company	SO	\$44.14	4.50%	2.70%	4.00%	4.02%	2.70%	5.43%	78.00%	72.00%	65.57%	\$0.00	11.78%	23.91	4.41			
WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%	4.23%	4.20%	5.43%	67.00%	66.00%	65.57%	\$0.00	9.77%	23.91	4.41			
Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%	3.90%	3.90%	5.43%	63.00%	67.00%	65.57%	\$0.00	9.90%	23.91	4.41			
												MEAN	9.81%					
												MAX	12.58%					
												MIN	7.26%					
Projected Annual Earnings per Share		[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	\$3.14	\$3.28	\$3.43	\$3.58	\$3.74	\$3.91	\$4.09	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.49	\$5.79	\$6.10	\$6.44	\$6.79
Alliant Energy Corporation	LNT	\$1.65	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.14	\$2.24	\$2.35	\$2.46	\$2.59	\$2.72	\$2.87	\$3.03	\$3.19	\$3.37	\$3.55
Ameren Corporation	AEE	\$2.68	\$2.81	\$2.94	\$3.08	\$3.22	\$3.38	\$3.54	\$3.71	\$3.89	\$4.09	\$4.30	\$4.53	\$4.78	\$5.04	\$5.31	\$5.60	\$5.90
American Electric Power Company, Inc.	AEP	\$4.23	\$4.42	\$4.62	\$4.83	\$5.04	\$5.27	\$5.51	\$5.76	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$7.80	\$8.22	\$8.67	\$9.14
Black Hills Corporation	BKH	\$2.63	\$2.74	\$2.85	\$2.96	\$3.09	\$3.21	\$3.34	\$3.48	\$3.64	\$3.82	\$4.01	\$4.21	\$4.44	\$4.68	\$4.94	\$5.21	\$5.49
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.06	\$1.12	\$1.18	\$1.25	\$1.32	\$1.39	\$1.47	\$1.55	\$1.64	\$1.73	\$1.82	\$1.92	\$2.02	\$2.13	\$2.25	\$2.37
CMS Energy Corporation	CMS	\$1.98	\$2.10	\$2.24	\$2.38	\$2.53	\$2.69	\$2.86	\$3.03	\$3.21	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$4.69	\$4.95
Consolidated Edison, Inc.	ED	\$3.94	\$4.05	\$4.17	\$4.28	\$4.40	\$4.53	\$4.66	\$4.81	\$4.99	\$5.19	\$5.43	\$5.70	\$6.01	\$6.33	\$6.68	\$7.04	\$7.42
DTE Energy Company	DTE	\$4.83	\$5.10	\$5.38	\$5.68	\$6.00	\$6.34	\$6.69	\$7.06	\$7.45	\$7.86	\$8.29	\$8.75	\$9.22	\$9.72	\$10.25	\$10.80	\$11.39
El Paso Electric Company	EE	\$2.39	\$2.49	\$2.59	\$2.69	\$2.80	\$2.92	\$3.04	\$3.17	\$3.31	\$3.47	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$4.99
Eversource Energy	ES	\$2.96	\$3.08	\$3.21	\$3.34	\$3.48	\$3.62	\$3.77	\$3.93	\$4.11	\$4.31	\$4.52	\$4.76	\$5.02	\$5.29	\$5.58	\$5.88	\$6.20
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.32	\$2.36	\$2.39	\$2.43	\$2.47	\$2.50	\$2.56	\$2.63	\$2.72	\$2.83	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87
IDACORP, Inc.	IDA	\$3.94	\$4.06	\$4.19	\$4.32	\$4.45	\$4.59	\$4.73	\$4.90	\$5.09	\$5.30	\$5.55	\$5.83	\$6.15	\$6.48	\$6.83	\$7.20	\$7.59
NorthWestern Corporation	NWE	\$3.39	\$3.47	\$3.55	\$3.64	\$3.73	\$3.82	\$3.91	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.99	\$5.26	\$5.55	\$5.85	\$6.17
OGE Energy Corp.	OGE	\$1.69	\$1.73	\$1.78	\$1.82	\$1.87	\$1.91	\$1.96	\$2.02	\$2.09	\$2.17	\$2.27	\$2.38	\$2.51	\$2.65	\$2.79	\$2.94	\$3.10
Otter Tail Corporation	OTTR	\$1.60	\$1.71	\$1.83	\$1.96	\$2.10	\$2.24	\$2.40	\$2.56	\$2.73	\$2.90	\$3.07	\$3.25	\$3.42	\$3.61	\$3.80	\$4.01	\$4.23
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.07	\$4.19	\$4.32	\$4.45	\$4.58	\$4.72	\$4.88	\$5.06	\$5.28	\$5.52	\$5.80	\$6.11	\$6.44	\$6.79	\$7.16	\$7.55
PNM Resources, Inc.	PNM	\$1.46	\$1.51	\$1.57	\$1.62	\$1.68	\$1.74	\$1.80	\$1.87	\$1.95	\$2.03	\$2.13	\$2.24	\$2.36	\$2.49	\$2.63	\$2.77	\$2.92
Portland General Electric Company	POR	\$2.16	\$2.22	\$2.29	\$2.35	\$2.42	\$2.49	\$2.56	\$2.65	\$2.75	\$2.86	\$2.99	\$3.14	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09
Southern Company	SO	\$2.83	\$2.91	\$2.98	\$3.07	\$3.15	\$3.23	\$3.32	\$3.43	\$3.55	\$3.69	\$3.86	\$4.05	\$4.27	\$4.50	\$4.75	\$5.01	\$5.28
WEC Energy Group, Inc.	WEC	\$2.96	\$3.08	\$3.21	\$3.35	\$3.49	\$3.64	\$3.79	\$3.96	\$4.14	\$4.34	\$4.55	\$4.79	\$5.05	\$5.33	\$5.62	\$5.92	\$6.24
Xcel Energy Inc.	XEL	\$2.21	\$2.30	\$2.39	\$2.48	\$2.58	\$2.68	\$2.78	\$2.90	\$3.02	\$3.16	\$3.32	\$3.49	\$3.68	\$3.88	\$4.09	\$4.31	\$4.55

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.00%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$162.26
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$2.33	\$84.86
Ameren Corporation	AEE	\$1.79	\$1.87	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$141.12
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$218.58
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$131.23
CenterPoint Energy, Inc.	CNP	\$0.79	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$1.55	\$56.70
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$118.30
Consolidated Edison, Inc.	ED	\$2.79	\$2.87	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$4.87	\$177.51
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$7.47	\$272.37
El Paso Electric Company	EE	\$1.35	\$1.46	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$3.27	\$119.35
Eversource Energy	ES	\$1.96	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$148.27
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$92.44
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$181.58
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$147.47
OGE Energy Corp.	OGE	\$1.21	\$1.28	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$74.13
Other Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$101.09
Pinnacle West Capital Corporation	PNW	\$2.68	\$2.73	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95	\$180.55
PNM Resources, Inc.	PNM	\$0.89	\$0.92	\$0.95	\$0.97	\$1.03	\$1.10	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$1.91	\$69.77
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$97.92
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$126.20
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$149.27
Xcel Energy Inc.	XEL	\$1.50	\$1.59	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$2.98	\$108.77

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow																
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$166.71
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.83	\$1.18	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$87.19
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.29	\$1.84	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$144.99
American Electric Power Company, Inc.	AEP	(\$67.20)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$224.58
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$134.83
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.57	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$58.26
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$121.54
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.00	\$2.83	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$182.38
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$279.84
El Paso Electric Company	EE	(\$49.43)	\$0.00	\$0.97	\$1.37	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$122.62
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.41	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$152.34
Hawaiian Electric Industries, Inc.	HE	(\$33.92)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$94.98
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.71	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$186.56
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$151.51
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$76.16
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$103.86
Pinnacle West Capital Corporation	PNW	(\$78.03)	\$0.00	\$1.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$185.50
PNM Resources, Inc.	PNM	(\$37.00)	\$0.00	\$0.64	\$0.91	\$0.95	\$0.97	\$1.03	\$1.10	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$71.68
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$100.61
Southern Company	SO	(\$44.14)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$129.66
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$153.36
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.08	\$1.53	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$111.76

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth - Setting Terminal P/E at 23.91
90 Day Low Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
		Stock		EPS Growth Rate Estimates		Value		Long-Term		Payout Ratio		Iterative Solution		Terminal	
		Ticker	Price	Zacks	First Call	Growth	Low	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio
Company	ALLETE, Inc.	ALE	\$71.97	6.68%	6.00%	4.87%	4.50%	5.43%	66.00%	64.00%	65.57%	(\$0.00)	9.03%	23.91	4.41
	Alliant Energy Corporation	LNT	\$40.49	5.30%	5.45%	4.44%	4.44%	5.43%	64.00%	64.00%	65.57%	\$0.00	8.34%	23.91	4.41
	Ameren Corporation	AEE	\$66.61	6.90%	6.37%	4.73%	4.73%	5.43%	61.00%	60.00%	65.57%	\$0.00	9.84%	23.91	4.41
	American Electric Power Company, Inc.	AEP	\$59.11	5.40%	5.63%	4.50%	4.50%	5.43%	66.00%	63.00%	65.57%	(\$0.00)	12.29%	23.91	4.41
	Black Hills Corporation	BKH	\$54.72	4.60%	4.07%	5.22%	4.07%	5.43%	52.00%	54.00%	65.57%	(\$0.00)	9.33%	23.91	4.41
	CenterPoint Energy, Inc.	CNP	\$27.48	5.90%	8.49%	NA	5.65%	5.43%	71.00%	64.00%	65.57%	\$0.00	8.18%	23.91	4.41
	CMS Energy Corporation	CMS	\$44.96	6.30%	7.04%	8.50%	7.13%	5.43%	61.00%	61.00%	65.57%	(\$0.00)	10.27%	23.91	4.41
	Consolidated Edison, Inc.	ED	\$79.65	4.00%	3.11%	3.00%	2.82%	5.43%	67.00%	67.00%	65.57%	\$0.00	9.08%	23.91	4.41
	DTE Energy Company	DTE	\$104.99	6.00%	5.58%	6.31%	5.58%	5.43%	62.00%	61.00%	65.57%	(\$0.00)	10.19%	23.91	4.41
	El Paso Electric Company	EE	\$51.94	5.10%	5.20%	5.00%	4.08%	5.43%	52.00%	59.00%	65.57%	\$0.00	9.02%	23.91	4.41
	Eversource Energy	ES	\$60.18	5.80%	5.65%	6.50%	4.12%	5.43%	61.00%	58.00%	65.57%	(\$0.00)	9.73%	23.91	4.41
	Hawaiian Electric Industries, Inc.	HE	\$34.52	6.70%	8.50%	1.50%	3.47%	5.43%	69.00%	71.00%	65.57%	(\$0.00)	11.09%	23.91	4.41
	IDACORP, Inc.	IDA	\$86.65	4.10%	3.10%	3.50%	3.10%	5.43%	57.00%	60.00%	65.57%	(\$0.00)	8.29%	23.91	4.41
	NorthWestern Corporation	NWE	\$54.69	2.40%	3.12%	4.50%	3.76%	5.43%	63.00%	62.00%	65.57%	(\$0.00)	10.81%	23.91	4.41
Company	OGE Energy Corp.	OGE	\$32.08	6.00%	5.80%	2.50%	2.89%	5.43%	68.00%	74.00%	65.57%	(\$0.00)	9.59%	23.91	4.41
	Otter Tail Corporation	OTTR	\$42.77	NA	9.00%	7.00%	7.88%	5.43%	72.00%	63.00%	65.57%	(\$0.00)	9.35%	23.91	4.41
	Pinnacle West Capital Corporation	PNW	\$80.50	3.00%	3.63%	5.00%	4.03%	5.43%	64.00%	62.00%	65.57%	(\$0.00)	9.02%	23.91	4.41
	PNM Resources, Inc.	PNM	\$38.09	5.40%	4.30%	7.50%	3.54%	5.43%	57.00%	56.00%	65.57%	(\$0.00)	7.00%	23.91	4.41
	Portland General Electric Company	POR	\$42.23	2.90%	3.50%	6.00%	4.24%	5.43%	59.00%	55.00%	65.57%	(\$0.00)	9.16%	23.91	4.41
	Southern Company	SO	\$45.61	4.50%	2.70%	4.00%	4.02%	5.43%	78.00%	72.00%	65.57%	(\$0.00)	11.44%	23.91	4.41
	WEC Energy Group, Inc.	WEC	\$63.20	4.20%	4.34%	6.00%	4.20%	5.43%	67.00%	66.00%	65.57%	(\$0.00)	9.53%	23.91	4.41
	Xcel Energy Inc.	XEL	\$45.71	5.80%	6.15%	4.50%	3.90%	5.43%	63.00%	67.00%	65.57%	MEAN	9.55%	23.91	4.41
												MAX	12.29%		
												MIN	7.00%		
Projected Annual Earnings per Share		[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]
Company	ALLETE, Inc.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	Alliant Energy Corporation	\$3.14	\$3.28	\$3.43	\$3.58	\$3.74	\$3.91	\$4.09	\$4.28	\$4.49	\$4.71	\$4.95	\$5.21	\$5.49	\$5.79
	Ameren Corporation	\$1.65	\$1.72	\$1.80	\$1.88	\$1.96	\$2.05	\$2.14	\$2.24	\$2.35	\$2.46	\$2.59	\$2.72	\$2.87	\$3.03
	American Electric Power Company, Inc.	\$4.23	\$4.42	\$4.62	\$4.83	\$5.04	\$5.27	\$5.51	\$5.76	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$7.80
	Black Hills Corporation	\$2.63	\$2.74	\$2.85	\$2.96	\$3.09	\$3.21	\$3.34	\$3.48	\$3.64	\$3.82	\$4.01	\$4.21	\$4.44	\$4.68
	CenterPoint Energy, Inc.	\$1.00	\$1.06	\$1.12	\$1.18	\$1.25	\$1.32	\$1.39	\$1.47	\$1.55	\$1.64	\$1.73	\$1.82	\$1.92	\$2.02
	CMS Energy Corporation	\$1.98	\$2.10	\$2.24	\$2.38	\$2.53	\$2.69	\$2.86	\$3.03	\$3.21	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22
	Consolidated Edison, Inc.	\$3.94	\$4.05	\$4.17	\$4.28	\$4.40	\$4.53	\$4.66	\$4.81	\$4.99	\$5.19	\$5.43	\$5.70	\$6.01	\$6.33
	DTE Energy Company	\$4.83	\$5.10	\$5.38	\$5.68	\$6.00	\$6.34	\$6.69	\$7.06	\$7.45	\$7.86	\$8.29	\$8.75	\$9.22	\$9.72
	El Paso Electric Company	\$2.96	\$2.49	\$2.59	\$2.69	\$2.80	\$2.92	\$3.04	\$3.17	\$3.31	\$3.47	\$3.64	\$3.83	\$4.04	\$4.26
	Eversource Energy	\$2.39	\$2.49	\$2.59	\$2.69	\$2.80	\$2.92	\$3.04	\$3.17	\$3.31	\$3.47	\$3.64	\$3.83	\$4.04	\$4.26
	Hawaiian Electric Industries, Inc.	\$2.29	\$2.32	\$2.36	\$2.39	\$2.43	\$2.47	\$2.50	\$2.56	\$2.63	\$2.72	\$2.83	\$2.97	\$3.13	\$3.30
	IDACORP, Inc.	\$3.94	\$4.06	\$4.19	\$4.32	\$4.45	\$4.59	\$4.73	\$4.90	\$5.09	\$5.30	\$5.55	\$5.83	\$6.15	\$6.48
	NorthWestern Corporation	\$3.99	\$3.47	\$3.55	\$3.64	\$3.73	\$3.82	\$3.91	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.99	\$5.26
Company	OGE Energy Corp.	\$1.69	\$1.73	\$1.78	\$1.82	\$1.87	\$1.91	\$1.96	\$2.02	\$2.09	\$2.17	\$2.27	\$2.38	\$2.51	\$2.65
	Otter Tail Corporation	\$1.60	\$1.71	\$1.83	\$1.96	\$2.10	\$2.24	\$2.40	\$2.56	\$2.73	\$2.90	\$3.07	\$3.25	\$3.42	\$3.61
	Pinnacle West Capital Corporation	\$3.95	\$4.07	\$4.19	\$4.32	\$4.45	\$4.58	\$4.72	\$4.88	\$5.06	\$5.28	\$5.52	\$5.80	\$6.11	\$6.44
	PNM Resources, Inc.	\$1.46	\$1.51	\$1.57	\$1.62	\$1.68	\$1.74	\$1.80	\$1.87	\$1.95	\$2.03	\$2.13	\$2.24	\$2.36	\$2.49
	Portland General Electric Company	\$2.16	\$2.22	\$2.29	\$2.35	\$2.42	\$2.49	\$2.56	\$2.65	\$2.75	\$2.86	\$2.99	\$3.14	\$3.31	\$3.49
	Southern Company	\$2.63	\$2.91	\$2.98	\$3.07	\$3.15	\$3.23	\$3.32	\$3.43	\$3.55	\$3.69	\$3.86	\$4.05	\$4.27	\$4.50
	WEC Energy Group, Inc.	\$2.96	\$3.08	\$3.21	\$3.35	\$3.49	\$3.64	\$3.79	\$3.96	\$4.14	\$4.34	\$4.55	\$4.79	\$5.05	\$5.33
	Xcel Energy Inc.	\$2.21	\$2.30	\$2.39	\$2.48	\$2.58	\$2.68	\$2.78	\$2.90	\$3.02	\$3.16	\$3.32	\$3.49	\$3.68	\$3.88

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.00%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
OTter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$162.26
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$2.33	\$84.86
Ameren Corporation	AEE	\$1.79	\$1.87	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$141.12
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$218.58
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$131.23
CenterPoint Energy, Inc.	CNP	\$0.79	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$1.55	\$56.70
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$118.30
Consolidated Edison, Inc.	ED	\$2.79	\$2.87	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$4.87	\$177.51
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$7.47	\$272.37
El Paso Electric Company	EE	\$1.35	\$1.46	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$3.27	\$119.35
Eversource Energy	ES	\$1.96	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$148.27
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$92.44
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$181.58
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$147.47
OGE Energy Corp.	OGE	\$1.21	\$1.28	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$74.13
OTter Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$101.09
Pinnacle West Capital Corporation	PNW	\$2.68	\$2.73	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95	\$180.55
PNM Resources, Inc.	PNM	\$0.89	\$0.92	\$0.95	\$0.97	\$1.03	\$1.10	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$1.91	\$69.77
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$97.92
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$126.20
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$149.27
Xcel Energy Inc.	XEL	\$1.50	\$1.59	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$2.98	\$108.77

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow																
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$166.71
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.83	\$1.18	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$87.19
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.29	\$1.84	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$144.99
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$224.56
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$134.83
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.57	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$58.26
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$121.54
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.00	\$2.83	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$182.38
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$279.84
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.97	\$1.37	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$122.62
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.41	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$152.34
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$94.98
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.71	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$186.56
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.61	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$151.51
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$76.16
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$103.86
Pinnacle West Capital Corporation	PNW	(\$80.50)	\$0.00	\$2.72	\$2.79	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$185.50
PNM Resources, Inc.	PNM	(\$38.09)	\$0.00	\$0.64	\$0.91	\$0.95	\$0.97	\$1.03	\$1.10	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$71.68
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$100.61
Southern Company	SO	(\$45.61)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$129.66
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$153.36
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.08	\$1.53	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$111.76

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth - Setting Terminal P/E at 23.91
180 Day Low Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
		Stock		EPS Growth Rate Estimates				Long-Term		Payout Ratio		Iterative Solution		Terminal	
		Ticker	Price	Zacks	First Call	Line	Growth	Low	Growth	2018	2021	2028	Proof	IRR	PEG Ratio
Company															
ALLETE, Inc.	Alliant Energy Corporation	ALE	\$74.60	6.60%	6.00%	4.50%	5.43%	4.50%	5.43%	66.00%	64.00%	65.57%	8.69%	23.91	4.41
	Ameren Corporation	LNT	\$41.66	5.30%	5.45%	4.44%	5.43%	4.44%	5.43%	64.00%	64.00%	65.57%	8.08%	23.91	4.41
	American Electric Power Company, Inc.	AEE	\$58.45	6.90%	6.37%	7.50%	4.73%	4.73%	5.43%	61.00%	60.00%	65.57%	9.54%	23.91	4.41
	Black Hills Corporation	BKH	\$71.18	5.40%	5.63%	4.50%	5.37%	4.50%	5.43%	66.00%	63.00%	65.57%	12.00%	23.91	4.41
	CenterPoint Energy, Inc.	CEP	\$60.62	4.60%	4.07%	7.50%	5.22%	4.07%	5.43%	52.00%	54.00%	65.57%	8.40%	23.91	4.41
	CMS Energy Corporation	CNP	\$28.43	5.90%	8.49%	NA	5.65%	5.65%	5.43%	71.00%	64.00%	65.57%	7.87%	23.91	4.41
	Consolidated Edison, Inc.	CMS	\$46.48	6.30%	7.04%	8.50%	7.13%	6.30%	5.43%	61.00%	61.00%	65.57%	9.96%	23.91	4.41
	DTE Energy Company	ED	\$82.04	4.00%	3.11%	3.00%	2.82%	2.82%	5.43%	67.00%	67.00%	65.57%	8.81%	23.91	4.41
	El Paso Electric Company	DTE	\$107.87	6.00%	5.58%	6.50%	6.31%	5.58%	5.43%	62.00%	61.00%	65.57%	9.94%	23.91	4.41
	Eversource Energy	EE	\$54.13	5.10%	5.20%	5.00%	4.08%	4.08%	5.43%	52.00%	59.00%	65.57%	8.64%	23.91	4.41
	Hawaiian Electric Industries, Inc.	ES	\$61.36	5.80%	5.65%	6.50%	4.12%	4.12%	5.43%	61.00%	58.00%	65.57%	9.55%	23.91	4.41
	IDACORP, Inc.	HE	\$34.56	6.70%	8.50%	1.50%	3.47%	1.50%	5.43%	69.00%	71.00%	65.57%	11.07%	23.91	4.41
	NorthWestern Corporation	IDA	\$88.70	4.10%	3.10%	3.50%	3.56%	3.10%	5.43%	57.00%	60.00%	65.57%	8.07%	23.91	4.41
	OGE Energy Corp.	NWE	\$57.20	2.40%	3.12%	4.50%	3.76%	2.40%	5.43%	63.00%	62.00%	65.57%	10.38%	23.91	4.41
	Otter Tail Corporation	OGE	\$34.04	6.00%	5.80%	2.50%	2.89%	2.50%	5.43%	68.00%	74.00%	65.57%	9.02%	23.91	4.41
Pinnacle West Capital Corporation	OTTR	\$43.36	NA	9.00%	7.00%	7.88%	7.00%	5.43%	72.00%	63.00%	65.57%	9.22%	23.91	4.41	
PNM Resources, Inc.	PNW	\$84.48	3.00%	3.63%	5.50%	4.03%	3.00%	5.43%	64.00%	62.00%	65.57%	8.57%	23.91	4.41	
Portland General Electric Company	PNM	\$40.17	5.40%	4.30%	7.50%	3.54%	3.54%	5.43%	57.00%	56.00%	65.57%	6.53%	23.91	4.41	
Southern Company	POR	\$44.58	2.90%	3.50%	6.00%	4.24%	2.90%	5.43%	59.00%	55.00%	65.57%	8.66%	23.91	4.41	
WEC Energy Group, Inc.	SO	\$47.85	4.50%	2.70%	4.00%	4.02%	2.70%	5.43%	78.00%	72.00%	65.57%	10.95%	23.91	4.41	
Xcel Energy Inc.	WEC	\$64.49	4.20%	4.34%	6.00%	4.23%	4.20%	5.43%	67.00%	66.00%	65.57%	9.34%	23.91	4.41	
		</													

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.00%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$4.45	\$162.26
Alliant Energy Corporation	LNT	\$1.15	\$1.20	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$2.33	\$84.86
Ameren Corporation	AEE	\$1.79	\$1.87	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$3.87	\$141.12
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$5.99	\$218.58
Black Hills Corporation	BKH	\$1.48	\$1.56	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$131.23
CenterPoint Energy, Inc.	CNP	\$0.79	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$1.55	\$56.70
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24	\$118.30
Consolidated Edison, Inc.	ED	\$2.79	\$2.87	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$4.87	\$177.51
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$7.47	\$272.37
El Paso Electric Company	EE	\$1.35	\$1.46	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$3.27	\$119.35
Eversource Energy	ES	\$1.96	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$148.27
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$2.53	\$92.44
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.17	\$3.35	\$3.55	\$3.78	\$4.03	\$4.25	\$4.48	\$4.72	\$4.98	\$181.58
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$147.47
OGE Energy Corp.	OGE	\$1.21	\$1.28	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$2.03	\$74.13
Other Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$2.77	\$101.09
Pinnacle West Capital Corporation	PNW	\$2.68	\$2.73	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$4.95	\$180.55
PNM Resources, Inc.	PNM	\$0.89	\$0.92	\$0.95	\$0.97	\$1.03	\$1.10	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$1.91	\$69.77
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$2.69	\$97.92
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$126.20
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$4.09	\$149.27
Xcel Energy Inc.	XEL	\$1.50	\$1.59	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$2.98	\$108.77

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
Company	Ticket	Initial																
		Outflow																
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.62	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.90	\$3.06	\$3.22	\$3.40	\$3.60	\$3.80	\$4.00	\$4.22	\$166.71
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.83	\$1.18	\$1.26	\$1.31	\$1.38	\$1.44	\$1.52	\$1.60	\$1.69	\$1.78	\$1.88	\$1.99	\$2.09	\$2.21	\$87.19
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.29	\$1.84	\$1.95	\$2.03	\$2.15	\$2.28	\$2.43	\$2.58	\$2.75	\$2.93	\$3.13	\$3.30	\$3.48	\$3.67	\$144.99
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.19	\$3.12	\$3.23	\$3.32	\$3.49	\$3.67	\$3.87	\$4.09	\$4.32	\$4.58	\$4.85	\$5.11	\$5.39	\$5.69	\$224.58
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.06	\$1.51	\$1.65	\$1.73	\$1.86	\$2.00	\$2.15	\$2.31	\$2.49	\$2.69	\$2.91	\$3.07	\$3.24	\$3.41	\$134.83
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.57	\$0.81	\$0.83	\$0.84	\$0.89	\$0.95	\$1.00	\$1.06	\$1.12	\$1.19	\$1.26	\$1.33	\$1.40	\$1.47	\$58.26
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$0.98	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.02	\$2.16	\$2.31	\$2.47	\$2.63	\$2.77	\$2.92	\$3.08	\$121.54
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.00	\$2.83	\$2.95	\$3.03	\$3.11	\$3.20	\$3.31	\$3.44	\$3.58	\$3.75	\$3.94	\$4.15	\$4.38	\$4.62	\$182.38
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.40	\$3.43	\$3.68	\$3.87	\$4.12	\$4.40	\$4.69	\$5.00	\$5.33	\$5.68	\$6.05	\$6.37	\$6.72	\$7.08	\$279.84
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.97	\$1.37	\$1.59	\$1.72	\$1.82	\$1.93	\$2.05	\$2.18	\$2.32	\$2.48	\$2.65	\$2.79	\$2.94	\$3.10	\$122.62
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.41	\$2.00	\$2.05	\$2.10	\$2.23	\$2.37	\$2.52	\$2.69	\$2.87	\$3.07	\$3.29	\$3.47	\$3.66	\$3.86	\$152.34
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.17	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.90	\$1.97	\$2.05	\$2.16	\$2.28	\$2.40	\$94.98
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.71	\$2.27	\$2.32	\$2.37	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$151.51
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.61	\$2.22	\$2.34	\$2.41	\$2.44	\$2.53	\$2.64	\$2.77	\$2.91	\$3.08	\$3.27	\$3.45	\$3.64	\$3.84	\$151.51
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.87	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.50	\$1.54	\$1.59	\$1.65	\$1.73	\$1.83	\$1.93	\$76.16
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.95	\$1.37	\$1.38	\$1.41	\$1.52	\$1.63	\$1.75	\$1.87	\$1.99	\$2.12	\$2.24	\$2.37	\$2.49	\$2.63	\$103.86
Pinnacle West Capital Corporation	PNW	(\$84.48)	\$0.00	\$1.93	\$2.72	\$2.79	\$2.84	\$2.95	\$3.07	\$3.22	\$3.38	\$3.56	\$3.77	\$4.01	\$4.22	\$4.45	\$4.70	\$185.50
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.64	\$0.91	\$0.95	\$0.97	\$1.03	\$1.10	\$1.17	\$1.25	\$1.34	\$1.44	\$1.55	\$1.63	\$1.72	\$1.81	\$71.68
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$0.97	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$2.01	\$2.17	\$2.29	\$2.42	\$2.55	\$100.61
Southern Company	SO	(\$47.85)	\$0.00	\$1.67	\$2.36	\$2.33	\$2.33	\$2.36	\$2.40	\$2.46	\$2.52	\$2.60	\$2.69	\$2.80	\$2.95	\$3.11	\$3.28	\$129.66
WEC Energy Group, Inc.	WEC	(\$64.49)	\$0.00	\$1.55	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.72	\$2.85	\$2.99	\$3.15	\$3.31	\$3.49	\$3.68	\$3.88	\$153.36
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.08	\$1.53	\$1.69	\$1.79	\$1.86	\$1.93	\$2.01	\$2.09	\$2.19	\$2.30	\$2.41	\$2.55	\$2.68	\$2.83	\$111.76

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth - Setting Terminal P/E at 23.91
30 Day High Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs			[1]	[2]	[3]	EPS Growth Rate Estimates			[5]	[6]	Long-Term			[7]	[8]	Payout Ratio			[9]	[10]	[11]	[12]	[13]	[14]		
Stock			[1]	[2]	[3]	Value			[5]	[6]	Growth			[7]	[8]	Iterative Solution			[9]	[10]	[11]	[12]	[13]	[14]		
Company	Ticker	Price	Zacks	First Call	Line	Growth	Sustainable	High	Growth	High	Growth	Growth	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio	P/E Ratio	IRR	P/E Ratio	PEG Ratio		
ALLETE, Inc.	ALE	\$70.43	6.60%	6.00%	4.50%	4.87%	4.87%	6.60%	5.43%	6.60%	66.00%	64.00%	65.57%	(80.00)	10.70%	23.91	4.41	23.91	10.70%	23.91	4.41	23.91	10.70%	23.91	4.41	
Alliant Energy Corporation	LNT	\$39.93	5.30%	5.45%	6.50%	4.44%	4.44%	6.50%	5.43%	6.50%	65.00%	64.00%	65.57%	(80.00)	9.89%	23.91	4.41	23.91	9.89%	23.91	4.41	23.91	9.89%	23.91	4.41	
Ameren Corporation	AEE	\$55.35	6.90%	6.37%	7.50%	4.73%	4.73%	7.50%	5.43%	7.50%	61.00%	60.00%	65.57%	(80.00)	12.01%	23.91	4.41	23.91	12.01%	23.91	4.41	23.91	12.01%	23.91	4.41	
American Electric Power Company, Inc.	AEP	\$67.20	5.40%	5.63%	4.50%	5.37%	5.37%	4.50%	5.43%	5.63%	66.00%	63.00%	65.57%	(80.00)	13.42%	23.91	4.41	23.91	13.42%	23.91	4.41	23.91	13.42%	23.91	4.41	
Black Hills Corporation	BKH	\$53.02	4.60%	4.07%	7.50%	5.22%	5.22%	7.50%	5.43%	5.22%	52.00%	54.00%	65.57%	(80.00)	12.03%	23.91	4.41	23.91	12.03%	23.91	4.41	23.91	12.03%	23.91	4.41	
CenterPoint Energy, Inc.	CNP	\$26.97	5.90%	8.49%	NA	5.65%	5.65%	8.49%	5.43%	71.00%	64.00%	65.57%	(80.00)	10.30%	23.91	4.41	23.91	10.30%	23.91	4.41	23.91	10.30%	23.91	4.41		
CMS Energy Corporation	CMS	\$44.02	6.30%	7.04%	8.50%	7.13%	7.13%	8.50%	5.43%	61.00%	65.57%	(80.00)	12.02%	23.91	4.41	23.91	4.41	23.91	12.02%	23.91	4.41	23.91	12.02%	23.91	4.41	
Consolidated Edison, Inc.	ED	\$76.71	4.00%	3.11%	3.00%	2.82%	2.82%	4.00%	5.43%	67.00%	65.57%	(80.00)	10.29%	23.91	4.41	23.91	4.41	23.91	10.29%	23.91	4.41	23.91	10.29%	23.91	4.41	
DTE Energy Company	DTE	\$102.48	6.00%	5.58%	6.50%	6.31%	6.31%	6.50%	5.43%	62.00%	65.57%	(80.00)	10.77%	23.91	4.41	23.91	4.41	23.91	10.77%	23.91	4.41	23.91	10.77%	23.91	4.41	
El Paso Electric Company	EE	\$49.44	5.10%	5.20%	5.00%	4.08%	4.08%	5.20%	5.43%	52.00%	59.00%	65.57%	(80.00)	10.27%	23.91	4.41	23.91	10.27%	23.91	4.41	23.91	10.27%	23.91	4.41		
Eversource Energy	ES	\$58.10	5.80%	5.65%	6.50%	4.12%	4.12%	6.50%	5.43%	61.00%	65.57%	(80.00)	11.76%	23.91	4.41	23.91	4.41	23.91	11.76%	23.91	4.41	23.91	11.76%	23.91	4.41	
Hawaiian Electric Industries, Inc.	HE	\$33.92	6.70%	8.50%	1.50%	3.47%	3.47%	8.50%	5.43%	69.00%	71.00%	65.57%	(80.00)	16.60%	23.91	4.41	23.91	16.60%	23.91	4.41	23.91	16.60%	23.91	4.41		
IDACORP, Inc.	IDA	\$85.10	4.10%	3.10%	3.50%	3.56%	3.56%	4.10%	5.43%	57.00%	60.00%	65.57%	(80.00)	9.15%	23.91	4.41	23.91	9.15%	23.91	4.41	23.91	9.15%	23.91	4.41		
NorthWestern Corporation	NWE	\$52.38	2.40%	3.12%	4.50%	3.76%	3.76%	4.50%	5.43%	63.00%	62.00%	65.57%	(80.00)	12.80%	23.91	4.41	23.91	12.80%	23.91	4.41	23.91	12.80%	23.91	4.41		
OGE Energy Corp.	OGE	\$31.83	6.00%	5.80%	2.50%	2.89%	2.89%	6.00%	5.43%	68.00%	74.00%	65.57%	(80.00)	12.22%	23.91	4.41	23.91	12.22%	23.91	4.41	23.91	12.22%	23.91	4.41		
Otter Tail Corporation	OTTR	\$42.67	NA	9.00%	7.00%	7.88%	7.88%	9.00%	5.43%	72.00%	63.00%	65.57%	(80.00)	10.75%	23.91	4.41	23.91	10.75%	23.91	4.41	23.91	10.75%	23.91	4.41		
Pinnacle West Capital Corporation	PNW	\$78.03	3.00%	3.63%	5.50%	4.03%	4.03%	5.50%	5.43%	64.00%	62.00%	65.57%	(80.00)	11.09%	23.91	4.41	23.91	11.09%	23.91	4.41	23.91	11.09%	23.91	4.41		
PNM Resources, Inc.	PNM	\$37.00	5.40%	4.30%	7.50%	3.54%	3.54%	7.50%	5.43%	59.00%	56.00%	65.57%	(80.00)	9.96%	23.91	4.41	23.91	9.96%	23.91	4.41	23.91	9.96%	23.91	4.41		
Portland General Electric Company	POR	\$39.86	2.90%	3.50%	6.00%	4.24%	4.24%	6.00%	5.43%	57.00%	71.00%	65.57%	(80.00)	11.92%	23.91	4.41	23.91	11.92%	23.91	4.41	23.91	11.92%	23.91	4.41		
Southern Company	SO	\$44.14	4.50%	2.70%	4.00%	4.02%	4.02%	4.50%	5.43%	78.00%	72.00%	65.57%	(80.00)	13.14%	23.91	4.41	23.91	13.14%	23.91	4.41	23.91	13.14%	23.91	4.41		
WEC Energy Group, Inc.	WEC	\$61.60	4.20%	4.34%	6.00%	4.23%	4.23%	6.00%	5.43%	67.00%	66.00%	65.57%	(80.00)	11.05%	23.91	4.41	23.91	11.05%	23.91	4.41	23.91	11.05%	23.91	4.41		
Xcel Energy Inc.	XEL	\$44.30	5.80%	6.15%	4.50%	3.90%	3.90%	4.50%	5.43%	63.00%	67.00%	65.57%	(80.00)	11.51%	23.91	4.41	23.91	11.51%	23.91	4.41	23.91	11.51%	23.91	4.41		
			MEAN 11.54%																							
			MAX 16.60%																							
			MIN 9.15%																							
Projected Annual Earnings per Share			[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]							
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032								
ALLETE, Inc.	ALE	\$3.14	\$3.35	\$3.57	\$3.80	\$4.05	\$4.32	\$4.61	\$4.90	\$5.21	\$5.52	\$5.84	\$6.17	\$6.50	\$6.86	\$7.23	\$7.62	\$8.04								
Alliant Energy Corporation	LNT	\$1.65	\$1.76	\$1.87	\$1.99	\$2.12	\$2.26	\$2.41	\$2.56	\$2.72	\$2.88	\$3.05	\$3.22	\$3.39	\$3.57	\$3.77	\$3.97	\$4.19								
Ameren Corporation	AEE	\$2.68	\$2.88	\$3.10	\$3.33	\$3.58	\$3.85	\$4.14	\$4.43	\$4.73	\$5.04	\$5.35	\$5.66	\$5.96	\$6.29	\$6.63	\$6.99	\$7.37								
American Electric Power Company, Inc.	AEP	\$4.23	\$4.47	\$4.72	\$4.99	\$5.27	\$5.56	\$5.88	\$6.20	\$6.55	\$6.91	\$7.29	\$7.69	\$8.11	\$8.55	\$9.01	\$9.50	\$10.02								
Black Hills Corporation	BKH	\$2.63	\$2.83	\$3.04	\$3.27	\$3.51	\$3.78	\$4.06	\$4.35	\$4.65	\$4.95	\$5.25	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23								
CenterPoint Energy, Inc.	CNP	\$1.00	\$1.08	\$1.18	\$1.28	\$1.39	\$1.50	\$1.63	\$1.76	\$1.89	\$2.02	\$2.15	\$2.28	\$2.41	\$2.54	\$2.67	\$2.82	\$2.97								
CMS Energy Corporation	CMS	\$1.98	\$2.15	\$2.33	\$2.53	\$2.74	\$2.98	\$3.23	\$3.49	\$3.75	\$4.01	\$4.27	\$4.52	\$4.77	\$5.03	\$5.30	\$5.59	\$5.89								
Consolidated Edison, Inc.	ED	\$3.94	\$4.10	\$4.26	\$4.43	\$4.61	\$4.79	\$4.99	\$5.20	\$5.43	\$5.69	\$5.97	\$6.28	\$6.62	\$6.98	\$7.35	\$7.75	\$8.17								
DTE Energy Company	DTE	\$4.83	\$5.14	\$5.48	\$5.83	\$6.21	\$6.62	\$7.05	\$7.49	\$7.95	\$8.43	\$8.92	\$9.41	\$9.93	\$10.46	\$11.03	\$11.63	\$12.26								
El Paso Electric Company	EE	\$2.39	\$2.51	\$2.65	\$2.78	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98	\$4.20	\$4.42	\$4.66	\$4.92	\$5.18	\$5.47								
Eversource Energy	ES	\$2.96	\$3.15	\$3.36	\$3.58	\$3.81	\$4.06	\$4.32	\$4.59	\$4.87	\$5.16	\$5.46	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.51								
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.48	\$2.70	\$2.92	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.51	\$5.81	\$6.13	\$6.46	\$6.81								
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.01	\$6.33	\$6.67	\$7.03	\$7.41	\$7.82	\$8.24								
NorthWestern Corporation	NWE	\$3.39	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.08	\$5.34	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33								
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.84	\$3.00	\$3.16	\$3.34	\$3.52	\$3.71	\$3.91	\$4.12								
Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.58	\$3.80	\$4.01	\$4.22	\$4.45	\$4.68	\$4.95								
Pinnacle West Capital Corporation	PNW	\$3.95	\$4.17	\$4.40	\$4.64	\$4.89	\$5.16	\$5.45	\$5.75	\$6.06	\$6.39	\$6.74	\$7.11	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25								
PNM Resources, Inc.	PNM	\$1.45	\$1.57	\$1.69	\$1.81	\$1.95	\$2.10	\$2.25	\$2.41	\$2.58	\$2.75	\$2.91	\$3.08	\$3.25	\$3.43	\$3.61	\$3.81	\$4.01								
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.24	\$3.43	\$3.63	\$3.83	\$4.05	\$4.26	\$4.50	\$4.74	\$5.00	\$5.27								
Southern Company	SO	\$2.83	\$2.96	\$3.09	\$3.23	\$3.37	\$3.53	\$3.69	\$3.86	\$4.04	\$4.24	\$4.46	\$4.70	\$4.95	\$5.22	\$5.50	\$5.80	\$6.12								
WEC Energy Group, Inc.	WEC	\$2.96	\$3.14	\$3.33	\$3.53	\$3.74	\$3.96	\$4.20	\$4.45	\$4.71	\$5.00	\$5.34	\$5.74	\$6.16	\$6.50	\$6.85	\$7.22	\$7.60								
Xcel Energy Inc.	XEL	\$2.21	\$2.35	\$2.49	\$2.64	\$2.81	\$2.98	\$3.16	\$3.35	\$3.55	\$3.76	\$3.97	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.46								

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Other Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$192.16
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$100.17
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$176.18
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$239.50
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$172.89
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$71.08
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$140.85
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$195.48
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$293.23
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$130.71
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$179.70
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$162.91
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$197.08
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$175.18
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$98.57
Other Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$118.37
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$6.07	\$221.32
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$95.98
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$125.99
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.40	\$3.61	\$3.80	\$4.01	\$146.24
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$172.65
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$130.47

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$70.43)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$197.43
Alliant Energy Corporation	LNT	(\$39.93)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$102.92
Ameren Corporation	AEE	(\$55.35)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$181.01
American Electric Power Company, Inc.	AEP	(\$67.20)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$246.07
Black Hills Corporation	BKH	(\$53.02)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$177.64
CenterPoint Energy, Inc.	CNP	(\$26.97)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$73.03
CMS Energy Corporation	CMS	(\$44.02)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$144.71
Consolidated Edison, Inc.	ED	(\$76.71)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$200.84
DTE Energy Company	DTE	(\$102.48)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$301.27
El Paso Electric Company	EE	(\$49.44)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$134.29
Eversource Energy	ES	(\$88.10)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$184.63
Hawaiian Electric Industries, Inc.	HE	(\$33.92)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$167.37
IDACORP, Inc.	IDA	(\$85.10)	\$0.00	\$1.75	\$2.48	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$202.48
NorthWestern Corporation	NWE	(\$52.38)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$179.98
OGE Energy Corp.	OGE	(\$31.83)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$101.28
Other Tail Corporation	OTTR	(\$42.67)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$121.62
Pinnacle West Capital Corporation	PNW	(\$78.03)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$227.39
PNM Resources, Inc.	PNM	(\$37.00)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$98.61
Portland General Electric Company	POR	(\$39.86)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$129.44
Southern Company	SO	(\$44.14)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$150.25
WEC Energy Group, Inc.	WEC	(\$61.60)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$177.39
Xcel Energy Inc.	XEL	(\$44.30)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$134.04

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth - Setting Terminal P/E at 23.91
90 Day High Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs	EPS Growth Rate Estimates														Payout Ratio														Iterative Solution				Terminal			
	Stock		Zacks		First Call		Line		Sustainable		High		Growth		Long-Term		2018		2021		2028		Proof		IRR		P/E Ratio		PEG Ratio							
	Ticker	Price																																		
Company	ALLETE, Inc.	\$71.97	6.60%	6.00%	4.50%	4.87%	4.44%	6.60%	5.43%	66.00%	64.00%	65.57%	(80.00)	10.50%	23.91	4.41	(80.00)	64.00%	64.00%	65.57%	(80.00)	9.76%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	9.76%	23.91	4.41				
Alliant Energy Corporation	LNT	\$40.49	5.30%	5.45%	6.50%	4.44%	6.50%	7.50%	5.43%	64.00%	64.00%	65.57%	(80.00)	9.76%	23.91	4.41	(80.00)	64.00%	64.00%	65.57%	(80.00)	9.76%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	9.76%	23.91	4.41				
Ameren Corporation	AEE	\$56.61	6.90%	6.37%	7.50%	4.73%	7.50%	6.50%	5.43%	61.00%	60.00%	65.57%	(80.00)	11.79%	23.91	4.41	(80.00)	60.00%	60.00%	65.57%	(80.00)	11.79%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	11.79%	23.91	4.41				
American Electric Power Company, Inc.	AEP	\$69.11	5.40%	5.63%	4.50%	5.37%	5.63%	5.63%	5.43%	66.00%	63.00%	65.57%	(80.00)	13.13%	23.91	4.41	(80.00)	66.00%	63.00%	65.57%	(80.00)	13.13%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	13.13%	23.91	4.41				
Black Hills Corporation	BKH	\$54.72	4.60%	4.07%	7.50%	5.22%	7.50%	7.50%	5.43%	52.00%	54.00%	65.57%	(80.00)	11.73%	23.91	4.41	(80.00)	52.00%	54.00%	65.57%	(80.00)	11.73%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	11.73%	23.91	4.41				
CenterPoint Energy, Inc.	CNP	\$27.48	5.90%	8.49%	NA	5.65%	8.49%	8.49%	5.43%	71.00%	64.00%	65.57%	(80.00)	10.12%	23.91	4.41	(80.00)	71.00%	64.00%	65.57%	(80.00)	10.12%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	10.12%	23.91	4.41				
CMS Energy Corporation	CMS	\$44.96	6.30%	7.04%	8.50%	7.13%	8.50%	8.50%	5.43%	61.00%	61.00%	65.57%	(80.00)	11.81%	23.91	4.41	(80.00)	61.00%	61.00%	65.57%	(80.00)	11.81%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	11.81%	23.91	4.41				
Consolidated Edison, Inc.	ED	\$79.65	4.00%	3.11%	3.00%	2.82%	3.11%	4.00%	5.43%	67.00%	67.00%	65.57%	(80.00)	9.92%	23.91	4.41	(80.00)	67.00%	67.00%	65.57%	(80.00)	9.92%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	9.92%	23.91	4.41				
DTE Energy Company	DTE	\$104.99	6.00%	5.58%	6.50%	6.31%	6.50%	6.50%	5.43%	62.00%	62.00%	65.57%	(80.00)	10.84%	23.91	4.41	(80.00)	62.00%	61.00%	65.57%	(80.00)	10.84%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	10.84%	23.91	4.41				
El Paso Electric Company	EE	\$51.94	5.10%	5.20%	5.00%	4.08%	5.00%	5.20%	5.43%	52.00%	59.00%	65.57%	(80.00)	9.80%	23.91	4.41	(80.00)	52.00%	59.00%	65.57%	(80.00)	9.80%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	9.80%	23.91	4.41				
Eversource Energy	ES	\$60.18	5.80%	5.65%	6.50%	4.12%	6.50%	6.50%	5.43%	61.00%	61.00%	65.57%	(80.00)	11.42%	23.91	4.41	(80.00)	61.00%	71.00%	65.57%	(80.00)	11.42%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	11.42%	23.91	4.41				
Hawaiian Electric Industries, Inc.	HE	\$34.52	6.70%	8.50%	1.50%	3.47%	8.50%	8.50%	5.43%	69.00%	61.00%	65.57%	(80.00)	16.40%	23.91	4.41	(80.00)	69.00%	71.00%	65.57%	(80.00)	16.40%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	16.40%	23.91	4.41				
IDACORP, Inc.	IDA	\$86.65	4.10%	3.10%	3.50%	3.56%	3.10%	3.50%	5.43%	57.00%	60.00%	65.57%	(80.00)	8.99%	23.91	4.41	(80.00)	57.00%	60.00%	65.57%	(80.00)	8.99%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	8.99%	23.91	4.41				
NorthWestern Corporation	NWE	\$54.69	2.40%	3.12%	4.50%	3.76%	4.50%	4.50%	5.43%	63.00%	63.00%	65.57%	(80.00)	12.36%	23.91	4.41	(80.00)	63.00%	74.00%	65.57%	(80.00)	12.36%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	12.36%	23.91	4.41				
OGE Energy Corp.	OGE	\$32.08	6.00%	5.80%	2.50%	2.89%	2.50%	6.00%	5.43%	68.00%	74.00%	65.57%	(80.00)	12.14%	23.91	4.41	(80.00)	68.00%	74.00%	65.57%	(80.00)	12.14%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	12.14%	23.91	4.41				
Other Tail Corporation	OTTR	\$42.77	NA	9.00%	7.00%	7.88%	7.00%	9.00%	5.43%	72.00%	63.00%	65.57%	(80.00)	10.72%	23.91	4.41	(80.00)	72.00%	62.00%	65.57%	(80.00)	10.72%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	10.72%	23.91	4.41				
Pinnacle West Capital Corporation	PNW	\$80.50	3.00%	3.63%	5.50%	4.03%	5.50%	5.50%	5.43%	64.00%	62.00%	65.57%	(80.00)	10.79%	23.91	4.41	(80.00)	64.00%	62.00%	65.57%	(80.00)	10.79%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	10.79%	23.91	4.41				
PNM Resources, Inc.	PNM	\$38.09	5.40%	4.30%	7.50%	3.54%	7.50%	7.50%	5.43%	57.00%	56.00%	65.57%	(80.00)	9.69%	23.91	4.41	(80.00)	57.00%	56.00%	65.57%	(80.00)	9.69%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	9.69%	23.91	4.41				
Portland General Electric Company	POR	\$42.23	2.90%	3.50%	6.00%	4.24%	6.00%	6.00%	5.43%	59.00%	59.00%	65.57%	(80.00)	11.36%	23.91	4.41	(80.00)	59.00%	72.00%	65.57%	(80.00)	11.36%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	11.36%	23.91	4.41				
Southern Company	SO	\$45.61	4.50%	2.70%	4.00%	4.02%	4.00%	4.50%	5.43%	78.00%	72.00%	65.57%	(80.00)	12.79%	23.91	4.41	(80.00)	78.00%	72.00%	65.57%	(80.00)	12.79%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	12.79%	23.91	4.41				
WEC Energy Group, Inc.	WEC	\$63.20	4.20%	4.34%	6.00%	4.23%	6.00%	6.00%	5.43%	67.00%	66.00%	65.57%	(80.00)	10.80%	23.91	4.41	(80.00)	67.00%	66.00%	65.57%	(80.00)	10.80%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	10.80%	23.91	4.41				
Xcel Energy Inc.	XEL	\$45.71	5.80%	6.15%	4.50%	3.90%	4.50%	6.15%	5.43%	63.00%	67.00%	65.57%	(80.00)	11.20%	23.91	4.41	(80.00)	63.00%	67.00%	65.57%	(80.00)	11.20%	23.91	4.41	(80.00)	10.50%	23.91	4.41	(80.00)	11.20%	23.91	4.41				
									</																											

Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
OTter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNM	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$192.16
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$100.17
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$176.18
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$239.50
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$172.89
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$71.08
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$140.85
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$195.48
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$293.23
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$130.71
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$179.70
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$162.91
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$197.08
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$175.18
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$98.57
OTter Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$118.37
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$6.07	\$221.32
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$95.98
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$125.99
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.40	\$3.61	\$3.80	\$4.01	\$146.24
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$172.65
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$130.47

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow																
ALLETE, Inc.	ALE	(\$71.97)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$197.43
Alliant Energy Corporation	LNT	(\$40.49)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$102.92
Ameren Corporation	AEE	(\$56.61)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$181.01
American Electric Power Company, Inc.	AEP	(\$69.11)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$246.07
Black Hills Corporation	BKH	(\$54.72)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$177.64
CenterPoint Energy, Inc.	CNP	(\$27.48)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$73.03
CMS Energy Corporation	CMS	(\$44.96)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$144.71
Consolidated Edison, Inc.	ED	(\$79.65)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$200.84
DTE Energy Company	DTE	(\$104.99)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$301.27
El Paso Electric Company	EE	(\$51.94)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$134.29
Eversource Energy	ES	(\$60.18)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$184.63
Hawaiian Electric Industries, Inc.	HE	(\$34.52)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$167.37
IDACORP, Inc.	IDA	(\$86.65)	\$0.00	\$1.75	\$2.38	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$202.48
NorthWestern Corporation	NWE	(\$54.69)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$179.98
OGE Energy Corp.	OGE	(\$32.08)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$101.28
Other Tail Corporation	OTTR	(\$42.77)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$121.62
Pinnacle West Capital Corporation	PNM	(\$80.50)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$227.39
PNM Resources, Inc.	PNM	(\$38.09)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$98.61
Portland General Electric Company	POR	(\$42.23)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$129.44
Southern Company	SO	(\$45.61)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$150.25
WEC Energy Group, Inc.	WEC	(\$63.20)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$177.39
Xcel Energy Inc.	XEL	(\$45.71)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$134.04

Multi-Stage Growth Discounted Cash Flow Model with Sustainable Growth - Setting Terminal P/E at 23.91
180 Day High Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
Company	Ticker	Stock		EPS Growth Rate Estimates			Long-Term		Payout Ratio		Iterative Solution		Terminal	Terminal	
		Price	Zacks	First Call	Value	Sustainable	High	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio
Value Sustainable															
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Projected Annual Dividend Payout Ratio		[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	[46]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.00%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.22%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.65%	57.31%	59.96%	60.61%	62.26%	63.92%	65.57%	65.57%	65.57%	65.57%	65.57%
CenterPoint Energy, Inc.	CNP	71.00%	68.00%	66.33%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
Consolidated Edison, Inc.	ED	67.00%	67.00%	67.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Eversource Energy	ES	61.00%	60.00%	59.00%	58.00%	59.08%	60.16%	61.24%	62.33%	63.41%	64.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.80%	61.59%	62.39%	63.18%	63.98%	64.77%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.80%	71.59%	70.39%	69.18%	67.98%	66.77%	65.57%	65.57%	65.57%	65.57%	65.57%
OTTR	OTTR	72.00%	69.00%	66.00%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.37%	58.73%	60.10%	61.47%	62.84%	64.20%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.08%	70.16%	69.24%	68.33%	67.41%	66.49%	65.57%	65.57%	65.57%	65.57%	65.57%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]	[62]
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.35	\$2.49	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$5.27	\$192.16
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$2.75	\$100.17
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$176.18
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$6.57	\$239.50
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$4.74	\$172.89
CenterPoint Energy, Inc.	CNP	\$0.84	\$0.88	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$1.95	\$71.08
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$3.86	\$140.85
Consolidated Edison, Inc.	ED	\$2.86	\$2.97	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$5.36	\$195.48
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$8.04	\$293.23
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$3.58	\$130.71
Eversource Energy	ES	\$2.05	\$2.15	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$4.93	\$179.70
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$4.47	\$162.91
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$5.40	\$197.08
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$4.80	\$175.18
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$2.70	\$98.57
OTTR	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$3.25	\$118.37
Pinnacle West Capital Corporation	PNW	\$2.81	\$3.03	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$6.07	\$221.32
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$95.98
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$3.45	\$125.99
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.40	\$3.61	\$3.80	\$4.01	\$146.24
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$4.73	\$172.65
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$3.58	\$130.47

Projected Annual Data Investor Cash Flows		[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]	[79]
		Initial																
Company	Ticker	Outflow	4/13/18	12/31/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32
ALLETE, Inc.	ALE	(\$74.60)	\$0.00	\$1.69	\$2.43	\$2.62	\$2.77	\$2.96	\$3.16	\$3.37	\$3.58	\$3.80	\$4.03	\$4.27	\$4.50	\$4.74	\$5.00	\$197.43
Alliant Energy Corporation	LNT	(\$41.66)	\$0.00	\$0.86	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.98	\$2.10	\$2.22	\$2.34	\$2.47	\$2.61	\$102.92
Ameren Corporation	AEE	(\$58.45)	\$0.00	\$1.36	\$1.96	\$2.16	\$2.31	\$2.51	\$2.73	\$2.95	\$3.18	\$3.42	\$3.66	\$3.91	\$4.12	\$4.35	\$4.58	\$181.01
American Electric Power Company, Inc.	AEP	(\$71.18)	\$0.00	\$2.24	\$3.20	\$3.37	\$3.50	\$3.72	\$3.95	\$4.20	\$4.46	\$4.73	\$5.01	\$5.32	\$5.60	\$5.91	\$6.23	\$246.07
Black Hills Corporation	BKH	(\$60.62)	\$0.00	\$1.13	\$1.64	\$1.87	\$2.04	\$2.26	\$2.49	\$2.74	\$3.00	\$3.27	\$3.55	\$3.84	\$4.05	\$4.27	\$4.50	\$177.64
CenterPoint Energy, Inc.	CNP	(\$28.43)	\$0.00	\$0.60	\$0.87	\$0.92	\$0.96	\$1.05	\$1.13	\$1.22	\$1.31	\$1.40	\$1.49	\$1.58	\$1.66	\$1.75	\$1.85	\$73.03
CMS Energy Corporation	CMS	(\$46.48)	\$0.00	\$1.02	\$1.48	\$1.67	\$1.82	\$1.99	\$2.17	\$2.36	\$2.55	\$2.74	\$2.94	\$3.13	\$3.30	\$3.47	\$3.66	\$144.71
Consolidated Edison, Inc.	ED	(\$82.04)	\$0.00	\$2.05	\$2.91	\$3.09	\$3.21	\$3.33	\$3.46	\$3.60	\$3.76	\$3.94	\$4.13	\$4.34	\$4.57	\$4.82	\$5.08	\$200.84
DTE Energy Company	DTE	(\$107.87)	\$0.00	\$2.44	\$3.51	\$3.81	\$4.04	\$4.35	\$4.67	\$5.01	\$5.36	\$5.73	\$6.11	\$6.51	\$6.86	\$7.23	\$7.63	\$301.27
El Paso Electric Company	EE	(\$54.13)	\$0.00	\$0.99	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.37	\$2.54	\$2.71	\$2.90	\$3.06	\$3.22	\$3.40	\$134.29
Eversource Energy	ES	(\$61.36)	\$0.00	\$1.47	\$2.11	\$2.25	\$2.35	\$2.55	\$2.76	\$2.99	\$3.22	\$3.46	\$3.72	\$3.99	\$4.21	\$4.43	\$4.67	\$184.63
Hawaiian Electric Industries, Inc.	HE	(\$34.56)	\$0.00	\$1.34	\$1.94	\$2.23	\$2.44	\$2.62	\$2.80	\$2.98	\$3.15	\$3.31	\$3.47	\$3.62	\$3.81	\$4.02	\$4.24	\$167.37
IDACORP, Inc.	IDA	(\$88.70)	\$0.00	\$1.75	\$2.38	\$2.73	\$2.89	\$3.05	\$3.22	\$3.41	\$3.62	\$3.85	\$4.10	\$4.37	\$4.61	\$4.86	\$5.13	\$202.48
NorthWestern Corporation	NWE	(\$57.20)	\$0.00	\$1.67	\$2.38	\$2.52	\$2.62	\$2.76	\$2.91	\$3.08	\$3.25	\$3.45	\$3.66	\$3.89	\$4.10	\$4.32	\$4.56	\$179.98
OGE Energy Corp.	OGE	(\$34.04)	\$0.00	\$0.93	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.96	\$2.04	\$2.11	\$2.19	\$2.31	\$2.43	\$2.56	\$101.28
Other Tail Corporation	OTTR	(\$43.36)	\$0.00	\$0.98	\$1.43	\$1.49	\$1.55	\$1.70	\$1.85	\$2.01	\$2.17	\$2.32	\$2.48	\$2.63	\$2.77	\$2.92	\$3.08	\$121.62
Pinnacle West Capital Corporation	PNM	(\$64.48)	\$0.00	\$2.02	\$2.89	\$3.07	\$3.20	\$3.40	\$3.62	\$3.85	\$4.09	\$4.35	\$4.62	\$4.91	\$5.18	\$5.46	\$5.76	\$227.39
PNM Resources, Inc.	PNM	(\$40.17)	\$0.00	\$0.69	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.83	\$1.98	\$2.13	\$2.25	\$2.37	\$2.50	\$98.61
Portland General Electric Company	POR	(\$44.58)	\$0.00	\$1.03	\$1.47	\$1.54	\$1.59	\$1.73	\$1.88	\$2.04	\$2.22	\$2.40	\$2.59	\$2.80	\$2.95	\$3.11	\$3.28	\$129.44
Southern Company	SO	(\$47.85)	\$0.00	\$1.73	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.80	\$2.90	\$3.01	\$3.12	\$3.25	\$3.42	\$3.61	\$3.80	\$150.25
WEC Energy Group, Inc.	WEC	(\$64.49)	\$0.00	\$1.60	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.83	\$4.04	\$4.26	\$4.49	\$177.39
Xcel Energy Inc.	XEL	(\$47.40)	\$0.00	\$1.13	\$1.62	\$1.84	\$2.00	\$2.11	\$2.23	\$2.36	\$2.49	\$2.62	\$2.76	\$2.90	\$3.05	\$3.22	\$3.39	\$134.04

Multi-Stage DCF Notes:

- [1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of April 13, 2018
- [2] Source: Zacks
- [3] Source: Yahoo! Finance
- [4] Source: Value Line
- [5] Equals indicated value (average, minimum, maximum) of Columns [2], [3], [4]
- [6] Source: Federal Reserve, Bureau of Economic Analysis, Blue Chip Financial Forecast
- [7] Source: Value Line
- [8] Source: Value Line
- [9] Source: Bloomberg Professional
- [10] Equals Column [1] + Column [62]
- [11] Equals result of Excel Solver function; goal: Column [10] equals \$0.00
- [12] Equals Column [61] / Column [30] or Proxy Group 30-day average PE ratio. Source: S&P Global Market Intelligence
- [13] Equals Column [12] / (Column [6] x 100)
- [14] Source: Value Line
- [15] Equals Column [14] x (1 + Column [5])
- [16] Equals Column [15] x (1 + Column [5])
- [17] Equals Column [16] x (1 + Column [5])
- [18] Equals Column [17] x (1 + Column [5])
- [19] Equals Column [18] x (1 + Column [5])
- [20] Equals Column [19] x (1 + Column [5])
- [21] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2028 - 2023 + 1)) x (2023 - 2022)))) x Column [20]
- [22] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2028 - 2023 + 1)) x (2024 - 2022)))) x Column [21]
- [23] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2028 - 2023 + 1)) x (2025 - 2022)))) x Column [22]
- [24] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2028 - 2023 + 1)) x (2026 - 2022)))) x Column [23]
- [25] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2028 - 2023 + 1)) x (2027 - 2022)))) x Column [24]
- [26] Equals Column [25] x (1 + Column [6])
- [27] Equals Column [26] x (1 + Column [6])
- [28] Equals Column [27] x (1 + Column [6])
- [29] Equals Column [28] x (1 + Column [6])
- [30] Equals Column [29] x (1 + Column [6])
- [31] Equals Column [7]
- [32] Equals Column [31] + ((Column [34] - Column [31]) / 3)
- [33] Equals Column [32] + ((Column [34] - Column [31]) / 3)
- [34] Equals Column [8]
- [35] Equals Column [34] + ((Column [41] - Column [34]) / 7)
- [36] Equals Column [35] + ((Column [41] - Column [34]) / 7)
- [37] Equals Column [36] + ((Column [41] - Column [34]) / 7)
- [38] Equals Column [37] + ((Column [41] - Column [34]) / 7)
- [39] Equals Column [38] + ((Column [41] - Column [34]) / 7)
- [40] Equals Column [39] + ((Column [41] - Column [34]) / 7)
- [41] Equals Column [9]
- [42] Equals Column [9]
- [43] Equals Column [9]
- [44] Equals Column [9]
- [45] Equals Column [9]
- [46] Equals Column [16] x Column [31]
- [47] Equals Column [17] x Column [32]
- [48] Equals Column [18] x Column [33]
- [49] Equals Column [19] x Column [34]
- [50] Equals Column [20] x Column [35]
- [51] Equals Column [21] x Column [36]
- [52] Equals Column [22] x Column [37]
- [53] Equals Column [23] x Column [38]
- [54] Equals Column [24] x Column [39]
- [55] Equals Column [25] x Column [40]
- [56] Equals Column [26] x Column [41]
- [57] Equals Column [27] x Column [42]
- [58] Equals Column [28] x Column [43]
- [59] Equals Column [29] x Column [44]
- [60] Equals Column [30] x Column [45]
- [61] Equals (Column [60] x (1 + Column [6])) / (Column [11] - Column [6]), or Column [12] x Column [30]
- [62] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [63] through Column [78]
- [63] Equals \$0.00
- [64] Equals Column [46] x (12/31/2018 - 4/13/2018) / 365
- [65] Equals Column [46] x (1 + (0.5 x Column [5]))
- [66] Equals Column [48]
- [67] Equals Column [49]
- [68] Equals Column [50]
- [69] Equals Column [51]
- [70] Equals Column [52]
- [71] Equals Column [53]
- [72] Equals Column [54]
- [73] Equals Column [55]
- [74] Equals Column [56]
- [75] Equals Column [57]
- [76] Equals Column [58]
- [77] Equals Column [59]
- [78] Equals Column [60] + [61]

Multi-Stage DCF Notes:

- [1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of April 13, 2018
- [2] Source: Zacks
- [3] Source: Yahoo! Finance
- [4] Source: Value Line
- [5] Source: RBH-2, Value Line
- [6] Equals indicated value (average, minimum, maximum) of Columns [2], [3], [4], [5]
- [7] Source: Federal Reserve, Bureau of Economic Analysis, Blue Chip Financial Forecast
- [8] Source: Value Line
- [9] Source: Value Line
- [10] Source: Bloomberg Professional
- [11] Equals Column [1] + Column [63]
- [12] Equals result of Excel Solver function; goal: Column [11] equals \$0.00
- [13] Equals Column [62] / Column [31] or Proxy Group 30-day average PE ratio. Source: S&P Global Market Intelligence
- [14] Equals Column [13] / (Column [7] x 100)
- [15] Source: Value Line
- [16] Equals Column [15] x (1 + Column [6])
- [17] Equals Column [16] x (1 + Column [6])
- [18] Equals Column [17] x (1 + Column [6])
- [19] Equals Column [18] x (1 + Column [6])
- [20] Equals Column [19] x (1 + Column [6])
- [21] Equals Column [20] x (1 + Column [6])
- [22] Equals $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2028 - 2023 + 1)) \times (2023 - 2022)))) \times \text{Column [21]}$
- [23] Equals $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2028 - 2023 + 1)) \times (2024 - 2022)))) \times \text{Column [22]}$
- [24] Equals $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2028 - 2023 + 1)) \times (2025 - 2022)))) \times \text{Column [23]}$
- [25] Equals $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2028 - 2023 + 1)) \times (2026 - 2022)))) \times \text{Column [24]}$
- [26] Equals $(1 + (\text{Column [6]} + (((\text{Column [7]} - \text{Column [6]}) / (2028 - 2023 + 1)) \times (2027 - 2022)))) \times \text{Column [25]}$
- [27] Equals Column [26] x (1 + Column [7])
- [28] Equals Column [27] x (1 + Column [7])
- [29] Equals Column [28] x (1 + Column [7])
- [30] Equals Column [29] x (1 + Column [7])
- [31] Equals Column [30] x (1 + Column [7])
- [32] Equals Column [8]
- [33] Equals Column [32] + ((Column [35] - Column [32]) / 3)
- [34] Equals Column [33] + ((Column [35] - Column [32]) / 3)
- [35] Equals Column [9]
- [36] Equals Column [35] + ((Column [42] - Column [35]) / 7)
- [37] Equals Column [36] + ((Column [42] - Column [35]) / 7)
- [38] Equals Column [37] + ((Column [42] - Column [35]) / 7)
- [39] Equals Column [38] + ((Column [42] - Column [35]) / 7)
- [40] Equals Column [39] + ((Column [42] - Column [35]) / 7)
- [41] Equals Column [40] + ((Column [42] - Column [35]) / 7)
- [42] Equals Column [10]
- [43] Equals Column [10]
- [44] Equals Column [10]
- [45] Equals Column [10]
- [46] Equals Column [10]
- [47] Equals Column [17] x Column [32]
- [48] Equals Column [18] x Column [33]
- [49] Equals Column [19] x Column [34]
- [50] Equals Column [20] x Column [35]
- [51] Equals Column [21] x Column [36]
- [52] Equals Column [22] x Column [37]
- [53] Equals Column [23] x Column [38]
- [54] Equals Column [24] x Column [39]
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- [58] Equals Column [28] x Column [43]
- [59] Equals Column [29] x Column [44]
- [60] Equals Column [30] x Column [45]
- [61] Equals Column [31] x Column [46]
- [62] Equals $(\text{Column [61]} \times (1 + \text{Column [7]})) / (\text{Column [12]} - \text{Column [7]})$, or Column [13] x Column [31]
- [63] Equals negative net present value; discount rate equals Column [12], cash flows equal Column [64] through Column [79]
- [64] Equals \$0.00
- [65] Equals $\text{Column [47]} \times (12/31/2018 - 4/13/2018) / 365$
- [66] Equals $\text{Column [47]} \times (1 + (0.5 \times \text{Column [5]}))$
- [67] Equals Column [49]
- [68] Equals Column [50]
- [69] Equals Column [51]
- [70] Equals Column [52]
- [71] Equals Column [53]
- [72] Equals Column [54]
- [73] Equals Column [55]
- [74] Equals Column [56]
- [75] Equals Column [57]
- [76] Equals Column [58]
- [77] Equals Column [59]
- [78] Equals Column [60]
- [79] Equals Column [61] + [62]

Schedule __ (RBH-4R)

Ex-Ante Market Risk Premium

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC Docket No. 4770
Schedule RBH-4R
Page 1 of 12

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

[1]	[2]	[3]
S&P 500 Est. Required Market Return	Current 30-Year Treasury (30-day average)	Implied Market Risk Premium
14.73%	3.07%	11.66%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	21,673.65	0.09%	0.90%	5.13%	6.05%	0.0055%
AMERICAN AIRLINES GROUP INC	AAL	21,439.64	0.09%	0.92%	17.02%	18.02%	0.0162%
ADVANCE AUTO PARTS INC	AAP	7,886.81	0.03%	0.23%	16.43%	16.67%	0.0055%
APPLE INC	AAPL	886,582.29	3.71%	1.55%	12.26%	13.91%	0.5157%
ABBVIE INC	ABBV	145,705.49	0.61%	4.07%	12.46%	16.78%	0.1023%
AMERISOURCEBERGEN CORP	ABC	19,071.67	0.08%	1.75%	9.71%	11.54%	0.0092%
ABBOTT LABORATORIES	ABT	102,143.07	0.43%	1.92%	12.67%	14.71%	0.0629%
ACCENTURE PLC-CL A	ACN	100,591.41	0.42%	1.77%	11.10%	12.97%	0.0546%
ADOBE SYSTEMS INC	ADBE	110,342.90	0.46%	0.00%	18.66%	18.66%	0.0861%
ANALOG DEVICES INC	ADI	34,310.38	0.14%	2.03%	9.68%	11.80%	0.0169%
ARCHER-DANIELS-MIDLAND CO	ADM	25,261.04	0.11%	2.96%	7.50%	10.58%	0.0112%
AUTOMATIC DATA PROCESSING	ADP	51,095.69	0.21%	2.11%	12.23%	14.46%	0.0309%
ALLIANCE DATA SYSTEMS CORP	ADS	11,423.92	0.05%	1.11%	15.13%	16.32%	0.0078%
AUTODESK INC	ADSK	28,201.41	0.12%	0.00%	48.90%	48.90%	0.0577%
AMEREN CORPORATION	AEE	13,466.73	0.06%	3.36%	8.45%	11.95%	0.0067%
AMERICAN ELECTRIC POWER	AEP	33,151.08	0.14%	3.73%	5.59%	9.42%	0.0131%
AES CORP	AES	7,489.99	0.03%	4.61%	7.98%	12.78%	0.0040%
AETNA INC	AET	56,571.67	0.24%	1.16%	11.51%	12.74%	0.0301%
AFLAC INC	AFL	34,728.55	0.15%	2.57%	6.52%	9.17%	0.0133%
ALLERGAN PLC	AGN	56,828.04	0.24%	1.77%	8.46%	10.31%	0.0245%
AMERICAN INTERNATIONAL GROUP	AIG	48,395.21	0.20%	2.62%	11.00%	13.76%	0.0279%
APARTMENT INVT & MGMT CO -A	AIV	6,430.09	0.03%	3.69%	5.80%	9.59%	0.0026%
ASSURANT INC	AIZ	4,808.15	N/A	2.48%	N/A	N/A	N/A
ARTHUR J GALLAGHER & CO	AJG	12,461.04	0.05%	2.36%	11.81%	14.31%	0.0075%
AKAMAI TECHNOLOGIES INC	AKAM	12,141.51	0.05%	0.00%	11.50%	11.50%	0.0058%
ALBEMARLE CORP	ALB	10,574.62	0.04%	1.38%	11.70%	13.17%	0.0058%
ALIGN TECHNOLOGY INC	ALGN	20,975.28	0.09%	0.00%	38.00%	38.00%	0.0333%
ALASKA AIR GROUP INC	ALK	7,891.08	0.03%	2.00%	9.08%	11.17%	0.0037%
ALLSTATE CORP	ALL	34,028.52	0.14%	1.83%	6.87%	8.76%	0.0125%
ALLEGION PLC	ALLE	8,048.88	0.03%	0.91%	11.55%	12.51%	0.0042%
ALEXION PHARMACEUTICALS INC	ALXN	24,766.27	0.10%	0.00%	19.46%	19.46%	0.0202%
APPLIED MATERIALS INC	AMAT	58,912.05	0.25%	1.25%	13.16%	14.49%	0.0357%
ADVANCED MICRO DEVICES	AMD	9,623.48	0.04%	0.00%	23.55%	23.55%	0.0095%
AMETEK INC	AME	17,351.52	0.07%	0.75%	10.38%	11.16%	0.0081%
AFFILIATED MANAGERS GROUP	AMG	9,223.48	0.04%	0.66%	13.39%	14.10%	0.0054%
AMGEN INC	AMGN	114,595.02	0.48%	2.96%	4.73%	7.75%	0.0372%
AMERIPRISE FINANCIAL INC	AMP	20,691.10	0.09%	2.55%	10.90%	13.59%	0.0118%
AMERICAN TOWER CORP	AMT	61,337.45	0.26%	2.25%	17.44%	19.89%	0.0510%
AMAZON.COM INC	AMZN	692,655.72	2.90%	0.00%	31.97%	31.97%	0.9264%
ANDEAVOR	ANDV	16,915.99	0.07%	2.22%	16.71%	19.12%	0.0135%
ANSYS INC	ANSS	13,195.60	0.06%	0.00%	12.20%	12.20%	0.0067%
ANTHEM INC	ANTM	56,804.05	0.24%	1.34%	11.47%	12.89%	0.0306%
AON PLC	AON	34,962.56	0.15%	1.08%	10.29%	11.42%	0.0167%
SMITH (A.O.) CORP	AOS	10,942.09	0.05%	1.11%	11.50%	12.68%	0.0058%
APACHE CORP	APA	15,522.80	0.06%	2.46%	-19.13%	-16.91%	-0.0110%
ANADARKO PETROLEUM CORP	APC	32,481.12	0.14%	1.12%	1.27%	2.40%	0.0033%
AIR PRODUCTS & CHEMICALS INC	APD	35,680.54	0.15%	2.61%	13.90%	16.69%	0.0249%
AMPHENOL CORP-CL A	APH	25,854.32	0.11%	0.90%	10.54%	11.49%	0.0124%
APTIV PLC	APTIV	22,660.15	0.09%	1.16%	12.30%	13.53%	0.0128%
ALEXANDRIA REAL ESTATE EQUIT	ARE	12,356.20	0.05%	3.01%	6.81%	9.91%	0.0051%
ARCONIC INC	ARNC	11,215.62	0.05%	1.05%	17.30%	18.44%	0.0087%
ACTIVISION BLIZZARD INC	ATVI	49,978.65	0.21%	0.52%	14.61%	15.16%	0.0317%
AVALONBAY COMMUNITIES INC	AVB	23,016.10	0.10%	3.54%	6.22%	9.87%	0.0095%
BROADCOM INC	AVGO	101,431.10	0.42%	2.83%	13.25%	16.27%	0.0690%
AVERY DENNISON CORP	AVY	9,233.05	0.04%	1.77%	6.15%	7.97%	0.0031%
AMERICAN WATER WORKS CO INC	AWK	14,584.10	0.06%	2.22%	7.85%	10.16%	0.0062%
AMERICAN EXPRESS CO	AXP	80,019.26	0.33%	1.56%	17.30%	18.99%	0.0636%
ACUITY BRANDS INC	AYI	5,362.72	0.02%	0.40%	10.00%	10.42%	0.0023%
AUTOZONE INC	AZO	16,324.26	0.07%	0.00%	14.83%	14.83%	0.0101%
BOEING CO/THE	BA	193,361.25	0.81%	2.10%	15.03%	17.29%	0.1399%
BANK OF AMERICA CORP	BAC	304,675.87	1.27%	2.01%	15.65%	17.81%	0.2270%
BAXTER INTERNATIONAL INC	BAX	35,344.68	0.15%	1.09%	12.90%	14.06%	0.0208%
BB&T CORP	BBT	40,383.89	0.17%	2.90%	14.24%	17.35%	0.0293%
BEST BUY CO INC	BBY	20,109.42	0.08%	2.52%	9.22%	11.86%	0.0100%
BECTON DICKINSON AND CO	BDX	60,003.07	0.25%	1.37%	13.50%	14.96%	0.0375%
FRANKLIN RESOURCES INC	BEN	18,288.97	0.08%	6.52%	10.00%	16.85%	0.0129%
BROWN-FORMAN CORP-CLASS B	BF/B	26,425.29	0.11%	1.95%	13.83%	15.92%	0.0176%
BRIGHTHOUSE FINANCIAL INC	BHF	6,012.61	0.03%	0.00%	8.00%	8.00%	0.0020%
BAKER HUGHES A GE CO	BHGE	36,686.90	0.15%	2.00%	52.20%	54.73%	0.0840%
BIAGEN INC	BIIB	56,146.62	0.23%	0.00%	4.92%	4.92%	0.0115%
BANK OF NEW YORK MELLON CORP	BK	51,959.18	0.22%	2.02%	8.80%	10.91%	0.0237%
BOOKING HOLDINGS INC	BKNG	100,723.24	0.42%	0.00%	14.07%	14.07%	0.0593%
BLACKROCK INC	BLK	84,632.29	0.35%	2.21%	11.38%	13.72%	0.0486%
BALL CORP	BLL	14,246.45	0.06%	0.95%	5.40%	6.38%	0.0038%
BRISTOL-MYERS SQUIBB CO	BMJ	95,894.18	0.40%	2.76%	9.38%	12.27%	0.0492%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	486,388.17	2.03%	0.00%	6.70%	6.70%	0.1363%
BOSTON SCIENTIFIC CORP	BSX	39,053.51	0.16%	0.00%	19.30%	19.30%	0.0315%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
BORWARNER INC	BWA	11,140.28	0.05%	1.25%	5.81%	7.09%	0.0033%
BOSTON PROPERTIES INC	BXP	18,506.30	0.08%	2.71%	6.14%	8.94%	0.0069%
CITIGROUP INC	C	181,068.40	0.76%	2.08%	14.36%	16.58%	0.1256%
CA INC	CA	14,388.05	0.06%	2.98%	2.80%	5.82%	0.0035%
CONAGRA BRANDS INC	CAG	14,481.52	0.06%	2.29%	10.35%	12.75%	0.0077%
CARDINAL HEALTH INC	CAH	19,014.59	0.08%	3.06%	13.61%	16.88%	0.0134%
CATERPILLAR INC	CAT	89,781.32	0.38%	2.14%	20.40%	22.76%	0.0855%
CHUBB LTD	CB	62,420.63	0.26%	2.19%	9.05%	11.34%	0.0296%
CBOE GLOBAL MARKETS INC	CBOE	12,169.85	0.05%	1.08%	21.45%	22.64%	0.0115%
CBRE GROUP INC - A	CBRE	15,835.16	0.07%	0.00%	10.75%	10.75%	0.0071%
CBS CORP-CLASS B NON VOTING	CBS	19,066.01	0.08%	1.55%	13.92%	15.57%	0.0124%
CROWN CASTLE INTL CORP	CCI	43,041.98	0.18%	4.12%	16.53%	20.99%	0.0378%
CARNIVAL CORP	CCL	45,104.32	0.19%	2.93%	14.20%	17.34%	0.0327%
CADENCE DESIGN SYS INC	CDNS	10,564.69	0.04%	0.00%	12.00%	12.00%	0.0053%
CELGENE CORP	CELG	67,244.50	0.28%	0.00%	17.79%	17.79%	0.0500%
CERNER CORP	CERN	18,879.09	0.08%	0.00%	12.02%	12.02%	0.0095%
CF INDUSTRIES HOLDINGS INC	CF	8,967.98	0.04%	3.13%	12.70%	16.02%	0.0060%
CITIZENS FINANCIAL GROUP	CFG	20,620.68	0.09%	2.28%	17.79%	20.27%	0.0175%
CHURCH & DWIGHT CO INC	CHD	11,950.00	0.05%	1.78%	10.75%	12.63%	0.0063%
C.H. ROBINSON WORLDWIDE INC	CHRW	13,143.39	0.05%	2.03%	9.95%	12.08%	0.0066%
CHARTER COMMUNICATIONS INC-A	CHTR	80,637.45	0.34%	0.00%	6.52%	6.52%	0.0220%
CIGNA CORP	CI	41,751.70	0.17%	0.02%	12.30%	12.33%	0.0215%
CINCINNATI FINANCIAL CORP	CINF	12,065.51	N/A	2.82%	N/A	N/A	N/A
COLGATE-PALMOLIVE CO	CL	62,537.38	0.26%	2.35%	8.33%	10.78%	0.0282%
CLOROX COMPANY	CLX	16,244.08	0.07%	2.74%	8.34%	11.19%	0.0076%
COMERICA INC	CMA	16,586.00	0.07%	1.47%	21.85%	23.48%	0.0163%
COMCAST CORP-CLASS A	CMCSA	153,361.65	0.64%	2.28%	17.00%	19.48%	0.1250%
CME GROUP INC	CME	55,650.26	0.23%	3.97%	9.00%	13.14%	0.0306%
CHIPOTLE MEXICAN GRILL INC	CMG	8,861.82	0.04%	0.00%	18.25%	18.25%	0.0068%
CUMMINS INC	CMI	26,806.81	0.11%	2.69%	10.24%	13.06%	0.0146%
CMS ENERGY CORP	CMS	12,488.05	0.05%	3.23%	6.33%	9.65%	0.0050%
CENTENE CORP	CNC	18,850.00	0.08%	0.00%	16.49%	16.49%	0.0130%
CENTERPOINT ENERGY INC	CNP	11,507.33	0.05%	4.19%	6.60%	10.93%	0.0053%
CAPITAL ONE FINANCIAL CORP	COF	46,882.65	0.20%	1.74%	16.46%	18.34%	0.0360%
CABOT OIL & GAS CORP	COG	10,915.29	0.05%	1.03%	36.74%	37.96%	0.0173%
ROCKWELL COLLINS INC	COL	21,901.13	0.09%	1.15%	10.55%	11.76%	0.0108%
COOPER COS INC/THE	COO	10,852.07	0.05%	0.03%	10.73%	10.77%	0.0049%
CONOCOPHILLIPS	COP	76,006.65	0.32%	1.76%	6.00%	7.81%	0.0248%
COSTCO WHOLESALE CORP	COST	82,897.54	0.35%	1.06%	11.47%	12.58%	0.0436%
COTY INC-CL A	COTY	13,242.61	0.06%	2.76%	16.71%	19.70%	0.0109%
CAMPBELL SOUP CO	CPB	12,761.91	0.05%	3.42%	5.57%	9.08%	0.0048%
SALESFORCE.COM INC	CRM	87,160.86	0.36%	0.00%	25.55%	25.55%	0.0932%
CISCO SYSTEMS INC	CSCO	207,153.25	0.87%	2.90%	6.24%	9.23%	0.0800%
CSX CORP	CSX	48,837.03	0.20%	1.57%	15.28%	16.97%	0.0347%
CINTAS CORP	CTAS	18,159.63	0.08%	0.95%	11.78%	12.79%	0.0097%
CENTURYLINK INC	CTL	18,395.37	0.08%	12.67%	-6.20%	6.07%	0.0047%
COGNIZANT TECH SOLUTIONS-A	CTSH	47,526.31	0.20%	0.92%	14.25%	15.24%	0.0303%
CITRIX SYSTEMS INC	CTXS	12,920.72	0.05%	0.00%	10.85%	10.85%	0.0059%
CVS HEALTH CORP	CVS	64,541.37	0.27%	3.44%	12.04%	15.68%	0.0423%
CHEVRON CORP	CVX	229,162.32	0.96%	3.73%	27.68%	31.93%	0.3061%
CONCHO RESOURCES INC	CXO	24,076.26	0.10%	0.00%	35.10%	35.10%	0.0354%
DOMINION ENERGY INC	D	42,997.18	0.18%	5.20%	5.78%	11.13%	0.0200%
DELTA AIR LINES INC	DAL	37,175.15	0.16%	2.48%	18.02%	20.72%	0.0322%
DEERE & CO	DE	48,561.70	0.20%	1.65%	7.67%	9.38%	0.0191%
DISCOVER FINANCIAL SERVICES	DFS	24,939.45	0.10%	2.10%	10.98%	13.20%	0.0138%
DOLLAR GENERAL CORP	DG	25,855.72	0.11%	1.20%	15.43%	16.72%	0.0181%
QUEST DIAGNOSTICS INC	DGX	13,545.77	0.06%	1.94%	9.55%	11.58%	0.0066%
DR HORTON INC	DHI	16,720.95	0.07%	1.09%	20.18%	21.39%	0.0150%
DANAHER CORP	DHR	69,313.44	0.29%	0.59%	9.98%	10.60%	0.0307%
WALT DISNEY CO/THE	DIS	150,893.83	0.63%	1.67%	10.12%	11.87%	0.0749%
DISCOVERY INC - A	DISCA	16,209.81	0.07%	0.00%	6.00%	6.00%	0.0041%
DISH NETWORK CORP-A	DISH	17,980.20	0.08%	0.00%	-8.23%	-8.23%	-0.0062%
DIGITAL REALTY TRUST INC	DLR	21,964.79	0.09%	3.93%	7.15%	11.22%	0.0103%
DOLLAR TREE INC	DLTR	23,052.45	0.10%	0.00%	13.27%	13.27%	0.0128%
DOVER CORP	DOV	14,508.59	0.06%	2.08%	13.53%	15.76%	0.0096%
DR PEPPER SNAPPLE GROUP INC	DPS	21,714.88	0.09%	2.02%	7.40%	9.49%	0.0086%
DUKE REALTY CORP	DRE	9,181.80	0.04%	3.12%	-4.14%	-1.08%	-0.0004%
DARDEN RESTAURANTS INC	DRI	10,858.82	0.05%	2.89%	10.84%	13.88%	0.0063%
DTE ENERGY COMPANY	DTE	18,407.70	0.08%	3.49%	5.00%	8.58%	0.0066%
DUKE ENERGY CORP	DUK	53,715.41	0.22%	4.77%	4.26%	9.13%	0.0205%
DAVITA INC	DVA	11,476.88	0.05%	0.00%	18.33%	18.33%	0.0088%
DEVON ENERGY CORP	DVN	17,676.96	0.07%	0.87%	18.22%	19.16%	0.0142%
DOWDUPONT INC	DWDP	153,907.80	0.64%	2.51%	7.90%	10.50%	0.0676%
DXC TECHNOLOGY CO	DXC	29,448.71	0.12%	0.70%	14.95%	15.70%	0.0193%
ELECTRONIC ARTS INC	EA	36,969.93	0.15%	0.00%	13.57%	13.57%	0.0210%
EBAY INC	EBAY	39,652.56	0.17%	0.00%	10.15%	10.15%	0.0168%
ECOLAB INC	ECL	40,708.99	0.17%	1.14%	12.38%	13.59%	0.0231%
CONSOLIDATED EDISON INC	ED	23,821.49	0.10%	3.72%	3.57%	7.36%	0.0073%
EQUIFAX INC	EFX	14,021.41	0.06%	1.39%	8.15%	9.59%	0.0056%
EDISON INTERNATIONAL	EIX	20,669.46	0.09%	3.82%	4.97%	8.89%	0.0077%
ESTEE LAUDER COMPANIES-CL A	EL	54,728.92	0.23%	1.00%	13.55%	14.62%	0.0335%
EASTMAN CHEMICAL CO	EMN	15,052.48	0.06%	2.17%	7.35%	9.60%	0.0060%
EMERSON ELECTRIC CO	EMR	43,435.59	0.18%	2.85%	11.12%	14.12%	0.0257%
EOG RESOURCES INC	EOG	64,240.38	0.27%	0.63%	7.96%	8.62%	0.0232%
EQUINIX INC	EQIX	31,806.11	0.13%	2.26%	23.62%	26.15%	0.0348%
EQUITY RESIDENTIAL	EQR	22,697.65	0.09%	3.47%	6.72%	10.30%	0.0098%
EQT CORP	EQT	12,919.51	0.05%	0.24%	17.50%	17.76%	0.0096%
EVERSOURCE ENERGY	ES	18,705.77	0.08%	3.43%	5.94%	9.46%	0.0074%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
EXPRESS SCRIPTS HOLDING CO	ESRX	40,216.86	0.17%	0.00%	7.99%	7.99%	0.0134%
ESSEX PROPERTY TRUST INC	ESS	16,047.25	0.07%	3.04%	6.25%	9.39%	0.0063%
E*TRADE FINANCIAL CORP	ETFC	15,102.73	0.06%	0.00%	34.97%	34.97%	0.0221%
EATON CORP PLC	ETN	33,847.85	0.14%	3.31%	9.08%	12.54%	0.0178%
ENTERGY CORP	ETR	14,273.95	0.06%	4.59%	3.15%	7.82%	0.0047%
ENVISION HEALTHCARE CORP	EVHC	4,525.05	0.02%	0.00%	14.96%	14.96%	0.0028%
EDWARDS LIFESCIENCES CORP	EW	29,018.17	0.12%	0.00%	16.60%	16.60%	0.0202%
EXELON CORP	EXC	36,997.60	0.15%	3.60%	3.67%	7.34%	0.0114%
EXPEDITORS INTL WASH INC	EXPD	11,160.48	0.05%	1.39%	9.33%	10.79%	0.0050%
EXPEDIA GROUP INC	EXPE	16,276.54	0.07%	1.14%	16.81%	18.05%	0.0123%
EXTRA SPACE STORAGE INC	EXR	10,964.44	0.05%	3.77%	5.85%	9.73%	0.0045%
FORD MOTOR CO	F	45,042.97	0.19%	5.90%	-8.36%	-2.71%	-0.0051%
FASTENAL CO	FAST	14,407.37	0.06%	2.96%	17.50%	20.71%	0.0125%
FACEBOOK INC-A	FB	477,930.72	2.00%	0.00%	24.31%	24.31%	0.4861%
FORTUNE BRANDS HOME & SECURI	FBHS	8,636.85	0.04%	1.33%	11.76%	13.17%	0.0048%
FREEPORT-MCMORAN INC	FCX	25,872.99	0.11%	1.16%	-0.11%	1.04%	0.0011%
FEDEX CORP	FDX	65,331.45	0.27%	0.82%	14.60%	15.48%	0.0423%
FIRSTENERGY CORP	FE	16,407.87	0.07%	4.18%	-1.79%	2.36%	0.0016%
FS NETWORKS INC	FFIV	9,589.60	0.04%	0.00%	10.03%	10.03%	0.0040%
FIDELITY NATIONAL INFO SERV	FIS	31,869.39	0.13%	1.33%	11.43%	12.84%	0.0171%
FISERV INC	FISV	29,152.16	0.12%	0.00%	7.65%	7.65%	0.0093%
FIFTH THIRD BANCORP	FITB	21,578.10	0.09%	2.35%	5.65%	8.06%	0.0073%
FOOT LOCKER INC	FL	5,338.83	0.02%	3.04%	5.42%	8.54%	0.0019%
FLIR SYSTEMS INC	FLIR	7,136.31	N/A	1.22%	N/A	N/A	N/A
FLUOR CORP	FLR	8,103.80	0.03%	1.49%	20.61%	22.25%	0.0075%
FLOWERVE CORP	FLS	5,974.48	0.02%	1.72%	16.98%	18.85%	0.0047%
FMC CORP	FMC	10,803.05	0.05%	0.93%	13.53%	14.52%	0.0066%
TWENTY-FIRST CENTURY FOX-A	FOXA	67,851.13	0.28%	1.01%	10.50%	11.56%	0.0328%
FEDERAL REALTY INVS TRUST	FRT	8,431.07	0.04%	3.54%	4.30%	7.92%	0.0028%
TECHNIPFMC PLC	FTI	14,975.67	0.06%	1.66%	4.55%	6.25%	0.0039%
FORTIVE CORP	FTV	25,997.96	0.11%	0.39%	10.64%	11.05%	0.0120%
GENERAL DYNAMICS CORP	GD	65,103.18	0.27%	1.70%	10.92%	12.72%	0.0346%
GENERAL ELECTRIC CO	GE	117,227.42	0.49%	3.66%	4.03%	7.77%	0.0381%
GGP INC	GGP	18,948.95	0.08%	4.60%	4.13%	8.83%	0.0070%
GILEAD SCIENCES INC	GILD	98,075.61	0.41%	2.98%	2.79%	5.81%	0.0238%
GENERAL MILLS INC	GIS	26,561.47	0.11%	4.42%	7.33%	11.91%	0.0132%
CORNING INC	GLW	23,285.91	0.10%	2.53%	6.95%	9.57%	0.0093%
GENERAL MOTORS CO	GM	54,242.31	0.23%	3.94%	5.28%	9.32%	0.0211%
ALPHABET INC-CL A	GOOGL	717,828.65	3.00%	0.00%	19.89%	19.89%	0.5973%
GENUINE PARTS CO	GPC	13,135.68	0.05%	3.19%	-2.26%	0.90%	0.0005%
GLOBAL PAYMENTS INC	GPN	17,535.77	0.07%	0.04%	22.05%	22.09%	0.0162%
GAP INC/THE	GPS	11,698.80	0.05%	3.23%	8.80%	12.17%	0.0060%
GARMIN LTD	GRMN	11,108.80	0.05%	3.56%	6.30%	9.97%	0.0046%
GOLDMAN SACHS GROUP INC	GS	100,738.11	0.42%	1.24%	11.35%	12.66%	0.0533%
GOODYEAR TIRE & RUBBER CO	GT	6,694.93	N/A	1.91%	N/A	N/A	N/A
WW GRAINGER INC	GWV	15,618.07	0.07%	1.95%	13.03%	15.11%	0.0099%
HALLIBURTON CO	HAL	44,440.12	0.19%	1.44%	75.82%	77.81%	0.1446%
HASBRO INC	HAS	10,974.46	0.05%	2.85%	8.53%	11.51%	0.0053%
HUNTINGTON BANCSHARES INC	HBAN	15,736.66	0.07%	3.14%	12.54%	15.88%	0.0105%
HANESBRANDS INC	HBI	6,533.21	0.03%	3.31%	7.19%	10.63%	0.0029%
HCA HEALTHCARE INC	HCA	33,911.51	0.14%	1.46%	12.64%	14.19%	0.0201%
HCP INC	HCP	10,529.32	0.04%	6.65%	-0.28%	6.37%	0.0028%
HOME DEPOT INC	HD	199,189.48	0.83%	2.34%	14.58%	17.08%	0.1423%
HESS CORP	HES	17,743.82	0.07%	1.83%	-11.08%	-9.35%	-0.0069%
HARTFORD FINANCIAL SVCS GRP	HIG	18,648.97	0.08%	2.00%	9.50%	11.60%	0.0090%
HUNTINGTON INGALLS INDUSTRIE	HII	11,490.38	0.05%	1.11%	27.50%	28.76%	0.0138%
HILTON WORLDWIDE HOLDINGS IN	HLT	23,915.21	0.10%	0.82%	2.18%	3.01%	0.0030%
HARLEY-DAVIDSON INC	HOG	7,083.84	0.03%	3.52%	9.60%	13.29%	0.0039%
HOLOGIC INC	HOLX	10,233.35	0.04%	0.00%	5.74%	5.74%	0.0025%
HONEYWELL INTERNATIONAL INC	HON	109,353.40	0.46%	2.08%	10.00%	12.18%	0.0557%
HELMERICH & PAYNE	HP	7,952.72	N/A	3.83%	N/A	N/A	N/A
HEWLETT PACKARD ENTERPRISE	HPE	27,025.76	0.11%	2.12%	5.12%	7.29%	0.0082%
HP INC	HPQ	35,647.64	0.15%	2.59%	7.19%	9.87%	0.0147%
H&R BLOCK INC	HRB	5,449.72	0.02%	3.69%	11.00%	14.89%	0.0034%
HORMEL FOODS CORP	HRL	18,554.88	0.08%	2.13%	8.20%	10.42%	0.0081%
HARRIS CORP	HRS	19,197.42	N/A	1.41%	N/A	N/A	N/A
HENRY SCHEIN INC	HSIC	10,644.03	0.04%	0.00%	11.54%	11.54%	0.0051%
HOST HOTELS & RESORTS INC	HST	14,050.88	0.06%	4.29%	4.13%	8.52%	0.0050%
HERSHEY CO/THE	HSY	20,144.03	0.08%	2.85%	9.33%	12.31%	0.0104%
HUMANA INC	HUM	39,716.64	0.17%	0.63%	14.08%	14.75%	0.0245%
INTL BUSINESS MACHINES CORP	IBM	144,356.22	0.60%	3.94%	1.97%	5.95%	0.0359%
INTERCONTINENTAL EXCHANGE IN	ICE	42,144.01	0.18%	1.32%	11.34%	12.74%	0.0225%
IDEXX LABORATORIES INC	IDXX	16,696.74	0.07%	0.00%	16.66%	16.66%	0.0116%
INTL FLAVORS & FRAGRANCES	IFF	10,864.65	0.05%	2.06%	8.20%	10.34%	0.0047%
ILLUMINA INC	ILMN	35,430.26	0.15%	0.00%	15.14%	15.14%	0.0224%
INCYTE CORP	INCY	14,851.33	0.06%	0.00%	44.67%	44.67%	0.0278%
IHS MARKIT LTD	INFO	19,399.51	0.08%	0.00%	12.37%	12.37%	0.0100%
INTEL CORP	INTC	242,617.49	1.01%	2.25%	8.16%	10.50%	0.1066%
INTUIT INC	INTU	44,048.54	0.18%	0.90%	16.03%	17.00%	0.0313%
INTERNATIONAL PAPER CO	IP	22,038.06	0.09%	3.65%	7.85%	11.64%	0.0107%
INTERPUBLIC GROUP OF COS INC	IPG	9,009.24	0.04%	3.60%	4.85%	8.54%	0.0032%
IPG PHOTONICS CORP	IPGP	12,377.89	0.05%	0.00%	35.00%	35.00%	0.0181%
IQVIA HOLDINGS INC	IQV	20,350.07	0.09%	0.00%	14.84%	14.84%	0.0126%
INGERSOLL-RAND PLC	IR	21,023.19	0.09%	2.13%	10.60%	12.84%	0.0113%
IRON MOUNTAIN INC	IRM	9,515.14	0.04%	6.97%	9.90%	17.21%	0.0069%
INTUITIVE SURGICAL INC	ISRG	46,878.94	0.20%	0.00%	10.00%	10.00%	0.0196%
GARTNER INC	IT	10,475.08	0.04%	0.00%	16.50%	16.50%	0.0072%
ILLINOIS TOOL WORKS	ITW	52,585.30	0.22%	2.27%	9.67%	12.05%	0.0265%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
INVESCO LTD	IVZ	12,542.18	0.05%	4.01%	10.16%	14.37%	0.0075%
HUNT (JB) TRANSPRT SVCS INC	JBHT	12,377.01	0.05%	0.85%	13.13%	14.03%	0.0073%
JOHNSON CONTROLS INTERNATION	JCI	31,561.67	0.13%	3.05%	10.40%	13.61%	0.0180%
JACOBS ENGINEERING GROUP INC	JEC	8,396.86	0.04%	0.99%	15.97%	17.03%	0.0060%
JOHNSON & JOHNSON	JNJ	350,406.39	1.47%	2.76%	7.17%	10.03%	0.1470%
JUNIPER NETWORKS INC	JNPR	8,673.23	0.04%	2.62%	7.10%	9.81%	0.0036%
JPMORGAN CHASE & CO	JPM	376,169.36	1.57%	2.23%	9.80%	12.14%	0.1911%
NORDSTROM INC	JWN	7,951.59	0.03%	3.21%	8.05%	11.39%	0.0038%
KELLOGG CO	K	21,856.01	0.09%	3.53%	7.64%	11.30%	0.0103%
KEYCORP	KEY	20,244.09	0.08%	2.68%	15.75%	18.64%	0.0158%
KRAFT HEINZ CO/THE	KHC	74,250.17	0.31%	4.21%	7.03%	11.38%	0.0354%
KIMCO REALTY CORP	KIM	5,944.36	0.02%	8.06%	4.21%	12.44%	0.0031%
KLA-TENCOR CORP	KLAC	16,770.28	0.07%	2.32%	11.86%	14.32%	0.0100%
KIMBERLY-CLARK CORP	KMB	37,050.90	0.15%	3.77%	16.49%	20.57%	0.0319%
KINDER MORGAN INC	KMI	33,819.07	0.14%	5.19%	13.75%	19.29%	0.0273%
CARMAX INC	KMX	11,513.78	0.05%	0.00%	13.53%	13.53%	0.0065%
COCA-COLA CO/THE	KO	189,812.87	0.79%	3.50%	8.42%	12.07%	0.0958%
MICHAEL KORS HOLDINGS LTD	KORS	9,949.83	0.04%	0.00%	6.06%	6.06%	0.0025%
KROGER CO	KR	20,549.62	0.09%	2.62%	5.57%	8.27%	0.0071%
KOHL'S CORP	KSS	10,319.65	0.04%	3.94%	7.00%	11.08%	0.0048%
KANSAS CITY SOUTHERN	KSU	11,299.74	0.05%	1.33%	13.00%	14.42%	0.0068%
LOEWS CORP	L	16,361.44	N/A	0.50%	N/A	N/A	N/A
L BRANDS INC	LB	10,087.08	0.04%	6.83%	11.66%	18.88%	0.0080%
LEGGITT & PLATT INC	LEG	5,838.10	0.02%	3.35%	11.00%	14.53%	0.0035%
LENNAR CORP-A	LEN	18,130.37	0.08%	0.28%	20.99%	21.30%	0.0162%
LABORATORY CRP OF AMER HLDGS	LH	16,811.85	0.07%	0.00%	9.40%	9.40%	0.0066%
LKQ CORP	LKQ	11,824.41	0.05%	0.00%	13.00%	13.00%	0.0064%
L3 TECHNOLOGIES INC	LLL	16,464.90	0.07%	1.53%	10.72%	12.33%	0.0085%
ELI LILLY & CO	LLY	87,110.07	0.36%	2.89%	9.91%	12.94%	0.0472%
LOCKHEED MARTIN CORP	LMT	97,923.36	0.41%	2.39%	21.24%	23.89%	0.0978%
LINCOLN NATIONAL CORP	LNC	15,146.23	0.06%	1.94%	8.00%	10.02%	0.0064%
ALLIANT ENERGY CORP	LNT	9,516.22	0.04%	3.26%	5.92%	9.27%	0.0037%
LOWE'S COS INC	LOW	71,205.83	0.30%	2.09%	16.07%	18.33%	0.0546%
LAM RESEARCH CORP	LRCX	33,199.94	0.14%	1.14%	12.86%	14.08%	0.0196%
LEUCADIA NATIONAL CORP	LUK	8,656.94	0.04%	1.65%	18.00%	19.79%	0.0072%
SOUTHWEST AIRLINES CO	LUV	32,051.24	0.13%	0.98%	13.72%	14.77%	0.0198%
LYONDELLBASELL INDU-CL A	LYB	40,563.80	0.17%	3.61%	6.90%	10.63%	0.0180%
MACY'S INC	M	8,646.14	0.04%	5.64%	-0.07%	5.58%	0.0020%
MASTERCARD INC - A	MA	183,224.85	0.77%	0.57%	20.55%	21.18%	0.1624%
MID-AMERICA APARTMENT COMM	MAA	10,403.85	0.04%	4.08%	7.00%	11.22%	0.0049%
MACERICH CO/THE	MAC	8,144.07	0.03%	5.16%	5.08%	10.37%	0.0035%
MARRIOTT INTERNATIONAL -CL A	MAR	46,775.28	0.20%	1.08%	15.03%	16.19%	0.0317%
MASCO CORP	MAS	12,655.35	0.05%	1.06%	16.79%	17.95%	0.0095%
MATTEL INC	MAT	5,035.84	0.02%	0.00%	9.73%	9.73%	0.0021%
MCDONALD'S CORP	MCD	127,133.93	0.53%	2.53%	8.62%	11.26%	0.0599%
MICROCHIP TECHNOLOGY INC	MCHP	20,465.18	0.09%	1.66%	14.29%	16.07%	0.0138%
MCKESSON CORP	MCK	29,475.57	0.12%	0.91%	14.48%	15.46%	0.0191%
MOODY'S CORP	MCO	31,129.67	0.13%	1.08%	8.00%	9.12%	0.0119%
MONDELEZ INTERNATIONAL INC-A	MDLZ	62,429.21	0.26%	2.18%	11.42%	13.73%	0.0358%
MEDTRONIC PLC	MDT	107,847.06	0.45%	2.33%	6.70%	9.11%	0.0411%
METLIFE INC	MET	48,639.28	0.20%	3.51%	12.71%	16.44%	0.0335%
MGM RESORTS INTERNATIONAL	MGM	19,492.97	0.08%	1.38%	10.99%	12.44%	0.0101%
MOHAWK INDUSTRIES INC	MHK	17,828.43	0.07%	0.00%	10.05%	10.05%	0.0075%
MCCORMICK & CO-NON VGT SHRS	MCK	13,879.94	0.06%	1.97%	8.30%	10.35%	0.0060%
MARTIN MARIETTA MATERIALS	MLM	12,316.92	0.05%	0.91%	14.57%	15.55%	0.0080%
MARSH & MCLENNAN COS	MMC	41,665.91	0.17%	1.93%	12.61%	14.66%	0.0255%
3M CO	MMM	128,171.45	0.54%	2.52%	8.80%	11.44%	0.0613%
MONSTER BEVERAGE CORP	MNST	32,103.71	0.13%	0.00%	18.25%	18.25%	0.0245%
ALTRIA GROUP INC	MO	121,150.06	0.51%	4.64%	2.57%	7.26%	0.0368%
MONSANTO CO	MON	55,337.01	0.23%	1.84%	7.95%	9.87%	0.0228%
MOSAIC CO/THE	MOS	9,573.77	0.04%	0.40%	13.65%	14.08%	0.0056%
MARATHON PETROLEUM CORP	MPC	35,384.81	0.15%	2.44%	7.94%	10.48%	0.0155%
MERCK & CO. INC.	MRK	153,942.50	0.64%	3.38%	6.09%	9.57%	0.0616%
MARATHON OIL CORP	MRO	15,495.10	0.06%	1.10%	5.00%	6.13%	0.0040%
MORGAN STANLEY	MS	93,983.79	0.39%	2.08%	15.09%	17.32%	0.0681%
MSCI INC	MSCI	13,266.73	0.06%	1.14%	12.90%	14.11%	0.0078%
MICROSOFT CORP	MSFT	716,696.72	3.00%	1.81%	11.08%	12.99%	0.3895%
MOTOROLA SOLUTIONS INC	MSI	17,412.99	0.07%	1.96%	4.07%	6.07%	0.0044%
M & T BANK CORP	MTB	27,200.97	0.11%	1.82%	11.91%	13.84%	0.0157%
METTLER-TOLEDO INTERNATIONAL	MTD	14,461.20	0.06%	0.00%	14.31%	14.31%	0.0087%
MICRON TECHNOLOGY INC	MU	60,574.50	0.25%	0.00%	0.45%	0.45%	0.0011%
MYLAN NV	MYL	20,910.43	0.09%	0.00%	5.89%	5.89%	0.0052%
NAVIENT CORP	NAVI	3,511.08	0.01%	4.90%	-6.00%	-1.25%	-0.0002%
NOBLE ENERGY INC	NBL	15,799.36	0.07%	1.25%	9.95%	11.26%	0.0074%
NORWEGIAN CRUISE LINE HOLDIN	NCLH	11,738.96	0.05%	0.36%	19.77%	20.17%	0.0099%
NASDAQ INC	NDAQ	14,312.47	0.06%	1.93%	10.58%	12.60%	0.0075%
NEXTERA ENERGY INC	NEE	75,533.55	0.32%	2.78%	8.20%	11.09%	0.0350%
NEWMONT MINING CORP	NEM	22,202.88	0.09%	1.36%	-3.00%	-1.66%	-0.0015%
NETFLIX INC	NFLX	135,240.04	0.57%	0.00%	47.36%	47.36%	0.2679%
NEWFIELD EXPLORATION CO	NFX	5,171.35	0.02%	0.00%	17.19%	17.19%	0.0037%
NISOURCE INC	NI	7,949.70	0.03%	3.24%	5.61%	8.94%	0.0030%
NIKE INC -CL B	NKE	108,390.82	0.45%	1.15%	11.72%	12.94%	0.0587%
NEKTAR THERAPEUTICS	NKTR	16,172.75	N/A	0.00%	N/A	N/A	N/A
NIELSEN HOLDINGS PLC	NLSN	11,521.89	0.05%	4.38%	9.75%	14.34%	0.0069%
NORTHROP GRUMMAN CORP	NOC	61,138.96	0.26%	1.32%	13.68%	15.09%	0.0386%
NATIONAL OILWELL VARCO INC	NOV	15,625.97	0.07%	0.46%	-11.60%	-11.17%	-0.0073%
NRG ENERGY INC	NRG	9,571.28	0.04%	0.50%	17.90%	18.44%	0.0074%
NORFOLK SOUTHERN CORP	NSC	37,823.93	0.16%	2.15%	14.33%	16.64%	0.0263%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
NETAPP INC	NTAP	18,076.75	0.08%	1.19%	9.83%	11.07%	0.0084%
NORTHERN TRUST CORP	NTRS	23,440.21	0.10%	1.73%	14.78%	16.64%	0.0163%
NUCOR CORP	NUE	19,594.75	0.08%	2.46%	5.00%	7.52%	0.0062%
NVIDIA CORP	NVDA	140,528.94	0.59%	0.26%	9.68%	9.95%	0.0585%
NEWELL BRANDS INC	NWL	12,491.08	0.05%	3.56%	4.98%	8.63%	0.0045%
NEWS CORP - CLASS A	NWSA	9,196.59	0.04%	1.32%	13.33%	14.74%	0.0057%
REALTY INCOME CORP	O	14,449.06	0.06%	5.17%	4.33%	9.61%	0.0058%
ONEOK INC	OKE	24,051.54	0.10%	5.45%	26.19%	32.35%	0.0326%
OMNICOM GROUP	OMC	16,333.27	0.07%	3.37%	5.80%	9.27%	0.0063%
ORACLE CORP	ORCL	188,112.98	0.79%	1.61%	8.71%	10.39%	0.0818%
O'REILLY AUTOMOTIVE INC	ORLY	18,731.71	0.08%	0.00%	15.95%	15.95%	0.0125%
OCCIDENTAL PETROLEUM CORP	OXY	56,376.20	0.24%	4.20%	8.05%	12.42%	0.0293%
PAYCHEX INC	PAYX	22,093.36	0.09%	3.23%	8.63%	12.00%	0.0111%
PEOPLE'S UNITED FINANCIAL	PBCT	6,451.94	0.03%	3.74%	2.00%	5.77%	0.0016%
PACCAR INC	PCAR	23,896.05	0.10%	3.29%	7.63%	11.05%	0.0110%
P G & E CORP	PCG	23,391.28	0.10%	4.32%	3.40%	7.79%	0.0076%
PUBLIC SERVICE ENTERPRISE GP	PEG	25,177.66	0.11%	3.61%	4.06%	7.74%	0.0082%
PEPSICO INC	PEP	155,088.59	0.65%	3.28%	6.92%	10.31%	0.0669%
PFIZER INC	PFE	216,208.05	0.90%	3.79%	6.92%	10.83%	0.0980%
PRINCIPAL FINANCIAL GROUP	PFG	17,456.32	0.07%	3.44%	9.67%	13.28%	0.0097%
PROCTER & GAMBLE CO/THE	PG	197,570.77	0.83%	3.58%	7.43%	11.15%	0.0921%
PROGRESSIVE CORP	PGR	34,983.84	0.15%	2.13%	9.33%	11.56%	0.0169%
PARKER HANNIFIN CORP	PH	22,948.21	0.10%	1.56%	10.12%	11.75%	0.0113%
PULTEGROUP INC	PHM	8,381.95	0.04%	1.25%	20.69%	22.07%	0.0077%
PACKAGING CORP OF AMERICA	PKG	10,712.48	0.04%	2.29%	8.50%	10.89%	0.0049%
PERKINELMER INC	PKI	8,223.73	0.03%	0.38%	75.64%	76.16%	0.0262%
PROLOGIS INC	PLD	33,133.90	0.14%	2.98%	6.08%	9.15%	0.0127%
PHILIP MORRIS INTERNATIONAL	PM	158,322.26	0.66%	4.27%	11.46%	15.98%	0.1058%
PNC FINANCIAL SERVICES GROUP	PNC	68,597.54	0.29%	2.30%	10.40%	12.81%	0.0368%
PENTAIR PLC	PNR	12,485.90	0.05%	2.00%	10.34%	12.44%	0.0065%
PINNACLE WEST CAPITAL	PNW	8,746.10	0.04%	3.61%	3.22%	6.89%	0.0025%
PPG INDUSTRIES INC	PPG	27,425.51	0.11%	1.69%	9.52%	11.29%	0.0130%
PPL CORP	PPL	19,293.94	0.08%	5.90%	5.47%	11.53%	0.0093%
PERRIGO CO PLC	PRGO	11,378.46	0.05%	0.82%	6.62%	7.47%	0.0036%
PRUDENTIAL FINANCIAL INC	PRU	43,993.76	0.18%	3.34%	8.50%	11.98%	0.0220%
PUBLIC STORAGE	PSA	34,343.40	0.14%	4.13%	5.15%	9.39%	0.0135%
PHILLIPS 66	PSX	48,376.57	0.20%	2.86%	5.05%	7.98%	0.0161%
PVH CORP	PVH	12,251.70	0.05%	0.10%	10.87%	10.97%	0.0056%
QUANTA SERVICES INC	PWR	5,128.57	N/A	0.00%	N/A	N/A	N/A
PRAXAIR INC	PX	42,074.13	0.18%	2.25%	11.00%	13.38%	0.0235%
PIONEER NATURAL RESOURCES CO	PXD	32,113.75	0.13%	0.12%	30.50%	30.64%	0.0412%
PAYPAL HOLDINGS INC	PYPL	91,733.48	0.38%	0.00%	17.89%	17.89%	0.0686%
QUALCOMM INC	QCOM	82,500.65	0.35%	4.21%	6.01%	10.35%	0.0357%
QORVO INC	QROV	9,177.11	0.04%	0.05%	13.35%	13.40%	0.0051%
ROYAL CARIBBEAN CRUISES LTD	RCL	24,311.81	0.10%	2.19%	18.83%	21.22%	0.0216%
EVEREST RE GROUP LTD	RE	12,634.61	0.05%	2.12%	10.00%	12.23%	0.0065%
REGENCY CENTERS CORP	REG	9,919.70	0.04%	3.82%	8.58%	12.57%	0.0052%
REGENERON PHARMACEUTICALS	REGN	34,630.98	0.14%	0.00%	14.37%	14.37%	0.0208%
REGIONS FINANCIAL CORP	RF	20,782.01	0.09%	2.26%	15.10%	17.53%	0.0152%
ROBERT HALF INTL INC	RHI	7,276.76	N/A	1.81%	N/A	N/A	N/A
RED HAT INC	RHT	27,915.35	0.12%	0.00%	17.16%	17.16%	0.0200%
RAYMOND JAMES FINANCIAL INC	RJF	12,455.90	0.05%	1.22%	17.00%	18.33%	0.0095%
RALPH LAUREN CORP	RL	9,035.35	0.04%	1.83%	5.16%	7.03%	0.0027%
RESMED INC	RMD	14,128.35	0.06%	1.46%	15.20%	16.78%	0.0099%
ROCKWELL AUTOMATION INC	ROK	22,091.44	0.09%	1.90%	10.92%	12.93%	0.0119%
ROPER TECHNOLOGIES INC	ROP	28,082.93	0.12%	0.59%	10.90%	11.52%	0.0135%
ROSS STORES INC	ROST	28,840.45	0.12%	1.02%	13.75%	14.84%	0.0179%
RANGE RESOURCES CORP	RRC	3,648.82	0.02%	0.55%	22.89%	23.50%	0.0036%
REPUBLIC SERVICES INC	RSG	21,598.17	0.09%	2.14%	10.18%	12.42%	0.0112%
RAYTHEON COMPANY	RTN	64,051.22	0.27%	1.54%	11.21%	12.83%	0.0344%
SBA COMMUNICATIONS CORP	SBAC	19,157.82	0.08%	0.00%	27.25%	27.25%	0.0218%
STARBUCKS CORP	SBUX	83,267.74	0.35%	2.12%	16.00%	18.29%	0.0637%
SCANA CORP	SCG	5,120.72	0.02%	5.92%	-2.10%	3.77%	0.0008%
SCHWAB (CHARLES) CORP	SCHW	68,811.53	0.29%	0.77%	25.56%	26.42%	0.0761%
SEALED AIR CORP	SEE	7,309.84	0.03%	1.49%	4.25%	5.77%	0.0018%
SHERWIN-WILLIAMS CO/THE	SHW	36,269.41	0.15%	0.89%	11.12%	12.06%	0.0183%
SVB FINANCIAL GROUP	SIVB	13,065.35	0.05%	0.00%	10.75%	10.75%	0.0059%
JM SMUCKER CO/THE	SJM	13,955.65	0.06%	2.54%	6.70%	9.32%	0.0054%
SCHLUMBERGER LTD	SLB	94,175.79	0.39%	3.00%	40.24%	43.84%	0.1727%
SL GREEN REALTY CORP	SLG	8,733.43	0.04%	3.42%	4.69%	8.19%	0.0030%
SNAP-ON INC	SNA	8,255.08	0.03%	2.37%	9.70%	12.19%	0.0042%
SYNOPSYS INC	SNPS	12,466.14	N/A	0.00%	N/A	N/A	N/A
SOUTHERN CO/THE	SO	44,491.35	0.19%	5.43%	4.73%	10.28%	0.0191%
SIMON PROPERTY GROUP INC	SPG	47,048.58	0.20%	5.22%	6.13%	11.51%	0.0227%
S&P GLOBAL INC	SPGI	47,567.74	0.20%	1.02%	11.70%	12.78%	0.0254%
STERICYCLE INC	SRCL	5,047.99	0.02%	0.00%	7.65%	7.65%	0.0016%
SEMPRA ENERGY	SRE	29,193.05	0.12%	3.24%	16.93%	20.45%	0.0250%
SUNTRUST BANKS INC	STI	31,554.07	0.13%	2.56%	13.21%	15.93%	0.0210%
STATE STREET CORP	STT	36,713.92	0.15%	1.81%	19.32%	21.31%	0.0327%
SEAGATE TECHNOLOGY	STX	17,263.39	0.07%	4.17%	10.85%	15.25%	0.0110%
CONSTELLATION BRANDS INC-A	STZ	43,622.41	0.18%	1.28%	15.01%	16.38%	0.0299%
STANLEY BLACK & DECKER INC	SWK	23,403.37	0.10%	1.70%	11.50%	13.29%	0.0130%
SKYWORKS SOLUTIONS INC	SWKS	17,937.82	0.08%	1.33%	10.60%	11.99%	0.0090%
SYNCHRONY FINANCIAL	SYF	25,902.70	0.11%	1.95%	8.40%	10.43%	0.0113%
STRYKER CORP	SYK	59,082.43	0.25%	1.45%	8.89%	10.40%	0.0257%
SYMANTEC CORP	SYM	17,104.74	0.07%	1.16%	11.08%	12.31%	0.0088%
SYSCO CORP	SY	31,534.33	0.13%	2.30%	11.62%	14.05%	0.0185%
AT&T INC	T	215,813.46	0.90%	5.71%	-1.60%	4.07%	0.0367%

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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
MOLSON COORS BREWING CO -B	TAP	15,755.66	0.07%	2.30%	6.16%	8.53%	0.0056%
TRANSDIGM GROUP INC	TDG	16,140.14	0.07%	0.00%	11.28%	11.28%	0.0076%
TE CONNECTIVITY LTD	TEL	34,899.38	0.15%	1.65%	10.38%	12.12%	0.0177%
TARGET CORP	TGT	38,534.69	0.16%	3.69%	4.48%	8.25%	0.0133%
TIFFANY & CO	TIF	12,328.42	0.05%	2.06%	10.90%	13.07%	0.0067%
TJX COMPANIES INC	TJX	50,955.90	0.21%	1.89%	12.53%	14.53%	0.0310%
TORCHMARK CORP	TMK	9,602.22	0.04%	0.76%	10.59%	11.39%	0.0046%
THERMO FISHER SCIENTIFIC INC	TMO	86,237.52	0.36%	0.31%	12.00%	12.33%	0.0445%
TAPESTRY INC	TPR	14,959.18	0.06%	2.60%	11.61%	14.36%	0.0090%
TRIPADVISOR INC	TRIP	5,631.63	0.02%	0.00%	16.19%	16.19%	0.0038%
T ROWE PRICE GROUP INC	TROW	26,198.83	0.11%	2.49%	12.21%	14.85%	0.0163%
TRAVELERS COS INC/THE	TRV	36,831.55	0.15%	2.20%	20.39%	22.80%	0.0351%
TRACTOR SUPPLY COMPANY	TSCO	7,224.49	0.03%	2.03%	13.63%	15.79%	0.0048%
TYSON FOODS INC-CL A	TSN	28,026.85	0.12%	1.72%	8.00%	9.79%	0.0115%
TOTAL SYSTEM SERVICES INC	TSS	15,533.90	0.06%	0.54%	12.75%	13.32%	0.0087%
TAKE-TWO INTERACTIVE SOFTWARE	TTWO	11,118.37	0.05%	0.00%	10.00%	10.00%	0.0047%
TIME WARNER INC	TWX	75,396.05	0.32%	1.71%	5.10%	6.85%	0.0216%
TEXAS INSTRUMENTS INC	TXN	100,434.09	0.42%	2.47%	11.38%	13.99%	0.0588%
TEXTRON INC	TXT	15,176.20	0.06%	0.14%	11.89%	12.04%	0.0076%
UNDER ARMOUR INC-CLASS A	UA	6,782.26	0.03%	0.00%	27.89%	27.89%	0.0079%
UNITED CONTINENTAL HOLDINGS	UAL	18,943.97	0.08%	0.00%	17.98%	17.98%	0.0142%
UDR INC	UDR	9,499.23	0.04%	3.63%	5.66%	9.39%	0.0037%
UNIVERSAL HEALTH SERVICES-B	UHS	11,269.96	0.05%	0.25%	9.11%	9.38%	0.0044%
ULTA BEAUTY INC	ULTA	13,387.83	0.06%	0.00%	18.60%	18.60%	0.0104%
UNITEDHEALTH GROUP INC	UNH	217,027.44	0.91%	1.39%	13.46%	14.95%	0.1357%
UNUM GROUP	UNM	10,507.86	0.04%	2.01%	7.00%	9.08%	0.0040%
UNION PACIFIC CORP	UNP	104,175.81	0.44%	2.09%	14.45%	16.69%	0.0728%
UNITED PARCEL SERVICE-CL B	UPS	92,404.33	0.39%	3.30%	15.04%	18.58%	0.0718%
UNITED RENTALS INC	URI	14,555.73	0.06%	0.00%	17.76%	17.76%	0.0108%
US BANCORP	USB	84,109.84	0.35%	2.54%	8.03%	10.67%	0.0376%
UNITED TECHNOLOGIES CORP	UTX	98,178.58	0.41%	2.33%	10.80%	13.25%	0.0544%
VISA INC-CLASS A SHARES	V	248,809.99	1.04%	0.68%	17.57%	18.31%	0.1906%
VARIAN MEDICAL SYSTEMS INC	VAR	11,019.94	0.05%	0.00%	11.25%	11.25%	0.0052%
VF CORP	VFC	30,633.09	0.13%	2.28%	7.00%	9.36%	0.0120%
VIACOM INC-CLASS B	VIAB	12,581.76	0.05%	2.62%	6.99%	9.70%	0.0051%
VALERO ENERGY CORP	VLO	43,880.82	0.18%	3.15%	7.46%	10.72%	0.0197%
VULCAN MATERIALS CO	VMC	14,930.18	0.06%	0.96%	20.49%	21.55%	0.0135%
VORNADO REALTY TRUST	VNO	12,646.14	0.05%	3.81%	6.41%	10.34%	0.0055%
VERISK ANALYTICS INC	VRSK	17,408.73	0.07%	0.00%	12.11%	12.11%	0.0088%
VERISIGN INC	VRSN	11,834.59	0.05%	0.00%	9.70%	9.70%	0.0048%
VERTEX PHARMACEUTICALS INC	VRTX	41,134.92	0.17%	0.00%	62.61%	62.61%	0.1077%
VENTAS INC	VTR	17,295.31	0.07%	6.55%	3.38%	10.03%	0.0073%
VERIZON COMMUNICATIONS INC	VZ	196,596.33	0.82%	5.01%	2.42%	7.50%	0.0616%
WATERS CORP	WAT	15,840.37	0.07%	0.00%	8.67%	8.67%	0.0057%
WALGREENS BOOTS ALLIANCE INC	WBA	63,288.10	0.26%	2.57%	10.98%	13.69%	0.0362%
WESTERN DIGITAL CORP	WDC	26,759.60	0.11%	2.26%	14.08%	16.49%	0.0185%
WEC ENERGY GROUP INC	WEC	19,430.88	0.08%	3.58%	3.43%	7.07%	0.0057%
WELLTOWER INC	WELL	19,576.66	0.08%	6.61%	5.23%	12.01%	0.0098%
WELLS FARGO & CO	WFC	248,032.77	1.04%	3.23%	10.66%	14.05%	0.1458%
WHIRLPOOL CORP	WHR	10,504.20	0.04%	3.16%	9.40%	12.71%	0.0056%
WILLIS TOWERS WATSON PLC	WLTW	19,873.21	0.08%	1.55%	10.00%	11.63%	0.0097%
WASTE MANAGEMENT INC	WM	35,917.68	0.15%	2.19%	13.52%	15.85%	0.0238%
WILLIAMS COS INC	WMB	20,814.21	0.09%	5.44%	-13.30%	-8.23%	-0.0072%
WALMART INC	WMT	253,818.94	1.06%	2.45%	5.74%	8.27%	0.0878%
WESTROCK CO	WRK	16,583.27	0.07%	2.65%	5.20%	7.92%	0.0055%
WESTERN UNION CO	WU	8,696.23	0.04%	3.94%	4.46%	8.48%	0.0031%
WEYERHAEUSER CO	WY	27,384.12	0.11%	3.58%	14.05%	17.88%	0.0205%
WYNDHAM WORLDWIDE CORP	WYN	10,991.51	0.05%	2.32%	19.50%	22.04%	0.0101%
WYNN RESORTS LTD	WYNN	19,935.50	N/A	1.61%	N/A	N/A	N/A
CIMAREX ENERGY CO	XEC	8,969.11	0.04%	0.48%	65.19%	65.83%	0.0247%
XCEL ENERGY INC	XEL	22,625.24	0.09%	3.42%	5.81%	9.33%	0.0089%
XL GROUP LTD	XL	14,298.69	0.06%	1.66%	20.45%	22.28%	0.0133%
XILINX INC	XLNX	17,452.29	0.07%	2.05%	8.53%	10.67%	0.0078%
EXXON MOBIL CORP	XOM	329,713.97	1.38%	4.07%	8.95%	13.20%	0.1821%
DENTSPLY SIRONA INC	XRAY	11,141.04	0.05%	0.73%	10.00%	10.77%	0.0050%
XEROX CORP	XR	7,174.15	0.03%	3.73%	1.00%	4.75%	0.0014%
XYLEM INC	XYL	13,823.07	0.06%	1.09%	18.00%	19.19%	0.0111%
YUM! BRANDS INC	YUM	28,051.93	0.12%	1.56%	12.13%	13.78%	0.0162%
ZIMMER BIOMET HOLDINGS INC	ZBH	21,449.99	0.09%	0.96%	6.54%	7.53%	0.0068%
ZIONS BANCORPORATION	ZION	10,385.78	0.04%	1.85%	10.10%	12.04%	0.0052%
ZOETIS INC	ZTS	40,540.71	0.17%	0.61%	14.84%	15.50%	0.0263%
Total Market Capitalization:		23,904,620					14.73%

Notes:

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

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

[1]	[2]	[3]
S&P 500 Est. Required Market Return	Current 30-Year Treasury (30-day average)	Implied Market Risk Premium
15.64%	3.07%	12.57%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	21,180.22	0.10%	0.91%	10.00%	10.96%	0.0107%
AMERICAN AIRLINES GROUP INC	AAL	24,792.99	0.11%	0.77%	2.00%	2.78%	0.0032%
ADVANCE AUTO PARTS INC	AAP	8,600.99	0.04%	0.21%	9.50%	9.72%	0.0038%
APPLE INC	AAPL	878,109.30	4.04%	1.71%	13.00%	14.82%	0.5991%
ABBVIE INC	ABBV	147,178.50	0.68%	4.16%	15.00%	19.47%	0.1319%
AMERISOURCEBERGEN CORP	ABC	19,092.62	0.09%	1.74%	7.00%	8.80%	0.0077%
ABBOTT LABORATORIES	ABT	104,192.40	0.48%	1.87%	8.50%	10.45%	0.0501%
ACCENTURE PLC-CL A	ACN	96,622.85	0.44%	1.83%	10.00%	11.92%	0.0530%
ADOBE SYSTEMS INC	ADBE	110,178.40	0.51%	0.00%	34.50%	34.50%	0.1750%
ANALOG DEVICES INC	ADI	33,629.98	0.15%	2.11%	13.00%	15.25%	0.0236%
ARCHER-DANIELS-MIDLAND CO	ADM	24,747.51	0.11%	3.02%	2.50%	5.56%	0.0063%
AUTOMATIC DATA PROCESSING	ADP	52,021.68	0.24%	2.26%	11.00%	13.38%	0.0321%
ALLIANCE DATA SYSTEMS CORP	ADS	11,609.13	0.05%	1.09%	15.00%	16.17%	0.0086%
AUTODESK INC	ADSK	28,198.58	N/A	0.00%	N/A	N/A	N/A
AMEREN CORPORATION	AEE	13,936.90	0.06%	3.26%	6.00%	9.36%	0.0060%
AMERICAN ELECTRIC POWER	AEP	33,918.82	0.16%	3.68%	4.50%	8.26%	0.0129%
AES CORP	AES	7,594.46	N/A	4.52%	N/A	N/A	N/A
AETNA INC	AET	55,668.53	0.26%	1.17%	10.50%	11.73%	0.0301%
AFLAC INC	AFL	34,125.77	0.16%	2.43%	6.50%	9.01%	0.0142%
ALLERGAN PLC	AGN	54,922.24	0.25%	1.74%	5.00%	6.78%	0.0172%
AMERICAN INTERNATIONAL GROUP	AIG	49,033.91	0.23%	2.35%	27.00%	29.67%	0.0670%
APARTMENT INVT & MGMT CO -A	AIV	-	N/A	3.68%	N/A	N/A	N/A
ASSURANT INC	AIZ	4,938.47	0.02%	2.44%	4.00%	6.49%	0.0015%
ARTHUR J GALLAGHER & CO	AJG	12,372.14	0.06%	2.40%	15.50%	18.09%	0.0103%
AKAMAI TECHNOLOGIES INC	AKAM	12,281.56	0.06%	0.00%	17.00%	17.00%	0.0096%
ALBEMARLE CORP	ALB	10,582.11	0.05%	1.40%	14.00%	15.50%	0.0075%
ALIGN TECHNOLOGY INC	ALGN	20,472.94	0.09%	0.00%	25.50%	25.50%	0.0240%
ALASKA AIR GROUP INC	ALK	7,643.32	0.04%	2.06%	6.00%	8.12%	0.0029%
ALLSTATE CORP	ALL	34,966.80	0.16%	1.89%	11.50%	13.50%	0.0217%
ALLEGION PLC	ALLE	8,169.63	0.04%	0.98%	9.50%	10.53%	0.0040%
ALEXION PHARMACEUTICALS INC	ALXN	24,376.13	0.11%	0.00%	18.00%	18.00%	0.0202%
APPLIED MATERIALS INC	AMAT	57,041.85	0.26%	1.47%	21.00%	22.62%	0.0594%
ADVANCED MICRO DEVICES	AMD	9,669.30	N/A	0.00%	N/A	N/A	N/A
AMETEK INC	AME	17,665.53	0.08%	0.73%	10.50%	11.27%	0.0092%
AFFILIATED MANAGERS GROUP	AMG	10,119.76	0.05%	0.71%	7.00%	7.73%	0.0036%
AMGEN INC	AMGN	124,218.40	0.57%	3.09%	6.50%	9.69%	0.0554%
AMERIPRISE FINANCIAL INC	AMP	21,652.90	0.10%	2.27%	13.50%	15.92%	0.0159%
AMERICAN TOWER CORP	AMT	61,845.47	0.28%	2.17%	11.50%	13.79%	0.0393%
AMAZON.COM INC	AMZN	699,743.50	3.22%	0.00%	60.00%	60.00%	1.9328%
ANDEAVOR	ANDV	16,517.99	0.08%	2.19%	5.50%	7.75%	0.0059%
ANSYS INC	ANSS	13,284.66	0.06%	0.00%	11.00%	11.00%	0.0067%
ANTHEM INC	ANTM	59,002.51	0.27%	1.30%	11.50%	12.87%	0.0350%
AON PLC	AON	35,154.64	0.16%	1.03%	10.50%	11.58%	0.0187%
SMITH (A.O.) CORP	AOS	11,154.66	0.05%	1.11%	13.00%	14.18%	0.0073%
APACHE CORP	APA	14,761.35	0.07%	2.58%	21.00%	23.85%	0.0162%
ANADARKO PETROLEUM CORP	APC	33,216.79	N/A	1.66%	N/A	N/A	N/A
AIR PRODUCTS & CHEMICALS INC	APD	35,930.07	0.17%	2.68%	9.00%	11.80%	0.0195%
AMPHENOL CORP-CL A	APH	25,883.59	0.12%	0.90%	9.00%	9.94%	0.0118%
APTIV PLC	APTIV	22,835.57	0.11%	1.02%	9.50%	10.57%	0.0111%
ALEXANDRIA REAL ESTATE EQUIT	ARE	N/A	N/A	0.00%	N/A	N/A	N/A
ARCONIC INC	ARNC	11,111.08	N/A	1.04%	N/A	N/A	N/A
ACTIVISION BLIZZARD INC	ATVI	50,396.81	0.23%	0.51%	9.00%	9.53%	0.0221%
AVALONBAY COMMUNITIES INC	AVB	-	N/A	3.59%	N/A	N/A	N/A
BROADCOM INC	AVGO	96,883.32	0.45%	2.96%	38.00%	41.52%	0.1852%
AVERY DENNISON CORP	AVY	9,342.75	0.04%	1.85%	12.50%	14.47%	0.0062%
AMERICAN WATER WORKS CO INC	AWK	14,646.29	0.07%	2.24%	8.50%	10.84%	0.0073%
AMERICAN EXPRESS CO	AXP	80,917.80	0.37%	1.55%	8.50%	10.12%	0.0377%
ACUTY BRANDS INC	AYI	5,587.36	0.03%	0.39%	13.00%	13.42%	0.0035%
AUTOZONE INC	AZO	17,369.24	0.08%	0.00%	14.00%	14.00%	0.0112%
BOEING CO/THE	BA	198,825.50	0.92%	2.03%	16.00%	18.19%	0.1665%
BANK OF AMERICA CORP	BAC	317,070.60	1.46%	1.72%	18.00%	19.87%	0.2901%
BAXTER INTERNATIONAL INC	BAX	35,683.83	0.16%	0.98%	5.50%	6.51%	0.0107%
BB&T CORP	BBT	41,360.30	0.19%	2.61%	9.00%	11.73%	0.0223%
BEST BUY CO INC	BBY	21,347.52	0.10%	2.50%	10.00%	12.63%	0.0124%
BECTON DICKINSON AND CO	BDX	58,607.85	0.27%	1.38%	10.00%	11.45%	0.0309%
FRANKLIN RESOURCES INC	BEN	18,809.43	0.09%	2.76%	8.00%	10.87%	0.0094%
BROWN-FORMAN CORP-CLASS B	BF/B	26,588.35	0.12%	1.14%	11.50%	12.71%	0.0156%
BRIGHTHOUSE FINANCIAL INC	BHF	N/A	N/A	0.00%	N/A	N/A	N/A
BAKER HUGHES A GE CO	BHGE	12,715.88	N/A	2.42%	N/A	N/A	N/A
BIAGEN INC	BIIB	56,037.17	0.26%	0.00%	7.50%	7.50%	0.0193%
BANK OF NEW YORK MELLON CORP	BK	52,972.66	0.24%	1.86%	9.00%	10.94%	0.0267%
BOOKING HOLDINGS INC	BKNG	101,944.80	0.47%	0.00%	15.00%	15.00%	0.0704%
BLACKROCK INC	BLK	86,131.62	0.40%	2.14%	12.00%	14.27%	0.0566%
BALL CORP	BLL	14,093.25	0.06%	0.99%	21.00%	22.09%	0.0143%
BRISTOL-MYERS SQUIBB CO	BMJ	101,982.80	0.47%	2.57%	15.00%	17.76%	0.0834%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	-	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	38,560.15	0.18%	0.00%	16.50%	16.50%	0.0293%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
BORWARNER INC	BWA	11,061.36	0.05%	1.30%	8.50%	9.86%	0.0050%
BOSTON PROPERTIES INC	BXP	-	N/A	2.62%	N/A	N/A	N/A
CITIGROUP INC	C	185,661.80	0.85%	1.82%	11.00%	12.92%	0.1104%
CA INC	CA	13,977.57	0.06%	3.07%	6.00%	9.16%	0.0059%
CONAGRA BRANDS INC	CAG	14,748.33	0.07%	2.31%	5.00%	7.37%	0.0050%
CARDINAL HEALTH INC	CAH	20,109.60	0.09%	3.07%	11.00%	14.24%	0.0132%
CATERPILLAR INC	CAT	88,127.58	0.41%	2.11%	13.50%	15.75%	0.0639%
CHUBB LTD	CB	63,018.86	0.29%	2.09%	7.00%	9.16%	0.0266%
CBOE GLOBAL MARKETS INC	CBOE	12,581.90	0.06%	0.97%	15.50%	16.55%	0.0096%
CBRE GROUP INC - A	CBRE	16,222.75	0.07%	0.00%	12.00%	12.00%	0.0090%
CBS CORP-CLASS B NON VOTING	CBS	21,152.00	0.10%	1.36%	13.50%	14.95%	0.0146%
CROWN CASTLE INTL CORP	CCI	44,609.00	0.21%	4.01%	9.50%	13.70%	0.0281%
CARNIVAL CORP	CCL	47,232.71	0.22%	2.75%	14.00%	16.94%	0.0368%
CADENCE DESIGN SYS INC	CDNS	10,430.84	0.05%	0.00%	11.00%	11.00%	0.0053%
CELGENE CORP	CELG	69,925.96	0.32%	0.00%	19.50%	19.50%	0.0628%
CERNER CORP	CERN	19,314.03	0.09%	0.00%	9.00%	9.00%	0.0080%
CF INDUSTRIES HOLDINGS INC	CF	9,000.21	0.04%	3.37%	47.00%	51.16%	0.0212%
CITIZENS FINANCIAL GROUP	CFG	21,488.70	0.10%	2.09%	11.50%	13.71%	0.0136%
CHURCH & DWIGHT CO INC	CHD	12,346.78	0.06%	1.75%	9.00%	10.83%	0.0062%
C.H. ROBINSON WORLDWIDE INC	CHRW	13,048.57	0.06%	1.97%	9.50%	11.56%	0.0069%
CHARTER COMMUNICATIONS INC-A	CHTR	75,611.18	0.35%	0.00%	19.50%	19.50%	0.0679%
CIGNA CORP	CI	41,674.18	0.19%	0.02%	12.50%	12.52%	0.0240%
CINCINNATI FINANCIAL CORP	CINF	12,193.40	0.06%	2.85%	6.50%	9.44%	0.0053%
COLGATE-PALMOLIVE CO	CL	62,812.28	0.29%	2.34%	11.00%	13.47%	0.0389%
CLOROX COMPANY	CLX	16,847.58	0.08%	2.95%	8.00%	11.07%	0.0086%
COMERICA INC	CMA	17,073.88	0.08%	1.23%	17.00%	18.33%	0.0144%
COMCAST CORP-CLASS A	CMCSA	160,700.00	0.74%	2.20%	12.50%	14.84%	0.1098%
CME GROUP INC	CME	55,291.91	0.25%	1.72%	4.50%	6.26%	0.0159%
CHIPOTLE MEXICAN GRILL INC	CMG	9,184.40	0.04%	0.00%	18.00%	18.00%	0.0076%
CUMMINS INC	CMI	27,059.17	0.12%	2.66%	8.00%	10.77%	0.0134%
CMS ENERGY CORP	CMS	12,831.84	0.06%	3.21%	7.00%	10.32%	0.0061%
CENTENE CORP	CNC	18,801.06	0.09%	0.00%	14.00%	14.00%	0.0121%
CENTERPOINT ENERGY INC	CNP	11,763.19	0.05%	4.10%	8.50%	12.77%	0.0069%
CAPITAL ONE FINANCIAL CORP	COF	47,240.64	0.22%	1.64%	5.00%	6.68%	0.0145%
CABOT OIL & GAS CORP	COG	11,072.42	N/A	1.00%	N/A	N/A	N/A
ROCKWELL COLLINS INC	COL	22,177.31	0.10%	0.98%	12.50%	13.54%	0.0138%
COOPER COS INC/THE	COO	10,953.95	0.05%	0.03%	16.50%	16.53%	0.0083%
CONOCOPHILLIPS	COP	72,092.45	0.33%	1.89%	62.00%	64.48%	0.2140%
COSTCO WHOLESALE CORP	COST	81,741.96	0.38%	1.15%	10.00%	11.21%	0.0422%
COTY INC-CL A	COTY	13,833.81	0.06%	2.71%	7.00%	9.80%	0.0062%
CAMPBELL SOUP CO	CPB	13,087.48	0.06%	3.22%	4.00%	7.28%	0.0044%
SALESFORCE.COM INC	CRM	85,982.59	N/A	0.00%	N/A	N/A	N/A
CISCO SYSTEMS INC	CSCO	203,579.80	0.94%	3.16%	7.50%	10.78%	0.1010%
CSX CORP	CSX	49,691.00	0.23%	1.58%	13.50%	15.19%	0.0347%
CINTAS CORP	CTAS	18,280.90	0.08%	1.05%	14.00%	15.12%	0.0127%
CENTURYLINK INC	CTL	18,560.77	0.09%	12.44%	5.50%	18.28%	0.0156%
COGNIZANT TECH SOLUTIONS-A	CTSH	47,742.80	0.22%	0.99%	13.50%	14.56%	0.0320%
CITRIX SYSTEMS INC	CTXS	13,964.82	0.06%	0.00%	6.50%	6.50%	0.0042%
CVS HEALTH CORP	CVS	65,500.59	0.30%	3.09%	9.00%	12.23%	0.0369%
CHEVRON CORP	CVX	222,777.60	1.03%	3.82%	12.50%	16.56%	0.1698%
CONCHO RESOURCES INC	CXO	20,765.95	0.10%	0.00%	20.50%	20.50%	0.0196%
DOMINION ENERGY INC	D	43,366.96	0.20%	5.09%	12.27%	12.27%	0.0245%
DELTA AIR LINES INC	DAL	38,650.27	0.18%	2.25%	10.50%	12.87%	0.0229%
DEERE & CO	DE	49,001.92	0.23%	1.59%	15.00%	16.71%	0.0377%
DISCOVER FINANCIAL SERVICES	DFS	26,402.68	0.12%	1.94%	7.50%	9.51%	0.0116%
DOLLAR GENERAL CORP	DG	26,178.77	0.12%	1.20%	11.00%	12.27%	0.0148%
QUEST DIAGNOSTICS INC	DGX	13,576.88	0.06%	2.00%	10.00%	12.10%	0.0076%
DR HORTON INC	DHI	17,492.31	0.08%	1.07%	12.00%	13.13%	0.0106%
DANAHER CORP	DHR	69,116.66	0.32%	0.65%	10.50%	11.18%	0.0356%
WALT DISNEY CO/THE	DIS	153,165.00	0.71%	1.65%	8.50%	10.22%	0.0721%
DISCOVERY INC - A	DISCA	8,578.02	0.04%	0.00%	13.50%	13.50%	0.0053%
DISH NETWORK CORP-A	DISH	18,406.83	0.08%	0.00%	1.00%	1.00%	0.0008%
DIGITAL REALTY TRUST INC	DLR	-	N/A	3.93%	N/A	N/A	N/A
DOLLAR TREE INC	DLTR	23,472.60	0.11%	0.00%	21.00%	21.00%	0.0227%
DOVER CORP	DOV	15,219.22	0.07%	1.92%	10.50%	12.52%	0.0088%
DR PEPPER SNAPPLE GROUP INC	DPS	21,432.94	0.10%	2.02%	7.50%	9.60%	0.0095%
DUKE REALTY CORP	DRE	-	0.00%	3.16%	28.50%	32.11%	0.0000%
DARDEN RESTAURANTS INC	DRI	10,728.88	0.05%	2.93%	13.00%	16.12%	0.0080%
DTE ENERGY COMPANY	DTE	18,769.16	0.09%	3.50%	7.00%	10.62%	0.0092%
DUKE ENERGY CORP	DUK	55,020.00	0.25%	4.68%	4.50%	9.29%	0.0235%
DAVITA INC	DVA	12,146.80	0.06%	0.00%	9.00%	9.00%	0.0050%
DEVON ENERGY CORP	DVN	16,952.25	0.08%	0.99%	14.00%	15.06%	0.0118%
DOWDUPONT INC	DWDP	152,300.60	N/A	2.45%	N/A	N/A	N/A
DXC TECHNOLOGY CO	DXC	29,163.53	0.13%	0.71%	19.00%	19.78%	0.0266%
ELECTRONIC ARTS INC	EA	37,217.61	0.17%	0.00%	13.00%	13.00%	0.0223%
EBAY INC	EBAY	41,991.47	0.19%	0.00%	10.00%	10.00%	0.0193%
ECOLAB INC	ECL	40,809.10	0.19%	1.16%	8.00%	9.21%	0.0173%
CONSOLIDATED EDISON INC	ED	24,455.90	0.11%	3.66%	3.00%	6.71%	0.0076%
EQUIFAX INC	EFX	14,354.40	0.07%	1.30%	8.50%	9.86%	0.0065%
EDISON INTERNATIONAL	EIX	20,741.13	0.10%	3.85%	4.00%	7.93%	0.0076%
ESTEE LAUDER COMPANIES-CL A	EL	55,755.70	0.26%	1.03%	13.50%	14.60%	0.0375%
EASTMAN CHEMICAL CO	EMN	15,132.70	0.07%	2.13%	10.50%	12.74%	0.0089%
EMERSON ELECTRIC CO	EMR	43,900.89	0.20%	2.85%	11.50%	14.51%	0.0293%
EOG RESOURCES INC	EOG	60,391.24	0.28%	0.72%	27.50%	28.32%	0.0787%
EQUINIX INC	EQIX	32,689.33	0.15%	2.21%	26.00%	28.50%	0.0429%
EQUITY RESIDENTIAL	EQR	-	N/A	3.41%	N/A	N/A	N/A
EQT CORP	EQT	8,448.74	0.04%	0.25%	20.50%	20.78%	0.0081%
EVERSOURCE ENERGY	ES	19,016.27	0.09%	3.37%	6.50%	9.98%	0.0087%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
EXPRESS SCRIPTS HOLDING CO	ESRX	39,183.55	0.18%	0.00%	16.00%	16.00%	0.0289%
ESSEX PROPERTY TRUST INC	ESS	-	N/A	3.10%	N/A	N/A	N/A
E*TRADE FINANCIAL CORP	ETFC	15,166.45	0.07%	0.00%	17.00%	17.00%	0.0119%
EATON CORP PLC	ETN	34,917.55	0.16%	3.33%	7.00%	10.45%	0.0168%
ENTERGY CORP	ETR	14,398.04	0.07%	4.51%	2.00%	6.56%	0.0043%
ENVISION HEALTHCARE CORP	EVHC	4,702.58	N/A	0.00%	N/A	N/A	N/A
EDWARDS LIFESCIENCES CORP	EW	29,815.15	0.14%	0.00%	16.50%	16.50%	0.0226%
EXELON CORP	EXC	37,473.23	0.17%	3.54%	6.00%	9.65%	0.0166%
EXPEDITORS INTL WASH INC	EXPD	11,266.12	0.05%	1.39%	9.00%	10.45%	0.0054%
EXPEDIA GROUP INC	EXPE	16,707.98	0.08%	1.24%	19.00%	20.36%	0.0157%
EXTRA SPACE STORAGE INC	EXR	-	N/A	3.69%	N/A	N/A	N/A
FORD MOTOR CO	F	45,085.63	0.21%	5.29%	3.00%	8.37%	0.0174%
FASTENAL CO	FAST	15,975.62	0.07%	2.66%	7.50%	10.26%	0.0075%
FACEBOOK INC-A	FB	463,042.00	2.13%	0.00%	31.50%	31.50%	0.6715%
FORTUNE BRANDS HOME & SECURI	FBHS	9,100.47	0.04%	1.33%	14.00%	15.42%	0.0065%
FREEPORT-MCMORAN INC	FCX	26,223.28	N/A	1.10%	N/A	N/A	N/A
FEDEX CORP	FDX	64,417.52	0.30%	0.95%	11.00%	12.00%	0.0356%
FIRSTENERGY CORP	FE	15,418.27	0.07%	4.19%	9.00%	13.38%	0.0095%
FS NETWORKS INC	FFIV	8,858.53	0.04%	0.00%	10.00%	10.00%	0.0041%
FIDELITY NATIONAL INFO SERV	FIS	32,454.18	0.15%	1.31%	7.50%	8.86%	0.0132%
FISERV INC	FISV	29,749.83	0.14%	0.00%	9.00%	9.00%	0.0123%
FIFTH THIRD BANCORP	FITB	22,807.98	0.10%	2.23%	8.50%	10.82%	0.0114%
FOOT LOCKER INC	FL	6,388.13	0.03%	2.88%	7.00%	9.98%	0.0029%
FLIR SYSTEMS INC	FLIR	7,121.20	0.03%	1.27%	11.50%	12.84%	0.0042%
FLUOR CORP	FLR	8,189.86	0.04%	1.44%	4.00%	5.47%	0.0021%
FLOWERVE CORP	FLS	5,838.30	0.03%	1.70%	2.00%	3.72%	0.0010%
FMC CORP	FMC	10,684.61	0.05%	0.93%	19.00%	20.02%	0.0098%
TWENTY-FIRST CENTURY FOX-A	FOXA	67,357.99	0.31%	0.99%	11.50%	12.55%	0.0389%
FEDERAL REALTY INVS TRUST	FRT	-	N/A	3.42%	N/A	N/A	N/A
TECHNIPFMC PLC	FTI	N/A	N/A	0.00%	N/A	N/A	N/A
FORTIVE CORP	FTV	26,903.45	N/A	0.36%	N/A	N/A	N/A
GENERAL DYNAMICS CORP	GD	65,679.34	0.30%	1.68%	8.50%	10.25%	0.0310%
GENERAL ELECTRIC CO	GE	116,580.10	0.54%	3.57%	9.50%	13.24%	0.0711%
GGP INC	GGP	-	N/A	4.69%	N/A	N/A	N/A
GILEAD SCIENCES INC	GILD	97,789.75	0.45%	3.05%	-1.00%	2.03%	0.0092%
GENERAL MILLS INC	GIS	25,899.64	0.12%	4.40%	5.50%	10.02%	0.0119%
CORNING INC	GLW	23,560.68	0.11%	2.62%	13.00%	15.79%	0.0171%
GENERAL MOTORS CO	GM	53,200.00	0.24%	4.00%	5.50%	9.61%	0.0235%
ALPHABET INC-CL A	GOOGL	N/A	N/A	0.00%	N/A	N/A	N/A
GENUINE PARTS CO	GPC	13,291.93	0.06%	3.18%	7.50%	10.80%	0.0066%
GLOBAL PAYMENTS INC	GPN	17,681.44	0.08%	0.04%	12.00%	12.04%	0.0098%
GAP INC/THE	GPS	12,451.89	0.06%	3.03%	4.00%	7.09%	0.0041%
GARMIN LTD	GRMN	11,225.47	0.05%	3.55%	7.00%	10.67%	0.0055%
GOLDMAN SACHS GROUP INC	GS	97,178.89	0.45%	1.17%	9.00%	10.22%	0.0457%
GOODYEAR TIRE & RUBBER CO	GT	6,661.87	0.03%	2.24%	12.50%	14.88%	0.0046%
WW GRAINGER INC	GWV	16,547.77	0.08%	1.74%	8.50%	10.31%	0.0079%
HALLIBURTON CO	HAL	41,624.64	0.19%	1.51%	23.00%	24.68%	0.0473%
HASBRO INC	HAS	10,637.00	0.05%	2.95%	11.00%	14.11%	0.0069%
HUNTINGTON BANCSHARES INC	HBAN	16,289.86	0.07%	3.05%	9.00%	12.19%	0.0091%
HANESBRANDS INC	HBI	7,007.07	0.03%	3.43%	9.50%	13.09%	0.0042%
HCA HEALTHCARE INC	HCA	34,374.47	0.16%	1.43%	13.00%	14.52%	0.0230%
HCP INC	HCP	-	N/A	6.43%	N/A	N/A	N/A
HOME DEPOT INC	HD	209,223.80	0.96%	2.30%	12.00%	14.44%	0.1391%
HESS CORP	HES	16,694.79	N/A	1.90%	N/A	N/A	N/A
HARTFORD FINANCIAL SVCS GRP	HIG	18,663.59	0.09%	1.92%	12.50%	14.54%	0.0125%
HUNTINGTON INGALLS INDUSTRIE	HII	11,770.65	0.05%	1.10%	9.50%	10.65%	0.0058%
HILTON WORLDWIDE HOLDINGS IN	HLT	25,365.52	0.12%	0.76%	8.50%	9.29%	0.0109%
HARLEY-DAVIDSON INC	HOG	7,171.05	0.03%	3.47%	8.00%	11.61%	0.0038%
HOLOGIC INC	HOLX	10,343.32	0.05%	0.00%	22.00%	22.00%	0.0105%
HONEYWELL INTERNATIONAL INC	HON	109,931.80	0.51%	2.04%	9.50%	11.64%	0.0589%
HELMERICH & PAYNE	HP	7,339.42	0.03%	4.15%	62.00%	67.44%	0.0228%
HEWLETT PACKARD ENTERPRISE	HPE	26,952.40	0.12%	2.62%	-0.50%	2.11%	0.0026%
HP INC	HPQ	35,363.55	0.16%	2.69%	5.50%	8.26%	0.0135%
H&R BLOCK INC	HRB	5,403.64	0.02%	3.72%	9.00%	12.89%	0.0032%
HORMEL FOODS CORP	HRL	18,607.88	0.09%	2.14%	10.50%	12.75%	0.0109%
HARRIS CORP	HRS	19,485.76	0.09%	1.44%	11.50%	13.02%	0.0117%
HENRY SCHEIN INC	HSIC	10,644.55	0.05%	0.00%	9.00%	9.00%	0.0044%
HOST HOTELS & RESORTS INC	HST	-	N/A	4.29%	N/A	N/A	N/A
HERSHEY CO/THE	HSY	21,022.84	0.10%	2.63%	7.50%	10.23%	0.0099%
HUMANA INC	HUM	41,042.25	0.19%	0.70%	13.00%	13.75%	0.0260%
INTL BUSINESS MACHINES CORP	IBM	142,043.20	0.65%	4.09%	1.00%	5.11%	0.0334%
INTERCONTINENTAL EXCHANGE IN	ICE	43,227.88	0.20%	1.32%	11.50%	12.90%	0.0257%
IDEXX LABORATORIES INC	IDXX	16,664.02	0.08%	0.00%	17.00%	17.00%	0.0130%
INTL FLAVORS & FRAGRANCES	IFF	10,920.94	0.05%	2.08%	8.00%	10.16%	0.0051%
ILLUMINA INC	ILMN	34,510.02	0.16%	0.00%	16.00%	16.00%	0.0254%
INCYTE CORP	INCY	17,582.85	N/A	0.00%	N/A	N/A	N/A
IHS MARKIT LTD	INFO	20,605.94	0.09%	0.00%	19.50%	19.50%	0.0185%
INTEL CORP	INTC	235,778.40	1.09%	2.38%	13.00%	15.53%	0.1686%
INTUIT INC	INTU	44,001.54	0.20%	0.91%	15.00%	15.98%	0.0324%
INTERNATIONAL PAPER CO	IP	22,062.58	0.10%	3.56%	15.50%	19.34%	0.0196%
INTERPUBLIC GROUP OF COS INC	IPG	9,302.03	0.04%	3.61%	10.00%	13.79%	0.0059%
IPG PHOTONICS CORP	IPGP	12,280.50	0.06%	0.00%	13.50%	13.50%	0.0076%
IQVIA HOLDINGS INC	IQV	20,200.35	0.09%	0.00%	14.50%	14.50%	0.0135%
INGERSOLL-RAND PLC	IR	21,422.76	0.10%	2.10%	9.00%	11.19%	0.0110%
IRON MOUNTAIN INC	IRM	9,012.60	0.04%	6.99%	9.50%	16.82%	0.0070%
INTUITIVE SURGICAL INC	ISRG	45,485.44	0.21%	0.00%	15.00%	15.00%	0.0314%
GARTNER INC	IT	10,765.12	0.05%	0.00%	13.50%	13.50%	0.0067%
ILLINOIS TOOL WORKS	ITW	54,377.47	0.25%	1.97%	11.50%	13.58%	0.0340%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
INVESCO LTD	IVZ	12,937.64	0.06%	3.65%	7.00%	10.78%	0.0064%
HUNT (JB) TRANSPRT SVCS INC	JBHT	12,489.78	0.06%	0.84%	12.00%	12.89%	0.0074%
JOHNSON CONTROLS INTERNATION	JCI	32,043.23	0.15%	3.01%	3.00%	6.06%	0.0089%
JACOBS ENGINEERING GROUP INC	JEC	8,475.02	0.04%	1.00%	11.00%	12.06%	0.0047%
JOHNSON & JOHNSON	JNJ	350,954.00	1.62%	2.69%	9.00%	11.81%	0.1908%
JUNIPER NETWORKS INC	JNPR	8,899.92	0.04%	2.96%	4.50%	7.53%	0.0031%
JPMORGAN CHASE & CO	JPM	388,193.00	1.79%	2.04%	8.00%	10.12%	0.1809%
NORDSTROM INC	JWN	8,341.66	0.04%	2.96%	3.50%	6.51%	0.0025%
KELLOGG CO	K	22,312.06	0.10%	3.41%	8.00%	11.55%	0.0119%
KEYCORP	KEY	21,103.72	0.10%	2.33%	12.50%	14.98%	0.0145%
KRAFT HEINZ CO/THE	KHC	74,736.89	N/A	4.16%	N/A	N/A	N/A
KIMCO REALTY CORP	KIM	-	N/A	7.78%	N/A	N/A	N/A
KLA-TENCOR CORP	KLAC	17,026.16	0.08%	2.76%	15.50%	18.47%	0.0145%
KIMBERLY-CLARK CORP	KMB	38,413.85	0.18%	3.66%	9.50%	13.33%	0.0236%
KINDER MORGAN INC	KMI	34,365.20	0.16%	3.23%	57.00%	61.15%	0.0967%
CARMAX INC	KMX	11,295.88	0.05%	0.00%	13.50%	13.50%	0.0070%
COCA-COLA CO/THE	KO	189,232.80	0.87%	3.51%	5.00%	8.60%	0.0749%
MICHAEL KORS HOLDINGS LTD	KORS	10,046.07	0.05%	0.00%	3.00%	3.00%	0.0014%
KROGER CO	KR	20,976.61	0.10%	2.31%	4.50%	6.86%	0.0066%
KOHL'S CORP	KSS	11,240.88	0.05%	3.65%	7.00%	10.78%	0.0056%
KANSAS CITY SOUTHERN	KSU	11,562.70	0.05%	1.28%	12.50%	13.86%	0.0074%
LOEWS CORP	L	17,003.13	0.08%	0.50%	14.00%	14.54%	0.0114%
L BRANDS INC	LB	10,921.86	0.05%	6.20%	0.50%	6.72%	0.0034%
LEGGETT & PLATT INC	LEG	5,934.18	0.03%	3.20%	9.00%	12.34%	0.0034%
LENNAR CORP-A	LEN	15,357.70	0.07%	0.27%	12.00%	12.29%	0.0087%
LABORATORY CRP OF AMER HLDGS	LH	16,852.63	0.08%	0.00%	9.50%	9.50%	0.0074%
LKQ CORP	LKQ	11,968.27	0.06%	0.00%	11.50%	11.50%	0.0063%
L3 TECHNOLOGIES INC	LLL	16,593.25	0.08%	1.50%	11.00%	12.58%	0.0096%
ELI LILLY & CO	LLY	86,568.09	0.40%	2.86%	11.50%	14.52%	0.0579%
LOCKHEED MARTIN CORP	LMT	98,448.61	0.45%	2.37%	12.50%	15.02%	0.0681%
LINCOLN NATIONAL CORP	LNC	15,558.54	0.07%	1.91%	7.50%	9.48%	0.0068%
ALLIANT ENERGY CORP	LNT	9,561.66	0.04%	3.24%	6.50%	9.85%	0.0043%
LOWE'S COS INC	LOW	73,751.25	0.34%	1.98%	13.50%	15.61%	0.0530%
LAM RESEARCH CORP	LRCX	31,096.13	0.14%	2.26%	19.50%	21.98%	0.0315%
LEUCADIA NATIONAL CORP	LUK	8,007.98	0.04%	1.78%	24.00%	25.99%	0.0096%
SOUTHWEST AIRLINES CO	LUV	33,465.01	0.15%	0.88%	11.50%	12.43%	0.0192%
LYONDELLBASELL INDU-CL A	LYB	41,364.59	0.19%	3.82%	3.50%	7.39%	0.0141%
MACY'S INC	M	9,420.23	0.04%	4.88%	2.50%	7.44%	0.0032%
MASTERCARD INC - A	MA	186,348.00	0.86%	0.57%	13.50%	14.11%	0.1210%
MID-AMERICA APARTMENT COMM	MAA	-	N/A	3.99%	N/A	N/A	N/A
MACERICH CO/THE	MAC	-	N/A	5.17%	N/A	N/A	N/A
MARRIOTT INTERNATIONAL -CL A	MAR	49,014.27	0.23%	0.98%	17.50%	18.57%	0.0419%
MASCO CORP	MAS	12,704.67	0.06%	1.03%	16.00%	17.11%	0.0100%
MATTEL INC	MAT	4,550.59	0.02%	0.00%	1.50%	1.50%	0.0003%
MCDONALD'S CORP	MCD	130,192.70	0.60%	2.50%	10.00%	12.63%	0.0757%
MICROCHIP TECHNOLOGY INC	MCHP	21,001.64	0.10%	1.63%	13.50%	15.24%	0.0147%
MCKESSON CORP	MCK	29,426.00	0.14%	1.02%	9.50%	10.57%	0.0143%
MOODY'S CORP	MCO	30,999.07	0.14%	1.09%	12.00%	13.16%	0.0188%
MONDELEZ INTERNATIONAL INC-A	MDLZ	62,799.34	0.29%	2.18%	10.00%	12.29%	0.0355%
MEDTRONIC PLC	MDT	108,014.30	0.50%	2.38%	6.00%	8.45%	0.0420%
METLIFE INC	MET	48,036.36	0.22%	3.54%	6.00%	9.65%	0.0213%
MGM RESORTS INTERNATIONAL	MGM	20,142.40	0.09%	1.35%	44.50%	46.15%	0.0428%
MOHAWK INDUSTRIES INC	MHK	17,803.95	0.08%	0.00%	10.00%	10.00%	0.0082%
MCCORMICK & CO-NON VTG SHRS	MKC	13,821.26	0.06%	1.98%	10.50%	12.58%	0.0080%
MARTIN MARIETTA MATERIALS	MLM	13,080.73	0.06%	0.85%	12.00%	12.90%	0.0078%
MARSH & MCLENNAN COS	MMC	41,986.44	0.19%	1.83%	10.50%	12.43%	0.0240%
3M CO	MMM	130,241.60	0.60%	2.49%	14.50%	17.17%	0.1030%
MONSTER BEVERAGE CORP	MNST	35,777.97	0.16%	0.00%	13.50%	13.50%	0.0222%
ALTRIA GROUP INC	MO	122,707.20	0.56%	4.34%	10.00%	14.56%	0.0822%
MONSANTO CO	MON	52,083.78	0.24%	1.83%	7.50%	9.40%	0.0225%
MOSAIC CO/THE	MOS	8,842.92	0.04%	0.40%	10.00%	10.42%	0.0042%
MARATHON PETROLEUM CORP	MPC	36,558.18	0.17%	2.63%	8.50%	11.24%	0.0189%
MERCK & CO. INC.	MRK	148,670.90	0.68%	3.52%	5.50%	9.12%	0.0624%
MARATHON OIL CORP	MRO	14,280.00	N/A	1.19%	N/A	N/A	N/A
MORGAN STANLEY	MS	98,300.67	0.45%	1.82%	11.00%	12.92%	0.0585%
MSCI INC	MSCI	13,195.72	0.06%	1.18%	22.50%	23.81%	0.0145%
MICROSOFT CORP	MSFT	711,787.90	3.28%	1.82%	9.50%	11.41%	0.3738%
MOTOROLA SOLUTIONS INC	MSI	17,283.78	0.08%	2.03%	14.00%	16.17%	0.0129%
M & T BANK CORP	MTB	28,457.68	0.13%	1.61%	9.50%	11.19%	0.0147%
METTLER-TOLEDO INTERNATIONAL	MTD	14,776.22	0.07%	0.00%	11.50%	11.50%	0.0078%
MICRON TECHNOLOGY INC	MU	57,714.71	0.27%	0.00%	24.00%	24.00%	0.0638%
MYLAN NV	MYL	21,695.36	0.10%	0.00%	8.50%	8.50%	0.0085%
NAVIENT CORP	NAVI	3,592.74	0.02%	4.69%	6.00%	10.83%	0.0018%
NOBLE ENERGY INC	NBL	14,861.70	N/A	1.32%	N/A	N/A	N/A
NORWEGIAN CRUISE LINE HOLDIN	NCLH	12,425.88	0.06%	0.00%	21.50%	21.50%	0.0123%
NASDAQ INC	NDAQ	14,451.83	0.07%	2.04%	9.00%	11.13%	0.0074%
NEXTERA ENERGY INC	NEE	77,244.00	0.36%	2.73%	8.50%	11.35%	0.0403%
NEWMONT MINING CORP	NEM	20,934.25	0.10%	1.43%	8.50%	9.99%	0.0096%
NETFLIX INC	NFLX	127,209.90	0.59%	0.00%	44.50%	44.50%	0.2606%
NEWFIELD EXPLORATION CO	NFX	4,922.38	0.02%	0.00%	19.00%	19.00%	0.0043%
NISOURCE INC	NI	8,233.28	0.04%	3.19%	18.00%	21.48%	0.0081%
NIKE INC -CL B	NKE	112,666.20	0.52%	1.15%	14.00%	15.23%	0.0790%
NEKTAR THERAPEUTICS	NKTR	15,921.31	N/A	0.00%	N/A	N/A	N/A
NIELSEN HOLDINGS PLC	NLSN	11,464.99	0.05%	4.22%	9.00%	13.41%	0.0071%
NORTHROP GRUMMAN CORP	NOC	62,676.19	0.29%	1.22%	8.50%	9.77%	0.0282%
NATIONAL OILWELL VARCO INC	NOV	14,149.37	0.07%	0.54%	3.00%	3.55%	0.0023%
NRG ENERGY INC	NRG	9,597.33	N/A	0.40%	N/A	N/A	N/A
NORFOLK SOUTHERN CORP	NSC	38,258.13	0.18%	2.15%	11.50%	13.77%	0.0243%

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Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
NETAPP INC	NTAP	16,857.20	0.08%	1.27%	14.00%	15.36%	0.0119%
NORTHERN TRUST CORP	NTRS	23,756.40	0.11%	1.61%	11.00%	12.70%	0.0139%
NUCOR CORP	NUE	20,060.56	0.09%	2.41%	20.00%	22.65%	0.0209%
NVIDIA CORP	NVDA	134,156.30	0.62%	0.27%	24.00%	24.30%	0.1501%
NEWELL BRANDS INC	NWL	12,721.95	0.06%	3.51%	9.00%	12.67%	0.0074%
NEWS CORP - CLASS A	NWSA	9,177.81	N/A	1.27%	N/A	N/A	N/A
REALTY INCOME CORP	O	-	N/A	5.10%	N/A	N/A	N/A
ONEOK INC	OKE	21,901.01	0.10%	5.48%	17.50%	23.46%	0.0237%
OMNICOM GROUP	OMC	16,713.64	0.08%	3.31%	7.50%	10.93%	0.0084%
ORACLE CORP	ORCL	188,114.30	0.87%	1.65%	8.00%	9.72%	0.0841%
O'REILLY AUTOMOTIVE INC	ORLY	20,558.73	0.09%	0.00%	13.50%	13.50%	0.0128%
OCCIDENTAL PETROLEUM CORP	OXY	51,860.66	0.24%	4.60%	21.00%	26.08%	0.0623%
PAYCHEX INC	PAYX	22,320.69	0.10%	3.59%	12.00%	15.81%	0.0162%
PEOPLE'S UNITED FINANCIAL	PBCT	6,519.55	0.03%	3.72%	10.50%	14.42%	0.0043%
PACCAR INC	PCAR	24,021.51	0.11%	3.22%	6.50%	9.82%	0.0109%
P G & E CORP	PCG	22,664.66	0.10%	0.00%	8.50%	8.50%	0.0089%
PUBLIC SERVICE ENTERPRISE GP	PEG	25,618.65	0.12%	3.55%	2.00%	5.59%	0.0066%
PEPSICO INC	PEP	157,009.40	0.72%	2.96%	7.50%	10.57%	0.0764%
PFIZER INC	PFE	212,976.10	0.98%	3.81%	13.00%	17.06%	0.1672%
PRINCIPAL FINANCIAL GROUP	PFG	17,687.93	0.08%	3.33%	5.00%	8.41%	0.0069%
PROCTER & GAMBLE CO/THE	PG	198,655.10	0.91%	3.50%	9.00%	12.66%	0.1158%
PROGRESSIVE CORP	PGR	35,623.00	0.16%	1.83%	15.00%	16.97%	0.0278%
PARKER HANNIFIN CORP	PH	22,908.20	0.11%	1.53%	14.00%	15.64%	0.0165%
PULTEGROUP INC	PHM	8,834.83	0.04%	1.20%	15.50%	16.79%	0.0068%
PACKAGING CORP OF AMERICA	PKG	10,682.30	0.05%	2.23%	10.00%	12.34%	0.0061%
PERKINELMER INC	PKI	8,364.71	0.04%	0.37%	11.00%	11.39%	0.0044%
PROLOGIS INC	PLD	-	N/A	3.14%	N/A	N/A	N/A
PHILIP MORRIS INTERNATIONAL	PM	157,962.30	0.73%	4.21%	8.00%	12.38%	0.0900%
PNC FINANCIAL SERVICES GROUP	PNC	72,713.77	0.33%	1.96%	8.00%	10.04%	0.0336%
PENTAIR PLC	PNR	12,702.63	0.06%	1.99%	12.00%	14.11%	0.0083%
PINNACLE WEST CAPITAL	PNW	8,973.61	0.04%	3.56%	5.50%	9.16%	0.0038%
PPG INDUSTRIES INC	PPG	28,417.33	0.13%	1.61%	10.50%	12.19%	0.0160%
PPL CORP	PPL	19,267.72	0.09%	5.86%	1.50%	7.40%	0.0066%
PERRIGO CO PLC	PRGO	11,787.78	0.05%	0.94%	1.50%	2.45%	0.0013%
PRUDENTIAL FINANCIAL INC	PRU	44,329.93	0.20%	3.43%	6.00%	9.53%	0.0195%
PUBLIC STORAGE	PSA	-	N/A	4.17%	N/A	N/A	N/A
PHILLIPS 66	PSX	49,543.97	0.23%	3.15%	4.50%	7.72%	0.0176%
PVH CORP	PVH	12,295.03	0.06%	0.09%	8.50%	8.59%	0.0049%
QUANTA SERVICES INC	PWR	5,305.63	0.02%	0.00%	17.50%	17.50%	0.0043%
PRAXAIR INC	PX	42,003.80	0.19%	2.30%	8.50%	10.90%	0.0211%
PIONEER NATURAL RESOURCES CO	PXD	29,341.55	0.14%	0.19%	41.50%	41.73%	0.0564%
PAYPAL HOLDINGS INC	PYPL	92,493.90	N/A	0.00%	N/A	N/A	N/A
QUALCOMM INC	QCOM	81,459.20	0.38%	4.14%	4.50%	8.73%	0.0327%
QORVO INC	QROV	9,031.44	0.04%	0.00%	21.00%	21.00%	0.0087%
ROYAL CARIBBEAN CRUISES LTD	RCL	25,222.32	0.12%	2.04%	13.50%	15.68%	0.0182%
EVEREST RE GROUP LTD	RE	10,529.42	0.05%	2.07%	3.50%	5.61%	0.0027%
REGENCY CENTERS CORP	REG	-	N/A	3.72%	N/A	N/A	N/A
REGENERON PHARMACEUTICALS	REGN	35,364.50	0.16%	0.00%	14.00%	14.00%	0.0228%
REGIONS FINANCIAL CORP	RF	21,365.84	0.10%	2.07%	12.00%	14.19%	0.0140%
ROBERT HALF INTL INC	RHI	7,424.30	0.03%	1.93%	6.50%	8.49%	0.0029%
RED HAT INC	RHT	26,739.85	0.12%	0.00%	20.50%	20.50%	0.0252%
RAYMOND JAMES FINANCIAL INC	RJF	12,827.26	0.06%	1.13%	14.00%	15.21%	0.0090%
RALPH LAUREN CORP	RL	9,299.91	0.04%	1.75%	3.50%	5.28%	0.0023%
RESMED INC	RMD	13,536.48	0.06%	1.51%	10.00%	11.59%	0.0072%
ROCKWELL AUTOMATION INC	ROK	22,356.05	0.10%	1.91%	8.50%	10.49%	0.0108%
ROPER TECHNOLOGIES INC	ROP	28,242.97	0.13%	0.60%	10.00%	10.63%	0.0138%
ROSS STORES INC	ROST	30,483.79	0.14%	1.13%	9.50%	10.68%	0.0150%
RANGE RESOURCES CORP	RRC	3,602.83	0.02%	0.55%	23.50%	24.11%	0.0040%
REPUBLIC SERVICES INC	RSG	22,847.45	0.11%	2.10%	12.50%	14.73%	0.0155%
RAYTHEON COMPANY	RTN	63,184.32	0.29%	1.58%	11.00%	12.67%	0.0368%
SBA COMMUNICATIONS CORP	SBAC	20,332.90	0.09%	0.00%	88.50%	88.50%	0.0828%
STARBUCKS CORP	SBUX	83,245.46	0.38%	2.20%	15.00%	17.37%	0.0665%
SCANA CORP	SCG	5,532.67	0.03%	0.00%	-0.50%	-0.50%	-0.0001%
SCHWAB (CHARLES) CORP	SCHW	70,150.57	0.32%	0.76%	15.50%	16.32%	0.0527%
SEALED AIR CORP	SEE	7,313.69	0.03%	1.48%	19.00%	20.62%	0.0069%
SHERWIN-WILLIAMS CO/THE	SHW	37,254.65	0.17%	0.87%	12.00%	12.92%	0.0222%
SVB FINANCIAL GROUP	SIVB	N/A	N/A	0.00%	N/A	N/A	N/A
JM SMUCKER CO/THE	SJM	14,086.40	0.06%	2.54%	8.00%	10.64%	0.0069%
SCHLUMBERGER LTD	SLB	91,021.28	0.42%	3.04%	17.50%	20.81%	0.0872%
SL GREEN REALTY CORP	SLG	-	N/A	3.47%	N/A	N/A	N/A
SNAP-ON INC	SNA	8,528.82	0.04%	2.19%	7.50%	9.77%	0.0038%
SYNOPSIS INC	SNPS	12,357.14	0.06%	0.00%	9.00%	9.00%	0.0051%
SOUTHERN CO/THE	SO	45,173.30	0.21%	5.33%	4.00%	9.44%	0.0196%
SIMON PROPERTY GROUP INC	SPG	-	N/A	5.18%	N/A	N/A	N/A
S&P GLOBAL INC	SPGI	48,383.70	0.22%	1.05%	14.50%	15.63%	0.0348%
STERICYCLE INC	SRCL	4,999.07	0.02%	0.00%	6.50%	6.50%	0.0015%
SEMPRA ENERGY	SRE	28,033.96	0.13%	3.21%	7.50%	10.83%	0.0140%
SUNTRUST BANKS INC	STI	32,625.11	0.15%	2.33%	7.00%	9.41%	0.0141%
STATE STREET CORP	STT	36,974.46	0.17%	1.73%	9.50%	11.31%	0.0193%
SEAGATE TECHNOLOGY	STX	16,576.44	0.08%	4.33%	5.00%	9.44%	0.0072%
CONSTELLATION BRANDS INC-A	STZ	44,768.29	0.21%	1.29%	13.50%	14.88%	0.0307%
STANLEY BLACK & DECKER INC	SWK	23,660.68	0.11%	1.63%	8.00%	9.70%	0.0106%
SKYWORKS SOLUTIONS INC	SWKS	18,021.12	0.08%	1.30%	14.50%	15.89%	0.0132%
SYNCHRONY FINANCIAL	SYF	27,233.93	0.13%	1.72%	9.00%	10.80%	0.0135%
STRYKER CORP	SYK	59,866.18	0.28%	1.17%	14.00%	15.25%	0.0420%
SYMANTEC CORP	SYMC	16,248.33	0.07%	1.15%	8.50%	9.70%	0.0073%
SYSCO CORP	SYT	31,446.24	0.14%	2.39%	14.00%	16.56%	0.0240%
AT&T INC	T	221,878.80	1.02%	5.56%	5.50%	11.21%	0.1145%

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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
MOLSON COORS BREWING CO -B	TAP	15,913.75	0.07%	2.27%	14.00%	16.43%	0.0120%
TRANSDIGM GROUP INC	TDG	16,207.44	0.07%	0.00%	11.00%	11.00%	0.0082%
TE CONNECTIVITY LTD	TEL	34,713.82	0.16%	1.62%	10.50%	12.21%	0.0195%
TARGET CORP	TGT	39,401.06	0.18%	3.42%	5.00%	8.51%	0.0154%
TIFFANY & CO	TIF	12,196.32	0.06%	2.19%	8.00%	10.28%	0.0058%
TJX COMPANIES INC	TJX	53,720.47	0.25%	1.84%	12.00%	13.95%	0.0345%
TORCHMARK CORP	TMK	9,735.82	0.04%	0.75%	10.00%	10.79%	0.0048%
THERMO FISHER SCIENTIFIC INC	TMO	84,954.80	0.39%	0.32%	9.00%	9.33%	0.0365%
TAPESTRY INC	TPR	15,222.60	0.07%	2.50%	14.00%	16.68%	0.0117%
TRIPADVISOR INC	TRIP	5,748.03	0.03%	0.00%	3.50%	3.50%	0.0009%
T ROWE PRICE GROUP INC	TROW	26,045.27	0.12%	2.60%	8.00%	10.70%	0.0128%
TRAVELERS COS INC/THE	TRV	37,803.31	0.17%	2.07%	3.00%	5.10%	0.0089%
TRACTOR SUPPLY COMPANY	TSCO	7,688.59	0.04%	1.91%	10.50%	12.51%	0.0044%
TYSON FOODS INC-CL A	TSN	26,116.96	0.12%	1.69%	11.50%	13.29%	0.0160%
TOTAL SYSTEM SERVICES INC	TSS	15,713.24	0.07%	0.60%	11.50%	12.13%	0.0088%
TAKE-TWO INTERACTIVE SOFTWARE	TTWO	11,275.88	N/A	0.00%	N/A	N/A	N/A
TIME WARNER INC	TWX	75,087.81	0.35%	1.67%	9.50%	11.25%	0.0389%
TEXAS INSTRUMENTS INC	TXN	100,518.20	0.46%	2.43%	9.50%	12.05%	0.0557%
TEXTRON INC	TXT	15,578.44	0.07%	0.13%	15.00%	15.14%	0.0109%
UNDER ARMOUR INC-CLASS A	UAA	7,715.28	0.04%	0.00%	3.50%	3.50%	0.0012%
UNITED CONTINENTAL HOLDINGS	UAL	20,942.05	0.10%	0.00%	2.50%	2.50%	0.0024%
UDR INC	UDR	-	N/A	3.58%	N/A	N/A	N/A
UNIVERSAL HEALTH SERVICES-B	UHS	11,547.94	0.05%	0.33%	10.50%	10.85%	0.0058%
ULTA BEAUTY INC	ULTA	12,637.43	0.06%	0.00%	21.00%	21.00%	0.0122%
UNITEDHEALTH GROUP INC	UNH	221,968.80	1.02%	1.31%	14.50%	15.90%	0.1625%
UNUM GROUP	UNM	10,758.40	0.05%	1.92%	12.00%	14.04%	0.0070%
UNION PACIFIC CORP	UNP	105,127.00	0.48%	2.19%	11.00%	13.31%	0.0644%
UNITED PARCEL SERVICE-CL B	UPS	92,389.16	0.43%	3.40%	8.50%	12.04%	0.0512%
UNITED RENTALS INC	URI	15,029.35	0.07%	0.00%	14.00%	14.00%	0.0097%
US BANCORP	USB	85,138.46	0.39%	2.43%	7.00%	9.52%	0.0373%
UNITED TECHNOLOGIES CORP	UTX	100,498.60	0.46%	2.23%	9.00%	11.33%	0.0524%
VISA INC-CLASS A SHARES	V	249,893.80	1.15%	0.69%	11.50%	12.23%	0.1407%
VARIAN MEDICAL SYSTEMS INC	VAR	11,035.05	0.05%	0.00%	10.00%	10.00%	0.0051%
VF CORP	VFC	30,570.04	0.14%	2.37%	9.00%	11.48%	0.0162%
VIACOM INC-CLASS B	VIAB	12,384.92	0.06%	2.60%	3.00%	5.64%	0.0032%
VALERO ENERGY CORP	VLO	41,983.52	0.19%	3.34%	7.00%	10.46%	0.0202%
VULCAN MATERIALS CO	VMC	15,480.58	0.07%	0.96%	18.00%	19.05%	0.0136%
VORNADO REALTY TRUST	VNO	12,868.03	0.06%	3.72%	-5.50%	-1.88%	-0.0011%
VERISK ANALYTICS INC	VRSK	17,348.32	0.08%	0.00%	9.50%	9.50%	0.0076%
VERISIGN INC	VRSN	11,634.80	0.05%	0.00%	10.50%	10.50%	0.0056%
VERTEX PHARMACEUTICALS INC	VRTX	39,927.87	N/A	0.00%	N/A	N/A	N/A
VENTAS INC	VTR	-	N/A	6.38%	N/A	N/A	N/A
VERIZON COMMUNICATIONS INC	VZ	196,792.20	0.91%	4.89%	4.00%	8.99%	0.0814%
WATERS CORP	WAT	16,039.59	0.07%	0.00%	11.00%	11.00%	0.0081%
WALGREENS BOOTS ALLIANCE INC	WBA	64,111.20	0.30%	2.48%	12.00%	14.63%	0.0432%
WESTERN DIGITAL CORP	WDC	26,887.41	0.12%	2.21%	10.50%	12.83%	0.0159%
WEC ENERGY GROUP INC	WEC	19,997.93	0.09%	3.54%	7.00%	10.66%	0.0098%
WELLTOWER INC	WELL	-	N/A	6.41%	N/A	N/A	N/A
WELLS FARGO & CO	WFC	262,458.40	1.21%	2.99%	5.00%	8.06%	0.0974%
WHIRLPOOL CORP	WHR	10,987.92	0.05%	2.88%	7.50%	10.49%	0.0053%
WILLIS TOWERS WATSON PLC	WLTW	19,622.79	N/A	1.62%	N/A	N/A	N/A
WASTE MANAGEMENT INC	WM	37,350.40	0.17%	2.16%	9.50%	11.76%	0.0202%
WILLIAMS COS INC	WMB	20,484.80	0.09%	5.48%	17.50%	23.46%	0.0221%
WALMART INC	WMT	260,620.10	1.20%	2.36%	5.50%	7.92%	0.0951%
WESTROCK CO	WRK	16,428.30	0.08%	2.67%	9.00%	11.79%	0.0089%
WESTERN UNION CO	WU	8,763.45	0.04%	3.98%	6.00%	10.10%	0.0041%
WEYERHAEUSER CO	WY	26,991.63	0.12%	3.58%	21.50%	25.46%	0.0316%
WYNDHAM WORLDWIDE CORP	WYN	11,483.64	0.05%	2.33%	8.00%	10.42%	0.0055%
WYNN RESORTS LTD	WYNN	18,628.39	0.09%	1.10%	14.00%	15.18%	0.0130%
CIMAREX ENERGY CO	XEC	8,949.77	0.04%	0.68%	27.50%	28.27%	0.0116%
XCEL ENERGY INC	XEL	23,199.65	0.11%	3.33%	4.50%	7.90%	0.0084%
XL GROUP LTD	XL	14,232.54	0.07%	1.58%	11.50%	13.17%	0.0086%
XILINX INC	XLNX	18,015.42	0.08%	1.98%	7.50%	9.55%	0.0079%
EXXON MOBIL CORP	XOM	322,096.80	1.48%	4.13%	9.00%	13.32%	0.1974%
DENTSPLY SIRONA INC	XRAY	11,500.66	0.05%	0.70%	8.50%	9.23%	0.0049%
XEROX CORP	XRXY	7,199.69	0.03%	3.54%	4.50%	8.12%	0.0027%
XYLEM INC	XYL	13,957.29	0.06%	1.08%	15.50%	16.66%	0.0107%
YUM! BRANDS INC	YUM	29,157.39	0.13%	1.67%	7.50%	9.23%	0.0124%
ZIMMER BIOMET HOLDINGS INC	ZBH	21,930.04	0.10%	0.92%	6.50%	7.45%	0.0075%
ZIONS BANCORPORATION	ZION	10,447.47	0.05%	1.74%	15.50%	17.37%	0.0084%
ZOETIS INC	ZTS	40,743.73	0.19%	0.60%	14.00%	14.64%	0.0275%
Total Market Capitalization:		21,722,336.67					15.64%

Notes:

[1] Equals sum of Col. [9]

[2] Source: Value Line

[3] Equals [1] - [2]

[4] Source: Value Line

[5] Equals weight in S&P 500 based on market capitalization

[6] Source: Value Line

[7] Source: Value Line

[8] Equals ([6] x (1 + (0.5 x [7]))) + [7]

[9] Equals Col. [5] x Col. [8]

Schedule __ (RBH-5R)

Bloomberg and Value Line Beta Coefficients

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1]	[2]
		Bloomberg	Value Line
ALLETE, Inc.	ALE	0.61	0.75
Alliant Energy Corporation	LNT	0.53	0.70
Ameren Corporation	AEE	0.50	0.65
American Electric Power Company, Inc.	AEP	0.58	0.65
Black Hills Corporation	BKH	0.64	0.90
CenterPoint Energy, Inc.	CNP	0.67	0.85
CMS Energy Corporation	CMS	0.54	0.65
Consolidated Edison, Inc.	ED	0.50	0.50
DTE Energy Company	DTE	0.54	0.65
El Paso Electric Company	EE	0.63	0.80
Eversource Energy	ES	0.68	0.65
Hawaiian Electric Industries, Inc.	HE	0.54	0.70
IDACORP, Inc.	IDA	0.62	0.70
NorthWestern Corporation	NWE	0.53	0.70
OGE Energy Corp.	OGE	0.63	0.95
Otter Tail Corporation	OTTR	0.73	0.85
Pinnacle West Capital Corporation	PNW	0.58	0.70
PNM Resources, Inc.	PNM	0.66	0.75
Portland General Electric Company	POR	0.52	0.70
Southern Company	SO	0.42	0.55
WEC Energy Group, Inc.	WEC	0.56	0.60
Xcel Energy Inc.	XEL	0.51	0.60
Mean		0.58	0.71

Notes:

[1] Source: Bloomberg Professional

[2] Source: Value Line

Schedule __ (RBH-6R)

Capital Asset Pricing Model Results

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

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	CAPM		ECAPM	
				Bloomberg MRP	Value Line MRP	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE BLOOMBERG BETA COEFFICIENT							
Current 30-Year Treasury [9]	0.578	11.66%	12.57%	9.81%	10.34%	11.04%	11.66%
Near-Term Projected 30-Year Treasury [10]	0.578	11.66%	12.57%	10.26%	10.79%	11.49%	12.11%
Mean				10.03%	10.56%	11.26%	11.89%
Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	CAPM		ECAPM	
				Bloomberg MRP	Value Line MRP	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE VALUE LINE AVERAGE BETA COEFFICIENT							
Current 30-Year Treasury [9]	0.707	11.66%	12.57%	11.31%	11.95%	12.16%	12.88%
Near-Term Projected 30-Year Treasury [10]	0.707	11.66%	12.57%	11.76%	12.40%	12.61%	13.32%
Mean				11.53%	12.18%	12.39%	13.10%

Notes:

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

Schedule __ (RBH-7R)

Bond Yield Plus Risk Premium

Bond Yield Plus Risk Premium

[1]	[2]	[3]	[4]	[5]
Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
-2.55%	-2.71%			
Current 30-Year Treasury		3.07%	6.90%	9.97%
Near-Term Projected 30-Year Treasury		3.52%	6.53%	10.04%
Long-Term Projected 30-Year Treasury		4.20%	6.05%	10.25%



Notes:

- [1] Constant of regression equation
- [2] Slope of regression equation
- [3] Source: Current = Bloomberg Professional,
Near Term Projected = Blue Chip Financial Forecasts, Vol. 37, No. 4, April 1, 2018, at 2,
Long Term Projected = Blue Chip Financial Forecasts, Vol. 36, No. 12, December 1, 2017, at 14.
- [4] Equals [1] + ln([3]) x [2]
- [5] Equals [3] + [4]
- [6] Source: SNL Financial
- [7] Source: SNL Financial
- [8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
- [9] Equals [7] - [8]

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

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
7/18/1980	13.80%	10.71%	3.09%
7/22/1980	14.10%	10.72%	3.38%
7/24/1980	15.00%	10.73%	4.27%
7/25/1980	13.48%	10.73%	2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980	13.50%	10.88%	2.62%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.94%	2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.98%	4.52%
10/7/1980	12.50%	10.99%	1.51%
10/9/1980	13.25%	11.00%	2.25%
10/9/1980	14.50%	11.00%	3.50%
10/9/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	13.75%	11.12%	2.63%
11/5/1980	14.00%	11.12%	2.88%
11/8/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/8/1980	14.15%	11.22%	2.93%
12/8/1980	15.10%	11.22%	3.88%
12/9/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%
1/2/1981	15.25%	11.22%	4.03%
1/7/1981	14.30%	11.21%	3.09%
1/19/1981	15.25%	11.20%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.21%	3.79%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.33%	3.92%
3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981	16.00%	11.50%	4.50%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.60%	3.70%
4/1/1981	14.53%	11.68%	2.85%
4/3/1981	19.10%	11.71%	7.39%
4/9/1981	15.00%	11.78%	3.22%
4/9/1981	15.30%	11.78%	3.52%
4/9/1981	16.50%	11.78%	4.72%
4/9/1981	17.00%	11.78%	5.22%
4/10/1981	13.75%	11.80%	1.95%
4/13/1981	13.57%	11.82%	1.75%
4/15/1981	15.30%	11.85%	3.45%
4/16/1981	13.50%	11.87%	1.63%
4/17/1981	14.10%	11.87%	2.23%
4/21/1981	14.00%	11.90%	2.10%
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%

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

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
3/12/1982	16.25%	13.88%	2.37%
3/17/1982	17.30%	13.88%	3.42%
3/22/1982	15.10%	13.89%	1.21%
3/27/1982	15.40%	13.89%	1.51%
3/30/1982	15.50%	13.90%	1.60%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982	15.50%	13.91%	1.59%
4/5/1982	15.50%	13.92%	1.58%
4/8/1982	16.40%	13.93%	2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%
4/27/1982	15.00%	13.94%	1.06%
4/28/1982	15.75%	13.94%	1.81%
4/30/1982	14.70%	13.94%	0.76%
4/30/1982	15.50%	13.94%	1.56%
5/3/1982	16.60%	13.94%	2.66%
5/4/1982	16.00%	13.94%	2.06%
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982	15.00%	13.91%	1.09%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/1/1982	15.50%	13.15%	2.35%
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%

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

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%
9/7/1983	15.00%	10.86%	4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983	16.15%	10.95%	5.20%
10/4/1983	14.80%	10.96%	3.84%
10/7/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.25%	11.01%	5.24%
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/1/1983	16.00%	11.06%	4.94%
11/9/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	14.69%	11.22%	3.47%
12/20/1983	16.00%	11.22%	4.78%
12/20/1983	16.25%	11.22%	5.03%
12/22/1983	14.75%	11.23%	3.52%
12/22/1983	15.75%	11.23%	4.52%
1/3/1984	14.75%	11.27%	3.48%
1/10/1984	15.90%	11.30%	4.60%
1/12/1984	15.60%	11.31%	4.29%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984	15.90%	11.33%	4.57%
1/30/1984	16.10%	11.37%	4.73%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/31/1984	15.25%	11.37%	3.88%
2/1/1984	14.80%	11.38%	3.42%
2/6/1984	13.75%	11.40%	2.35%
2/6/1984	14.75%	11.40%	3.35%
2/9/1984	15.25%	11.42%	3.83%
2/15/1984	15.70%	11.44%	4.26%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984	14.75%	11.47%	3.28%
2/28/1984	14.50%	11.51%	2.99%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.64%	4.36%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
4/2/1984	15.50%	11.71%	3.79%
4/6/1984	14.74%	11.75%	2.99%
4/11/1984	15.72%	11.78%	3.94%
4/17/1984	15.00%	11.81%	3.19%
4/18/1984	16.20%	11.82%	4.38%
4/25/1984	14.64%	11.85%	2.79%
4/30/1984	14.40%	11.87%	2.53%
5/16/1984	14.69%	11.98%	2.71%
5/16/1984	15.00%	11.98%	3.02%
5/22/1984	14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.15%	3.10%
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984	16.00%	12.31%	3.69%
7/12/1984	16.50%	12.32%	4.18%
7/13/1984	16.25%	12.33%	3.92%
7/17/1984	14.14%	12.35%	1.79%
7/18/1984	15.30%	12.36%	2.94%
7/18/1984	15.50%	12.36%	3.14%
7/19/1984	14.30%	12.37%	1.93%
7/24/1984	16.79%	12.39%	4.40%
7/31/1984	16.00%	12.43%	3.57%
8/3/1984	14.25%	12.44%	1.81%
8/17/1984	14.30%	12.49%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984	16.30%	12.51%	3.79%
8/31/1984	15.55%	12.52%	3.03%
9/6/1984	16.00%	12.53%	3.47%
9/10/1984	14.75%	12.54%	2.21%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984	14.50%	12.57%	1.93%
9/28/1984	15.00%	12.57%	2.43%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
9/28/1984	16.25%	12.57%	3.68%
10/9/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.58%	3.82%
10/31/1984	16.25%	12.58%	3.67%
11/7/1984	15.60%	12.58%	3.02%
11/9/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.58%	3.17%
11/20/1984	15.25%	12.58%	2.67%
11/20/1984	15.92%	12.58%	3.34%
11/23/1984	15.00%	12.58%	2.42%
11/28/1984	16.15%	12.57%	3.58%
12/3/1984	15.80%	12.56%	3.24%
12/4/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.53%	2.22%
12/19/1984	15.00%	12.53%	2.47%
12/20/1984	16.00%	12.53%	3.47%
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985	15.75%	12.47%	3.28%
1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.35%	2.12%
3/1/1985	13.84%	12.31%	1.53%
3/8/1985	16.85%	12.28%	4.57%
3/14/1985	15.50%	12.25%	3.25%
3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.17%	3.45%
4/3/1985	14.60%	12.14%	2.46%
4/9/1985	15.50%	12.11%	3.39%
4/16/1985	15.70%	12.06%	3.64%
4/22/1985	14.00%	12.02%	1.98%
4/26/1985	15.50%	11.98%	3.52%
4/29/1985	15.00%	11.97%	3.03%
5/2/1985	14.68%	11.94%	2.74%
5/8/1985	15.62%	11.89%	3.73%
5/10/1985	16.50%	11.87%	4.63%
5/29/1985	14.61%	11.73%	2.88%
5/31/1985	16.00%	11.71%	4.29%
6/14/1985	15.50%	11.61%	3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.33%	3.17%
8/2/1985	14.80%	11.29%	3.51%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
8/7/1985	15.00%	11.27%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.15%	3.35%
9/9/1985	14.60%	11.11%	3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.50%	11.05%	4.45%
9/27/1985	15.80%	11.05%	4.75%
10/2/1985	14.00%	11.03%	2.97%
10/2/1985	14.75%	11.03%	3.72%
10/3/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985	15.50%	10.90%	4.60%
11/8/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.23%	5.77%
2/24/1986	14.50%	10.18%	4.32%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986	13.40%	9.69%	3.71%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.32%	5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
5/30/1986	15.10%	9.18%	5.92%
6/2/1986	12.81%	9.17%	3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986	12.00%	8.91%	3.09%
6/26/1986	14.75%	8.91%	5.84%
6/30/1986	13.00%	8.87%	4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.66%	3.74%
7/25/1986	14.25%	8.57%	5.68%
8/6/1986	13.50%	8.44%	5.06%
8/14/1986	13.50%	8.35%	5.15%
9/16/1986	12.75%	8.06%	4.69%
9/19/1986	13.25%	8.03%	5.22%
10/1/1986	14.00%	7.95%	6.05%
10/3/1986	13.40%	7.93%	5.47%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986	13.00%	7.75%	5.25%
12/3/1986	12.90%	7.58%	5.32%
12/4/1986	14.44%	7.58%	6.86%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.51%	6.29%
12/30/1986	13.00%	7.49%	5.51%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.47%	4.93%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.54%	4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987	13.50%	7.70%	5.80%
6/15/1987	13.20%	7.78%	5.42%
6/29/1987	15.00%	7.83%	7.17%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987	12.90%	7.86%	5.04%
7/15/1987	13.50%	7.88%	5.62%
7/16/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%
7/27/1987	13.00%	7.92%	5.08%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
7/27/1987	13.40%	7.92%	5.48%
7/27/1987	13.50%	7.92%	5.58%
7/31/1987	12.98%	7.95%	5.03%
8/26/1987	12.63%	8.06%	4.57%
8/26/1987	12.75%	8.06%	4.69%
8/27/1987	13.25%	8.06%	5.19%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	12.75%	8.31%	4.44%
9/30/1987	13.00%	8.31%	4.69%
10/2/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.43%	4.57%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.68%	3.32%
12/3/1987	14.20%	8.70%	5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%
12/16/1987	13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987	13.00%	8.81%	4.19%
1/20/1988	13.80%	8.94%	4.86%
1/26/1988	13.90%	8.95%	4.95%
1/29/1988	13.20%	8.96%	4.24%
2/4/1988	12.60%	8.96%	3.64%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%
3/24/1988	11.24%	8.92%	2.32%
3/30/1988	12.72%	8.92%	3.80%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.93%	4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.99%	4.51%
5/16/1988	13.00%	8.99%	4.01%
6/30/1988	12.75%	9.00%	3.75%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.92%	3.83%
8/23/1988	11.70%	8.93%	2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%
12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/20/1988	13.00%	9.02%	3.98%
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989	13.00%	9.05%	3.95%
3/30/1989	14.00%	9.05%	4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.00%	4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
1/10/1990	12.80%	8.24%	4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.20%	3.80%
2/9/1990	12.10%	8.17%	3.93%
2/24/1990	12.86%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%
4/12/1990	12.52%	8.18%	4.34%
4/19/1990	12.75%	8.20%	4.55%
5/21/1990	12.10%	8.28%	3.82%
5/29/1990	12.40%	8.30%	4.10%
5/31/1990	12.00%	8.30%	3.70%
6/4/1990	12.90%	8.30%	4.60%
6/6/1990	12.25%	8.31%	3.94%
6/15/1990	13.20%	8.32%	4.88%
6/20/1990	12.92%	8.32%	4.60%
6/27/1990	12.90%	8.33%	4.57%
6/29/1990	12.50%	8.33%	4.17%
7/6/1990	12.10%	8.34%	3.76%
7/6/1990	12.35%	8.34%	4.01%
8/10/1990	12.55%	8.41%	4.14%

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

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.50%	8.18%	4.32%
11/27/1991	12.10%	8.18%	3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
1/9/1992	12.80%	8.09%	4.71%
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.06%	4.94%
1/27/1992	12.65%	8.05%	4.60%
1/31/1992	12.00%	8.04%	3.96%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.01%	4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.94%	3.51%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.93%	3.57%
5/5/1992	11.50%	7.89%	3.61%
5/12/1992	11.87%	7.88%	3.99%
5/12/1992	12.46%	7.88%	4.58%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/13/1992	13.50%	7.84%	5.66%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992	11.40%	7.71%	3.69%
9/30/1992	11.75%	7.70%	4.05%
10/2/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992	11.85%	7.68%	4.17%
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992	12.40%	7.66%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.63%	4.27%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993	11.90%	7.49%	4.41%
2/26/1993	11.80%	7.48%	4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.25%	4.50%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.23%	4.27%
5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.10%	4.28%
7/23/1993	10.46%	7.09%	3.37%
8/24/1993	11.50%	6.96%	4.54%
9/21/1993	10.50%	6.81%	3.69%
9/29/1993	11.47%	6.77%	4.70%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.57%	5.43%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993	10.55%	6.48%	4.07%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.47%	4.83%
1/4/1994	10.07%	6.44%	3.63%
1/13/1994	11.00%	6.42%	4.58%
1/21/1994	11.00%	6.40%	4.60%
1/28/1994	11.35%	6.39%	4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.39%	3.46%
11/9/1994	10.85%	7.39%	3.46%

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

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%
12/18/1996	11.75%	6.83%	4.92%
12/31/1996	11.50%	6.83%	4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.80%	3.22%
4/2/1997	11.65%	6.80%	4.85%
4/28/1997	11.50%	6.81%	4.69%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
2/2/1998	12.75%	6.39%	6.36%
3/2/1998	11.25%	6.29%	4.96%
3/6/1998	10.75%	6.27%	4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998	11.40%	5.94%	5.46%
9/15/1998	11.90%	5.78%	6.12%
11/30/1998	12.60%	5.58%	7.02%
12/10/1998	12.20%	5.54%	6.66%
12/17/1998	12.10%	5.52%	6.58%
2/5/1999	10.30%	5.38%	4.92%
3/4/1999	10.50%	5.34%	5.16%
4/6/1999	10.94%	5.32%	5.62%
7/29/1999	10.75%	5.52%	5.23%
9/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
1/7/2000	11.50%	6.05%	5.45%
1/7/2000	11.50%	6.05%	5.45%
2/17/2000	10.60%	6.17%	4.43%
3/28/2000	11.25%	6.20%	5.05%
5/24/2000	11.00%	6.18%	4.82%
7/18/2000	12.20%	6.16%	6.04%
9/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
1/23/2001	11.25%	5.79%	5.46%
2/8/2001	11.50%	5.77%	5.73%
5/8/2001	10.75%	5.62%	5.13%
6/26/2001	11.00%	5.62%	5.38%
7/25/2001	11.02%	5.60%	5.42%
7/25/2001	11.02%	5.60%	5.42%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001	10.50%	5.56%	4.94%
9/7/2001	10.75%	5.55%	5.20%
9/10/2001	11.00%	5.55%	5.45%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
9/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/3/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
1/22/2002	10.00%	5.50%	4.50%
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002	10.17%	5.46%	4.71%
6/10/2002	12.00%	5.47%	6.53%
6/18/2002	11.16%	5.48%	5.68%
6/20/2002	11.00%	5.48%	5.52%
6/20/2002	12.30%	5.48%	6.82%
7/15/2002	11.00%	5.48%	5.52%
9/12/2002	12.30%	5.45%	6.85%
9/26/2002	10.45%	5.41%	5.04%
12/4/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
1/8/2003	11.10%	5.19%	5.91%
1/31/2003	12.45%	5.13%	7.32%
2/28/2003	12.30%	5.05%	7.25%
3/6/2003	10.75%	5.03%	5.72%
3/7/2003	9.96%	5.02%	4.94%
3/20/2003	12.00%	4.98%	7.02%
4/3/2003	12.00%	4.96%	7.04%
4/15/2003	11.15%	4.94%	6.21%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003	9.75%	4.79%	4.96%
7/16/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.80%	4.70%
8/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
1/13/2004	12.00%	4.95%	7.05%
3/2/2004	10.75%	4.99%	5.76%
3/26/2004	10.25%	5.02%	5.23%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.08%	5.17%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
7/16/2004	11.60%	5.11%	6.49%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%
12/29/2004	9.85%	5.07%	4.78%
1/6/2005	10.70%	5.08%	5.62%
2/18/2005	10.30%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005	10.25%	4.87%	5.38%
5/18/2005	10.25%	4.78%	5.47%
5/25/2005	10.75%	4.76%	5.99%
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005	11.50%	4.64%	6.86%
8/5/2005	11.75%	4.62%	7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%
12/22/2005	11.15%	4.54%	6.61%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.53%	6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006	10.20%	4.83%	5.37%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.89%	4.66%
9/1/2006	10.54%	4.90%	5.64%
9/14/2006	10.00%	4.91%	5.09%
10/6/2006	9.67%	4.92%	4.75%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/1/2006	10.25%	4.95%	5.30%
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
1/5/2007	10.00%	4.95%	5.05%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.90%	4.95%	5.95%
1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.87%	6.48%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007	9.67%	4.80%	4.87%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/22/2007	10.50%	4.83%	5.67%
6/28/2007	10.75%	4.84%	5.91%
7/12/2007	9.67%	4.86%	4.81%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
8/15/2007	10.40%	4.88%	5.52%
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/28/2008	9.40%	4.80%	4.60%
1/30/2008	10.00%	4.79%	5.21%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/31/2008	10.71%	4.79%	5.92%
2/29/2008	10.25%	4.75%	5.50%
3/12/2008	10.25%	4.73%	5.52%
3/25/2008	9.10%	4.68%	4.42%
4/22/2008	10.25%	4.60%	5.65%
4/24/2008	10.10%	4.60%	5.50%
5/1/2008	10.70%	4.59%	6.11%
5/19/2008	11.00%	4.56%	6.44%
5/27/2008	10.00%	4.55%	5.45%
6/10/2008	10.70%	4.54%	6.16%
6/27/2008	10.50%	4.54%	5.96%
6/27/2008	11.04%	4.54%	6.50%
7/10/2008	10.43%	4.52%	5.91%
7/16/2008	9.40%	4.52%	4.88%
7/30/2008	10.80%	4.51%	6.29%
7/31/2008	10.70%	4.51%	6.19%
8/11/2008	10.25%	4.51%	5.74%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008	10.30%	4.50%	5.80%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.48%	5.72%
10/8/2008	10.15%	4.46%	5.69%
11/13/2008	10.55%	4.45%	6.10%
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.79%	6.21%
4/30/2009	11.25%	3.78%	7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
7/17/2009	10.50%	3.78%	6.72%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.30%	6.70%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.70%	4.35%	6.35%
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41%	5.77%
3/2/2010	9.63%	4.41%	5.22%
3/4/2010	10.50%	4.41%	6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.10%	4.44%	5.66%
5/28/2010	10.20%	4.44%	5.76%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010	9.67%	4.43%	5.24%
6/28/2010	10.50%	4.43%	6.07%
6/30/2010	9.40%	4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.53%	4.43%	6.10%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
7/15/2010	10.70%	4.43%	6.27%
7/30/2010	10.70%	4.41%	6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010	9.90%	4.37%	5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.33%	5.67%
9/16/2010	10.00%	4.33%	5.67%
9/30/2010	9.75%	4.29%	5.46%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010	10.70%	4.20%	6.50%
11/19/2010	10.20%	4.18%	6.02%
11/22/2010	10.00%	4.18%	5.82%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010	10.25%	4.15%	6.10%
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.15%	5.85%
12/20/2010	10.60%	4.15%	6.45%
12/21/2010	10.30%	4.14%	6.16%
12/27/2010	9.90%	4.14%	5.76%
12/29/2010	11.15%	4.14%	7.01%
1/5/2011	10.15%	4.13%	6.02%
1/12/2011	10.30%	4.12%	6.18%
1/13/2011	10.30%	4.12%	6.18%
1/18/2011	10.00%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.12%	5.48%
2/3/2011	10.00%	4.12%	5.88%
2/25/2011	10.00%	4.14%	5.86%
3/25/2011	9.80%	4.18%	5.62%
3/30/2011	10.00%	4.18%	5.82%
4/12/2011	10.00%	4.21%	5.79%
4/25/2011	10.74%	4.23%	6.51%
4/26/2011	9.67%	4.23%	5.44%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.24%	5.76%
5/4/2011	10.00%	4.24%	5.76%
5/24/2011	10.50%	4.27%	6.23%
6/8/2011	10.75%	4.30%	6.45%
6/16/2011	9.20%	4.32%	4.88%
6/17/2011	9.95%	4.32%	5.63%
7/13/2011	10.20%	4.36%	5.84%
8/1/2011	9.20%	4.39%	4.81%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011	10.35%	4.37%	5.98%
8/19/2011	10.25%	4.36%	5.89%
9/2/2011	12.88%	4.32%	8.56%
9/22/2011	10.00%	4.24%	5.76%
10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%
12/14/2011	10.00%	3.80%	6.20%
12/14/2011	10.30%	3.80%	6.50%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.76%	6.44%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%
12/23/2011	10.19%	3.74%	6.45%
1/25/2012	10.50%	3.57%	6.93%
1/27/2012	10.50%	3.56%	6.94%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.44%	6.46%
2/27/2012	10.25%	3.43%	6.82%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012	10.37%	3.32%	7.05%
4/4/2012	10.00%	3.30%	6.70%
4/26/2012	10.00%	3.21%	6.79%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.17%	6.63%
5/15/2012	10.00%	3.14%	6.86%
5/29/2012	10.05%	3.11%	6.94%
6/7/2012	10.30%	3.08%	7.22%
6/14/2012	9.40%	3.06%	6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.06%	6.54%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.02%	6.78%
7/20/2012	9.31%	3.01%	6.30%
7/20/2012	9.81%	3.01%	6.80%
9/13/2012	9.80%	2.94%	6.86%
9/19/2012	9.80%	2.94%	6.86%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
9/19/2012	10.05%	2.94%	7.11%
9/26/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.75%	2.89%	6.86%
11/29/2012	9.88%	2.89%	6.99%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.87%	6.84%
12/19/2012	10.25%	2.87%	7.38%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
7/12/2013	9.36%	3.07%	6.29%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013	10.20%	3.31%	6.89%
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.48%	5.24%
12/9/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%
12/17/2013	10.95%	3.51%	7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%
12/30/2013	9.50%	3.54%	5.96%
2/20/2014	9.20%	3.68%	5.52%
2/26/2014	9.75%	3.69%	6.06%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
6/30/2014	9.55%	3.64%	5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%
7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.57%	6.18%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
9/11/2014	9.60%	3.51%	6.09%
9/15/2014	10.25%	3.51%	6.74%
10/9/2014	9.80%	3.45%	6.35%
11/6/2014	9.56%	3.37%	6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.33%	6.37%
11/26/2014	10.20%	3.33%	6.87%
12/4/2014	9.68%	3.31%	6.37%
12/10/2014	9.25%	3.29%	5.96%
12/10/2014	9.25%	3.29%	5.96%
12/11/2014	10.07%	3.29%	6.78%
12/12/2014	10.20%	3.28%	6.92%
12/17/2014	9.17%	3.27%	5.90%
12/18/2014	9.83%	3.26%	6.57%
1/23/2015	9.50%	3.14%	6.36%
2/24/2015	9.83%	3.04%	6.79%
3/18/2015	9.75%	2.98%	6.77%
3/25/2015	9.50%	2.96%	6.54%
3/26/2015	9.72%	2.95%	6.77%
4/23/2015	10.20%	2.87%	7.33%
4/29/2015	9.53%	2.86%	6.67%
5/1/2015	9.60%	2.85%	6.75%
5/26/2015	9.75%	2.83%	6.92%
6/17/2015	9.00%	2.82%	6.18%
6/17/2015	9.00%	2.82%	6.18%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.00%	2.88%	7.12%
11/19/2015	10.30%	2.88%	7.42%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/15/2015	9.60%	2.91%	6.69%
12/17/2015	9.70%	2.91%	6.79%
12/18/2015	9.50%	2.91%	6.59%
12/30/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.94%	6.56%
2/23/2016	9.75%	2.94%	6.81%
3/16/2016	9.85%	2.91%	6.94%
4/29/2016	9.80%	2.83%	6.97%

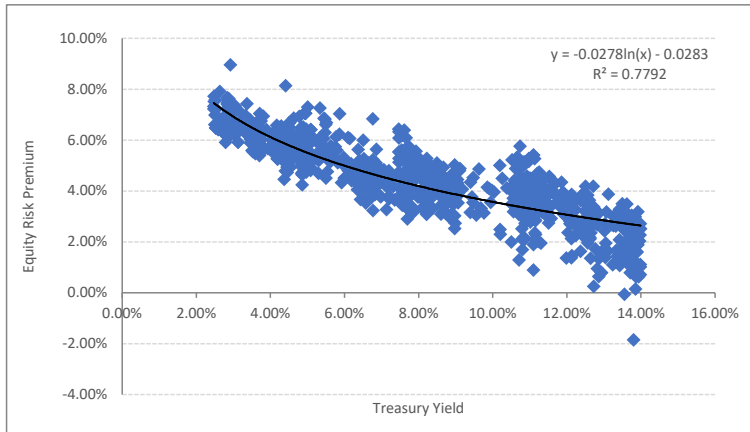
[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
6/3/2016	9.75%	2.80%	6.95%
6/8/2016	9.48%	2.80%	6.68%
6/15/2016	9.00%	2.78%	6.22%
6/15/2016	9.00%	2.78%	6.22%
7/18/2016	9.98%	2.71%	7.27%
8/9/2016	9.85%	2.66%	7.19%
8/18/2016	9.50%	2.63%	6.87%
8/24/2016	9.75%	2.62%	7.13%
9/1/2016	9.50%	2.59%	6.91%
9/8/2016	10.00%	2.58%	7.42%
9/28/2016	9.58%	2.54%	7.04%
9/30/2016	9.90%	2.53%	7.37%
11/9/2016	9.80%	2.48%	7.32%
11/10/2016	9.50%	2.48%	7.02%
11/15/2016	9.55%	2.49%	7.06%
11/18/2016	10.00%	2.50%	7.50%
11/29/2016	10.55%	2.51%	8.04%
12/1/2016	10.00%	2.51%	7.49%
12/6/2016	8.64%	2.52%	6.12%
12/6/2016	8.64%	2.52%	6.12%
12/7/2016	10.10%	2.52%	7.58%
12/12/2016	9.60%	2.53%	7.07%
12/14/2016	9.10%	2.53%	6.57%
12/19/2016	9.00%	2.54%	6.46%
12/19/2016	9.37%	2.54%	6.83%
12/22/2016	9.60%	2.55%	7.05%
12/22/2016	9.90%	2.55%	7.35%
12/28/2016	9.50%	2.55%	6.95%
1/18/2017	9.45%	2.58%	6.87%
1/24/2017	9.00%	2.59%	6.41%
1/31/2017	10.10%	2.60%	7.50%
2/15/2017	9.60%	2.62%	6.98%
2/22/2017	9.60%	2.64%	6.96%
2/24/2017	9.75%	2.64%	7.11%
2/28/2017	10.10%	2.64%	7.46%
3/2/2017	9.41%	2.65%	6.76%
3/20/2017	9.50%	2.68%	6.82%
4/4/2017	10.25%	2.71%	7.54%
4/12/2017	9.40%	2.74%	6.66%
4/20/2017	9.50%	2.76%	6.74%
5/3/2017	9.50%	2.79%	6.71%
5/11/2017	9.20%	2.81%	6.39%
5/18/2017	9.50%	2.83%	6.67%

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

of Cases: 1550
Average: 4.63%

Bond Yield Plus Risk Premium

[1]	[2]	[3]	[4]	[5]
Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
-2.83%	-2.78%			
		Current 30-Year Treasury	3.07%	6.86%
		Near-Term Projected 30-Year Treasury	3.52%	6.48%
		Long-Term Projected 30-Year Treasury	4.20%	5.99%
				10.19%



Notes:

[1] Constant of regression equation

[2] Slope of regression equation

[3] Source: Current = Bloomberg Professional,

Near Term Projected = Blue Chip Financial Forecasts, Vol. 37, No. 4, April 1, 2018, at 2,

Long Term Projected = Blue Chip Financial Forecasts, Vol. 36, No. 12, December 1, 2017, at 14.

[4] Equals [1] + ln([3]) x [2]

[5] Equals [3] + [4]

[6] Source: SNL Financial

[7] Source: SNL Financial

[8] Source: Bloomberg Professional, equals 187-trading day average (i.e. lag period)

[9] Equals [7] - [8]

Bond Yield Plus Risk Premium			
[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/3/1980	12.55%	9.39%	3.16%
1/4/1980	13.75%	9.40%	4.35%
1/14/1980	13.20%	9.44%	3.76%
1/18/1980	14.00%	9.47%	4.53%
1/31/1980	12.61%	9.56%	3.05%
2/8/1980	14.50%	9.63%	4.87%
2/14/1980	13.00%	9.67%	3.33%
2/15/1980	13.00%	9.69%	3.31%
2/29/1980	14.00%	9.86%	4.14%
3/5/1980	14.00%	9.91%	4.09%
3/7/1980	13.50%	9.95%	3.55%
3/14/1980	14.00%	10.04%	3.96%
3/27/1980	12.69%	10.20%	2.49%
4/1/1980	14.75%	10.26%	4.49%
4/29/1980	12.50%	10.51%	1.99%
5/7/1980	14.27%	10.56%	3.71%
5/8/1980	13.75%	10.56%	3.19%
5/19/1980	15.50%	10.62%	4.88%
5/27/1980	14.60%	10.65%	3.95%
5/29/1980	16.00%	10.67%	5.33%
6/10/1980	13.78%	10.71%	3.07%
6/25/1980	14.25%	10.74%	3.51%
7/9/1980	14.51%	10.77%	3.74%
7/17/1980	12.90%	10.79%	2.11%
7/18/1980	13.80%	10.79%	3.01%
7/22/1980	14.10%	10.79%	3.31%
7/23/1980	14.19%	10.79%	3.40%
8/1/1980	12.50%	10.80%	1.70%
8/11/1980	14.85%	10.81%	4.04%
8/21/1980	13.03%	10.84%	2.19%
8/28/1980	13.61%	10.87%	2.74%
8/28/1980	14.00%	10.87%	3.13%
9/4/1980	14.00%	10.90%	3.10%
9/24/1980	15.00%	10.98%	4.02%
10/9/1980	14.50%	11.05%	3.45%
10/9/1980	14.50%	11.05%	3.45%
10/24/1980	14.00%	11.09%	2.91%
10/27/1980	15.20%	11.10%	4.10%
10/27/1980	15.20%	11.10%	4.10%
10/28/1980	12.00%	11.10%	0.90%
10/28/1980	13.00%	11.10%	1.90%
10/31/1980	14.50%	11.12%	3.38%
11/4/1980	15.00%	11.12%	3.88%
11/6/1980	14.35%	11.13%	3.22%
11/10/1980	13.25%	11.14%	2.11%
11/17/1980	15.50%	11.15%	4.35%
11/19/1980	13.50%	11.14%	2.36%
12/5/1980	14.60%	11.13%	3.47%
12/8/1980	16.40%	11.13%	5.27%
12/12/1980	15.45%	11.15%	4.30%
12/17/1980	14.40%	11.16%	3.24%
12/17/1980	14.20%	11.16%	3.04%
12/18/1980	14.00%	11.16%	2.84%
12/22/1980	13.45%	11.16%	2.29%
12/26/1980	14.00%	11.15%	2.85%
12/30/1980	14.50%	11.14%	3.36%
12/31/1980	14.56%	11.14%	3.42%
1/7/1981	14.30%	11.13%	3.17%
1/12/1981	14.95%	11.14%	3.81%
1/26/1981	15.25%	11.20%	4.05%
1/30/1981	13.25%	11.23%	2.02%
2/11/1981	14.50%	11.33%	3.17%
2/20/1981	14.50%	11.40%	3.10%
3/12/1981	15.65%	11.60%	4.05%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
3/25/1981	15.30%	11.74%	3.56%
4/1/1981	15.30%	11.82%	3.48%
4/9/1981	15.00%	11.91%	3.09%
4/29/1981	13.50%	12.12%	1.38%
4/29/1981	14.25%	12.12%	2.13%
4/30/1981	15.00%	12.14%	2.86%
4/30/1981	13.60%	12.14%	1.46%
5/21/1981	14.00%	12.37%	1.63%
6/3/1981	14.67%	12.46%	2.21%
6/22/1981	16.00%	12.57%	3.43%
6/25/1981	14.75%	12.60%	2.15%
7/2/1981	14.00%	12.64%	1.36%
7/10/1981	16.00%	12.69%	3.31%
7/14/1981	16.90%	12.71%	4.19%
7/21/1981	15.78%	12.78%	3.00%
7/27/1981	13.77%	12.82%	0.95%
7/27/1981	15.50%	12.82%	2.68%
7/31/1981	14.20%	12.86%	1.34%
7/31/1981	13.50%	12.86%	0.64%
8/12/1981	13.72%	12.93%	0.79%
8/12/1981	13.72%	12.93%	0.79%
8/12/1981	14.41%	12.93%	1.48%
8/25/1981	15.45%	13.02%	2.43%
8/27/1981	14.43%	13.04%	1.39%
8/28/1981	15.00%	13.05%	1.95%
9/23/1981	14.34%	13.24%	1.10%
9/24/1981	16.25%	13.26%	2.99%
9/29/1981	14.50%	13.31%	1.19%
9/30/1981	15.94%	13.32%	2.62%
10/2/1981	14.80%	13.36%	1.44%
10/12/1981	16.25%	13.43%	2.82%
10/20/1981	15.25%	13.50%	1.75%
10/20/1981	16.50%	13.50%	3.00%
10/20/1981	17.00%	13.50%	3.50%
10/23/1981	15.50%	13.54%	1.96%
10/26/1981	13.50%	13.56%	-0.06%
10/29/1981	16.50%	13.60%	2.90%
11/4/1981	15.33%	13.62%	1.71%
11/6/1981	15.17%	13.64%	1.53%
11/12/1981	15.00%	13.65%	1.35%
11/25/1981	16.10%	13.66%	2.44%
11/25/1981	16.10%	13.66%	2.44%
11/25/1981	15.25%	13.66%	1.59%
11/30/1981	16.75%	13.66%	3.09%
12/1/1981	15.70%	13.66%	2.04%
12/1/1981	16.00%	13.66%	2.34%
12/15/1981	15.81%	13.69%	2.12%
12/17/1981	14.75%	13.70%	1.05%
12/22/1981	16.00%	13.72%	2.28%
12/22/1981	15.70%	13.72%	1.98%
12/30/1981	16.00%	13.74%	2.26%
12/30/1981	16.25%	13.74%	2.51%
1/4/1982	15.50%	13.75%	1.75%
1/14/1982	11.95%	13.80%	-1.85%
1/25/1982	16.25%	13.84%	2.41%
1/27/1982	16.84%	13.85%	2.99%
1/31/1982	14.00%	13.86%	0.14%
2/2/1982	16.24%	13.86%	2.38%
2/8/1982	15.50%	13.87%	1.63%
2/9/1982	14.95%	13.88%	1.07%
2/9/1982	15.75%	13.88%	1.87%
2/11/1982	16.00%	13.89%	2.11%
3/1/1982	15.96%	13.91%	2.05%
3/3/1982	15.00%	13.91%	1.09%
3/8/1982	17.10%	13.92%	3.18%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
3/26/1982	16.00%	13.97%	2.03%
3/31/1982	16.25%	13.98%	2.27%
4/1/1982	16.50%	13.98%	2.52%
4/6/1982	15.00%	13.99%	1.01%
4/9/1982	16.50%	13.99%	2.51%
4/12/1982	15.10%	13.99%	1.11%
4/12/1982	16.70%	13.99%	2.71%
4/18/1982	14.70%	13.99%	0.71%
4/27/1982	15.00%	13.97%	1.03%
5/10/1982	14.57%	13.94%	0.63%
5/14/1982	15.80%	13.92%	1.88%
5/20/1982	15.82%	13.91%	1.91%
5/21/1982	15.50%	13.90%	1.60%
5/25/1982	16.25%	13.90%	2.35%
6/2/1982	14.50%	13.87%	0.63%
6/7/1982	16.00%	13.85%	2.15%
6/23/1982	15.50%	13.81%	1.69%
6/25/1982	16.50%	13.81%	2.69%
7/1/1982	16.00%	13.79%	2.21%
7/1/1982	15.55%	13.79%	1.76%
7/2/1982	15.10%	13.79%	1.31%
7/13/1982	16.80%	13.75%	3.05%
7/22/1982	14.50%	13.71%	0.79%
7/28/1982	16.10%	13.68%	2.42%
7/30/1982	14.82%	13.66%	1.16%
8/4/1982	15.58%	13.64%	1.94%
8/6/1982	16.50%	13.63%	2.87%
8/11/1982	17.11%	13.62%	3.49%
8/25/1982	16.00%	13.59%	2.41%
8/30/1982	16.25%	13.58%	2.67%
9/3/1982	15.50%	13.57%	1.93%
9/9/1982	16.04%	13.55%	2.49%
9/15/1982	16.04%	13.52%	2.52%
9/17/1982	15.25%	13.51%	1.74%
9/29/1982	14.50%	13.43%	1.07%
9/30/1982	16.50%	13.42%	3.08%
9/30/1982	16.70%	13.42%	3.28%
9/30/1982	15.50%	13.42%	2.08%
9/30/1982	14.74%	13.42%	1.32%
10/1/1982	16.50%	13.41%	3.09%
10/8/1982	15.00%	13.33%	1.67%
10/15/1982	15.90%	13.26%	2.64%
10/19/1982	15.90%	13.22%	2.68%
10/27/1982	17.00%	13.12%	3.88%
10/28/1982	14.75%	13.11%	1.64%
11/2/1982	16.25%	13.07%	3.18%
11/4/1982	15.75%	13.03%	2.72%
11/5/1982	14.73%	13.01%	1.72%
11/17/1982	16.00%	12.86%	3.14%
11/23/1982	15.50%	12.79%	2.71%
11/24/1982	16.02%	12.77%	3.25%
11/24/1982	14.50%	12.77%	1.73%
11/30/1982	15.50%	12.72%	2.78%
11/30/1982	16.10%	12.72%	3.38%
11/30/1982	15.50%	12.72%	2.78%
11/30/1982	12.98%	12.72%	0.26%
11/30/1982	15.65%	12.72%	2.93%
11/30/1982	16.00%	12.72%	3.28%
12/3/1982	15.33%	12.68%	2.65%
12/8/1982	15.75%	12.63%	3.12%
12/13/1982	16.00%	12.58%	3.42%
12/14/1982	16.40%	12.57%	3.83%
12/17/1982	16.25%	12.52%	3.73%
12/20/1982	15.00%	12.51%	2.49%
12/21/1982	15.70%	12.49%	3.21%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/28/1982	15.25%	12.42%	2.83%
12/28/1982	15.25%	12.42%	2.83%
12/29/1982	16.25%	12.41%	3.84%
12/29/1982	16.25%	12.41%	3.84%
1/11/1983	15.90%	12.26%	3.64%
1/12/1983	15.50%	12.24%	3.26%
1/18/1983	15.00%	12.18%	2.82%
1/24/1983	16.00%	12.13%	3.87%
1/24/1983	15.50%	12.13%	3.37%
1/28/1983	14.90%	12.08%	2.82%
1/31/1983	15.00%	12.07%	2.93%
2/10/1983	15.00%	11.97%	3.03%
2/25/1983	15.70%	11.84%	3.86%
3/2/1983	15.25%	11.79%	3.46%
3/16/1983	16.00%	11.62%	4.38%
3/21/1983	14.96%	11.57%	3.39%
3/23/1983	15.40%	11.53%	3.87%
3/23/1983	16.10%	11.53%	4.57%
3/24/1983	15.00%	11.51%	3.49%
4/12/1983	13.25%	11.30%	1.95%
4/29/1983	15.05%	11.09%	3.96%
5/3/1983	15.40%	11.06%	4.34%
5/9/1983	15.50%	11.00%	4.50%
5/19/1983	14.85%	10.90%	3.95%
5/31/1983	14.00%	10.84%	3.16%
6/2/1983	14.50%	10.82%	3.68%
6/7/1983	14.50%	10.80%	3.70%
6/9/1983	14.85%	10.79%	4.06%
6/20/1983	14.15%	10.74%	3.41%
6/20/1983	16.50%	10.74%	5.76%
6/27/1983	14.50%	10.71%	3.79%
6/30/1983	14.80%	10.70%	4.10%
6/30/1983	15.90%	10.70%	5.20%
7/1/1983	14.80%	10.70%	4.10%
7/5/1983	15.00%	10.69%	4.31%
7/8/1983	15.50%	10.69%	4.81%
7/19/1983	15.10%	10.70%	4.40%
7/19/1983	15.00%	10.70%	4.30%
8/18/1983	15.30%	10.81%	4.49%
8/19/1983	15.79%	10.82%	4.97%
8/29/1983	16.00%	10.85%	5.15%
8/31/1983	15.25%	10.87%	4.38%
8/31/1983	14.75%	10.87%	3.88%
9/8/1983	14.75%	10.89%	3.86%
9/16/1983	15.51%	10.93%	4.58%
9/26/1983	14.50%	10.96%	3.54%
9/28/1983	14.25%	10.97%	3.28%
9/30/1983	16.15%	10.98%	5.17%
9/30/1983	16.25%	10.98%	5.27%
10/1/1983	16.25%	10.98%	5.27%
10/13/1983	15.52%	11.02%	4.50%
10/19/1983	15.20%	11.04%	4.16%
10/26/1983	14.75%	11.06%	3.69%
10/27/1983	15.33%	11.07%	4.26%
10/27/1983	14.88%	11.07%	3.81%
11/9/1983	14.82%	11.10%	3.72%
11/9/1983	16.51%	11.10%	5.41%
11/9/1983	16.51%	11.10%	5.41%
12/1/1983	14.50%	11.17%	3.33%
12/8/1983	15.90%	11.20%	4.70%
12/9/1983	15.30%	11.21%	4.09%
12/12/1983	14.50%	11.22%	3.28%
12/12/1983	15.50%	11.22%	4.28%
12/20/1983	16.00%	11.26%	4.74%
12/20/1983	15.40%	11.26%	4.14%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/22/1983	15.75%	11.27%	4.48%
12/29/1983	15.00%	11.30%	3.70%
12/30/1983	15.00%	11.30%	3.70%
1/10/1984	15.90%	11.34%	4.56%
1/13/1984	15.50%	11.36%	4.14%
1/18/1984	15.53%	11.38%	4.15%
1/26/1984	15.90%	11.42%	4.48%
2/14/1984	14.25%	11.51%	2.74%
2/28/1984	14.50%	11.58%	2.92%
3/20/1984	16.00%	11.70%	4.30%
3/23/1984	15.50%	11.72%	3.78%
4/9/1984	15.20%	11.81%	3.39%
4/18/1984	16.20%	11.86%	4.34%
4/27/1984	15.85%	11.90%	3.95%
5/15/1984	13.35%	11.99%	1.36%
5/16/1984	15.00%	12.00%	3.00%
5/22/1984	14.40%	12.04%	2.36%
6/13/1984	15.50%	12.18%	3.32%
7/10/1984	16.00%	12.37%	3.63%
8/7/1984	16.69%	12.51%	4.18%
8/9/1984	15.33%	12.51%	2.82%
8/17/1984	14.82%	12.54%	2.28%
8/21/1984	14.64%	12.54%	2.10%
8/27/1984	14.52%	12.56%	1.96%
8/28/1984	14.75%	12.57%	2.18%
8/30/1984	15.60%	12.58%	3.02%
9/12/1984	15.90%	12.60%	3.30%
9/12/1984	15.60%	12.60%	3.00%
9/25/1984	16.25%	12.61%	3.64%
10/2/1984	14.80%	12.62%	2.18%
10/9/1984	14.75%	12.63%	2.12%
10/10/1984	15.50%	12.63%	2.87%
10/18/1984	15.00%	12.65%	2.35%
10/24/1984	15.50%	12.65%	2.85%
11/7/1984	15.00%	12.64%	2.36%
11/20/1984	15.92%	12.63%	3.29%
11/30/1984	15.50%	12.60%	2.90%
12/18/1984	15.00%	12.55%	2.45%
12/20/1984	15.00%	12.54%	2.46%
12/28/1984	15.75%	12.51%	3.24%
12/28/1984	16.25%	12.51%	3.74%
1/2/1985	16.00%	12.50%	3.50%
1/31/1985	14.75%	12.37%	2.38%
2/7/1985	14.85%	12.33%	2.52%
2/15/1985	15.00%	12.27%	2.73%
2/20/1985	14.50%	12.25%	2.25%
2/22/1985	14.86%	12.25%	2.61%
3/14/1985	15.50%	12.16%	3.34%
3/28/1985	14.80%	12.08%	2.72%
4/9/1985	15.50%	12.02%	3.48%
4/16/1985	15.70%	11.96%	3.74%
6/10/1985	15.75%	11.58%	4.17%
6/26/1985	14.82%	11.46%	3.36%
7/9/1985	15.00%	11.38%	3.62%
7/26/1985	14.50%	11.26%	3.24%
8/29/1985	14.50%	11.11%	3.39%
8/30/1985	14.38%	11.11%	3.27%
9/12/1985	15.25%	11.07%	4.18%
9/23/1985	15.30%	11.03%	4.27%
9/25/1985	14.50%	11.02%	3.48%
9/26/1985	13.80%	11.02%	2.78%
9/26/1985	14.50%	11.02%	3.48%
10/25/1985	15.25%	10.91%	4.34%
11/8/1985	12.94%	10.85%	2.09%
11/20/1985	14.90%	10.81%	4.09%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
11/25/1985	13.30%	10.79%	2.51%
12/6/1985	12.00%	10.71%	1.29%
12/11/1985	14.90%	10.68%	4.22%
12/20/1985	15.00%	10.59%	4.41%
12/20/1985	14.88%	10.59%	4.29%
12/20/1985	15.00%	10.59%	4.41%
12/30/1985	15.75%	10.53%	5.22%
12/31/1985	14.00%	10.51%	3.49%
12/31/1985	14.50%	10.51%	3.99%
1/17/1986	14.50%	10.38%	4.12%
2/11/1986	12.50%	10.20%	2.30%
2/12/1986	15.20%	10.19%	5.01%
3/11/1986	14.00%	9.98%	4.02%
4/2/1986	12.90%	9.76%	3.14%
4/28/1986	13.01%	9.47%	3.54%
5/21/1986	13.25%	9.18%	4.07%
5/28/1986	14.00%	9.12%	4.88%
5/29/1986	13.90%	9.10%	4.80%
6/2/1986	13.00%	9.08%	3.92%
6/11/1986	14.00%	8.97%	5.03%
6/13/1986	13.55%	8.94%	4.61%
6/27/1986	11.88%	8.77%	3.11%
7/14/1986	12.60%	8.59%	4.01%
7/30/1986	13.30%	8.38%	4.92%
8/14/1986	13.50%	8.22%	5.28%
9/5/1986	13.30%	8.02%	5.28%
9/23/1986	12.75%	7.91%	4.84%
10/30/1986	13.00%	7.67%	5.33%
10/31/1986	13.75%	7.66%	6.09%
11/10/1986	14.00%	7.61%	6.39%
11/19/1986	13.75%	7.56%	6.19%
11/25/1986	13.15%	7.54%	5.61%
12/22/1986	13.80%	7.47%	6.33%
12/30/1986	13.90%	7.47%	6.43%
1/20/1987	12.75%	7.47%	5.28%
1/23/1987	13.55%	7.47%	6.08%
1/27/1987	12.16%	7.47%	4.69%
2/13/1987	12.60%	7.47%	5.13%
2/24/1987	12.00%	7.47%	4.53%
3/30/1987	12.20%	7.46%	4.74%
3/31/1987	13.00%	7.47%	5.53%
5/5/1987	12.85%	7.60%	5.25%
5/28/1987	13.50%	7.73%	5.77%
6/15/1987	13.20%	7.80%	5.40%
6/30/1987	12.60%	7.85%	4.75%
7/10/1987	12.90%	7.88%	5.02%
7/27/1987	13.50%	7.93%	5.57%
8/25/1987	11.40%	8.09%	3.31%
9/18/1987	13.00%	8.27%	4.73%
10/20/1987	12.60%	8.55%	4.05%
10/20/1987	12.98%	8.55%	4.43%
11/12/1987	12.75%	8.68%	4.07%
11/13/1987	12.75%	8.68%	4.07%
11/24/1987	12.50%	8.73%	3.77%
12/8/1987	12.50%	8.81%	3.69%
12/22/1987	12.00%	8.90%	3.10%
12/31/1987	13.25%	8.94%	4.31%
12/31/1987	12.85%	8.94%	3.91%
1/15/1988	13.15%	8.99%	4.16%
1/20/1988	12.75%	8.99%	3.76%
1/29/1988	13.20%	8.99%	4.21%
2/4/1988	12.60%	8.99%	3.61%
3/23/1988	13.00%	8.95%	4.05%
5/27/1988	13.18%	9.02%	4.16%
6/14/1988	13.50%	9.00%	4.50%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
6/17/1988	11.72%	8.99%	2.73%
6/24/1988	11.50%	8.97%	2.53%
7/1/1988	12.75%	8.95%	3.80%
7/8/1988	12.00%	8.93%	3.07%
7/18/1988	12.00%	8.91%	3.09%
7/20/1988	13.40%	8.90%	4.50%
8/8/1988	12.74%	8.90%	3.84%
9/20/1988	12.90%	8.93%	3.97%
9/26/1988	12.40%	8.93%	3.47%
9/27/1988	13.65%	8.93%	4.72%
9/30/1988	13.25%	8.94%	4.31%
10/13/1988	13.10%	8.93%	4.17%
10/21/1988	12.80%	8.94%	3.86%
10/25/1988	13.25%	8.94%	4.31%
10/26/1988	13.50%	8.94%	4.56%
10/27/1988	12.95%	8.94%	4.01%
10/28/1988	13.00%	8.95%	4.05%
11/15/1988	12.00%	8.98%	3.02%
11/29/1988	12.75%	9.01%	3.74%
12/19/1988	13.00%	9.05%	3.95%
12/21/1988	12.90%	9.05%	3.85%
12/22/1988	13.50%	9.05%	4.45%
1/26/1989	12.60%	9.06%	3.54%
1/27/1989	13.00%	9.06%	3.94%
2/8/1989	13.37%	9.05%	4.32%
3/8/1989	13.00%	9.04%	3.96%
5/4/1989	13.00%	9.04%	3.96%
6/8/1989	13.50%	8.96%	4.54%
7/19/1989	11.80%	8.84%	2.96%
7/25/1989	12.80%	8.82%	3.98%
7/31/1989	13.00%	8.81%	4.19%
8/14/1989	12.50%	8.76%	3.74%
8/22/1989	12.80%	8.73%	4.07%
8/23/1989	12.90%	8.72%	4.18%
9/21/1989	12.10%	8.62%	3.48%
10/6/1989	13.00%	8.58%	4.42%
10/17/1989	12.41%	8.54%	3.87%
10/18/1989	13.25%	8.54%	4.71%
10/20/1989	12.90%	8.53%	4.37%
10/31/1989	13.60%	8.50%	5.10%
11/3/1989	12.93%	8.48%	4.45%
11/5/1989	13.20%	8.48%	4.72%
11/9/1989	12.60%	8.45%	4.15%
11/9/1989	13.00%	8.45%	4.55%
11/28/1989	12.75%	8.37%	4.38%
12/7/1989	13.25%	8.32%	4.93%
12/15/1989	13.00%	8.28%	4.72%
12/20/1989	12.90%	8.26%	4.64%
12/21/1989	12.80%	8.25%	4.55%
12/21/1989	12.90%	8.25%	4.65%
12/27/1989	12.50%	8.23%	4.27%
1/9/1990	13.00%	8.19%	4.81%
1/18/1990	12.50%	8.16%	4.34%
1/26/1990	12.10%	8.14%	3.96%
3/21/1990	12.80%	8.15%	4.65%
3/28/1990	13.00%	8.16%	4.84%
4/5/1990	12.20%	8.17%	4.03%
4/12/1990	13.25%	8.19%	5.06%
4/30/1990	12.45%	8.24%	4.21%
5/31/1990	12.40%	8.31%	4.09%
6/15/1990	13.20%	8.33%	4.87%
6/27/1990	12.90%	8.34%	4.56%
6/29/1990	13.25%	8.35%	4.90%
7/6/1990	12.10%	8.36%	3.74%
7/19/1990	11.70%	8.38%	3.32%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
8/31/1990	12.50%	8.53%	3.97%
8/31/1990	12.50%	8.53%	3.97%
9/13/1990	12.50%	8.58%	3.92%
9/18/1990	12.75%	8.60%	4.15%
9/20/1990	12.50%	8.61%	3.89%
10/2/1990	13.00%	8.65%	4.35%
10/17/1990	11.90%	8.68%	3.22%
10/31/1990	12.95%	8.70%	4.25%
11/9/1990	13.25%	8.70%	4.55%
11/19/1990	13.00%	8.70%	4.30%
11/21/1990	12.50%	8.70%	3.80%
11/21/1990	12.10%	8.70%	3.40%
11/28/1990	12.75%	8.70%	4.05%
11/29/1990	12.75%	8.70%	4.05%
12/18/1990	13.10%	8.68%	4.42%
12/20/1990	12.50%	8.67%	3.83%
12/21/1990	13.60%	8.67%	4.93%
12/21/1990	13.00%	8.67%	4.33%
12/21/1990	12.50%	8.67%	3.83%
1/3/1991	13.02%	8.66%	4.36%
1/16/1991	13.25%	8.63%	4.62%
1/25/1991	11.70%	8.61%	3.09%
2/15/1991	12.70%	8.56%	4.14%
2/15/1991	12.80%	8.56%	4.24%
4/3/1991	13.00%	8.51%	4.49%
4/30/1991	12.45%	8.48%	3.97%
4/30/1991	13.00%	8.48%	4.52%
6/25/1991	11.70%	8.34%	3.36%
6/28/1991	12.50%	8.34%	4.16%
7/1/1991	11.70%	8.34%	3.36%
7/19/1991	12.10%	8.31%	3.79%
7/19/1991	12.30%	8.31%	3.99%
7/22/1991	12.90%	8.30%	4.60%
8/15/1991	12.25%	8.28%	3.97%
8/29/1991	13.30%	8.26%	5.04%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.40%	8.23%	4.17%
10/3/1991	11.30%	8.22%	3.08%
10/9/1991	11.70%	8.21%	3.49%
10/15/1991	13.40%	8.20%	5.20%
11/1/1991	12.90%	8.20%	4.70%
11/8/1991	12.75%	8.20%	4.55%
11/26/1991	12.00%	8.18%	3.82%
11/26/1991	11.60%	8.18%	3.42%
11/27/1991	12.70%	8.18%	4.52%
12/6/1991	12.70%	8.16%	4.54%
12/10/1991	11.75%	8.15%	3.60%
12/19/1991	12.60%	8.14%	4.46%
12/19/1991	12.80%	8.14%	4.66%
12/30/1991	12.10%	8.11%	3.99%
1/22/1992	12.84%	8.05%	4.79%
1/31/1992	12.00%	8.03%	3.97%
2/20/1992	13.00%	8.00%	5.00%
2/27/1992	11.75%	7.98%	3.77%
3/18/1992	12.50%	7.94%	4.56%
5/15/1992	12.75%	7.86%	4.89%
6/24/1992	12.20%	7.85%	4.35%
6/29/1992	11.00%	7.85%	3.15%
7/14/1992	12.00%	7.83%	4.17%
7/22/1992	11.20%	7.82%	3.38%
8/10/1992	12.10%	7.79%	4.31%
8/26/1992	12.43%	7.75%	4.68%
9/30/1992	11.60%	7.72%	3.88%
10/6/1992	12.25%	7.72%	4.53%
10/13/1992	12.75%	7.71%	5.04%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
10/23/1992	11.65%	7.71%	3.94%
10/28/1992	12.25%	7.71%	4.54%
10/29/1992	12.75%	7.70%	5.05%
10/30/1992	11.40%	7.70%	3.70%
11/9/1992	10.60%	7.70%	2.90%
11/25/1992	12.00%	7.68%	4.32%
11/25/1992	11.00%	7.68%	3.32%
12/3/1992	11.85%	7.66%	4.19%
12/16/1992	11.90%	7.64%	4.26%
12/22/1992	12.40%	7.62%	4.78%
12/22/1992	12.30%	7.62%	4.68%
12/30/1992	12.00%	7.61%	4.39%
12/31/1992	12.00%	7.61%	4.39%
1/12/1993	12.00%	7.59%	4.41%
1/12/1993	12.00%	7.59%	4.41%
2/2/1993	11.40%	7.53%	3.87%
2/22/1993	11.60%	7.48%	4.12%
4/23/1993	11.75%	7.27%	4.48%
5/3/1993	11.75%	7.25%	4.50%
5/3/1993	11.50%	7.25%	4.25%
6/3/1993	12.00%	7.20%	4.80%
6/7/1993	11.50%	7.20%	4.30%
6/22/1993	11.75%	7.16%	4.59%
7/21/1993	11.78%	7.06%	4.72%
7/21/1993	11.90%	7.06%	4.84%
7/23/1993	11.50%	7.05%	4.45%
7/29/1993	11.50%	7.03%	4.47%
8/12/1993	10.75%	6.97%	3.78%
8/24/1993	11.50%	6.92%	4.58%
8/31/1993	11.90%	6.88%	5.02%
9/1/1993	11.25%	6.87%	4.38%
9/1/1993	11.47%	6.87%	4.60%
9/27/1993	10.50%	6.74%	3.76%
9/29/1993	11.00%	6.72%	4.28%
9/30/1993	11.60%	6.72%	4.88%
10/8/1993	11.50%	6.67%	4.83%
10/14/1993	11.20%	6.65%	4.55%
10/15/1993	11.75%	6.64%	5.11%
10/25/1993	11.55%	6.60%	4.95%
10/28/1993	11.50%	6.58%	4.92%
10/29/1993	11.25%	6.57%	4.68%
10/29/1993	10.20%	6.57%	3.63%
10/29/1993	10.10%	6.57%	3.53%
11/2/1993	10.80%	6.56%	4.24%
11/12/1993	11.80%	6.53%	5.27%
11/23/1993	12.50%	6.51%	5.99%
11/26/1993	11.00%	6.50%	4.50%
12/1/1993	11.45%	6.49%	4.96%
12/16/1993	11.20%	6.45%	4.75%
12/16/1993	10.60%	6.45%	4.15%
12/21/1993	11.30%	6.44%	4.86%
12/22/1993	11.00%	6.44%	4.56%
12/23/1993	10.10%	6.44%	3.66%
1/5/1994	11.50%	6.41%	5.09%
1/10/1994	11.00%	6.40%	4.60%
1/25/1994	12.00%	6.37%	5.63%
2/2/1994	10.40%	6.35%	4.05%
2/9/1994	10.70%	6.34%	4.36%
4/6/1994	11.24%	6.35%	4.89%
4/25/1994	11.00%	6.39%	4.61%
6/16/1994	10.50%	6.63%	3.87%
6/23/1994	10.60%	6.67%	3.93%
7/19/1994	10.70%	6.83%	3.87%
9/29/1994	11.00%	7.20%	3.80%
9/29/1994	10.90%	7.20%	3.70%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
10/7/1994	11.87%	7.26%	4.61%
10/18/1994	11.50%	7.32%	4.18%
10/18/1994	11.50%	7.32%	4.18%
10/24/1994	11.00%	7.35%	3.65%
11/22/1994	12.12%	7.52%	4.60%
11/29/1994	11.30%	7.55%	3.75%
12/1/1994	11.00%	7.56%	3.44%
12/8/1994	11.70%	7.59%	4.11%
12/8/1994	11.50%	7.59%	3.91%
12/12/1994	11.82%	7.60%	4.22%
12/14/1994	11.50%	7.61%	3.89%
12/19/1994	11.50%	7.62%	3.88%
4/19/1995	11.00%	7.72%	3.28%
9/11/1995	11.30%	7.16%	4.14%
9/15/1995	10.40%	7.13%	3.27%
9/29/1995	11.50%	7.06%	4.44%
10/13/1995	10.76%	6.98%	3.78%
11/7/1995	12.50%	6.86%	5.64%
11/8/1995	11.30%	6.85%	4.45%
11/8/1995	11.10%	6.85%	4.25%
11/17/1995	10.90%	6.81%	4.09%
11/20/1995	11.40%	6.80%	4.60%
11/27/1995	13.60%	6.77%	6.83%
12/14/1995	11.30%	6.68%	4.62%
12/20/1995	11.60%	6.65%	4.95%
1/31/1996	11.30%	6.45%	4.85%
3/11/1996	11.60%	6.40%	5.20%
4/3/1996	11.13%	6.41%	4.72%
4/15/1996	10.50%	6.41%	4.09%
4/17/1996	10.77%	6.40%	4.37%
4/26/1996	10.60%	6.40%	4.20%
5/10/1996	11.00%	6.40%	4.60%
5/13/1996	11.25%	6.41%	4.84%
7/3/1996	11.25%	6.49%	4.76%
7/22/1996	11.25%	6.54%	4.71%
10/3/1996	10.00%	6.77%	3.23%
10/29/1996	11.30%	6.84%	4.46%
11/26/1996	11.30%	6.86%	4.44%
11/27/1996	11.30%	6.86%	4.44%
11/29/1996	11.00%	6.86%	4.14%
12/12/1996	11.96%	6.85%	5.11%
12/17/1996	11.50%	6.85%	4.65%
1/22/1997	11.30%	6.83%	4.47%
1/27/1997	11.25%	6.83%	4.42%
1/31/1997	11.25%	6.83%	4.42%
2/13/1997	11.00%	6.82%	4.18%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.81%	4.99%
3/27/1997	10.75%	6.79%	3.96%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
10/29/1997	10.75%	6.70%	4.05%
10/31/1997	11.25%	6.70%	4.55%
12/24/1997	10.75%	6.53%	4.22%
4/28/1998	10.90%	6.11%	4.79%
4/30/1998	12.20%	6.10%	6.10%
6/30/1998	11.00%	5.94%	5.06%
8/26/1998	10.93%	5.82%	5.11%
9/3/1998	11.40%	5.80%	5.60%
9/15/1998	11.90%	5.77%	6.13%
10/7/1998	11.06%	5.70%	5.36%
10/30/1998	11.40%	5.63%	5.77%
12/10/1998	12.20%	5.52%	6.68%
12/17/1998	12.10%	5.49%	6.61%
2/19/1999	11.15%	5.32%	5.83%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
3/1/1999	10.65%	5.31%	5.34%
3/1/1999	10.65%	5.31%	5.34%
6/8/1999	11.25%	5.35%	5.90%
11/12/1999	10.25%	5.92%	4.33%
12/14/1999	10.50%	5.99%	4.51%
1/28/2000	10.71%	6.16%	4.55%
2/17/2000	10.60%	6.20%	4.40%
5/25/2000	10.80%	6.19%	4.61%
6/19/2000	11.05%	6.18%	4.87%
6/22/2000	11.25%	6.18%	5.07%
7/17/2000	11.06%	6.15%	4.91%
7/20/2000	12.20%	6.14%	6.06%
8/11/2000	11.00%	6.11%	4.89%
9/27/2000	11.25%	6.00%	5.25%
9/29/2000	11.16%	6.00%	5.16%
10/5/2000	11.30%	5.98%	5.32%
11/28/2000	12.90%	5.87%	7.03%
11/30/2000	12.10%	5.86%	6.24%
2/5/2001	11.50%	5.75%	5.75%
3/15/2001	11.25%	5.66%	5.59%
5/8/2001	10.75%	5.61%	5.14%
10/24/2001	11.00%	5.54%	5.46%
10/24/2001	10.30%	5.54%	4.76%
1/9/2002	10.00%	5.50%	4.50%
1/30/2002	11.00%	5.47%	5.53%
1/31/2002	11.00%	5.47%	5.53%
4/17/2002	11.50%	5.44%	6.06%
4/29/2002	11.00%	5.45%	5.55%
6/11/2002	11.77%	5.48%	6.29%
6/20/2002	12.30%	5.48%	6.82%
8/28/2002	11.00%	5.49%	5.51%
9/11/2002	11.20%	5.45%	5.75%
9/12/2002	12.30%	5.45%	6.85%
10/28/2002	11.30%	5.35%	5.95%
10/30/2002	10.60%	5.34%	5.26%
11/1/2002	12.60%	5.34%	7.26%
11/7/2002	11.40%	5.33%	6.07%
11/8/2002	10.75%	5.33%	5.42%
11/20/2002	10.00%	5.30%	4.70%
11/20/2002	10.50%	5.30%	5.20%
12/4/2002	10.75%	5.27%	5.48%
12/30/2002	11.20%	5.19%	6.01%
1/6/2003	11.25%	5.16%	6.09%
2/28/2003	12.30%	5.01%	7.29%
3/7/2003	9.96%	4.99%	4.97%
3/12/2003	11.40%	4.97%	6.43%
3/20/2003	12.00%	4.95%	7.05%
4/3/2003	12.00%	4.92%	7.08%
5/2/2003	11.40%	4.88%	6.52%
5/15/2003	11.05%	4.87%	6.18%
6/26/2003	11.00%	4.80%	6.20%
7/1/2003	11.00%	4.80%	6.20%
7/29/2003	11.71%	4.78%	6.93%
8/22/2003	10.20%	4.81%	5.39%
9/17/2003	9.90%	4.85%	5.05%
9/25/2003	10.25%	4.85%	5.40%
10/17/2003	10.54%	4.87%	5.67%
10/22/2003	10.46%	4.87%	5.59%
10/22/2003	10.71%	4.87%	5.84%
10/30/2003	11.00%	4.88%	6.12%
10/31/2003	10.20%	4.88%	5.32%
10/31/2003	10.75%	4.88%	5.87%
11/10/2003	10.60%	4.89%	5.71%
12/9/2003	10.50%	4.93%	5.57%
12/18/2003	10.50%	4.94%	5.56%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
1/13/2004	10.25%	4.95%	5.30%
1/13/2004	12.00%	4.95%	7.05%
2/9/2004	11.25%	4.98%	6.27%
3/16/2004	10.90%	5.05%	5.85%
3/16/2004	10.90%	5.05%	5.85%
5/25/2004	10.00%	5.06%	4.94%
6/2/2004	11.22%	5.07%	6.15%
6/30/2004	10.50%	5.10%	5.40%
7/8/2004	10.00%	5.10%	4.90%
7/22/2004	10.25%	5.10%	5.15%
8/26/2004	10.50%	5.10%	5.40%
8/26/2004	10.50%	5.10%	5.40%
9/9/2004	10.40%	5.10%	5.30%
9/21/2004	10.50%	5.09%	5.41%
9/27/2004	10.30%	5.09%	5.21%
9/27/2004	10.50%	5.09%	5.41%
10/20/2004	10.20%	5.08%	5.12%
11/30/2004	10.60%	5.08%	5.52%
12/8/2004	9.90%	5.09%	4.81%
12/21/2004	11.50%	5.09%	6.41%
12/22/2004	11.50%	5.09%	6.41%
12/28/2004	10.25%	5.09%	5.16%
2/18/2005	10.30%	4.95%	5.35%
3/29/2005	11.00%	4.86%	6.14%
4/13/2005	10.60%	4.84%	5.76%
4/28/2005	11.00%	4.80%	6.20%
5/17/2005	10.00%	4.77%	5.23%
6/8/2005	10.18%	4.71%	5.47%
6/10/2005	10.90%	4.71%	6.19%
7/6/2005	10.50%	4.65%	5.85%
7/19/2005	11.50%	4.63%	6.87%
8/11/2005	10.40%	4.60%	5.80%
9/19/2005	9.45%	4.53%	4.92%
9/30/2005	10.51%	4.52%	5.99%
10/4/2005	9.90%	4.52%	5.38%
10/4/2005	10.75%	4.52%	6.23%
10/14/2005	10.40%	4.52%	5.88%
10/31/2005	10.25%	4.53%	5.72%
11/2/2005	9.70%	4.53%	5.17%
11/30/2005	10.00%	4.53%	5.47%
12/9/2005	9.70%	4.53%	5.17%
12/12/2005	11.00%	4.53%	6.47%
12/20/2005	10.13%	4.53%	5.60%
12/21/2005	11.00%	4.52%	6.48%
12/21/2005	10.40%	4.52%	5.88%
12/22/2005	10.20%	4.52%	5.68%
12/22/2005	11.00%	4.52%	6.48%
12/28/2005	10.00%	4.52%	5.48%
1/5/2006	11.00%	4.52%	6.48%
1/25/2006	11.20%	4.52%	6.68%
1/25/2006	11.20%	4.52%	6.68%
2/3/2006	10.50%	4.52%	5.98%
2/15/2006	9.50%	4.53%	4.97%
4/26/2006	10.60%	4.65%	5.95%
7/24/2006	9.60%	4.87%	4.73%
7/24/2006	10.00%	4.87%	5.13%
9/20/2006	11.00%	4.93%	6.07%
9/26/2006	10.75%	4.93%	5.82%
10/20/2006	9.80%	4.96%	4.84%
11/2/2006	9.71%	4.97%	4.74%
11/9/2006	10.00%	4.97%	5.03%
11/21/2006	11.00%	4.98%	6.02%
12/5/2006	10.20%	4.97%	5.23%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/5/2007	10.40%	4.95%	5.45%
1/9/2007	11.00%	4.94%	6.06%
1/11/2007	10.90%	4.94%	5.96%
1/19/2007	10.80%	4.93%	5.87%
1/26/2007	10.00%	4.92%	5.08%
2/8/2007	10.40%	4.91%	5.49%
3/14/2007	10.10%	4.86%	5.24%
3/20/2007	10.25%	4.84%	5.41%
3/21/2007	11.35%	4.84%	6.51%
3/22/2007	10.50%	4.84%	5.66%
3/29/2007	10.00%	4.83%	5.17%
6/13/2007	10.75%	4.81%	5.94%
6/29/2007	10.10%	4.84%	5.26%
6/29/2007	9.53%	4.84%	4.69%
7/3/2007	10.25%	4.85%	5.40%
7/13/2007	9.50%	4.86%	4.64%
7/24/2007	10.40%	4.87%	5.53%
8/1/2007	10.15%	4.88%	5.27%
8/29/2007	10.50%	4.91%	5.59%
9/10/2007	9.71%	4.91%	4.80%
9/19/2007	10.00%	4.91%	5.09%
9/25/2007	9.70%	4.92%	4.78%
10/8/2007	10.48%	4.92%	5.56%
10/19/2007	10.50%	4.91%	5.59%
10/25/2007	9.65%	4.91%	4.74%
11/15/2007	10.00%	4.89%	5.11%
11/20/2007	9.90%	4.89%	5.01%
11/27/2007	10.00%	4.88%	5.12%
11/29/2007	10.90%	4.88%	6.02%
12/14/2007	10.80%	4.87%	5.93%
12/18/2007	10.40%	4.86%	5.54%
12/19/2007	9.80%	4.86%	4.94%
12/19/2007	9.80%	4.86%	4.94%
12/19/2007	10.20%	4.86%	5.34%
12/21/2007	9.10%	4.86%	4.24%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/17/2008	10.75%	4.81%	5.94%
2/5/2008	9.99%	4.78%	5.21%
2/5/2008	10.19%	4.78%	5.41%
2/13/2008	10.20%	4.76%	5.44%
3/31/2008	10.00%	4.63%	5.37%
5/28/2008	10.50%	4.53%	5.97%
6/24/2008	10.00%	4.52%	5.48%
6/27/2008	10.00%	4.52%	5.48%
7/31/2008	10.70%	4.50%	6.20%
7/31/2008	10.82%	4.50%	6.32%
8/27/2008	10.25%	4.50%	5.75%
9/2/2008	10.25%	4.50%	5.75%
9/19/2008	10.70%	4.48%	6.22%
9/24/2008	10.68%	4.48%	6.20%
9/24/2008	10.68%	4.48%	6.20%
9/24/2008	10.68%	4.48%	6.20%
9/30/2008	10.20%	4.48%	5.72%
10/3/2008	10.30%	4.48%	5.82%
10/8/2008	10.15%	4.47%	5.68%
10/20/2008	10.06%	4.47%	5.59%
10/24/2008	10.60%	4.46%	6.14%
10/24/2008	10.60%	4.46%	6.14%
11/21/2008	10.50%	4.42%	6.08%
11/21/2008	10.50%	4.42%	6.08%
11/21/2008	10.50%	4.42%	6.08%
11/24/2008	10.50%	4.41%	6.09%
12/3/2008	10.39%	4.37%	6.02%
12/24/2008	10.00%	4.26%	5.74%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/26/2008	10.10%	4.24%	5.86%
12/29/2008	10.20%	4.23%	5.97%
1/13/2009	10.45%	4.14%	6.31%
2/2/2009	10.05%	4.04%	6.01%
3/9/2009	10.30%	3.89%	6.41%
3/25/2009	10.17%	3.84%	6.34%
4/2/2009	10.75%	3.81%	6.94%
5/5/2009	10.75%	3.71%	7.04%
5/15/2009	10.20%	3.70%	6.50%
5/29/2009	9.54%	3.70%	5.84%
6/3/2009	10.10%	3.71%	6.39%
6/22/2009	10.00%	3.73%	6.27%
6/29/2009	10.21%	3.74%	6.47%
6/30/2009	9.31%	3.74%	5.57%
7/17/2009	9.26%	3.75%	5.51%
7/17/2009	10.50%	3.75%	6.75%
10/16/2009	10.40%	4.09%	6.31%
10/26/2009	10.10%	4.11%	5.99%
10/28/2009	10.15%	4.12%	6.03%
10/28/2009	10.15%	4.12%	6.03%
10/30/2009	9.95%	4.12%	5.83%
11/20/2009	9.45%	4.18%	5.27%
12/14/2009	10.50%	4.24%	6.26%
12/16/2009	10.75%	4.25%	6.50%
12/17/2009	10.30%	4.26%	6.04%
12/18/2009	10.40%	4.26%	6.14%
12/18/2009	10.50%	4.26%	6.24%
12/18/2009	10.40%	4.26%	6.14%
12/22/2009	10.20%	4.27%	5.93%
12/22/2009	10.40%	4.27%	6.13%
12/28/2009	10.85%	4.29%	6.56%
12/29/2009	10.38%	4.30%	6.08%
1/11/2010	10.24%	4.34%	5.90%
1/21/2010	10.33%	4.37%	5.96%
1/21/2010	10.23%	4.37%	5.86%
1/26/2010	10.40%	4.37%	6.03%
2/10/2010	10.00%	4.39%	5.61%
2/23/2010	10.50%	4.40%	6.10%
3/9/2010	9.60%	4.40%	5.20%
3/24/2010	10.13%	4.42%	5.71%
3/31/2010	10.70%	4.43%	6.27%
4/1/2010	9.50%	4.43%	5.07%
4/2/2010	10.10%	4.44%	5.66%
4/8/2010	10.35%	4.44%	5.91%
4/29/2010	9.40%	4.46%	4.94%
4/29/2010	9.19%	4.46%	4.73%
4/29/2010	9.40%	4.46%	4.94%
5/17/2010	10.55%	4.46%	6.09%
5/24/2010	10.05%	4.46%	5.59%
6/3/2010	11.00%	4.46%	6.54%
6/16/2010	10.00%	4.46%	5.54%
6/18/2010	10.30%	4.46%	5.84%
8/9/2010	12.55%	4.41%	8.14%
8/17/2010	10.10%	4.40%	5.70%
9/16/2010	10.30%	4.31%	5.99%
9/16/2010	9.60%	4.31%	5.29%
9/16/2010	10.00%	4.31%	5.69%
9/16/2010	10.00%	4.31%	5.69%
10/21/2010	10.40%	4.20%	6.20%
11/2/2010	9.75%	4.17%	5.58%
11/2/2010	9.75%	4.17%	5.58%
11/3/2010	10.75%	4.17%	6.58%
11/19/2010	10.20%	4.15%	6.05%
12/1/2010	10.00%	4.13%	5.87%
12/6/2010	9.56%	4.12%	5.44%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/6/2010	10.09%	4.12%	5.97%
12/9/2010	10.25%	4.12%	6.13%
12/14/2010	10.33%	4.11%	6.22%
12/17/2010	10.10%	4.11%	5.99%
12/20/2010	10.10%	4.11%	5.99%
12/23/2010	9.92%	4.10%	5.82%
1/6/2011	10.35%	4.09%	6.26%
1/12/2011	10.30%	4.09%	6.21%
1/13/2011	10.30%	4.09%	6.21%
3/10/2011	10.10%	4.16%	5.94%
3/31/2011	9.45%	4.20%	5.25%
4/18/2011	10.05%	4.23%	5.82%
5/26/2011	10.50%	4.32%	6.18%
6/21/2011	10.00%	4.36%	5.64%
6/29/2011	8.83%	4.38%	4.45%
8/1/2011	9.20%	4.41%	4.79%
9/1/2011	10.10%	4.33%	5.77%
11/14/2011	9.60%	3.93%	5.67%
12/13/2011	9.50%	3.76%	5.74%
12/20/2011	10.00%	3.72%	6.28%
12/22/2011	10.40%	3.70%	6.70%
1/10/2012	9.06%	3.59%	5.47%
1/10/2012	9.45%	3.59%	5.86%
1/10/2012	9.45%	3.59%	5.86%
1/23/2012	10.20%	3.53%	6.67%
1/31/2012	10.00%	3.49%	6.51%
4/24/2012	9.75%	3.16%	6.59%
4/24/2012	9.50%	3.16%	6.34%
5/7/2012	9.80%	3.13%	6.67%
5/22/2012	9.60%	3.10%	6.50%
5/24/2012	9.70%	3.09%	6.61%
6/7/2012	10.30%	3.06%	7.24%
6/15/2012	10.40%	3.05%	7.35%
6/18/2012	9.60%	3.05%	6.55%
7/2/2012	9.75%	3.04%	6.71%
10/24/2012	10.30%	2.92%	7.38%
10/26/2012	9.50%	2.92%	6.58%
10/31/2012	10.00%	2.92%	7.08%
10/31/2012	9.30%	2.92%	6.38%
10/31/2012	9.90%	2.92%	6.98%
11/1/2012	9.45%	2.91%	6.54%
11/8/2012	10.10%	2.91%	7.19%
11/9/2012	10.30%	2.90%	7.40%
11/26/2012	10.00%	2.89%	7.11%
11/28/2012	10.40%	2.88%	7.52%
11/28/2012	10.50%	2.88%	7.62%
12/4/2012	10.50%	2.87%	7.63%
12/4/2012	10.00%	2.87%	7.13%
12/20/2012	10.40%	2.84%	7.56%
12/20/2012	10.30%	2.84%	7.46%
12/20/2012	10.10%	2.84%	7.26%
12/20/2012	10.25%	2.84%	7.41%
12/20/2012	10.50%	2.84%	7.66%
12/20/2012	9.50%	2.84%	6.66%
12/26/2012	9.80%	2.83%	6.97%
2/22/2013	9.60%	2.86%	6.74%
3/14/2013	9.30%	2.89%	6.41%
3/27/2013	9.80%	2.92%	6.88%
4/23/2013	9.80%	2.96%	6.84%
5/10/2013	9.25%	2.96%	6.29%
6/13/2013	9.40%	3.01%	6.39%
6/18/2013	9.28%	3.02%	6.26%
6/18/2013	9.28%	3.02%	6.26%
6/25/2013	9.80%	3.04%	6.76%
9/23/2013	9.60%	3.33%	6.27%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
11/6/2013	10.20%	3.42%	6.78%
11/13/2013	9.84%	3.44%	6.40%
11/14/2013	10.25%	3.44%	6.81%
11/22/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.50%	6.70%
12/13/2013	9.60%	3.52%	6.08%
12/16/2013	9.73%	3.53%	6.20%
12/17/2013	10.00%	3.53%	6.47%
12/18/2013	9.08%	3.53%	5.55%
12/23/2013	9.72%	3.55%	6.17%
12/30/2013	10.00%	3.57%	6.43%
1/21/2014	9.65%	3.66%	5.99%
1/22/2014	9.18%	3.66%	5.52%
2/20/2014	9.30%	3.71%	5.59%
2/21/2014	9.85%	3.72%	6.13%
2/28/2014	9.55%	3.73%	5.83%
3/16/2014	9.72%	3.74%	5.98%
4/21/2014	9.50%	3.73%	5.77%
4/22/2014	9.80%	3.73%	6.07%
5/8/2014	9.59%	3.71%	5.88%
5/8/2014	9.10%	3.71%	5.39%
6/6/2014	10.40%	3.66%	6.74%
6/12/2014	10.10%	3.66%	6.44%
6/12/2014	10.10%	3.66%	6.44%
6/12/2014	10.10%	3.66%	6.44%
7/7/2014	9.30%	3.63%	5.67%
7/25/2014	9.30%	3.60%	5.70%
7/31/2014	9.90%	3.59%	6.31%
9/4/2014	9.10%	3.50%	5.60%
9/24/2014	9.35%	3.46%	5.89%
9/30/2014	9.75%	3.44%	6.31%
10/29/2014	10.80%	3.37%	7.43%
11/6/2014	10.20%	3.35%	6.85%
11/14/2014	10.20%	3.33%	6.87%
11/14/2014	10.30%	3.33%	6.97%
11/26/2014	10.20%	3.30%	6.90%
12/3/2014	10.00%	3.29%	6.71%
1/13/2015	10.30%	3.16%	7.14%
1/21/2015	9.05%	3.13%	5.92%
1/21/2015	9.05%	3.13%	5.92%
4/9/2015	9.50%	2.88%	6.62%
5/11/2015	9.80%	2.82%	6.98%
6/17/2015	9.00%	2.79%	6.21%
8/21/2015	9.75%	2.78%	6.97%
10/7/2015	9.55%	2.82%	6.73%
10/13/2015	9.75%	2.83%	6.92%
10/15/2015	9.00%	2.84%	6.16%
10/30/2015	9.80%	2.87%	6.93%
11/19/2015	10.00%	2.89%	7.11%
12/3/2015	10.00%	2.91%	7.09%
12/9/2015	9.60%	2.92%	6.68%
12/11/2015	9.90%	2.92%	6.98%
12/18/2015	9.50%	2.94%	6.56%
1/6/2016	9.50%	2.97%	6.53%
1/6/2016	9.50%	2.97%	6.53%
1/28/2016	9.40%	2.97%	6.43%
2/10/2016	9.60%	2.95%	6.65%
2/16/2016	9.50%	2.94%	6.56%
2/29/2016	9.40%	2.92%	6.48%
4/29/2016	9.80%	2.83%	6.97%
5/5/2016	9.49%	2.82%	6.67%
6/1/2016	9.55%	2.80%	6.75%
6/3/2016	9.65%	2.79%	6.86%
6/15/2016	9.00%	2.77%	6.23%
6/15/2016	9.00%	2.77%	6.23%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
9/2/2016	9.50%	2.56%	6.94%
9/23/2016	9.75%	2.52%	7.23%
9/27/2016	9.50%	2.51%	6.99%
9/29/2016	9.11%	2.50%	6.61%
10/13/2016	10.20%	2.48%	7.72%
10/28/2016	9.70%	2.47%	7.23%
11/9/2016	9.80%	2.47%	7.33%
11/18/2016	10.00%	2.49%	7.51%
12/9/2016	10.10%	2.51%	7.59%
12/15/2016	9.00%	2.53%	6.47%
12/15/2016	9.00%	2.53%	6.47%
12/20/2016	9.75%	2.53%	7.22%
12/22/2016	9.50%	2.54%	6.96%
1/24/2017	9.00%	2.59%	6.41%
2/21/2017	10.55%	2.63%	7.92%
3/1/2017	9.25%	2.65%	6.60%
4/11/2017	9.50%	2.77%	6.73%
4/20/2017	8.70%	2.79%	5.91%
4/28/2017	9.50%	2.81%	6.69%
5/23/2017	9.60%	2.88%	6.72%
6/6/2017	9.70%	2.91%	6.79%
6/22/2017	9.70%	2.93%	6.77%
6/30/2017	9.60%	2.94%	6.66%
7/20/2017	9.55%	2.97%	6.58%
7/31/2017	10.10%	2.98%	7.12%
9/13/2017	9.40%	2.93%	6.47%
9/19/2017	9.70%	2.92%	6.78%
9/22/2017	11.88%	2.92%	8.96%
9/27/2017	10.20%	2.92%	7.28%
10/20/2017	9.60%	2.90%	6.70%
10/26/2017	10.20%	2.90%	7.30%
10/30/2017	10.05%	2.90%	7.15%
11/21/2017	9.50%	2.88%	6.62%
12/5/2017	9.50%	2.86%	6.64%
12/7/2017	9.80%	2.86%	6.94%
12/13/2017	9.25%	2.85%	6.40%
12/28/2017	9.50%	2.84%	6.66%
1/31/2018	9.80%	2.83%	6.97%
2/21/2018	9.80%	2.84%	6.96%
2/21/2018	9.80%	2.84%	6.96%
2/28/2018	9.50%	2.85%	6.65%
3/15/2018	9.00%	2.87%	6.13%
3/26/2018	10.19%	2.88%	7.31%

of Cases: 1082
Average: 4.63%

Schedule __ (RBH-8R)

Proof Concept: Earnings, Dividends, Book Value and Stock Price Growth Rate

Equivalence in Constant Growth DCF

Proof Concept: Earnings, Dividends, Book Value and
Stock Price Growth Rate Equivalence in Constant Growth DCF

IMPLIED GROWTH RATE AT ALLOWED ROE:												
Line Description	0	1	2	3	4	5	6	7	8	9	10	250
Input	\$ 20.00	\$ 21.22	\$ 22.51	\$ 23.89	\$ 25.34	\$ 26.89	\$ 28.53	\$ 30.27	\$ 32.12	\$ 34.08	\$ 36.16	\$
Dividend Yield												
Assumes g = Allowed ROE - Div. Yield												
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CASE 2												
10-YEAR HOLDING PERIOD												
Present value of Div/IS obtained by multiplying nominal Div/IS by the Present Value Factor for the period												
		Present Value of Dividend	\$ 1.28	\$ 1.23	\$ 1.19	\$ 1.14	\$ 1.10	\$ 1.06	\$ 1.02	\$ 0.99	\$ 0.95	\$ 0.91
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 10th Period (Terminal Value)		Present Value of Stock Price	--	--	--	--	--	--	--	--	--	24.27
Value of dividends = sum of all Present Value Dividends for periods 1-10		Value of Dividends	\$ 10.87									
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 10th Period (Terminal Value)		Value of Stock Price	\$ 24.27									
Total Value of investment sum of all Present Value Dividends for periods 1-10 and Present Value of Stock in period 10 (Terminal Value)		Value of Investment	\$ 35.13									
CASE 3												
5-YEAR HOLDING PERIOD												
Present value of Div/IS obtained by multiplying nominal Div/IS by the Present Value Factor for the period												
		Present Value of Dividend	\$ 1.28	\$ 1.23	\$ 1.19	\$ 1.14	\$ 1.10					
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 5th Period (Terminal Value)		Present Value of Stock Price	--	--	--	--	29.20					
Value of dividends = sum of all Present Value Dividends for periods 1-5		Value of Dividends	\$ 5.93									
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 5th Period (Terminal Value)		Value of Stock Price	\$ 29.20									
Total Value of investment sum of all Present Value Dividends for periods 1-5 and Present Value of Stock in period 5 (Terminal Value)		Value of Investment	\$ 35.13									

[1] Note: for purposes of this exhibit, these data are illustrative only.
[2] Note: illustrative only.

Schedule __ (RBH-9R)

Growth Rate Regression Analysis

Growth Rate Regression Analysis

Company	Ticker	Median P/E Ratio	Proj. Earnings Growth Rate	Proj. Dividend Growth Rate	Proj. Book Value Growth Rate
ALLETE, Inc.	ALE	16.00	4.50%	4.50%	4.00%
Alliant Energy Corporation	LNT	15.00	6.50%	6.00%	5.00%
Ameren Corporation	AEE	15.00	7.50%	4.50%	4.00%
American Electric Power Company, Inc.	AEP	18.10	4.50%	5.00%	4.50%
Avangrid, Inc.	AGR	NMF	NMF	NMF	NMF
Avista Corporation	AVA	16.00	4.00%	4.00%	3.00%
Black Hills Corporation	BKH	18.00	7.50%	6.00%	5.00%
CenterPoint Energy, Inc.	CNP	15.00	-0.50%	2.00%	7.50%
CMS Energy Corporation	CMS	16.00	8.50%	7.00%	6.50%
Consolidated Edison, Inc.	ED	15.00	3.00%	3.50%	3.50%
Dominion Energy Inc.	D	19.00	7.00%	8.50%	6.00%
DTE Energy Company	DTE	15.00	6.50%	6.50%	5.00%
Duke Energy Corporation	DUK	17.00	4.50%	4.50%	1.50%
Edison International	EIX	12.00	4.00%	9.00%	4.00%
El Paso Electric Company	EE	15.00	5.00%	7.00%	4.00%
Entergy Corporation	ETR	12.00	5.00%	2.00%	3.00%
Exelon Corporation	EXC	15.00	6.00%	4.50%	5.50%
FirstEnergy Corp.	FE	16.00	9.00%	1.50%	Nil
Great Plains Energy Inc.	GXP	17.00	NMF	5.50%	-1.00%
Hawaiian Electric Industries, Inc.	HE	18.00	1.50%	2.00%	3.50%
IDACORP, Inc.	IDA	14.00	3.50%	7.00%	4.00%
MGE Energy, Inc.	MGEE	17.00	6.00%	5.00%	7.50%
NextEra Energy, Inc.	NEE	16.00	8.50%	9.50%	6.50%
Eversource Energy	ES	17.00	6.50%	6.00%	4.00%
NorthWestern Corporation	NWE	16.00	4.50%	5.00%	4.00%
OGE Energy Corp.	OGE	15.00	2.50%	8.00%	4.00%
Otter Tail Corporation	OTTR	24.00	7.00%	3.50%	6.50%
PG&E Corporation	PCG	17.00	8.50%	3.00%	5.50%
Pinnacle West Capital Corporation	PNW	15.00	5.50%	5.50%	4.00%
PNM Resources, Inc.	PNM	18.00	7.50%	9.00%	2.00%
Portland General Electric Company	POR	15.00	6.00%	6.00%	4.00%
PPL Corporation	PPL	13.00	NMF	3.50%	NMF
Public Service Enterprise Group Incorporated	PEG	13.00	2.00%	5.00%	4.50%
SCANA Corporation	SCG	14.00	-0.50%	-5.50%	6.00%
Sempra Energy	SRE	15.00	7.50%	8.50%	2.00%
Southern Company	SO	16.00	4.00%	3.50%	2.50%
Vectren Corporation	VVC	17.00	6.50%	6.50%	5.50%
Westar Energy, Inc.	WR	16.00	7.50%	4.00%	3.00%
WEC Energy Group, Inc.	WEC	16.00	6.00%	6.00%	3.50%
Xcel Energy Inc.	XEL	15.00	4.50%	6.00%	4.00%
Atmos Energy Corporation	ATO	16.00	7.50%	7.00%	5.50%
Chesapeake Utilities Corporation	CPK	15.00	6.50%	5.00%	6.50%
Spire Inc	SR	16.00	9.00%	4.00%	5.50%
New Jersey Resources Corporation	NJR	16.00	9.50%	4.00%	9.00%
NiSource Inc.	NI	20.00	18.00%	9.00%	3.00%
Northwest Natural Gas Company	NWN	19.00	7.00%	2.50%	1.00%
ONE Gas, Inc.	OGS	NMF	8.00%	12.00%	3.00%
South Jersey Industries, Inc.	SJI	18.00	6.50%	4.00%	4.50%
Southwest Gas Corporation	SWX	17.00	7.50%	7.00%	8.50%
UGI Corporation	UGI	16.00	6.50%	3.00%	8.00%
WGL Holdings, Inc.	WGL	16.00	6.50%	2.50%	8.00%

Notes:

Source: Value Line Reports as of April 13, 2018.

Growth Rate Regression Analysis

SUMMARY OUTPUT

Regression Statistics						
Multiple R		0.424508889				
R Square		0.180207797				
Adjusted R Square		0.161990192				
Standard Error		1.838891172				
Observations		47				

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	33.44986452	33.44986452	9.891958996	0.002939659	
Residual	45	152.1684334	3.381520741			
Total	46	185.6182979				

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	14.36694852	0.62137061	23.12138408	1.30803E-26	13.11544387	15.61845318
Proj. Earnings Growth Rate	29.38064516	9.341576494	3.145148486	0.002939659	10.56574429	48.19554603

SUMMARY OUTPUT

Regression Statistics						
Multiple R		0.08363774				
R Square		0.006995272				
Adjusted R Square		-0.014132489				
Standard Error		2.035302253				
Observations		49				

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	1.371541473	1.371541473	0.331093853	0.567760477	
Residual	47	194.6953973	4.142455262			
Total	48	196.0669388				

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	15.75314116	0.64382577	24.46801897	2.17836E-28	14.45793077	17.04835155
Proj. Dividends Growth Rate	6.570419142	11.41872243	0.575407554	0.567760477	-16.40108739	29.54192567

SUMMARY OUTPUT

Regression Statistics						
Multiple R		0.014294812				
R Square		0.000204342				
Adjusted R Square		-0.02201334				
Standard Error		2.034695556				
Observations		47				

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	0.038076499	0.038076499	0.009197253	0.92402398	
Residual	45	186.2993703	4.139986007			
Total	46	186.3374468				

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	16.08520014	0.748164562	21.4995483	2.64459E-25	14.57831936	17.59208092
Proj. Book Value per Share Growth	1.426540823	14.874937	0.09590231	0.92402398	-28.53312019	31.38620184

SUMMARY OUTPUT

Regression Statistics						
Multiple R		0.457752596				
R Square		0.20953744				
Adjusted R Square		0.153075828				
Standard Error		1.868986932				
Observations		46				

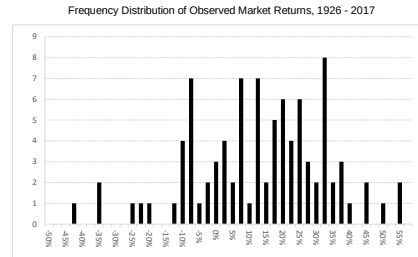
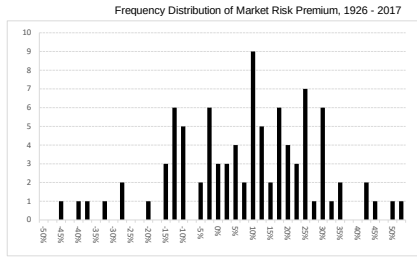
ANOVA						
	df	SS	MS	F	Significance F	
Regression	3	38.89037655	12.96345885	3.711148764	0.018652457	
Residual	42	146.7107104	3.493112153			
Total	45	185.601087				

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	14.76163079	1.033110408	14.28853168	9.97548E-18	12.67672958	16.846532
Proj. Earnings Growth Rate	35.94958125	10.95810676	3.280637982	0.002088183	13.8352265	58.063936
Proj. Dividends Growth Rate	-13.74647185	12.34490866	-1.113533702	0.271811642	-38.65950614	11.16656244
Proj. Book Value per Share Growth	-1.209036564	15.30655093	-0.078988178	0.937417173	-32.09890693	29.6808338

Schedule __ (RBH-10R)

Frequency Distribution of Market Risk Premium 1926 - 2017

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC Docket No. 4770
Schedule RBH-10R
Page 1 of 1



Source: Duff & Phelps, 2018 Stocks, Bonds, Bills and Inflation Yearbook Appendix A-1, A-7

Market Risk Premium, 1926 - 2017

Year	Large Company Stocks Total Returns	Long-Term Government Bond Income Returns	MRP
	Jan-Dec*	Jan-Dec*	
1926	0.1162	0.0373	0.0789
1927	0.3749	0.0341	0.3408
1928	0.4361	0.0322	0.4039
1929	-0.0842	0.0347	-0.1189
1930	-0.2490	0.0332	-0.2822
1931	-0.4334	0.0333	-0.4667
1932	-0.0819	0.0369	-0.1188
1933	0.5399	0.0312	0.5087
1934	-0.0144	0.0318	-0.0462
1935	0.4767	0.0281	0.4486
1936	0.3392	0.0277	0.3115
1937	-0.3503	0.0266	-0.3769
1938	0.3112	0.0264	0.2848
1939	-0.0041	0.0240	-0.0281
1940	-0.0978	0.0223	-0.1201
1941	-0.1159	0.0194	-0.1353
1942	0.2034	0.0246	0.1788
1943	0.2590	0.0244	0.2346
1944	0.1975	0.0246	0.1729
1945	0.3644	0.0234	0.3410
1946	-0.0807	0.0204	-0.1011
1947	0.0571	0.0213	0.0358
1948	0.0550	0.0240	0.0310
1949	0.1879	0.0225	0.1654
1950	0.3171	0.0212	0.2959
1951	0.2402	0.0238	0.2164
1952	0.1837	0.0266	0.1571
1953	-0.0099	0.0284	-0.0383
1954	0.5262	0.0279	0.4983
1955	0.3156	0.0275	0.2881
1956	0.0656	0.0299	0.0357
1957	-0.1078	0.0344	-0.1422
1958	0.4336	0.0327	0.4009
1959	0.1196	0.0401	0.0795
1960	0.0047	0.0426	-0.0379
1961	0.2689	0.0383	0.2306
1962	-0.0873	0.0400	-0.1273
1963	0.2280	0.0389	0.1891
1964	0.1648	0.0415	0.1233
1965	0.1245	0.0420	0.0825
1966	-0.1006	0.0449	-0.1455
1967	0.2398	0.0459	0.1939
1968	0.1106	0.0550	0.0556
1969	-0.0850	0.0595	-0.1445
1970	0.0386	0.0674	-0.0288
1971	0.1490	0.0632	0.0798
1972	0.1899	0.0587	0.1312
1973	-0.1469	0.0651	-0.2120
1974	-0.2647	0.0727	-0.3374
1975	0.3723	0.0799	0.2924
1976	0.2393	0.0789	0.1604
1977	-0.0716	0.0714	-0.1430
1978	-0.0657	0.0790	-0.0133
1979	0.1861	0.0886	0.0975
1980	0.3250	0.0997	0.2253
1981	-0.0492	0.1155	-0.1647
1982	0.2155	0.1350	0.0805
1983	0.2256	0.1038	0.1218
1984	0.0627	0.1174	-0.0547
1985	0.3173	0.1125	0.2048
1986	0.1867	0.0898	0.0969
1987	0.0525	0.0792	-0.0267
1988	0.1661	0.0897	0.0764
1989	0.3169	0.0881	0.2288
1990	-0.0310	0.0819	-0.1129
1991	0.3047	0.0822	0.2225
1992	0.0762	0.0726	0.0036
1993	0.1008	0.0717	0.0291
1994	0.0132	0.0659	-0.0527
1995	0.3758	0.0760	0.2998
1996	0.2296	0.0618	0.1678
1997	0.3336	0.0664	0.2672
1998	0.2858	0.0583	0.2275
1999	0.2104	0.0557	0.1547
2000	-0.0910	0.0650	-0.1560
2001	-0.1189	0.0553	-0.1742
2002	-0.2210	0.0559	-0.2769
2003	0.2868	0.0480	0.2388
2004	0.1088	0.0502	0.0586
2005	0.0491	0.0469	0.0022
2006	0.1579	0.0468	0.1111
2007	0.0549	0.0486	0.0063
2008	-0.3700	0.0445	-0.4145
2009	0.2646	0.0347	0.2299
2010	0.1506	0.0425	0.1081
2011	0.0211	0.0382	-0.0171
2012	0.1600	0.0246	0.1354
2013	0.3239	0.0288	0.2951
2014	0.1369	0.0341	0.1028
2015	0.0138	0.0247	-0.0109
2016	0.1196	0.0230	0.0966
2017	0.2183	0.0267	0.1916
Average	0.1206	0.0499	0.0707
Std. Dev.	0.1980	0.0263	0.1990

MRP			Returns		
Bin	Frequency	Cumulative %	Bin	Frequency	Cumulative %
-50.00%	0	0.0%	-50.00%	0	0.0%
-47.50%	0	0.0%	-47.50%	0	0.0%
-45.00%	1	1.1%	-45.00%	0	0.0%
-42.50%	0	1.1%	-42.50%	1	1.1%
-40.00%	1	2.2%	-40.00%	0	1.1%
-37.50%	1	3.3%	-37.50%	0	1.1%
-35.00%	0	3.3%	-35.00%	2	3.3%
-32.50%	1	4.3%	-32.50%	0	3.3%
-30.00%	1	4.3%	-30.00%	0	3.3%
-27.50%	2	6.5%	-27.50%	0	3.3%
-25.00%	0	6.5%	-25.00%	1	4.3%
-22.50%	0	6.5%	-22.50%	1	5.4%
-20.00%	1	7.6%	-20.00%	1	6.5%
-17.50%	0	7.6%	-17.50%	0	6.5%
-15.00%	3	10.9%	-15.00%	0	6.5%
-12.50%	6	17.4%	-12.50%	1	7.6%
-10.00%	5	22.8%	-10.00%	4	12.0%
-7.50%	0	22.8%	-7.50%	7	19.6%
-5.00%	2	25.0%	-5.00%	1	20.7%
-2.50%	6	31.5%	-2.50%	2	22.8%
0.00%	3	34.8%	0.00%	3	26.1%
2.50%	3	38.0%	2.50%	4	30.4%
5.00%	4	42.4%	5.00%	2	32.6%
7.50%	2	44.6%	7.50%	7	40.2%
10.00%	9	54.3%	10.00%	1	41.3%
12.50%	5	59.8%	12.50%	7	48.9%
15.00%	2	62.0%	15.00%	2	51.1%
17.50%	6	68.5%	17.50%	5	56.5%
20.00%	4	72.8%	20.00%	6	63.0%
22.50%	3	76.1%	22.50%	4	67.4%
25.00%	7	83.7%	25.00%	6	73.9%
27.50%	1	84.8%	27.50%	3	77.2%
30.00%	6	91.3%	30.00%	2	79.3%
32.50%	1	92.4%	32.50%	8	88.0%
35.00%	2	94.6%	35.00%	2	90.2%
37.50%	0	94.6%	37.50%	3	93.5%
40.00%	0	94.6%	40.00%	1	94.6%
42.50%	2	96.7%	42.50%	0	94.6%
45.00%	1	97.8%	45.00%	2	96.7%
47.50%	0	97.8%	47.50%	0	96.7%
50.00%	1	98.9%	50.00%	1	97.8%
51.00%	1	100.0%	52.50%	0	97.8%
			55.00%	2	100.0%
			57.50%	0	100.0%
Count:	92		Count:	92	
Highest MRP from Direct	11.49%	Rank			
		57.30%			
Historical Market Return					
Hevert	% Rank	Occurrence			
11.12%	44.0%	51			
11.49%	44.8%	51			
		92			

Schedule __ (RBH-11R)

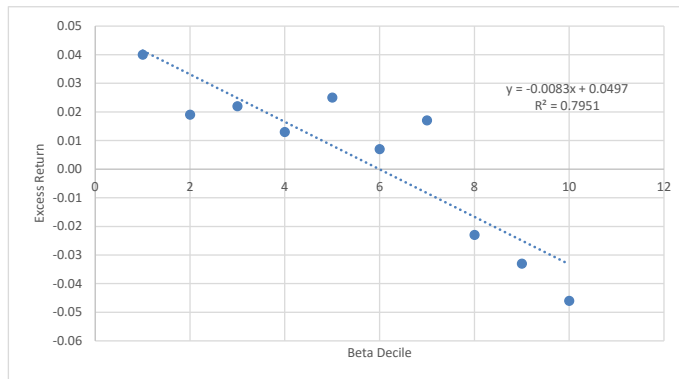
CAPM vs. Actual Returns

CAPM vs Actual Returns

Source: Bloomberg Professional Services

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Beta Range										
Decile										
1	0.34 - 0.71	0.15 - 0.75	0.03 - 0.74	0.42 - 0.69	-0.67 - 0.7	0.35 - 0.68	0.51 - 0.72	0.45 - 0.76	0.45 - 0.76	0.41 - 0.71
2	0.71 - 0.81	0.75 - 0.84	0.74 - 0.83	0.69 - 0.8	0.7 - 0.81	0.68 - 0.79	0.72 - 0.83	0.76 - 0.86	0.76 - 0.84	0.71 - 0.8
3	0.81 - 0.88	0.84 - 0.9	0.83 - 0.91	0.8 - 0.89	0.81 - 0.89	0.79 - 0.89	0.83 - 0.91	0.86 - 0.92	0.84 - 0.92	0.8 - 0.88
4	0.88 - 0.96	0.9 - 0.99	0.91 - 0.97	0.89 - 0.97	0.89 - 0.98	0.89 - 0.94	0.91 - 0.98	0.92 - 0.99	0.92 - 0.99	0.88 - 0.96
5	0.96 - 1.02	0.99 - 1.04	0.97 - 1.03	0.97 - 1.06	0.98 - 1.04	0.94 - 1.03	0.98 - 1.05	0.99 - 1.05	0.99 - 1.05	0.96 - 1.04
6	1.02 - 1.06	1.04 - 1.1	1.03 - 1.11	1.06 - 1.13	1.04 - 1.13	1.03 - 1.14	1.05 - 1.15	1.05 - 1.13	1.05 - 1.11	1.04 - 1.11
7	1.06 - 1.12	1.1 - 1.17	1.11 - 1.18	1.13 - 1.21	1.13 - 1.2	1.14 - 1.27	1.15 - 1.25	1.13 - 1.22	1.11 - 1.17	1.11 - 1.21
8	1.12 - 1.19	1.17 - 1.27	1.18 - 1.27	1.21 - 1.31	1.2 - 1.31	1.27 - 1.41	1.25 - 1.4	1.22 - 1.35	1.17 - 1.25	1.21 - 1.33
9	1.19 - 1.31	1.27 - 1.39	1.27 - 1.39	1.31 - 1.44	1.31 - 1.45	1.41 - 1.63	1.4 - 1.63	1.35 - 1.57	1.25 - 1.41	1.33 - 1.49
10	1.31 - 1.84	1.39 - 2.03	1.39 - 2.12	1.44 - 1.89	1.45 - 2.07	1.63 - 2.86	1.63 - 2.65	1.57 - 2.4	1.41 - 2.11	1.49 - 2.42

	Median Excess Return - CAPM										10-year Avg
1	0.05	0.01	0.16	0	-0.01	0.13	0.03	-0.03	0.05	0.01	0.04
2	-0.03	0.01	0.12	0	0.01	0.08	-0.01	0.05	-0.02	-0.02	0.02
3	-0.03	0.02	0.06	0.08	0	0.04	0.01	0	0.03	0.01	0.02
4	0.01	0.07	0.05	0.02	-0.01	-0.03	0.02	0.08	0.05	-0.13	0.01
5	0.06	-0.02	0.05	0.1	0.04	-0.05	0.03	0.14	0.04	-0.14	0.03
6	-0.04	0.01	-0.01	0.01	0.02	0	0.09	0.07	-0.05	-0.03	0.01
7	0.07	-0.08	-0.04	0.04	0.05	0.02	0.08	0.14	0.02	-0.13	0.02
8	0.02	-0.04	-0.1	-0.03	-0.08	-0.1	0.03	0.1	0	-0.03	-0.02
9	0.05	-0.07	-0.19	-0.08	-0.06	-0.12	0.04	0.15	-0.05	0	-0.03
10	0.02	-0.19	-0.1	-0.09	-0.07	-0.19	0.06	0.1	0	0	-0.05

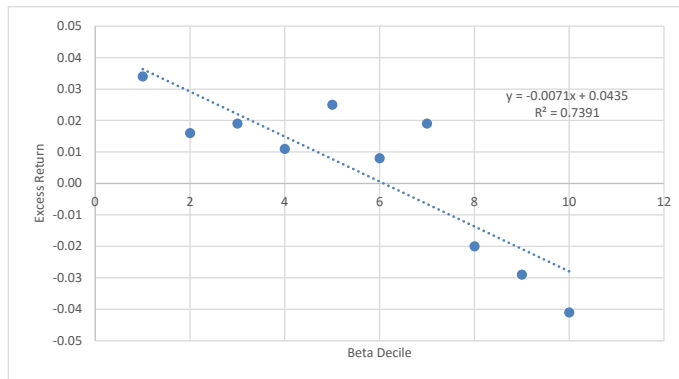


CAPM vs Actual Returns

Source: Bloomberg Professional Services

Beta Range	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Decile										
1	0.34 - 0.71	0.15 - 0.75	0.03 - 0.74	0.42 - 0.69	-0.67 - 0.7	0.35 - 0.68	0.51 - 0.72	0.45 - 0.76	0.45 - 0.76	0.41 - 0.71
2	0.71 - 0.81	0.75 - 0.84	0.74 - 0.83	0.69 - 0.8	0.7 - 0.81	0.68 - 0.79	0.72 - 0.83	0.76 - 0.86	0.76 - 0.84	0.71 - 0.8
3	0.81 - 0.88	0.84 - 0.9	0.83 - 0.91	0.8 - 0.89	0.81 - 0.89	0.79 - 0.89	0.83 - 0.91	0.86 - 0.92	0.84 - 0.92	0.8 - 0.88
4	0.88 - 0.96	0.9 - 0.99	0.91 - 0.97	0.89 - 0.97	0.89 - 0.98	0.89 - 0.94	0.91 - 0.98	0.92 - 0.99	0.92 - 0.99	0.88 - 0.96
5	0.96 - 1.02	0.99 - 1.04	0.97 - 1.03	0.97 - 1.06	0.98 - 1.04	0.94 - 1.03	0.98 - 1.05	0.99 - 1.05	0.99 - 1.05	0.96 - 1.04
6	1.02 - 1.06	1.04 - 1.1	1.03 - 1.11	1.06 - 1.13	1.04 - 1.13	1.03 - 1.14	1.05 - 1.15	1.05 - 1.13	1.05 - 1.11	1.04 - 1.11
7	1.06 - 1.12	1.1 - 1.17	1.11 - 1.18	1.13 - 1.21	1.13 - 1.2	1.14 - 1.27	1.15 - 1.25	1.13 - 1.22	1.11 - 1.17	1.11 - 1.21
8	1.12 - 1.19	1.17 - 1.27	1.18 - 1.27	1.21 - 1.31	1.2 - 1.31	1.27 - 1.41	1.25 - 1.4	1.22 - 1.35	1.17 - 1.25	1.21 - 1.33
9	1.19 - 1.31	1.27 - 1.39	1.27 - 1.39	1.31 - 1.44	1.31 - 1.45	1.41 - 1.63	1.4 - 1.63	1.35 - 1.57	1.25 - 1.41	1.33 - 1.49
10	1.31 - 1.84	1.39 - 2.03	1.39 - 2.12	1.44 - 1.89	1.45 - 2.07	1.63 - 2.86	1.63 - 2.65	1.57 - 2.4	1.41 - 2.11	1.49 - 2.42

	Median Excess Return - CAPM										10-year Avg
1	0.04	0.01	0.15	-0.03	-0.02	0.13	0.02	-0.05	0.08	0.01	0.03
2	-0.03	0.01	0.11	-0.02	0	0.08	-0.02	0.04	0.01	-0.02	0.02
3	-0.04	0.02	0.05	0.07	0	0.04	0.01	-0.01	0.04	0.01	0.02
4	0	0.07	0.05	0.01	-0.01	-0.03	0.02	0.08	0.05	-0.13	0.01
5	0.06	-0.02	0.05	0.1	0.04	-0.05	0.03	0.14	0.04	-0.14	0.03
6	-0.04	0.01	-0.01	0.02	0.02	0	0.09	0.07	-0.05	-0.03	0.01
7	0.07	-0.08	-0.04	0.06	0.05	0.02	0.08	0.15	0.01	-0.13	0.02
8	0.02	-0.04	-0.1	-0.02	-0.07	-0.1	0.04	0.12	-0.02	-0.03	-0.02
9	0.05	-0.07	-0.19	-0.06	-0.04	-0.12	0.05	0.18	-0.09	0	-0.03
10	0.02	-0.19	-0.08	-0.05	-0.05	-0.2	0.08	0.14	-0.08	0	-0.04



Schedule __ (RBH-12R)

Proxy Group Residential Customer Charge

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC Docket No. 4770
Schedule RBH-12R
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Proxy Group Residential Customer Charge Revenue as a Percentage of Residential Revenue

Company	Service	Parent	State	Residential Customer Charge (\$/Mo) [1]	Residential Customers [2]	Annual Customer Charge Revenue [3]	Total Residential Revenue \$000 [4]	% Customer Charge [5]	Rank
Ameren Illinois Company	Electric	AEE	IL	12.29	1,062,515	\$156,699,712	894,439	17.52%	8
Union Electric Company	Electric	AEE	MO	9.00	1,047,640	\$113,145,120	1,420,793	7.96%	43
AEP Texas Central Company	Electric	AEP	TX	6.74	NA	NA	NA		
AEP Texas North Company	Electric	AEP	TX	8.18	NA	NA	NA		
Appalachian Power Company	Electric	AEP	VA	8.35	449,723	\$45,062,245	698,596	6.45%	57
Appalachian Power/Wheeling Power	Electric	AEP	WV	8.00	360,500	\$34,608,000	616,181	5.62%	60
Indiana Michigan Power Company	Electric	AEP	IN	7.30	402,987	\$35,301,661	496,192	7.11%	54
Indiana Michigan Power Company	Electric	AEP	MI	7.25	109,017	\$9,484,479	131,007	7.24%	49
Kentucky Power Company	Electric	AEP	KY	14.00	137,013	\$23,018,184	254,060	9.06%	38
Kingsport Power Company	Electric	AEP	TN	12.63	41,382	\$6,271,856	58,043	10.81%	26
Ohio Power Company	Electric	AEP	OH	8.40	1,278,484	\$128,871,187	1,635,157	7.88%	45
Public Service Company of Oklahoma	Electric	AEP	OK	20.00	470,006	\$112,801,440	537,176	21.00%	3
Southwestern Electric Power Company	Electric	AEP	AR	7.75	99,557	\$9,258,801	102,097	9.07%	37
Southwestern Electric Power Company	Electric	AEP	LA	5.49	202,873	\$13,365,273	286,276	4.67%	64
Southwestern Electric Power Company	Electric	AEP	TX	8.00	149,482	\$14,350,272	200,888	7.14%	52
ALLETE (Minnesota Power)	Electric	ALE	MN	8.00	121,836	\$11,696,256	103,594	11.29%	23
Superior Water, Light and Power Company	Electric	ALE	WI	9.00	12,565	\$1,357,020	9,723	13.96%	16
Black Hills Colorado Electric Utility Company, LP	Electric	BKH	CO	16.50	83,873	\$16,606,854	97,088	17.10%	10
Black Hills Power, Inc.	Electric	BKH	SD	9.25	55,637	\$6,175,707	69,571	8.88%	39
Black Hills Power, Inc.	Electric	BKH	WY	15.50	2,063	\$383,718	2,508	15.30%	14
Cheyenne Light, Fuel and Power Company	Electric	BKH	WY	13.00	36,748	\$5,732,688	39,553	14.49%	15
Consumers Energy Company	Electric	CMS	MI	7.00	1,584,318	\$133,082,712	1,969,484	6.76%	56
CenterPoint Energy Houston Electric LLC	Electric	CNP	TX	5.47	2,107,787	\$138,355,139	1,093,201	12.66%	18
DTE Electric Company	Electric	DTE	MI	7.50	1,966,675	\$177,000,750	2,477,251	7.15%	51
Consolidated Edison Company of New York, Inc.	Electric	ED	NY	15.76	2,896,029	\$547,697,004	3,197,433	17.13%	9
Orange and Rockland Utilities, Inc.	Electric	ED	NY	20.00	198,331	\$47,599,440	268,500	17.73%	6
Rockland Electric Company	Electric	ED	NJ	4.53	63,925	\$3,474,963	118,971	2.92%	65
El Paso Electric Company	Electric	EE	NM	7.00	84,974	\$7,137,816	81,573	8.75%	40
El Paso Electric Company	Electric	EE	TX	8.25	277,164	\$27,439,236	263,747	10.40%	30
Connecticut Light and Power Company	Electric	ES	CT	21.50	1,125,415	\$290,357,070	1,635,840	17.75%	5
NSTAR Electric Company	Electric	ES	MA	7.00	1,024,972	\$86,097,648	1,086,268	7.93%	44
Public Service Company of New Hampshire	Electric	ES	NH	12.69	430,657	\$65,580,448	519,648	12.62%	19
Western Massachusetts Electric Company	Electric	ES	MA	7.00	191,768	\$16,108,512	225,013	7.16%	50
Hawaii Electric Light Company, Inc.	Electric	HE	HI	10.50	71,518	\$9,011,268	121,650	7.41%	48
Hawaiian Electric Company, Inc.	Electric	HE	HI	9.00	270,451	\$29,208,708	411,966	7.09%	55
Maui Electric Company, Limited	Electric	HE	HI	8.50	60,389	\$6,159,678	105,160	5.86%	59
Idaho Power Co.	Electric	IDA	ID	5.00	426,966	\$25,617,960	496,886	5.16%	61
Idaho Power Co.	Electric	IDA	OR	8.00	13,396	\$1,286,016	18,068	7.12%	53
Interstate Power and Light Company	Electric	LNT	IA	11.95	402,199	\$57,675,337	536,676	10.75%	27
Wisconsin Power and Light Company	Electric	LNT	WI	15.00	405,804	\$73,052,024	464,454	15.73%	13
NorthWestern Corporation	Electric	NWE	MT	4.10	291,168	\$14,325,466	278,933	5.14%	62
NorthWestern Corporation	Electric	NWE	SD	6.00	50,016	\$3,601,152	57,369	6.28%	58
Oklahoma Gas and Electric Company	Electric	OGE	AR	9.75	55,190	\$6,457,230	58,535	11.03%	24
Oklahoma Gas and Electric Company	Electric	OGE	OK	13.00	654,457	\$102,095,292	893,409	11.43%	22
Otter Tail Power Company	Electric	OTTR	MN	9.75	48,186	\$5,637,762	53,511	10.54%	29
Otter Tail Power Company	Electric	OTTR	ND	8.00	45,790	\$4,395,840	51,907	8.47%	41
Otter Tail Power Company	Electric	OTTR	SD	8.00	8,710	\$836,160	10,365	8.07%	42
Public Service Company of New Mexico	Electric	PNM	NM	7.06	461,248	\$39,076,931	394,167	9.91%	33
Texas-New Mexico Power Company	Electric	PNM	TX	5.25	203,764	\$12,837,132	124,462	10.31%	31
Arizona Public Service Company	Electric	PNW	AZ	13.76	1,061,814	\$175,371,855	1,729,901	10.14%	32
Portland General Electric Company	Electric	POR	OR	11.00	752,365	\$99,312,180	837,939	11.85%	21
Alabama Power Company	Electric	SO	AL	14.50	1,262,752	\$219,718,848	2,321,848	9.46%	35
Georgia Power Company	Electric	SO	GA	10.00	2,144,447	\$257,333,640	3,337,865	7.71%	46
Gulf Power Company	Electric	SO	FL	19.47	396,408	\$92,600,909	715,604	12.94%	17
Mississippi Power Company	Electric	SO	MS	23.73	153,273	\$43,636,823	260,169	16.77%	11
Wisconsin Electric Power Company	Electric	WEC	MI	9.61	24,586	\$2,834,134	25,746	11.01%	25
Wisconsin Electric Power Company	Electric	WEC	WI	16.00	998,871	\$191,780,535	1,217,586	15.75%	12
Wisconsin Public Service Corporation	Electric	WEC	WI	21.00	387,554	\$97,662,058	369,538	26.43%	1
Northern States Power Company - MN	Electric	XEL	MN	20.00	1,131,107	\$271,465,680	1,136,511	23.89%	2
Northern States Power Company - MN	Electric	XEL	ND	14.50	80,410	\$13,991,340	77,876	17.97%	4
Northern States Power Company - MN	Electric	XEL	SD	9.25	79,597	\$8,835,267	89,587	9.86%	34
Northern States Power Company - WI	Electric	XEL	MI	8.75	7,637	\$801,885	6,656	12.05%	20
Northern States Power Company - WI	Electric	XEL	WI	17.00	208,215	\$42,475,860	241,820	17.57%	7
Public Service Company of Colorado	Electric	XEL	CO	5.41	1,228,305	\$79,741,561	1,063,526	7.50%	47
Southwestern Public Service Company	Electric	XEL	NM	8.50	94,958	\$9,685,716	104,733	9.25%	36
Southwestern Public Service Company	Electric	XEL	TX	10.00	210,498	\$25,259,760	239,258	10.56%	28
The Narragansett Electric Company	Electric		RI	5.00	433,051	\$25,983,060	529,062	4.91%	63

THE NARRAGANSETT ELECTRIC COMPANY
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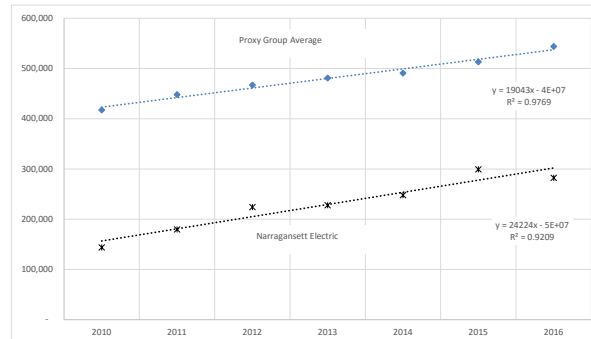
Company	Service	Parent	State	Residential Customer Charge (\$/Mo) [1]	Residential Customers [2]	Annual Customer Charge Revenue [3]	Total Residential Revenue \$000 [4]	% Customer Charge [5]	Rank
Ameren Illinois Company	Gas	AEE	IL	21.35	747,016	\$191,385,499	530,532	36.07%	9
Union Electric Company	Gas	AEE	MO	15.00	116,075	\$20,893,500	76,516	27.31%	22
Superior Water, Light and Power Company	Gas	ALE	WI	7.25	11,372	\$989,364	7,679	12.88%	46
Cheyenne Light, Fuel and Power Company	Gas	BKH	WY	17.70	33,539	\$7,123,684	19,577	36.39%	8
DTE Gas Company	Gas	DTE	MI	10.50	996,004	\$125,496,504	746,257	16.82%	39
Consolidated Edison Company of New York, Inc.	Gas	ED	NY	21.75	781,376	\$203,939,136	927,494	21.99%	29
Orange and Rockland Utilities, Inc.	Gas	ED	NY	20.00	74,404	\$17,856,960	83,621	21.35%	30
NSTAR Gas Company	Gas	ES	MA	8.50	258,475	\$26,364,450	249,390	10.57%	47
Yankee Gas Services Company	Gas	ES	CT	16.75	199,357	\$40,070,757	210,318	19.05%	33
Interstate Power and Light Company	Gas	LNT	IA	13.00	198,421	\$30,950,253	110,600	27.98%	20
Wisconsin Power and Light Company	Gas	LNT	WI	12.51	166,236	\$24,956,096	86,064	29.00%	18
NorthWestern Corporation	Gas	NWE	MT	6.50	168,224	\$13,121,472	91,138	14.40%	43
NorthWestern Corporation	Gas	NWE	NE	8.00	37,461	\$3,596,256	17,043	21.10%	31
NorthWestern Corporation	Gas	NWE	SD	8.00	39,207	\$3,763,872	20,399	18.45%	35
Atlanta Gas Light Company	Gas	SO	GA	16.26	1,472,208	\$287,257,225	NA		
Chattanooga Gas Company	Gas	SO	TN	14.50	55,996	\$9,743,304	29,145	33.43%	11
Elizabethtown Gas	Gas	SO	NJ	8.48	259,073	\$26,363,268	175,693	15.01%	41
Elkton Gas	Gas	SO	MD	5.75	5,878	\$405,582	3,042	13.33%	44
Florida City Gas	Gas	SO	FL	8.75	99,983	\$10,498,215	30,970	33.90%	10
Northern Illinois Gas Company	Gas	SO	IL	16.72	1,783,094	\$357,759,980	939,861	38.07%	3
Virginia Natural Gas	Gas	SO	VA	11.00	268,846	\$35,487,672	157,182	22.58%	27
Michigan Gas Utilities Corporation	Gas	WEC	MI	13.00	146,758	\$22,894,395	78,424	29.19%	17
Minnesota Energy Resources Corporation	Gas	WEC	MN	9.50	207,112	\$23,610,768	130,483	18.09%	38
North Shore Gas Company	Gas	WEC	IL	19.82	133,665	\$31,790,884	125,344	25.36%	24
Peoples Gas Light and Coke Company	Gas	WEC	IL	23.61	714,487	\$202,385,588	713,865	28.35%	19
Wisconsin Electric Power Company	Gas	WEC	WI	10.04	440,170	\$53,018,477	238,642	22.22%	28
Wisconsin Gas	Gas	WEC	WI	10.04	564,214	\$67,959,576	361,395	18.80%	34
Wisconsin Public Service Corporation	Gas	WEC	MI	5.00	4,842	\$290,372	2,238	12.97%	45
Wisconsin Public Service Corporation	Gas	WEC	WI	17.00	294,152	\$60,006,567	160,999	37.27%	6
Northern States Power Company - MN	Gas	XEL	MN	9.00	416,664	\$44,999,712	246,678	18.24%	36
Northern States Power Company - MN	Gas	XEL	ND	18.48	46,455	\$10,301,861	21,229	48.53%	1
Northern States Power Company - WI	Gas	XEL	MI	11.00	5,061	\$668,052	2,826	23.64%	26
Northern States Power Company - WI	Gas	XEL	WI	14.00	99,781	\$16,763,208	56,514	29.66%	15
Public Service Company of Colorado	Gas	XEL	CO	11.15	1,262,092	\$168,867,910	611,804	27.60%	21
Black Hills Arkansas	Gas	BKH	AR	11.58	146,387	\$20,341,938	78,226	26.00%	23
Black Hills Gas Distribution	Gas	BKH	CO	10.40	83,260	\$10,390,848	70,748	14.69%	42
Black Hills Gas Distribution	Gas	BKH	NE	14.61	67,703	NA	NA		
Black Hills Gas Distribution	Gas	BKH	WY	15.23	27,843	\$5,088,587	15,287	33.29%	12
Black Hills Iowa Gas Utility	Gas	BKH	IA	18.25	138,972	\$30,434,868	80,480	37.82%	4
Black Hills Kansas Gas Utility	Gas	BKH	KS	17.25	99,385	\$20,572,695	56,284	36.55%	7
Black Hills Nebraska Gas Utility	Gas	BKH	NE	13.50	181,597	\$29,418,714	98,300	29.93%	14
Consumers Energy Company	Gas	CMS	MI	11.75	1,617,373	\$228,049,593	1,150,170	19.83%	32
CenterPoint Energy Resources	Gas	CNP	AR	10.75	379,117	\$48,906,093	203,479	24.03%	25
CenterPoint Energy Resources	Gas	CNP	LA	10.00	230,475	\$27,657,000	93,334	29.63%	16
CenterPoint Energy Resources	Gas	CNP	MN	9.50	778,731	\$88,775,334	489,155	18.15%	37
CenterPoint Energy Resources	Gas	CNP	MS	13.09	112,992	\$17,748,783	47,208	37.60%	5
CenterPoint Energy Resources	Gas	CNP	OK	14.23	89,419	\$15,269,188	45,879	33.28%	13
CenterPoint Energy Resources	Gas	CNP	TX	13.96	1,592,804	\$266,771,916	630,325	42.32%	2
The Narragansett Electric Company	Gas		RI	13.00	239,038	\$37,289,928	237,342	15.71%	40
ELECTRIC PROXY AVERAGE				\$10.75				10.98%	
ELECTRIC PROXY MEDIAN				\$9.00				10.03%	
GAS PROXY AVERAGE				\$13.00				25.93%	
GAS PROXY MEDIAN				\$12.75				25.68%	

Schedule __ (RBH-13R)

Utility EBITDA

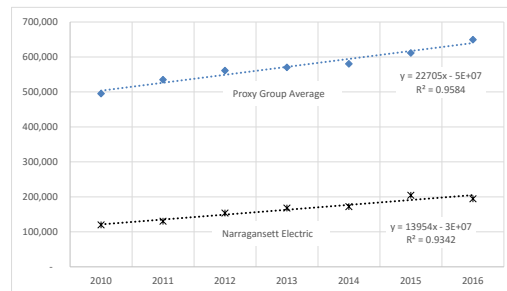
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Company	Parent Ticker	Service	Utility EBITDA						SER	Average	SER/Average	
			2016	2015	2014	2013	2012	2011				2010
Narragansett Electric Company		Electric/Gas	282,445	299,337	247,959	227,938	224,270	179,828	143,925	16,799	229,386	0.07
Ameren Illinois Company	AEE	Electric/Gas	880,201	765,679	724,879	666,475	625,351	705,994	773,414	78,454	734,570	0.11
Union Electric Company	AEE	Electric/Gas	1,255,488	1,238,068	1,261,763	1,267,025	1,286,014	1,102,646	1,091,270	64,065	1,214,611	0.05
AEP Texas Central Company	AEP	Electric	405,490	320,574	331,679	315,623	317,841	307,377	253,075	25,492	321,666	0.08
AEP Texas North Company	AEP	Electric	139,978	122,338	126,458	129,973	125,183	131,370	110,990	7,760	126,613	0.06
Appalachian Power Company	AEP	Electric	1,159,079	1,122,176	1,007,641	884,743	940,111	675,039	670,374	61,807	922,738	0.07
Indiana Michigan Power Company	AEP	Electric	605,742	570,554	521,208	496,766	407,652	429,306	421,205	27,646	493,205	0.06
Kentucky Power Company	AEP	Electric	209,561	170,203	194,608	150,248	164,694	156,826	142,471	15,126	169,802	0.09
Kingsport Power Company	AEP	Electric	9,382	5,286	8,807	11,889	11,755	9,989	17,576	2,691	10,669	0.25
Ohio Power Company	AEP	Electric	933,373	870,415	771,237	1,382,837	1,476,013	1,453,323	979,154	283,350	1,123,765	0.25
Public Service Company of Oklahoma	AEP	Electric	342,902	319,650	298,637	315,619	335,952	345,515	291,823	22,529	321,443	0.07
Southwestern Electric Power Company	AEP	Electric	520,478	555,485	501,689	513,413	416,475	425,555	366,822	31,663	471,417	0.07
Wheeling Power Company	AEP	Electric	91,991	74,388	84,560	69,015	59,032	53,657	44,803	5,696	68,207	0.08
ALLETE (Minnesota Power)	ALE	Electric	314,987	314,414	288,775	255,919	246,488	234,644	208,607	8,103	266,262	0.03
Black Hills Colorado Electric Utility Company, LP	BKH	Electric	76,641	73,100	61,844	65,738	75,547	37,358	25,464	12,920	59,385	0.22
Black Hills Colorado Gas Utility Company, LP	BKH	Gas	10,336	10,005	9,219	9,508	8,058	9,307	7,998	552	9,204	0.06
Black Hills Energy Arkansas, Inc.	BKH	Gas	45,314	41,094	31,010	24,667	23,076	26,599	23,553	4,712	30,759	0.15
Black Hills Gas Distribution LLC	BKH	Gas	81,667	69,001	67,489	75,639	63,862	56,688	49,659	5,581	66,286	0.08
Black Hills Iowa Gas Utility Company, LLC	BKH	Gas	25,806	25,235	26,736	24,989	21,987	25,617	24,056	1,482	24,918	0.06
Black Hills Kansas Gas Utility Company, LLC	BKH	Gas	18,714	17,978	17,696	18,905	20,003	18,628	17,328	976	18,465	0.05
Black Hills Nebraska Gas Utility Company LLC	BKH	Gas	38,971	38,356	42,107	38,810	31,852	40,763	35,959	3,482	38,117	0.09
Black Hills Power, Inc.	BKH	Electric	119,773	120,477	98,466	90,368	84,912	81,186	71,844	5,227	95,289	0.05
Cheyenne Light, Fuel and Power Company	BKH	Electric/Gas	65,657	60,553	51,041	49,917	42,658	42,648	40,263	2,891	50,391	0.06
Consumers Energy Company	CMS	Electric/Gas	2,029,043	1,875,288	1,809,353	1,731,044	1,571,417	1,511,832	1,485,846	38,685	1,716,312	0.02
CenterPoint Energy Houston Electric, LLC	CNP	Electric	901,649	824,394	791,734	783,216	772,395	764,295	715,737	23,413	793,346	0.03
CenterPoint Energy Resources Corp.	CNP	Gas	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Citizens Gas Fuel Company	DTE	Gas	2,509	2,910	3,541	3,528	3,184	3,140	2,961	378	3,110	0.12
DTE Electric Company	DTE	Electric	1,949,855	1,722,948	1,775,758	1,689,589	1,655,094	1,639,781	1,644,542	65,323	1,725,367	0.04
DTE Gas Company	DTE	Gas	394,692	365,186	387,793	361,022	323,554	311,033	304,369	17,008	348,236	0.05
Consolidated Edison Company of New York, Inc.	ED	Electric/Gas	3,367,701	3,286,627	3,130,077	3,006,143	2,986,442	2,911,578	2,709,496	45,252	3,056,866	0.01
Orange and Rockland Utilities, Inc.	ED	Electric/Gas	176,835	154,881	159,554	152,356	149,966	132,146	118,691	7,134	149,204	0.05
Rockland Electric Company	ED	Electric	26,601	30,690	26,589	21,393	24,205	26,561	28,768	3,268	26,401	0.12
El Paso Electric Company	EE	Electric	286,591	242,651	240,042	250,930	250,190	275,611	256,880	18,923	257,556	0.07
Connecticut Light and Power Company	ES	Electric	901,973	802,350	758,613	702,171	642,196	691,804	891,706	105,461	770,116	0.14
NSTAR Electric Company	ES	Electric	784,713	842,328	750,321	726,164	683,931	754,324	758,424	46,274	757,172	0.06
NSTAR Gas Company	ES	Gas	91,897	88,653	86,502	76,789	66,576	71,091	73,252	5,104	79,251	0.06
Public Service Company of New Hampshire	ES	Electric	387,850	351,492	295,180	311,275	327,520	337,222	308,617	28,005	331,308	0.08
Western Massachusetts Electric Company	ES	Electric	170,558	169,130	147,955	169,170	168,870	143,785	102,428	18,927	153,128	0.12
Yankee Gas Services Company	ES	Gas	129,413	125,755	129,752	115,797	94,398	100,107	95,986	7,407	113,030	0.07
Hawaii Electric Light Company, Inc.	HE	Electric	81,928	81,115	76,547	76,218	76,502	87,960	73,386	5,285	79,094	0.07
Hawaiian Electric Company, Inc.	HE	Electric	321,732	306,919	297,830	262,646	262,416	217,186	194,095	11,028	266,118	0.04
Maul Electric Company, Limited	HE	Electric	66,008	67,963	67,370	63,505	54,150	59,049	50,121	3,689	61,167	0.06
Idaho Power Co.	IDA	Electric	420,973	432,869	397,328	432,930	374,085	283,588	315,785	36,111	379,651	0.10
Interstate Power and Light Company	LNT	Electric/Gas	484,984	462,322	400,596	391,841	381,456	363,975	443,699	40,573	418,410	0.10
Superior Water, Light and Power Company	LNT	Electric/Gas	12,281	10,999	13,121	12,748	10,746	9,676	9,816	1,104	11,341	0.10
Wisconsin Power and Light Company	LNT	Electric/Gas	512,036	480,696	469,020	454,725	418,474	415,151	372,240	9,159	446,049	0.02
NorthWestern Corporation	NWE	Electric/Gas	383,506	373,430	302,836	290,554	320,884	292,190	259,349	24,155	317,536	0.08
Oklahoma Gas and Electric Company	OGE	Electric	823,908	801,523	820,374	789,253	737,775	685,154	614,520	33,029	753,215	0.04
Otter Tail Power Company	OTTR	Electric	137,299	126,004	116,727	102,180	101,141	99,445	99,949	6,459	111,821	0.06
Public Service Company of New Mexico	PNM	Electric	320,363	294,445	290,282	296,466	275,123	243,438	220,134	13,172	277,179	0.05
Texas-New Mexico Power Company	PNM	Electric	152,833	146,359	135,674	122,410	116,874	112,377	98,137	2,749	126,381	0.02
Arizona Public Service Company	PNW	Electric	1,339,494	1,322,111	1,217,177	1,250,222	1,221,953	1,141,336	1,094,318	30,636	1,226,659	0.02
Portland General Electric Company	POR	Electric	656,823	618,033	597,484	510,633	555,470	536,549	503,523	28,522	568,359	0.05
Alabama Power Company	SO	Electric	2,368,179	2,206,212	2,127,908	2,119,230	2,137,521	2,152,608	2,093,408	65,989	2,172,152	0.03
Atlanta Gas Light Company	SO	Gas	385,620	356,083	378,528	365,020	348,360	328,948	292,827	16,459	350,769	0.05
Chattanooga Gas Company	SO	Gas	15,789	16,011	16,361	15,666	15,941	16,962	17,295	452	16,289	0.03
Georgia Power Company	SO	Electric	3,341,351	3,167,378	3,128,020	3,050,999	2,959,869	2,757,645	2,133,633	192,267	2,934,128	0.07
Gulf Power Company	SO	Electric	454,572	431,831	426,240	414,010	409,234	354,375	368,299	13,652	408,366	0.03
Mississippi Power Company	SO	Electric	375,978	399,414	445,221	359,409	261,522	213,622	219,685	52,608	324,979	0.16
Northern Illinois Gas Company	SO	Gas	356,693	345,564	356,573	352,383	320,345	336,468	378,627	19,946	349,522	0.06
Pivotal Utility Holdings, Inc.	SO	Gas	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Virginia Natural Gas, Inc.	SO	Gas	89,375	86,753	85,480	86,084	87,063	89,544	86,687	1,722	87,284	0.02
Michigan Gas Utilities Corporation	WEC	Gas	26,650	27,759	30,138	22,914	21,221	25,024	25,693	2,914	25,628	0.11
North Shore Gas Company	WEC	Gas	39,244	35,964	33,175	34,309	27,803	29,277	26,389	1,640	32,309	0.05
Peoples Gas Light and Coke Company	WEC	Gas	302,182	308,231	207,844	232,916	205,401	196,129	183,697	26,552	233,771	0.11
Upper Michigan Energy Resources Corporation	WEC	Electric/Gas	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wisconsin Electric Power Company	WEC	Electric/Gas	979,738	959,533	928,648	848,507	847,574	693,580	506,978	70,546	823,508	0.09
Wisconsin Gas LLC	WEC	Gas	178,141	156,193	164,672	155,102	103,157	114,365	109,957	14,849	140,227	0.11
Wisconsin Public Service Corporation	WEC	Electric/Gas	395,239	347,791	381,132	342,746	321,471	335,643	369,304	25,547	356,189	0.07
Northern States Power Company - MN	XEL	Electric/Gas	1,505,299	1,287,068	1,161,619	1,126,012	1,064,416	1,072,796	998,695	75,554	1,173,701	0.06
Northern States Power Company - WI	XEL	Electric/Gas	230,770	225,011	206,989	190,017	170,606	175,769	152,910	6,527	193,153	0.03
Public Service Company of Colorado	XEL	Electric/Gas	1,362,081	1,336,871	1,177,708	1,160,132	1,188,265	1,129,574	1,045,773	46,041	1,200,058	0.04
Southwestern Public Service Company	XEL	Electric	452,854	417,300	398,132	313,624	335,544	304,487	284,860	21,897	358,114	0.06
Proxy Group Average			543,874	513,276	490,972	481,224	467,200	448,090	417,525	6,933	480,309	0.01
Proxy Group Median			321,732	314,414	295,180	290,554	262,416	243,438	220,134	7,278	278,267	0.03



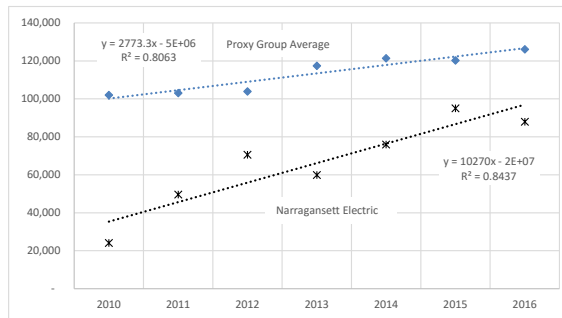
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			Utility EBITDA: Electric Only									SER/ Average
Company	Ticker	Service	2016	2015	2014	2013	2012	2011	2010	SER	Average	
Narragansett Electric Company		Electric	194,547	204,337	171,965	168,021	153,739	130,196	119,812	8,766	163,231	0.05
Ameren Illinois Company	AEE	Electric	687,677	604,459	556,851	520,853	479,782	560,379	610,400	65,917	574,343	0.11
Union Electric Company	AEE	Electric	1,221,712	1,205,691	1,226,958	1,228,364	1,253,221	1,066,984	1,065,037	62,786	1,181,138	0.05
AEP Texas Central Company	AEP	Electric	405,490	320,574	331,679	315,623	317,841	307,377	253,075	25,492	321,666	0.08
AEP Texas North Company	AEP	Electric	139,978	122,338	126,458	129,973	125,183	131,370	110,990	7,760	126,613	0.06
Appalachian Power Company	AEP	Electric	1,159,079	1,122,176	1,007,641	884,743	940,111	675,039	670,374	61,807	922,738	0.07
Indiana Michigan Power Company	AEP	Electric	605,742	570,554	521,208	496,766	407,652	429,306	421,205	27,646	493,205	0.06
Kentucky Power Company	AEP	Electric	209,561	170,203	194,608	150,248	164,694	156,826	142,471	15,126	169,802	0.09
Kingsport Power Company	AEP	Electric	9,382	5,286	8,807	11,889	11,755	9,989	17,576	2,691	10,669	0.25
Ohio Power Company	AEP	Electric	933,373	870,415	771,237	1,382,837	1,476,013	1,453,323	979,154	283,350	1,123,765	0.25
Public Service Company of Oklahoma	AEP	Electric	342,902	319,650	298,637	315,619	335,952	345,515	291,823	22,529	321,443	0.07
Southwestern Electric Power Company	AEP	Electric	520,478	555,485	501,689	513,413	416,475	425,555	366,822	31,663	471,417	0.07
Wheeling Power Company	AEP	Electric	91,991	74,388	84,560	69,015	59,032	53,657	44,803	5,696	68,207	0.08
ALLETE (Minnesota Power)	ALE	Electric	314,987	314,414	288,775	255,919	246,488	234,644	208,607	8,103	266,262	0.03
Black Hills Colorado Electric Utility Company, LP	BKH	Electric	76,641	73,100	61,844	65,738	75,547	37,358	25,464	12,920	59,385	0.22
Black Hills Power, Inc.	BKH	Electric	119,773	120,477	98,466	90,368	84,912	81,186	71,844	5,227	95,289	0.05
Cheyenne Light, Fuel and Power Company	BKH	Electric	55,513	51,676	43,590	40,698	36,345	37,861	34,881	2,815	42,938	0.07
Consumers Energy Company	CMS	Electric	1,522,441	1,393,168	1,305,104	1,257,428	1,193,367	1,108,364	1,099,624	33,236	1,268,499	0.03
CenterPoint Energy Houston Electric, LLC	CNP	Electric	901,649	824,394	791,734	783,216	772,395	764,295	715,737	23,413	793,346	0.03
DTE Electric Company	DTE	Electric	1,949,855	1,722,948	1,775,758	1,689,589	1,655,094	1,639,781	1,644,542	65,323	1,725,367	0.04
Consolidated Edison Company of New York, Inc.	ED	Electric	2,642,027	2,549,017	2,425,246	2,274,971	2,336,180	2,282,675	2,107,903	61,338	2,374,003	0.03
Orange and Rockland Utilities, Inc.	ED	Electric	122,261	119,224	118,094	103,577	94,496	85,832	73,728	4,368	102,459	0.04
Rockland Electric Company	ED	Electric	26,601	30,690	26,589	21,393	24,205	26,561	28,768	3,268	26,401	0.12
El Paso Electric Company	EE	Electric	286,591	242,651	240,042	250,930	250,190	275,611	256,880	18,923	257,556	0.07
Connecticut Light and Power Company	ES	Electric	901,973	802,350	758,613	702,171	642,196	691,804	691,706	105,461	770,116	0.14
NSTAR Electric Company	ES	Electric	784,713	842,328	750,321	726,164	683,931	754,324	758,424	46,274	757,172	0.06
Public Service Company of New Hampshire	ES	Electric	387,850	351,492	295,180	311,275	327,520	337,222	308,617	28,005	331,308	0.08
Western Massachusetts Electric Company	ES	Electric	170,558	169,130	147,955	169,170	168,870	143,785	102,428	18,927	153,128	0.12
Hawaii Electric Light Company, Inc.	HE	Electric	81,928	81,115	76,547	76,218	76,502	87,960	73,396	5,285	79,094	0.07
Hawaiian Electric Company, Inc.	HE	Electric	321,732	306,919	297,830	262,646	262,416	217,186	194,095	11,028	266,118	0.04
Maui Electric Company, Limited	HE	Electric	66,008	67,963	67,370	63,505	54,150	59,049	50,121	3,689	61,167	0.06
Idaho Power Co.	IDA	Electric	420,973	432,869	397,328	432,930	374,085	283,588	315,785	36,111	379,651	0.10
Interstate Power and Light Company	LNT	Electric	439,820	411,504	344,156	338,001	332,632	323,880	405,110	44,765	370,729	0.12
Superior Water, Light and Power Company	LNT	Electric	4,732	4,275	4,819	4,086	4,466	3,715	4,942	476	4,434	0.11
Wisconsin Power and Light Company	LNT	Electric	481,888	450,215	428,018	414,914	378,188	375,741	331,382	8,764	408,621	0.02
NorthWestern Corporation	NWE	Electric	326,949	311,826	231,136	228,537	273,295	235,475	204,533	30,605	258,822	0.12
Oklahoma Gas and Electric Company	OGE	Electric	823,908	801,523	820,374	789,253	737,775	685,154	614,520	33,029	753,215	0.04
Otter Tail Power Company	OTTR	Electric	137,299	126,004	116,727	102,180	101,141	99,445	99,949	6,459	111,821	0.06
Public Service Company of New Mexico	PNM	Electric	320,363	294,445	290,282	296,466	275,123	243,438	220,134	13,172	277,179	0.05
Texas-New Mexico Power Company	PNM	Electric	152,833	146,359	135,674	122,410	116,874	112,377	98,137	2,749	126,381	0.02
Arizona Public Service Company	PNW	Electric	1,339,494	1,322,111	1,217,177	1,250,222	1,221,953	1,141,336	1,094,318	30,636	1,226,659	0.02
Portland General Electric Company	POR	Electric	656,823	618,033	597,484	510,633	555,470	536,549	503,523	28,522	568,359	0.05
Alabama Power Company	SO	Electric	2,368,179	2,206,212	2,127,908	2,119,230	2,137,521	2,152,608	2,093,408	65,989	2,172,152	0.03
Georgia Power Company	SO	Electric	3,341,351	3,167,378	3,128,020	3,050,999	2,959,869	2,757,645	2,133,633	192,267	2,934,128	0.07
Gulf Power Company	SO	Electric	454,572	431,831	426,240	414,010	409,234	354,375	368,299	13,652	408,366	0.03
Mississippi Power Company	SO	Electric	375,978	399,414	445,221	359,409	261,522	213,622	219,685	52,608	324,979	0.16
Upper Michigan Energy Resources Corporation	WEC	Electric	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wisconsin Electric Power Company	WEC	Electric	890,684	858,030	809,692	746,765	773,430	615,356	436,615	68,037	732,939	0.09
Wisconsin Public Service Corporation	WEC	Electric	342,741	295,940	310,168	279,274	258,839	274,646	296,783	22,616	294,056	0.08
Northern States Power Company - MN	XEL	Electric	1,421,112	1,189,216	1,053,629	1,027,706	984,372	979,421	910,146	82,270	1,080,800	0.08
Northern States Power Company - WI	XEL	Electric	211,442	206,334	181,461	166,402	153,490	158,897	136,522	7,709	173,507	0.04
Public Service Company of Colorado	XEL	Electric	1,101,847	1,089,469	925,696	945,523	999,241	948,755	852,094	56,488	980,375	0.06
Southwestern Public Service Company	XEL	Electric	452,854	417,300	398,132	313,624	335,544	304,487	284,860	21,897	358,114	0.06
Proxy Group Average			649,535	611,462	580,171	570,135	561,109	534,928	494,997	11,194	571,763	0.02
Proxy Group Median			405,490	399,414	344,156	315,623	332,632	307,377	296,783	18,054	343,068	0.05



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Company	Parent Ticker	Service	Utility EBITDA: Gas Only							SER	SER/	
			2016	2015	2014	2013	2012	2011	2010		Average	Average
Narragansett Electric Company		Gas	87,898	94,999	75,995	59,915	70,530	49,634	24,114	10,460	66,155	0.16
Ameren Illinois Company	AEE	Gas	192,523	161,219	168,028	145,622	145,569	145,615	163,013	14,368	160,227	0.09
Union Electric Company	AEE	Gas	33,777	32,378	34,805	38,660	32,793	35,662	26,232	3,898	33,472	0.12
Black Hills Colorado Gas Utility Company, LP	BKH	Gas	10,336	10,005	9,219	9,508	8,058	9,307	7,998	552	9,204	0.06
Black Hills Energy Arkansas, Inc.	BKH	Gas	45,314	41,094	31,010	24,667	23,076	26,599	23,553	4,712	30,759	0.15
Black Hills Gas Distribution LLC	BKH	Gas	81,667	69,001	67,489	75,639	63,862	56,688	49,659	5,581	66,286	0.08
Black Hills Iowa Gas Utility Company, LLC	BKH	Gas	25,806	25,235	26,736	24,989	21,987	25,617	24,056	1,482	24,918	0.06
Black Hills Kansas Gas Utility Company, LLC	BKH	Gas	18,714	17,978	17,696	18,905	20,003	18,628	17,328	976	18,465	0.05
Black Hills Nebraska Gas Utility Company LLC	BKH	Gas	38,971	38,356	42,107	38,810	31,852	40,763	35,959	3,482	38,117	0.09
Cheyenne Light, Fuel and Power Company	BKH	Gas	10144	8878	7449	9219	6314	4787	5382	1,019	7,453	0.14
Consumers Energy Company	CMS	Gas	506,601	482,119	504,250	473,975	378,051	403,468	386,223	29,284	447,812	0.07
CenterPoint Energy Resources Corp.	CNP	Gas	NA	NA	NA	NA	NA	NA	NA			
Citizens Gas Fuel Company	DTE	Gas	2,509	2,910	3,541	3,528	3,184	3,140	2,961	378	3,110	0.12
DTE Gas Company	DTE	Gas	394,692	355,186	387,793	361,022	323,554	311,033	304,369	17,008	348,236	0.05
Consolidated Edison Company of New York, Inc.	ED	Gas	520,874	504,365	451,569	497,565	471,463	408,817	417,137	24,697	467,399	0.05
Orange and Rockland Utilities, Inc.	ED	Gas	54,575	35,656	41,461	48,779	55,469	46,314	44,963	7,672	46,745	0.16
NSTAR Gas Company	ES	Gas	91,897	88,653	86,502	76,789	66,576	71,091	73,252	5,104	79,251	0.06
Yankee Gas Services Company	ES	Gas	129,413	125,755	129,752	115,797	94,398	100,107	95,986	7,407	113,030	0.07
Interstate Power and Light Company	LNT	Gas	34,870	37,924	45,870	46,565	40,492	36,598	38,180	4,963	40,071	0.12
Superior Water, Light and Power Company	LNT	Gas	2,910	2,018	3,735	3,774	2,173	2,116	1,538	845	2,609	0.32
Wisconsin Power and Light Company	LNT	Gas	30,146	30,481	41,002	39,811	40,287	39,411	40,856	3,373	37,428	0.09
NorthWestern Corporation	NWE	Gas	56,550	61,583	71,686	62,021	47,606	56,675	54,787	7,487	58,701	0.13
Atlanta Gas Light Company	SO	Gas	385,620	356,083	378,528	365,020	348,360	328,948	292,827	16,459	350,769	0.05
Chattanooga Gas Company	SO	Gas	15,789	16,011	16,361	15,666	15,941	16,962	17,295	452	16,289	0.03
Northern Illinois Gas Company	SO	Gas	356,693	345,564	356,573	352,383	320,345	336,468	378,627	19,946	349,522	0.06
Pivotal Utility Holdings, Inc.	SO	Gas	NA	NA	NA	NA	NA	NA	NA			
Virginia Natural Gas, Inc.	SO	Gas	89,375	86,753	85,480	86,084	87,063	89,544	86,687	1,722	87,284	0.02
Michigan Gas Utilities Corporation	WEC	Gas	26,650	27,759	30,138	22,914	21,221	25,024	25,693	2,914	25,628	0.11
North Shore Gas Company	WEC	Gas	39,244	35,964	33,175	34,309	27,803	29,277	26,389	1,640	32,309	0.05
Peoples Gas Light and Coke Company	WEC	Gas	302,182	308,231	207,844	232,916	205,401	196,129	183,697	26,552	233,771	0.11
Upper Michigan Energy Resources Corporation	WEC	Gas	NA	NA	NA	NA	NA	NA	NA			
Wisconsin Electric Power Company	WEC	Gas	70,699	90,417	107,660	95,378	73,978	73,634	64,826	15,537	82,370	0.19
Wisconsin Gas LLC	WEC	Gas	178,141	156,193	164,672	155,102	103,157	114,365	109,957	14,849	140,227	0.11
Wisconsin Public Service Corporation	WEC	Gas	52,499	51,851	70,964	63,471	62,630	60,997	72,523	6,522	62,134	0.10
Northern States Power Company - MN	XEL	Gas	84,187	97,852	107,990	98,057	79,747	93,049	88,275	10,253	92,737	0.11
Northern States Power Company - WI	XEL	Gas	19,154	18,491	25,339	23,422	16,922	16,670	16,183	3,480	19,454	0.18
Public Service Company of Colorado	XEL	Gas	258,537	245,148	248,450	212,755	188,152	178,533	190,598	13,369	217,453	0.06
Proxy Group Average			126,093	120,215	121,360	117,367	103,863	103,092	102,031	3,594	113,432	0.03
Proxy Group Median			54,575	51,851	67,489	62,021	55,469	56,675	49,659	6,531	56,820	0.11



Schedule __ (RBH-14R)

Cost of Long –Term Debt

NARRAGANSETT ELECTRIC COMPANY
COST OF LONG-TERM DEBT AS OF June 30, 2017

Panel A: Long-term debt

Senior Unsecured Notes

	Percent	Due	Amount	Annual Interest Expense	Annual Amortization of DD&E	Total Expense	Cost of Debt
Senior Notes	4.53%	15-Mar-2020	250,000,000	11,335,000	238,808	11,573,808	4.63%
Senior Notes	5.64%	15-Mar-2040	300,000,000	16,914,000	283,842	17,197,842	5.73%
Senior Notes	4.17%	10-Dec-2042	250,000,000	10,425,000	68,396	10,493,396	4.20%
<u>Expected issuance</u>							
Senior Notes	3.96%	31-Mar-2048	250,000,000	9,900,000	77,917	9,977,917	3.99%
Subtotal							4.69%

First mortgage bonds¹

Providence Gas FMB N	9.63%	30-May-2020	10,000,000	963,000	4,060	967,060	9.67%
Providence Gas FMB O	8.46%	30-Sep-2022	12,500,000	1,057,500	4,311	1,061,811	8.49%
FMB Series P	8.09%	30-Sep-2022	3,750,000	303,375	3,449	306,824	8.18%
FMB Series R	7.50%	15-Dec-2025	6,750,000	506,250	4,071	510,321	7.56%
Subtotal							8.62%

Total			1,083,000,000	51,404,125	684,854	52,088,979	4.81%

Panel B: Weighted Average Cost of Debt by Segment

Electric Operations	70%		758,100,000	35,070,428	482,991	35,553,419	4.69%
Gas Operations	30%		324,900,000	16,333,697	201,863	16,535,560	5.09%
Legacy Debt			33,000,000	2,830,125	15,891	2,846,016	8.62%
New Debt			291,900,000	13,503,572	185,972	13,689,544	4.69%
Total			1,083,000,000	51,404,125	684,854	52,088,979	4.81%

¹ Backed entirely by gas assets. This debt was assumed by the Narragansett Electric Company when National Grid purchased the gas assets of the New England Gas Company from the Southern Union Company and merged them into Narragansett Electric.

² Calculated based on "Net Electric/Gas Plant in Service at Page 200 and 201 Line 3, 6 and 18 on NECO FERC Form 1 annual report ending December 2014, 2015 and 2016.

NARRAGANSETT ELECTRIC COMPANY
COST OF CAPITAL FOR RATE YEAR

Panel A: Electric Distribution Cost of Capital

	<u>Capitalization</u>		<u>Weighted</u>
	<u>Ratio</u>	<u>Cost Rate</u>	<u>Average Cost</u>
Long-Term Debt	48.53%	4.69%	2.28%
Short-Term Debt ¹	0.45%	1.76%	0.01%
Preferred Stock	0.11%	4.50%	0.00%
Common Equity	50.92%	10.10%	<u>5.14%</u>
Total ²	100.0%		7.43%

Panel B: Gas Distribution Cost of Capital

	<u>Capitalization</u>		<u>Weighted</u>
	<u>Ratio</u>	<u>Cost Rate</u>	<u>Average Cost</u>
Long-Term Debt	48.53%	5.09%	2.47%
Short-Term Debt ¹	0.45%	1.76%	0.01%
Preferred Stock	0.11%	4.50%	0.00%
Common Equity	50.92%	10.10%	<u>5.14%</u>
Total ²	100.0%		7.63%

As filed in Attachment DIV 4-3 and updated for the Cost of Debt for Gas Distribution.

¹ Cost rate is the average short-term debt interest rate projected for the Rate Year.

² Capitalization ratios include impact of refinancing and exclude goodwill and accumulated other comprehensive income.

Schedule __ (RBH-15R)

Authorized ROEs by RRA Ranking

Recently Authorized ROEs

State	Company	Case Identification	Service	Case Type	Date	Return on Equity (%)	Vertically Integrated	Distribution	RRA Rank	Average/ 2 and above	Average 3/ and lower
Wyoming	PacifiCorp	D-20000-446-ER-14	Electric	Vertically Integrated	1/23/2015	9.50	9.50		Average / 3		9.50
Colorado	Public Service Co. of CO	D-14AL-0660E	Electric	Vertically Integrated	2/24/2015	9.83	9.83		Average / 2	9.83	
New Jersey	Jersey Cntrl Power & Light Co.	D-ER-12111052	Electric	Distribution	3/18/2015	9.75		9.75	Below Average / 2		9.75
Washington	PacifiCorp	D-UE-140762	Electric	Vertically Integrated	3/25/2015	9.50	9.50		Average / 3		9.50
Minnesota	Northern States Power Co. - MN	D-E-002/GR-13-868	Electric	Vertically Integrated	3/26/2015	9.72	9.72		Average / 2	9.72	
Michigan	Wisconsin Public Service Corp.	C-U-17669	Electric	Vertically Integrated	4/23/2015	10.20	10.20		Above Average / 3	10.20	
Missouri	Union Electric Co.	C-ER-2014-0258	Electric	Vertically Integrated	4/29/2015	9.53	9.53		Below Average / 1		9.53
West Virginia	Appalachian Power Co.	C-14-1152-E-42T	Electric	Vertically Integrated	5/26/2015	9.75	9.75		Below Average / 1		9.75
New York	Central Hudson Gas & Electric	C-14-E-0318	Electric	Distribution	6/17/2015	9.00		9.00	Average / 1	9.00	
New York	Consolidated Edison Co. of NY	C-15-E-0050/C-13-E-0030 (Ext)	Electric	Distribution	6/17/2015	9.00		9.00	Average / 1	9.00	
Missouri	Kansas City Power & Light	C-ER-2014-0370	Electric	Vertically Integrated	9/2/2015	9.50	9.50		Below Average / 1		9.50
Kansas	Kansas City Power & Light	D-15-KCPE-116-RTS	Electric	Vertically Integrated	9/10/2015	9.30	9.30		Below Average / 1		9.30
New York	Orange & Rockland Utts Inc.	C-14-E-0493	Electric	Distribution	10/15/2015	9.00		9.00	Average / 1	9.00	
Michigan	Consumers Energy Co.	C-U-17735	Electric	Vertically Integrated	11/19/2015	10.30	10.30		Above Average / 3	10.30	
Wisconsin	Wisconsin Public Service Corp.	D-6690-UR-124 (Elec)	Electric	Vertically Integrated	11/19/2015	10.00	10.00		Above Average / 2	10.00	
Wisconsin	Northern States Power Co - WI	D-4220-UR-121 (Elec)	Electric	Vertically Integrated	12/3/2015	10.00	10.00		Above Average / 2	10.00	
Michigan	DTE Electric Co.	C-U-17767	Electric	Vertically Integrated	12/11/2015	10.30	10.30		Above Average / 3	10.30	
Oregon	Portland General Electric Co.	D-UE-294	Electric	Vertically Integrated	12/15/2015	9.60	9.60		Average / 2	9.60	
Texas	Southwestern Public Service Co	D-43695	Electric	Vertically Integrated	12/17/2015	9.70	9.70		Average / 3		9.70
Idaho	Avista Corp.	C-AVU-E-15-05	Electric	Vertically Integrated	12/18/2015	9.50	9.50		Average / 2	9.50	
Wyoming	PacifiCorp	D-20000-469-ER-15	Electric	Vertically Integrated	12/30/2015	9.50	9.50		Average / 3		9.50
Washington	Avista Corp.	D-UE-150204	Electric	Vertically Integrated	1/6/2016	9.50	9.50		Average / 3		9.50
Arkansas	Energy Arkansas Inc.	D-15-015-U	Electric	Vertically Integrated	2/23/2016	9.75	9.75		Average / 1	9.75	
Massachusetts	Indianapolis Power & Light Co.	Ca-44576	Electric	Vertically Integrated	3/16/2016	9.85	9.85		Average / 1	9.85	
Maryland	Fitchburg Gas & Electric Light	DPU 15-80	Electric	Distribution	4/29/2016	9.80		9.80	Average / 2	9.80	
New Mexico	Baltimore Gas and Electric Co.	C-9406 (elec)	Electric	Distribution	6/3/2016	9.75		9.75	Below Average / 3		9.75
New York	El Paso Electric Co.	C-15-00127-JT	Electric	Vertically Integrated	6/8/2016	9.48	9.48		Below Average / 2		9.48
New York	NY State Electric & Gas Corp.	C-15-E-0283	Electric	Distribution	6/15/2016	9.00		9.00	Average / 1	9.00	
Indiana	Rochester Gas & Electric Corp.	C-15-E-0285	Electric	Distribution	6/15/2016	9.00		9.00	Average / 1	9.00	
Illinois	Northern IN Public Svc Co.	Ca-44688	Electric	Vertically Integrated	7/18/2016	9.98	9.98		Average / 1	9.98	
Tennessee	Kingsport Power Company	D-16-00001	Electric	Vertically Integrated	8/9/2016	9.85	9.85		Above Average / 3	9.85	
Arizona	UNS Electric Inc.	D-E-042044-15-0142	Electric	Vertically Integrated	8/18/2016	9.50	9.50		Average / 3		9.50
New Jersey	Atlantic City Electric Co.	D-ER-16030252	Electric	Distribution	8/24/2016	9.75		9.75	Below Average / 2		9.75
Washington	PacifiCorp	D-UE-152253	Electric	Vertically Integrated	9/1/2016	9.50	9.50		Average / 3		9.50
Michigan	Upper Peninsula Power Co.	C-U-17895	Electric	Vertically Integrated	9/8/2016	10.00	10.00		Above Average / 3		9.50
New Mexico	Public Service Co. of NM	C-15-00261-JT	Electric	Vertically Integrated	9/28/2016	9.58	9.58		Below Average / 2		9.58
Massachusetts	Massachusetts Electric Co.	DPU-15-155	Electric	Distribution	9/30/2016	9.90		9.90	Average / 2	9.90	
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-121 (Elec)	Electric	Vertically Integrated	11/9/2016	9.80	9.80		Above Average / 2	9.80	
Oklahoma	Public Service Co. of OK	Ca-PUD201500208	Electric	Vertically Integrated	11/10/2016	9.50	9.50		Average / 3	9.50	
Maryland	Polomac Electric Power Co.	C-9418	Electric	Distribution	11/15/2016	9.55		9.55	Below Average / 3		9.55
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-120 (Elec)	Electric	Vertically Integrated	11/18/2016	10.00	10.00		Above Average / 2	10.00	
Florida	Florida Power & Light Co.	D-160021-EI	Electric	Vertically Integrated	11/29/2016	10.55	10.55		Above Average / 2	10.55	
California	Liberty Utilities CalPeco Ele	A-15-05-008	Electric	Vertically Integrated	12/1/2016	10.00	10.00		Above Average / 3	10.00	
South Carolina	Duke Energy Progress LLC	D-2016-227-E	Electric	Vertically Integrated	12/7/2016	10.10	10.10		Average / 2	10.10	
New Jersey	Jersey Cntrl Power & Light Co.	D-ER-16040383	Electric	Distribution	12/12/2016	9.60		9.60	Below Average / 2		9.60
Connecticut	United Illuminating Co.	D-16-06-04	Electric	Distribution	12/14/2016	9.10		9.10	Below Average / 2		9.10
Colorado	Black Hills Colorado Electric	D-16AL-0326E	Electric	Vertically Integrated	12/19/2016	9.37	9.37		Average / 2	9.37	
Maine	Emera Maine	D-2015-00360	Electric	Distribution	12/19/2016	9.00		9.00	Average / 2	9.00	
North Carolina	Virginia Electric & Power Co.	D-E-22, Sub 532	Electric	Vertically Integrated	12/22/2016	9.90	9.90		Average / 1	9.90	
Nevada	Sierra Pacific Power Co.	D-16-06006	Electric	Vertically Integrated	12/22/2016	9.60	9.60		Average / 2	9.60	
Idaho	Avista Corp.	C-AVU-E-16-03	Electric	Vertically Integrated	12/28/2016	9.50	9.50		Average / 3	9.50	
Wyoming	MDU Resources Group Inc.	D-20004-117-ER-16	Electric	Vertically Integrated	1/18/2017	9.45	9.45		Average / 3		9.45
New York	Consolidated Edison Co. of NY	C-16-E-0060	Electric	Distribution	1/24/2017	9.00		9.00	Average / 1	9.00	
Michigan	DTE Electric Co.	C-U-18014	Electric	Vertically Integrated	1/31/2017	10.10	10.10		Above Average / 3	10.10	
Maryland	Delmarva Power & Light Co.	C-9424	Electric	Distribution	2/15/2017	9.60		9.60	Below Average / 2		9.60
New Jersey	Rockland Electric Company	D-ER-16050428	Electric	Distribution	2/22/2017	9.60		9.60	Below Average / 2		9.60
Arizona	Tucson Electric Power Co.	D-E-019334-15-0322	Electric	Vertically Integrated	2/24/2017	9.75	9.75		Average / 3		9.75
Michigan	Consumers Energy Co.	C-U-17990	Electric	Vertically Integrated	2/28/2017	10.10	10.10		Above Average / 3	10.10	

State	Company	Case Identification	Service	Case Type	Date	Return on Equity (%)	Vertically Integrated	Distribution	RRA Rank	Average/ 2 and above	Average 3/ and lower
Minnesota	Otter Tail Power Co.	D-E-017/GR-15-1033	Electric	Vertically Integrated	3/2/2017	9.41	9.41	Average / 2	Average / 2	9.41	9.41
Oklahoma	Oklahoma Gas and Electric Co.	Ca-PUD021500273	Electric	Vertically Integrated	3/20/2017	9.50	9.50	Average / 3	Average / 3	10.25	9.50
Florida	Gulf Power Co.	D-160186-EI	Electric	Vertically Integrated	4/4/2017	10.25	10.25	Above Average / 2	Above Average / 2	10.25	9.40
New Hampshire	Liberty Utilities Granite St	D-DE-16-383	Electric	Distribution	4/12/2017	9.40	9.40	Average / 3	Average / 3	9.40	9.40
New Hampshire	Unitil Energy Systems Inc.	D-DE-16-384	Electric	Distribution	4/20/2017	9.50	9.50	Average / 3	Average / 3	9.50	9.50
Missouri	Kansas City Power & Light	C-ER-2016-0285	Electric	Vertically Integrated	5/3/2017	9.50	9.50	Below Average / 1	Below Average / 1	9.20	9.50
Minnesota	Northern States Power Co. - MN	D-E-002/GR-15-826	Electric	Vertically Integrated	5/11/2017	9.20	9.20	Average / 2	Average / 2	9.50	9.50
Arkansas	Oklahoma Gas and Electric Co.	D-16-052-J	Electric	Vertically Integrated	5/18/2017	9.50	9.50	Average / 1	Average / 1	9.50	9.70
Delaware	Delmarva Power & Light Co.	D-16-0649	Electric	Distribution	5/23/2017	9.70	9.70	Average / 3	Average / 3	9.65	9.70
North Dakota	MDU Resources Group Inc.	C-PU-16-666	Electric	Vertically Integrated	6/16/2017	9.65	9.65	Average / 1	Average / 1	9.70	9.70
Kentucky	Kentucky Utilities Co.	C-2016-00370	Electric	Vertically Integrated	6/22/2017	9.70	9.70	Average / 1	Average / 1	9.70	9.70
Kentucky	Louisville Gas & Electric Co.	C-2016-00371 (elec.)	Electric	Vertically Integrated	6/22/2017	9.70	9.70	Average / 1	Average / 1	9.70	9.70
District of Columbia	Potomac Electric Power Co.	FC-1139	Electric	Distribution	7/24/2017	9.50	9.50	Below Average / 3	Below Average / 3	10.00	9.50
Arizona	Arizona Public Service Co.	D-E-01345A-16-0036	Electric	Vertically Integrated	8/15/2017	10.00	10.00	Average / 3	Average / 3	10.00	9.60
New Jersey	Atlantic City Electric Co.	D-ER-17030308	Electric	Distribution	9/22/2017	9.60	9.60	Below Average / 2	Below Average / 2	9.80	9.80
Texas	Oncor Electric Delivery Co.	D-46957	Electric	Distribution	9/28/2017	9.80	9.80	Average / 3	Average / 3	9.50	9.50
Maryland	Potomac Electric Power Co.	C-9443	Electric	Distribution	10/20/2017	9.50	9.50	Below Average / 3	Below Average / 3	10.25	10.25
California	Pacific Gas and Electric Co.	Advise No. 3887-G/5148-E	Electric	Vertically Integrated	10/26/2017	10.25	10.25	Above Average / 3	Above Average / 3	10.20	10.20
California	San Diego Gas & Electric Co.	Advise No. 3120-E	Electric	Vertically Integrated	10/26/2017	10.30	10.30	Above Average / 3	Above Average / 3	10.30	10.30
California	Southern California Edison Co.	Advise No. 3665-E	Electric	Vertically Integrated	10/26/2017	10.25	10.25	Above Average / 2	Above Average / 2	10.25	11.95
Florida	Tampa Electric Co.	D-20170210-EI	Electric	Vertically Integrated	11/6/2017	11.95	11.95	Below Average / 1	Below Average / 1	10.00	10.00
Alaska	Alaska Electric Light Power	D-U-16-086	Electric	Vertically Integrated	11/15/2017	10.00	10.00	Average / 2	Average / 2	10.00	9.50
Massachusetts	NSTAR Electric Co.	DPU 17-05 (NSTAR)	Electric	Distribution	11/30/2017	10.00	10.00	Average / 2	Average / 2	9.80	9.80
Massachusetts	Western Massachusetts Electric	DPU 17-05 (WMECO)	Electric	Distribution	11/30/2017	9.50	9.50	Average / 3	Average / 3	9.60	9.65
Washington	Puget Sound Energy Inc.	D-UE-170033	Electric	Vertically Integrated	12/5/2017	9.80	9.80	Average / 3	Average / 3	9.50	9.58
Wisconsin	Northern States Power Co. - WI	D-4220-UR-123 (Elec)	Electric	Vertically Integrated	12/7/2017	9.60	9.60	Average / 2	Average / 2	9.10	9.10
Texas	Southwestern Electric Power Co	D-46449	Electric	Vertically Integrated	12/14/2017	9.58	9.58	Average / 2	Average / 2	9.50	9.50
Texas	El Paso Electric Co.	D-46831	Electric	Vertically Integrated	12/14/2017	9.65	9.65	Average / 3	Average / 3	9.10	9.10
Oregon	Portland General Electric Co.	D-UE-319	Electric	Vertically Integrated	12/18/2017	9.50	9.50	Average / 2	Average / 2	9.70	9.70
New Mexico	Public Service Co. of NM	C-16-00276-UT	Electric	Vertically Integrated	12/20/2017	9.58	9.58	Average / 2	Average / 2	9.30	9.30
Vermont	Green Mountain Power Corp.	C-17-3112-INV	Electric	Vertically Integrated	12/20/2017	9.50	9.50	Average / 2	Average / 2	9.98	9.98
Idaho	Avista Corp.	D-AVU-E-17-01	Electric	Vertically Integrated	12/21/2017	9.51	9.51	Average / 2	Average / 2	9.90	9.90
Nevada	Nevada Power Co.	D-17-06003	Electric	Vertically Integrated	12/28/2017	9.51	9.51	Average / 1	Average / 1	9.70	9.70
Kentucky	Kentucky Power Co.	C-2017-00179	Electric	Vertically Integrated	1/18/2018	9.70	9.70	Average / 3	Average / 3	9.98	9.98
Oklahoma	Public Service Co. of OK	Ca-PUD201700151	Electric	Vertically Integrated	1/31/2018	9.90	9.90	Average / 1	Average / 1	9.25	9.25
Iowa	Interstate Power & Light Co.	D-RPU-2017-0001	Electric	Vertically Integrated	2/2/2018	9.90	9.90	Average / 2	Average / 2	9.00	9.00
North Carolina	Duke Energy Progress LLC	D-E-2, Sub 1142	Electric	Vertically Integrated	2/23/2018	10.00	10.00	Above Average / 3	Above Average / 3	9.73	9.73
Minnesota	ALLETE (Minnesota Power)	D-E-015/GR-16-664	Electric	Vertically Integrated	3/12/2018	9.90	9.90	Average / 1	Average / 1	9.73	9.73
New York	Niagara Mohawk Power Corp.	C-17-E-0238	Electric	Distribution	3/15/2018	9.73	9.73	Average / 1	Average / 1	9.73	9.73
Michigan	Consumers Energy Co.	C-U-18322	Electric	Vertically Integrated	3/29/2018	9.90	9.90	Average / 1	Average / 1	9.73	9.73
Michigan	Indiana Michigan Power Co.	C-U-18370	Electric	Vertically Integrated	4/12/2018	9.90	9.90	Average / 1	Average / 1	9.73	9.73
Kentucky	Duke Energy Kentucky Inc.	C-2017-00321	Electric	Vertically Integrated	4/13/2018	9.73	9.73	Average / 1	Average / 1	9.73	9.73
Total Cases						100	73	27	40	60	40
Mean						9.69	9.77	9.46	9.62	9.73	9.62
Median						9.63	9.70	9.55	9.52	9.80	9.52
Maximum						11.95	11.95	10.00	11.95	10.55	11.95
Minimum						9.00	9.10	9.00	9.00	9.00	9.10

Source: RRA