BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

DIRECT TESTIMONY OF

ROBERT B. HEVERT

ON BEHALF OF KANSAS CITY POWER & LIGHT COMPANY

IN THE MATTER OF THE APPLICATION OF KANSAS CITY POWER & LIGHT COMPANY TO MAKE CERTAIN CHANGES IN ITS CHARGES FOR ELECTRIC SERVICE

DOCKET NO. 18-KCPE-___-RTS

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GLOSSARY OF FREQUENTLY USED TERMS

TERM	DESCRIPTION		
Beta Coefficient	A component of the CAPM that measures the risk of		
	a given stock relative to the risk of the overall market.		
Capital Asset Pricing Model	A risk premium-based model used to estimate the		
("CAPM")	Cost of Equity, assuming the stock is added to a well-		
	diversified portfolio. The CAPM assumes that		
	investors are compensated for the time value of		
	money (represented by the Risk-Free Rate), and risk		
	(represented by the combination of the Beta		
	Coefficient and the Market Risk Premium).		
Constant Growth DCF Model	A form of the DCF model that assumes cash flows		
	will grow at a constant rate, in perpetuity. The model		
	simplifies to a form that expresses the Cost of Equity		
	as the sum of the expected dividend yield and the		
	expected growth rate.		
Cost of Equity	The return required by investors to invest in equity		
	securities. The terms "Return on Equity" and "Cost		
D: 10 17 ((DCF)) 16 11	of Equity" are used interchangeably.		
Discounted Cash Flow ("DCF") Model	A model used to estimate the Cost of Equity based on		
	expected cash flows. The Cost of Equity equals the		
	discount rate that sets the current market price equal		
Di-11171-11	to the present value of expected cash flows.		
Dividend Yield	For a given stock, the current dividend divided by the		
Grass Domastia Product ("GDP")	current market price. The value of all finished goods and services produced		
Gross Domestic Product ("GDP")	within a country during a given period of time		
	(usually measured annually). GDP includes public		
	and private consumption, government expenditures,		
	investments, and exports less imports.		
Market Return	The expected return on the equity market, taken as a		
Warket Retain	portfolio.		
Market Risk Premium	The additional compensation required by investing in		
	the equity market as a portfolio over the Risk-Free		
	rate. The Market Risk Premium is a component of		
	the CAPM.		
Multi-Stage DCF Model	A form of the DCF model in which the rate of growth		
	may change over different stages.		
Proxy Group	A group of publicly traded companies used as the		
	"proxy" for the subject company (in this case,		
	KCP&L Greater Missouri Operations Company).		
	Proxy companies are sometimes referred to as		
	"Comparable Companies."		

TERM	DESCRIPTION		
Return on Equity ("ROE")	The return required by investors to invest in equity		
	securities. The terms "Return on Equity" and "Cost		
	of Equity" are used interchangeably.		
Risk-Free Rate	The rate of return on an asset with no risk of default.		
Risk Premium	The additional compensation required by investors		
	for taking on additional increments of risk. Risk		
	Premium-based approaches are used in addition to the		
	DCF and CAPM to estimate the Cost of Equity.		
Terminal Growth	The expected rate of growth in the final, or terminal,		
	stage of the Multi-Stage DCF model.		
Treasury Inflation Protected Securities	Treasury securities that are indexed to inflation. The		
("TIPS")	principal value of TIPS increase with inflation and		
	decrease with deflation, as measured by the		
	Consumer Price Index.		
Treasury Yield	The return on Treasury securities; the yield on long-		
	term Treasury bonds is considered to be a measure of		
	the Risk-Free Rate.		

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1		I. <u>INTRODUCTION AND SUMMARY OF RECOMMENDATIONS</u>
2	Q:	Please state your name and business address.
3	A:	My name is Robert B. Hevert and my business address is ScottMadden Inc., 1900 West
4		Park Drive, Suite 250, Westborough, MA 01581.
5	Q:	On whose behalf are you submitting this testimony?
6	A:	I am submitting this direct testimony ("Direct Testimony") before the Kansas
7		Corporation Commission ("Commission") on behalf of Kansas City Power & Light
8		Company ("KCP&L" or the "Company").
9	Q:	Please describe your educational background.
10	A:	I hold a Bachelor's degree in Business and Economics from the University of Delaware,
11		and an MBA with a concentration in Finance from the University of Massachusetts. I
12		also hold the Chartered Financial Analyst designation.

Q: Please describe your experience in the energy and utility industries.

A:

A:

I have worked in regulated industries for over thirty years, having served as an executive and manager with consulting firms, a financial officer of a publicly-traded natural gas utility (at the time, Bay State Gas Company), and an analyst at a telecommunications utility. In my role as a consultant, I have advised numerous energy and utility clients on a wide range of financial and economic issues, including corporate and asset-based transactions, asset and enterprise valuation, transaction due diligence, and strategic matters. As an expert witness, I have provided testimony in more than 230 proceedings regarding various financial and regulatory matters before numerous state utility regulatory agencies, the Federal Energy Regulatory Commission, and the Alberta Utilities Commission. A summary of my professional and educational background, including a list of my testimony in prior proceedings, is included in **Attachment A** to my Direct Testimony.

II. PURPOSE AND OVERVIEW OF TESTIMONY

Q: What is the purpose of your Direct Testimony?

On behalf of KCP&L, my Direct Testimony presents evidence and provides a recommendation regarding the Company's Return on Equity ("ROE")¹ and assesses the reasonableness of the Company's capital structure and Cost of Debt. My analyses and conclusions are supported by the data presented in Exhibits RBH-1 through RBH-11, which have been prepared by me or under my direction.

¹ Throughout my Direct Testimony, I interchangeably use the terms "ROE" and "Cost of Equity."

Q: What are your conclusions regarding the appropriate Cost of Capital for theCompany?

A:

The Company's 4.96 percent Cost of Debt reflects the prevailing level of interest rates at the times of issuance. As such, I conclude that the Company's proposed Cost of Debt is reasonable and appropriate.

As to the Company's requested capital structure, which includes 50.25 percent common equity and 49.75 percent long-term debt, I conclude that it is consistent with those in place at similarly-situated utilities, whose capital structures include common equity ratios in the range of 46.06 percent to 59.52 percent.

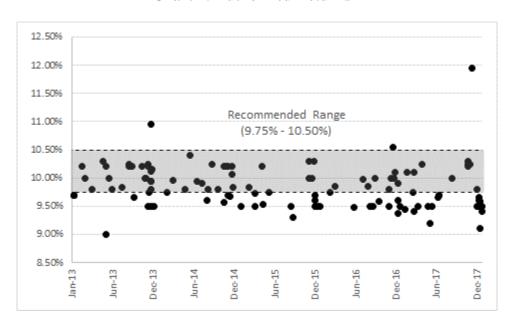
As to the Company's Cost of Equity, my analyses indicate that an ROE in the range of 9.75 percent to 10.50 percent represents the range of equity investors' required return for investment in vertically integrated electric utilities similar to the Company in today's capital markets.² I note that the Cost of Equity, which is the return required by equity investors to assume the risks of ownership, is a market-based concept. As discussed further in my testimony, as opposed to the earned return on common equity, which is an accounting construct that can be observed in historical data, the Cost of Equity is unobservable and must be estimated based on observable capital market data. As a consequence, there may be differences of opinion among analysts as to the data, assumptions and models used in the estimation process. Although analysts may rely on different data, assumptions and models, the determination of the Cost of Equity must be based on considerations such as the reasonableness of those factors, capital market conditions, and the relative risk of the subject company.

Q: How does your recommendation compare to recently authorized returns?

A:

A: As shown in Chart 1, below, my recommendation is highly consistent with recently authorized ROEs for vertically integrated electric utilities. Chart 1 also shows that there have been a range of authorized returns and that there has not been a discernible trend in those returns.

Chart 1: Authorized Returns³



Q: Please provide a brief overview of the analyses that led to your ROE recommendation.

Because all financial models are subject to various assumptions and constraints, equity analysts and investors tend to use multiple methods to develop their return requirements.

I therefore relied on three widely-accepted approaches to develop my ROE recommendation: (1) the Discounted Cash Flow ("DCF") model, including the Constant Growth, and Multi-Stage forms; (2) the Capital Asset Pricing Model ("CAPM"); and (3)

As noted in the direct testimony of Mr. Darrin R. Ives, the Company has entered into a settlement agreement in Docket No. 18-KCPE-095-MER in which the Company agreed to recommend an ROE of 9.30 percent in this proceeding following the approval of the settlement agreement and closing of the merger.

1		the Bond Yield Plus Risk Premium approach. As discussed in Sections V, VI and VII, I
2		considered the results of those methods in the context of both Company-specific, and
3		general capital market factors. Based on those analyses, I concluded that a range of 9.75
4		percent to 10.50 percent represents reasonable estimates of the Company's Cost of
5		Equity.
6	Q:	How is the remainder of your Direct Testimony organized?
7	A:	The remainder of my Direct Testimony is organized as follows:
8		Section III - Provides a summary of issues regarding Cost of Equity estimation in
9		regulatory proceedings and discusses the regulatory guidelines pertinent to the
10		development of the cost of capital;
11		Section IV - Explains my selection of the proxy group used to develop my
12		analytical results;
13		Section V - Explains my analyses and the analytical bases for my ROE
14		recommendation;
15		Section VI - Provides a discussion of specific business risks and other
16		considerations that have a direct bearing on the Company's Cost of Equity;
17		Section VII - Highlights the current capital market conditions and their effect on
18		the Company's Cost of Equity;
19		Section VIII - Analyzes the Company's embedded Cost of Debt;
20		Section IX - Provides my analyses of the Company's capital structure and
21		presents the overall rate of return;
22		Section X – Summarizes my conclusions and recommendations.

³ Source: S&P Global Market Intelligence as of March 20, 2018.

III. SUMMARY OF ISSUES SURROUNDING COST OF EQUITY ESTIMATION IN <u>REGULATORY PROCEEDINGS</u>

Q: Before addressing the specific aspects of this proceeding, please provide an overview
 of the issues surrounding the Cost of Equity in regulatory proceedings, generally.

A:

In very general terms, the Cost of Equity is the return that investors require to make an equity investment in a firm. That is, investors will only provide funds to a firm if the return that they *expect* is equal to, or greater than, the return that they *require* to accept the risk of providing funds to the firm. From the firm's perspective, that required return, whether it is provided to debt or equity investors, has a cost. Individually, we speak of the "Cost of Debt" and the "Cost of Equity." Together, they are referred to as the "Cost of Capital."

The Cost of Capital (including the costs of both debt and equity) is based on the economic principle of "opportunity costs." Investing in any asset, whether debt or equity securities, implies a forgone opportunity to invest in alternative assets. For any investment to be sensible, its expected return must be at least equal to the return expected on alternative, comparable investment opportunities. Because investments with like risks should offer similar returns, the opportunity cost of an investment should equal the return available on an investment of comparable risk.

Although both debt and equity have required costs, they differ in certain fundamental ways. Most noticeably, the Cost of Debt is contractually defined and can be directly observed as the interest rate or yield on debt securities.⁴ The Cost of Equity, on the other hand, is neither directly observable nor a contractual obligation. Rather, equity investors have a claim on cash flows only after debt holders are paid; the uncertainty (or

⁴ The observed interest rate may be adjusted to reflect issuance or other directly observable costs.

risk) associated with those residual cash flows determines the Cost of Equity. Because equity investors bear the "residual risk," they take greater risks and require higher returns than debt holders. In that basic sense, equity and debt investors differ: They invest in different securities, face different risks, and require different returns.

Whereas the Cost of Debt can be directly observed, the Cost of Equity must be estimated or inferred based on market data and various financial models. As discussed throughout my Direct Testimony, each of those models is subject to certain assumptions, which may be more or less applicable under differing market conditions. In addition, because the Cost of Equity is premised on opportunity costs, the models typically are applied to a group of "comparable" or "proxy" companies. The choice of models (including their inputs), the selection of proxy companies, and the interpretation of the model results all require the application of reasoned judgment. That judgment should consider data and information that is not necessarily included in the models themselves. In the end, the estimated Cost of Equity should reflect the return that investors require in light of the subject company's risks, and the returns available on comparable investments.

In the end, the estimated Cost of Equity should reflect the return that investors require in light of the subject company's risks, and the returns available on comparable investments. A given utility stock may require a higher return based on the risks to which it is exposed relative to other utilities. That is, simply because utilities are viewed as a "sector," that does not mean that all utilities require the same return. The assessment of relative risk, and its effect on the Cost of Equity necessarily requires the application of reasoned, experienced judgment applied to a variety of data, much of which is qualitative in nature.

1 Q: Please now provide a brief summary of the regulatory guidelines established for the purpose of determining the ROE.

A: The United States Supreme Court (the "Court") established the guiding principles for establishing a fair return for capital in two cases: (1) *Bluefield Water Works and Improvement Co. v. Public Service Comm'n of West Virginia*, 262 U.S. 679 (1923) ("Bluefield"); and (2) Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944) ("Hope"). In those cases, the Court recognized that the fair rate of return on equity should be: (1) comparable to returns investors expect to earn on other investments of similar risk; (2) sufficient to assure confidence in the company's financial integrity; and (3) adequate to maintain and support the company's credit and to attract capital.

11 Q: Does Kansas precedent provide similar guidance?

12 A: Yes. In a prior order, the Commission cited the *Hope* and *Bluefield* decisions and acknowledged its authority and responsibility to set "a fair rate of return", stating that:

In determining the appropriate ROE, the Commission is guided by *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1944) and *Bluefield Waterworks & Improvement Company v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923) which find returns granted to regulated public utilities should be: (1) commensurate with returns on investment of similar risk; (2) sufficient to ensure the utility's financial integrity under proper management; and (3) adjusted to reflect changes in the money market and business conditions. Hope and Bluefield have been adopted by the Kansas Supreme Court and recognized by the Commission in Docket No. 10-KCPE-415-RTS (10-415 Docket), KCP&L's most recent rate case before the Commission. While the Commission has substantial discretion in setting a fair rate of return, it must not be so unreasonably high or low as to be unlawful.⁵

In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in Its Charges for Electric Service, Docket No. 15-KCPE-116-RTS, Order on KCP&L's Application for Rate Change at p. 13-14 (Sep. 9, 2015).

Based on those standards, the authorized ROE should provide the Company with the opportunity to earn a fair and reasonable return, and should enable efficient access to external capital under a variety of market conditions.

4 Q: Why is it important for a utility to be allowed the opportunity to earn a return adequate to attract equity capital at reasonable terms?

A:

A:

A return that is adequate to attract capital at reasonable terms enables the utility to provide service while maintaining its financial integrity. As discussed above, and in keeping with the *Hope* and *Bluefield* standards, that return should be commensurate with the returns expected elsewhere in the market for investments of equivalent risk. The consequence of the Commission's order in this case, therefore, should be to provide KCP&L with the opportunity to earn a return on equity that is: (1) adequate to attract capital at reasonable terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises having corresponding risks. To the extent KCP&L is provided a reasonable opportunity to earn its market-based Cost of Equity, neither customers nor shareholders should be disadvantaged. In fact, a return that is adequate to attract capital at reasonable terms enables the Company to provide safe, reliable electric utility service while maintaining its financial integrity.

Q: How is the Cost of Equity estimated in regulatory proceedings?

The Cost of Equity is estimated by the use of various financial models. By their very nature, those models produce a range of results from which the ROE is estimated. Both practitioners and academics, however, recognize that financial models simply are tools to be used in the ROE estimation process, and that strict adherence to any single approach or to the specific results of any single approach can lead to flawed or misleading

conclusions. That position is consistent with the *Hope* and *Bluefield* principle that it is the analytical result, as opposed to the methodology, that is controlling in arriving at ROE determinations. Thus, a reasonable ROE estimate appropriately considers alternative methodologies and the reasonableness of their individual and collective results in the context of observable, relevant market information.

IV. **PROXY GROUP SELECTION**

6 Q: As a preliminary matter, why is it necessary to select a group of proxy companies to 7 determine the Cost of Equity for the Company?

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- 8 A: Since the ROE is a market-based concept, and KCP&L is not a publicly traded entity, it is 9 necessary to establish a group of comparable, publicly traded companies to serve as its 10 "proxy." Even if the Company were a publicly traded entity, short-term events could bias 11 its market value during a given period of time. A significant benefit of using a proxy 12 group is that it moderates the effects of anomalous, temporary events associated with any 13 one company.
- 14 Does the selection of a proxy group suggest that analytical results will be tightly Q: 15 clustered around average (i.e., mean) results?
- 16 A: No. For example, the Constant Growth DCF approach defines the Cost of Equity as the 17 sum of the expected dividend yield and projected long-term growth. Despite the care 18 taken to ensure risk comparability, market expectations with respect to future risks and 19 growth opportunities will vary from company to company. Therefore, even within a 20 group of similarly-situated companies, it is common for analytical results to reflect a seemingly wide range. Consequently, at issue is how to estimate the Cost of Equity from

1		within that range. Such a determination necessarily must consider a wide range of both		
2		quantitative and qualitative information.		
3	Q:	Please provide a summary profile of KCP&L.		
4	A:	KCP&L, a wholly owned subsidiary of Great Plains Energy Incorporated ("GPE"),		
5		provides electric service to approximately 542,500 retail customers in Missouri and		
6		Kansas. ⁶ KCP&L's current long-term issuer credit rating from Standard & Poor's		
7		("S&P") is BBB+ (outlook: Positive) and Baa1 (outlook: Stable) from Moody's Investors		
8		Service ("Moody's"). ⁷		
9	Q:	How did you select the companies included in your proxy group?		
10	A:	I began with the universe of companies that Value Line classifies as Electric Utilities, and		
11		applied the following screening criteria:		
12		 I excluded companies that do not consistently pay quarterly cash dividends; 		
13		I excluded companies that were not covered by at least two utility industry equity		
14		analysts;		
15		I excluded companies that do not have investment grade senior unsecured bond		
16		and/or corporate credit ratings from S&P		
17		■ I excluded companies that were not vertically-integrated, <i>i.e.</i> utilities that own and		
18		operate regulated generation, transmission and distribution assets;		
19		I excluded any companies whose regulated operating income over the three most		
20		recently reported fiscal years comprised less than 60.00 percent of the respective		

totals for that company;

See Great Plains Energy Inc., SEC Form 10-K for year-end December 31, 2017, at 10. Source: S&P Global Market Intelligence as of March 20, 2018.

- I excluded any companies whose regulated electric operating income over the
 three most recently reported fiscal years represented less than 60.00 percent of
 total regulated operating income;⁸ and
- I eliminated companies that are currently known to be party to a merger, or other significant transaction.

6 Q: Did you include GPE in your proxy group?

- A: No. To avoid the circular logic that would otherwise occur, it has been my consistent practice to exclude the subject company (or its parent) from the proxy group. In any event, GPE would be excluded from my proxy group based on its announced merger with Westar Energy, Inc. 9
- 11 Q: What companies met those screening criteria?
- 12 A: The criteria discussed above resulted in a proxy group of the following 20 companies:

In the KCP&L's most recent case (Docket No. 15-KCPE-116-RTS), I excluded companies whose regulated electric operating income over the three most recently reported fiscal years represented less than 90.00 percent of total regulated operating income. However, due to recent consolidation in the industry, that threshold would produce a relatively small group of proxy companies. As such, in this proceeding, I have lowered the threshold to 60.00 percent.

⁹ SEC Form 8-K, Great Plains Energy Incorporated (July 9, 2017).

Table 1: Proxy Group Screening Results

1

Company	Ticker
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Black Hills Corporation	BKH
CMS Energy Corporation	CMS
DTE Energy Company	DTE
Duke Energy Corporation	DUK
El Paso Electric Company	EE
Hawaiian Electric Industries, Inc.	HE
IDACORP, Inc.	IDA
NorthWestern Corporation	NWE
OGE Energy Corp.	OGE
Otter Tail Corporation	OTTR
Pinnacle West Capital Corporation	PNW
PNM Resources, Inc.	PNM
Portland General Electric Company	POR
Southern Company	SO
WEC Energy Group, Inc.	WEC
Xcel Energy Inc.	XEL

V. <u>COST OF EQUITY ESTIMATION</u>

- 2 Q: Please briefly discuss the ROE in the context of the regulated rate of return.
- A: Regulated utilities primarily use common stock and long-term debt to finance their capital investments. The Weighted Average Cost of Capital weights the costs of the individual sources of capital by their respective book values. While the Cost of Debt can be directly observed, the Cost of Equity is market-based and, therefore, must be estimated based on observable market information.

Q: How is the required ROE determined?

A:

I estimated the ROE using analyses based on market data to quantify a range of investor expectations of required equity returns. By their very nature, quantitative models produce a range of results from which the market required ROE must be estimated. As discussed throughout my Direct Testimony, that estimation must be based on a comprehensive review of relevant data and information, and does not necessarily lend itself to a strict mathematical solution. Consequently, the key consideration in determining the ROE is to ensure that the overall analysis reasonably reflects investors' view of the financial markets in general, and the subject company (in the context of the proxy companies) in particular.

Because the Cost of Equity is not directly observable, it must be estimated based on both quantitative and qualitative information. Although a number of empirical models have been developed for that purpose, all are subject to limiting assumptions or other constraints. Consequently, many finance texts recommend using multiple approaches to estimate the Cost of Equity. When faced with the task of estimating the Cost of Equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed and, therefore, rely on multiple analytical approaches.

I also note that as a practical matter, no individual model is more reliable than all others under all market conditions. Therefore, it is both prudent and appropriate to use multiple methodologies in order to mitigate the effects of assumptions and inputs associated with any single approach. As such, I have considered the results of the

See, e.g., Eugene Brigham, Louis Gapenski, <u>Financial Management: Theory and Practice</u>, 7th Ed., 1994, at 341, and Tom Copeland, Tim Koller and Jack Murrin, <u>Valuation: Measuring and Managing the Value of Companies</u>, 3rd ed., 2000, at 214.

- 1 Constant Growth and Multi-Stage forms of the DCF model; the Capital Asset Pricing
- Model; and the Bond Yield Plus Risk Premium approach.
- 3 A. <u>Constant Growth Discounted Cash Flow Model</u>
- 4 Q: Please more fully describe the Constant Growth DCF approach.
- 5 A: The Constant Growth DCF approach is based on the theory that a stock's current price
- 6 represents the present value of all expected future cash flows. In its simplest form, the
- 7 Constant Growth DCF model expresses the Cost of Equity as the discount rate that sets
- 8 the current price equal to expected cash flows:

9
$$P = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_{\infty}}{(1+k)^{\infty}} \quad \text{Equation [1]}$$

- where P represents the current stock price, $D_1 \dots D_{\infty}$ represent expected future dividends,
- and k is the discount rate, or required ROE. Equation [1] is a standard present value
- calculation that can be simplified and rearranged into the familiar form:

13
$$k = \frac{D_0 (1+g)}{p} + g \quad \text{Equation [2]}$$

- Equation [2] often is referred to as the "Constant Growth DCF" model, in which
- 15 the first term is the expected dividend yield and the second term is the expected long-
- term annual growth rate.
- 17 Q: What assumptions are inherent in the Constant Growth DCF model?
- 18 A: The Constant Growth DCF model assumes: (1) a constant average annual growth rate for
- earnings and dividends; (2) a stable dividend payout ratio; (3) a constant Price to
- Earnings multiple; and (4) a discount rate greater than the expected growth rate.

- 1 Q: What market data did you use to calculate the dividend yield in your Constant
- 2 **Growth DCF model?**
- 3 A: The dividend yield is based on the proxy companies' current annualized dividend, and
- 4 average closing stock prices over the 30, 90, and 180-trading day periods as of March 16,
- 5 2018.
- 6 Q: Why did you use three averaging periods to calculate an average stock price?
- 7 A: I did so to ensure that the model's results are not skewed by anomalous events that may
- 8 affect stock prices on any given trading day. At the same time, the averaging period
- 9 should be reasonably representative of expected capital market conditions over the long
- term. In my view, using 30-, 90-, and 180-day averaging periods reasonably balances
- those concerns.
- 12 Q: Did you make any adjustments to the dividend yield to account for periodic growth
- in dividends?
- 14 A: Yes, I did. Since utility companies tend to increase their quarterly dividends at different
- times throughout the year, it is reasonable to assume that dividend increases will be
- evenly distributed over calendar quarters. Given that assumption, it is appropriate to
- 17 calculate the expected dividend yield by applying one-half of the long-term growth rate
- to the current dividend yield. That adjustment ensures that the expected dividend yield is,
- on average, representative of the coming twelve-month period, and does not overstate the
- dividends to be paid during that time.

1	Q:	Is it important to select appropriate measures of long-term growth in applying the
2		DCF model?
3	A:	Yes. In its Constant Growth form, the DCF model (i.e., as presented in Equation [2]
4		above) assumes a single growth estimate in perpetuity. Accordingly, in order to reduce
5		the long-term growth rate to a single measure, one must assume a fixed payout ratio, and
6		the same constant growth rate for earnings per share ("EPS"), dividends per share, and
7		book value per share. Since dividend growth can only be sustained by earnings growth,
8		the model should incorporate a variety of measures of long-term earnings growth. That
9		can be accomplished by averaging those measures of long-term growth that tend to be
10		least influenced by capital allocation decisions that companies may make in response to
11		near-term changes in the business environment. Because such decisions may directly
12		affect near-term dividend payout ratios, estimates of earnings growth are more indicative
13		of long-term investor expectations than are dividend growth estimates. For the purposes
14		of the Constant Growth DCF model, therefore, growth in EPS represents the appropriate
15		measure of long-term growth.
16	Q:	Please summarize the findings of academic research on the appropriate measure for
17		estimating equity returns using the DCF model.
18	A:	The relationship between various growth rates and stock valuation metrics has been the
19		subject of much academic research. ¹¹ As noted over 40 years ago by Charles Phillips in
20		The Economics of Regulation:
21 22 23		For many years, it was thought that investors bought utility stocks largely on the basis of dividends. More recently, however, studies indicate that the market is valuing utility stocks with reference to total

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

per share earnings, so that the earnings-price ratio has assumed increased emphasis in rate cases. 12

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Philips' conclusion continues to hold true. Subsequent academic research has clearly and consistently indicated that measures of earnings and cash flow are strongly related to returns, and that analysts' forecasts of growth are superior to other measures of growth in predicting stock prices.¹³ For example, Vander Weide and Carleton state that, "[our] results ... are consistent with the hypothesis that investors use analysts' forecasts, rather than historically oriented growth calculations, in making stock buy-and-sell decisions." Other research specifically notes the importance of analysts' growth estimates in determining the Cost of Equity, and in the valuation of equity securities. Dr. Robert Harris noted that "a growing body of knowledge shows that analysts' earnings forecast are indeed reflected in stock prices." Citing Cragg and Malkiel, Dr. Harris notes that those authors "found that the evaluations of companies that analysts make are the sorts of ones on which market valuation is based."15 Similarly, Brigham, Shome and Vinson noted that "evidence in the current literature indicates that (i) analysts' forecasts are superior to forecasts based solely on time series data; and (ii) investors do rely on analysts' forecasts."16

To that point, the research of Carleton and Vander Weide demonstrates that earnings growth projections have a statistically significant relationship to stock valuation

¹² Charles F. Phillips, Jr., <u>The Economics of Regulation</u>, at 285 (Rev. ed. 1969).

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).

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

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

5	Q:	Please summarize your inputs to the Constant Growth DCF model.
4		purpose of the Constant Growth DCF model.
3		Consequently, earnings growth, not dividend growth, is the appropriate estimate for the
2		their investment decisions based on expectations of growth in earnings, not dividends.
1		levels, while dividend growth rates do not. Those findings suggest that investors form

- A: I applied the DCF model to the proxy group of integrated electric utility companies using
 the following inputs for the price and dividend terms:
 - The average daily closing prices for the 30-trading days, 90-trading days, and 180-trading days ended March 16, 2018, for the term P₀; and
 - The annualized dividend per share as of March 16, 2018, for the term D_0 .
- 11 I then calculated my DCF results using each of the following growth terms:
 - The Zacks consensus long-term earnings growth estimates;
 - The First Call consensus long-term earnings growth estimates; and
- The Value Line long-term earnings growth estimates. 18

15 Q: How did you calculate the DCF results?

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For each proxy company, I calculated the mean, mean high, and mean low results. For the mean result, I combined the average of the EPS growth rate estimates reported by Value Line, Zacks, and First Call with the subject company's dividend yield for each proxy company and then calculated the average result for those estimates. I calculated the high DCF result by combining the maximum EPS growth rate estimate as reported by Value Line, Zacks, and First Call with the subject company's dividend yield. The mean

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).

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

high result simply is the average of those estimates. I used the same approach to calculate the low DCF result, using instead the minimum of the Value Line, Zacks, and First Call estimate for each proxy company, and calculating the average result for those estimates.

5 Q: Do you have any concerns with the Constant Growth DCF model under current market conditions?

A: Yes. The Constant Growth DCF model is predicated on a number of assumptions, one of which is that the Price to Earnings ("P/E") ratio will remain constant, in perpetuity. Because the utility sector P/E ratios have expanded to the point that they recently have exceeded both their long-term average and the market P/E ratio, the Constant Growth DCF model's results should be viewed with caution. As such, it is appropriate to consider additional methods, such as the Multi-Stage DCF model, CAPM approach, and the Bond Yield Plus Risk Premium model.

14 Q: What are the results of your Constant Growth DCF analysis?

15 A: My Constant Growth DCF results are summarized in Table 2, below (*see* also Exhibit16 RBH-1).

Table 2: Constant Growth DCF Results¹⁹

	Mean Low	Mean	Mean High
30-Day Average	7.92%	8.95%	10.02%
90-Day Average	7.66%	8.70%	9.76%
180-Day Average	7.60%	8.64%	9.70%

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¹⁸ See Exhibit RBH-1.

¹⁹ See Exhibit RBH-1.

As noted earlier, the Constant Growth DCF model is subject to a number of assumptions that likely are not consistent with current market conditions. As also discussed later in my Direct Testimony, other methods more directly reflect the risk premium required by investors in response to such risks. On balance, it is my view that the Constant Growth DCF method should be given less weight than other methods in establishing the Company's ROE.

A:

Q: With those points in mind, how did you reflect the Constant Growth DCF results in your ROE range and recommendation?

I first recognized that the model's mean, and mean low results are well below a reasonable estimate of the Company's Cost of Equity. For example, of the 1,389 vertically integrated electric utility rate cases surveyed by Regulatory Research Associates that disclosed the awarded ROE since 1980, only one included an authorized ROE of 9.00 percent or lower.²⁰ On that basis alone, the mean and mean low results are highly improbable.

I also recognize that whereas the Constant Growth DCF model essentially assumes that existing capital market conditions will remain constant, Risk Premiumbased methods (discussed later in this Section) directly reflect the changing capital market environment (*see* Section VII). Because it is important to reflect the results of different models, and the mean and mean low Constant Growth DCF results are farremoved from recently authorized returns, I concluded that they should be given less weight than other methods in determining the Company's ROE.

The lowest return authorized for a vertically integrated electric utility was 9.00 percent given to Maui Electric Company and included a 50 basis point reduction due to the company's "inability to address certain apparent system inefficiencies" (see Decision and Order No. 31288, Public Utilities Commission of the State of Hawaii, Docket No. 2011-0092, at 107).

B. <u>Multi-Stage DCF Model</u>

A:

2 Q: What other forms of the DCF model have you used?

A: To address certain limiting assumptions underlying the Constant Growth form of the DCF model, I also considered the Multi-Stage (three-stage) DCF Model. The Multi-Stage model, which is an extension of the Constant Growth form, enables the analyst to specify growth rates over three distinct stages. As with the Constant Growth form of the DCF model, the Multi-Stage form defines the Cost of Equity as the discount rate that sets the current price equal to the discounted value of future cash flows. Unlike the Constant Growth form, however, the Multi-Stage model must be solved in an iterative fashion.

10 Q: Please generally describe the structure of your Multi-Stage DCF model.

The Multi-Stage DCF model sets the subject company's stock price equal to the present value of future cash flows received over three "stages" "(*e.g.*, Years 1 to 5; Years 5 to 10; Year 11 and beyond). In the first two stages, "cash flows" are defined as projected dividends. In the third stage, "cash flows" equal both dividends and the expected price at which the stock will be sold at the end of the period (*i.e.*, the "terminal price"). I calculated the terminal price based on the Gordon model, ²¹ which defines the price as the expected dividend divided by the difference between the Cost of Equity (*i.e.*, the discount rate) and the long-term expected growth rate. In essence, the terminal price is defined by the present value of the remaining "cash flows" in perpetuity. In each of the three stages, the dividend is the product of the projected earnings per share and the expected dividend payout ratio. A summary description of the model is provided in Table 3 (below).

²¹ See Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 48-52.

A:

Stage	0	1	2	3
Cash Flow Component	Initial Stock Price	Expected Dividend	Expected Dividend	Expected Dividend + Terminal Value
Inputs	Stock Price Earnings Per Share (EPS); Dividends Per Share (DPS)	Expected EPS; Expected DPS	Expected EPS; Expected DPS	Expected EPS; Expected DPS; Terminal Value
Assumptions	30-, 90-, and 180-day average stock price	EPS Growth Rate; Payout Ratio	Growth Rate Change; Payout Ratio Change	Long-term Growth Rate; Long-term Payout Ratio

2 Q: What are the analytical benefits of your three-stage DCF model?

The principal benefits relate to the flexibility provided by the model's formulation. Since the model provides the ability to specify near, intermediate and long-term growth rates, for example, it avoids the sometimes limiting assumption that the subject company will grow at the same, constant rate in perpetuity. In addition, by calculating the dividend as the product of earnings per share and the dividend payout ratio, the model enables analysts to reflect assumptions regarding the timing and extent of changes in the payout ratio to reflect, for example, increases or decreases in expected capital spending, or transition from current payout levels to long-term expected levels. In that regard, because the model relies on multiple sources of earnings growth rate assumptions, it is

not limited to a single source, such as Value Line, for all inputs, and mitigates the potential bias associated with relying on a single source of growth estimates.²²

The model also enables the analyst to assess the reasonableness of the inputs and results by reference to certain market-based metrics. For example, the stock price estimate can be divided by the expected earnings per share in the final year to calculate an average Price to Earnings ("P/E") ratio. Similarly, the terminal P/E ratio can be divided by the terminal growth rate to develop a Price to Earnings Growth ("PEG") ratio. To the extent that either the projected P/E or PEG ratios are inconsistent with either historical or expected levels, it may indicate incorrect or inconsistent assumptions within the balance of the model.

11 Q: Please summarize your inputs to the Multi-Stage DCF model.

12 A: I applied the Multi-Stage model to the proxy group described earlier in my Direct
13 Testimony. My assumptions with respect to the various model inputs are described in
14 Table 4 (below).

See Harris and Marston, Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts, Financial Management 21 (Summer 1992).

Table 4: Multi-Stage DCF Model Assumptions

A:

Stage	Initial	First	Transition	Terminal
Stock Price	30-, 90-, and			
	180-day			
	average stock			
	price as of			
	March 16,			
	2018			
Earnings	2016 actual	EPS growth	Transition to	Long-term
Growth	EPS escalated	as average of	Long-term	GDP growth
	by Period 1	(1) Value	GDP growth	
	growth rate	Line; (2)		
		Zacks; and		
		(3) First Call		
Payout Ratio	Value Line	Value Line	Transition to	Long-term
	company-	company-	long-term	expected
	specific	specific	industry	payout ratio
	1	1	payout ratio	1 7
Terminal				Expected
Value				dividend in
				final year
				divided by
				solved Cost
				of Equity less
				long-term
				growth rate

2 Q: How did you calculate the long-term GDP growth rate?

The long-term growth rate of 5.45 percent is based on the real GDP growth rate of 3.21 percent from 1929 through 2017, and an inflation rate of 2.16 percent. The GDP growth rate is calculated as the compound growth rate in the chain-weighted GDP for the period from 1929 through 2017.²³ The rate of inflation of 2.16 percent is an average of two components: (1) the compound annual forward rate starting in ten years (*i.e.*, 2028, which is the beginning of the terminal period) based on the 30-day average spread between

yields on long-term nominal Treasury Securities and long-term Treasury Inflation Protected Securities, known as the "TIPS spread" of 2.13 percent;²⁴ and (2) and the projected Blue Chip Financial Forecast of CPI for 2024 – 2028 of 2.20 percent.²⁵

I averaged these two measures of inflation because nominal Treasury yields are related to inflation, which includes the effect of commodities such as oil, which may cause the current TIPS spread to somewhat understate long-term expected inflation. To account for that effect, I also considered the 2.20 percent long-term projected rate of inflation as provided by Blue Chip Financial Forecast.²⁶ My long-term inflation rate, therefore, is the average of those two estimates, or 2.16 percent.

Have you compared your long-term growth rate to historical measures?

Yes, I have. From 1929 through 2017, the long-term geometric average growth in nominal GDP was 6.11 percent. The arithmetic average annual growth rate over that time was 6.34 percent. Considered in that context, my 5.45 percent assumption is approximately 65 to 90 basis points below the long-term average. I also calculated the average five-year average annual growth rates over the 1929 to 2017 period. I then arranged that data in histograms to provide a perspective of how frequently various levels of growth have occurred.

As Chart 2 demonstrates, average annual growth of 5.45 percent and above has been observed frequently. When measured over five-year periods, average annual growth exceeded 5.45 percent in 58 of 84 periods. That is, my result falls in approximately the

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A:

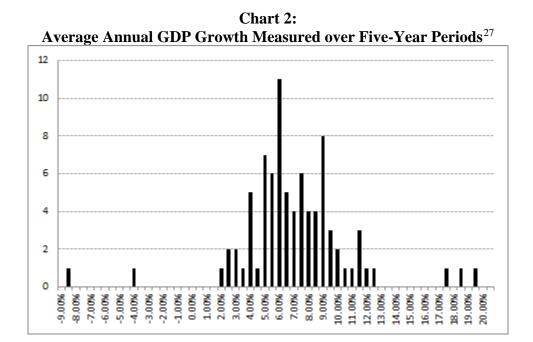
See Bureau of Economic Analysis, "Current-Dollar and 'Real' Gross Domestic Product," February 28, 2018 update.

²⁴ See Board of Governors of the Federal Reserve System, "Table H.15 Selected Interest Rates."

²⁵ Blue Chip Financial Forecasts at 14 (December 1, 2017).

²⁶ *Ibid*.

32nd percentile of observed growth rates in GDP. As such, I believe my long-term growth estimate is reasonable, if not conservative.



Q: Have you compared your long-term growth rate to analyst growth rates?

Yes, I have. As shown on Exhibit RBH-1, my long-term growth rate of 5.45 percent is similar to the analyst growth rates for my proxy group, which range from an average of 4.99 percent to 5.38 percent. That is,

10 Q: What were your specific assumptions with respect to the payout ratio?

As noted in Table 4, for the first two periods, I relied on the first year and long-term projected payout ratios reported by Value Line²⁸ for each of the proxy companies. I then assumed that by the end of the second period (*i.e.*, the end of year 10), the payout ratio will converge to the historical industry average ratio of 65.91 percent.²⁹

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²⁷ Source: Bureau of Economic Analysis.

As reported in the Value Line Investment Survey company reports as "All Div'ds to Net Prof."

²⁹ Source: Bloomberg Professional

1 Q: What are the results of your Multi-Stage DCF analysis?

A: Although I performed a series of analyses in which the terminal value is calculated based on the assumed long-term nominal GDP growth rate,³⁰ I also performed a series of analyses in which the terminal value is based on the current P/E ratio.³¹ The results of those analyses are shown in Table 5, below. For the reasons discussed below, I believe that assumption is reasonable and produces reliable results.

Table 5: Multi-Stage DCF Model Results³²

	Mean Low	Mean	Mean High
30-Day Average	9.86%	10.59%	11.34%
90-Day Average	9.18%	9.91%	10.65%
180-Day Average	9.03%	9.75%	10.50%

8 Q: Did you undertake any additional analyses to support your recommendation?

9 A: Yes. As noted earlier, I also applied the CAPM and Risk Premium approaches.

10 C. <u>Capital Asset Pricing Model</u>

11 Q: Please briefly describe the general form of the CAPM.

12 A: The CAPM is a risk premium method that estimates the Cost of Equity for a given security as a function of a risk-free return plus a risk premium (to compensate investors for the non-diversifiable or "systematic" risk of that security). As shown in Equation [3], the CAPM is defined by four components, each of which theoretically must be a forward-looking estimate:

$$\mathbf{k} = \mathbf{r_f} + \beta (\mathbf{r_m} - \mathbf{r_f})$$
 Equation [3]

where:

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³⁰ See Exhibit RBH-2.

Defined as the 30-day average of the proxy group P/E ratio, calculated as an Index.

k = the required market ROE for a security;

 β = the Beta coefficient of that security;

 r_f = the risk-free rate of return; and

 r_m = the required return on the market as a whole.

In Equation [3], the term $(r_m - r_f)$ represents the Market Risk Premium.³³ According to the theory underlying the CAPM, since unsystematic risk can be diversified away by adding securities to investment portfolios, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

$$\beta_{j} = \frac{\sigma_{j}}{\sigma_{m}} \times \rho_{j,m}$$
 Equation [4]

Where σ_j is the standard deviation of returns for company "j," σ_m is the standard deviation of returns for the broad market (as measured, for example, by the S&P 500 Index), and $\rho_{j,m}$ is the correlation of returns in between company j and the broad market. The Beta coefficient therefore represents both relative volatility (i.e., the standard deviation) of returns, and the correlation in returns between the subject company and the overall market.

Intuitively, higher Beta coefficients indicate that the subject company's returns have been relatively volatile, and have moved in tandem with the overall market. Consequently, if a company has a Beta coefficient of 1.00, it is as risky as the market and does not provide any diversification benefit.

³² See Exhibit RBH-2.

³³ The Market Risk Premium is defined as the incremental return of the market portfolio over the risk-free rate.

1 Q: What assumptions did you include in your CAPM analysis?

- 2 A: Since utility equity is a long duration investment, I used two different measures of the
- 3 risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds (i.e., 3.13
- 4 percent); and (2) the projected 30-year Treasury yield (*i.e.*, 3.42 percent).
- 5 Q: Why have you relied upon the 30-year Treasury yield for your CAPM analysis?
- 6 A: In determining the security most relevant to the application of the CAPM, it is important
- 7 to select the term (or maturity) that best matches the life of the underlying investment.
- 8 Electric utilities typically are long-duration investments and, as such, the 30-year
- 9 Treasury yield is more suitable for the purpose of calculating the Cost of Equity.
- 10 Q: Please describe your ex-ante approach to estimating the Market Risk Premium
- 11 ("MRP").
- 12 The approach is based on the market required return, less the current 30-year Treasury A: 13 yield. To estimate the market required return, I calculated the market capitalization 14 weighted average ROE based on the Constant Growth DCF model. To do so, I relied on 15 data from two sources: (1) Bloomberg; and (2) Value Line.³⁴ With respect to 16 Bloomberg-derived growth estimates, I calculated the expected dividend yield (using the 17 same one-half growth rate assumption described earlier), and combined that amount with 18 the projected earnings growth rate to arrive at the market capitalization weighted average 19 DCF result. I performed that calculation for each of the S&P 500 companies for which

Treasury yield from that amount to arrive at the market DCF-derived ex-ante market risk

Bloomberg provided consensus growth rates. I then subtracted the current 30-year

premium estimate. In the case of Value Line, I performed the same calculation, again

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See Exhibit RBH-4.

using all companies for which five-year earnings growth rates were available. The results of those calculations are provided in Exhibit RBH-3.

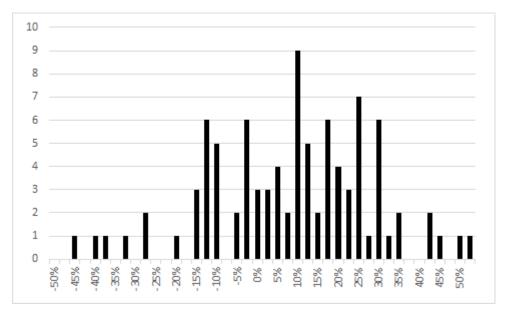
A:

As discussed above each input to the CAPM should be forward-looking. While it may be instructive to review historical MRPs to inform the reasonableness of an *ex-ante* estimate (as I have done below), they do not include investors' expectations, and therefore are not appropriate for use in the CAPM. As such, I believe my *ex-ante* approach is reasonable.

Q: Have you undertaken any analyses to determine the reasonableness of the *ex-ante*MRP calculation?

Yes, I have considered how often various ranges of MRPs have been observed over the 1926 to 2017 period. To perform that analysis, I gathered the annual Market Risk Premia reported by Duff & Phelps and produced a histogram of those observations. The results of that analysis, which are presented in Chart 3, demonstrate that MRPs in the range of approximately 12.02 percent (the average of my MRP estimates) and higher occurred quite often. In fact, there is approximately a 58.00 percent probability that an MRP of at least 12.02 percent will occur in any given year.

Chart 3: Frequency Distribution of MRP, 1926 - 2017³⁵



3 Q: How did you apply your expected Market Risk Premium and risk-free rate

4 estimates?

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5 A: I relied on the *ex-ante* Market Risk Premia discussed above, together with the current and near-term projected 30-year Treasury yields as inputs to my CAPM analyses.

7 Q: What Beta coefficient did you use in your CAPM model?

A: As shown in Exhibit RBH-4, I considered the Beta coefficients reported by two sources:

Bloomberg and Value Line. While both of those services adjust their calculated (or

"raw") Beta coefficients to reflect the tendency of the Beta coefficient to regress to the

market mean of 1.00, Value Line calculates the Beta coefficient over a five-year period,

while Bloomberg's calculation is based on two years of data.

13 Q: What are the results of your CAPM analysis?

14 A: As shown in Table 6 the CAPM analyses suggest an ROE range of 9.90 percent to 12.30 percent (*see* also Exhibit RBH-5).

Duff & Phelps, 2018 Stocks, Bonds, Bills and Inflation Yearbook, Table A-1 and A-7.

Table 6: Summary of CAPM Results³⁶

	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium								
Average Bloomberg Beta Coefficient										
Current 30-Year Treasury (3.13%)	9.90%	10.53%								
Near Term Projected 30-Year Treasury (3.42%)	10.19%	10.82%								
Average Value Line Bet	a Coefficient									
Current 30-Year Treasury (3.13%)	11.26%	12.01%								
Near Term Projected 30-Year Treasury (3.42%)	11.55%	12.30%								

2 D. <u>Bond Yield Plus Risk Premium Approach</u>

A:

3 Q: Please generally describe the Bond Yield Plus Risk Premium approach.

This approach is based on the basic financial tenet that equity investors bear the residual risk associated with ownership and therefore require a premium over the return they would have earned as a bondholder. That is, since returns to equity holders are more risky than returns to bondholders, equity investors must be compensated for bearing that additional risk. Risk premium approaches, therefore, estimate the Cost of Equity as the sum of the equity risk premium and the yield on a particular class of bonds. As noted in my discussion of the CAPM, since the equity risk premium is not directly observable, it typically is estimated using a variety of approaches, some of which incorporate *ex-ante*, or forward-looking estimates of the Cost of Equity, and others that consider historical, or *ex-post*, estimates. An alternative approach is to use actual authorized returns for electric utilities to estimate the Equity Risk Premium.

³⁶ See Exhibit RBH-5.

1 Q: Please explain how you performed your Bond Yield Plus Risk Premium analysis.

Q:

A:

A:

As suggested above, I first defined the Risk Premium as the difference between the authorized ROE and the then-prevailing level of long-term (*i.e.*, 30-year) Treasury yield. I then gathered data for 1,547 electric utility rate proceedings between January 1980 and March 16, 2018. In addition to the authorized ROE, I also calculated the average period between the filing of the case and the date of the final order (the "lag period"). In order to reflect the prevailing level of interest rates during the pendency of the proceedings, I calculated the average 30-year Treasury yield over the average lag period (approximately 200 days).

Because the data cover a number of economic cycles, the analysis also may be used to assess the stability of the Equity Risk Premium. Prior research, for example, has shown that the Equity Risk Premium is inversely related to the level of interest rates. That analysis is particularly relevant given the relatively low, but increasing level of current Treasury yields.

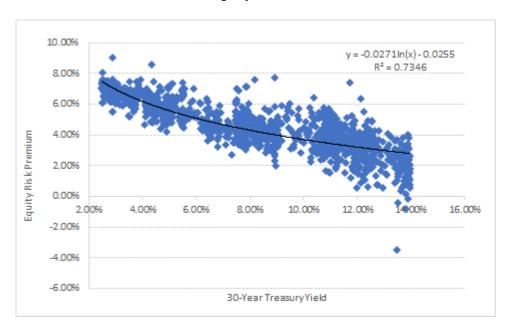
How did you analyze the relationship between interest rates and the Equity Risk Premium?

The basic method used was regression analysis, in which the observed Equity Risk Premium is the dependent variable, and the average 30-year Treasury yield is the independent variable. Relative to the long-term historical average, the analytical period includes interest rates and authorized ROEs that are quite high during one period (*i.e.*, the 1980s) and that are quite low during another (*i.e.*, the post-Lehman bankruptcy period). To account for that variability, I used the semi-log regression, in which the Equity Risk Premium is expressed as a function of the natural log of the 30-year Treasury yield:

$RP = \alpha + \beta(LN(T_{30}))$ Equation [5]

As shown on Chart 4 (below), the semi-log form is useful when measuring an absolute change in the dependent variable (in this case, the Risk Premium) relative to a proportional change in the independent variable (the 30-year Treasury yield).

Chart 4: Equity Risk Premium³⁷



As Chart 4 illustrates, over time there has been a statistically significant, negative relationship between the 30-year Treasury yield and the Equity Risk Premium. Consequently, simply applying the long-term average Equity Risk Premium of 4.62 percent would significantly understate the Cost of Equity and produce results well below any reasonable estimate. Based on the regression coefficients in Chart 4, however, the implied ROE is between 9.97 percent and 10.25 percent (*see* Table 7 and Exhibit RBH-6).

³⁷ See Exhibit RBH-6.

Table 7: Summary of Bond Yield Plus Risk Premium Results³⁸

	Return on Equity
Current 30-Year Treasury (3.13%)	9.97%
Near Term Projected 30-Year Treasury (3.42%)	10.02%
Long Term Projected 30-Year Treasury (4.20%)	10.25%

- Q: Have you provided an alternative Bond Yield Plus Risk Premium analysis to account for how market conditions may affect the inverse relationship between interest rates and the Equity Risk Premium?
 - A: To address the prospect that the market conditions affect the relationship between interest rates and the Equity Risk Premium, I first calculated the "credit spread", or the difference between the Moody's A-Utility Bond yield and the 30-Year Treasury yield. To reflect the risk of equity investments, I calculated the market volatility as measured by the CBOE Volatility Index (the "VIX") since 1990, the first year for which data was available. I then performed a regression analysis in which the Equity Risk Premium is the dependent variable, and Treasury yields, credit spreads, and the VIX were the explanatory variables. There were three principal findings from those analyses (*see* Exhibit RBH-7):
 - 1. Credit spreads and the VIX do not negate the statistically significant inverse relationship between Treasury yields and the Equity Risk Premium.
 - 2. There is a high degree of correlation between credit spreads and the VIX, indicating that the two move closely together. That is, the "relative risk" of the two is not a meaningful factor.

³⁸ See Exhibit RBH-6.

- 3. Based on the current, and projected Treasury yields, the expected ROE falls in the range of 9.83 percent to 9.94 percent. Those results overlap with my recommended range, and are only slightly below the results of my Bond Yield Plus Risk Premium analysis (see Exhibit RBH-6).
- Lastly, please note that neither the VIX nor credit spreads added significantly to the explanatory value of the regression equations.

VI. BUSINESS RISKS AND OTHER CONSIDERATIONS

- 7 Q: Do the mean DCF results for the proxy group provide an appropriate estimate of the Cost of Equity for KCP&L?
- 9 A: No, the mean DCF results do not necessarily provide an appropriate estimate of the 10 Company's Cost of Equity. In my view, there are additional factors that must be taken 11 into consideration when determining where the Company's Cost of Equity falls within 12 the range of results. Those factors include: (1) the regulatory environment in which the 13 Company operates; (2) the Company's generation portfolio; and (3) the Company's 14 capital expenditure plans. Those risk factors, which are discussed below, should be 15 considered with respect to their overall effect on the KCP&L's risk profile and therefore 16 its Cost of Equity.
- 17 A. Regulatory Environment
- 18 Q: How does the regulatory environment in which a utility operates affect its access to 19 and cost of capital?
- 20 A: The regulatory environment can significantly affect both the access to and the cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by rating agencies' assessment of the regulatory environment.

In addition, it is important to recognize that regulatory decisions regarding the authorized ROE and capital structure have direct consequences for the subject utility's internal cash flow generation (sometimes referred to as "Funds from Operations" or "FFO"). Since credit ratings are intended to reflect the ability to meet financial obligations as they come due, the ability to generate the cash flows required to meet those obligations (and to provide an additional amount for unexpected events) is of critical importance to debt investors. Two of the most important metrics used to assess that ability are the ratios of FFO to debt, and FFO to interest expense, both of which are directly affected by regulatory decisions regarding the appropriate rate of return and capital structure.

Q:

Investors recognize that a reasonable allowed ROE that is subject to earnings attrition due to unfavorable regulatory or economic factors does not provide any assurance that the utility will actually recover its costs or earn a reasonable return. The authorized ROE affects not only the cash flow-related metrics that measure financial strength, but also provides an indication of the degree of regulatory support, as well as risk associated with a given utility and jurisdiction. It is, therefore, an important measure of regulatory support and financial integrity from several perspectives.

Have you compared KCP&L's regulatory risks to electric utilities in other jurisdictions?

A: Regulatory Research Associates ("RRA") rates the Commission as having a "Below Average / 1" regulatory environment from an investor viewpoint.³⁹ In fact, fewer than

RRA Regulatory Focus: Kansas Regulatory Review, at 1 (Sep. 19, 2017). RRA notes that "Kansas regulation is relatively restrictive from an investor perspective," and that a recent authorized return was "significantly below prevailing industry averages." RRA also noted that the use of historical test periods can lead to regulatory lag and make it "challenging for the utility to earn its authorized return."

10.00 percent of regulatory bodies have lower ratings from RRA.⁴⁰ Any further decrease in the perception of regulatory supportiveness may cause investors' assessment of KCP&L's regulatory risk (and therefore its business risk and S&P Business Risk rating) to become more negative, further increasing KCP&L's overall cost of capital.

B. Generation Portfolio

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6 Q: Please provide an overview of the Company's generation portfolio.

7 A: KCP&L's operations are heavily dependent on coal-fired generation, which represented over 76.00 percent of the Company's electric utility 2016 net generation. 41

9 Q: Please briefly describe the risks associated with KCP&L's generation portfolio.

In general, highly capital-intensive generation assets are subject to certain risks including the recovery of the investors' capital in the event of a change in market structure or a plant failure, and recovery of replacement power and repair costs in the event of extended or unplanned outage. In addition, federal environmental and safety regulations present a substantial risk of requiring investors to commit new capital to comply with new regulations or operation restrictions or possibly closure.

In a September 2014 report, S&P noted that power generators have addressed carbon-reduction policies that target coal-fired generating plants by implementing three strategies: adding "scrubbers" to coal-fired plants; switching to burning natural gas; or retiring coal-fired plants outright.⁴² To the extent these strategies increase costs for utilities, their credit profiles may come under pressure. As noted by S&P:

Higher costs could become a key credit issue for regulated utilities given the importance of managing customer rate increases, which has

Source: S&P Global Market Intelligence, KCP&L electric utility net generation.

Regulatory Research Associates, calculated as of March 14, 2018.

S&P Research, The Clean Power Plan Will Spur Further Coal Plant Closings, But How Will U.S. Utilities Recover The Costs? (September 2, 2014).

implications for relations with regulators, as well as economic and political ramifications that could heighten business risk. actions would likely not occur until there is further clarity from a utility about early plant retirements and related cost recovery. For utilities that have significant coal-fired generation, recovery mechanisms will be extremely important to continue to support operating cash flow and maintain robust financial measures. 43

O: What are your conclusions regarding the Company's generating portfolio?

The Company's generating portfolio consists of a high percentage of coal power plants that face certain inherent risks associated with capital intensive assets such as the risk of an extended forced outage and changing market dynamics. In particular, the Company and its investors are faced with the risk that new and impending federal environmental and safety regulations will require it to expend additional capital or face closure or curtailment of generating capacity. Because investors consider these risks in establishing their return requirements, the Commission likewise should consider the effect of the additional risk associated with the Company's generating portfolio in determining KCP&L's authorized ROE.

18 C. **Planned Capital Expenditures**

19 Q: Please briefly summarize the Company's capital investment plans.

20 A: GPE's five-year capital expenditures budget for its utility operations over the 2018-2022 21 timeframe totals approximately \$2.76 billion, which includes substantial investments for KCP&L.⁴⁴ Because the Company will continue to make substantial investments in its 22 23 utility operations, it will require efficient access to capital markets during the period that 24 rates established in this proceeding will be in effect.

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⁴³ Ibid.

Great Plains Energy Inc., SEC Form 10-K for year-end December 31, 2017, at 49.

1	Q:	Do credit	rating	agencies	recognize	risk	associated	with	increased	capital
2		expenditure	es?							

A:

A: Yes, they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. S&P has noted that:

The real challenge for the industry is the combination of slow growth and huge investment needs. We believe that for the remainder of 2012 and beyond, state regulation will continue to be the single most influential factor for the sector's credit quality. Cost increases, construction projects, environmental compliance, and other public policy directives, together with lackluster growth, will necessitate continued reliance on rate relief requests. 45

The rating agency views noted above also are consistent with certain observations discussed earlier in my Direct Testimony: (1) the benefits of maintaining a strong financial profile are significant when capital access is required, and become particularly acute during periods of market instability; and (2) the Commission's decision in this proceeding will have a direct bearing on the Company's credit profile, and its ability to access the capital needed to fund its investments.

Q: What are your conclusions regarding the effect of the Company's capital spending plans on its risk profile?

It is clear that the Company's capital expenditure program is significant. The financial community recognizes the additional risks associated with substantial capital expenditures and the financing, regulatory and operating risks associated with those plans. The Company must have access to the capital markets on a timely basis and at reasonable cost rates to fund those investments. In my view, the Company's capital

S&P Ratings Direct, Industry Economic and Ratings Outlook: U.S. Regulated Utilities Will Likely Stay On A Stable Trajectory For The Rest Of 2012 And Into 2013, at 6 (July 17, 2012).

investment plan remains an important consideration in establishing its ROE and overall rate of return.

O:

A:

What are your conclusions regarding the Company's overall business risk profile?

The regulatory environment is one of the most important issues considered by both debt and equity investors in assessing the risks and prospects of utility companies. From the perspective of debt investors, the authorized return should enable the Company to generate the cash flow needed to meet its near-term financial obligations, make the capital investments needed to maintain and expand its system, and maintain sufficient levels of liquidity to fund unexpected events. That financial liquidity must be derived not only from internally generated funds, but also by efficient access to capital markets. Because investors have many investment alternatives, even within a given market sector, the Company's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions.

From the perspective of GPE, the authorized return must be sufficient to fund incremental capital investments in KCP&L's operations. From the perspective of equity investors, the authorized return must be adequate to provide a risk-comparable return on the equity portion of the Company's capital investments. Since (as discussed earlier) equity investors are the residual claimants on the Company's cash, they are particularly concerned with regulatory uncertainty and its effect on future cash flows.

In light of those risks, I believe that an ROE in the range of 9.75 percent to 10.50 percent is reasonable, if not conservative. An ROE in that range would permit the Company to compete for a capital at a time when it requires additional funds to finance

large projects as it confronts multiple new and emerging safety and environmental
 regulations.

VII. CAPITAL MARKET ENVIRONMENT

3 Q: Do economic conditions influence the required cost of capital and required return 4 on common equity? 5 A: Yes. As discussed in Section V, the models used to estimate the Cost of Equity are 6 meant to reflect, and therefore are influenced by, current and expected capital market 7 conditions. As such, it is important to assess the reasonableness of any financial model's 8 results in the context of observable market data. To the extent certain ROE estimates are 9 incompatible with such data or inconsistent with basic financial principles, it is 10 appropriate to consider whether alternative estimation techniques are likely to provide 11 more meaningful and reliable results. 12 Do you have any general observations regarding the relationship between Federal Q: 13 Reserve monetary policy, capital market conditions, and the Company's Cost of 14 **Equity?** 15 A: Yes, I do. Much has been reported about the Federal Reserve's Quantitative Easing 16 policy and its effect on interest rates. Although the Federal Reserve completed its 17 Quantitative Easing initiative in October 2014, it was not until December 2015 that it raised the Federal Funds rate, and began the process of rate normalization. ⁴⁶ Therefore, a 18 19 significant issue is how investors will react as that process continues, and eventually is 20 A viable outcome is that investors will perceive greater prospects of

macroeconomic growth, which will increase the growth rates included in the Constant

Growth DCF model. At the same time, higher growth and the absence of Federal market

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intervention could provide the opportunity for interest rates to increase, thereby increasing the dividend yield portion of the DCF model. In that case, both terms of the Constant Growth DCF model would increase, producing increased ROE estimates.

More recently, interest rates have risen and become increasingly volatile. In the equity markets, sectors that historically have included dividend-paying companies lost value, as increasing interest rates provided investors with other sources of current income. Because those dynamics affect different models in different ways, it would be inappropriate to rely on a single method to estimate the Company's Cost of Equity. A more reasoned approach is to understand the relationships among Federal monetary policy, interest rates, and measures of market risk, and to consider how those factors may affect different models and their results. As discussed throughout my Direct Testimony, it remains important to consider a broad range of data and models when determining the Company's Cost of Equity.

Q: Please summarize the effect of recent Federal Reserve policies on interest rates and the cost of capital.

Beginning in 2008, the Federal Reserve proceeded on a steady path of initiatives intended to lower long-term Treasury yields.⁴⁷ The Federal Reserve's policy actions "were designed to put downward pressure on longer-term interest rates by having the Federal Reserve take onto its balance sheet some of the duration and prepayment risks that would otherwise have been borne by private investors."⁴⁸ Under that policy, "Securities held outright" on the Federal Reserve's balance sheet increased from approximately \$489

A:

See Federal Reserve Press Release (December 16, 2015).

⁴⁷ See Federal Reserve Press Release, dated June 19, 2013.

⁴⁸ Federal Reserve Bank of New York, *Domestic Open Market Operations During 2012*, April 2013, at 29.

billion at the beginning of October 2008 to \$4.19 trillion by March 2018.⁴⁹ To put that increase in context, the securities held by the Federal Reserve represented approximately 3.29 percent of Gross Domestic Product ("GDP") at the end of September 2008, and had risen to approximately 21.20 percent of GDP in March 2018.⁵⁰ As such, the Federal Reserve provided a significant source of liquidity, and had a substantial effect on capital markets.

Does your recommendation consider the interest rate environment?

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A:

Yes, it does. From an analytical perspective, it is important that the inputs and assumptions used to arrive at an ROE recommendation, including assessments of capital market conditions, are consistent with the recommendation itself. Although all analyses require an element of judgment, the application of that judgment must be made in the context of the quantitative and qualitative information available to the analyst, and the capital market environment in which the analyses were undertaken. Because the Cost of Equity is forward-looking, the salient issue is whether investors see the likelihood of increased interest rates during the period in which the rates set in this proceeding will be in effect.

The low interest rate environment associated with central bank intervention may lead some analysts to conclude that current capital costs, including the Cost of Equity, are low and will remain as such. However, that conclusion only holds true under the hypothesis of Perfectly Competitive Capital Markets ("PCCM") and the classical valuation framework which, under normal economic and capital market conditions, underpin the traditional Cost of Equity models. Perfectly Competitive Capital Markets

Source: Federal Reserve Board Schedule H.4.1. "Securities held outright" include U.S. Treasury securities, Federal agency debt securities, and mortgage-backed securities

are those in which no single trader, or "market-mover", would have the power to change the prices of goods or services, including bond and common stock securities. In other words, under the PCCM hypothesis, no single trader would have a significant effect on market prices.

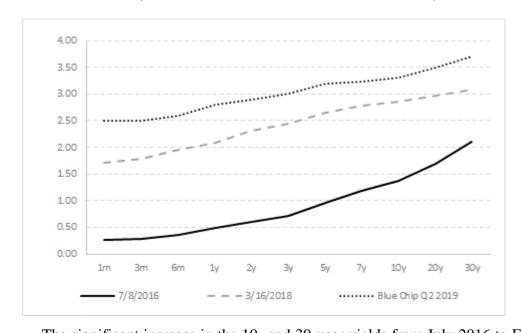
Classic valuation theory assumes investors trade securities rationally, with prices reflecting their perceptions of value. Although central banks may set benchmark interest rates, they have maintained below-normal rates to stimulate economic expansion and capital market recovery. It therefore is reasonable to conclude that the Federal Reserve and other central banks have been acting as market-movers, thereby having a significant effect on the market prices of both bonds and stocks. The presence of market-movers, such as the Federal Reserve, runs counter to the PCCM hypothesis, which underlies traditional Cost of Equity models. Consequently, the results of those models should be considered in the context of both quantitative and qualitative information.

Although the Federal Reserve's market intervention policies have kept interest rates historically low, since July 8, 2016 (when the 30-year Treasury yield hit an all-time low of 2.11 percent), rates have risen. As the Federal Reserve increased the Federal Funds target rate by 25 basis points five times from December 2016 (from 0.25 percent - 0.50 percent to 0.50 percent - 0.75 percent) to March 2018 (to 1.50 percent – 1.75 percent), short-term and long-term interest rates increased by a corresponding amount (*see* Chart 5 below). ⁵¹

Source: Federal Reserve Board Schedule H.4.1; Bureau of Economic Analysis.

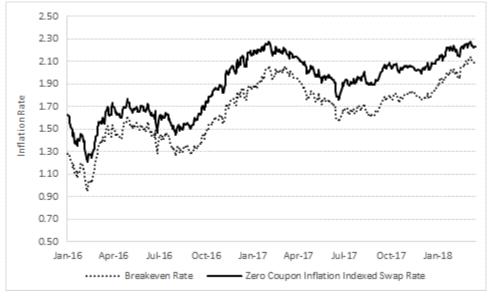
Federal Reserve Board Schedule H.15. 6-month and 1-year Treasury yields increased by 160 basis points from July 8, 2016 to March 16, 2018. The ten-year and 30-year Treasury yields increasing by 148 basis points and 97 basis points, respectively, by March 16, 2018.

Chart 5: Treasury Yield Curve: 7/8/2016, 3/16/2018 and Projected Q2 2019⁵²



The significant increase in the 10- and 30-year yields from July 2016 to February 2018 is highly related to increasing inflation. To that point, leading up to and following the November 2016 Presidential election, expected inflation, as measured by the breakeven forward inflation rate and the zero-coupon inflation index swaps also increased. Although those measures of forward inflation fell somewhat between February and June 2017, they have increased since that period, such that they are similar to the Federal Reserve's 2.00 percent inflation target (*see* Chart 6, below).

Sources: Federal Reserve Board Schedule H.15.; Blue Chip Financial Forecasts, Vol. 37, No. 3, March 1, 2018, at 2. 3-year, 7-year and 20-year projected Treasury yields interpolated.



Lastly, on September 20, 2017, the Federal Reserve announced that it will "initiate the balance sheet normalization program described in the June 2017 Addendum to the Committee's Policy Normalization Principles and Plans." Those "Principles and Plans" call for reducing the reinvestment of principal payments received from its holdings of Treasury securities by up to \$30 billion per month, and mortgage-backed securities by up to \$20 billion per month. 55 At the same time, the Federal Reserve will continue considering increases to the Federal Funds target rate; as noted below, current market data indicate an approximately 97.50 percent likelihood of further rate increases by December 2018.

⁵³ Source: Bloomberg Professional Services

⁵⁴ Federal Reserve Press Release, (Sept. 20, 2017).

Federal Reserve *Addendum to the Policy Normalization Principles and Plans*, as adopted effective June 13, 2017.

1 Q: Does market-based data indicate that investors see a probability of increasing 2 interest rates?

A:

Yes. Forward Treasury yields implied by the slope of the yield curve and published projections by sources such as *Blue Chip Financial Forecasts* (which provides consensus estimates from approximately 50 professional economists) indicate investors expect long-term interest rates to increase.

Looking to short-term interest rates, data compiled by CME Groups indicates that investors see a high likelihood of further Federal Funds rate increases, even after the five increases between December 14, 2016 and March 21, 2018. As shown in Table 8, (below) the market is now anticipating at least one additional rate hike (97.50 percent probability) and possibly two or more (78.40 percent) by December 2018.

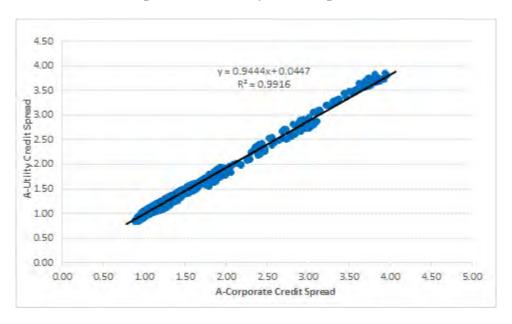
Table 8: Probability of Federal Funds Rate Increases⁵⁶

Target Rate		Federal Reserve Meeting Date											
(bps)	5/2/18	6/13/18	8/1/18	9/26/18	11/8/18	12/19/18							
150-175	95.9%	16.8%	14.9%	5.3%	4.5%	2.5%							
175-200	4.1%	79.8%	72.9%	35.3%	31.0%	19.1%							
200-225		3.4%	11.8%	51.4%	49.1%	41.0%							
225-250			0.4%	7.8%	14.0%	29.7%							
250-275				0.2%	1.3%	7.0%							
275-300						0.6%							

Source: http://www.cmegroup.com/trading/interest-rates/countdown-to-fomc.html, accessed March 21, 2018.

- 1 Q: Have you also reviewed the relationship between credit spreads for A-rated utility
 2 debt relative to A-rated corporate debt?
- 3 A: Yes, I have. Given the historical volatility in the spread between corporate and utility A-4 rated debt, there is no reason to conclude that utility yields are different than those of 5 their corporate counterparts. That conclusion is consistent with the finding that over 6 time, there has been a nearly one-to-one relationship between credit spreads on A-rated 7 corporate and utility bonds. In fact, a regression analysis in which corporate credit 8 spreads are the explanatory variable and utility credit spreads are the dependent variable 9 shows that slope is approximately 1.00 and highly significant (see Chart 7, below). 10 Because the intercept term is nearly zero, we can conclude that there has been no material 11 difference between the two, and there certainly is no meaningful difference in the current 12 market.

Chart 7: Corporate and Utility Credit Spreads (A-Rated)⁵⁷



Q: Have there been recent periods when utility valuation levels were high relative to both their long-term average and the market?

Yes. For example, between July and December 2016, the S&P Electric Utility Index lost approximately 9.00 percent of its value. At the same time, the S&P 500 increased by approximately 7.00 percent, indicating that the utility sector under-performed the market by about 16.00 percent. Also during that time, the 30-year Treasury yield increased by approximately 95 basis points (an increase of nearly 45.00 percent). The point simply is that as interest rates increased, utility valuations fell. Because (as noted above) investors see the strong likelihood of further interest rate increases, there is a continuing risk of losses in the utility sector.

A:

⁵⁷ Source: Bloomberg Professional Services

Q: What conclusions do you draw from your analyses of the current capital market environment, and how do those conclusions affect your ROE recommendation?

A:

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

From an analytical perspective, it is important that the inputs and assumptions used to arrive at an ROE determination, including assessments of capital market conditions, are consistent with the conclusion itself. Although all analyses require an element of judgment, the application of that judgment must be made in the context of the quantitative and qualitative information available to the analyst and the capital market environment in which the analyses were undertaken. Because the application of financial models and interpretation of their results often is the subject of differences among analysts in regulatory proceedings, I believe that it is important to review and consider a variety of data points; doing so enables us to put in context both quantitative analyses and the associated recommendations.

Because not all models used to estimate the Cost of Equity adequately reflect those changing market dynamics, it is important to give appropriate weight to the methods and to their results. Moreover, because those models produce a range of results, it is important to consider the type of data discussed above in determining where the Companies' ROE falls within that range. As described in Section VII, on balance, I

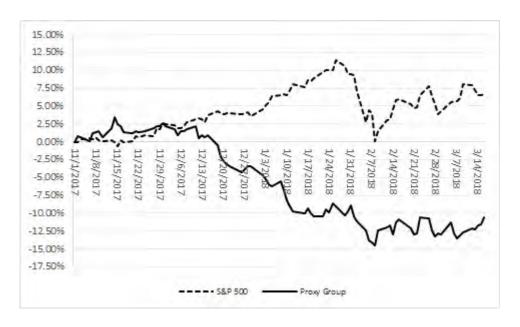
believe that the DCF-based results should be viewed very carefully, and that somewhat more weight should be afforded the Risk Premium-based methods. I believe that doing so supports my recommended range of 9.75 percent to 10.50 percent.

4 Q: Have you also considered the effect of the recently enacted Tax Cut and Jobs Act 5 ("TCJA")?

A:

Yes, I have. On December 22, 2017, the President of the United States signed the TCJA into law. Since shortly before the TCJA was signed, electric utilities (as measured by my proxy group) have significantly underperformed the overall market. As Chart 8 (below) demonstrates, from November 1, 2017 through March 16, 2018 the S&P 500 gained approximately 6.70 percent in value. In stark contrast, my proxy group lost approximately 10.60 percent, underperforming the overall market by nearly 17.30 percentage points.





⁵⁸ Source: S&P Global Market Intelligence. Proxy group calculated as an index.

A reasonable inference to be drawn from that data is that investors have been reevaluating electric 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 the 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.

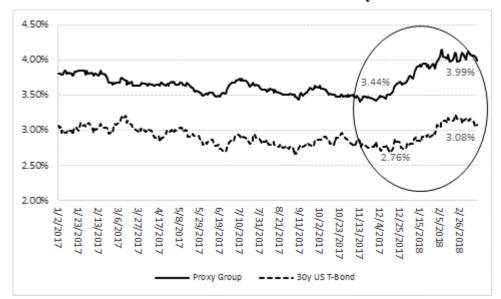
Q:

A:

Have the proxy companies' dividend yields increased coincident with the TCJA?

Yes, since the beginning of December 2017 the dividend yield for my proxy group increased by 55 basis points, while the 30-year Treasury yield increased by 32 basis points (*see* Chart 9, below). Again, that data suggests the fall in price among utility stocks may be a matter of relative value stemming from concerns regarding the TCJA's effect on utilities' cash flow. As discussed below, Moody's Investors Service ("Moody's"), Standard & Poor's, and Fitch Ratings all recently have evaluated the utility sector in the context of the TCJA, with Moody's noting negative ratings implications for many of the utilities it covers.





A:

Q: Are there reasons to expect the TCJA may affect the models used to estimate the Cost of Equity?

Yes, there are. As discussed earlier in my Direct Testimony, the Constant Growth DCF model is based on several assumptions that together assume current market conditions essentially will remain in place, unchanged, in perpetuity. Because we have seen a significant change in utility valuations, we should recognize the mean DCF results likely are not reliable indicators of the Company's Cost of Equity. As also discussed in my Direct Testimony, the Cost of Equity is affected by the degree of financial leverage, or debt, in the capital structure. Because there is a "tax shield" associated with debt, lower marginal tax rates will increase the risk-effect of leverage. That effect would manifest itself in increased Beta coefficients of the CAPM, for example. The point simply is that the reduction in utility valuations coincident with the TCJA is consistent with financial theory.

⁵⁹ Source: S&P Global Market Intelligence. My proxy group calculated as an index.

1	Q:	What concer	ns have	rating	agencies	raised	as they	consider	the im	plications	of	the

TCJA for utilities' cash flow?

A:

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

Tax reform is credit negative for US regulated utilities because the lower 21% statutory tax rate reduces cash collected from customers, while the loss of bonus depreciation reduces tax deferrals, all else being equal. Moody's calculates that the recent changes in tax laws will dilute a utility's ratio of cash flow before changes in working capital to debt by approximately 150 - 250 basis points on average, depending to some degree on the size of the company's capital expenditure programs. From a leverage perspective, Moody's estimates that debt to total capitalization ratios will increase, based on the lower value of deferred tax liabilities. ⁶³

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

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

⁶¹ FitchRatings Special Report, *Tax Reform Impact on the U.S. Utilities, Power & Gas Sector*, January 24, 2018.

S&P Global Ratings, U.S. Tax Reform: For Utilities' Credit Quality, Challenges Abound, January 24, 2018.
 Moody's Investors' Service, Rating Action: Moody's changes outlooks on 25 US regulated utilities primarily impacted by tax reform, January 19, 2018.

1	Q:	Have the rating agencies also discussed possible regulatory reactions to the cash
2		flow implications of the TCJA?
3	A:	Yes. Moody's, for example, identified approaches to help preserve credit profiles,
4		including "accelerated cost recovery of certain regulatory assets or future investment;
5		changes to the equity layer or allowed ROEs in rates, and other actions." Moody's also
6		suggested that "[c]hanges to corporate financial policies could include changes to
7		capitalization, the financing of future investments, dividend growth, or others."64
8		FitchRatings observed the following:
9 10 11 12 13 14 15 16		A majority of states have opened dockets or requested all utilities in the state to submit an analysis on the implications of the tax reform. While regulators will be keen to provide some sort of rate relief for customers, such actions could take many forms and vary in time frame. Some jurisdictions may be open to a negotiated outcome that focuses more on benefits of rate stability and creditworthy utilities rather than immediate rate reductions. In the former, many tools could be employed, including the following:
17 18 19		 Deferral of lower tax expense to use as an offset to expected future rate increases either from the recovery of regulatory deferrals or rate base growth
20		 Return of excess unprotected ADIT over a longer-term horizon
21		■ Increase in authorized equity ratio and/or return on equity
22		 Accelerated depreciation on some assets
23		■ Lower capex ⁶⁵
24		As both rating agencies discussed, regulatory responses may vary by company

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

and jurisdiction, but may include a variety of potential approaches.

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⁶⁵ FitchRatings Special Report, *Tax Reform Impact on the U.S. Utilities, Power & Gas Sector*, January 24, 2018.

1	Q:	What conclusions do you draw from the data and information discussed above?
2	A:	There is little question that the TCJA has increased cash flow-related risks for utilities
3		Those risks are manifested in the sector's significant underperformance relative to the
4		broad market, and in the comments of financial participants such as Moody's, Standard &
5		Poor's, and FitchRatings.
6	Q:	Are you recommending a higher ROE in this proceeding in connection with the
7		TCJA?
8	A:	No, I am not. Rather, I recommend that the Commission consider the capital market
9		implications of the TCJA as part of its review. Based on the data and information
10		discussed above, it is my view that the TCJA, and its implications for utilities' cash flows
11		and credit profiles, provide further support for my ROE range and recommendation.
		VIII. COST OF DEBT

- 12 Q: What is the Company's Cost of Debt?
- 13 A: As shown in Exhibit RBH-9, the Company's Cost of Debt is 4.96 percent.
- 14 Q: How does the projected cost of debt as of June 30, 2018 compare to the actual cost of
- debt as of December 31, 2017 and the cost of debt used in KCP&L last rate case
- 16 (Docket No. 15-KCPE-116-RTS)?
- 17 A: The projected Cost of Debt of 4.96 percent (as of June 30, 2018) is somewhat below the
- 18 Company's actual Cost of Debt (5.35 percent as of December 31, 2017), and below the
- 5.55 percent Cost of Debt approved in KCP&L's last rate case. 66

Docket No. 15-KCPE-116-RTS, which was approved by the Commission in its Order dated September 9, 2015, was based on a partial settlement.

1 Q: Have you assessed the Company's Cost of Debt?

Yes, I reviewed the prevailing Bloomberg Fair Value Curves for A-rated and BBB-rated utility debt concurrent with the date of issuance of the Company's debt instruments. As shown Exhibit RBH-10, the Company's weighted average coupon rate is consistent with the prevailing yields at the times of issuance. As such, I believe the Company's 4.96 percent Cost of Debt is reasonable.

IX. CAPITAL STRUCTURE AND OVERALL RATE OF RETURN

7 Q: Please summarize the Company's requested capital structure and overall rate of return.

9 A: The requested capital structure components and resulting overall rate of return are presented in Table 9 below:

Table 9: Summary of Overall Rate of Return⁶⁷

Capital Components	Ratio	Cost	Weighted Cost
Long-Term Debt	50.25%	4.96%	2.49%
Common Equity	49.75%	9.85%	4.90%
Total	100.00%		7.39%

12 Q: What is the basis for the Company's requested capital structure and overall rate of return?

14 A: The requested capital structure, as well as the cost of debt, are based on KCP&L's

15 projected capital structure at June 30, 2018. The data supporting the requested capital

16 structure is presented in Exhibit RBH-9, with the June 30, 2018 summary shown on page

17 1 of that exhibit.

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⁶⁷ See Exhibit RBH-9.

- Q: What are the principal differences between KCP&L's actual capital structure as of December 31, 2017 and the requested projected capital structure as of June 30, 2018?
- 4 A: The actual KCP&L capital structure as of December 31, 2017, is shown on page 6 of Exhibit RBH-9. The key differences between the actual capital structure and the requested capital structure, projected as of June 30, 2018, are as follows:
 - Long-Term Debt is projected to decrease by \$50.00 million in connection
 with a March 1, 2018 long-term debt maturity and subsequent refinancing.
 - Equity is projected to increase by \$10.80 million due to earnings and increases in accumulated other comprehensive income, which are partially offset by the payout of common dividends.

12 Q: How does the capital structure affect the Cost of Equity?

A:

In practice, the capital structure should enable the Company to maintain or enhance its financial integrity, thereby enabling access to capital at competitive rates under a variety of economic and financial market conditions. The capital structure relates to financial risk, which is a function of the percentage of debt relative to equity (that relationship is often referred to as "financial leverage"). As the percentage of debt in the capital structure increases, so do the fixed obligations for the repayment of that debt and, therefore, the risk that cash flows may not be sufficient to meet those obligations on a timely basis. Consequently, as the degree of financial leverage increases, the risk of financial distress (*i.e.*, financial risk) also increases. Since the capital structure can affect the subject company's overall level of risk, it is an important consideration in establishing

- a just and reasonable rate of return. Therefore, it is important to consider the capital
 structure in light of industry practice and investor requirements.
- Q: Please describe your analysis of the Company's capital structure relative to industry
 practice.
- As a measure of industry practice, I calculated the average capital structure for each of the utility operating companies held by the proxy companies over the last eight fiscal quarters. As shown in Exhibit RBH-11, the proxy group average capital structure over that period includes 52.47 percent common equity and 47.53 percent long-term debt; the average common equity ratios (on a company-specific basis) range from 46.06 percent to 59.52 percent. Based on that review, it is apparent that KCP&L's capital structure is consistent with those in place at the proxy companies.
- 12 Q: What is the basis for using average capital components rather than a point-in-time
 13 measurement?
- A: Measuring the capital components at a particular point in time can skew the capital structure by the specific circumstances of a particular period. Therefore, it is more appropriate to normalize the relative relationship between the capital components over a period of time.
- 18 Q: What is your conclusion regarding an appropriate capital structure for KCP&L?
- 19 A: Considering the range of proxy company average equity ratios from 46.06 percent to 59.52 percent, I believe that KCP&L's 50.25 percent common equity ratio is appropriate.

X. <u>CONCLUSIONS AND RECOMMENDATION</u>

1 Q: What is your conclusion regarding the Company's Cost of Equity?

As discussed in Section V (and as shown in Exhibits RBH-1 through RBH-6), I have performed several analyses to estimate KCP&L's Cost of Equity. In light of those results, and taking into consideration other relevant and observable market data, I believe that an ROE in the range of 9.75 percent to 10.50 percent represents the range of returns required by equity investors under current and expected market conditions. As discussed earlier in my testimony, my recommendation reflects analytical results based on a proxy group of electric utilities, and takes into consideration the Company's risk profile, including the regulatory environment in which KCP&L operates, its generation portfolio, and its planned capital expenditures.

I also conclude that the Company's 4.96 percent Cost of Debt reflects prevailing market conditions at the times of issuance, and therefore is reasonable and appropriate. Lastly, I conclude that the Company's capital structure, which consists of 50.25 percent common equity, 49.75 percent long-term debt is reasonable relative to its peers. The Company's proposed capital structure is consistent with industry practice and supports KCP&L's financial integrity.

17 Q: Does this conclude your Direct Testimony?

18 A: Yes, it does.

A:

As noted in the direct testimony of Mr. Darrin R. Ives, the Company has entered into a settlement agreement in Docket No. 18-KCPE-095-MER in which the Company agreed to recommend an ROE of 9.30 percent in this proceeding following the approval of the settlement agreement and closing of the merger.

BEFORE THE CORPORATION COMMISSION OF THE STATE OF KANSAS

In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in Its Charge for Electric Service))
AFFIDAVIT OF RO	OBERT B. HEVERT
STATE OF MISSOURI)	
COUNTY OF JACKSON) ss	
Robert B. Hevert, being first duly sworn on l	nis oath, states:
1. My name is Robert B. Hevert and r	my business address is ScottMadden, Inc., 1900 W.
Park Drive, Suite 250, Westborough, MA 01581.	I have been retained to serve as an expert witness to
provide testimony on behalf of Kansas City Power &	Ł Light Company.
2. Attached hereto and made a part here	eof for all purposes is my Direct Testimony on behalf
of Kansas City Power & Light Company consisting	ng of sixty-two (62) pages, having been prepared in
written form for introduction into evidence in the ab	ove-captioned docket.
3. I have knowledge of the matters se	t forth therein. I hereby swear and affirm that my
answers contained in the attached testimony to	the questions therein propounded, including any
attachments thereto, are true and accurate to the best	of my knowledge, information and belief.
Robert	B. Hevert
Subscribed and sworn before me this 1st day of May	2018.
Notary	Fublic Public
My commission expires: 4/24/2021	ANTHONY R WESTENKIRCHNER Notary Public, Notary Seal State of Missouri Platte County Commission # 17279952 My Commission Expires April 26, 2021

Constant Growth Discounted Cash Flow Model 30 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		•	Average		Expected	Zacks	First Call	Value Line	Average			_
		Annualized	Stock	Dividend	Dividend	Earnings	Earnings	Earnings	Earnings	Low	Mean	High
Company	Ticker	Dividend	Price	Yield	Yield	Growth	Growth	Growth	Growth	ROE	ROE	ROE
ALLETE, Inc.	ALE	\$2.24	\$68.80	3.26%	3.34%	6.10%	5.00%	4.50%	5.20%	7.83%	8.54%	9.46%
Alliant Energy Corporation	LNT	\$1.34	\$38.71	3.46%	3.56%	5.30%	5.45%	6.50%	5.75%	8.85%	9.31%	10.07%
Ameren Corporation	AEE	\$1.83	\$54.60	3.35%	3.47%	6.90%	6.40%	7.50%	6.93%	9.86%	10.40%	10.98%
American Electric Power Company, Inc.	AEP	\$2.48	\$65.89	3.76%	3.86%	5.40%	5.63%	4.50%	5.18%	8.35%	9.04%	9.50%
Black Hills Corporation	BKH	\$1.90	\$51.93	3.66%	3.75%	4.60%	3.50%	7.50%	5.20%	7.22%	8.95%	11.30%
CMS Energy Corporation	CMS	\$1.43	\$43.01	3.32%	3.45%	6.30%	7.04%	8.50%	7.28%	9.73%	10.73%	11.97%
DTE Energy Company	DTE	\$3.53	\$101.62	3.47%	3.58%	6.00%	5.58%	6.50%	6.03%	9.15%	9.61%	10.09%
Duke Energy Corporation	DUK	\$3.56	\$76.11	4.68%	4.77%	3.70%	4.24%	4.50%	4.15%	8.46%	8.92%	9.28%
El Paso Electric Company	EE	\$1.34	\$49.61	2.70%	2.77%	5.10%	5.20%	5.00%	5.10%	7.77%	7.87%	7.97%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$33.15	3.74%	3.84%	6.70%	8.50%	1.50%	5.57%	5.27%	9.41%	12.40%
IDACORP, Inc.	IDA	\$2.36	\$82.97	2.84%	2.90%	4.10%	3.10%	3.50%	3.57%	5.99%	6.46%	7.00%
NorthWestern Corporation	NWE	\$2.20	\$51.42	4.28%	4.35%	2.40%	3.12%	4.50%	3.34%	6.73%	7.69%	8.87%
OGE Energy Corp.	OGE	\$1.33	\$31.25	4.26%	4.36%	6.00%	5.80%	2.50%	4.77%	6.81%	9.12%	10.38%
Otter Tail Corporation	OTTR	\$1.34	\$41.20	3.25%	3.38%	NA	9.00%	7.00%	8.00%	10.37%	11.38%	12.40%
Pinnacle West Capital Corporation	PNW	\$2.78	\$76.92	3.61%	3.69%	3.00%	3.63%	5.50%	4.04%	6.67%	7.73%	9.21%
PNM Resources, Inc.	PNM	\$1.06	\$35.57	2.98%	3.08%	5.80%	5.80%	7.50%	6.37%	8.87%	9.44%	10.59%
Portland General Electric Company	POR	\$1.36	\$40.07	3.39%	3.46%	2.90%	3.50%	6.00%	4.13%	6.34%	7.60%	9.50%
Southern Company	SO	\$2.32	\$43.84	5.29%	5.39%	4.50%	2.70%	4.00%	3.73%	8.06%	9.12%	9.91%
WEC Energy Group, Inc.	WEC	\$2.21	\$60.76	3.64%	3.73%	4.20%	4.34%	6.00%	4.85%	7.91%	8.57%	9.75%
Xcel Energy Inc.	XEL	\$1.52	\$43.57	3.49%	3.58%	5.80%	6.15%	4.50%	5.48%	8.07%	9.07%	9.75%
Proxy Group Mean	_	-		3.62%	3.72%	4.99%	5.18%	5.38%	5.23%	7.92%	8.95%	10.02%
Proxy Group Median				3.48%	3.58%	5.30%	5.33%	5.25%	5.19%	7.99%	9.05%	9.83%

Notes:

- Notes:
 [1] Source: Bloomberg Professional
 [2] Source: Bloomberg Professional, equals indicated number of trading day average as of March 16, 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

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		A	Average	D: :II	Expected	Zacks	First Call	Value Line	Average			12.1
•		Annualized	Stock	Dividend	Dividend	Earnings	Earnings	Earnings	Earnings	Low	Mean	High
Company	Ticker	Dividend	Price	Yield	Yield	Growth	Growth	Growth	Growth	ROE	ROE	ROE
ALLETE, Inc.	ALE	\$2.24	\$73.39	3.05%	3.13%	6.10%	5.00%	4.50%	5.20%	7.62%	8.33%	9.25%
Alliant Energy Corporation	LNT	\$1.34	\$41.32	3.24%	3.34%	5.30%	5.45%	6.50%	5.75%	8.63%	9.09%	9.85%
Ameren Corporation	AEE	\$1.83	\$58.17	3.15%	3.26%	6.90%	6.40%	7.50%	6.93%	9.65%	10.19%	10.76%
American Electric Power Company, Inc.	AEP	\$2.48	\$70.89	3.50%	3.59%	5.40%	5.63%	4.50%	5.18%	8.08%	8.77%	9.23%
Black Hills Corporation	BKH	\$1.90	\$55.75	3.41%	3.50%	4.60%	3.50%	7.50%	5.20%	6.97%	8.70%	11.04%
CMS Energy Corporation	CMS	\$1.43	\$46.01	3.11%	3.22%	6.30%	7.04%	8.50%	7.28%	9.51%	10.50%	11.74%
DTE Energy Company	DTE	\$3.53	\$107.17	3.29%	3.39%	6.00%	5.58%	6.50%	6.03%	8.97%	9.42%	9.90%
Duke Energy Corporation	DUK	\$3.56	\$81.78	4.35%	4.44%	3.70%	4.24%	4.50%	4.15%	8.13%	8.59%	8.95%
El Paso Electric Company	EE	\$1.34	\$53.98	2.48%	2.55%	5.10%	5.20%	5.00%	5.10%	7.54%	7.65%	7.75%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$35.12	3.53%	3.63%	6.70%	8.50%	1.50%	5.57%	5.06%	9.20%	12.18%
IDACORP, Inc.	IDA	\$2.36	\$88.81	2.66%	2.70%	4.10%	3.10%	3.50%	3.57%	5.80%	6.27%	6.81%
NorthWestern Corporation	NWE	\$2.20	\$56.57	3.89%	3.95%	2.40%	3.12%	4.50%	3.34%	6.34%	7.29%	8.48%
OGE Energy Corp.	OGE	\$1.33	\$32.77	4.06%	4.15%	6.00%	5.80%	2.50%	4.77%	6.61%	8.92%	10.18%
Otter Tail Corporation	OTTR	\$1.34	\$43.47	3.08%	3.21%	NA	9.00%	7.00%	8.00%	10.19%	11.21%	12.22%
Pinnacle West Capital Corporation	PNW	\$2.78	\$82.88	3.35%	3.42%	3.00%	3.63%	5.50%	4.04%	6.40%	7.47%	8.95%
PNM Resources, Inc.	PNM	\$1.06	\$39.54	2.68%	2.77%	5.80%	5.80%	7.50%	6.37%	8.56%	9.13%	10.28%
Portland General Electric Company	POR	\$1.36	\$44.10	3.08%	3.15%	2.90%	3.50%	6.00%	4.13%	6.03%	7.28%	9.18%
Southern Company	SO	\$2.32	\$47.14	4.92%	5.01%	4.50%	2.70%	4.00%	3.73%	7.69%	8.75%	9.53%
WEC Energy Group, Inc.	WEC	\$2.21	\$64.56	3.42%	3.51%	4.20%	4.34%	6.00%	4.85%	7.69%	8.35%	9.53%
Xcel Energy Inc.	XEL	\$1.52	\$46.97	3.24%	3.32%	5.80%	6.15%	4.50%	5.48%	7.81%	8.81%	9.49%
Proxy Group Mean	_			3.38%	3.46%	4.99%	5.18%	5.38%	5.23%	7.66%	8.70%	9.76%
Proxy Group Median				3.27%	3.36%	5.30%	5.33%	5.25%	5.19%	7.69%	8.76%	9.53%

Notes:

- Notes:

 [1] Source: Bloomberg Professional
 [2] Source: Bloomberg Professional, equals indicated number of trading day average as of March 16, 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

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
			Average	5	Expected	Zacks	First Call	Value Line	Average			
_		Annualized	Stock	Dividend	Dividend	Earnings	Earnings	Earnings	Earnings	Low	Mean	High
Company	Ticker	Dividend	Price	Yield	Yield	Growth	Growth	Growth	Growth	ROE	ROE	ROE
ALLETE, Inc.	ALE	\$2.24	\$74.59	3.00%	3.08%	6.10%	5.00%	4.50%	5.20%	7.57%	8.28%	9.19%
Alliant Energy Corporation	LNT	\$1.34	\$41.63	3.22%	3.31%	5.30%	5.45%	6.50%	5.75%	8.60%	9.06%	9.82%
Ameren Corporation	AEE	\$1.83	\$58.34	3.14%	3.25%	6.90%	6.40%	7.50%	6.93%	9.64%	10.18%	10.75%
American Electric Power Company, Inc.	AEP	\$2.48	\$71.29	3.48%	3.57%	5.40%	5.63%	4.50%	5.18%	8.06%	8.75%	9.21%
Black Hills Corporation	BKH	\$1.90	\$62.19	3.05%	3.13%	4.60%	3.50%	7.50%	5.20%	6.61%	8.33%	10.67%
CMS Energy Corporation	CMS	\$1.43	\$46.64	3.07%	3.18%	6.30%	7.04%	8.50%	7.28%	9.46%	10.46%	11.70%
DTE Energy Company	DTE	\$3.53	\$108.14	3.26%	3.36%	6.00%	5.58%	6.50%	6.03%	8.94%	9.39%	9.87%
Duke Energy Corporation	DUK	\$3.56	\$83.84	4.25%	4.33%	3.70%	4.24%	4.50%	4.15%	8.02%	8.48%	8.84%
El Paso Electric Company	EE	\$1.34	\$54.30	2.47%	2.53%	5.10%	5.20%	5.00%	5.10%	7.53%	7.63%	7.73%
Hawaiian Electric Industries, Inc.	HE	\$1.24	\$34.36	3.61%	3.71%	6.70%	8.50%	1.50%	5.57%	5.14%	9.28%	12.26%
IDACORP, Inc.	IDA	\$2.36	\$88.56	2.66%	2.71%	4.10%	3.10%	3.50%	3.57%	5.81%	6.28%	6.82%
NorthWestern Corporation	NWE	\$2.20	\$57.95	3.80%	3.86%	2.40%	3.12%	4.50%	3.34%	6.24%	7.20%	8.38%
OGE Energy Corp.	OGE	\$1.33	\$34.33	3.87%	3.97%	6.00%	5.80%	2.50%	4.77%	6.42%	8.73%	9.99%
Otter Tail Corporation	OTTR	\$1.34	\$42.98	3.12%	3.24%	NA	9.00%	7.00%	8.00%	10.23%	11.24%	12.26%
Pinnacle West Capital Corporation	PNW	\$2.78	\$85.18	3.26%	3.33%	3.00%	3.63%	5.50%	4.04%	6.31%	7.37%	8.85%
PNM Resources, Inc.	PNM	\$1.06	\$40.22	2.64%	2.72%	5.80%	5.80%	7.50%	6.37%	8.51%	9.09%	10.23%
Portland General Electric Company	POR	\$1.36	\$45.11	3.01%	3.08%	2.90%	3.50%	6.00%	4.13%	5.96%	7.21%	9.11%
Southern Company	SO	\$2.32	\$48.18	4.82%	4.91%	4.50%	2.70%	4.00%	3.73%	7.58%	8.64%	9.42%
WEC Energy Group, Inc.	WEC	\$2.21	\$64.44	3.43%	3.51%	4.20%	4.34%	6.00%	4.85%	7.70%	8.36%	9.53%
Xcel Energy Inc.	XEL	\$1.52	\$47.55	3.20%	3.28%	5.80%	6.15%	4.50%	5.48%	7.77%	8.77%	9.45%
Proxy Group Mean				3.32%	3.40%	4.99%	5.18%	5.38%	5.23%	7.60%	8.64%	9.70%
Proxy Group Median				3.21%	3.30%	5.30%	5.33%	5.25%	5.19%	7.64%	8.69%	9.49%

Notes:

- Notes:

 [1] Source: Bloomberg Professional
 [2] Source: Bloomberg Professional, equals indicated number of trading day average as of March 16, 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])

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	_			
		Stock	EP	S Growth Ra		tes	Long-Term	F	Payout Rati	io	Iterative	Solution	Terminal	Terminal				
			7	F' (O - II	Value		0 11						D/E D-11-	PEG				
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	Ratio	•			
ALLETE, Inc.	ALE	\$68.80	6.10%	5.00%	4.50%	5.20%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	8.89%	20.17	3.70				
Alliant Energy Corporation	LNT	\$38.71	5.30%	5.45%	6.50%	5.75%	5.45%	64.00%	64.00%	65.91%	(\$0.00)	8.79%	20.79	3.82				
Ameren Corporation	AEE	\$54.60	6.90%	6.40%	7.50%	6.93%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	9.59%	16.75	3.08				
American Electric Power Company, Inc.	AEP	\$65.89	5.40%	5.63%	4.50%	5.18%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	10.29%	14.33	2.63				
Black Hills Corporation	BKH	\$51.93	4.60%	3.50%	7.50%	5.20%	5.45%	52.00%	54.00%	65.91%	\$0.00	9.14%	18.83	3.46				
CMS Energy Corporation	CMS	\$43.01	6.30%	7.04%	8.50%	7.28%	5.45%	61.00%	61.00%	65.91%	(\$0.00)	9.45%	17.37	3.19				
DTE Energy Company	DTE	\$101.62	6.00%	5.58%	6.50%	6.03%	5.45%	62.00%	61.00%	65.91%	(\$0.00)	9.22%	18.41	3.38				
Duke Energy Corporation	DUK	\$76.11	3.70%	4.24%	4.50%	4.15%	5.45%	75.00%	78.00%	65.91%	\$0.00	8.98%	19.66	3.61				
El Paso Electric Company	EE	\$49.61	5.10%	5.20%	5.00%	5.10%	5.45%	52.00%	59.00%	65.91%	\$0.00	8.97%	19.73	3.62				
Hawaiian Electric Industries, Inc.	HE	\$33.15	6.70%	8.50%	1.50%	5.57%	5.45%	69.00%	71.00%	65.91%	\$0.00	10.97%	12.59	2.31				
IDACORP, Inc.	IDA	\$82.97	4.10%	3.10%	3.50%	3.57%	5.45%	57.00%	60.00%	65.91%	(\$0.00)	8.56%	22.29	4.09				
NorthWestern Corporation	NWE	\$51.42	2.40%	3.12%	4.50%	3.34%	5.45%	63.00%	62.00%	65.91%	(\$0.00)	9.77%	16.08	2.95				
OGE Energy Corp.	OGE	\$31.25	6.00%	5.80%	2.50%	4.77%	5.45%	68.00%	74.00%	65.91%	(\$0.00)	9.51%	17.10	3.14				
Otter Tail Corporation	OTTR	\$41.20	NA	9.00%	7.00%	8.00%	5.45%	72.00%	63.00%	65.91%	(\$0.00)	9.06%	19.25	3.53				
Pinnacle West Capital Corporation	PNW	\$76.92	3.00%	3.63%	5.50%	4.04%	5.45%	64.00%	62.00%	65.91%	(\$0.00)	8.98%	19.64	3.61				
PNM Resources, Inc.	PNM	\$35.57	5.80%	5.80%	7.50%	6.37%	5.45%	57.00%	56.00%	65.91%	(\$0.00)	8.74%	21.07	3.87				
Portland General Electric Company	POR	\$40.07	2.90%	3.50%	6.00%	4.13%	5.45%	59.00%	55.00%	65.91%	(\$0.00)	9.11%	18.97	3.48				
Southern Company	SO	\$43.84	4.50%	2.70%	4.00%	3.73%	5.45%	78.00%	72.00%	65.91%	(\$0.00)	10.01%	15.23	2.80				
WEC Energy Group, Inc.	WEC	\$60.76	4.20%	4.34%	6.00%	4.85%	5.45%	67.00%	66.00%	65.91%	(\$0.00)	9.05%	19.29	3.54				
Xcel Energy Inc.	XEL	\$43.57	5.80%	6.15%	4.50%	5.48%	5.45%	63.00%	67.00%	65.91%	\$0.00	9.37%	17.69	3.25	•			
											Mean	9.32%	18.26					
											Max							
Drainated Annual											Min	8.56%						
Projected Annual		[4 4]	[4.5]	[4.0]	[4 7]	[4.0]	[40]	[00]	[04]	[00]	[00]	[0.4]	[05]	[00]	[07]	[00]	[00]	[00]
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	\$3.30	\$3.48	\$3.66	\$3.85	\$4.05	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$5.52	\$5.82	\$6.13	\$6.47	\$6.82	\$7.19
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	\$3.20	\$3.37	\$3.55	\$3.75	\$3.95
Ameren Corporation	AEE	\$2.68	\$2.87	\$3.06	\$3.28	\$3.50	\$3.75	\$4.01	\$4.27	\$4.55	\$4.83	\$5.12	\$5.41	\$5.70	\$6.02	\$6.34	\$6.69	\$7.05
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.92	\$5.18	\$5.44	\$5.73	\$6.03	\$6.34	\$6.68	\$7.04	\$7.42	\$7.82	\$8.25	\$8.70	\$9.17	\$9.67
Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.91	\$3.06	\$3.22	\$3.39	\$3.56	\$3.75	\$3.95	\$4.16	\$4.38	\$4.62	\$4.87	\$5.14	\$5.42	\$5.71	\$6.02
CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.02	\$3.23	\$3.44	\$3.66	\$3.89	\$4.11	\$4.33	\$4.57	\$4.82	\$5.08	\$5.36
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	\$9.07	\$9.56	\$10.08	\$10.63	\$11.21	\$11.82
Duke Energy Corporation	DUK	\$3.71	\$3.86	\$4.02	\$4.19	\$4.36	\$4.55	\$4.73	\$4.94	\$5.17	\$5.41	\$5.69	\$5.98	\$6.31	\$6.65	\$7.02	\$7.40	\$7.80
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	\$5.15	\$5.43
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	\$4.61	\$4.86	\$5.12	\$5.40
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	\$6.74	\$7.11	\$7.49	\$7.90
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	\$5.40	\$5.69	\$6.00	\$6.33	\$6.67
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	\$3.19	\$3.36	\$3.54	\$3.74
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	\$3.71	\$3.91	\$4.12	\$4.35	\$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	\$6.32	\$6.66	\$7.02	\$7.41	\$7.81	\$8.24
PNM Resources, Inc.	PNM	\$1.46	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.25	\$2.38	\$2.52	\$2.67	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67
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	\$4.54
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	\$4.91	\$5.17	\$5.46	\$5.75
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	\$5.62	\$5.92	\$6.25	\$6.59
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	\$4.42	\$4.66	\$4.91	\$5.18
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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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
OTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ouke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
lawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
DACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
lorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
DGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
NM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
				00 000/	00 000/	05 000/	0 - 0 - 0 /	05 000/	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
VEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	03.3376	00.0070	00.02 /0	00.0170	00.0170	00.0170	00.0170		
WEC Energy Group, Inc. Xcel Energy Inc. Projected Annual	WEC XEL	67.00% 63.00%	66.67% 64.33%	65.67%	67.00%	66.84%	65.97% 66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	-
Coel Energy Inc. Projected Annual																	- [€
Coel Energy Inc. Projected Annual Cash Flows	XEL	63.00% [46]	[47]	[48]	67.00% [49]	[50]	[51]	[52]	[53]	[54]	[55]	65.91% [56]	65.91% [57]	65.91% [58]	65.91% [59]	65.91% [60]	Ter
Company	XEL Ticker	[46] 2018	[47] 2019	[48] 2020	[49] 2021	[50] 2022	[51] 2023	[52] 2024	[53] 2025	[54] 2026	[55] 2027	[56] 2028	[57] 2029	[58] 2030	65.91% [59] 2031	[60] 2032	Ter Va
cel Energy Inc. Projected Annual Cash Flows Company LLLETE, Inc.	XEL Ticker ALE	63.00% [46] 2018 \$2.29	[47] 2019 \$2.39	[48] 2020 \$2.49	67.00% [49] 2021 \$2.59	[50] 2022 \$2.74	[51] 2023 \$2.89	[52] 2024 \$3.06	[53] 2025 \$3.23	[54] 2026 \$3.42	[55] 2027 \$3.62	[56] 2028 \$3.83	65.91% [57] 2029 \$4.04	[58] 2030 \$4.26	65.91% [59] 2031 \$4.49	65.91% [60] 2032 \$4.74	- Teri Va \$14
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation	Ticker ALE LNT	63.00% [46] 2018 \$2.29 \$1.18	64.33% [47] 2019 \$2.39 \$1.25	[48] 2020 \$2.49 \$1.32	[49] 2021 \$2.59 \$1.40	[50] 2022 \$2.74 \$1.48	[51] 2023 \$2.89 \$1.57	[52] 2024 \$3.06 \$1.67	[53] 2025 \$3.23 \$1.77	[54] 2026 \$3.42 \$1.88	[55] 2027 \$3.62 \$1.99	[56] 2028 \$3.83 \$2.11	65.91% [57] 2029 \$4.04 \$2.22	[58] 2030 \$4.26 \$2.34	65.91% [59] 2031 \$4.49 \$2.47	[60] 2032 \$4.74 \$2.60	Ter Va \$14 \$82
cel Energy Inc. Projected Annual Cash Flows Company LLETE, Inc. Illiant Energy Corporation Imperen Corporation	Ticker ALE LNT AEE	[46] 2018 \$2.29 \$1.18 \$1.87	[47] 2019 \$2.39 \$1.25 \$1.99	[48] 2020 \$2.49 \$1.32 \$2.11	[49] 2021 \$2.59 \$1.40 \$2.25	[50] 2022 \$2.74 \$1.48 \$2.44	[51] 2023 \$2.89 \$1.57 \$2.64	[52] 2024 \$3.06 \$1.67 \$2.85	[53] 2025 \$3.23 \$1.77 \$3.06	[54] 2026 \$3.42 \$1.88 \$3.29	[55] 2027 \$3.62 \$1.99 \$3.52	[56] 2028 \$3.83 \$2.11 \$3.76	[57] 2029 \$4.04 \$2.22 \$3.96	[58] 2030 \$4.26 \$2.34 \$4.18	[59] 2031 \$4.49 \$2.47 \$4.41	[60] 2032 \$4.74 \$2.60 \$4.65	Ter Va \$14 \$82 \$11
Crojected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc.	Ticker ALE LNT AEE AEP	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37	Ter Va \$14 \$82 \$11 \$13
Crojected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation	Ticker ALE LNT AEE AEP BKH	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97	Terr V8 \$14 \$82 \$11 \$13 \$11
rojected Annual eash Flows company LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. Ilack Hills Corporation MS Energy Corporation	Ticker ALE LNT AEE AEP BKH CMS	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53	Ter V3 \$14 \$82 \$11 \$13 \$11 \$93
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company	Ticker ALE LNT AEE AEP BKH CMS DTE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79	Terr Va \$14 \$82 \$11 \$13 \$11 \$93 \$21
Crojected Annual Cash Flows Company LLETE, Inc. Illiant Energy Corporation Company Co	Ticker ALE LNT AEE AEP BKH CMS DTE DUK	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36	67.00% [49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14	Teri Va \$14 \$82 \$11 \$13 \$11 \$93 \$21 \$15
cel Energy Inc. Projected Annual Eash Flows Company LLETE, Inc. Illiant Energy Corporation Imeren Corporation Imerican Electric Power Company, Inc. Islack Hills Corporation IMS Energy Corporation ITE Energy Company Ouke Energy Corporation II Paso Electric Company	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65	67.00% [49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58	Ter V3 \$14 \$82 \$11 \$13 \$11 \$93 \$21 \$15
Crojected Annual Cash Flows Company LLETE, Inc. Illiant Energy Corporation Comerican Electric Power Company, Inc. Company Com	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56	Ter V3 \$14 \$88 \$11 \$13 \$11 \$99 \$21 \$15 \$10 \$6
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Industries, Inc. DACORP, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$1.76 \$2.41	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21	Ter V3 \$14 \$83 \$11 \$13 \$11 \$93 \$21 \$15 \$10 \$6 \$17
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Company awaiian Electric Industries, Inc. OACORP, Inc. orthWestern Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.13 \$2.82 \$2.48	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49 \$2.99	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40	Ter V3 \$14 \$88 \$11 \$13 \$11 \$9 \$21 \$15 \$10 \$6 \$17
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Company awaiian Electric Industries, Inc. DACORP, Inc. orthWestern Corporation GE Energy Corp.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46	Ter V3 \$14 \$8, \$11 \$13 \$11 \$9, \$21 \$15 \$10 \$6 \$17
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Company awaiian Electric Industries, Inc. DACORP, Inc. orthWestern Corporation GE Energy Corp. tter Tail Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02	Ter V: \$12 \$8. \$11 \$13 \$11 \$9 \$21 \$15 \$16 \$17 \$10 \$6 \$8
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Company awaiian Electric Industries, Inc. OACORP, Inc. orthWestern Corporation IGE Energy Corp. Itter Tail Corporation innacle West Capital Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43	Tei V \$14 \$8 \$17 \$13 \$14 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16
rojected Annual ash Flows company LLETE, Inc. Illiant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company suke Energy Corporation I Paso Electric Company awaiian Electric Industries, Inc. DACORP, Inc. corthWestern Corporation OGE Energy Corp. Ster Tail Corporation innacle West Capital Corporation NM Resources, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74 \$0.94	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82 \$1.00	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90 \$1.05	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99 \$1.11	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13 \$1.21	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30 \$1.32	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48 \$1.43	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67 \$1.56	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89 \$1.68	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13 \$1.82	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39 \$1.96	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63 \$2.06	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88 \$2.18	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15 \$2.30	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43 \$2.42	Tel V \$14 \$8 \$17 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16
Coel Energy Inc. Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation CMS Energy Corporation CHE Energy Company Cluke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. DACORP, Inc. NorthWestern Corporation CGE Energy Corp. Cotter Tail Corporation Connacle West Capital Corporation CONNAC Resources, Inc. Cortland General Electric Company	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74 \$0.94 \$1.38	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82 \$1.00 \$1.41	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90 \$1.05 \$1.43	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99 \$1.11 \$1.45	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13 \$1.21 \$1.56	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30 \$1.32 \$1.67	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48 \$1.79	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67 \$1.56 \$1.93	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89 \$1.68 \$2.08	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13 \$1.82 \$2.24	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39 \$1.96 \$2.42	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63 \$2.06 \$2.55	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88 \$2.18 \$2.69	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15 \$2.30 \$2.84	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43 \$2.42 \$2.99	Ter V3 \$14 \$88 \$11 \$13 \$11 \$9 \$21 \$16 \$6 \$17 \$10 \$6 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16
coel Energy Inc. Projected Annual Cash Flows Company LLETE, Inc. Illiant Energy Corporation Imeren Corporation Imerican Electric Power Company, Inc. Islack Hills Corporation Inc. Inc. Inc. Inc. Inc. Inc. Inc. Inc	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR SO	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74 \$0.94 \$1.38 \$2.38	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82 \$1.00 \$1.41 \$2.40	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90 \$1.05 \$1.43 \$2.42	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99 \$1.11 \$1.45 \$2.45	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13 \$1.21 \$1.56 \$2.51	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30 \$1.32 \$1.67 \$2.58	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48 \$1.79 \$2.65	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67 \$1.56 \$1.93 \$2.74	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89 \$1.68 \$2.08 \$2.84	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13 \$1.82 \$2.24 \$2.95	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39 \$1.96 \$2.42 \$3.07	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63 \$2.06 \$2.55 \$3.23	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88 \$2.18 \$2.69 \$3.41	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15 \$2.30 \$2.84 \$3.60	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43 \$2.42 \$2.99 \$3.79	Tei V \$14 \$8 \$11 \$13 \$13 \$17 \$9 \$2 \$15 \$10 \$6 \$17 \$10 \$6 \$8 \$16 \$7 \$88 \$8
	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74 \$0.94 \$1.38	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82 \$1.00 \$1.41	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90 \$1.05 \$1.43	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99 \$1.11 \$1.45	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13 \$1.21 \$1.56	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30 \$1.32 \$1.67	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48 \$1.79	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67 \$1.56 \$1.93	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89 \$1.68 \$2.08	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13 \$1.82 \$2.24	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39 \$1.96 \$2.42	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63 \$2.06 \$2.55	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88 \$2.18 \$2.69	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15 \$2.30 \$2.84	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43 \$2.42 \$2.99	Ter V3 \$14 \$88 \$11 \$13 \$11 \$9 \$21 \$15 \$10 \$6 \$17 \$10 \$6 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16

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	3/16/18	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	(\$68.80)	\$0.00	\$1.82	\$2.35	\$2.49	\$2.59	\$2.74	\$2.89	\$3.06	\$3.23	\$3.42	\$3.62	\$3.83	\$4.04	\$4.26	\$4.49	\$149.81
Alliant Energy Corporation	LNT	(\$38.71)	\$0.00	\$0.94	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99	\$2.11	\$2.22	\$2.34	\$2.47	\$84.71
Ameren Corporation	AEE	(\$54.60)	\$0.00	\$1.49	\$1.93	\$2.11	\$2.25	\$2.44	\$2.64	\$2.85	\$3.06	\$3.29	\$3.52	\$3.76	\$3.96	\$4.18	\$4.41	\$122.79
American Electric Power Company, Inc.	AEP	(\$65.89)	\$0.00	\$2.45	\$3.17	\$3.31	\$3.43	\$3.63	\$3.85	\$4.07	\$4.32	\$4.58	\$4.86	\$5.15	\$5.44	\$5.73	\$6.04	\$144.95
Black Hills Corporation	BKH	(\$51.92)	\$0.00	\$1.20	\$1.55	\$1.72	\$1.83	\$1.99	\$2.15	\$2.33	\$2.53	\$2.74	\$2.97	\$3.21	\$3.39	\$3.57	\$3.76	\$117.41
CMS Energy Corporation	CMS	(\$43.01)	\$0.00	\$1.10	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.68	\$2.86	\$3.01	\$3.17	\$3.35	\$96.57
DTE Energy Company	DTE	(\$101.62)	\$0.00	\$2.67	\$3.47	\$3.74	\$3.95	\$4.23	\$4.54	\$4.85	\$5.19	\$5.54	\$5.91	\$6.30	\$6.65	\$7.01	\$7.39	\$225.40
Duke Energy Corporation	DUK	(\$76.11)	\$0.00	\$2.40	\$3.08	\$3.36	\$3.55	\$3.61	\$3.68	\$3.76	\$3.85	\$3.94	\$4.05	\$4.16	\$4.38	\$4.62	\$4.88	\$158.47
El Paso Electric Company	EE	(\$49.61)	\$0.00	\$1.09	\$1.41	\$1.65	\$1.81	\$1.93	\$2.07	\$2.21	\$2.36	\$2.53	\$2.70	\$2.89	\$3.05	\$3.22	\$3.39	\$110.69
Hawaiian Electric Industries, Inc.	HE	(\$33.15)	\$0.00	\$1.40	\$1.81	\$2.00	\$2.13	\$2.23	\$2.33	\$2.43	\$2.54	\$2.65	\$2.76	\$2.88	\$3.04	\$3.20	\$3.38	\$71.55
IDACORP, Inc.	IDA	(\$82.97)	\$0.00	\$1.91	\$2.45	\$2.67	\$2.82	\$2.96	\$3.12	\$3.29	\$3.49	\$3.70	\$3.94	\$4.21	\$4.44	\$4.68	\$4.94	\$181.34
NorthWestern Corporation	NWE	(\$51.42)	\$0.00	\$1.81	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.84	\$2.99	\$3.16	\$3.34	\$3.56	\$3.75	\$3.96	\$4.17	\$111.67
OGE Energy Corp.	OGE	(\$31.25)	\$0.00	\$1.00	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.74	\$1.79	\$1.86	\$1.92	\$1.99	\$2.10	\$2.22	\$2.34	\$66.37
Otter Tail Corporation	OTTR	(\$41.20)	\$0.00	\$1.07	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.58	\$2.72	\$2.86	\$91.21
Pinnacle West Capital Corporation	PNW	(\$76.92)	\$0.00	\$2.17	\$2.79	\$2.90	\$2.99	\$3.13	\$3.30	\$3.48	\$3.67	\$3.89	\$4.13	\$4.39	\$4.63	\$4.88	\$5.15	\$167.21
PNM Resources, Inc.	PNM	(\$35.57)	\$0.00	\$0.75	\$0.97	\$1.05	\$1.11	\$1.21	\$1.32	\$1.43	\$1.56	\$1.68	\$1.82	\$1.96	\$2.06	\$2.18	\$2.30	\$79.81
Portland General Electric Company	POR	(\$40.07)	\$0.00	\$1.10	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.93	\$2.08	\$2.24	\$2.42	\$2.55	\$2.69	\$2.84	\$89.04
Southern Company	so	(\$43.84)	\$0.00	\$1.89	\$2.42	\$2.42	\$2.45	\$2.51	\$2.58	\$2.65	\$2.74	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.60	\$91.40
WEC Energy Group, Inc.	WEC	(\$60.76)	\$0.00	\$1.73	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.86	\$3.01	\$3.16	\$3.33	\$3.51	\$3.70	\$3.90	\$4.12	\$131.41
Xcel Energy Inc.	XEL	(\$43.57)	\$0.00	\$1.23	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.24	\$95.04

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	_			
		Stock	EP	S Growth Ra			Long-Term	F	Payout Rati	io	Iterative	Solution	Terminal	Terminal				
	-	. .	7	First Oall	Value	High	6 4	00.40			_ ,		D/E Datia	PEG				
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	Ratio				
ALLETE, Inc.	ALE	\$68.80	6.10%	5.00%	4.50%	6.10%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	9.13%	18.87	3.47				
Alliant Energy Corporation	LNT	\$38.71	5.30%	5.45%	6.50%	6.50%	5.45%	64.00%	64.00%	65.91%	\$0.00	8.98%	19.66	3.61				
Ameren Corporation	AEE	\$54.60	6.90%	6.40%	7.50%	7.50%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	9.77%	16.09	2.95				
American Electric Power Company, Inc.	AEP	\$65.89	5.40%	5.63%	4.50%	5.63%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	10.46%	13.87	2.55				
Black Hills Corporation	BKH	\$51.93	4.60%	3.50%	7.50%	7.50%	5.45%	52.00%	54.00%	65.91%	\$0.00	9.80%	15.98	2.93				
CMS Energy Corporation	CMS	\$43.01	6.30%	7.04%	8.50%	8.50%	5.45%	61.00%	61.00%	65.91%	\$0.00	9.81%	15.93	2.93				
DTE Energy Company	DTE	\$101.62	6.00%	5.58%	6.50%	6.50%	5.45%	62.00%	61.00%	65.91%	\$0.00	9.35%	17.78	3.27				
Duke Energy Corporation	DUK	\$76.11	3.70%	4.24%	4.50%	4.50%	5.45%	75.00%	78.00%	65.91%	\$0.00	9.08%	19.13	3.51				
El Paso Electric Company	EE	\$49.61	5.10%	5.20%	5.00%	5.20%	5.45%	52.00%	59.00%	65.91%	\$0.00	8.99%	19.58	3.60				
Hawaiian Electric Industries, Inc.	HE	\$33.15	6.70%	8.50%	1.50%	8.50%	5.45%	69.00%	71.00%	65.91%	\$0.00	12.23%	10.25	1.88				
IDACORP, Inc.	IDA	\$82.97	4.10%	3.10%	3.50%	4.10%	5.45%	57.00%	60.00%	65.91%	(\$0.00)	8.69%	21.41	3.93				
NorthWestern Corporation	NWE	\$51.42	2.40%	3.12%	4.50%	4.50%	5.45%	63.00%	62.00%	65.91%	(\$0.00)	10.16%	14.76	2.71				
OGE Energy Corp.	OGE	\$31.25	6.00%	5.80%	2.50%	6.00%	5.45%	68.00%	74.00%	65.91%	\$0.00	9.90%	15.60	2.87				
Otter Tail Corporation	OTTR	\$41.20	NA	9.00%	7.00%	9.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	9.32%	17.92	3.29				
Pinnacle West Capital Corporation	PNW	\$76.92	3.00%	3.63%	5.50%	5.50%	5.45%	64.00%	62.00%	65.91%	(\$0.00)	9.39%	17.63	3.24				
PNM Resources, Inc.	PNM	\$35.57	5.80%	5.80%	7.50%	7.50%	5.45%	57.00%	56.00%	65.91%	(\$0.00)	9.03%	19.41	3.57				
Portland General Electric Company	POR	\$40.07	2.90%	3.50%	6.00%	6.00%	5.45%	59.00%	55.00%	65.91%	(\$0.00)	9.64%	16.55	3.04				
Southern Company	SO	\$43.84	4.50%	2.70%	4.00%	4.50%	5.45%	78.00%	72.00%	65.91%	(\$0.00)	10.28%	14.38	2.64				
WEC Energy Group, Inc.	WEC	\$60.76	4.20%	4.34%	6.00%	6.00%	5.45%	67.00%	66.00%	65.91%	\$0.00	9.37%	17.71	3.25				
Xcel Energy Inc.	XEL	\$43.57	5.80%	6.15%	4.50%	6.15%	5.45%	63.00%	67.00%	65.91%	\$0.00	9.57%	16.85	3.09	•			
											Mean	9.65%						
											Max	12.23%						
Drain stad Americal											Min	8.69%						
Projected Annual		[4.4]	[4.5]	[4.0]	[47]	[4.0]	[40]	[00]	[04]	[00]	[00]	[0.4]	[05]	[00]	[07]	[00]	[00]	[00]
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	\$3.33	\$3.53	\$3.75	\$3.98	\$4.22	\$4.48	\$4.75	\$5.03	\$5.32	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33	\$7.73
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	\$3.58	\$3.77	\$3.98	\$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	\$5.97	\$6.29	\$6.64	\$7.00	\$7.38
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	\$9.02	\$9.51	\$10.03
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	\$5.86	\$6.18	\$6.51	\$6.87	\$7.24
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	\$5.90
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	\$9.42	\$9.93	\$10.47	\$11.04	\$11.64	\$12.28
Duke Energy Corporation	DUK	\$3.71	\$3.88	\$4.05	\$4.23	\$4.42	\$4.62	\$4.83	\$5.06	\$5.30	\$5.56	\$5.85	\$6.16	\$6.49	\$6.85	\$7.22	\$7.61	\$8.03
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	\$4.43	\$4.67	\$4.92	\$5.19	\$5.47
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	\$5.52	\$5.82	\$6.14	\$6.47	\$6.82
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.02	\$6.33	\$6.68	\$7.04	\$7.42	\$7.83	\$8.25
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	\$5.63	\$5.93	\$6.26	\$6.60	\$6.96	\$7.34
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	\$3.17	\$3.34	\$3.52	\$3.71	\$3.91	\$4.13
Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.59	\$3.80	\$4.01	\$4.23	\$4.46	\$4.70	\$4.96
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	\$7.50	\$7.90	\$8.33	\$8.79	\$9.27
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	\$4.02
Portland General Electric Company	POR	\$2.16	\$2.29	\$2.43	\$2.57	\$2.73	\$2.89	\$3.06	\$3.25	\$3.43	\$3.63	\$3.83	\$4.05	\$4.27	\$4.50	\$4.74	\$5.00	\$5.28
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	\$5.51	\$5.81	\$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	\$5.55	\$5.85	\$6.17	\$6.50	\$6.86	\$7.23
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	\$5.18	\$5.46
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Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	
Dividend Payout Ratio		[၁۱]	[32]	[၁၁]	[34]	[၁၁]	[၁၀]	[37]	[၁၀]	[၁၅]	[40]	[41]	[42]	[43]	[44]	[40]	1
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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
OTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
lawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
DACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
(cel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
	ALL	00.0070	04.33 /6	03.07 /6	07.0070	00.0476	00.0378	00.5576	00.01 70	00.2270	00.0070	00.0170	00.0170	03.9176	00.0170	00.3170	•
Projected Annual	ALL	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	
Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	Ter
Projected Annual Cash Flows Company	Ticker	[46] 2018	[47] 2019	[48] 2020	[49] 2021	[50] 2022	[51] 2023	[52] 2024	[53] 2025	[54] 2026	[55] 2027	[56] 2028	[57] 2029	[58] 2030	[59] 2031	[60] 2032	Teri Va
Projected Annual Cash Flows Company ALLETE, Inc.	Ticker ALE	[46] 2018 \$2.33	[47] 2019 \$2.45	[48] 2020 \$2.57	[49] 2021 \$2.70	[50] 2022 \$2.88	[51] 2023 \$3.06	[52] 2024 \$3.26	[53] 2025 \$3.46	[54] 2026 \$3.67	[55] 2027 \$3.89	[56] 2028 \$4.12	[57] 2029 \$4.35	[58] 2030 \$4.58	[59] 2031 \$4.83	[60] 2032 \$5.10	Ter Va \$14
Projected Annual Cash Flows Company ILLETE, Inc. Illiant Energy Corporation	Ticker ALE LNT	[46] 2018 \$2.33 \$1.20	[47] 2019 \$2.45 \$1.28	[48] 2020 \$2.57 \$1.36	[49] 2021 \$2.70 \$1.45	[50] 2022 \$2.88 \$1.55	[51] 2023 \$3.06 \$1.65	[52] 2024 \$3.26 \$1.76	[53] 2025 \$3.46 \$1.87	[54] 2026 \$3.67 \$1.99	[55] 2027 \$3.89 \$2.11	[56] 2028 \$4.12 \$2.24	[57] 2029 \$4.35 \$2.36	[58] 2030 \$4.58 \$2.49	[59] 2031 \$4.83 \$2.62	[60] 2032 \$5.10 \$2.76	Ter V: \$14 \$82
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation	Ticker ALE LNT AEE	[46] 2018 \$2.33 \$1.20 \$1.89	[47] 2019 \$2.45 \$1.28 \$2.02	[48] 2020 \$2.57 \$1.36 \$2.16	[49] 2021 \$2.70 \$1.45 \$2.31	[50] 2022 \$2.88 \$1.55 \$2.52	[51] 2023 \$3.06 \$1.65 \$2.73	[52] 2024 \$3.26 \$1.76 \$2.96	[53] 2025 \$3.46 \$1.87 \$3.19	[54] 2026 \$3.67 \$1.99 \$3.44	[55] 2027 \$3.89 \$2.11 \$3.68	[56] 2028 \$4.12 \$2.24 \$3.93	[57] 2029 \$4.35 \$2.36 \$4.15	[58] 2030 \$4.58 \$2.49 \$4.37	[59] 2031 \$4.83 \$2.62 \$4.61	[60] 2032 \$5.10 \$2.76 \$4.86	Ter Va \$14 \$82 \$11
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc.	Ticker ALE LNT AEE AEP	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12	2019 \$2.45 \$1.28 \$2.02 \$3.24	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61	Ter Va \$14 \$82 \$11 \$13
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation	Ticker ALE LNT AEE AEP BKH	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77	Ter V3 \$14 \$82 \$11 \$13 \$11
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation	Ticker ALE LNT AEE AEP BKH CMS	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89	Ter V8 \$14 \$82 \$11 \$13 \$11 \$93
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Company OTE Energy Company	Ticker ALE LNT AEE AEP BKH CMS DTE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09	Ter V3 \$14 \$82 \$11 \$13 \$11 \$93 \$21
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation OTE Energy Company Duke Energy Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29	Ter V2 \$14 \$82 \$11 \$13 \$11 \$93 \$21 \$15
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation OTE Energy Company Ouke Energy Corporation El Paso Electric Company	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.67 \$3.81 \$3.41 \$1.66	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61	Ter Va \$14 \$82 \$11 \$13 \$11 \$93 \$21 \$15 \$10
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.40 \$3.04 \$1.38 \$1.86	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50	Ter V3 \$14 \$82 \$11 \$13 \$11 \$93 \$21 \$15 \$10 \$69
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation OTE Energy Company Ouke Energy Company Ouke Energy Company Hawaiian Electric Industries, Inc. DACORP, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44	Ter V3 \$14 \$82 \$11 \$13 \$11 \$93 \$21 \$15 \$10 \$69 \$17
Projected Annual Cash Flows Company CLLETE, Inc. Company Comp	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83	Ter V2 \$14 \$82 \$11 \$13 \$11 \$93 \$21 \$15 \$10 \$69 \$17 \$10
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation OTE Energy Company Ouke Energy Company Havaiian Electric Company Havaiian Electric Industries, Inc. DACORP, Inc. HorthWestern Corporation OGE Energy Corp.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$3.88 \$3.42 \$3.08 \$1.89	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72	Ter V2 \$14 \$82 \$11 \$13 \$11 \$93 \$21 \$15 \$10 \$69 \$17 \$10
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation CMS Energy Corporation CHE Energy Company Cuke Energy Company Cluke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. CDACORP, Inc. ClorthWestern Corporation CGE Energy Corp. Cotter Tail Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.94	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27	Ter V3 \$14 \$83 \$11 \$13 \$11 \$93 \$21 \$15 \$10 \$66 \$86 \$86
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation OTE Energy Company Ouke Energy Company Hawaiian Electric Company Hawaiian Electric Industries, Inc. DACORP, Inc. HorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.45 \$2.94 \$5.49	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11	Ter V3 \$12 \$8 \$11 \$13 \$11 \$9 \$21 \$15 \$10 \$6 \$17 \$10 \$6 \$18
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation CMS Energy Company Duke Energy Company Claudian Electric Company Hawaiian Electric Industries, Inc. DACORP, Inc. NorthWestern Corporation DGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PMM Resources, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.40 \$3.40 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81 \$0.96	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94 \$1.03	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07 \$1.10	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20 \$1.17	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41 \$1.29	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63 \$1.42	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86 \$1.55	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11 \$1.69	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37 \$1.84	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65 \$1.99	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94 \$2.14	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21 \$2.26	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.94 \$5.49 \$2.38	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79 \$2.51	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11 \$2.65	Ter V3 \$14 \$83 \$11 \$13 \$11 \$93 \$21 \$15 \$10 \$6 \$17 \$10 \$6 \$17
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation CMS Energy Corporation CTE Energy Company Cuke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. DACORP, Inc. NorthWestern Corporation CGE Energy Corp. Ctter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc. Portland General Electric Company	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81 \$0.96 \$1.43	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94 \$1.03 \$1.48	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07 \$1.10 \$1.54	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20 \$1.17 \$1.59	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41 \$1.29 \$1.73	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63 \$1.42 \$1.89	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86 \$1.55 \$2.05	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11 \$1.69 \$2.22	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37 \$1.84 \$2.41	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65 \$1.99 \$2.60	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94 \$2.14 \$2.81	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21 \$2.26 \$2.97	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.45 \$2.45 \$2.38 \$3.13	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79 \$2.51 \$3.30	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11 \$2.65 \$3.48	Ter V2 \$12 \$8, \$11 \$13 \$11 \$9 \$21 \$16 \$6 \$17 \$10 \$6 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation CMS Energy Corporation CHS Energy Company Duke Energy Company Duke Energy Company Hawaiian Electric Company Hawaiian Electric Industries, Inc. DACORP, Inc. NorthWestern Corporation DGE Energy Corp. Dtter Tail Corporation Pinnacle West Capital Corporation Pom Resources, Inc. Portland General Electric Company Southern Company	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR SO	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81 \$0.96 \$1.43 \$2.41	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94 \$1.03 \$1.48 \$2.45	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07 \$1.10 \$1.54 \$2.50	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20 \$1.17 \$1.59 \$2.54	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41 \$1.29 \$1.73 \$2.62	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63 \$1.42 \$1.89 \$2.71	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86 \$1.55 \$2.05 \$2.81	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11 \$1.69 \$2.22 \$2.91	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37 \$1.84 \$2.41 \$3.02	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$3.68 \$2.12 \$2.49 \$4.65 \$1.99 \$2.60 \$3.14	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94 \$2.14 \$2.81 \$3.26	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21 \$2.26 \$2.97 \$3.44	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.45 \$2.45 \$2.38 \$3.13 \$3.63	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79 \$2.51 \$3.30 \$3.83	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11 \$2.65 \$3.48 \$4.04	Ter V2 \$12 \$8, \$11 \$13 \$13 \$11 \$9 \$21 \$15 \$10 \$6 \$17 \$10 \$6 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Company OTE Energy Company	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81 \$0.96 \$1.43	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94 \$1.03 \$1.48	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07 \$1.10 \$1.54	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20 \$1.17 \$1.59	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41 \$1.29 \$1.73	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63 \$1.42 \$1.89	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86 \$1.55 \$2.05	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11 \$1.69 \$2.22	[54] 2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37 \$1.84 \$2.41	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65 \$1.99 \$2.60	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94 \$2.14 \$2.81	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21 \$2.26 \$2.97	[58] 2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.45 \$2.45 \$2.38 \$3.13	[59] 2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79 \$2.51 \$3.30	[60] 2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11 \$2.65 \$3.48	Ter V2 \$12 \$8, \$11 \$13 \$11 \$9 \$21 \$16 \$6 \$17 \$10 \$6 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16

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	3/16/18	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	(\$68.80)	\$0.00	\$1.85	\$2.40	\$2.57	\$2.70	\$2.88	\$3.06	\$3.26	\$3.46	\$3.67	\$3.89	\$4.12	\$4.35	\$4.58	\$4.83	\$150.99
Alliant Energy Corporation	LNT	(\$38.71)	\$0.00	\$0.95	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.24	\$2.36	\$2.49	\$2.62	\$85.25
Ameren Corporation	AEE	(\$54.60)	\$0.00	\$1.50	\$1.96	\$2.16	\$2.31	\$2.52	\$2.73	\$2.96	\$3.19	\$3.44	\$3.68	\$3.93	\$4.15	\$4.37	\$4.61	\$123.55
American Electric Power Company, Inc.	AEP	(\$65.89)	\$0.00	\$2.47	\$3.20	\$3.37	\$3.50	\$3.73	\$3.96	\$4.21	\$4.47	\$4.75	\$5.04	\$5.35	\$5.64	\$5.94	\$6.27	\$145.72
Black Hills Corporation	BKH	(\$51.92)	\$0.00	\$1.26	\$1.64	\$1.87	\$2.04	\$2.26	\$2.50	\$2.75	\$3.01	\$3.28	\$3.57	\$3.86	\$4.07	\$4.29	\$4.53	\$120.44
CMS Energy Corporation	CMS	(\$43.01)	\$0.00	\$1.13	\$1.48	\$1.67	\$1.82	\$1.99	\$2.18	\$2.37	\$2.56	\$2.75	\$2.95	\$3.14	\$3.32	\$3.50	\$3.69	\$97.85
DTE Energy Company	DTE	(\$101.62)	\$0.00	\$2.70	\$3.51	\$3.81	\$4.04	\$4.35	\$4.68	\$5.02	\$5.38	\$5.75	\$6.14	\$6.55	\$6.90	\$7.28	\$7.67	\$226.45
Duke Energy Corporation	DUK	(\$76.11)	\$0.00	\$2.41	\$3.11	\$3.41	\$3.61	\$3.69	\$3.77	\$3.86	\$3.96	\$4.06	\$4.17	\$4.28	\$4.51	\$4.76	\$5.02	\$158.87
El Paso Electric Company	EE	(\$49.61)	\$0.00	\$1.09	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.38	\$2.55	\$2.73	\$2.92	\$3.08	\$3.24	\$3.42	\$110.80
Hawaiian Electric Industries, Inc.	HE	(\$33.15)	\$0.00	\$1.48	\$1.94	\$2.23	\$2.44	\$2.63	\$2.81	\$2.98	\$3.16	\$3.33	\$3.49	\$3.64	\$3.83	\$4.04	\$4.26	\$74.42
IDACORP, Inc.	IDA	(\$82.97)	\$0.00	\$1.93	\$2.48	\$2.73	\$2.89	\$3.05	\$3.23	\$3.42	\$3.63	\$3.86	\$4.12	\$4.40	\$4.64	\$4.89	\$5.16	\$182.13
NorthWestern Corporation	NWE	(\$51.42)	\$0.00	\$1.85	\$2.38	\$2.52	\$2.62	\$2.76	\$2.92	\$3.08	\$3.27	\$3.46	\$3.68	\$3.91	\$4.12	\$4.35	\$4.58	\$113.07
OGE Energy Corp.	OGE	(\$31.25)	\$0.00	\$1.03	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.97	\$2.05	\$2.12	\$2.20	\$2.32	\$2.45	\$2.58	\$67.12
Otter Tail Corporation	OTTR	(\$41.20)	\$0.00	\$1.09	\$1.43	\$1.49	\$1.55	\$1.70	\$1.86	\$2.01	\$2.17	\$2.33	\$2.49	\$2.64	\$2.79	\$2.94	\$3.10	\$92.08
Pinnacle West Capital Corporation	PNW	(\$76.92)	\$0.00	\$2.24	\$2.89	\$3.07	\$3.20	\$3.41	\$3.63	\$3.86	\$4.11	\$4.37	\$4.65	\$4.94	\$5.21	\$5.49	\$5.79	\$169.47
PNM Resources, Inc.	PNM	(\$35.57)	\$0.00	\$0.76	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.84	\$1.99	\$2.14	\$2.26	\$2.38	\$2.51	\$80.68
Portland General Electric Company	POR	(\$40.07)	\$0.00	\$1.14	\$1.47	\$1.54	\$1.59	\$1.73	\$1.89	\$2.05	\$2.22	\$2.41	\$2.60	\$2.81	\$2.97	\$3.13	\$3.30	\$90.80
Southern Company	SO	(\$43.84)	\$0.00	\$1.92	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.81	\$2.91	\$3.02	\$3.14	\$3.26	\$3.44	\$3.63	\$3.83	\$92.08
WEC Energy Group, Inc.	WEC	(\$60.76)	\$0.00	\$1.77	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.28	\$3.46	\$3.66	\$3.85	\$4.06	\$4.29	\$4.52	\$132.77
Xcel Energy Inc.	XEL	(\$43.57)	\$0.00	\$1.25	\$1.62	\$1.84	\$2.00	\$2.11	\$2.24	\$2.36	\$2.49	\$2.63	\$2.77	\$2.91	\$3.07	\$3.24	\$3.41	\$95.64

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

Stock First Call Line Company Ticker Price Set	ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc.	Ticker	Stock	EPS	S Growth Ra	nto Letima													
Company Ticker Price Zacks First Call Line Growth Growth 2018 2021 2028 Proof IRR P/E Ratio Ratio ALLE TE, Inc. ALE \$68.80 6.10% 5.00% 4.50% 5.45% 66.00% 64.00% 65.91% (\$0.00) 8.71% 21.26 3.90 Alliant Energy Corporation LNT \$38.71 5.30% 5.45% 66.00% 64.00% 66.91% (\$0.00) 9.871% 21.26 3.90 American Electric Power Company, Inc. AEE \$54.60 6.90% 6.40% 7.50% 3.50% 5.45% 61.00% 65.91% (\$0.00) 9.44% 17.41 3.20 American Electric Power Company, Inc. AEE \$55.40% 5.63% 4.50% 4.50% 5.45% 61.00% 65.91% (\$0.00) 9.42% 17.06 3.50% 5.45% 62.00% 65.91% \$0.00 9.17% 18.65 3.42 DT 2.76 Black Hillis Corporation DUK \$7	ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc.	Ticker						Long-Term	P	ayout Rat	10	Iterative	Solution	Terminal	Terminal				
ALLETE, Inc. ALE \$68.80 6.10% 5.00% 4.50% 5.45% 66.00% 64.00% 65.91% (\$0.00) 8.71% 21.26 3.90 Alliant Energy Corporation AEE \$46.0 6.90% 6.40% 5.45% 61.00% 60.00% 65.91% (\$0.00) 8.71% 21.26 3.90 American Electric Power Company, Inc. AEP \$65.89 5.40% 5.63% 4.50% 4.50% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.44% 17.41 3.20 American Electric Power Company, Inc. BIACH \$51.93 4.60% 3.50% 7.50% 3.50% 5.45% 61.00% 63.00% 65.91% (\$0.00) 9.44% 17.41 3.20 CMS Energy Corporation CMS \$43.01 6.30% 7.45% 8.50% 5.50% 3.50% 5.45% 61.00% 61.00% 65.91% (\$0.00) 9.10% 15.06 2.76 BIACK Hills Corporation CMS Energy Corporation CMS \$43.01 6.30% 7.45% 8.50% 5.58% 5.45% 62.00% 54.00% 65.91% (\$0.00) 9.17% 18.65 3.42 DTE Energy Company DTE \$101.62 6.00% 5.58% 6.50% 5.58% 5.45% 62.00% 61.00% 65.91% (\$0.00) 9.10% 19.02 3.49 Duke Energy Corporation DUK \$76.11 3.70% 4.24% 4.50% 3.70% 5.45% 62.00% 61.00% 65.91% (\$0.00) 9.10% 19.02 3.49 Duke Energy Corporation DUK \$76.11 3.70% 4.24% 4.50% 3.70% 5.45% 65.00% 5.5	ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc.		Price	7acks	First Call		_	Growth	2018	2021	2028	Proof	IRR	P/F Ratio					
Alliant Energy Corporation AEE \$54.60 6.90% 6.40% 7.50% 6.40% 5.45% 61.00% 60.00% 65.91% (\$0.00) 8.68% 21.50 3.95 American Electric Power Company, Inc. AEP \$65.89 5.40% 5.63% 4.50% 4.50% 4.50% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.44% 17.41 3.20 American Electric Power Company, Inc. Black Hills Corporation BKH \$51.93 4.60% 3.50% 7.50% 3.50% 5.45% 66.00% 65.91% (\$0.00) 10.06% 15.06 2.76 Black Hills Corporation CMS Energy Corporation CMS \$43.01 6.30% 7.04% 8.50% 6.30% 5.45% 61.00% 65.91% (\$0.00) 10.06% 15.06 2.76 Black Energy Company DTE \$101.62 6.00% 5.58% 5.50% 5.45% 61.00% 65.91% (\$0.00) 9.17% 18.65 3.42 DIKE Energy Corporation DUK \$76.11 3.70% 4.24% 4.50% 3.70% 5.45% 62.00% 61.00% 65.91% (\$0.00) 9.10% 19.02 3.49 Dike Energy Corporation DUK \$76.11 3.70% 4.24% 4.50% 3.70% 5.45% 52.00% 54.00% 65.91% (\$0.00) 8.86% 20.35 3.74 EI Paso Electric Company EE \$49.61 5.10% 5.20% 5.00% 5.45% 52.00% 54.00% 65.91% (\$0.00) 8.86% 20.35 3.74 EI Paso Electric Industries, Inc. HE \$33.15 6.70% 8.50% 1.50% 1.50% 5.45% 69.00% 71.00% 65.91% (\$0.00) 9.47% 17.26 3.14 NorthWestern Corporation NWE \$51.42 2.40% 3.12% 4.50% 2.40% 5.45% 68.00% 74.00% 65.91% (\$0.00) 9.47% 17.26 3.17 OGE Energy Corp. OGE \$31.25 6.00% 5.80% 2.50% 2.50% 5.45% 68.00% 74.00% 65.91% (\$0.00) 9.47% 17.26 3.17 OGE Energy Corp. OGE \$31.25 6.00% 5.80% 2.50% 5.45% 68.00% 74.00% 65.91% (\$0.00) 8.86% 20.35 3.74 PINM Resources, Inc. PNM \$35.57 5.80% 5.80% 7.50% 5.80% 5.45% 57.00% 66.00% 65.91% (\$0.00) 8.61% 21.97 4.03 PONTAIN Resources, Inc. PNM \$35.57 5.80% 5.80% 7.50% 5.80% 5.45% 59.00% 55.00% 65.91% (\$0.00) 8.66% 16.48 3.03	Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc.																		
Ameren Corporation AEE \$54.80 6.90% 6.40% 7.50% 6.40% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.44% 17.41 3.20 American Electric Company, Inc. AEP \$65.89 5.40% 5.63% 4.50% 5.45% 66.00% 63.00% 65.91% (\$0.00) 10.06% 15.06 2.76 Black Hills Corporation CMS 843.01 6.30% 7.60% 8.50% 6.30% 5.45% 66.00% 65.91% 80.00 8.70% 21.36 3.92 CMS Energy Corporation CMS \$43.01 6.30% 7.60% 8.50% 6.30% 5.45% 61.00% 65.91% 80.00 9.17% 18.65 3.42 DTE Energy Company DTE \$101.62 6.00% 5.58% 6.50% 5.45% 62.00% 65.91% 80.00 9.10% 19.02 3.49 Duke Energy Corporation DUK \$76.11 3.00% 5.45% 62.00% 5.90% 65.91% 80.00 <	Ameren Corporation American Electric Power Company, Inc.																		
American Electric Power Company, Inc. AEP \$65.89 5.40% 5.63% 4.50% 4.50% 5.45% 66.00% 63.00% 65.91% (\$0.00) 10.06% 15.06 2.76 Black Hills Corporation BKH \$51.93 4.60% 3.50% 7.50% 3.50% 5.45% 52.00% 54.00% 65.91% \$0.00 8.70% 21.36 3.92 CMS Energy Corporation CMS \$43.01 6.30% 7.04% 8.50% 6.30% 5.45% 62.00% 61.00% 65.91% \$0.00 9.17% 18.65 3.42 DTE Energy Corporation DUK \$76.11 3.70% 4.24% 4.50% 3.70% 5.45% 62.00% 65.91% \$0.00 9.10% 19.02 3.49 Duke Energy Corporation DUK \$76.11 3.70% 4.24% 4.50% 3.70% 5.45% 62.00% 65.91% \$0.00 8.86% 20.35 3.74 El Paso Electric Company EE \$49.61 5.10% 5.50% 1.50% <td>American Electric Power Company, Inc.</td> <td></td>	American Electric Power Company, Inc.																		
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OGE Energy Corp. OGE \$31.25 6.00% 5.80% 2.50% 2.50% 5.45% 68.00% 74.00% 65.91% \$0.00 8.86% 20.35 3.74 Otter Tail Corporation OTTR \$41.20 NA 9.00% 7.00% 5.45% 72.00% 63.00% 65.91% \$0.00 8.86% 20.35 3.74 Pinnacle West Capital Corporation PNW \$76.92 3.00% 3.63% 5.50% 3.00% 5.45% 64.00% 62.00% 65.91% \$0.00 8.86% 20.70 3.80 PNM Resources, Inc. PNM \$35.57 5.80% 5.80% 7.50% 5.80% 5.45% 57.00% 56.00% 65.91% (\$0.00) 8.61% 21.97 4.03 Portland General Electric Company POR \$40.07 2.90% 3.50% 6.45% 59.00% 55.00% 65.91% (\$0.00) 8.79% 20.81 3.82 Southern Company SO \$43.84 4.50% 2.70% 4.00% 2.70% <		NWE										. ,							
Otter Tail Corporation OTTR \$41.20 NA 9.00% 7.00% 7.00% 5.45% 72.00% 63.00% 65.91% \$0.00 8.80% 20.70 3.80 Pinnacle West Capital Corporation PNW \$76.92 3.00% 3.63% 5.50% 3.00% 5.45% 64.00% 62.00% 65.91% (\$0.00) 8.71% 21.27 3.91 PNM Resources, Inc. PNM \$35.57 5.80% 5.80% 7.50% 5.80% 5.45% 57.00% 56.00% 65.91% (\$0.00) 8.61% 21.97 4.03 Portland General Electric Company POR \$40.07 2.90% 3.50% 6.00% 2.90% 5.45% 59.00% 55.00% 65.91% (\$0.00) 8.79% 20.81 3.82 Southern Company SO \$43.84 4.50% 2.70% 4.00% 2.70% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.66% 16.48 3.03												. ,							
PNM Resources, Inc. PNM \$35.57 5.80% 5.80% 7.50% 5.80% 5.45% 57.00% 56.00% 65.91% (\$0.00) 8.61% 21.97 4.03 Portland General Electric Company POR \$40.07 2.90% 3.50% 6.00% 2.90% 5.45% 59.00% 55.00% 65.91% (\$0.00) 8.79% 20.81 3.82 Southern Company SO \$43.84 4.50% 2.70% 4.00% 2.70% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.66% 16.48 3.03		OTTR	\$41.20	NA				5.45%	72.00%	63.00%	65.91%	\$0.00	8.80%	20.70	3.80				
Portland General Electric Company POR \$40.07 2.90% 3.50% 6.00% 2.90% 5.45% 59.00% 55.00% 65.91% (\$0.00) 8.79% 20.81 3.82 Southern Company SO \$43.84 4.50% 2.70% 4.00% 2.70% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.66% 16.48 3.03	Pinnacle West Capital Corporation	PNW	\$76.92	3.00%	3.63%	5.50%	3.00%	5.45%	64.00%	62.00%	65.91%	(\$0.00)	8.71%	21.27	3.91				
Southern Company SO \$43.84 4.50% 2.70% 4.00% 2.70% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.66% 16.48 3.03	PNM Resources, Inc.	PNM	\$35.57	5.80%	5.80%	7.50%	5.80%	5.45%	57.00%	56.00%	65.91%	(\$0.00)	8.61%	21.97	4.03				
		POR	\$40.07	2.90%	3.50%	6.00%	2.90%	5.45%	59.00%	55.00%	65.91%	(\$0.00)	8.79%	20.81	3.82				
WEC Energy Group, Inc. WEC \$60.76 4.20% 4.34% 6.00% 4.20% 5.45% 67.00% 66.00% 65.91% \$0.00 8.88% 20.25 3.72		SO	\$43.84	4.50%	2.70%	4.00%	2.70%	5.45%	78.00%	72.00%	65.91%	(\$0.00)	9.66%	16.48	3.03				
			\$60.76	4.20%	4.34%	6.00%	4.20%	5.45%	67.00%	66.00%	65.91%	\$0.00		20.25					
Xcel Energy Inc. XEL \$43.57 5.80% 6.15% 4.50% 4.50% 5.45% 63.00% 67.00% 65.91% \$0.00 9.10% 19.04 3.50	Xcel Energy Inc.	XEL	\$43.57	5.80%	6.15%	4.50%	4.50%	5.45%	63.00%	67.00%	65.91%	\$0.00		19.04	3.50				
Mean 9.03%																			
Max 10.06%																			
Min 8.45%												Min	8.45%						
Projected Annual				F 4 = 3		F 4 3			1001	TO 41	1001	1001	ro 41	ro=1			[0.0]		ro 01
Earnings per Share [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] [30]	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	Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
																			\$6.79
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 \$3.43 \$3.61 \$3.81	•																		
Ameren Corporation AEE \$2.68 \$2.85 \$3.03 \$3.23 \$3.43 \$3.65 \$3.89 \$4.13 \$4.38 \$4.64 \$4.91 \$5.18 \$5.47 \$5.76 \$6.08 \$6.41 \$6.76																			
American Electric Power Company, Inc. AEP \$4.23 \$4.42 \$4.62 \$4.83 \$5.04 \$5.27 \$5.51 \$5.77 \$6.04 \$6.34 \$6.67 \$7.02 \$7.40 \$7.81 \$8.23 \$8.68 \$9.15																			
Black Hills Corporation BKH \$2.63 \$2.72 \$2.82 \$2.92 \$3.02 \$3.12 \$3.23 \$3.36 \$3.50 \$3.65 \$3.83 \$4.02 \$4.24 \$4.47 \$4.72 \$4.97 \$5.24																			
CMS Energy Corporation CMS \$1.98 \$2.10 \$2.24 \$2.38 \$2.53 \$2.69 \$2.86 \$3.03 \$3.22 \$3.40 \$3.60 \$3.80 \$4.01 \$4.23 \$4.46 \$4.70 \$4.95																			
DTE Energy Company DTE \$4.83 \$5.10 \$5.38 \$5.68 \$6.00 \$6.34 \$6.69 \$7.06 \$7.45 \$7.86 \$8.30 \$8.75 \$9.23 \$9.73 \$10.26 \$10.82 \$11.41			•					•	•		•	•		•	•	•	•		•
Duke Energy Corporation DUK \$3.71 \$3.85 \$3.99 \$4.14 \$4.29 \$4.45 \$4.61 \$4.80 \$5.00 \$5.23 \$5.49 \$5.77 \$6.08 \$6.41 \$6.76 \$7.13 \$7.52											•								•
El Paso Electric Company 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 \$4.36 \$4.59 \$4.84 \$5.11 \$5.39																		•	
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 \$6.49 \$6.84 \$7.21 \$7.60	·																		
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 \$4.74 \$4.99 \$5.27 \$5.55 \$5.86 \$6.18																			
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 \$3.81 \$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 \$6.12 \$6.45 \$6.80 \$7.17 \$7.56																			
PNM Resources, Inc. PNM \$1.46 \$1.54 \$1.63 \$1.73 \$1.83 \$1.94 \$2.05 \$2.17 \$2.29 \$2.42 \$2.55 \$2.69 \$2.84 \$2.99 \$3.16 \$3.33 \$3.51																			
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 \$3.00 \$3.15 \$3.32 \$3.50 \$3.69 \$3.89 \$4.10																			
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 \$4.51 \$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 \$4.56 \$4.79 \$5.06 \$5.33 \$5.62 \$5.93 \$6.25		WEC	\$2.96	\$3.08	\$3.21	\$3.35	\$3.49	\$3.64	\$3.79	\$3.96	\$4.14	\$4.34	\$4.56	\$4.79		\$5.33	\$5.62	\$5.93	
	vv ⊑C Energy Group, 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	\$4.54	\$4.78

Projected Annual
Dividend Payout Ratio
Company

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Alliant Energy Corporation	LNT	6	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	6	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	6	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	5	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	6	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	6	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	7	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	5	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	6	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	5	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	6	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE		8.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	7	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	6	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	5	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	5	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	7	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	6	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	6	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
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	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$4.48	\$144.47
Alliant Energy Corporation	LNT		\$1.17	\$1.23	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$81.89
Ameren Corporation	AEE		\$1.85	\$1.96	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$4.45	\$117.64
American Electric Power Company, Inc.	AEP		\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$6.03	\$137.82
Black Hills Corporation	BKH		\$1.47	\$1.54	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$112.06
CMS Energy Corporation	CMS		\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$3.26	\$92.37
DTE Energy Company	DTE		\$3.34	\$3.51	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$7.52	\$216.93
Duke Energy Corporation	DUK		\$2.99	\$3.14	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$4.96	\$153.04
El Paso Electric Company	EE		\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$3.55	\$107.04
Hawaiian Electric Industries, Inc.	HE		\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$2.55	\$66.14
IDACORP, Inc.						1												
NI (1147 (O ()	IDA		\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$5.01	\$175.67
NorthWestern Corporation	NWE		\$2.24	\$2.50 \$2.28	\$2.32	\$2.37	\$2.88 \$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$106.57
OGE Energy Corp.	NWE OGE		\$2.24 \$1.21	\$2.50 \$2.28 \$1.27	\$2.32 \$1.34	\$2.37 \$1.41	\$2.88 \$2.45 \$1.43	\$2.54 \$1.45	\$2.65 \$1.47	\$2.78 \$1.51	\$2.92 \$1.55	\$3.10 \$1.60	\$3.29 \$1.65	\$3.47 \$1.74	\$3.66 \$1.84	\$3.86 \$1.94	\$4.07 \$2.05	\$106.57 \$63.17
OGE Energy Corp. Otter Tail Corporation	NWE OGE OTTR		\$2.24 \$1.21 \$1.32	\$2.50 \$2.28 \$1.27 \$1.35	\$2.32 \$1.34 \$1.38	\$2.37 \$1.41 \$1.41	\$2.88 \$2.45 \$1.43 \$1.52	\$2.54 \$1.45 \$1.64	\$2.65 \$1.47 \$1.75	\$2.78 \$1.51 \$1.87	\$2.92 \$1.55 \$2.00	\$3.10 \$1.60 \$2.13	\$3.29 \$1.65 \$2.26	\$3.47 \$1.74 \$2.38	\$3.66 \$1.84 \$2.51	\$3.86 \$1.94 \$2.65	\$4.07 \$2.05 \$2.79	\$106.57 \$63.17 \$87.62
OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation	NWE OGE OTTR PNW		\$2.24 \$1.21 \$1.32 \$2.68	\$2.50 \$2.28 \$1.27 \$1.35 \$2.73	\$2.32 \$1.34 \$1.38 \$2.79	\$2.37 \$1.41 \$1.41 \$2.84	\$2.88 \$2.45 \$1.43 \$1.52 \$2.95	\$2.54 \$1.45 \$1.64 \$3.08	\$2.65 \$1.47 \$1.75 \$3.22	\$2.78 \$1.51 \$1.87 \$3.39	\$2.92 \$1.55 \$2.00 \$3.58	\$3.10 \$1.60 \$2.13 \$3.79	\$3.29 \$1.65 \$2.26 \$4.03	\$3.47 \$1.74 \$2.38 \$4.25	\$3.66 \$1.84 \$2.51 \$4.48	\$3.86 \$1.94 \$2.65 \$4.73	\$4.07 \$2.05 \$2.79 \$4.98	\$106.57 \$63.17 \$87.62 \$160.78
OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc.	NWE OGE OTTR PNW PNM		\$2.24 \$1.21 \$1.32 \$2.68 \$0.93	\$2.50 \$2.28 \$1.27 \$1.35 \$2.73 \$0.98	\$2.32 \$1.34 \$1.38 \$2.79 \$1.03	\$2.37 \$1.41 \$1.41 \$2.84 \$1.08	\$2.88 \$2.45 \$1.43 \$1.52 \$2.95 \$1.18	\$2.54 \$1.45 \$1.64 \$3.08 \$1.27	\$2.65 \$1.47 \$1.75 \$3.22 \$1.38	\$2.78 \$1.51 \$1.87 \$3.39 \$1.49	\$2.92 \$1.55 \$2.00 \$3.58 \$1.61	\$3.10 \$1.60 \$2.13 \$3.79 \$1.74	\$3.29 \$1.65 \$2.26 \$4.03 \$1.87	\$3.47 \$1.74 \$2.38 \$4.25 \$1.97	\$3.66 \$1.84 \$2.51 \$4.48 \$2.08	\$3.86 \$1.94 \$2.65 \$4.73 \$2.19	\$4.07 \$2.05 \$2.79 \$4.98 \$2.31	\$106.57 \$63.17 \$87.62 \$160.78 \$77.10
OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc. Portland General Electric Company	NWE OGE OTTR PNW PNM POR		\$2.24 \$1.21 \$1.32 \$2.68 \$0.93 \$1.35	\$2.50 \$2.28 \$1.27 \$1.35 \$2.73 \$0.98 \$1.36	\$2.32 \$1.34 \$1.38 \$2.79 \$1.03 \$1.36	\$2.37 \$1.41 \$1.41 \$2.84 \$1.08 \$1.37	\$2.88 \$2.45 \$1.43 \$1.52 \$2.95 \$1.18 \$1.45	\$2.54 \$1.45 \$1.64 \$3.08 \$1.27 \$1.54	\$2.65 \$1.47 \$1.75 \$3.22 \$1.38 \$1.64	\$2.78 \$1.51 \$1.87 \$3.39 \$1.49 \$1.75	\$2.92 \$1.55 \$2.00 \$3.58 \$1.61 \$1.88	\$3.10 \$1.60 \$2.13 \$3.79 \$1.74 \$2.02	\$3.29 \$1.65 \$2.26 \$4.03 \$1.87 \$2.19	\$3.47 \$1.74 \$2.38 \$4.25 \$1.97 \$2.30	\$3.66 \$1.84 \$2.51 \$4.48 \$2.08 \$2.43	\$3.86 \$1.94 \$2.65 \$4.73 \$2.19 \$2.56	\$4.07 \$2.05 \$2.79 \$4.98 \$2.31 \$2.70	\$106.57 \$63.17 \$87.62 \$160.78 \$77.10 \$85.32
OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc. Portland General Electric Company Southern Company	NWE OGE OTTR PNW PNM POR SO		\$2.24 \$1.21 \$1.32 \$2.68 \$0.93 \$1.35 \$2.33	\$2.50 \$2.28 \$1.27 \$1.35 \$2.73 \$0.98 \$1.36 \$2.33	\$2.32 \$1.34 \$1.38 \$2.79 \$1.03 \$1.36 \$2.33	\$2.37 \$1.41 \$1.41 \$2.84 \$1.08 \$1.37 \$2.33	\$2.88 \$2.45 \$1.43 \$1.52 \$2.95 \$1.18 \$1.45 \$2.36	\$2.54 \$1.45 \$1.64 \$3.08 \$1.27 \$1.54 \$2.41	\$2.65 \$1.47 \$1.75 \$3.22 \$1.38 \$1.64 \$2.46	\$2.78 \$1.51 \$1.87 \$3.39 \$1.49 \$1.75 \$2.53	\$2.92 \$1.55 \$2.00 \$3.58 \$1.61 \$1.88 \$2.61	\$3.10 \$1.60 \$2.13 \$3.79 \$1.74 \$2.02 \$2.71	\$3.29 \$1.65 \$2.26 \$4.03 \$1.87 \$2.19 \$2.82	\$3.47 \$1.74 \$2.38 \$4.25 \$1.97 \$2.30 \$2.97	\$3.66 \$1.84 \$2.51 \$4.48 \$2.08 \$2.43 \$3.13	\$3.86 \$1.94 \$2.65 \$4.73 \$2.19 \$2.56 \$3.30	\$4.07 \$2.05 \$2.79 \$4.98 \$2.31 \$2.70 \$3.48	\$106.57 \$63.17 \$87.62 \$160.78 \$77.10 \$85.32 \$87.09
OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc. Portland General Electric Company	NWE OGE OTTR PNW PNM POR		\$2.24 \$1.21 \$1.32 \$2.68 \$0.93 \$1.35	\$2.50 \$2.28 \$1.27 \$1.35 \$2.73 \$0.98 \$1.36	\$2.32 \$1.34 \$1.38 \$2.79 \$1.03 \$1.36	\$2.37 \$1.41 \$1.41 \$2.84 \$1.08 \$1.37	\$2.88 \$2.45 \$1.43 \$1.52 \$2.95 \$1.18 \$1.45	\$2.54 \$1.45 \$1.64 \$3.08 \$1.27 \$1.54	\$2.65 \$1.47 \$1.75 \$3.22 \$1.38 \$1.64	\$2.78 \$1.51 \$1.87 \$3.39 \$1.49 \$1.75	\$2.92 \$1.55 \$2.00 \$3.58 \$1.61 \$1.88	\$3.10 \$1.60 \$2.13 \$3.79 \$1.74 \$2.02	\$3.29 \$1.65 \$2.26 \$4.03 \$1.87 \$2.19	\$3.47 \$1.74 \$2.38 \$4.25 \$1.97 \$2.30	\$3.66 \$1.84 \$2.51 \$4.48 \$2.08 \$2.43	\$3.86 \$1.94 \$2.65 \$4.73 \$2.19 \$2.56	\$4.07 \$2.05 \$2.79 \$4.98 \$2.31 \$2.70	\$106.57 \$63.17 \$87.62 \$160.78 \$77.10 \$85.32

Projected Annual Data
Investor Cash Flows

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[/1]	[72]	[73]	[74]	[/5]	[76]	[//]	[78]
		Initial																
Company	Ticker	Outflow	3/16/18	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	(\$68.80)	\$0.00	\$1.80	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$148.95
Alliant Energy Corporation	LNT	(\$38.71)	\$0.00	\$0.93	\$1.20	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$84.40
Ameren Corporation	AEE	(\$54.60)	\$0.00	\$1.47	\$1.91	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$122.10
American Electric Power Company, Inc.	AEP	(\$65.89)	\$0.00	\$2.42	\$3.12	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$143.85
Black Hills Corporation	BKH	(\$51.92)	\$0.00	\$1.16	\$1.49	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$115.51
CMS Energy Corporation	CMS	(\$43.01)	\$0.00	\$1.08	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$95.64
DTE Energy Company	DTE	(\$101.62)	\$0.00	\$2.65	\$3.43	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$224.45
Duke Energy Corporation	DUK	(\$76.11)	\$0.00	\$2.38	\$3.05	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$157.99
El Paso Electric Company	EE	(\$49.61)	\$0.00	\$1.09	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$110.59
Hawaiian Electric Industries, Inc.	HE	(\$33.15)	\$0.00	\$1.29	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$68.69
IDACORP, Inc.	IDA	(\$82.97)	\$0.00	\$1.90	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$180.68
NorthWestern Corporation	NWE	(\$51.42)	\$0.00	\$1.78	\$2.27	\$2.32	\$2.37	\$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$110.64
OGE Energy Corp.	OGE	(\$31.25)	\$0.00	\$0.96	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.51	\$1.55	\$1.60	\$1.65	\$1.74	\$1.84	\$1.94	\$65.22
Otter Tail Corporation	OTTR	(\$41.20)	\$0.00	\$1.05	\$1.37	\$1.38	\$1.41	\$1.52	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.26	\$2.38	\$2.51	\$2.65	\$90.41
Pinnacle West Capital Corporation	PNW	(\$76.92)	\$0.00	\$2.13	\$2.72	\$2.79	\$2.84	\$2.95	\$3.08	\$3.22	\$3.39	\$3.58	\$3.79	\$4.03	\$4.25	\$4.48	\$4.73	\$165.77
PNM Resources, Inc.	PNM	(\$35.57)	\$0.00	\$0.74	\$0.96	\$1.03	\$1.08	\$1.18	\$1.27	\$1.38	\$1.49	\$1.61	\$1.74	\$1.87	\$1.97	\$2.08	\$2.19	\$79.41
Portland General Electric Company	POR	(\$40.07)	\$0.00	\$1.07	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.88	\$2.02	\$2.19	\$2.30	\$2.43	\$2.56	\$88.02
Southern Company	SO	(\$43.84)	\$0.00	\$1.85	\$2.36	\$2.33	\$2.33	\$2.36	\$2.41	\$2.46	\$2.53	\$2.61	\$2.71	\$2.82	\$2.97	\$3.13	\$3.30	\$90.57
WEC Energy Group, Inc.	WEC	(\$60.76)	\$0.00	\$1.71	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.73	\$2.86	\$3.00	\$3.16	\$3.33	\$3.51	\$3.70	\$3.91	\$130.71
Xcel Energy Inc.	XEL	(\$43.57)	\$0.00	\$1.21	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$94.21

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

Inputs		[1] Stock	[2]	[3] S Growth Ra	[4] ate Estima	[5]	[6] Long-Term	[7]	[8] Payout Rat	[9]	[10] Iterative	[11]	[12] Terminal	[13] Terminal	-			
					Value		, 20119		•					PEG				
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	Ratio	•			
ALLETE, Inc.	ALE	\$73.39	6.10%	5.00%	4.50%	5.20%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	8.67%	21.54	3.95				
Alliant Energy Corporation	LNT	\$41.32	5.30%	5.45%	6.50%	5.75%	5.45%	64.00%	64.00%	65.91%	(\$0.00)	8.58%	22.20	4.08				
Ameren Corporation	AEE	\$58.17	6.90%	6.40%	7.50%	6.93%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	9.34%	17.83	3.27				
American Electric Power Company, Inc.	AEP	\$70.89	5.40%	5.63%	4.50%	5.18%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	9.95%	15.44	2.83				
Black Hills Corporation	BKH	\$55.75	4.60%	3.50%	7.50%	5.20%	5.45%	52.00%	54.00%	65.91%	\$0.00	8.89%	20.20	3.71				
CMS Energy Corporation	CMS	\$46.01	6.30%	7.04%	8.50%	7.28%	5.45%	61.00%	61.00%	65.91%	\$0.00	9.19%	18.57	3.41				
DTE Energy Company	DTE	\$107.17	6.00%	5.58%	6.50%	6.03%	5.45%	62.00%	61.00%	65.91%	(\$0.00)	9.03%	19.41	3.56				
Duke Energy Corporation	DUK	\$81.78	3.70%	4.24%	4.50%	4.15%	5.45%	75.00%	78.00%	65.91%	\$0.00	8.72%	21.20	3.89				
El Paso Electric Company	EE	\$53.98	5.10%	5.20%	5.00%	5.10%	5.45%	52.00%	59.00%	65.91%	\$0.00	8.69%	21.45	3.94				
Hawaiian Electric Industries, Inc.	HE	\$35.12	6.70%	8.50%	1.50%	5.57%	5.45%	69.00%	71.00%	65.91%	\$0.00	10.65%	13.36	2.45				
IDACORP, Inc.	IDA	\$88.81	4.10%	3.10%	3.50%	3.57%	5.45%	57.00%	60.00%	65.91%	(\$0.00)	8.36%	23.87	4.38				
NorthWestern Corporation	NWE	\$56.57	2.40%	3.12%	4.50%	3.34%	5.45%	63.00%	62.00%	65.91%	(\$0.00)	9.37%	17.72	3.25				
OGE Energy Corp.	OGE	\$32.77	6.00%	5.80%	2.50%	4.77%	5.45%	68.00%	74.00%	65.91%	\$0.00	9.31%	17.97	3.30				
Otter Tail Corporation	OTTR	\$43.47	NA	9.00%	7.00%	8.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	8.87%	20.31	3.73				
Pinnacle West Capital Corporation	PNW	\$82.88	3.00%	3.63%	5.50%	4.04%	5.45%	64.00%	62.00%	65.91%	(\$0.00)	8.73%	21.19	3.89				
PNM Resources, Inc.	PNM	\$39.54	5.80%	5.80%	7.50%	6.37%	5.45%	57.00%	56.00%	65.91%	(\$0.00)	8.42%	23.39	4.29				
Portland General Electric Company	POR	\$44.10	2.90%	3.50%	6.00%	4.13%	5.45%	59.00%	55.00%	65.91%	(\$0.00)	8.78%	20.87	3.83				
Southern Company	SO	\$47.14	4.50%	2.70%	4.00%	3.73%	5.45%	78.00%	72.00%	65.91%	(\$0.00)	9.67%	16.45	3.02				
WEC Energy Group, Inc.	WEC	\$64.56	4.20%	4.34%	6.00%	4.85%	5.45%	67.00%	66.00%	65.91%	\$0.00	8.83%	20.52	3.77				
Xcel Energy Inc.	XEL	\$46.97	5.80%	6.15%	4.50%	5.48%	5.45%	63.00%	67.00%	65.91%	\$0.00	9.09%	19.10	3.51	_			
Drainated Appual											Max Min							
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
		[]	[]	[]	[]	[]	[, -]	[]	[]	[]	[]	[]	[1	[1	[]	[]	[1]	[5.5]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	\$3.14	\$3.30	\$3.48	\$3.66	\$3.85	\$4.05	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$5.52	\$5.82	\$6.13	\$6.47	\$6.82	\$7.19
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	\$3.20	\$3.37	\$3.55	\$3.75	\$3.95
Ameren Corporation	AEE	\$2.68	\$2.87	\$3.06	\$3.28	\$3.50	\$3.75	\$4.01	\$4.27	\$4.55	\$4.83	\$5.12	\$5.41	\$5.70	\$6.02	\$6.34	\$6.69	\$7.05
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.92	\$5.18	\$5.44	\$5.73	\$6.03	\$6.34	\$6.68	\$7.04	\$7.42	\$7.82	\$8.25	\$8.70	\$9.17	\$9.67
Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.91	\$3.06	\$3.22	\$3.39	\$3.56	\$3.75	\$3.95	\$4.16	\$4.38	\$4.62	\$4.87	\$5.14	\$5.42	\$5.71	\$6.02
CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.02	\$3.23	\$3.44	\$3.66	\$3.89	\$4.11	\$4.33	\$4.57	\$4.82	\$5.08	\$5.36
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	\$9.07	\$9.56	\$10.08	\$10.63	\$11.21	\$11.82
Duke Energy Corporation	DUK	\$3.71	\$3.86	\$4.02	\$4.19	\$4.36	\$4.55	\$4.73	\$4.94	\$5.17	\$5.41	\$5.69	\$5.98	\$6.31	\$6.65	\$7.02	\$7.40	\$7.80
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	\$5.15	\$5.43
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	\$4.61	\$4.86	\$5.12	\$5.40
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	\$6.74	\$7.11	\$7.49	\$7.90
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	\$5.40	\$5.69	\$6.00	\$6.33	\$6.67
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	\$3.19	\$3.36	\$3.54	\$3.74
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	\$3.71	\$3.91	\$4.12	\$4.35	\$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	\$6.32	\$6.66	\$7.02	\$7.41	\$7.81	\$8.24
PNM Resources, Inc.	PNM	\$1.46	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.25	\$2.38	\$2.52	\$2.67	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67
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	\$4.54
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	\$4.91	\$5.17	\$5.46	\$5.75
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	\$5.62	\$5.92	\$6.25	\$6.59
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	\$4.42	\$4.66	\$4.91	\$5.18

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	•
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
tool Elliolgy moi	7(2.2	30.0070	0110070	00.01.70	01.10070	00.0170	00.0070	00.0070	00.01 70	00.2270	00.0070	00.0170	00.0170	00.0170	00.0170	00.0170	•
Projected Annual																	
Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	
_																	
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
ALLETE, Inc.	ALE	\$2.29	\$2.39	\$2.49	\$2.59	\$2.74	\$2.89	\$3.06	\$3.23	\$3.42	\$3.62	\$3.83	\$4.04	\$4.26	\$4.49	\$4.74	
Alliant Energy Corporation	LNT	\$1.18	\$1.25	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99	\$2.11	\$2.22	\$2.34	\$2.47	\$2.60	
Ameren Corporation	AEE	\$1.87	\$1.99	\$2.11	\$2.25	\$2.44	\$2.64	\$2.85	\$3.06	\$3.29	\$3.52	\$3.76	\$3.96	\$4.18	\$4.41	\$4.65	
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.31	\$3.43	\$3.63	\$3.85	\$4.07	\$4.32	\$4.58	\$4.86	\$5.15	\$5.44	\$5.73	\$6.04	\$6.37	
Black Hills Corporation	BKH	\$1.51	\$1.61	\$1.72	\$1.83	\$1.99	\$2.15	\$2.33	\$2.53	\$2.74	\$2.97	\$3.21	\$3.39	\$3.57	\$3.76	\$3.97	
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.68	\$2.86	\$3.01	\$3.17	\$3.35	\$3.53	
OTE Energy Company	DTE	\$3.37	\$3.55	\$3.74	\$3.95	\$4.23	\$4.54	\$4.85	\$5.19	\$5.54	\$5.91	\$6.30	\$6.65	\$7.01	\$7.39	\$7.79	
Ouke Energy Corporation	DUK	\$3.02	\$3.19	\$3.36	\$3.55	\$3.61	\$3.68	\$3.76	\$3.85	\$3.94	\$4.05	\$4.16	\$4.38	\$4.62	\$4.88	\$5.14	
El Paso Electric Company	EE	\$1.37	\$1.51	\$1.65	\$1.81	\$1.93	\$2.07	\$2.21	\$2.36	\$2.53	\$2.70	\$2.89	\$3.05	\$3.22	\$3.39	\$3.58	
Hawaiian Electric Industries, Inc.	HE	\$1.76	\$1.88	\$2.00	\$2.13	\$2.23	\$2.33	\$2.43	\$2.54	\$2.65	\$2.76	\$2.88	\$3.04	\$3.20	\$3.38	\$3.56	
DACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.12	\$3.29	\$3.49	\$3.70	\$3.94	\$4.21	\$4.44	\$4.68	\$4.94	\$5.21	
NorthWestern Corporation	NWE	\$2.28	\$2.34	\$2.41	\$2.48	\$2.58	\$2.70	\$2.84	\$2.99	\$3.16	\$3.34	\$3.56	\$3.75	\$3.96	\$4.17	\$4.40	
OGE Energy Corp.	OGE	\$1.26	\$1.36	\$1.47	\$1.58	\$1.63	\$1.68	\$1.74	\$1.79	\$1.86	\$1.92	\$1.99	\$2.10	\$2.22	\$2.34	\$2.46	
Otter Tail Corporation	OTTR	\$1.34	\$1.39	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.58	\$2.72	\$2.86	\$3.02	
Pinnacle West Capital Corporation	DNIM	¢2.74	¢2 22	00.02	¢2.00	¢2 12	¢2 20	¢2 49	¢2 67	¢2 90	¢4.12	¢4.30	¢4.62	¢4 00	¢5 15	¢5 /2	

PNW

PNM

POR

SO

WEC

XEL

\$2.74

\$0.94

\$1.38

\$2.38

\$2.18

\$1.55

\$2.82

\$1.00

\$1.41

\$2.40

\$2.27

\$1.67

\$2.90

\$1.05

\$1.43

\$2.42

\$2.37

\$1.80

\$2.99

\$1.11

\$1.45

\$2.45

\$2.48

\$1.93

\$3.13

\$1.21

\$1.56

\$2.51

\$2.59

\$2.03

\$3.30

\$1.32

\$1.67

\$2.58

\$2.72

\$2.14

\$3.67

\$1.56

\$1.93

\$2.74

\$3.01

\$2.37

\$3.48

\$1.43

\$1.79

\$2.65

\$2.86

\$2.25

\$3.89

\$1.68

\$2.08

\$2.84

\$3.16

\$2.49

\$4.13

\$1.82

\$2.24

\$2.95

\$3.33

\$2.62

\$4.39

\$1.96

\$2.42

\$3.07

\$3.51

\$2.76

\$4.63

\$2.06

\$2.55

\$3.23

\$3.70

\$2.91

\$4.88

\$2.18

\$2.69

\$3.41

\$3.90

\$3.07

\$5.15

\$2.30

\$2.84

\$3.60

\$4.12

\$3.24

\$5.43

\$2.42

\$2.99

\$3.79

\$4.34

\$3.41

\$174.51

\$85.89

\$94.67

\$94.61

\$135.17

\$98.88

Pinnacle West Capital Corporation

Portland General Electric Company

PNM Resources, Inc.

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

Projected Annual Data
Investor Cash Flows

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
_		Initial				- / /	- / /- /	- / /	- / /	- / /- /	- / /	- / /	- / /	- / /	- / /	- / /	- / /	
Company	Ticker	Outflow	3/16/18	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	(\$73.39)	\$0.00	\$1.82	\$2.35	\$2.49	\$2.59	\$2.74	\$2.89	\$3.06	\$3.23	\$3.42	\$3.62	\$3.83	\$4.04	\$4.26	\$4.49	\$159.61
Alliant Energy Corporation	LNT	(\$41.32)	\$0.00	\$0.94	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99	\$2.11	\$2.22	\$2.34	\$2.47	\$90.28
Ameren Corporation	AEE	(\$58.17)	\$0.00	\$1.49	\$1.93	\$2.11	\$2.25	\$2.44	\$2.64	\$2.85	\$3.06	\$3.29	\$3.52	\$3.76	\$3.96	\$4.18	\$4.41	\$130.42
American Electric Power Company, Inc.	AEP	(\$70.89)	\$0.00	\$2.45	\$3.17	\$3.31	\$3.43	\$3.63	\$3.85	\$4.07	\$4.32	\$4.58	\$4.86	\$5.15	\$5.44	\$5.73	\$6.04	\$155.62
Black Hills Corporation	BKH	(\$55.75)	\$0.00	\$1.20	\$1.55	\$1.72	\$1.83	\$1.99	\$2.15	\$2.33	\$2.53	\$2.74	\$2.97	\$3.21	\$3.39	\$3.57	\$3.76	\$125.61
CMS Energy Corporation	CMS	(\$46.01)	\$0.00	\$1.10	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.68	\$2.86	\$3.01	\$3.17	\$3.35	\$103.00
DTE Energy Company	DTE	(\$107.17)	\$0.00	\$2.67	\$3.47	\$3.74	\$3.95	\$4.23	\$4.54	\$4.85	\$5.19	\$5.54	\$5.91	\$6.30	\$6.65	\$7.01	\$7.39	\$237.28
Duke Energy Corporation	DUK	(\$81.78)	\$0.00	\$2.40	\$3.08	\$3.36	\$3.55	\$3.61	\$3.68	\$3.76	\$3.85	\$3.94	\$4.05	\$4.16	\$4.38	\$4.62	\$4.88	\$170.51
El Paso Electric Company	EE	(\$53.98)	\$0.00	\$1.09	\$1.41	\$1.65	\$1.81	\$1.93	\$2.07	\$2.21	\$2.36	\$2.53	\$2.70	\$2.89	\$3.05	\$3.22	\$3.39	\$120.02
Hawaiian Electric Industries, Inc.	HE	(\$35.12)	\$0.00	\$1.40	\$1.81	\$2.00	\$2.13	\$2.23	\$2.33	\$2.43	\$2.54	\$2.65	\$2.76	\$2.88	\$3.04	\$3.20	\$3.38	\$75.73
IDACORP, Inc.	IDA	(\$88.81)	\$0.00	\$1.91	\$2.45	\$2.67	\$2.82	\$2.96	\$3.12	\$3.29	\$3.49	\$3.70	\$3.94	\$4.21	\$4.44	\$4.68	\$4.94	\$193.82
NorthWestern Corporation	NWE	(\$56.57)	\$0.00	\$1.81	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.84	\$2.99	\$3.16	\$3.34	\$3.56	\$3.75	\$3.96	\$4.17	\$122.64
OGE Energy Corp.	OGE	(\$32.77)	\$0.00	\$1.00	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.74	\$1.79	\$1.86	\$1.92	\$1.99	\$2.10	\$2.22	\$2.34	\$69.61
Otter Tail Corporation	OTTR	(\$43.47)	\$0.00	\$1.07	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.58	\$2.72	\$2.86	\$96.07
Pinnacle West Capital Corporation	PNW	(\$82.88)	\$0.00	\$2.17	\$2.79	\$2.90	\$2.99	\$3.13	\$3.30	\$3.48	\$3.67	\$3.89	\$4.13	\$4.39	\$4.63	\$4.88	\$5.15	\$179.94
PNM Resources, Inc.	PNM	(\$39.54)	\$0.00	\$0.75	\$0.97	\$1.05	\$1.11	\$1.21	\$1.32	\$1.43	\$1.56	\$1.68	\$1.82	\$1.96	\$2.06	\$2.18	\$2.30	\$88.31
Portland General Electric Company	POR	(\$44.10)	\$0.00	\$1.10	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.93	\$2.08	\$2.24	\$2.42	\$2.55	\$2.69	\$2.84	\$97.66
Southern Company	SO	(\$47.14)	\$0.00	\$1.89	\$2.42	\$2.42	\$2.45	\$2.51	\$2.58	\$2.65	\$2.74	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.60	\$98.40
WEC Energy Group, Inc.	WEC	(\$64.56)	\$0.00	\$1.73	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.86	\$3.01	\$3.16	\$3.33	\$3.51	\$3.70	\$3.90	\$4.12	\$139.52
Xcel Energy Inc.	XEL	(\$46.97)	\$0.00	\$1.23	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.24	\$102.29

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

Stock EPS Growth Rate Estimates Value High First Call Line Growth Gr	
Company Ticker Price Zacks First Call Line Growth Growth 2018 2021 2028 Proof IRR P/E Ratio Ratio ALLETE, Inc. ALE \$73.39 6.10% 5.00% 4.50% 6.10% 5.45% 66.00% 64.00% 65.91% (\$0.00) 8.90% 20.14 3.70 Alliant Energy Corporation LNT \$41.32 5.30% 5.45% 6.50% 5.45% 64.00% 64.00% 65.91% \$0.00 8.76% 20.99 3.85 American Corporation AEE \$58.17 6.90% 6.40% 7.50% 7.50% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.50% 17.12 3.14 American Electric Power Company, Inc. AEP \$70.89 5.40% 5.63% 4.50% 5.63% 5.45% 66.00% 63.00% 65.91% (\$0.00) 10.10% 14.94 2.74 Black Hills Corporation BKH \$55.75 4.60% 3.50%	
ALLETE, Inc. ALE \$73.39 6.10% 5.00% 4.50% 6.10% 5.45% 66.00% 64.00% 65.91% (\$0.00) 8.90% 20.14 3.70 Alliant Energy Corporation LNT \$41.32 5.30% 5.45% 6.50% 6.50% 5.45% 64.00% 64.00% 65.91% \$0.00 8.76% 20.99 3.85 American Corporation AEE \$58.17 6.90% 6.40% 7.50% 7.50% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.50% 17.12 3.14 American Electric Power Company, Inc. BKH \$55.75 4.60% 3.50% 7.50% 7.50% 5.45% 52.00% 54.00% 65.91% \$0.00 9.51% 17.11 3.14	
Alliant Energy Corporation LNT \$41.32 5.30% 5.45% 6.50% 6.50% 5.45% 64.00% 64.00% 65.91% \$0.00 8.76% 20.99 3.85 American Electric Power Company, Inc. AEP \$70.89 5.40% 5.63% 4.50% 5.63% 5.45% 66.00% 65.00% 65.91% (\$0.00) 9.50% 17.12 3.14 Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 7.50% 5.45% 52.00% 54.00% 65.91% \$0.00 9.51% 17.11 3.14	
Ameren Corporation AEE \$58.17 6.90% 6.40% 7.50% 7.50% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.50% 17.12 3.14 American Electric Power Company, Inc. AEP \$70.89 5.40% 5.63% 4.50% 5.63% 5.45% 66.00% 63.00% 65.91% (\$0.00) 10.10% 14.94 2.74 Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 7.50% 5.45% 52.00% 54.00% 65.91% \$0.00 9.51% 17.11 3.14	
American Electric Power Company, Inc. AEP \$70.89 5.40% 5.63% 4.50% 5.63% 5.45% 66.00% 63.00% 65.91% (\$0.00) 10.10% 14.94 2.74 Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 7.50% 5.45% 52.00% 54.00% 65.91% \$0.00 9.51% 17.11 3.14	
Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 7.50% 5.45% 52.00% 54.00% 65.91% \$0.00 9.51% 17.11 3.14	
DTE Energy Company DTE \$107.17 6.00% 5.58% 6.50% 6.50% 5.45% 62.00% 61.00% 65.91% \$0.00 9.15% 18.75 3.44	
Duke Energy Corporation DUK \$81.78 3.70% 4.24% 4.50% 4.50% 5.45% 75.00% 78.00% 65.91% \$0.00 8.81% 20.63 3.79	
El Paso Electric Company EE \$53.98 5.10% 5.20% 5.00% 5.20% 5.45% 52.00% 59.00% 65.91% \$0.00 8.71% 21.29 3.91	
Hawaiian Electric Industries, Inc. HE \$35.12 6.70% 8.50% 1.50% 8.50% 5.45% 69.00% 71.00% 65.91% \$0.00 11.84% 10.87 2.00	
IDACORP, Inc. IDA \$88.81 4.10% 3.10% 3.50% 4.10% 5.45% 57.00% 60.00% 65.91% (\$0.00) 8.48% 22.92 4.21	
NorthWestern Corporation NWE \$56.57 2.40% 3.12% 4.50% 4.50% 5.45% 63.00% 62.00% 65.91% (\$0.00) 9.72% 16.25 2.98	
OGE Energy Corp. OGE \$32.77 6.00% 5.80% 2.50% 6.00% 5.45% 68.00% 74.00% 65.91% \$0.00 9.69% 16.39 3.01	
Otter Tail Corporation OTTR \$43.47 NA 9.00% 7.00% 9.00% 5.45% 72.00% 63.00% 65.91% \$0.00 9.12% 18.90 3.47	
Pinnacle West Capital Corporation PNW \$82.88 3.00% 3.63% 5.50% 5.50% 5.45% 64.00% 62.00% 65.91% (\$0.00) 9.10% 19.00 3.49	
PNM Resources, Inc. PNM \$39.54 5.80% 5.80% 7.50% 7.50% 5.45% 57.00% 56.00% 65.91% (\$0.00) 8.67% 21.53 3.95	
Portland General Electric Company POR \$44.10 2.90% 3.50% 6.00% 6.00% 5.45% 59.00% 55.00% 65.91% (\$0.00) 9.27% 18.19 3.34	
Southern Company SO \$47.14 4.50% 2.70% 4.00% 4.50% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.92% 15.52 2.85	
WEC Energy Group, Inc. WEC \$64.56 4.20% 4.34% 6.00% 6.00% 5.45% 67.00% 66.00% 65.91% \$0.00 9.14% 18.83 3.46	
Xcel Energy Inc. XEL \$46.97 5.80% 6.15% 4.50% 6.15% 5.45% 63.00% 67.00% 65.91% \$0.00 9.27% 18.18 3.34	
Mean 9.36%	
Max 11.84%	
Min 8.48%	
Projected Annual	ro 01
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 \$3.33 \$3.53 \$3.75 \$3.98 \$4.22 \$4.48 \$4.75 \$5.03 \$5.32 \$5.62 \$5.93 \$6.25 \$6.59 \$6.95 \$7.33	\$7.73
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 \$3.58 \$3.77 \$3.98	\$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 \$5.97 \$6.29 \$6.64 \$7.00	\$7.38
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 \$9.02 \$9.51	\$10.03
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 \$5.86 \$6.18 \$6.51 \$6.87	\$7.24
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	\$5.90
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 \$9.42 \$9.93 \$10.47 \$11.04 \$11.64	\$12.28
Duke Energy Corporation DUK \$3.71 \$3.88 \$4.05 \$4.23 \$4.42 \$4.62 \$4.83 \$5.06 \$5.30 \$5.56 \$5.85 \$6.16 \$6.49 \$6.85 \$7.22 \$7.61	\$8.03
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 \$4.43 \$4.67 \$4.92 \$5.19	\$5.47
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 \$5.52 \$5.82 \$6.14 \$6.47	\$6.82
IDACORP, Inc. IDA \$3.94 \$4.10 \$4.27 \$4.44 \$4.63 \$4.82 \$5.01 \$5.23 \$5.47 \$5.73 \$6.02 \$6.33 \$6.68 \$7.04 \$7.42 \$7.83	\$8.25
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 \$5.63 \$5.93 \$6.26 \$6.60 \$6.96	\$7.34
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 \$3.17 \$3.34 \$3.52 \$3.71 \$3.91	\$4.13
Otter Tail Corporation OTTR \$1.60 \$1.74 \$1.90 \$2.07 \$2.26 \$2.46 \$2.68 \$2.91 \$3.14 \$3.36 \$3.59 \$3.80 \$4.01 \$4.23 \$4.46 \$4.70	\$4.96
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 \$7.50 \$7.90 \$8.33 \$8.79	\$9.27
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	\$4.02
Portland General Electric Company POR \$2.16 \$2.29 \$2.43 \$2.57 \$2.73 \$2.89 \$3.06 \$3.25 \$3.43 \$3.63 \$3.83 \$4.05 \$4.27 \$4.50 \$4.74 \$5.00	\$5.28
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 \$5.51 \$5.81	\$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 \$5.55 \$5.85 \$6.17 \$6.50 \$6.86	\$7.23
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 \$5.18	\$5.46

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%
DACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%

Projected Annual		[46]	[47]	[40]	[40]	[50]	[64]	[50]	[50]	[E 4]	[66]	[56]	[57]	[50]	[50]	[60]	[64]
Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61] Terminal
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Value
ALLETE, Inc.	ALE	\$2.33	\$2.45	\$2.57	\$2.70	\$2.88	\$3.06	\$3.26	\$3.46	\$3.67	\$3.89	\$4.12	\$4.35	\$4.58	\$4.83	\$5.10	\$155.70
Alliant Energy Corporation	LNT	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.24	\$2.36	\$2.49	\$2.62	\$2.76	\$88.06
Ameren Corporation	AEE	\$1.89	\$2.02	\$2.16	\$2.31	\$2.52	\$2.73	\$2.96	\$3.19	\$3.44	\$3.68	\$3.93	\$4.15	\$4.37	\$4.61	\$4.86	\$126.32
American Electric Power Company, Inc.	AEP	\$3.12	\$3.24	\$3.37	\$3.50	\$3.73	\$3.96	\$4.21	\$4.47	\$4.75	\$5.04	\$5.35	\$5.64	\$5.94	\$6.27	\$6.61	\$149.79
Black Hills Corporation	BKH	\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.50	\$2.75	\$3.01	\$3.28	\$3.57	\$3.86	\$4.07	\$4.29	\$4.53	\$4.77	\$123.90
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.18	\$2.37	\$2.56	\$2.75	\$2.95	\$3.14	\$3.32	\$3.50	\$3.69	\$3.89	\$100.40
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.68	\$5.02	\$5.38	\$5.75	\$6.14	\$6.55	\$6.90	\$7.28	\$7.67	\$8.09	\$230.24
Duke Energy Corporation	DUK	\$3.04	\$3.22	\$3.41	\$3.61	\$3.69	\$3.77	\$3.86	\$3.96	\$4.06	\$4.17	\$4.28	\$4.51	\$4.76	\$5.02	\$5.29	\$165.61
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.38	\$2.55	\$2.73	\$2.92	\$3.08	\$3.24	\$3.42	\$3.61	\$116.52
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.63	\$2.81	\$2.98	\$3.16	\$3.33	\$3.49	\$3.64	\$3.83	\$4.04	\$4.26	\$4.50	\$74.12
IDACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.23	\$3.42	\$3.63	\$3.86	\$4.12	\$4.40	\$4.64	\$4.89	\$5.16	\$5.44	\$189.18
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.92	\$3.08	\$3.27	\$3.46	\$3.68	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$119.22
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.97	\$2.05	\$2.12	\$2.20	\$2.32	\$2.45	\$2.58	\$2.72	\$67.65
Otter Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.86	\$2.01	\$2.17	\$2.33	\$2.49	\$2.64	\$2.79	\$2.94	\$3.10	\$3.27	\$93.68
Pinnacle West Capital Corporation	PNW	\$2.81	\$2.94	\$3.07	\$3.20	\$3.41	\$3.63	\$3.86	\$4.11	\$4.37	\$4.65	\$4.94	\$5.21	\$5.49	\$5.79	\$6.11	\$176.10
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.84	\$1.99	\$2.14	\$2.26	\$2.38	\$2.51	\$2.65	\$86.54
Portland General Electric Company	POR	\$1.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.89	\$2.05	\$2.22	\$2.41	\$2.60	\$2.81	\$2.97	\$3.13	\$3.30	\$3.48	\$95.96
Southern Company	SO	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.81	\$2.91	\$3.02	\$3.14	\$3.26	\$3.44	\$3.63	\$3.83	\$4.04	\$95.05
WEC Energy Group, Inc.	WEC	\$2.23	\$2.35	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.28	\$3.46	\$3.66	\$3.85	\$4.06	\$4.29	\$4.52	\$4.76	\$136.12
Xcel Energy Inc.	XEL	\$1.57	\$1.70	\$1.84	\$2.00	\$2.11	\$2.24	\$2.36	\$2.49	\$2.63	\$2.77	\$2.91	\$3.07	\$3.24	\$3.41	\$3.60	\$99.30

Projected Annual Data
Investor Cash Flows

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																_
Company	Ticker	Outflow	3/16/18	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	(\$73.39)	\$0.00	\$1.85	\$2.40	\$2.57	\$2.70	\$2.88	\$3.06	\$3.26	\$3.46	\$3.67	\$3.89	\$4.12	\$4.35	\$4.58	\$4.83	\$160.80
Alliant Energy Corporation	LNT	(\$41.32)	\$0.00	\$0.95	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.24	\$2.36	\$2.49	\$2.62	\$90.83
Ameren Corporation	AEE	(\$58.17)	\$0.00	\$1.50	\$1.96	\$2.16	\$2.31	\$2.52	\$2.73	\$2.96	\$3.19	\$3.44	\$3.68	\$3.93	\$4.15	\$4.37	\$4.61	\$131.19
American Electric Power Company, Inc.	AEP	(\$70.89)	\$0.00	\$2.47	\$3.20	\$3.37	\$3.50	\$3.73	\$3.96	\$4.21	\$4.47	\$4.75	\$5.04	\$5.35	\$5.64	\$5.94	\$6.27	\$156.40
Black Hills Corporation	BKH	(\$55.75)	\$0.00	\$1.26	\$1.64	\$1.87	\$2.04	\$2.26	\$2.50	\$2.75	\$3.01	\$3.28	\$3.57	\$3.86	\$4.07	\$4.29	\$4.53	\$128.67
CMS Energy Corporation	CMS	(\$46.01)	\$0.00	\$1.13	\$1.48	\$1.67	\$1.82	\$1.99	\$2.18	\$2.37	\$2.56	\$2.75	\$2.95	\$3.14	\$3.32	\$3.50	\$3.69	\$104.29
DTE Energy Company	DTE	(\$107.17)	\$0.00	\$2.70	\$3.51	\$3.81	\$4.04	\$4.35	\$4.68	\$5.02	\$5.38	\$5.75	\$6.14	\$6.55	\$6.90	\$7.28	\$7.67	\$238.33
Duke Energy Corporation	DUK	(\$81.78)	\$0.00	\$2.41	\$3.11	\$3.41	\$3.61	\$3.69	\$3.77	\$3.86	\$3.96	\$4.06	\$4.17	\$4.28	\$4.51	\$4.76	\$5.02	\$170.90
El Paso Electric Company	EE	(\$53.98)	\$0.00	\$1.09	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.38	\$2.55	\$2.73	\$2.92	\$3.08	\$3.24	\$3.42	\$120.13
Hawaiian Electric Industries, Inc.	HE	(\$35.12)	\$0.00	\$1.48	\$1.94	\$2.23	\$2.44	\$2.63	\$2.81	\$2.98	\$3.16	\$3.33	\$3.49	\$3.64	\$3.83	\$4.04	\$4.26	\$78.61
IDACORP, Inc.	IDA	(\$88.81)	\$0.00	\$1.93	\$2.48	\$2.73	\$2.89	\$3.05	\$3.23	\$3.42	\$3.63	\$3.86	\$4.12	\$4.40	\$4.64	\$4.89	\$5.16	\$194.62
NorthWestern Corporation	NWE	(\$56.57)	\$0.00	\$1.85	\$2.38	\$2.52	\$2.62	\$2.76	\$2.92	\$3.08	\$3.27	\$3.46	\$3.68	\$3.91	\$4.12	\$4.35	\$4.58	\$124.06
OGE Energy Corp.	OGE	(\$32.77)	\$0.00	\$1.03	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.97	\$2.05	\$2.12	\$2.20	\$2.32	\$2.45	\$2.58	\$70.37
Otter Tail Corporation	OTTR	(\$43.47)	\$0.00	\$1.09	\$1.43	\$1.49	\$1.55	\$1.70	\$1.86	\$2.01	\$2.17	\$2.33	\$2.49	\$2.64	\$2.79	\$2.94	\$3.10	\$96.95
Pinnacle West Capital Corporation	PNW	(\$82.88)	\$0.00	\$2.24	\$2.89	\$3.07	\$3.20	\$3.41	\$3.63	\$3.86	\$4.11	\$4.37	\$4.65	\$4.94	\$5.21	\$5.49	\$5.79	\$182.21
PNM Resources, Inc.	PNM	(\$39.54)	\$0.00	\$0.76	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.84	\$1.99	\$2.14	\$2.26	\$2.38	\$2.51	\$89.19
Portland General Electric Company	POR	(\$44.10)	\$0.00	\$1.14	\$1.47	\$1.54	\$1.59	\$1.73	\$1.89	\$2.05	\$2.22	\$2.41	\$2.60	\$2.81	\$2.97	\$3.13	\$3.30	\$99.43
Southern Company	SO	(\$47.14)	\$0.00	\$1.92	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.81	\$2.91	\$3.02	\$3.14	\$3.26	\$3.44	\$3.63	\$3.83	\$99.08
WEC Energy Group, Inc.	WEC	(\$64.56)	\$0.00	\$1.77	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.28	\$3.46	\$3.66	\$3.85	\$4.06	\$4.29	\$4.52	\$140.88
Xcel Energy Inc.	XEL	(\$46.97)	\$0.00	\$1.25	\$1.62	\$1.84	\$2.00	\$2.11	\$2.24	\$2.36	\$2.49	\$2.63	\$2.77	\$2.91	\$3.07	\$3.24	\$3.41	\$102.90

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

Stock EPS Growth Rate Estimates Long-Term Payout Ratio Iterative Solution Terminal PEG	
Company Ticker Price Zacks First Call Line Growth Growth 2018 2021 2028 Proof IRR P/E Ratio Ratio ALLETE, Inc. ALE \$73.39 6.10% 5.00% 4.50% 4.50% 5.45% 66.00% 64.00% 65.91% (\$0.00) 8.51% 22.71 4.17 Alliant Energy Corporation LNT \$41.32 5.30% 5.45% 6.50% 5.30% 5.45% 64.00% 64.00% 65.91% (\$0.00) 8.47% 22.96 4.22 American Corporation AEE \$58.17 6.90% 6.40% 7.50% 6.40% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.20% 18.53 3.40 American Electric Power Company, Inc. AEP \$70.89 5.40% 5.63% 4.50% 5.45% 66.00% 63.00% 65.91% (\$0.00) 9.73% 16.22 2.98 Black Hills Corporation BKH \$55.75 4.60% 3.50% <td< td=""><td></td></td<>	
ALLETE, Inc. ALE \$73.39 6.10% 5.00% 4.50% 4.50% 5.45% 66.00% 64.00% 65.91% (\$0.00) 8.51% 22.71 4.17 Alliant Energy Corporation LNT \$41.32 5.30% 5.45% 6.50% 5.30% 5.45% 64.00% 65.91% (\$0.00) 8.47% 22.96 4.22 American Electric Power Company, Inc. AEP \$70.89 5.40% 5.63% 4.50% 4.50% 5.45% 66.00% 63.00% 65.91% (\$0.00) 9.20% 18.53 3.40 Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 3.50% 5.45% 52.00% 54.00% 65.91% (\$0.00) 9.73% 16.22 2.98 Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 3.50% 5.45% 52.00% 54.00% 65.91% \$0.00 8.48% 22.93 4.21	
Alliant Energy Corporation LNT \$41.32 5.30% 5.45% 6.50% 5.30% 5.45% 64.00% 64.00% 65.91% (\$0.00) 8.47% 22.96 4.22 American Electric Power Company, Inc. AEP \$70.89 5.40% 5.63% 4.50% 4.50% 5.45% 66.00% 65.00% 65.91% (\$0.00) 9.20% 18.53 3.40 Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 3.50% 5.45% 52.00% 54.00% 65.91% \$0.00 8.48% 22.93 4.21	
Ameren Corporation AEE \$58.17 6.90% 6.40% 7.50% 6.40% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.20% 18.53 3.40 American Electric Power Company, Inc. AEP \$70.89 5.40% 5.63% 4.50% 4.50% 5.45% 66.00% 63.00% 65.91% (\$0.00) 9.73% 16.22 2.98 Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 3.50% 5.45% 52.00% 54.00% 65.91% \$0.00 8.48% 22.93 4.21	
American Electric Power Company, Inc. AEP \$70.89 5.40% 5.63% 4.50% 4.50% 5.45% 66.00% 63.00% 65.91% (\$0.00) 9.73% 16.22 2.98 Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 3.50% 5.45% 52.00% 54.00% 65.91% \$0.00 8.48% 22.93 4.21	
Black Hills Corporation BKH \$55.75 4.60% 3.50% 7.50% 3.50% 5.45% 52.00% 54.00% 65.91% \$0.00 8.48% 22.93 4.21	
DIVID WILD TOLD UNDER CONTROL OF THE WILD WILD WILD WILD WILD WILD WILD WILD	
DTE Energy Company DTE \$107.17 6.00% 5.58% 6.50% 5.58% 5.45% 62.00% 61.00% 65.91% (\$0.00) 8.91% 20.06 3.68	
Duke Energy Corporation DUK \$81.78 3.70% 4.24% 4.50% 3.70% 5.45% 75.00% 78.00% 65.91% \$0.00 8.61% 21.95 4.03	
El Paso Electric Company EE \$53.98 5.10% 5.20% 5.00% 5.00% 5.45% 52.00% 59.00% 65.91% \$0.00 8.66% 21.61 3.97	
Hawaiian Electric Industries, Inc. HE \$35.12 6.70% 8.50% 1.50% 1.50% 5.45% 69.00% 71.00% 65.91% \$0.00 9.27% 18.16 3.34	
IDACORP, Inc. IDA \$88.81 4.10% 3.10% 3.50% 3.10% 5.45% 57.00% 60.00% 65.91% (\$0.00) 8.25% 24.74 4.54	
NorthWestern Corporation NWE \$56.57 2.40% 3.12% 4.50% 2.40% 5.45% 63.00% 62.00% 65.91% (\$0.00) 9.10% 19.03 3.50	
OGE Energy Corp. OGE \$32.77 6.00% 5.80% 2.50% 2.50% 5.45% 68.00% 74.00% 65.91% \$0.00 8.69% 21.40 3.93	
Otter Tail Corporation OTTR \$43.47 NA 9.00% 7.00% 7.00% 5.45% 72.00% 63.00% 65.91% \$0.00 8.63% 21.85 4.01	
Pinnacle West Capital Corporation PNW \$82.88 3.00% 3.63% 5.50% 3.00% 5.45% 64.00% 62.00% 65.91% (\$0.00) 8.47% 22.95 4.21	
PNM Resources, Inc. PNM \$39.54 5.80% 5.80% 7.50% 5.80% 5.45% 57.00% 56.00% 65.91% (\$0.00) 8.29% 24.39 4.48	
Portland General Electric Company POR \$44.10 2.90% 3.50% 6.00% 2.90% 5.45% 59.00% 55.00% 65.91% (\$0.00) 8.48% 22.91 4.21	
Southern Company SO \$47.14 4.50% 2.70% 4.00% 2.70% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.35% 17.80 3.27	
WEC Energy Group, Inc. WEC \$64.56 4.20% 4.34% 6.00% 4.20% 5.45% 67.00% 66.00% 65.91% \$0.00 8.67% 21.55 3.96	
Xcel Energy Inc. XEL \$46.97 5.80% 6.15% 4.50% 4.50% 5.45% 63.00% 67.00% 65.91% \$0.00 8.83% 20.56 3.77	
Mean 8.78%	
Max 9.73%	
Min 8.25%	
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 \$3.28 \$3.43 \$3.58 \$3.74 \$3.91 \$4.09 \$4.28 \$4.49 \$4.71 \$4.95 \$5.21 \$5.50 \$5.80 \$6.11 \$6.44	\$6.79
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 \$3.43 \$3.61	\$3.81
Ameren Corporation AEE \$2.68 \$2.85 \$3.03 \$3.23 \$3.43 \$3.65 \$3.89 \$4.13 \$4.38 \$4.64 \$4.91 \$5.18 \$5.47 \$5.76 \$6.08 \$6.41	\$6.76
American Electric Power Company, Inc. AEP \$4.23 \$4.42 \$4.62 \$4.83 \$5.04 \$5.27 \$5.51 \$5.77 \$6.04 \$6.34 \$6.67 \$7.02 \$7.40 \$7.81 \$8.23 \$8.68	\$9.15
Black Hills Corporation BKH \$2.63 \$2.72 \$2.82 \$2.92 \$3.02 \$3.12 \$3.23 \$3.36 \$3.50 \$3.65 \$3.83 \$4.02 \$4.24 \$4.47 \$4.72 \$4.97	\$5.24
CMS Energy Corporation CMS \$1.98 \$2.10 \$2.24 \$2.38 \$2.53 \$2.69 \$2.86 \$3.03 \$3.22 \$3.40 \$3.60 \$3.80 \$4.01 \$4.23 \$4.46 \$4.70	\$4.95
DTE Energy Company DTE \$4.83 \$5.10 \$5.38 \$5.68 \$6.00 \$6.34 \$6.69 \$7.06 \$7.45 \$7.86 \$8.30 \$8.75 \$9.23 \$9.73 \$10.26 \$10.82	\$11.41
Duke Energy Corporation DUK \$3.71 \$3.85 \$3.99 \$4.14 \$4.29 \$4.45 \$4.61 \$4.80 \$5.00 \$5.23 \$5.49 \$5.77 \$6.08 \$6.41 \$6.76 \$7.13	\$7.52
El Paso Electric Company 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 \$4.36 \$4.59 \$4.84 \$5.11	\$5.39
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 \$6.49 \$6.84 \$7.21	\$7.60
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 \$4.74 \$4.99 \$5.27 \$5.55 \$5.86	\$6.18
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 \$3.81 \$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 \$6.12 \$6.45 \$6.80 \$7.17	\$7.56
PNM Resources, Inc. PNM \$1.46 \$1.54 \$1.63 \$1.73 \$1.83 \$1.94 \$2.05 \$2.17 \$2.29 \$2.42 \$2.55 \$2.69 \$2.84 \$2.99 \$3.16 \$3.33	\$3.51
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 \$3.00 \$3.15 \$3.32 \$3.50 \$3.69 \$3.89	\$4.10
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 \$4.51 \$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 \$4.56 \$4.79 \$5.06 \$5.33 \$5.62 \$5.93	\$6.25
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 \$4.54	\$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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%

62.00%

56.00%

55.00%

72.00%

63.33% 62.67%

56.67% 56.33%

59.00% 57.67% 56.33%

78.00% 76.00% 74.00%

64.00%

57.00%

Pinnacle West Capital Corporation

Portland General Electric Company

PNM Resources, Inc.

Southern Company

PNW

PNM

POR

SO

WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Projected Annual																	
Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
																	Terminal
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$4.48	\$154.27
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$87.46
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$4.45	\$125.27
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$6.03	\$148.49
Black Hills Corporation	BKH	\$1.47	\$1.54	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$120.25
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$3.26	\$98.79
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$7.52	\$228.81
Duke Energy Corporation	DUK	\$2.99	\$3.14	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$4.96	\$165.07
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$3.55	\$116.37
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$2.55	\$70.31
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$5.01	\$188.15
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$117.54
OGE Energy Corp.	OGE	\$1.21	\$1.27	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.51	\$1.55	\$1.60	\$1.65	\$1.74	\$1.84	\$1.94	\$2.05	\$66.41
Otter Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.26	\$2.38	\$2.51	\$2.65	\$2.79	\$92.48
Pinnacle West Capital Corporation	PNW	\$2.68	\$2.73	\$2.79	\$2.84	\$2.95	\$3.08	\$3.22	\$3.39	\$3.58	\$3.79	\$4.03	\$4.25	\$4.48	\$4.73	\$4.98	\$173.51
PNM Resources, Inc.	PNM	\$0.93	\$0.98	\$1.03	\$1.08	\$1.18	\$1.27	\$1.38	\$1.49	\$1.61	\$1.74	\$1.87	\$1.97	\$2.08	\$2.19	\$2.31	\$85.60
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.88	\$2.02	\$2.19	\$2.30	\$2.43	\$2.56	\$2.70	\$93.93
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.41	\$2.46	\$2.53	\$2.61	\$2.71	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$94.09
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.73	\$2.86	\$3.00	\$3.16	\$3.33	\$3.51	\$3.70	\$3.91	\$4.12	\$134.69
Xcel Energy Inc.	XEL	\$1.52	\$1.62	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$3.15	\$98.31

62.56% 63.12% 63.67% 64.23% 64.79% 65.35%

57.42% 58.83% 60.25% 61.66% 63.08% 64.49%

56.56% 58.12% 59.67% 61.23% 62.79% 64.35%

71.13% 70.26% 69.39% 68.52% 67.65% 66.78%

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Projected Annual Data
Investor Cash Flows

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
_		Initial																
Company	Ticker	Outflow	3/16/18	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	(\$73.39)	\$0.00	\$1.80	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$158.75
Alliant Energy Corporation	LNT	(\$41.32)	\$0.00	\$0.93	\$1.20	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$89.97
Ameren Corporation	AEE	(\$58.17)	\$0.00	\$1.47	\$1.91	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$129.73
American Electric Power Company, Inc.	AEP	(\$70.89)	\$0.00	\$2.42	\$3.12	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$154.52
Black Hills Corporation	BKH	(\$55.75)	\$0.00	\$1.16	\$1.49	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$123.70
CMS Energy Corporation	CMS	(\$46.01)	\$0.00	\$1.08	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$102.06
DTE Energy Company	DTE	(\$107.17)	\$0.00	\$2.65	\$3.43	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$236.32
Duke Energy Corporation	DUK	(\$81.78)	\$0.00	\$2.38	\$3.05	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$170.03
El Paso Electric Company	EE	(\$53.98)	\$0.00	\$1.09	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$119.92
Hawaiian Electric Industries, Inc.	HE	(\$35.12)	\$0.00	\$1.29	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$72.87
IDACORP, Inc.	IDA	(\$88.81)	\$0.00	\$1.90	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$193.16
NorthWestern Corporation	NWE	(\$56.57)	\$0.00	\$1.78	\$2.27	\$2.32	\$2.37	\$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$121.61
OGE Energy Corp.	OGE	(\$32.77)	\$0.00	\$0.96	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.51	\$1.55	\$1.60	\$1.65	\$1.74	\$1.84	\$1.94	\$68.46
Otter Tail Corporation	OTTR	(\$43.47)	\$0.00	\$1.05	\$1.37	\$1.38	\$1.41	\$1.52	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.26	\$2.38	\$2.51	\$2.65	\$95.27
Pinnacle West Capital Corporation	PNW	(\$82.88)	\$0.00	\$2.13	\$2.72	\$2.79	\$2.84	\$2.95	\$3.08	\$3.22	\$3.39	\$3.58	\$3.79	\$4.03	\$4.25	\$4.48	\$4.73	\$178.49
PNM Resources, Inc.	PNM	(\$39.54)	\$0.00	\$0.74	\$0.96	\$1.03	\$1.08	\$1.18	\$1.27	\$1.38	\$1.49	\$1.61	\$1.74	\$1.87	\$1.97	\$2.08	\$2.19	\$87.91
Portland General Electric Company	POR	(\$44.10)	\$0.00	\$1.07	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.88	\$2.02	\$2.19	\$2.30	\$2.43	\$2.56	\$96.63
Southern Company	SO	(\$47.14)	\$0.00	\$1.85	\$2.36	\$2.33	\$2.33	\$2.36	\$2.41	\$2.46	\$2.53	\$2.61	\$2.71	\$2.82	\$2.97	\$3.13	\$3.30	\$97.57
WEC Energy Group, Inc.	WEC	(\$64.56)	\$0.00	\$1.71	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.73	\$2.86	\$3.00	\$3.16	\$3.33	\$3.51	\$3.70	\$3.91	\$138.81
Xcel Energy Inc.	XEL	(\$46.97)	\$0.00	\$1.21	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$101.46

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

Inputs		[1] Stock	[2]	[3] S Growth Ra	[4]	[5]	[6] Long-Term	[7]	[8] Payout Rati	[9]	[10] Iterative	[11]	[12] Terminal	[13] Terminal				
		Stock	LFX	3 GIOWIII N	Value	1100	Long-Term	·	ayout itali	O	iterative	Solution	Temma	PEG				
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	Ratio				
ALLETE, Inc.	ALE	\$74.59	6.10%	5.00%	4.50%	5.20%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	8.62%	21.89	4.02				
Alliant Energy Corporation	LNT	\$41.63	5.30%	5.45%	6.50%	5.75%	5.45%	64.00%	64.00%	65.91%	(\$0.00)	8.55%	22.37	4.11				
Ameren Corporation	AEE	\$58.34	6.90%	6.40%	7.50%	6.93%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	9.33%	17.89	3.28				
American Electric Power Company, Inc.	AEP	\$71.29	5.40%	5.63%	4.50%	5.18%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	9.92%	15.52	2.85				
Black Hills Corporation	BKH	\$62.19	4.60%	3.50%	7.50%	5.20%	5.45%	52.00%	54.00%	65.91%	\$0.00	8.54%	22.49	4.13				
CMS Energy Corporation	CMS	\$46.64	6.30%	7.04%	8.50%	7.28%	5.45%	61.00%	61.00%	65.91%	\$0.00	9.14%	18.82	3.46				
DTE Energy Company	DTE	\$108.14	6.00%	5.58%	6.50%	6.03%	5.45%	62.00%	61.00%	65.91%	(\$0.00)	8.99%	19.59	3.60				
Duke Energy Corporation	DUK	\$83.84	3.70%	4.24%	4.50%	4.15%	5.45%	75.00%	78.00%	65.91%	\$0.00	8.64%	21.76	4.00				
El Paso Electric Company	EE	\$54.30	5.10%	5.20%	5.00%	5.10%	5.45%	52.00%	59.00%	65.91%	\$0.00	8.67%	21.57	3.96				
Hawaiian Electric Industries, Inc.	HE	\$34.36	6.70%	8.50%	1.50%	5.57%	5.45%	69.00%	71.00%	65.91%	(\$0.00)	10.77%	13.06	2.40				
IDACORP, Inc.	IDA	\$88.56	4.10%	3.10%	3.50%	3.57%	5.45%	57.00%	60.00%	65.91%	(\$0.00)	8.36%	23.81	4.37				
NorthWestern Corporation	NWE	\$57.95	2.40%	3.12%	4.50%	3.34%	5.45%	63.00%	62.00%	65.91%	(\$0.00)	9.27%	18.17	3.34				
OGE Energy Corp.	OGE	\$34.33	6.00%	5.80%	2.50%	4.77%	5.45%	68.00%	74.00%	65.91%	\$0.00	9.13%	18.86	3.46				
Otter Tail Corporation	OTTR	\$42.98	NA	9.00%	7.00%	8.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	8.91%	20.08	3.69				
Pinnacle West Capital Corporation	PNW	\$85.18	3.00%	3.63%	5.50%	4.04%	5.45%	64.00%	62.00%	65.91%	(\$0.00)	8.64%	21.79	4.00				
PNM Resources, Inc.	PNM	\$40.22	5.80%	5.80%	7.50%	6.37%	5.45%	57.00%	56.00%	65.91%	(\$0.00)	8.37%	23.78	4.37				
Portland General Electric Company	POR	\$45.11	2.90%	3.50%	6.00%	4.13%	5.45%	59.00%	55.00%	65.91%	(\$0.00)	8.70%	21.34	3.92				
Southern Company	SO	\$48.18	4.50%	2.70%	4.00%	3.73%	5.45%	78.00%	72.00%	65.91%	(\$0.00)	9.58%	16.83	3.09				
WEC Energy Group, Inc.	WEC	\$64.44	4.20%	4.34%	6.00%	4.85%	5.45%	67.00%	66.00%	65.91%	\$0.00	8.84%	20.48	3.76				
Xcel Energy Inc.	XEL	\$47.55	5.80%	6.15%	4.50%	5.48%	5.45%	63.00%	67.00%	65.91%	\$0.00	9.04%	19.33	3.55				
											Mean	9.00%			'			
											Max	10.77%						
											Min	8.36%						
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	\$3.30	\$3.48	\$3.66	\$3.85	\$4.05	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$5.52	\$5.82	\$6.13	\$6.47	\$6.82	\$7.19
Alliant Energy Corporation	LNT	\$1.65	\$3.30 \$1.74	\$3.46 \$1.85	\$3.00 \$1.95	\$2.06	\$4.03 \$2.18	\$2.31	\$2.44	\$2.58	\$4.97 \$2.72	\$3.23 \$2.87	\$3.03	\$3.20	\$3.37	\$3.55	\$3.75	\$3.95
Ameren Corporation	AEE	\$2.68	\$2.87	\$3.06	\$3.28	\$3.50	\$3.75	\$4.01	\$4.27	\$4.55	\$4.83	\$5.12	\$5.03 \$5.41	\$5.70	\$6.02	\$6.34	\$6.69	\$3.95 \$7.05
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$3.00 \$4.68	\$4.92	\$5.30 \$5.18	\$5.73 \$5.44	\$5.73	\$6.03	\$6.34	\$6.68	\$7.04	\$7.42	\$5.70 \$7.82	\$8.25	\$8.70	\$0.09 \$9.17	\$7.03 \$9.67
Black Hills Corporation	BKH	\$4.23 \$2.63	\$4.45 \$2.77	\$4.00 \$2.91	\$3.06	\$3.10 \$3.22	\$3.44 \$3.39	\$3.73 \$3.56	\$3.75	\$6.34 \$3.95	\$6.06 \$4.16	\$4.38	\$7.42 \$4.62	\$4.87	\$5.14	\$5.70 \$5.42	\$5.71	\$9.07 \$6.02
CMS Energy Corporation	CMS	\$1.98	\$2.77	\$2.28	\$2.44	\$2.62	\$3.39 \$2.81	\$3.02	\$3.23	\$3.44	\$3.66	\$3.89	\$4.11	\$4.33	\$4.57	\$4.82	\$5.71 \$5.08	\$5.36
DTE Energy Company	DTE	\$4.83	\$5.12	\$5.43	\$5.76	\$6.10	\$6.47	\$6.86	\$7.27	\$3.44 \$7.69	\$8.13	\$8.59	\$9.07	\$9.56	\$4.57 \$10.08	\$10.63	\$3.06 \$11.21	\$11.82
Duke Energy Company Duke Energy Corporation	DUK		\$3.12 \$3.86	\$4.02	\$3.76 \$4.19	\$4.36	\$4.55	\$4.73	\$4.94	\$7.09 \$5.17	\$5.41	\$5.69	\$5.98	\$6.31	\$6.65	\$7.02	\$7.40	\$71.82 \$7.80
El Paso Electric Company		\$3.71													•		\$7.40 \$5.15	
	EE HE	\$2.39	\$2.51 \$2.42	\$2.64	\$2.77	\$2.92 \$2.84	\$3.06	\$3.22 \$3.17	\$3.39	\$3.56	\$3.75	\$3.95 \$3.93	\$4.16 \$4.14	\$4.39 \$4.37	\$4.63 \$4.61	\$4.88 \$4.86	\$5.13 \$5.12	\$5.43 \$5.40
Hawaiian Electric Industries, Inc.		\$2.29		\$2.55 \$4.22	\$2.69		\$3.00	•	\$3.35	\$3.53	\$3.72					\$4.86		
IDACORP, Inc.	IDA	\$3.94	\$4.08 \$3.50	\$4.23	\$4.38 \$2.74	\$4.53	\$4.69 \$4.00	\$4.86	\$5.05	\$5.26	\$5.50	\$5.76	\$6.06	\$6.39 \$5.40	\$6.74	\$7.11 \$6.00	\$7.49	\$7.90 \$6.67
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	\$5.40	\$5.69	\$6.00	\$6.33	\$6.67
OGE Energy Corp.	OGE	\$1.69 \$4.60	\$1.77	\$1.85	\$1.94	\$2.04	\$2.13	\$2.23	\$2.34	\$2.46	\$2.59	\$2.72	\$2.87	\$3.02	\$3.19	\$3.36	\$3.54 \$4.35	\$3.74
Otter Tail Corporation	OTTR	\$1.60	\$1.73	\$1.87 \$4.00	\$2.02	\$2.18	\$2.35	\$2.54	\$2.73	\$2.93	\$3.12	\$3.32	\$3.51	\$3.71	\$3.91	\$4.12	\$4.35 \$7.04	\$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	\$6.32	\$6.66	\$7.02	\$7.41	\$7.81	\$8.24
PNM Resources, Inc.	PNM	\$1.46	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.25	\$2.38	\$2.52	\$2.67	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67
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	\$4.54
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	\$4.91	\$5.17	\$5.46	\$5.75
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	\$5.62	\$5.92	\$6.25	\$6.59
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	\$4.42	\$4.66	\$4.91	\$5.18

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	
ALLÉTE, Inc.	ALE	66.00%	65.33%	64.67%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	_
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
OTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ouke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
lawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
DACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
IorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
					66.00%	65.99%		65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
VEC Energy Group Inc	WFC	67 00%	bb b / %	nn .3.3%	DD UU70	000 9970	nn 9/%										
WEC Energy Group, Inc. Kcel Energy Inc. Projected Annual	WEC XEL	67.00% 63.00%	66.67% 64.33%	66.33% 65.67%	67.00%	66.84%	65.97% 66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	-
cel Energy Inc. Projected Annual																	-
rojected Annual cash Flows	XEL	[46]	[47]	[48]	67.00% [49]	[50]	[51]	[52]	[53]	[54]	[55]	65.91% [56]	65.91% [57]	65.91% [58]	65.91% [59]	65.91% [60]	Te
Coel Energy Inc. Projected Annual Cash Flows Company	XEL	[46] 2018	[47] 2019	[48] 2020	67.00% [49] 2021	[50] 2022	[51] 2023	[52] 2024	[53] 2025	[54] 2026	[55] 2027	[56] 2028	[57] 2029	[58] 2030	[59] 2031	[60] 2032	Te
cel Energy Inc. Projected Annual Cash Flows Company LLETE, Inc.	XEL Ticker ALE	[46] 2018 \$2.29	[47] 2019 \$2.39	[48] 2020 \$2.49	67.00% [49] 2021 \$2.59	[50] 2022 \$2.74	[51] 2023 \$2.89	[52] 2024 \$3.06	[53] 2025 \$3.23	[54] 2026 \$3.42	[55] 2027 \$3.62	[56] 2028 \$3.83	65.91% [57] 2029 \$4.04	65.91% [58] 2030 \$4.26	65.91% [59] 2031 \$4.49	[60] 2032 \$4.74	Te V \$1:
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation	Ticker ALE LNT	[46] 2018 \$2.29 \$1.18	[47] 2019 \$2.39 \$1.25	[48] 2020 \$2.49 \$1.32	67.00% [49] 2021 \$2.59 \$1.40	[50] 2022 \$2.74 \$1.48	[51] 2023 \$2.89 \$1.57	[52] 2024 \$3.06 \$1.67	[53] 2025 \$3.23 \$1.77	[54] 2026 \$3.42 \$1.88	[55] 2027 \$3.62 \$1.99	[56] 2028 \$3.83 \$2.11	65.91% [57] 2029 \$4.04 \$2.22	65.91% [58] 2030 \$4.26 \$2.34	65.91% [59] 2031 \$4.49 \$2.47	[60] 2032 \$4.74 \$2.60	Te V \$1: \$8
rojected Annual eash Flows company LLETE, Inc. Illiant Energy Corporation meren Corporation	Ticker ALE LNT AEE	[46] 2018 \$2.29 \$1.18 \$1.87	[47] 2019 \$2.39 \$1.25 \$1.99	[48] 2020 \$2.49 \$1.32 \$2.11	[49] 2021 \$2.59 \$1.40 \$2.25	[50] 2022 \$2.74 \$1.48 \$2.44	[51] 2023 \$2.89 \$1.57 \$2.64	[52] 2024 \$3.06 \$1.67 \$2.85	[53] 2025 \$3.23 \$1.77 \$3.06	[54] 2026 \$3.42 \$1.88 \$3.29	[55] 2027 \$3.62 \$1.99 \$3.52	[56] 2028 \$3.83 \$2.11 \$3.76	[57] 2029 \$4.04 \$2.22 \$3.96	[58] 2030 \$4.26 \$2.34 \$4.18	[59] 2031 \$4.49 \$2.47 \$4.41	[60] 2032 \$4.74 \$2.60 \$4.65	Te \ \$1 \$8 \$1
cel Energy Inc. Projected Annual Cash Flows Company LLLETE, Inc. Illiant Energy Corporation Company	Ticker ALE LNT AEE AEP	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37	Te V \$1: \$8 \$1:
cel Energy Inc. Projected Annual Cash Flows Company LLETE, Inc. Illiant Energy Corporation Imeren Corporation Imerican Electric Power Company, Inc. Islack Hills Corporation	Ticker ALE LNT AEE AEP BKH	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97	Te V \$1: \$8 \$1: \$1:
rojected Annual ash Flows company LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation	Ticker ALE LNT AEE AEP BKH CMS	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53	Te V \$1: \$1: \$1: \$1: \$1:
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company	Ticker ALE LNT AEE AEP BKH CMS DTE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79	Te V \$1 \$1 \$1 \$1 \$2
rojected Annual eash Flows company LLETE, Inc. Illiant Energy Corporation meren Corporation merican Electric Power Company, Inc. Illack Hills Corporation MS Energy Corporation TE Energy Company buke Energy Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14	Te V \$1 \$8 \$1 \$1 \$1 \$2 \$1
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company I Paso Electric Company	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.72 \$3.95 \$3.55 \$1.81	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58	Te \(\) \$1 \$8 \$1 \$1 \$1 \$1 \$2 \$1 \$1
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Industries, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56	\$1 \$1 \$1 \$1 \$1 \$1 \$2 \$1 \$1
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Industries, Inc. DACORP, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21	Te \\ \$1 \$2 \$1 \$2 \$1 \$2 \$3 \$3 \$4 \$5 \$5 \$5 \$5 \$5 \$5 \$5
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Industries, Inc. DACORP, Inc. orthWestern Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49 \$2.99	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40	Te \\ \$1 \$6 \$1 \$1 \$1 \$1 \$1 \$2 \$1 \$2 \$1 \$1 \$2 \$1 \$2 \$1 \$2 \$2 \$2 \$3 \$3
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rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Company awaiian Electric Industries, Inc. OACORP, Inc. orthWestern Corporation GE Energy Corp. tter Tail Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34	64.33% [47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02	Te \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. Ilack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Company awaiian Electric Company awaiian Electric Industries, Inc. OACORP, Inc. orthWestern Corporation GE Energy Corp. tter Tail Corporation innacle West Capital Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.23 \$2.96 \$2.58 \$1.63	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.54 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43	\$1 \$1 \$1 \$1 \$1 \$2 \$1 \$1 \$1 \$1 \$1 \$1
rojected Annual ash Flows ompany LLETE, Inc. Iliant Energy Corporation meren Corporation merican Electric Power Company, Inc. lack Hills Corporation MS Energy Corporation TE Energy Company uke Energy Company uke Energy Corporation I Paso Electric Company awaiian Electric Industries, Inc. OACORP, Inc. orthWestern Corporation IGE Energy Corp. Itter Tail Corporation innacle West Capital Corporation NM Resources, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34	64.33% [47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43 \$2.42	\$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$
cel Energy Inc. Projected Annual Cash Flows Company LLETE, Inc. Illiant Energy Corporation Company Inc. Company Comp	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43	\$1 \$1 \$1 \$1 \$1 \$2 \$1 \$1 \$1 \$1 \$1 \$1
cel Energy Inc. Projected Annual Cash Flows Company LLETE, Inc. Illiant Energy Corporation Imeren Corporation Imerican Electric Power Company, Inc. Islack Hills Corporation IMS Energy Corporation ITE Energy Company Include Energy Corporation I Paso Electric Company I I Paso Electric Industries, Inc. I DACORP, Inc. I I I Corporation I I Corporation I I Resources, Inc. I I Corporation I I Corpor	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR SO	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74 \$0.94	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82 \$1.00	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90 \$1.05	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99 \$1.11	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13 \$1.21	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30 \$1.32	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48 \$1.43	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67 \$1.56	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89 \$1.68	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13 \$1.82	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39 \$1.96	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63 \$2.06	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88 \$2.18	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15 \$2.30	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43 \$2.42	\$1 \$1 \$1 \$1 \$1 \$2 \$1 \$1 \$1 \$1 \$1 \$1
	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR	[46] 2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74 \$0.94 \$1.38	[47] 2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82 \$1.00 \$1.41	[48] 2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90 \$1.05 \$1.43	[49] 2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99 \$1.11 \$1.45	[50] 2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13 \$1.21 \$1.56	[51] 2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30 \$1.32 \$1.67	[52] 2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48 \$1.79	[53] 2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67 \$1.56 \$1.93	[54] 2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89 \$1.68 \$2.08	[55] 2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13 \$1.82 \$2.24	[56] 2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39 \$1.96 \$2.42	[57] 2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63 \$2.06 \$2.55	[58] 2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$4.88 \$2.18 \$2.69	[59] 2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15 \$2.30 \$2.84	[60] 2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43 \$2.42 \$2.99	\$1 \$1 \$1 \$1 \$1 \$1 \$2 \$1 \$1 \$1 \$1

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	3/16/18	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	(\$74.59)	\$0.00	\$1.82	\$2.35	\$2.49	\$2.59	\$2.74	\$2.89	\$3.06	\$3.23	\$3.42	\$3.62	\$3.83	\$4.04	\$4.26	\$4.49	\$162.17
Alliant Energy Corporation	LNT	(\$41.63)	\$0.00	\$0.94	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99	\$2.11	\$2.22	\$2.34	\$2.47	\$90.95
Ameren Corporation	AEE	(\$58.34)	\$0.00	\$1.49	\$1.93	\$2.11	\$2.25	\$2.44	\$2.64	\$2.85	\$3.06	\$3.29	\$3.52	\$3.76	\$3.96	\$4.18	\$4.41	\$130.79
American Electric Power Company, Inc.	AEP	(\$71.29)	\$0.00	\$2.45	\$3.17	\$3.31	\$3.43	\$3.63	\$3.85	\$4.07	\$4.32	\$4.58	\$4.86	\$5.15	\$5.44	\$5.73	\$6.04	\$156.48
Black Hills Corporation	BKH	(\$62.19)	\$0.00	\$1.20	\$1.55	\$1.72	\$1.83	\$1.99	\$2.15	\$2.33	\$2.53	\$2.74	\$2.97	\$3.21	\$3.39	\$3.57	\$3.76	\$139.41
CMS Energy Corporation	CMS	(\$46.64)	\$0.00	\$1.10	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.68	\$2.86	\$3.01	\$3.17	\$3.35	\$104.35
DTE Energy Company	DTE	(\$108.14)	\$0.00	\$2.67	\$3.47	\$3.74	\$3.95	\$4.23	\$4.54	\$4.85	\$5.19	\$5.54	\$5.91	\$6.30	\$6.65	\$7.01	\$7.39	\$239.36
Duke Energy Corporation	DUK	(\$83.84)	\$0.00	\$2.40	\$3.08	\$3.36	\$3.55	\$3.61	\$3.68	\$3.76	\$3.85	\$3.94	\$4.05	\$4.16	\$4.38	\$4.62	\$4.88	\$174.89
El Paso Electric Company	EE	(\$54.30)	\$0.00	\$1.09	\$1.41	\$1.65	\$1.81	\$1.93	\$2.07	\$2.21	\$2.36	\$2.53	\$2.70	\$2.89	\$3.05	\$3.22	\$3.39	\$120.71
Hawaiian Electric Industries, Inc.	HE	(\$34.36)	\$0.00	\$1.40	\$1.81	\$2.00	\$2.13	\$2.23	\$2.33	\$2.43	\$2.54	\$2.65	\$2.76	\$2.88	\$3.04	\$3.20	\$3.38	\$74.12
IDACORP, Inc.	IDA	(\$88.56)	\$0.00	\$1.91	\$2.45	\$2.67	\$2.82	\$2.96	\$3.12	\$3.29	\$3.49	\$3.70	\$3.94	\$4.21	\$4.44	\$4.68	\$4.94	\$193.30
NorthWestern Corporation	NWE	(\$57.95)	\$0.00	\$1.81	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.84	\$2.99	\$3.16	\$3.34	\$3.56	\$3.75	\$3.96	\$4.17	\$125.61
OGE Energy Corp.	OGE	(\$34.33)	\$0.00	\$1.00	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.74	\$1.79	\$1.86	\$1.92	\$1.99	\$2.10	\$2.22	\$2.34	\$72.93
Otter Tail Corporation	OTTR	(\$42.98)	\$0.00	\$1.07	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.58	\$2.72	\$2.86	\$95.03
Pinnacle West Capital Corporation	PNW	(\$85.18)	\$0.00	\$2.17	\$2.79	\$2.90	\$2.99	\$3.13	\$3.30	\$3.48	\$3.67	\$3.89	\$4.13	\$4.39	\$4.63	\$4.88	\$5.15	\$184.84
PNM Resources, Inc.	PNM	(\$40.22)	\$0.00	\$0.75	\$0.97	\$1.05	\$1.11	\$1.21	\$1.32	\$1.43	\$1.56	\$1.68	\$1.82	\$1.96	\$2.06	\$2.18	\$2.30	\$89.76
Portland General Electric Company	POR	(\$45.11)	\$0.00	\$1.10	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.93	\$2.08	\$2.24	\$2.42	\$2.55	\$2.69	\$2.84	\$99.82
Southern Company	so	(\$48.18)	\$0.00	\$1.89	\$2.42	\$2.42	\$2.45	\$2.51	\$2.58	\$2.65	\$2.74	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.60	\$100.60
WEC Energy Group, Inc.	WEC	(\$64.44)	\$0.00	\$1.73	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.86	\$3.01	\$3.16	\$3.33	\$3.51	\$3.70	\$3.90	\$4.12	\$139.25
Xcel Energy Inc.	XEL	(\$47.55)	\$0.00	\$1.23	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.24	\$103.51

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

Stock EPS Growth Rate Estimates High High Frick Herative Solution Terminal Terminal PEG	
Company Ticker Price Zacks First Call Line Growth Growth 2018 2021 2028 Proof IRR P/E Ratio Ratio ALLETE, Inc. ALE \$74.59 6.10% 5.00% 4.50% 6.10% 5.45% 66.00% 64.00% 65.91% (\$0.00) 8.84% 20.47 3.76 Alliant Energy Corporation LNT \$41.63 5.30% 5.45% 6.50% 5.45% 64.00% 64.00% 65.91% \$0.00 8.73% 21.15 3.88 American Electric Power Company, Inc. AEP \$71.29 5.40% 5.63% 4.50% 5.45% 66.00% 65.91% (\$0.00) 9.49% 17.17 3.15 American Electric Power Company, Inc. AEP \$71.29 5.40% 5.63% 4.50% 5.45% 66.00% 65.91% (\$0.00) 10.07% 15.02 2.76 Black Hills Corporation BKH \$62.19 4.60% 3.50% 7.50% 7.50% 5.45% 61.00% </td <td></td>	
ALLETE, Inc. ALE \$74.59 6.10% 5.00% 4.50% 6.10% 5.45% 66.00% 64.00% 65.91% (\$0.00) 8.84% 20.47 3.76 Alliant Energy Corporation LNT \$41.63 5.30% 5.45% 6.50% 6.50% 5.45% 64.00% 64.00% 65.91% \$0.00 8.73% 21.15 3.88 Ameren Corporation AEE \$58.34 6.90% 6.40% 7.50% 7.50% 7.50% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.49% 17.17 3.15 American Electric Power Company, Inc. AEP \$71.29 5.40% 5.63% 4.50% 5.63% 5.45% 66.00% 63.00% 65.91% (\$0.00) 10.07% 15.02 2.76 Black Hills Corporation BKH \$62.19 4.60% 3.50% 7.50% 7.50% 7.50% 5.45% 52.00% 54.00% 65.91% \$0.00 9.10% 19.02 3.49 CMS Energy Corporation CMS \$46.64 6.30% 7.04% 8.50% 8.50% 5.45% 61.00% 61.00% 65.91% \$0.00 9.47% 17.25 3.17 DTE Energy Company DTE \$108.14 6.00% 5.58% 6.50% 6.50% 5.45% 62.00% 61.00% 65.91% \$0.00 9.12% 18.92 3.47 Duke Energy Corporation DUK \$83.84 3.70% 4.24% 4.50% 4.50% 5.45% 52.00% 59.00% 65.91% \$0.00 8.73% 21.18 3.89 EI Paso Electric Company EE \$54.30 5.10% 5.20% 5.00% 5.00% 5.20% 5.45% 52.00% 59.00% 65.91% \$0.00 8.69% 21.41 3.93	
Alliant Energy Corporation LNT \$41.63 5.30% 5.45% 6.50% 6.50% 5.45% 64.00% 64.00% 65.91% \$0.00 8.73% 21.15 3.88 Ameren Corporation AEE \$58.34 6.90% 6.40% 7.50% 7.50% 5.45% 61.00% 60.00% 65.91% (\$0.00) 9.49% 17.17 3.15 American Electric Power Company, Inc. AEP \$71.29 5.40% 5.63% 4.50% 5.63% 5.45% 66.00% 63.00% 65.91% (\$0.00) 10.07% 15.02 2.76 Black Hills Corporation BKH \$62.19 4.60% 3.50% 7.50% 7.50% 5.45% 52.00% 54.00% 65.91% \$0.00 9.10% 19.02 3.49 CMS Energy Corporation CMS \$46.64 6.30% 7.04% 8.50% 8.50% 5.45% 61.00% 61.00% 65.91% \$0.00 9.47% 17.25 3.17 DTE Energy Company DTE \$108.14 6.00% 5.58% 6.50% 6.50% 5.45% 62.00% 61.00% 65.91% \$0.00 9.12% 18.92 3.47 Duke Energy Corporation DUK \$83.84 3.70% 4.24% 4.50% 4.50% 5.45% 75.00% 78.00% 65.91% \$0.00 8.73% 21.18 3.89 EI Paso Electric Company EE \$54.30 5.10% 5.20% 5.00% 5.20% 5.20% 5.45% 52.00% 59.00% 65.91% \$0.00 8.69% 21.41 3.93	
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Black Hills Corporation BKH \$62.19 4.60% 3.50% 7.50% 7.50% 5.45% 52.00% 54.00% 65.91% \$0.00 9.10% 19.02 3.49 CMS Energy Corporation CMS \$46.64 6.30% 7.04% 8.50% 8.50% 5.45% 61.00% 61.00% 65.91% \$0.00 9.47% 17.25 3.17 DTE Energy Company DTE \$108.14 6.00% 5.58% 6.50% 6.50% 5.45% 62.00% 61.00% 65.91% \$0.00 9.12% 18.92 3.47 Duke Energy Corporation DUK \$83.84 3.70% 4.24% 4.50% 4.50% 5.45% 75.00% 78.00% 65.91% \$0.00 8.73% 21.18 3.89 EI Paso Electric Company EE \$54.30 5.10% 5.20% 5.00% 5.45% 52.00% 59.00% 65.91% \$0.00 8.69% 21.41 3.93	
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Duke Energy Corporation DUK \$83.84 3.70% 4.24% 4.50% 4.50% 5.45% 75.00% 78.00% 65.91% \$0.00 8.73% 21.18 3.89 El Paso Electric Company EE \$54.30 5.10% 5.20% 5.00% 5.20% 5.45% 52.00% 59.00% 65.91% \$0.00 8.69% 21.41 3.93	
El Paso Electric Company EE \$54.30 5.10% 5.20% 5.00% 5.20% 5.45% 52.00% 59.00% 65.91% \$0.00 8.69% 21.41 3.93	
IDACORP, Inc. IDA \$88.56 4.10% 3.10% 3.50% 4.10% 5.45% 57.00% 60.00% 65.91% (\$0.00) 8.49% 22.86 4.20	
NorthWestern Corporation NWE \$57.95 2.40% 3.12% 4.50% 4.50% 5.45% 63.00% 62.00% 65.91% (\$0.00) 9.62% 16.66 3.06	
OGE Energy Corp. OGE \$34.33 6.00% 5.80% 2.50% 6.00% 5.45% 68.00% 74.00% 65.91% \$0.00 9.49% 17.19 3.16	
Otter Tail Corporation OTTR \$42.98 NA 9.00% 7.00% 9.00% 5.45% 72.00% 63.00% 65.91% \$0.00 9.16% 18.69 3.43	
Pinnacle West Capital Corporation PNW \$85.18 3.00% 3.63% 5.50% 5.50% 5.45% 64.00% 62.00% 65.91% (\$0.00) 9.00% 19.53 3.59	
PNM Resources, Inc. PNM \$40.22 5.80% 5.80% 7.50% 7.50% 5.45% 57.00% 56.00% 65.91% (\$0.00) 8.62% 21.89 4.02	
Portland General Electric Company POR \$45.11 2.90% 3.50% 6.00% 6.00% 5.45% 59.00% 55.00% 65.91% (\$0.00) 9.18% 18.60 3.42	
Southern Company SO \$48.18 4.50% 2.70% 4.00% 4.50% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.82% 15.88 2.92	
WEC Energy Group, Inc. WEC \$64.44 4.20% 4.34% 6.00% 6.00% 5.45% 67.00% 66.00% 65.91% \$0.00 9.14% 18.79 3.45	
Xcel Energy Inc. XEL \$47.55 5.80% 6.15% 4.50% 6.15% 5.45% 63.00% 67.00% 65.91% \$0.00 9.22% 18.40 3.38	
Mean 9.30%	
Max 11.98%	
Min 8.49%	
Projected Annual	ro 01
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
	\$7.73
	\$4.19
	\$7.38
	\$10.03
	\$7.24
	\$5.90
	\$12.28
	\$8.03
	\$5.47
	\$6.82
	\$8.25
	\$7.34
	\$4.13
	\$4.96
	\$9.27
	\$4.02
	\$5.28
	\$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 \$5.55 \$5.85 \$6.17 \$6.50 \$6.86 \$	\$7.23
	\$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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	63.00%	62.67%		62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	64.00%	63.33%		62.00%	62.56%	63.12%	63.67%		64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	57.00%	56.67%		56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	57.67%		55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	63.00%	64.33%		67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%
Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
Company	Tielcor	2010	2010	2020	2024	2022	2022	2024	2025	2026	2027	2020	2020	2020	2024	2022
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026 \$3.67	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE LNT	\$2.33 \$1.20	\$2.45 \$1.28	\$2.57 \$1.36	\$2.70 \$1.45	\$2.88 \$1.55	\$3.06 \$1.65	\$3.26 \$1.76	\$3.46 \$1.87	\$3.67 \$1.99	\$3.89 \$2.11	\$4.12 \$2.24	\$4.35 \$2.36	\$4.58 \$2.49	\$4.83 \$2.63	\$5.10 \$2.76
Alliant Energy Corporation Ameren Corporation	AEE	\$1.20 \$1.89	\$1.20 \$2.02	\$1.36 \$2.16	\$1.45 \$2.31	\$1.55 \$2.52	\$1.65 \$2.73	\$1.76 \$2.96	\$1.67 \$3.19	\$1.99 \$3.44	\$2.11 \$3.68	\$2.24 \$3.93	\$2.36 \$4.15	\$2.49 \$4.37	\$2.62 \$4.61	\$2.76 \$4.86
American Electric Power Company, Inc.	AEP	\$3.12	\$2.02 \$3.24	\$3.37	\$2.51 \$3.50	\$2.52 \$3.73	\$2.73 \$3.96	\$2.96 \$4.21	\$3.19 \$4.47	\$3.44 \$4.75	\$5.04	\$5.35	\$5.64	\$4.37 \$5.94	\$4.61 \$6.27	\$4.66 \$6.61
	BKH		\$3.24 \$1.72		\$3.50 \$2.04			\$4.21 \$2.75	\$4.47 \$3.01	\$4.75 \$3.28		\$3.86			\$4.53	\$4.77
Black Hills Corporation		\$1.58	-	\$1.87	•	\$2.26	\$2.50	•	-	•	\$3.57	•	\$4.07	\$4.29	•	•
CMS Energy Corporation	CMS	\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.18	\$2.37	\$2.56	\$2.75	\$2.95	\$3.14	\$3.32	\$3.50	\$3.69	\$3.89
DTE Energy Company	DTE	\$3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.68	\$5.02	\$5.38	\$5.75	\$6.14	\$6.55	\$6.90	\$7.28	\$7.67	\$8.09
Duke Energy Corporation	DUK	\$3.04	\$3.22	\$3.41	\$3.61	\$3.69	\$3.77	\$3.86	\$3.96	\$4.06	\$4.17	\$4.28	\$4.51	\$4.76	\$5.02	\$5.29
El Paso Electric Company	EE	\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.38	\$2.55	\$2.73	\$2.92	\$3.08	\$3.24	\$3.42	\$3.61 \$4.50
Hawaiian Electric Industries, Inc.	HE	\$1.86	\$2.04	\$2.23	\$2.44	\$2.63	\$2.81	\$2.98	\$3.16	\$3.33	\$3.49	\$3.64	\$3.83	\$4.04	\$4.26	\$4.50
DACORP, Inc.	IDA	\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.23	\$3.42	\$3.63	\$3.86	\$4.12	\$4.40	\$4.64	\$4.89	\$5.16	\$5.44
NorthWestern Corporation	NWE	\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.92	\$3.08	\$3.27	\$3.46	\$3.68	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83
OGE Energy Corp.	OGE	\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.97	\$2.05	\$2.12	\$2.20	\$2.32	\$2.45	\$2.58	\$2.72
Otter Tail Corporation	OTTR	\$1.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.86	\$2.01	\$2.17	\$2.33	\$2.49	\$2.64	\$2.79	\$2.94	\$3.10	\$3.27
Pinnacle West Capital Corporation	PNW	\$2.81	\$2.94	\$3.07	\$3.20	\$3.41	\$3.63	\$3.86	\$4.11	\$4.37	\$4.65	\$4.94	\$5.21	\$5.49	\$5.79	\$6.11
PNM Resources, Inc.	PNM	\$0.96	\$1.03	\$1.10	\$1 17	\$1 29	\$1 42	\$1.55	\$1.69	\$1.84	\$1.99	\$2 14	\$2.26	\$2.38	\$2.51	\$2 65

PNM

POR

SO

WEC

XEL

PNM Resources, Inc.
Portland General Electric Company

Southern Company

WEC Energy Group, Inc. Xcel Energy Inc.

\$0.96

\$1.43

\$2.41

\$2.23

\$1.57

\$1.03

\$1.48

\$2.45

\$2.35

\$1.70

\$1.10

\$1.54

\$2.50

\$2.48

\$1.84

\$1.17

\$1.59

\$2.54

\$2.61

\$2.00

\$1.29

\$1.73

\$2.62

\$2.77

\$2.11

\$1.42

\$1.89

\$2.71

\$2.93

\$2.24

\$1.55

\$2.05

\$2.81

\$3.10

\$2.36

\$1.69

\$2.22

\$2.91

\$3.28

\$2.49

\$1.84

\$2.41

\$3.02

\$3.46

\$2.63

\$1.99

\$2.60

\$3.14

\$3.66

\$2.77

\$2.14

\$2.81

\$3.26

\$3.85

\$2.91

\$2.26

\$2.97

\$3.44

\$4.06

\$3.07

\$87.99

\$98.12

\$97.25

\$135.85

\$100.52

\$2.65

\$3.48

\$4.04

\$4.76

\$3.60

\$2.51

\$3.30

\$3.83

\$4.52

\$3.41

\$2.38

\$3.13

\$3.63

\$4.29

\$3.24

Projected Annual Data
Investor Cash Flows

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
_		Initial																
Company	Ticker	Outflow	3/16/18	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	(\$74.59)	\$0.00	\$1.85	\$2.40	\$2.57	\$2.70	\$2.88	\$3.06	\$3.26	\$3.46	\$3.67	\$3.89	\$4.12	\$4.35	\$4.58	\$4.83	\$163.36
Alliant Energy Corporation	LNT	(\$41.63)	\$0.00	\$0.95	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.24	\$2.36	\$2.49	\$2.62	\$91.49
Ameren Corporation	AEE	(\$58.34)	\$0.00	\$1.50	\$1.96	\$2.16	\$2.31	\$2.52	\$2.73	\$2.96	\$3.19	\$3.44	\$3.68	\$3.93	\$4.15	\$4.37	\$4.61	\$131.56
American Electric Power Company, Inc.	AEP	(\$71.29)	\$0.00	\$2.47	\$3.20	\$3.37	\$3.50	\$3.73	\$3.96	\$4.21	\$4.47	\$4.75	\$5.04	\$5.35	\$5.64	\$5.94	\$6.27	\$157.26
Black Hills Corporation	BKH	(\$62.19)	\$0.00	\$1.26	\$1.64	\$1.87	\$2.04	\$2.26	\$2.50	\$2.75	\$3.01	\$3.28	\$3.57	\$3.86	\$4.07	\$4.29	\$4.53	\$142.50
CMS Energy Corporation	CMS	(\$46.64)	\$0.00	\$1.13	\$1.48	\$1.67	\$1.82	\$1.99	\$2.18	\$2.37	\$2.56	\$2.75	\$2.95	\$3.14	\$3.32	\$3.50	\$3.69	\$105.64
DTE Energy Company	DTE	(\$108.14)	\$0.00	\$2.70	\$3.51	\$3.81	\$4.04	\$4.35	\$4.68	\$5.02	\$5.38	\$5.75	\$6.14	\$6.55	\$6.90	\$7.28	\$7.67	\$240.41
Duke Energy Corporation	DUK	(\$83.84)	\$0.00	\$2.41	\$3.11	\$3.41	\$3.61	\$3.69	\$3.77	\$3.86	\$3.96	\$4.06	\$4.17	\$4.28	\$4.51	\$4.76	\$5.02	\$175.29
El Paso Electric Company	EE	(\$54.30)	\$0.00	\$1.09	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.38	\$2.55	\$2.73	\$2.92	\$3.08	\$3.24	\$3.42	\$120.81
Hawaiian Electric Industries, Inc.	HE	(\$34.36)	\$0.00	\$1.48	\$1.94	\$2.23	\$2.44	\$2.63	\$2.81	\$2.98	\$3.16	\$3.33	\$3.49	\$3.64	\$3.83	\$4.04	\$4.26	\$77.00
IDACORP, Inc.	IDA	(\$88.56)	\$0.00	\$1.93	\$2.48	\$2.73	\$2.89	\$3.05	\$3.23	\$3.42	\$3.63	\$3.86	\$4.12	\$4.40	\$4.64	\$4.89	\$5.16	\$194.09
NorthWestern Corporation	NWE	(\$57.95)	\$0.00	\$1.85	\$2.38	\$2.52	\$2.62	\$2.76	\$2.92	\$3.08	\$3.27	\$3.46	\$3.68	\$3.91	\$4.12	\$4.35	\$4.58	\$127.02
OGE Energy Corp.	OGE	(\$34.33)	\$0.00	\$1.03	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.97	\$2.05	\$2.12	\$2.20	\$2.32	\$2.45	\$2.58	\$73.68
Otter Tail Corporation	OTTR	(\$42.98)	\$0.00	\$1.09	\$1.43	\$1.49	\$1.55	\$1.70	\$1.86	\$2.01	\$2.17	\$2.33	\$2.49	\$2.64	\$2.79	\$2.94	\$3.10	\$95.90
Pinnacle West Capital Corporation	PNW	(\$85.18)	\$0.00	\$2.24	\$2.89	\$3.07	\$3.20	\$3.41	\$3.63	\$3.86	\$4.11	\$4.37	\$4.65	\$4.94	\$5.21	\$5.49	\$5.79	\$187.12
PNM Resources, Inc.	PNM	(\$40.22)	\$0.00	\$0.76	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.84	\$1.99	\$2.14	\$2.26	\$2.38	\$2.51	\$90.64
Portland General Electric Company	POR	(\$45.11)	\$0.00	\$1.14	\$1.47	\$1.54	\$1.59	\$1.73	\$1.89	\$2.05	\$2.22	\$2.41	\$2.60	\$2.81	\$2.97	\$3.13	\$3.30	\$101.60
Southern Company	SO	(\$48.18)	\$0.00	\$1.92	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.81	\$2.91	\$3.02	\$3.14	\$3.26	\$3.44	\$3.63	\$3.83	\$101.28
WEC Energy Group, Inc.	WEC	(\$64.44)	\$0.00	\$1.77	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.28	\$3.46	\$3.66	\$3.85	\$4.06	\$4.29	\$4.52	\$140.62
Xcel Energy Inc.	XEL	(\$47.55)	\$0.00	\$1.25	\$1.62	\$1.84	\$2.00	\$2.11	\$2.24	\$2.36	\$2.49	\$2.63	\$2.77	\$2.91	\$3.07	\$3.24	\$3.41	\$104.12

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

Company Ticker Price Ticker Price Ticker Price Ticker Price Ticker Price Ticker Ticker Price Ticker Ticker Ticker Price Ticker	Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]				
Company Ticker Price Zacks First Call Line Growth			Stock	EPS	S Growth Ra			_ Long-Term	F	'ayout Rat	10	Iterative	Solution	Terminal					
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Otter Tail Corporation OTTR \$42.98 NA 9.00% 7.00% 5.45% 72.00% 63.00% 65.91% \$0.00 8.66% 21.60 3.97 Pinnacle West Capital Corporation PNW \$85.18 3.00% 3.63% 5.50% 3.00% 5.45% 64.00% 62.00% 65.91% (\$0.00) 8.39% 23.60 4.33 PNM Resources, Inc. PNM \$40.22 5.80% 5.80% 7.50% 5.80% 5.45% 57.00% 56.00% 65.91% (\$0.00) 8.25% 24.81 4.55 Portland General Electric Company POR \$45.11 2.90% 3.50% 6.00% 2.90% 5.45% 59.00% 55.00% 65.91% (\$0.00) 8.41% 4.30 Southern Company SO \$48.18 4.50% 2.70% 4.00% 2.70% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.26% 18.22 3.35 WEC Energy Group, Inc. WEC \$64.44 4.20% 4.34% 6.00%												,							
PNM Resources, Inc. PNM \$40.22 5.80% 5.80% 7.50% 5.80% 5.45% 57.00% 56.00% 65.91% (\$0.00) 8.25% 24.81 4.55 Portland General Electric Company POR \$45.11 2.90% 3.50% 6.00% 2.90% 5.45% 59.00% 55.00% 65.91% (\$0.00) 8.41% 23.43 4.30 Southern Company SO \$48.18 4.50% 2.70% 4.00% 2.70% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.26% 18.22 3.35 WEC Energy Group, Inc. WEC \$64.44 4.20% 4.34% 6.00% 4.50% 5.45% 67.00% 66.00% 65.91% \$0.00 8.68% 21.51 3.95 Xcel Energy Inc. XEL \$47.55 5.80% 6.15% 4.50% 4.50% 5.45% 63.00% 67.00% 65.91% \$0.00 8.78% 20.81 3.82		OTTR	\$42.98	NA				5.45%	72.00%	63.00%	65.91%	\$0.00	8.66%	21.60	3.97				
Portland General Electric Company POR \$45.11 2.90% 3.50% 6.00% 2.90% 5.45% 59.00% 55.00% 65.91% (\$0.00) 8.41% 23.43 4.30 Southern Company SO \$48.18 4.50% 2.70% 4.00% 2.70% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.26% 18.22 3.35 WEC Energy Group, Inc. WEC \$64.44 4.20% 4.34% 6.00% 4.50% 5.45% 67.00% 66.00% 65.91% \$0.00 8.68% 21.51 3.95 Xcel Energy Inc. XEL \$47.55 5.80% 6.15% 4.50% 4.50% 5.45% 63.00% 67.00% 65.91% \$0.00 8.78% 20.81 3.82	Pinnacle West Capital Corporation	PNW	\$85.18	3.00%	3.63%	5.50%	3.00%	5.45%	64.00%	62.00%	65.91%	(\$0.00)	8.39%	23.60	4.33				
Southern Company SO \$48.18 4.50% 2.70% 4.00% 2.70% 5.45% 78.00% 72.00% 65.91% (\$0.00) 9.26% 18.22 3.35 WEC Energy Group, Inc. WEC \$64.44 4.20% 4.34% 6.00% 4.20% 5.45% 67.00% 66.00% 65.91% \$0.00 8.68% 21.51 3.95 Xcel Energy Inc. XEL \$47.55 5.80% 6.15% 4.50% 4.50% 5.45% 63.00% 67.00% 65.91% \$0.00 8.78% 20.81 3.82	PNM Resources, Inc.	PNM	\$40.22	5.80%	5.80%	7.50%	5.80%	5.45%	57.00%	56.00%	65.91%	(\$0.00)	8.25%	24.81	4.55				
WEC Energy Group, Inc. WEC \$64.44 4.20% 4.34% 6.00% 4.20% 5.45% 67.00% 66.00% 65.91% \$0.00 8.68% 21.51 3.95 XCel Energy Inc. XEL \$47.55 5.80% 6.15% 4.50% 4.50% 5.45% 63.00% 67.00% 65.91% \$0.00 8.78% 20.81 3.82		POR	\$45.11	2.90%	3.50%	6.00%	2.90%	5.45%	59.00%	55.00%	65.91%	(\$0.00)	8.41%	23.43	4.30				
Xcel Energy Inc. XEL \$47.55 5.80% 6.15% 4.50% 4.50% 5.45% 63.00% 67.00% 65.91% \$0.00 8.78% 20.81 3.82		SO	\$48.18	4.50%	2.70%	4.00%	2.70%	5.45%	78.00%	72.00%	65.91%	(\$0.00)	9.26%	18.22	3.35				
			\$64.44	4.20%	4.34%	6.00%	4.20%	5.45%	67.00%	66.00%	65.91%	\$0.00		21.51					
	Xcel Energy Inc.	XEL	\$47.55	5.80%	6.15%	4.50%	4.50%	5.45%	63.00%	67.00%	65.91%	\$0.00		20.81	3.82				
Mean 8.73%																			
Max 9.70%																			
Min 8.17%												Min	8.17%						
Projected Annual			F4 43	F 4 = 3		F 4 3				50.43		1001	ro 41	ro=1	10.01			1001	10.01
Earnings per Share [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] [30]	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	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 \$5.50 \$5.80 \$6.11 \$6.44 \$6.79																			
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 \$3.43 \$3.61 \$3.81	·																		
Ameren Corporation AEE \$2.68 \$2.85 \$3.03 \$3.23 \$3.43 \$3.65 \$3.89 \$4.13 \$4.38 \$4.64 \$4.91 \$5.18 \$5.47 \$5.76 \$6.08 \$6.41 \$6.76																			
American Electric Power Company, Inc. AEP \$4.23 \$4.42 \$4.62 \$4.83 \$5.04 \$5.27 \$5.51 \$5.77 \$6.04 \$6.34 \$6.67 \$7.02 \$7.40 \$7.81 \$8.23 \$8.68 \$9.15																			
Black Hills Corporation BKH \$2.63 \$2.72 \$2.82 \$2.92 \$3.02 \$3.12 \$3.23 \$3.36 \$3.50 \$3.65 \$3.83 \$4.02 \$4.24 \$4.47 \$4.72 \$4.97 \$5.24																			
CMS Energy Corporation CMS \$1.98 \$2.10 \$2.24 \$2.38 \$2.53 \$2.69 \$2.86 \$3.03 \$3.22 \$3.40 \$3.60 \$3.80 \$4.01 \$4.23 \$4.46 \$4.70 \$4.95																			
DTE Energy Company DTE \$4.83 \$5.10 \$5.38 \$5.68 \$6.00 \$6.34 \$6.69 \$7.06 \$7.45 \$7.86 \$8.30 \$8.75 \$9.23 \$9.73 \$10.26 \$10.82 \$11.41	· · ·		•					•	•			•		•				•	•
Duke Energy Corporation DUK \$3.71 \$3.85 \$3.99 \$4.14 \$4.29 \$4.45 \$4.61 \$4.80 \$5.00 \$5.23 \$5.49 \$5.77 \$6.08 \$6.41 \$6.76 \$7.13 \$7.52																			•
El Paso Electric Company 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 \$4.36 \$4.59 \$4.84 \$5.11 \$5.39																		•	
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 \$6.49 \$6.84 \$7.21 \$7.60	·																		
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 \$4.74 \$4.99 \$5.27 \$5.55 \$5.86 \$6.18																			
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 \$3.81 \$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 \$6.12 \$6.45 \$6.80 \$7.17 \$7.56																			
PNM Resources, Inc. PNM \$1.46 \$1.54 \$1.63 \$1.73 \$1.83 \$1.94 \$2.05 \$2.17 \$2.29 \$2.42 \$2.55 \$2.69 \$2.84 \$2.99 \$3.16 \$3.33 \$3.51																			
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 \$3.00 \$3.15 \$3.32 \$3.50 \$3.69 \$3.89 \$4.10																			
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 \$4.51 \$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 \$4.56 \$4.79 \$5.06 \$5.33 \$5.62 \$5.93 \$6.25	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	\$4.56	\$4.79		\$5.33	\$5.62	\$5.93	
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 \$4.54 \$4.78	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	\$4.54	\$4.78

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%		66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	63.00%	64.33%		67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Droingtod Annual																	
Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	
Casii Flows		[40]	[47]	[40]	[49]	[၁၀]	[၁۱]	[32]	[၁၁]	[34]	[၁၁]	[50]	[37]	[၁၀]	[၁၅]	լսսյ	Te
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	V
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$4.48	\$1
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$8
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$4.45	\$1
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$6.03	\$1
Black Hills Corporation	BKH	\$1.47	\$1.54	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$1
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$3.26	\$1
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$7.52	\$2
Duka Energy Comparation	DIIK	Φ2.00	ψ0.01 Φ0.44	ψο.οο Φο.οο	ψ0.07 Φ0.47	ψ 1 .10	ψτ.τι Φο Εο	Φ 1 .70	ψ0.02 Φ0.70	Φ0.00	ψ3.70 Φ3.00	Φ0.00 Φ4.04	ψυ. - 1	Φ4.40	Φ1.10 Φ1.70	Ψ1.02 Φ1.0C	Ψ <u>~</u>

\$3.52

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\$4.51

\$3.66

\$1.84

\$2.51

\$4.48

\$2.08

\$2.43

\$3.13

\$3.70

\$2.83

\$4.70

\$3.37

\$2.42

\$4.75

\$3.86

\$1.94

\$2.65

\$4.73

\$2.19

\$2.56

\$3.30

\$3.91

\$2.99

\$4.96

\$3.55

\$2.55

\$5.01

\$4.07

\$2.05

\$2.79

\$4.98

\$2.31

\$2.70

\$3.48

\$4.12

\$3.15

\$169.46

\$117.06

\$68.71

\$187.62

\$120.50

\$69.73

\$91.44

\$178.41

\$87.05

\$96.09

\$96.28

\$134.43

\$99.53

Duke Energy Corporation

El Paso Electric Company

NorthWestern Corporation

IDACORP, Inc.

OGE Energy Corp.

Otter Tail Corporation

PNM Resources, Inc.

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

Hawaiian Electric Industries, Inc.

Pinnacle West Capital Corporation

Portland General Electric Company

DUK

EE

ΗE

IDA

NWE

OGE

OTTR

PNW

PNM

POR

SO

WEC

XEL

\$2.99

\$1.37

\$1.63

\$2.39

\$2.24

\$1.21

\$1.32

\$2.68

\$0.93

\$1.35

\$2.33

\$2.15

\$1.52

\$3.14

\$1.50

\$1.67

\$2.50

\$2.28

\$1.27

\$1.35

\$2.73

\$0.98

\$1.36

\$2.33

\$2.23

\$1.62

\$3.30

\$1.65

\$1.71

\$2.63

\$2.32

\$1.34

\$1.38

\$2.79

\$1.03

\$1.36

\$2.33

\$2.31

\$1.73

\$3.47

\$1.80

\$1.75

\$2.75

\$2.37

\$1.41

\$1.41

\$2.84

\$1.08

\$1.37

\$2.33

\$2.40

\$1.85

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Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
_		Initial								_ , ,								
Company	Ticker	Outflow	3/16/18	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	(\$74.59)	\$0.00	\$1.80	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$161.31
Alliant Energy Corporation	LNT	(\$41.63)	\$0.00	\$0.93	\$1.20	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$90.64
Ameren Corporation	AEE	(\$58.34)	\$0.00	\$1.47	\$1.91	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$130.10
American Electric Power Company, Inc.	AEP	(\$71.29)	\$0.00	\$2.42	\$3.12	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$155.38
Black Hills Corporation	BKH	(\$62.19)	\$0.00	\$1.16	\$1.49	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$137.48
CMS Energy Corporation	CMS	(\$46.64)	\$0.00	\$1.08	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$103.40
DTE Energy Company	DTE	(\$108.14)	\$0.00	\$2.65	\$3.43	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$238.40
Duke Energy Corporation	DUK	(\$83.84)	\$0.00	\$2.38	\$3.05	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$174.42
El Paso Electric Company	EE	(\$54.30)	\$0.00	\$1.09	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$120.61
Hawaiian Electric Industries, Inc.	HE	(\$34.36)	\$0.00	\$1.29	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$71.26
IDACORP, Inc.	IDA	(\$88.56)	\$0.00	\$1.90	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$192.63
NorthWestern Corporation	NWE	(\$57.95)	\$0.00	\$1.78	\$2.27	\$2.32	\$2.37	\$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$124.57
OGE Energy Corp.	OGE	(\$34.33)	\$0.00	\$0.96	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.51	\$1.55	\$1.60	\$1.65	\$1.74	\$1.84	\$1.94	\$71.77
Otter Tail Corporation	OTTR	(\$42.98)	\$0.00	\$1.05	\$1.37	\$1.38	\$1.41	\$1.52	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.26	\$2.38	\$2.51	\$2.65	\$94.23
Pinnacle West Capital Corporation	PNW	(\$85.18)	\$0.00	\$2.13	\$2.72	\$2.79	\$2.84	\$2.95	\$3.08	\$3.22	\$3.39	\$3.58	\$3.79	\$4.03	\$4.25	\$4.48	\$4.73	\$183.40
PNM Resources, Inc.	PNM	(\$40.22)	\$0.00	\$0.74	\$0.96	\$1.03	\$1.08	\$1.18	\$1.27	\$1.38	\$1.49	\$1.61	\$1.74	\$1.87	\$1.97	\$2.08	\$2.19	\$89.36
Portland General Electric Company	POR	(\$45.11)	\$0.00	\$1.07	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.88	\$2.02	\$2.19	\$2.30	\$2.43	\$2.56	\$98.80
Southern Company	SO	(\$48.18)	\$0.00	\$1.85	\$2.36	\$2.33	\$2.33	\$2.36	\$2.41	\$2.46	\$2.53	\$2.61	\$2.71	\$2.82	\$2.97	\$3.13	\$3.30	\$99.76
WEC Energy Group, Inc.	WEC	(\$64.44)	\$0.00	\$1.71	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.73	\$2.86	\$3.00	\$3.16	\$3.33	\$3.51	\$3.70	\$3.91	\$138.55
Xcel Energy Inc.	XEL	(\$47.55)	\$0.00	\$1.21	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$102.68

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

						Avera	ge EPS Grov	vtn Kate E	stimate in	First Stage)						
Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]			
		Stock	EP	S Growth Ra		ates	Long-Term	F	Payout Rat	io	Iterative	Solution	Terminal	Terminal			
0	Tieleen	Duine	Zacks	First Call	Value	A	0	0040	0004	0000	Dunaf	IDD	D/C D-#-	DEC Datia			
Company	Ticker	Price			Line	Average	Growth	2018	2021	2028	Proof	IRR		PEG Ratio			
ALLETE, Inc.	ALE	\$68.80	6.10%	5.00%	4.50%	5.20%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	9.54%	22.51	4.13			
Alliant Energy Corporation	LNT	\$38.71	5.30%	5.45%	6.50%	5.75%	5.45%	64.00%	64.00%	65.91%	\$0.00	9.27%	22.51	4.13			
Ameren Corporation	AEE	\$54.60	6.90%	6.40%	7.50%	6.93%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	11.33%	22.51	4.13			
American Electric Power Company, Inc.	AEP	\$65.89	5.40%	5.63%	4.50%	5.18%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	12.87%	22.51	4.13			
Black Hills Corporation	BKH	\$51.93	4.60%	3.50%	7.50%	5.20%	5.45%	52.00%	54.00%	65.91%	\$0.00	10.20%	22.51	4.13			
CMS Energy Corporation	CMS	\$43.01	6.30%	7.04%	8.50%	7.28%	5.45%	61.00%	61.00%	65.91%	\$0.00	10.98%	22.51	4.13			
DTE Energy Company	DTE	\$101.62	6.00%	5.58%	6.50%	6.03%	5.45%	62.00%	61.00%	65.91%	\$0.00	10.41%	22.51	4.13			
Duke Energy Corporation	DUK	\$76.11	3.70%	4.24%	4.50%	4.15%	5.45%	75.00%	78.00%	65.91%	\$0.00	9.78%	22.51	4.13			
El Paso Electric Company	EE	\$49.61	5.10%	5.20%	5.00%	5.10%	5.45%	52.00%	59.00%	65.91%	\$0.00	9.76%	22.51	4.13			
Hawaiian Electric Industries, Inc.	HE	\$33.15	6.70%	8.50%	1.50%	5.57%	5.45%	69.00%	71.00%	65.91%	\$0.00	14.18%	22.51	4.13			
IDACORP, Inc.	IDA	\$82.97	4.10%	3.10%	3.50%	3.57%	5.45%	57.00%	60.00%	65.91%	\$0.00	8.62%	22.51	4.13			
NorthWestern Corporation	NWE	\$51.42	2.40%	3.12%	4.50%	3.34%	5.45%	63.00%	62.00%	65.91%	\$0.00	11.72%	22.51	4.13			
OGE Energy Corp.	OGE	\$31.25	6.00%	5.80%	2.50%	4.77%	5.45%	68.00%	74.00%	65.91%	\$0.00	11.10%	22.51	4.13			
Otter Tail Corporation	OTTR	\$41.20	NA	9.00%	7.00%	8.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	9.99%	22.51	4.13			
Pinnacle West Capital Corporation	PNW	\$76.92	3.00%	3.63%	5.50%	4.04%	5.45%	64.00%	62.00%	65.91%	\$0.00	9.79%	22.51	4.13			
PNM Resources, Inc.	PNM	\$35.57	5.80%	5.80%	7.50%	6.37%	5.45%	57.00%	56.00%	65.91%	\$0.00	9.14%	22.51	4.13			
Portland General Electric Company	POR	\$40.07	2.90%	3.50%	6.00%	4.13%	5.45%	59.00%	55.00%	65.91%	\$0.00	10.13%	22.51	4.13			
Southern Company	SO	\$43.84	4.50%	2.70%	4.00%	3.73%	5.45%	78.00%	72.00%	65.91%	\$0.00	12.23%	22.51	4.13			
WEC Energy Group, Inc.	WEC	\$60.76	4.20%	4.34%	6.00%	4.85%	5.45%	67.00%	66.00%	65.91%	\$0.00	9.96%	22.51	4.13			
Xcel Energy Inc.	XEL	\$43.57	5.80%	6.15%	4.50%	5.48%	5.45%	63.00%	67.00%	65.91%	\$0.00	10.79%	22.51	4.13			
											Mean						
											Max						
											Min	8.62%					
Projected Annual																	
Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.14	\$3.30	\$3.48	\$3.66	\$3.85	\$4.05	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$5.52	\$5.82	\$6.13	\$6.47	\$6.82
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	\$3.20	\$3.37	\$3.55	\$3.75
Ameren Corporation	AEE	\$2.68	\$2.87	\$3.06	\$3.28	\$3.50	\$3.75	\$4.01	\$4.27	\$4.55	\$4.83	\$5.12	\$5.41	\$5.70	\$6.02	\$6.34	\$6.69
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.92	\$5.18	\$5.44	\$5.73	\$6.03	\$6.34	\$6.68	\$7.04	\$7.42	\$7.82	\$8.25	\$8.70	\$9.17
Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.91	\$3.06	\$3.22	\$3.39	\$3.56	\$3.75	\$3.95	\$4.16	\$4.38	\$4.62	\$4.87	\$5.14	\$5.42	\$5.71
CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.02	\$3.23	\$3.44	\$3.66	\$3.89	\$4.11	\$4.33	\$4.57	\$4.82	\$5.08
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	\$9.07	\$9.56	\$10.08	\$10.63	\$11.21
Duke Energy Corporation	DUK	\$3.71	\$3.86	\$4.02	\$4.19	\$4.36	\$4.55	\$4.73	\$4.94	\$5.17	\$5.41	\$5.69	\$5.98	\$6.31	\$6.65	\$7.02	\$7.40
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	\$5.15
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	\$4.61	\$4.86	\$5.12
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	\$6.74	\$7.11	\$7.49
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	\$5.40	\$5.69	\$6.00	\$6.33
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	\$3.19	\$3.36	\$3.54
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	\$3.71	\$3.91	\$4.12	\$4.35
Diamanda Mant Camital Camanatian	DNIM	CO OF	0111	#4.00	Φ 4 4 E	04.00	#4.00	CF 04	ሲ ሮ 00	CE 40	CE 70	CO 00	ሰ ር ጋር	CC CC	¢ 7.00	C7 44	CZ 04

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\$2.46

Pinnacle West Capital Corporation

Portland General Electric Company

PNM Resources, Inc.

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

PNW

PNM

POR

SO

WEC

XEL

\$3.95

\$1.46

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[30]

\$7.19 \$3.95 \$7.05 \$9.67 \$6.02 \$5.36 \$11.82 \$7.80 \$5.43 \$5.40 \$7.90 \$6.67 \$3.74

\$4.58

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\$4.30

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\$6.25

\$4.91

Projected Annual
Dividend Payout Pati

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	-
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	so	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Projected Annual																	
•		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Cash Flows	Ticker																Terminal
Cash Flows Company	Ticker ALE	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
Cash Flows Company ALLETE, Inc.	ALE	2018 \$2.29	2019 \$2.39	2020 \$2.49	2021 \$2.59	2022 \$2.74	2023 \$2.89	2024 \$3.06	2025 \$3.23	2026 \$3.42	2027 \$3.62	2028 \$3.83	2029 \$4.04	2030 \$4.26	2031 \$4.49	2032 \$4.74	Terminal Value \$161.84
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation	ALE LNT	2018 \$2.29 \$1.18	2019 \$2.39 \$1.25	2020 \$2.49 \$1.32	2021 \$2.59 \$1.40	2022	2023 \$2.89 \$1.57	2024 \$3.06 \$1.67	2025 \$3.23 \$1.77	2026 \$3.42 \$1.88	2027 \$3.62 \$1.99	2028 \$3.83 \$2.11	2029 \$4.04 \$2.22	2030 \$4.26 \$2.34	2031 \$4.49 \$2.47	2032 \$4.74 \$2.60	Terminal Value \$161.84 \$88.90
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation	ALE LNT AEE	2018 \$2.29 \$1.18 \$1.87	2019 \$2.39 \$1.25 \$1.99	2020 \$2.49 \$1.32 \$2.11	2021 \$2.59 \$1.40 \$2.25	2022 \$2.74 \$1.48 \$2.44	2023 \$2.89 \$1.57 \$2.64	2024 \$3.06 \$1.67 \$2.85	2025 \$3.23 \$1.77 \$3.06	2026 \$3.42 \$1.88 \$3.29	2027 \$3.62 \$1.99 \$3.52	2028 \$3.83 \$2.11 \$3.76	2029 \$4.04 \$2.22 \$3.96	2030 \$4.26 \$2.34 \$4.18	2031 \$4.49 \$2.47 \$4.41	2032 \$4.74 \$2.60 \$4.65	Terminal Value \$161.84 \$88.90 \$158.73
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc.	ALE LNT	2018 \$2.29 \$1.18	2019 \$2.39 \$1.25	2020 \$2.49 \$1.32	2021 \$2.59 \$1.40	2022 \$2.74 \$1.48	2023 \$2.89 \$1.57	2024 \$3.06 \$1.67	2025 \$3.23 \$1.77	2026 \$3.42 \$1.88	2027 \$3.62 \$1.99	2028 \$3.83 \$2.11	2029 \$4.04 \$2.22	2030 \$4.26 \$2.34	2031 \$4.49 \$2.47	2032 \$4.74 \$2.60	Terminal Value \$161.84 \$88.90
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation	ALE LNT AEE AEP	2018 \$2.29 \$1.18 \$1.87 \$3.09	2019 \$2.39 \$1.25 \$1.99 \$3.20	2020 \$2.49 \$1.32 \$2.11 \$3.31	2021 \$2.59 \$1.40 \$2.25 \$3.43	2022 \$2.74 \$1.48 \$2.44 \$3.63	2023 \$2.89 \$1.57 \$2.64 \$3.85	2024 \$3.06 \$1.67 \$2.85 \$4.07	2025 \$3.23 \$1.77 \$3.06 \$4.32	2026 \$3.42 \$1.88 \$3.29 \$4.58	2027 \$3.62 \$1.99 \$3.52 \$4.86	2028 \$3.83 \$2.11 \$3.76 \$5.15	2029 \$4.04 \$2.22 \$3.96 \$5.44	2030 \$4.26 \$2.34 \$4.18 \$5.73	2031 \$4.49 \$2.47 \$4.41 \$6.04	2032 \$4.74 \$2.60 \$4.65 \$6.37	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation	ALE LNT AEE AEP BKH	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company	ALE LNT AEE AEP BKH CMS	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation	ALE LNT AEE AEP BKH CMS DTE	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company	ALE LNT AEE AEP BKH CMS DTE DUK	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc.	ALE LNT AEE AEP BKH CMS DTE DUK EE	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56 \$122.20
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc.	ALE LNT AEE AEP BKH CMS DTE DUK EE HE	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56 \$122.20 \$121.58
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation	ALE LNT AEE AEP BKH CMS DTE DUK EE HE	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56 \$122.20 \$121.58 \$177.81
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp.	ALE LNT AEE AEP BKH CMS DTE DUK EE IDA NWE	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.36 \$2.54 \$3.49 \$2.99	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56 \$121.58 \$177.81 \$150.18
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation	ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56 \$122.20 \$121.58 \$177.81 \$150.18 \$84.11
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation	ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.97 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56 \$122.20 \$121.58 \$177.81 \$150.18 \$84.11 \$103.13
Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc.	ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.48 \$1.58 \$1.48 \$2.99	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56 \$122.20 \$121.58 \$177.81 \$150.18 \$84.11 \$103.13 \$185.35
Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company 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	ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR SO	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74 \$0.94	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82 \$1.00	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90 \$1.05	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99 \$1.11	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13 \$1.21	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30 \$1.32	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48 \$1.43	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67 \$1.56	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89 \$1.68	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13 \$1.82	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39 \$1.96	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63 \$2.06	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88 \$2.18	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15 \$2.30	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43 \$2.42	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56 \$122.20 \$121.58 \$177.81 \$150.18 \$84.11 \$103.13 \$185.35 \$82.65
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company 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.	ALE LNT AEE AEP BKH CMS DTE DUK EE IDA NWE OGE OTTR PNW PNM POR	2018 \$2.29 \$1.18 \$1.87 \$3.09 \$1.51 \$1.39 \$3.37 \$3.02 \$1.37 \$1.76 \$2.41 \$2.28 \$1.26 \$1.34 \$2.74 \$0.94 \$1.38	2019 \$2.39 \$1.25 \$1.99 \$3.20 \$1.61 \$1.49 \$3.55 \$3.19 \$1.51 \$1.88 \$2.54 \$2.34 \$1.36 \$1.39 \$2.82 \$1.00 \$1.41	2020 \$2.49 \$1.32 \$2.11 \$3.31 \$1.72 \$1.60 \$3.74 \$3.36 \$1.65 \$2.00 \$2.67 \$2.41 \$1.47 \$1.44 \$2.90 \$1.05 \$1.43	2021 \$2.59 \$1.40 \$2.25 \$3.43 \$1.83 \$1.72 \$3.95 \$3.55 \$1.81 \$2.13 \$2.82 \$2.48 \$1.58 \$1.48 \$2.99 \$1.11 \$1.45	2022 \$2.74 \$1.48 \$2.44 \$3.63 \$1.99 \$1.86 \$4.23 \$3.61 \$1.93 \$2.23 \$2.96 \$2.58 \$1.63 \$1.61 \$3.13 \$1.21 \$1.56	2023 \$2.89 \$1.57 \$2.64 \$3.85 \$2.15 \$2.01 \$4.54 \$3.68 \$2.07 \$2.33 \$3.12 \$2.70 \$1.68 \$1.74 \$3.30 \$1.32 \$1.67	2024 \$3.06 \$1.67 \$2.85 \$4.07 \$2.33 \$2.17 \$4.85 \$3.76 \$2.21 \$2.43 \$3.29 \$2.84 \$1.74 \$1.88 \$3.48 \$1.79	2025 \$3.23 \$1.77 \$3.06 \$4.32 \$2.53 \$2.34 \$5.19 \$3.85 \$2.36 \$2.54 \$3.49 \$2.99 \$1.79 \$2.02 \$3.67 \$1.56 \$1.93	2026 \$3.42 \$1.88 \$3.29 \$4.58 \$2.74 \$2.51 \$5.54 \$3.94 \$2.53 \$2.65 \$3.70 \$3.16 \$1.86 \$2.16 \$3.89 \$1.68 \$2.08	2027 \$3.62 \$1.99 \$3.52 \$4.86 \$2.97 \$2.68 \$5.91 \$4.05 \$2.70 \$2.76 \$3.94 \$3.34 \$1.92 \$2.30 \$4.13 \$1.82 \$2.24	2028 \$3.83 \$2.11 \$3.76 \$5.15 \$3.21 \$2.86 \$6.30 \$4.16 \$2.89 \$2.88 \$4.21 \$3.56 \$1.99 \$2.44 \$4.39 \$1.96 \$2.42	2029 \$4.04 \$2.22 \$3.96 \$5.44 \$3.39 \$3.01 \$6.65 \$4.38 \$3.05 \$3.04 \$4.44 \$3.75 \$2.10 \$2.58 \$4.63 \$2.06 \$2.55	2030 \$4.26 \$2.34 \$4.18 \$5.73 \$3.57 \$3.17 \$7.01 \$4.62 \$3.22 \$3.20 \$4.68 \$3.96 \$2.22 \$2.72 \$4.88 \$2.18 \$2.69	2031 \$4.49 \$2.47 \$4.41 \$6.04 \$3.76 \$3.35 \$7.39 \$4.88 \$3.39 \$3.38 \$4.94 \$4.17 \$2.34 \$2.86 \$5.15 \$2.30 \$2.84	2032 \$4.74 \$2.60 \$4.65 \$6.37 \$3.53 \$7.79 \$5.14 \$3.58 \$3.56 \$5.21 \$4.40 \$2.46 \$3.02 \$5.43 \$2.42 \$2.99	Terminal Value \$161.84 \$88.90 \$158.73 \$217.61 \$135.56 \$120.55 \$266.08 \$175.56 \$122.20 \$121.58 \$177.81 \$150.18 \$84.11 \$103.13 \$185.35 \$82.65 \$102.10

Projected Annu	al Data
1	-1

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	3/16/18	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	(\$68.80)	\$0.00	\$1.82	\$2.35	\$2.49	\$2.59	\$2.74	\$2.89	\$3.06	\$3.23	\$3.42	\$3.62	\$3.83	\$4.04	\$4.26	\$4.49	\$166.58
Alliant Energy Corporation	LNT	(\$38.71)	\$0.00	\$0.94	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99	\$2.11	\$2.22	\$2.34	\$2.47	\$91.50
Ameren Corporation	AEE	(\$54.60)	\$0.00	\$1.49	\$1.93	\$2.11	\$2.25	\$2.44	\$2.64	\$2.85	\$3.06	\$3.29	\$3.52	\$3.76	\$3.96	\$4.18	\$4.41	\$163.38
American Electric Power Company, Inc.	AEP	(\$65.89)	\$0.00	\$2.45	\$3.17	\$3.31	\$3.43	\$3.63	\$3.85	\$4.07	\$4.32	\$4.58	\$4.86	\$5.15	\$5.44	\$5.73	\$6.04	\$223.99
Black Hills Corporation	BKH	(\$51.92)	\$0.00	\$1.20	\$1.55	\$1.72	\$1.83	\$1.99	\$2.15	\$2.33	\$2.53	\$2.74	\$2.97	\$3.21	\$3.39	\$3.57	\$3.76	\$139.53
CMS Energy Corporation	CMS	(\$43.01)	\$0.00	\$1.10	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.68	\$2.86	\$3.01	\$3.17	\$3.35	\$124.08
DTE Energy Company	DTE	(\$101.62)	\$0.00	\$2.67	\$3.47	\$3.74	\$3.95	\$4.23	\$4.54	\$4.85	\$5.19	\$5.54	\$5.91	\$6.30	\$6.65	\$7.01	\$7.39	\$273.87
Duke Energy Corporation	DUK	(\$76.11)	\$0.00	\$2.40	\$3.08	\$3.36	\$3.55	\$3.61	\$3.68	\$3.76	\$3.85	\$3.94	\$4.05	\$4.16	\$4.38	\$4.62	\$4.88	\$180.70
El Paso Electric Company	EE	(\$49.61)	\$0.00	\$1.09	\$1.41	\$1.65	\$1.81	\$1.93	\$2.07	\$2.21	\$2.36	\$2.53	\$2.70	\$2.89	\$3.05	\$3.22	\$3.39	\$125.77
Hawaiian Electric Industries, Inc.	HE	(\$33.15)	\$0.00	\$1.40	\$1.81	\$2.00	\$2.13	\$2.23	\$2.33	\$2.43	\$2.54	\$2.65	\$2.76	\$2.88	\$3.04	\$3.20	\$3.38	\$125.14
IDACORP, Inc.	IDA	(\$82.97)	\$0.00	\$1.91	\$2.45	\$2.67	\$2.82	\$2.96	\$3.12	\$3.29	\$3.49	\$3.70	\$3.94	\$4.21	\$4.44	\$4.68	\$4.94	\$183.02
NorthWestern Corporation	NWE	(\$51.42)	\$0.00	\$1.81	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.84	\$2.99	\$3.16	\$3.34	\$3.56	\$3.75	\$3.96	\$4.17	\$154.57
OGE Energy Corp.	OGE	(\$31.25)	\$0.00	\$1.00	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.74	\$1.79	\$1.86	\$1.92	\$1.99	\$2.10	\$2.22	\$2.34	\$86.57
Otter Tail Corporation	OTTR	(\$41.20)	\$0.00	\$1.07	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.58	\$2.72	\$2.86	\$106.15
Pinnacle West Capital Corporation	PNW	(\$76.92)	\$0.00	\$2.17	\$2.79	\$2.90	\$2.99	\$3.13	\$3.30	\$3.48	\$3.67	\$3.89	\$4.13	\$4.39	\$4.63	\$4.88	\$5.15	\$190.78
PNM Resources, Inc.	PNM	(\$35.57)	\$0.00	\$0.75	\$0.97	\$1.05	\$1.11	\$1.21	\$1.32	\$1.43	\$1.56	\$1.68	\$1.82	\$1.96	\$2.06	\$2.18	\$2.30	\$85.07
Portland General Electric Company	POR	(\$40.07)	\$0.00	\$1.10	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.93	\$2.08	\$2.24	\$2.42	\$2.55	\$2.69	\$2.84	\$105.09
Southern Company	SO	(\$43.84)	\$0.00	\$1.89	\$2.42	\$2.42	\$2.45	\$2.51	\$2.58	\$2.65	\$2.74	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.60	\$133.26
WEC Energy Group, Inc.	WEC	(\$60.76)	\$0.00	\$1.73	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.86	\$3.01	\$3.16	\$3.33	\$3.51	\$3.70	\$3.90	\$4.12	\$152.61
Xcel Energy Inc.	XEL	(\$43.57)	\$0.00	\$1.23	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.24	\$119.96

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

Stock Stoc							9	0 0.0	Trate Lot		or orago							
Company Ticker Price Tacker Prist Call Lie Growth Growth Call 2021 2028 Prior IRR P/E Ratio PE Ratio PE Ratio Relation PE Ratio PE Ratio Relation PE Ratio PE Ratio PE Ratio Relation PE Ratio PE Ratio PE Ratio Relation PE Ratio	Inputs		[1]					[6]						[12]	[13]			
Company Price Price Price State Pr			Stock	EF	S Growth Ra			Long-Term	F	ayout Rati	O	Iterative	Solution	Terminal	Terminal			
ALLETE, Inc. ALE \$88.80 6.10% 5.00% 4.50% 6.10% 5.60% 6.00% 6.40% 6.00% 6.51% (\$0.00) 10.17% 22.51 4.13 American Electric Power Company, Inc. AEE \$64.60 6.00% 6.40% 7.50% 7.50% 5.45% 60.00% 65.31% (\$0.00) 11.73% 22.51 4.13 American Electric Power Company, Inc. AEE \$64.60 6.00% 6.40% 7.50% 7.50% 5.45% 60.00% 65.00% 65.00% (\$5.91% \$0.00) 11.73% 22.51 4.13 AEE \$64.60 6.00% 6.50% 5.60% 6.50%	Company	Ticker	Price	Zacks	First Call		•	Growth	2018	2021	2028	Proof	IRR	P/F Ratio	PFG Ratio			
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American Destriction ARE S44.00 6.90% 6.40% 7.50% 5.45% 5.63% 6.40% 7.50% 7.50% 5.45% 5.00% 63.00% 6	•																	
American Electric Power Company, Inc. AEP																		
Black Hills Corporation BKH \$51,93 4.60% 3.50% 7.50% 5.50% 5.65% 5.65% 5.60% 6.00% 6.09% 5.65% 5.60% 6.00%	•											,						
CMS Energy Company DME Energy Company DME (11) \$101.62 \(6.30\), \$6.30\), \$6.50\),																		
DTE Engry Company DTE \$10.62 6.00% 5.69% 6.50% 6	•																	
Duke Energy Corporation DUK \$76.11 \$3.70% \$4.24% \$4.50% \$4.50% \$5.45% \$75.00% \$6.59.0% \$5.91% \$0.00 \$10.30% \$2.51 \$4.13 \$1.10																		
El Paso Electric Company EE \$49.61 5.10% 5.20% 5.00% 5.20% 5.00% 5.40% 5.45% 5.20% 5.00% 5.90%																		
Hawaiian Electric Industries, Inc. HE \$33.15 6.70% 8.50% 1.50% 8.50% 5.45% 69.00% 71,00% 65.91% \$0.00 16.42% 22.51 4.13 DACORP, Inc. Inc. Inc. Sal. 2.40% 3.12% 4.50% 4.50% 5.45% 69.00% 62.00% 65.91% \$0.00 12.58% 22.51 4.13 DOES Tanglor Corp. OGE \$31.25 6.00% \$3.12% 4.50% 4.50% 5.45% 68.00% 62.00% 65.91% \$0.00 12.58% 22.51 4.13 DOES Tanglor Corp. OGE \$31.25 6.00% \$3.12% 4.50% 5.60% 5.45% 68.00% 62.00% 65.91% \$0.00 10.65% 22.51 4.13 Delta Tall Corporation OTTR \$41.20 NA 9.00% 7.00% 9.00% 5.45% 64.00% 65.91% \$0.00 10.65% 22.51 4.13 Plymace West Capital Corporation PNM \$3.557 5.80% 5.80% 5.80% 5.50% 5.45% 64.00% 65.91% \$0.00 10.65% 22.51 4.13 Plymace West Capital Corporation PNM \$3.557 5.80% 5.80% 5.80% 5.60% 5.45% 64.00% 65.00% 65.91% \$0.00 9.91% 22.51 4.13 Poltrad General Electric Company SO \$4.384 4.50% 2.70% 4.00% 4.50% 5.45% 67.00% 66.00% 65.91% \$0.00 11.25% 22.51 4.13 Poltrad General Electric Company SO \$4.384 4.50% 2.70% 4.50% 5.00% 5.45% 67.00% 66.00% 65.91% \$0.00 11.25% 22.51 4.13 Poltrad General Electric Company SO \$4.384 4.50% 4.50% 6.15% 5.45% 67.00% 60.00% 65.91% \$0.00 11.25% 22.51 4.13 Poltrad General Electric Company SO \$4.384 4.50% 4.50% 6.15% 5.45% 67.00% 60.00% 65.91% \$0.00 11.25% 22.51 4.13 Poltrad General Electric Company SO \$4.384 4.50% 4.50% 6.15% 5.45% 67.00% 60.00% 65.91% \$0.00 11.25% 22.51 4.13 Poltrad General Electric Company SO \$4.50% 5.45% 67.00% 60.00% 65.91% \$0.00 11.25% \$2.51 4.13 Poltrad General Electric Company SO \$4.50% 5.45% 67.00% 60.00% 65.91% \$0.00 11.25% \$2.51 4.13 Poltrad General Electric Company SO \$4.50% \$4.50% \$4.50% \$4.50% \$4.50% \$4.50% \$4																		
IDACORP, Inc. IDA 882.97																		
NorthWestern Corporation NVE S51.42	IDACORP, Inc.																	
OGE Energy Corp. OGE \$31.25 6,00% 5,80% 2,50% 6,00% 5,45% 68,00% 74,00% 65,91% 80,00 1,00% 22,51 4,13 Prinance West Capital Corporation PNW \$76.92 3,00% 3,63% 5,50% 5,50% 5,50% 5,45% 64,00% 62,00% 65,91% 80,00 10,67% 22,51 4,13 PMPM Resources, inc. PNM \$35.57 5,80% 5,80% 7,50% 7,50% 7,50% 7,50% 7,50% 7,50% 66,00% 65,91% 80,00 10,83% 22,51 4,13 Portland General Electric Company POR \$40.07 2,20% 3,50% 6,00% 6,00% 5,45% 64,00% 62,00% 65,91% 80,00 10,83% 22,51 4,13 Southern Company POR \$40.07 2,20% 3,50% 6,00% 6,00% 5,45% 67,00% 65,00% 65,91% 80,00 11,45% 22,51 4,13 WEC Energy Group, Inc. WEC \$60.76 4,20% 4,34% 6,00% 5,45% 63,00% 67,00% 65,91% 80,00 11,26% 22,51 4,13 WEC Energy Group, Inc. WEC \$60.76 4,20% 4,34% 6,00% 5,45% 63,00% 67,00% 65,91% 80,00 11,26% 22,51 4,13 Well and the second secon																		
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Pinnack West Capital Corporation PNW \$76.92 3.00% 3.63% 5.50% 5.50% 5.50% 6.91% 6.00% 65.91% \$0.00 10.83% 22.51 4.13 PM PM Resources, inc. PNM Resources, inc. PNM \$35.57 5.80% 5.80% 5.80% 5.80% 5.50% 5.45% 5.00% 65.91% \$0.00 12.81% 22.51 4.13 PM																		
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Porlland General Electric Company POR \$40.07 2.90% 3.50% 6.00% 6.00% 5.45% 59.00% 65.91% \$0.00 11.45% 22.51 4.13 Southern Company WEC \$60.76 4.20% 4.34% 6.00% 6.00% 5.45% 67.00% 66.00% 65.91% \$0.00 12.81% 22.51 4.13 WEC Energy Group, Inc. XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 66.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 66.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 66.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 66.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 67.00% 65.91% \$0.00 11.26% 22.51 4.13 XEL \$43.57 5.80% 6.15	PNM Resources, Inc.	PNM	\$35.57	5.80%	5.80%	7.50%		5.45%	57.00%	56.00%	65.91%	\$0.00	9.91%	22.51	4.13			
WEC Energy Group, Inc. WEC \$60.76 4.20% 4.34% 6.00% 6.00% 6.15% 5.45% 63.00% 67.00% 66.91% (\$0.00) 10.78% 22.51 4.13 Wear 11.34% Max 16.42% Min 8.99% Projected Annual Earnings per Share [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] Company Ticker 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 ALLETE, Inc. ALLE \$3.14 \$3.33 \$3.53 \$3.75 \$3.98 \$4.22 \$4.48 \$4.75 \$5.03 \$5.55 \$5.66 \$5.97 \$6.29 \$6.64 \$7.00 American Electric Power Company, Inc. AEP \$4.23 \$4.47 \$4.72 \$4.99 \$5.27 \$5.56 \$5.85 \$4.65 \$4.55 \$4.65 \$4.95 \$5.55 \$5.66 \$5.97 \$6.29 \$6.64 \$7.00 Black Hills Corporation BKH \$2.63 \$2.83 \$3.04 \$3.27 \$3.51 \$3.52 \$2.73 \$2.24 \$2.25 \$3.93 \$3.75 \$3.98 \$4.22 \$4.48 \$4.43 \$4.47 \$4.49 \$4.55 \$5.03 \$5.25 \$5.55 \$5.66 \$5.97 \$6.29 \$6.64 \$7.00 Black Hills Corporation BKH \$2.63 \$2.83 \$3.10 \$3.27 \$3.51 \$3.57 \$3.51 \$3.76 \$3.51 \$3.76 \$3.51 \$3.76 \$3.51 \$3.76 \$3.88 \$4.14 \$4.43 \$4.47 \$4.73 \$5.04 \$5.55 \$5.66 \$5.97 \$6.29 \$6.64 \$7.00 \$6.91 \$0.00	Portland General Electric Company	POR		2.90%	3.50%	6.00%	6.00%	5.45%	59.00%	55.00%	65.91%	\$0.00	11.45%	22.51	4.13			
XEL \$43.57 5.80% 6.15% 4.50% 6.15% 5.45% 63.00% 67.00% 65.91% \$0.00 11.26% 22.51 4.13 Max 11.34% Max 16.42% Min 8.99%	Southern Company	SO	\$43.84	4.50%	2.70%	4.00%	4.50%	5.45%	78.00%	72.00%	65.91%	\$0.00	12.81%	22.51	4.13			
XEL \$43.57 \$5.80% \$6.15% \$4.50% \$6.15% \$4.50% \$6.15% \$4.50% \$6.15% \$5.45% \$63.00% \$67.00% \$6.91% \$0.00 \$11.26% \$22.51 \$4.13 \$4.1	WEC Energy Group, Inc.	WEC	\$60.76	4.20%	4.34%	6.00%	6.00%	5.45%	67.00%	66.00%	65.91%	(\$0.00)	10.78%	22.51	4.13			
Projected Annual Earnings per Share	Xcel Energy Inc.	XEL	\$43.57	5.80%	6.15%	4.50%	6.15%	5.45%	63.00%	67.00%	65.91%	\$0.00	11.26%	22.51	4.13			
Projected Annual Earnings per Share												Mean	11.34%		_			
Projected Annual Earnings per Share												Max						
Earnings per Share [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] Company Ticker 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 ALLETE, Inc. ALE \$3.14 \$3.33 \$3.55 \$3.75 \$3.98 \$4.22 \$4.48 \$4.75 \$5.03 \$5.32 \$5.62 \$5.93 \$6.25 \$6.59 \$6.95 \$7.33 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 \$3.58 \$3.77 \$3.98 American Electric Power Company, Inc. AEE \$2.68 \$2.88 \$3.10 \$3.33 \$3.58 \$3.58 \$3.58 \$3.85 \$4.14 \$4.43 \$4.73 \$5.04 \$5.35 \$5.66 \$5.97 \$6.29 \$6.64 \$7.00 American Electric Power Company, Inc. BKH \$2.63 \$2.83 \$3.04 \$3.27 \$3.51 \$3.78 \$4.06 \$4.43 \$4.73 \$5.04 \$5.25 \$5.55 \$5.66 \$5.17 \$6.29 \$6.64 \$7.00 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 DTE 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 DTE Energy Company DTE \$4.83 \$5.14 \$5.48 \$5.83 \$6.21 \$5.66 \$7.05 \$7.49 \$7.59 \$8.43 \$8.92 \$9.94 \$9.93 \$10.47 \$11.04 \$11.64 Duke Energy Corporation DUK \$3.71 \$3.88 \$4.05 \$4.23 \$4.42 \$4.62 \$4.83 \$5.06 \$5.30 \$5.56 \$5.85 \$6.16 \$6.15 \$6.87 \$4.99 \$6.27 \$7.69 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 \$5.52 \$5.55 \$5.82 \$6.14 \$6.47 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.64 \$10.04 \$11.04 \$11.64 \$10.04 \$11.04 \$11.64 \$10.04 \$11.												Min	8.99%					
Company	Projected Annual																	
ALE \$3.14 \$3.33 \$3.53 \$3.75 \$3.98 \$4.22 \$4.48 \$4.75 \$5.03 \$5.32 \$5.62 \$5.93 \$6.25 \$6.59 \$6.95 \$7.33 \$4 \$4.25 \$4.48 \$4.75 \$5.03 \$5.32 \$5.62 \$5.93 \$6.25 \$6.59 \$6.95 \$7.33 \$4 \$4.25 \$4.48 \$4.75 \$5.03 \$5.32 \$5.62 \$5.93 \$6.25 \$6.59 \$6.95 \$7.33 \$4 \$4.25	Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
ALE \$3.14 \$3.33 \$3.53 \$3.75 \$3.98 \$4.22 \$4.48 \$4.75 \$5.03 \$5.32 \$5.62 \$5.93 \$6.25 \$6.59 \$6.95 \$7.33 \$4 \$4.25 \$4.48 \$4.75 \$5.03 \$5.32 \$5.62 \$5.93 \$6.25 \$6.59 \$6.95 \$7.33 \$4 \$4.25 \$4.48 \$4.75 \$5.03 \$5.32 \$5.62 \$5.93 \$6.25 \$6.59 \$6.95 \$7.33 \$4 \$4.25	Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
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 \$3.58 \$3.77 \$3.98 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 \$5.97 \$6.29 \$6.64 \$7.00 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 \$9.02 \$9.51 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 \$5.86 \$6.51 \$6.51 \$6.87 CMS Energy Corporation CMS \$1.98 \$2.15 \$2.33 \$2.74 \$2.98 \$3.23 \$3.49 \$3.75 \$4.01 \$4.27 \$4.52 \$4.77 \$5.03 \$5.30 \$5.50 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 \$9.42 \$9.93 \$10.47 \$11.04 \$11.64 Duke Energy Corporation DUK \$3.71 \$3.88 \$4.05 \$4.23 \$4.42 \$4.62 \$4.83 \$5.06 \$5.30 \$5.56 \$5.85 \$6.16 \$6.49 \$6.85 \$7.22 \$7.61 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 \$4.43 \$4.67 \$4.92 \$5.19 Hawaiian Electric Industries, Inc. IDA \$3.94 \$4.10 \$4.27 \$4.44 \$4.63 \$4.82 \$5.01 \$5.23 \$5.44 \$5.08 \$5.34 \$5.63 \$5.93 \$6.26 \$6.60 \$6.60 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 \$3.17 \$3.34 \$3.52 \$3.71 \$3.91	ALLETE, Inc.																	
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 \$9.02 \$9.51 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 \$5.86 \$6.18 \$6.51 \$6.87 \$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 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 \$9.42 \$9.93 \$10.47 \$11.04 \$11.64 \$1.64 \$1.98 \$1.98 \$2.15 \$2.39 \$2.51 \$2.65 \$2.78 \$2.93 \$3.08 \$3.24 \$4.42 \$4.62 \$4.83 \$5.06 \$5.85 \$6.16 \$6.49 \$6.85 \$7.22 \$7.61 \$1.98 \$1.99 \$1.90 \$1.90 \$1.90 \$2.13 \$2.26 \$2.40 \$2.54 \$2.69 \$2.84 \$3.00 \$3.17 \$3.34 \$3.52 \$3.71 \$3.91	Alliant Energy Corporation					\$1.99			\$2.41	\$2.56			\$3.05				\$3.77	
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 \$5.86 \$6.18 \$6.51 \$6.87 \$6	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	\$5.97	\$6.29	\$6.64	\$7.00
CMS Energy Corporation	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	\$9.02	\$9.51
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 \$9.42 \$9.93 \$10.47 \$11.04 \$11.64 \$1.	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	\$5.86	\$6.18	\$6.51	\$6.87
Duke Energy Corporation DUK \$3.71 \$3.88 \$4.05 \$4.23 \$4.42 \$4.62 \$4.83 \$5.06 \$5.30 \$5.56 \$5.85 \$6.16 \$6.49 \$6.85 \$7.22 \$7.61 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 \$4.43 \$4.92 \$5.19 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 \$5.52 \$5.82 \$6.14 \$6.47 IDA CORP, Inc. IDA \$3.94 \$4.10 \$4.27 \$4.44 \$4.63 \$4.82 \$5.01 \$5.23 \$5.73 \$6.02 \$6.33 \$6.68 \$7.04 \$7.42 \$7.83 NorthWestern Corporation NWE \$3.39 \$3.54 \$3.70 \$3.87 \$4.04 \$4.22 \$4.41 \$4.62 \$4.84 \$5	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
Duke Energy Corporation DUK \$3.71 \$3.88 \$4.05 \$4.23 \$4.42 \$4.62 \$4.83 \$5.06 \$5.30 \$5.56 \$5.85 \$6.16 \$6.49 \$6.85 \$7.22 \$7.61 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 \$4.43 \$4.92 \$5.19 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 \$5.52 \$5.82 \$6.14 \$6.47 IDA CORP, Inc. IDA \$3.94 \$4.10 \$4.27 \$4.44 \$4.63 \$4.82 \$5.01 \$5.23 \$5.73 \$6.02 \$6.33 \$6.68 \$7.04 \$7.42 \$7.83 NorthWestern Corporation NWE \$3.39 \$3.54 \$3.70 \$3.87 \$4.04 \$4.22 \$4.41 \$4.62 \$4.84 \$5	DTE Energy Company									\$7.49						\$10.47	\$11.04	
El \$2.39 \$2.51 \$2.65 \$2.78 \$2.93 \$3.08 \$3.24 \$3.41 \$3.59 \$3.78 \$3.98 \$4.20 \$4.43 \$4.67 \$4.92 \$5.19 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 \$5.52 \$5.82 \$6.14 \$6.47 IDACORP, Inc. IDA \$3.94 \$4.10 \$4.27 \$4.44 \$4.63 \$4.82 \$5.01 \$5.23 \$5.47 \$5.73 \$6.02 \$6.33 \$6.68 \$7.04 \$7.42 \$7.83 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 \$5.63 \$5.93 \$6.26 \$6.60 \$6.96 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 \$3.17 \$3.34 \$3.52 \$3.71 \$3.91	Duke Energy Corporation	DUK	\$3.71	\$3.88	\$4.05	\$4.23	\$4.42	\$4.62	\$4.83	\$5.06	\$5.30	\$5.56	\$5.85	\$6.16	\$6.49	\$6.85	\$7.22	\$7.61
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 \$5.52 \$5.82 \$6.14 \$6.47 IDACORP, Inc. IDA \$3.94 \$4.10 \$4.27 \$4.44 \$4.63 \$4.82 \$5.01 \$5.23 \$5.73 \$6.02 \$6.33 \$6.68 \$7.04 \$7.42 \$7.83 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 \$5.63 \$5.93 \$6.26 \$6.60 \$6.96 OGE \$1.69 \$1.79 \$1.90 \$2.01 \$2.13 \$2.26 \$2.40 \$2.54 \$2.69 \$2.84 \$3.00 \$3.17 \$3.34 \$3.52 \$3.71 \$3.91	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	\$4.43	\$4.67	\$4.92	\$5.19
IDACORP, Inc. IDA \$3.94 \$4.10 \$4.27 \$4.44 \$4.63 \$4.82 \$5.01 \$5.23 \$5.47 \$5.73 \$6.02 \$6.33 \$6.68 \$7.04 \$7.42 \$7.83 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 \$5.63 \$5.93 \$6.26 \$6.60 \$6.96 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 \$3.17 \$3.34 \$3.52 \$3.71 \$3.91	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	\$5.52	\$5.82	\$6.14	
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 \$3.17 \$3.34 \$3.52 \$3.71 \$3.91	IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.02	\$6.33	\$6.68	\$7.04	\$7.42	\$7.83
	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	\$5.63	\$5.93	\$6.26	\$6.60	\$6.96
	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	\$3.17	\$3.34	\$3.52	\$3.71	\$3.91
	Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.59	\$3.80	\$4.01	\$4.23	\$4.46	\$4.70

\$5.45

\$2.25

\$3.06

\$3.69

\$4.20

\$3.16

\$5.75

\$2.41

\$3.25

\$3.86

\$4.45

\$3.35

\$6.06

\$2.58

\$3.43

\$4.04

\$4.71

\$3.55

\$6.39

\$2.75

\$3.63

\$4.24

\$4.97

\$3.76

\$6.74

\$2.91

\$3.83

\$4.46

\$5.25

\$3.97

\$7.11

\$3.08

\$4.05

\$4.70

\$5.55

\$4.19

Pinnacle West Capital Corporation

Portland General Electric Company

PNM Resources, Inc.

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

\$3.95

\$1.46

\$2.16

\$2.83

\$2.96

\$2.21

\$4.17

\$1.57

\$2.29

\$2.96

\$3.14

\$2.35

PNW

PNM

POR

SO

WEC

XEL

\$4.40

\$1.69

\$2.43

\$3.09

\$3.33

\$2.49

\$4.64

\$1.81

\$2.57

\$3.23

\$3.53

\$2.64

\$4.89

\$1.95

\$2.73

\$3.37

\$3.74

\$2.81

\$5.16

\$2.10

\$2.89

\$3.53

\$3.96

\$2.98

[30]

\$7.73 \$4.19 \$7.38 \$10.03 \$7.24 \$5.90 \$12.28 \$8.03 \$5.47 \$6.82 \$8.25 \$7.34 \$4.13 \$4.96

\$9.27

\$4.02

\$5.28

\$6.12

\$7.23

\$5.46

\$7.50

\$3.25

\$4.27

\$4.95

\$5.85

\$4.42

\$7.90

\$3.43

\$4.50

\$5.22

\$6.17

\$4.66

\$8.33

\$3.61

\$4.74

\$5.51

\$6.50

\$4.91

\$8.79

\$3.81

\$5.00

\$5.81

\$6.86

\$5.18

Projected Annual	
Dividend Payout Rat	i

Dividend Payout Ratio			[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	
Company	Ticker	2	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
ALLETE, Inc.	ALE	66	6.00%	65.33%	64.67%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Alliant Energy Corporation	LNT	64	4.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61	1.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP		6.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH		2.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS		1.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE		2.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK		5.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE		2.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE		9.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA		7.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE		3.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE		8.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR		2.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW		4.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM		7.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR		9.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO		8.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC		7.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	63	3.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Projected Annual Cash Flows			[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$.	32.33	\$2.45	\$2.57	\$2.70	\$2.88	\$3.06	\$3.26	\$3.46	\$3.67	\$3.89	\$4.12	\$4.35	\$4.58	\$4.83	\$5.10	\$174.00
Alliant Energy Corporation	LNT	\$	\$1.20	\$1.28	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.24	\$2.36	\$2.49	\$2.62	\$2.76	\$94.41
Ameren Corporation	AEE	\$	\$1.89	\$2.02	\$2.16	\$2.31	\$2.52	\$2.73	\$2.96	\$3.19	\$3.44	\$3.68	\$3.93	\$4.15	\$4.37	\$4.61	\$4.86	\$166.04
American Electric Power Company, Inc.	AEP	\$	3.12	\$3.24	\$3.37	\$3.50	\$3.73	\$3.96	\$4.21	\$4.47	\$4.75	\$5.04	\$5.35	\$5.64	\$5.94	\$6.27	\$6.61	\$225.72
Black Hills Corporation	BKH		\$1.58	\$1.72	\$1.87	\$2.04	\$2.26	\$2.50	\$2.75	\$3.01	\$3.28	\$3.57	\$3.86	\$4.07	\$4.29	\$4.53	\$4.77	\$162.94
CMS Energy Corporation	CMS		\$1.42	\$1.54	\$1.67	\$1.82	\$1.99	\$2.18	\$2.37	\$2.56	\$2.75	\$2.95	\$3.14	\$3.32	\$3.50	\$3.69	\$3.89	\$132.75
DTE Energy Company	DTE		3.40	\$3.60	\$3.81	\$4.04	\$4.35	\$4.68	\$5.02	\$5.38	\$5.75	\$6.14	\$6.55	\$6.90	\$7.28	\$7.67	\$8.09	\$276.36
Duke Energy Corporation	DUK		3.04	\$3.22	\$3.41	\$3.61	\$3.69	\$3.77	\$3.86	\$3.96	\$4.06	\$4.17	\$4.28	\$4.51	\$4.76	\$5.02	\$5.29	\$180.68
El Paso Electric Company	EE		\$1.38	\$1.51	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.38	\$2.55	\$2.73	\$2.92	\$3.08	\$3.24	\$3.42	\$3.61	\$123.19
Hawaiian Electric Industries, Inc.	HE		\$1.86	\$2.04	\$2.23	\$2.44	\$2.63	\$2.81	\$2.98	\$3.16	\$3.33	\$3.49	\$3.64	\$3.83	\$4.04	\$4.26	\$4.50	\$153.53
IDACORP, Inc.	IDA		\$2.43	\$2.58	\$2.73	\$2.89	\$3.05	\$3.23	\$3.42	\$3.63	\$3.86	\$4.12	\$4.40	\$4.64	\$4.89	\$5.16	\$5.44	\$185.74
NorthWestern Corporation	NWE		\$2.33	\$2.42	\$2.52	\$2.62	\$2.76	\$2.92	\$3.08	\$3.27	\$3.46	\$3.68	\$3.91	\$4.12	\$4.35	\$4.58	\$4.83	\$165.10
OGE Energy Corp.	OGE		\$1.29	\$1.41	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.97	\$2.05	\$2.12	\$2.20	\$2.32	\$2.45	\$2.58	\$2.72	\$92.90
Otter Tail Corporation	OTTR		31.37	\$1.43	\$1.49	\$1.55	\$1.70	\$1.86	\$2.01	\$2.17	\$2.33	\$2.49	\$2.64	\$2.79	\$2.94	\$3.10	\$3.27	\$111.56
Pinnacle West Capital Corporation	PNW		\$2.81	\$2.94	\$3.07	\$3.20	\$3.41	\$3.63	\$3.86	\$4.11	\$4.37	\$4.65	\$4.94	\$5.21	\$5.49	\$5.79	\$6.11	\$208.58
PNM Resources, Inc.	PNM		80.96	\$1.03	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.84	\$1.99	\$2.14	\$2.26	\$2.38	\$2.51	\$2.65	\$90.46
Portland General Electric Company	POR		31.43	\$1.48	\$1.54	\$1.59	\$1.73	\$1.89	\$2.05	\$2.22	\$2.41	\$2.60	\$2.81	\$2.97	\$3.13	\$3.30	\$3.48	\$118.74
Southern Company	C./ J	\$	\$2.41	\$2.45	\$2.50	\$2.54	\$2.62	\$2.71	\$2.81	\$2.91	\$3.02	\$3.14	\$3.26	\$3.44	\$3.63	\$3.83	\$4.04	\$137.82
M/EO E	SO			•														0400 70
WEC Energy Group, Inc. Xcel Energy Inc.	WEC XEL	\$	\$2.23 \$1.57	\$2.35 \$1.70	\$2.48 \$1.84	\$2.61 \$2.00	\$2.77 \$2.11	\$2.93 \$2.24	\$3.10 \$2.36	\$3.28 \$2.49	\$3.46 \$2.63	\$3.66 \$2.77	\$3.85 \$2.91	\$4.06 \$3.07	\$4.29 \$3.24	\$4.52 \$3.41	\$4.76 \$3.60	\$162.72 \$122.96

Projected Annu	al Data
1	-1

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	3/16/18	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	(\$68.80)	\$0.00	\$1.85	\$2.40	\$2.57	\$2.70	\$2.88	\$3.06	\$3.26	\$3.46	\$3.67	\$3.89	\$4.12	\$4.35	\$4.58	\$4.83	\$179.10
Alliant Energy Corporation	LNT	(\$38.71)	\$0.00	\$0.95	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.24	\$2.36	\$2.49	\$2.62	\$97.17
Ameren Corporation	AEE	(\$54.60)	\$0.00	\$1.50	\$1.96	\$2.16	\$2.31	\$2.52	\$2.73	\$2.96	\$3.19	\$3.44	\$3.68	\$3.93	\$4.15	\$4.37	\$4.61	\$170.90
American Electric Power Company, Inc.	AEP	(\$65.89)	\$0.00	\$2.47	\$3.20	\$3.37	\$3.50	\$3.73	\$3.96	\$4.21	\$4.47	\$4.75	\$5.04	\$5.35	\$5.64	\$5.94	\$6.27	\$232.33
Black Hills Corporation	BKH	(\$51.92)	\$0.00	\$1.26	\$1.64	\$1.87	\$2.04	\$2.26	\$2.50	\$2.75	\$3.01	\$3.28	\$3.57	\$3.86	\$4.07	\$4.29	\$4.53	\$167.72
CMS Energy Corporation	CMS	(\$43.01)	\$0.00	\$1.13	\$1.48	\$1.67	\$1.82	\$1.99	\$2.18	\$2.37	\$2.56	\$2.75	\$2.95	\$3.14	\$3.32	\$3.50	\$3.69	\$136.63
DTE Energy Company	DTE	(\$101.62)	\$0.00	\$2.70	\$3.51	\$3.81	\$4.04	\$4.35	\$4.68	\$5.02	\$5.38	\$5.75	\$6.14	\$6.55	\$6.90	\$7.28	\$7.67	\$284.45
Duke Energy Corporation	DUK	(\$76.11)	\$0.00	\$2.41	\$3.11	\$3.41	\$3.61	\$3.69	\$3.77	\$3.86	\$3.96	\$4.06	\$4.17	\$4.28	\$4.51	\$4.76	\$5.02	\$185.97
El Paso Electric Company	EE	(\$49.61)	\$0.00	\$1.09	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.38	\$2.55	\$2.73	\$2.92	\$3.08	\$3.24	\$3.42	\$126.79
Hawaiian Electric Industries, Inc.	HE	(\$33.15)	\$0.00	\$1.48	\$1.94	\$2.23	\$2.44	\$2.63	\$2.81	\$2.98	\$3.16	\$3.33	\$3.49	\$3.64	\$3.83	\$4.04	\$4.26	\$158.03
IDACORP, Inc.	IDA	(\$82.97)	\$0.00	\$1.93	\$2.48	\$2.73	\$2.89	\$3.05	\$3.23	\$3.42	\$3.63	\$3.86	\$4.12	\$4.40	\$4.64	\$4.89	\$5.16	\$191.17
NorthWestern Corporation	NWE	(\$51.42)	\$0.00	\$1.85	\$2.38	\$2.52	\$2.62	\$2.76	\$2.92	\$3.08	\$3.27	\$3.46	\$3.68	\$3.91	\$4.12	\$4.35	\$4.58	\$169.93
OGE Energy Corp.	OGE	(\$31.25)	\$0.00	\$1.03	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.97	\$2.05	\$2.12	\$2.20	\$2.32	\$2.45	\$2.58	\$95.62
Otter Tail Corporation	OTTR	(\$41.20)	\$0.00	\$1.09	\$1.43	\$1.49	\$1.55	\$1.70	\$1.86	\$2.01	\$2.17	\$2.33	\$2.49	\$2.64	\$2.79	\$2.94	\$3.10	\$114.83
Pinnacle West Capital Corporation	PNW	(\$76.92)	\$0.00	\$2.24	\$2.89	\$3.07	\$3.20	\$3.41	\$3.63	\$3.86	\$4.11	\$4.37	\$4.65	\$4.94	\$5.21	\$5.49	\$5.79	\$214.69
PNM Resources, Inc.	PNM	(\$35.57)	\$0.00	\$0.76	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.84	\$1.99	\$2.14	\$2.26	\$2.38	\$2.51	\$93.10
Portland General Electric Company	POR	(\$40.07)	\$0.00	\$1.14	\$1.47	\$1.54	\$1.59	\$1.73	\$1.89	\$2.05	\$2.22	\$2.41	\$2.60	\$2.81	\$2.97	\$3.13	\$3.30	\$122.22
Southern Company	SO	(\$43.84)	\$0.00	\$1.92	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.81	\$2.91	\$3.02	\$3.14	\$3.26	\$3.44	\$3.63	\$3.83	\$141.86
WEC Energy Group, Inc.	WEC	(\$60.76)	\$0.00	\$1.77	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.28	\$3.46	\$3.66	\$3.85	\$4.06	\$4.29	\$4.52	\$167.48
Xcel Energy Inc.	XEL	(\$43.57)	\$0.00	\$1.25	\$1.62	\$1.84	\$2.00	\$2.11	\$2.24	\$2.36	\$2.49	\$2.63	\$2.77	\$2.91	\$3.07	\$3.24	\$3.41	\$126.56

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

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Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]				
		Stock	EP	S Growth Ra			Long-Term	F	Payout Rat	io	Iterative	Solution	Terminal	Terminal				
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2018	2021	2028	Proof	IRR	P/F Ratio	PEG Ratio				
ALLETE, Inc.	ALE	\$68.80	6.10%	5.00%	4.50%	4.50%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	9.06%	22.51	4.13				
Alliant Energy Corporation	LNT	\$38.71	5.30%	5.45%	6.50%	5.30%	5.45%	64.00%	64.00%	65.91%	\$0.00	8.96%	22.51	4.13				
Ameren Corporation	AEE	\$54.60	6.90%	6.40%	7.50%	6.40%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	10.96%	22.51	4.13				
American Electric Power Company, Inc.	AEP	\$65.89	5.40%	5.63%	4.50%	4.50%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	12.37%	22.51	4.13				
Black Hills Corporation	BKH	\$51.93	4.60%	3.50%	7.50%	3.50%	5.45%	52.00%	54.00%	65.91%	\$0.00	9.01%	22.51	4.13				
CMS Energy Corporation	CMS	\$43.01	6.30%	7.04%	8.50%	6.30%	5.45%	61.00%	61.00%	65.91%	\$0.00	10.29%	22.51	4.13				
DTE Energy Company	DTE	\$101.62	6.00%	5.58%	6.50%	5.58%	5.45%	62.00%	61.00%	65.91%	\$0.00	10.10%	22.51	4.13				
Duke Energy Corporation	DUK	\$76.11	3.70%	4.24%	4.50%	3.70%	5.45%	75.00%	78.00%	65.91%	\$0.00	9.46%	22.51	4.13				
El Paso Electric Company	EE	\$49.61	5.10%	5.20%	5.00%	5.00%	5.45%	52.00%	59.00%	65.91%	\$0.00	9.69%	22.51	4.13				
Hawaiian Electric Industries, Inc.	HE	\$33.15	6.70%	8.50%	1.50%	1.50%	5.45%	69.00%	71.00%	65.91%	\$0.00	11.10%	22.51	4.13				
IDACORP, Inc.	IDA	\$82.97	4.10%	3.10%	3.50%	3.10%	5.45%	57.00%	60.00%	65.91%	\$0.00	8.30%	22.51	4.13				
NorthWestern Corporation	NWE	\$51.42	2.40%	3.12%	4.50%	2.40%	5.45%	63.00%	62.00%	65.91%	\$0.00	11.02%	22.51	4.13				
OGE Energy Corp.	OGE	\$31.25	6.00%	5.80%	2.50%	2.50%	5.45%	68.00%	74.00%	65.91%	\$0.00	9.46%	22.51	4.13				
Otter Tail Corporation	OTTR	\$41.20	NA	9.00%	7.00%	7.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	9.31%	22.51	4.13				
Pinnacle West Capital Corporation	PNW	\$76.92	3.00%	3.63%	5.50%	3.00%	5.45%	64.00%	62.00%	65.91%	\$0.00	9.05%	22.51	4.13				
PNM Resources, Inc.	PNM	\$35.57	5.80%	5.80%	7.50%	5.80%	5.45%	57.00%	56.00%	65.91%	\$0.00	8.76%	22.51	4.13				
Portland General Electric Company	POR	\$40.07	2.90%	3.50%	6.00%	2.90%	5.45%	59.00%	55.00%	65.91%	\$0.00	9.26%	22.51	4.13				
Southern Company	SO	\$43.84	4.50%	2.70%	4.00%	2.70%	5.45%	78.00%	72.00%	65.91%	\$0.00	11.45%	22.51	4.13				
WEC Energy Group, Inc.	WEC	\$60.76	4.20%	4.34%	6.00%	4.20%	5.45%	67.00%	66.00%	65.91%	(\$0.00)	9.51%	22.51	4.13				
Xcel Energy Inc.	XEL	\$43.57	5.80%	6.15%	4.50%	4.50%	5.45%	63.00%	67.00%	65.91%	\$0.00	10.08%	22.51	4.13				
Addi Energy Inc.	ALL	Ψ-10.07	0.0070	0.1070	4.0070	4.0070	0.4070	00.0070	07.0070	00.0170	Mean	9.86%	22.01	7.10				
											Max							
											Min	8.30%						
Projected Annual												0.0070						
Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
3.7.						,							,				,	
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	\$5.50	\$5.80	\$6.11	\$6.44	\$6.79
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	\$3.43	\$3.61	\$3.81
Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.89	\$4.13	\$4.38	\$4.64	\$4.91	\$5.18	\$5.47	\$5.76	\$6.08	\$6.41	\$6.76
American Electric Power Company, Inc.	AEP	\$4.23	\$4.42	\$4.62	\$4.83	\$5.04	\$5.27	\$5.51	\$5.77	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$7.81	\$8.23	\$8.68	\$9.15
Black Hills Corporation	BKH	\$2.63	\$2.72	\$2.82	\$2.92	\$3.02	\$3.12	\$3.23	\$3.36	\$3.50	\$3.65	\$3.83	\$4.02	\$4.24	\$4.47	\$4.72	\$4.97	\$5.24
CMS Energy Corporation	CMS	\$1.98	\$2.10	\$2.24	\$2.38	\$2.53	\$2.69	\$2.86	\$3.03	\$3.22	\$3.40	\$3.60	\$3.80	\$4.01	\$4.23	\$4.46	\$4.70	\$4.95
DTE Energy Company	DTE	\$4.83	\$5.10	\$5.38	\$5.68	\$6.00	\$6.34	\$6.69	\$7.06	\$7.45	\$7.86	\$8.30	\$8.75	\$9.23	\$9.73	\$10.26	\$10.82	\$11.41
Duke Energy Corporation	DUK	\$3.71	\$3.85	\$3.99	\$4.14	\$4.29	\$4.45	\$4.61	\$4.80	\$5.00	\$5.23	\$5.49	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	\$7.52
El Paso Electric Company	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	\$4.36	\$4.59	\$4.84	\$5.11	\$5.39
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	\$6.49	\$6.84	\$7.21	\$7.60
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	\$4.74	\$4.99	\$5.27	\$5.55	\$5.86	\$6.18
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	\$3.81	\$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	\$6.12	\$6.45	\$6.80	\$7.17	\$7.56
DNIM Deserves les		04.40	C4 E4	#4.00	Φ4 7 0	#4 00	C4 O4		CO 47	ሰ ር ርዕ	ው ር 40	ሰ ር ይር	ተ ດ co	CO O 4	<u></u> ተለ ለሰ	CO 4C	ተ ብ ብብ	CO E 4

PNM

POR

SO

WEC

XEL

PNM Resources, Inc.

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

Portland General Electric Company

\$1.46

\$2.16

\$2.83

\$2.96

\$2.21

\$1.54

\$2.22

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\$4.08

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\$3.69

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\$5.62

\$4.30

\$3.33

\$3.89

\$5.01

\$5.93

\$4.54

\$3.51

\$4.10

\$5.28

\$6.25

\$4.78

Projected Annual
Dividend Payout Ratio

Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]	
Dividend Fayout Hand		[0.	[02]	[oo]	[0.1]	[oo]	رددا	[0.]	[00]	[00]	[.0]	[]	[]	[.0]	[]	[.0]	
Company	Ticker	201		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
ALLETE, Inc.	ALE	66.00	% 65.33%	64.67%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Alliant Energy Corporation	LNT	64.00	% 64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00	% 60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00	% 65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00	% 52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00	% 61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00	% 61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00	% 76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00	% 54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	69.00	% 69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	57.00	% 58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00	% 62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00	% 70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00		66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00			62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00			56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00			55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00			72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00			66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	63.00			67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	201	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
ALLETE, Inc.	ALE	\$2.20		\$2.42	\$2.50	\$2.63	\$2.76		\$3.06	\$3.24	\$3.42	\$3.62	\$3.82		\$4.25	\$4.48	
Alliant Energy Corporation	LNT					Ψ2.00	ΨΖ.10	\$2.91	ΨΟ.ΟΟ			ΨΟ.ΟΣ		Φ 4 .U3	ΨΤ.ΖΟ	Φ4.40	\$152.92
Ameren Corporation		\$1.1	\$1.23	\$1.30	\$1.37	\$1.45	\$1.53	\$2.91 \$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$4.03 \$2.26	\$2.38	\$4.40 \$2.51	\$152.92 \$85.73
	AEE	\$1.1 \$1.8		\$1.30 \$2.07			\$1.53		\$1.71				\$2.14		\$2.38		
American Electric Power Company, Inc.		· ·	\$1.96		\$1.37 \$2.19	\$1.45		\$1.62		\$1.81	\$1.92	\$2.03		\$2.26		\$2.51	\$85.73
•	AEE	\$1.8	\$1.96	\$2.07	\$1.37	\$1.45 \$2.37	\$1.53 \$2.55	\$1.62 \$2.74	\$1.71 \$2.94	\$1.81 \$3.15	\$1.92 \$3.37	\$2.03 \$3.60	\$2.14 \$3.80	\$2.26 \$4.01	\$2.38 \$4.22	\$2.51 \$4.45	\$85.73 \$152.12
American Electric Power Company, Inc. Black Hills Corporation	AEE AEP	\$1.89 \$3.09	\$1.96 \$3.14 \$1.54	\$2.07 \$3.23	\$1.37 \$2.19 \$3.32	\$1.45 \$2.37 \$3.49	\$1.53 \$2.55 \$3.68	\$1.62 \$2.74 \$3.88	\$1.71 \$2.94 \$4.10	\$1.81 \$3.15 \$4.34	\$1.92 \$3.37 \$4.60	\$2.03 \$3.60 \$4.88	\$2.14 \$3.80 \$5.15	\$2.26 \$4.01 \$5.43	\$2.38 \$4.22 \$5.72	\$2.51 \$4.45 \$6.03	\$85.73 \$152.12 \$206.00
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation	AEE AEP BKH	\$1.8 \$3.0 \$1.4	\$1.96 \$3.14 \$1.54 \$1.45	\$2.07 \$3.23 \$1.61	\$1.37 \$2.19 \$3.32 \$1.69	\$1.45 \$2.37 \$3.49 \$1.80	\$1.53 \$2.55 \$3.68 \$1.93	\$1.62 \$2.74 \$3.88 \$2.07	\$1.71 \$2.94 \$4.10 \$2.22	\$1.81 \$3.15 \$4.34 \$2.39	\$1.92 \$3.37 \$4.60 \$2.58	\$2.03 \$3.60 \$4.88 \$2.80	\$2.14 \$3.80 \$5.15 \$2.95	\$2.26 \$4.01 \$5.43 \$3.11	\$2.38 \$4.22 \$5.72 \$3.28	\$2.51 \$4.45 \$6.03 \$3.46	\$85.73 \$152.12 \$206.00 \$118.05
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company	AEE AEP BKH CMS DTE	\$1.89 \$3.09 \$1.4 \$1.30 \$3.3	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation	AEE AEP BKH CMS DTE DUK	\$1.89 \$3.09 \$1.41 \$1.30 \$3.34 \$2.99	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company	AEE AEP BKH CMS DTE DUK EE	\$1.84 \$3.04 \$1.4 \$1.34 \$3.34 \$2.94 \$1.3	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47 \$1.80	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc.	AEE AEP BKH CMS DTE DUK EE HE	\$1.84 \$3.00 \$1.4 \$1.30 \$3.3 \$2.99 \$1.3 \$1.6	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50 \$1.67	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30 \$1.65 \$1.71	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47 \$1.80 \$1.75	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52 \$1.92 \$1.76	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58 \$2.05 \$1.78	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64 \$2.19 \$1.81	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72 \$2.34 \$1.85	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51 \$1.91	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90 \$2.68 \$1.98	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87 \$2.06	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03 \$2.18	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19 \$2.29	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70 \$3.37 \$2.42	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96 \$3.55 \$2.55	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27 \$121.21 \$87.12
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc.	AEE AEP BKH CMS DTE DUK EE	\$1.84 \$3.04 \$1.4 \$1.34 \$3.34 \$2.94 \$1.3	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50 \$1.67 \$2.50	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30 \$1.65	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47 \$1.80	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52 \$1.92	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58 \$2.05	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64 \$2.19	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72 \$2.34	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90 \$2.68	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70 \$3.37	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96 \$3.55	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27 \$121.21
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation	AEE AEP BKH CMS DTE DUK EE HE IDA	\$1.8 \$3.0 \$1.4 \$1.3 \$3.3 \$2.9 \$1.3 \$1.6 \$2.3 \$2.2	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50 \$1.67 \$2.50 \$2.28	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30 \$1.65 \$1.71 \$2.63	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47 \$1.80 \$1.75 \$2.75 \$2.37	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52 \$1.92 \$1.76 \$2.88	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58 \$2.05 \$1.78 \$3.02	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64 \$2.19 \$1.81 \$3.18	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72 \$2.34 \$1.85 \$3.36 \$2.78	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51 \$1.91 \$3.57	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90 \$2.68 \$1.98 \$3.79 \$3.10	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87 \$2.06 \$4.05	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03 \$2.18 \$4.27 \$3.47	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19 \$2.29 \$4.51 \$3.66	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70 \$3.37 \$2.42 \$4.75	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96 \$3.55 \$2.55 \$5.01	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27 \$121.21 \$87.12 \$171.13
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp.	AEE AEP BKH CMS DTE DUK EE HE IDA NWE	\$1.84 \$3.04 \$1.4 \$1.36 \$3.36 \$2.96 \$1.37 \$1.66 \$2.36 \$2.26 \$1.2	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50 \$1.67 \$2.50 \$2.28 \$1.27	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30 \$1.65 \$1.71 \$2.63 \$2.32	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47 \$1.80 \$1.75 \$2.75 \$2.37 \$1.41	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52 \$1.92 \$1.76 \$2.88 \$2.45	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58 \$2.05 \$1.78 \$3.02 \$2.54	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64 \$2.19 \$1.81 \$3.18 \$2.65	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72 \$2.34 \$1.85 \$3.36 \$2.78 \$1.51	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51 \$1.91 \$3.57 \$2.92 \$1.55	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90 \$2.68 \$1.98 \$3.79 \$3.10 \$1.60	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87 \$2.06 \$4.05 \$3.29 \$1.65	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03 \$2.18 \$4.27 \$3.47 \$1.74	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19 \$2.29 \$4.51 \$3.66 \$1.84	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70 \$3.37 \$2.42 \$4.75 \$3.86	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96 \$3.55 \$2.55 \$5.01 \$4.07 \$2.05	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27 \$121.21 \$87.12 \$171.13 \$138.98
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation	AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE	\$1.84 \$3.00 \$1.4 \$1.30 \$3.3 \$2.99 \$1.3 \$1.66 \$2.39 \$2.24 \$1.2 \$1.3	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50 \$1.67 \$2.50 \$2.28 \$1.27 \$1.35	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30 \$1.65 \$1.71 \$2.63 \$2.32 \$1.34 \$1.38	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47 \$1.80 \$1.75 \$2.75 \$2.37 \$1.41 \$1.41	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52 \$1.92 \$1.76 \$2.88 \$2.45 \$1.43 \$1.52	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58 \$2.05 \$1.78 \$3.02 \$2.54 \$1.45 \$1.64	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64 \$2.19 \$1.81 \$3.18 \$2.65 \$1.47 \$1.75	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72 \$2.34 \$1.85 \$3.36 \$2.78 \$1.51 \$1.87	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51 \$1.91 \$3.57 \$2.92 \$1.55 \$2.00	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90 \$2.68 \$1.98 \$3.79 \$3.10 \$1.60 \$2.13	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87 \$2.06 \$4.05 \$3.29 \$1.65 \$2.26	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03 \$2.18 \$4.27 \$3.47 \$1.74 \$2.38	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19 \$2.29 \$4.51 \$3.66 \$1.84 \$2.51	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70 \$3.37 \$2.42 \$4.75 \$3.86 \$1.94 \$2.65	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96 \$3.55 \$2.55 \$5.01 \$4.07 \$2.05 \$2.79	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27 \$121.21 \$87.12 \$171.13 \$138.98 \$69.86 \$95.27
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation	AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW	\$1.83 \$3.00 \$1.44 \$1.30 \$3.34 \$2.99 \$1.33 \$1.65 \$2.33 \$2.24 \$1.22 \$1.33 \$2.66	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50 \$1.67 \$2.50 \$2.28 \$1.27 \$1.35 \$2.73	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30 \$1.65 \$1.71 \$2.63 \$2.32 \$1.34 \$1.38 \$2.79	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47 \$1.80 \$1.75 \$2.75 \$2.37 \$1.41 \$1.41 \$2.84	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52 \$1.92 \$1.76 \$2.88 \$2.45 \$1.43 \$1.52 \$2.95	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58 \$2.05 \$1.78 \$3.02 \$2.54 \$1.45 \$1.64 \$3.08	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64 \$2.19 \$1.81 \$3.18 \$2.65 \$1.47 \$1.75 \$3.22	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72 \$2.34 \$1.85 \$3.36 \$2.78 \$1.51 \$1.87 \$3.39	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51 \$1.91 \$3.57 \$2.92 \$1.55 \$2.00 \$3.58	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90 \$2.68 \$1.98 \$3.79 \$3.10 \$1.60 \$2.13 \$3.79	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87 \$2.06 \$4.05 \$3.29 \$1.65 \$2.26 \$4.03	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03 \$2.18 \$4.27 \$3.47 \$1.74 \$2.38 \$4.25	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19 \$2.29 \$4.51 \$3.66 \$1.84 \$2.51 \$4.48	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70 \$3.37 \$2.42 \$4.75 \$3.86 \$1.94 \$2.65 \$4.73	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96 \$3.55 \$2.55 \$5.01 \$4.07 \$2.05 \$2.79 \$4.98	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27 \$121.21 \$87.12 \$171.13 \$138.98 \$69.86 \$95.27 \$170.16
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc.	AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM	\$1.83 \$3.09 \$1.44 \$1.30 \$3.34 \$2.99 \$1.33 \$1.66 \$2.33 \$2.24 \$1.22 \$1.33 \$2.66 \$0.99	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50 \$1.67 \$2.50 \$2.28 \$1.27 \$1.35 \$2.73 \$0.98	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30 \$1.65 \$1.71 \$2.63 \$2.32 \$1.34 \$1.38 \$2.79 \$1.03	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47 \$1.80 \$1.75 \$2.75 \$2.37 \$1.41 \$1.41 \$2.84 \$1.08	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52 \$1.92 \$1.76 \$2.88 \$2.45 \$1.43 \$1.52 \$2.95 \$1.18	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58 \$2.05 \$1.78 \$3.02 \$2.54 \$1.45 \$1.64 \$3.08 \$1.27	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64 \$2.19 \$1.81 \$3.18 \$2.65 \$1.47 \$1.75 \$3.22 \$1.38	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72 \$2.34 \$1.85 \$3.36 \$2.78 \$1.51 \$1.87 \$3.39 \$1.49	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51 \$1.91 \$3.57 \$2.92 \$1.55 \$2.00 \$3.58 \$1.61	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90 \$2.68 \$1.98 \$3.79 \$3.10 \$1.60 \$2.13 \$3.79 \$1.74	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87 \$2.06 \$4.05 \$3.29 \$1.65 \$2.26 \$4.03 \$1.87	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03 \$2.18 \$4.27 \$3.47 \$1.74 \$2.38 \$4.25 \$1.97	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19 \$2.29 \$4.51 \$3.66 \$1.84 \$2.51 \$4.48 \$2.08	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70 \$3.37 \$2.42 \$4.75 \$3.86 \$1.94 \$2.65 \$4.73 \$2.19	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96 \$3.55 \$2.55 \$5.01 \$4.07 \$2.05 \$2.79 \$4.98 \$2.31	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27 \$121.21 \$87.12 \$171.13 \$138.98 \$69.86 \$95.27 \$170.16 \$78.98
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company 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	AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR	\$1.8 \$3.0 \$1.4 \$1.3 \$3.3 \$2.9 \$1.3 \$1.6 \$2.3 \$2.2 \$1.2 \$1.3 \$2.6 \$0.9 \$1.3	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50 \$1.67 \$2.50 \$2.28 \$1.27 \$1.35 \$2.73 \$0.98 \$1.36	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30 \$1.65 \$1.71 \$2.63 \$2.32 \$1.34 \$1.38 \$2.79 \$1.03 \$1.36	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$1.80 \$1.75 \$2.75 \$2.37 \$1.41 \$1.41 \$2.84 \$1.08 \$1.37	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52 \$1.92 \$1.76 \$2.88 \$2.45 \$1.43 \$1.52 \$2.95 \$1.18 \$1.45	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58 \$2.05 \$1.78 \$3.02 \$2.54 \$1.64 \$3.08 \$1.27 \$1.54	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64 \$2.19 \$1.81 \$3.18 \$2.65 \$1.47 \$1.75 \$3.22 \$1.38 \$1.64	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72 \$2.34 \$1.85 \$3.36 \$2.78 \$1.51 \$1.87 \$3.39 \$1.49 \$1.75	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51 \$1.91 \$3.57 \$2.92 \$1.55 \$2.00 \$3.58 \$1.61 \$1.88	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90 \$2.68 \$1.98 \$3.79 \$3.10 \$1.60 \$2.13 \$3.79 \$1.74 \$2.02	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87 \$2.06 \$4.05 \$3.29 \$1.65 \$2.26 \$4.03 \$1.87 \$2.19	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03 \$2.18 \$4.27 \$3.47 \$1.74 \$2.38 \$4.25 \$1.97 \$2.30	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19 \$2.29 \$4.51 \$3.66 \$1.84 \$2.51 \$4.48 \$2.08 \$2.43	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70 \$3.37 \$2.42 \$4.75 \$3.86 \$1.94 \$2.65 \$4.73 \$2.19 \$2.56	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96 \$3.55 \$2.55 \$5.01 \$4.07 \$2.05 \$2.79 \$4.98 \$2.31 \$2.70	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27 \$121.21 \$87.12 \$171.13 \$138.98 \$69.86 \$95.27 \$170.16 \$78.98 \$92.29
American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc.	AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM	\$1.83 \$3.09 \$1.44 \$1.30 \$3.34 \$2.99 \$1.37 \$1.66 \$2.33 \$2.24 \$1.27 \$1.37 \$2.66 \$0.99	\$1.96 \$3.14 \$1.54 \$1.45 \$3.51 \$3.14 \$1.50 \$1.67 \$2.50 \$2.28 \$1.27 \$1.35 \$2.73 \$0.98 \$1.36 \$2.33	\$2.07 \$3.23 \$1.61 \$1.54 \$3.68 \$3.30 \$1.65 \$1.71 \$2.63 \$2.32 \$1.34 \$1.38 \$2.79 \$1.03	\$1.37 \$2.19 \$3.32 \$1.69 \$1.64 \$3.87 \$3.47 \$1.80 \$1.75 \$2.75 \$2.37 \$1.41 \$1.41 \$2.84 \$1.08	\$1.45 \$2.37 \$3.49 \$1.80 \$1.76 \$4.13 \$3.52 \$1.92 \$1.76 \$2.88 \$2.45 \$1.43 \$1.52 \$2.95 \$1.18	\$1.53 \$2.55 \$3.68 \$1.93 \$1.89 \$4.41 \$3.58 \$2.05 \$1.78 \$3.02 \$2.54 \$1.45 \$1.64 \$3.08 \$1.27	\$1.62 \$2.74 \$3.88 \$2.07 \$2.03 \$4.70 \$3.64 \$2.19 \$1.81 \$3.18 \$2.65 \$1.47 \$1.75 \$3.22 \$1.38	\$1.71 \$2.94 \$4.10 \$2.22 \$2.17 \$5.02 \$3.72 \$2.34 \$1.85 \$3.36 \$2.78 \$1.51 \$1.87 \$3.39 \$1.49	\$1.81 \$3.15 \$4.34 \$2.39 \$2.32 \$5.35 \$3.81 \$2.51 \$1.91 \$3.57 \$2.92 \$1.55 \$2.00 \$3.58 \$1.61	\$1.92 \$3.37 \$4.60 \$2.58 \$2.48 \$5.70 \$3.90 \$2.68 \$1.98 \$3.79 \$3.10 \$1.60 \$2.13 \$3.79 \$1.74	\$2.03 \$3.60 \$4.88 \$2.80 \$2.64 \$6.08 \$4.01 \$2.87 \$2.06 \$4.05 \$3.29 \$1.65 \$2.26 \$4.03 \$1.87	\$2.14 \$3.80 \$5.15 \$2.95 \$2.78 \$6.41 \$4.23 \$3.03 \$2.18 \$4.27 \$3.47 \$1.74 \$2.38 \$4.25 \$1.97	\$2.26 \$4.01 \$5.43 \$3.11 \$2.94 \$6.76 \$4.46 \$3.19 \$2.29 \$4.51 \$3.66 \$1.84 \$2.51 \$4.48 \$2.08	\$2.38 \$4.22 \$5.72 \$3.28 \$3.10 \$7.13 \$4.70 \$3.37 \$2.42 \$4.75 \$3.86 \$1.94 \$2.65 \$4.73 \$2.19	\$2.51 \$4.45 \$6.03 \$3.46 \$3.26 \$7.52 \$4.96 \$3.55 \$2.55 \$5.01 \$4.07 \$2.05 \$2.79 \$4.98 \$2.31	\$85.73 \$152.12 \$206.00 \$118.05 \$111.49 \$256.70 \$169.27 \$121.21 \$87.12 \$171.13 \$138.98 \$69.86 \$95.27 \$170.16 \$78.98

Projected Annu	al Data
1	-1

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	3/16/18	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	(\$68.80)	\$0.00	\$1.80	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$157.40
Alliant Energy Corporation	LNT	(\$38.71)	\$0.00	\$0.93	\$1.20	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$88.25
Ameren Corporation	AEE	(\$54.60)	\$0.00	\$1.47	\$1.91	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$156.57
American Electric Power Company, Inc.	AEP	(\$65.89)	\$0.00	\$2.42	\$3.12	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$212.04
Black Hills Corporation	BKH	(\$51.92)	\$0.00	\$1.16	\$1.49	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$121.50
CMS Energy Corporation	CMS	(\$43.01)	\$0.00	\$1.08	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$114.76
DTE Energy Company	DTE	(\$101.62)	\$0.00	\$2.65	\$3.43	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$264.22
Duke Energy Corporation	DUK	(\$76.11)	\$0.00	\$2.38	\$3.05	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$174.23
El Paso Electric Company	EE	(\$49.61)	\$0.00	\$1.09	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$124.76
Hawaiian Electric Industries, Inc.	HE	(\$33.15)	\$0.00	\$1.29	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$89.67
IDACORP, Inc.	IDA	(\$82.97)	\$0.00	\$1.90	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$176.14
NorthWestern Corporation	NWE	(\$51.42)	\$0.00	\$1.78	\$2.27	\$2.32	\$2.37	\$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$143.05
OGE Energy Corp.	OGE	(\$31.25)	\$0.00	\$0.96	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.51	\$1.55	\$1.60	\$1.65	\$1.74	\$1.84	\$1.94	\$71.91
Otter Tail Corporation	OTTR	(\$41.20)	\$0.00	\$1.05	\$1.37	\$1.38	\$1.41	\$1.52	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.26	\$2.38	\$2.51	\$2.65	\$98.06
Pinnacle West Capital Corporation	PNW	(\$76.92)	\$0.00	\$2.13	\$2.72	\$2.79	\$2.84	\$2.95	\$3.08	\$3.22	\$3.39	\$3.58	\$3.79	\$4.03	\$4.25	\$4.48	\$4.73	\$175.14
PNM Resources, Inc.	PNM	(\$35.57)	\$0.00	\$0.74	\$0.96	\$1.03	\$1.08	\$1.18	\$1.27	\$1.38	\$1.49	\$1.61	\$1.74	\$1.87	\$1.97	\$2.08	\$2.19	\$81.29
Portland General Electric Company	POR	(\$40.07)	\$0.00	\$1.07	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.88	\$2.02	\$2.19	\$2.30	\$2.43	\$2.56	\$94.99
Southern Company	SO	(\$43.84)	\$0.00	\$1.85	\$2.36	\$2.33	\$2.33	\$2.36	\$2.41	\$2.46	\$2.53	\$2.61	\$2.71	\$2.82	\$2.97	\$3.13	\$3.30	\$122.42
WEC Energy Group, Inc.	WEC	(\$60.76)	\$0.00	\$1.71	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.73	\$2.86	\$3.00	\$3.16	\$3.33	\$3.51	\$3.70	\$3.91	\$144.80
Xcel Energy Inc.	XEL	(\$43.57)	\$0.00	\$1.21	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$110.78

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E 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]				
inputs		Stock		S Growth Ra			Long-Term		Payout Rati		Iterative		Terminal	Terminal				
		Otock		O Olowali ike	Value	103	Long-Tenn	'	ayout reat		iterative	Colditori	Terrinia	remina				
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio				
ALLETE, Inc.	ALE	\$73.39	6.10%	5.00%	4.50%	5.20%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	8.94%	22.51	4.13				
Alliant Energy Corporation	LNT	\$41.32	5.30%	5.45%	6.50%	5.75%	5.45%	64.00%	64.00%	65.91%	\$0.00	8.66%	22.51	4.13				
Ameren Corporation	AEE	\$58.17	6.90%	6.40%	7.50%	6.93%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	10.72%	22.51	4.13				
American Electric Power Company, Inc.	AEP	\$70.89	5.40%	5.63%	4.50%	5.18%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	12.13%	22.51	4.13				
Black Hills Corporation	BKH	\$55.75	4.60%	3.50%	7.50%	5.20%	5.45%	52.00%	54.00%	65.91%	\$0.00	9.54%	22.51	4.13				
CMS Energy Corporation	CMS	\$46.01	6.30%	7.04%	8.50%	7.28%	5.45%	61.00%	61.00%	65.91%	\$0.00	10.33%	22.51	4.13				
DTE Energy Company	DTE	\$107.17	6.00%	5.58%	6.50%	6.03%	5.45%	62.00%	61.00%	65.91%	\$0.00	9.91%	22.51	4.13				
Duke Energy Corporation	DUK	\$81.78	3.70%	4.24%	4.50%	4.15%	5.45%	75.00%	78.00%	65.91%	\$0.00	9.08%	22.51	4.13				
El Paso Electric Company	EE	\$53.98	5.10%	5.20%	5.00%	5.10%	5.45%	52.00%	59.00%	65.91%	\$0.00	8.98%	22.51	4.13				
Hawaiian Electric Industries, Inc.	HE	\$35.12	6.70%	8.50%	1.50%	5.57%	5.45%	69.00%	71.00%	65.91%	\$0.00	13.56%	22.51	4.13				
IDACORP, Inc.	IDA	\$88.81	4.10%	3.10%	3.50%	3.57%	5.45%	57.00%	60.00%	65.91%	\$0.00	8.00%	22.51	4.13				
NorthWestern Corporation	NWE	\$56.57	2.40%	3.12%	4.50%	3.34%	5.45%	63.00%	62.00%	65.91%	\$0.00	10.77%	22.51	4.13				
OGE Energy Corp.	OGE	\$32.77	6.00%	5.80%	2.50%	4.77%	5.45%	68.00%	74.00%	65.91%	\$0.00	10.63%	22.51	4.13				
Otter Tail Corporation	OTTR	\$43.47	NA	9.00%	7.00%	8.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	9.49%	22.51	4.13				
Pinnacle West Capital Corporation	PNW	\$82.88	3.00%	3.63%	5.50%	4.04%	5.45%	64.00%	62.00%	65.91%	\$0.00	9.09%	22.51	4.13				
PNM Resources, Inc.	PNM	\$39.54	5.80%	5.80%	7.50%	6.37%	5.45%	57.00%	56.00%	65.91%	\$0.00	8.18%	22.51	4.13				
Portland General Electric Company	POR	\$44.10	2.90%	3.50%	6.00%	4.13%	5.45%	59.00%	55.00%	65.91%	\$0.00	9.23%	22.51	4.13				
Southern Company	SO	\$47.14	4.50%	2.70%	4.00%	3.73%	5.45%	78.00%	72.00%	65.91%	\$0.00	11.48%	22.51	4.13				
WEC Energy Group, Inc.	WEC	\$64.56	4.20%	4.34%	6.00%	4.85%	5.45%	67.00%	66.00%	65.91%	\$0.00	9.38%	22.51	4.13				
Xcel Energy Inc.	XEL	\$46.97	5.80%	6.15%	4.50%	5.48%	5.45%	63.00%	67.00%	65.91%	\$0.00	10.06%	22.51	4.13				
											Mean	9.91%						
											Max							
5											Min	8.00%						
Projected Annual		F4 41	[45]	[40]	F4 71	[40]	[40]	[00]	[04]	[00]	[00]	[0.4]	[05]	1001	[07]	1001	1001	1001
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	\$3.30	\$3.48	\$3.66	\$3.85	\$4.05	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$5.52	\$5.82	\$6.13	\$6.47	\$6.82	\$7.19
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	\$3.20	\$3.37	\$3.55	\$3.75	\$3.95
Ameren Corporation	AEE	\$2.68	\$2.87	\$3.06	\$3.28	\$3.50	\$3.75	\$4.01	\$4.27	\$4.55	\$4.83	\$5.12	\$5.41	\$5.70	\$6.02	\$6.34	\$6.69	\$7.05
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.92	\$5.18	\$5.44	\$5.73	\$6.03	\$6.34	\$6.68	\$7.04	\$7.42	\$7.82	\$8.25	\$8.70	\$9.17	\$9.67
Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.91	\$3.06	\$3.22	\$3.39	\$3.56	\$3.75	\$3.95	\$4.16	\$4.38	\$4.62	\$4.87	\$5.14	\$5.42	\$5.71	\$6.02
CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.02	\$3.23	\$3.44	\$3.66	\$3.89	\$4.11	\$4.33	\$4.57	\$4.82	\$5.08	\$5.36
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	\$9.07	\$9.56	\$10.08	\$10.63	\$11.21	\$11.82
Duke Energy Corporation	DUK	\$3.71	\$3.86	\$4.02	\$4.19	\$4.36	\$4.55	\$4.73	\$4.94	\$5.17	\$5.41	\$5.69	\$5.98	\$6.31	\$6.65	\$7.02	\$7.40	\$7.80
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	\$5.15	\$5.43
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	\$4.61	\$4.86	\$5.12	\$5.40
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	\$6.74	\$7.11	\$7.49	\$7.90
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	\$5.40	\$5.69	\$6.00	\$6.33	\$6.67
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	\$3.19	\$3.36	\$3.54	\$3.74
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	\$3.71	\$3.91	\$4.12	\$4.35	\$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	\$6.32	\$6.66	\$7.02	\$7.41	\$7.81	\$8.24
PNM Resources, Inc.	PNM	\$1.46	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.25	\$2.38	\$2.52	\$2.67	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67

\$2.64

\$3.40

\$3.75

\$2.89

\$2.75

\$3.53

\$3.93

\$3.04

\$2.87

\$3.67

\$4.13

\$3.21

\$3.15

\$4.00

\$4.56

\$3.57

\$3.01

\$3.83

\$4.33

\$3.39

\$3.31

\$4.20

\$4.80

\$3.77

\$3.48

\$4.41

\$5.05

\$3.97

\$3.67

\$4.65

\$5.33

\$4.19

\$3.87

\$4.91

\$5.62

\$4.08

\$5.17

\$5.92

\$4.66

Portland General Electric Company

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

POR

SO

WEC

XEL

\$2.16

\$2.83

\$2.96

\$2.21

\$2.25

\$2.94

\$3.10

\$2.33

\$2.34

\$3.05

\$3.25

\$2.46

\$2.44

\$3.16

\$3.41

\$2.59

\$2.54

\$3.28

\$3.58

\$2.74

\$4.30

\$5.46

\$6.25

\$4.91

\$4.54

\$5.75

\$6.59

\$5.18

Projected A	nnual
Dividend Pa	avout Rati

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
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	\$2.29	\$2.39	\$2.49	\$2.59	\$2.74	\$2.89	\$3.06	\$3.23	\$3.42	\$3.62	\$3.83	\$4.04	\$4.26	\$4.49	\$4.74	\$161.84
Alliant Energy Corporation	LNT	\$1.18	\$1.25	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99	\$2.11	\$2.22	\$2.34	\$2.47	\$2.60	\$88.90
Ameren Corporation	AEE	\$1.87	\$1.99	\$2.11	\$2.25	\$2.44	\$2.64	\$2.85	\$3.06	\$3.29	\$3.52	\$3.76	\$3.96	\$4.18	\$4.41	\$4.65	\$158.73
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.31	\$3.43	\$3.63	\$3.85	\$4.07	\$4.32	\$4.58	\$4.86	\$5.15	\$5.44	\$5.73	\$6.04	\$6.37	\$217.61
Black Hills Corporation	BKH	\$1.51	\$1.61	\$1.72	\$1.83	\$1.99	\$2.15	\$2.33	\$2.53	\$2.74	\$2.97	\$3.21	\$3.39	\$3.57	\$3.76	\$3.97	\$135.56
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.68	\$2.86	\$3.01	\$3.17	\$3.35	\$3.53	\$120.55
DTE Energy Company	DTE	\$3.37	\$3.55	\$3.74	\$3.95	\$4.23	\$4.54	\$4.85	\$5.19	\$5.54	\$5.91	\$6.30	\$6.65	\$7.01	\$7.39	\$7.79	\$266.08
Duke Energy Corporation	DUK	\$3.02	\$3.19	\$3.36	\$3.55	\$3.61	\$3.68	\$3.76	\$3.85	\$3.94	\$4.05	\$4.16	\$4.38	\$4.62	\$4.88	\$5.14	\$175.56
El Paso Electric Company	EE	\$1.37	\$1.51	\$1.65	\$1.81	\$1.93	\$2.07	\$2.21	\$2.36	\$2.53	\$2.70	\$2.89	\$3.05	\$3.22	\$3.39	\$3.58	\$122.20
Hawaiian Electric Industries, Inc.	HE	\$1.76	\$1.88	\$2.00	\$2.13	\$2.23	\$2.33	\$2.43	\$2.54	\$2.65	\$2.76	\$2.88	\$3.04	\$3.20	\$3.38	\$3.56	\$121.58
IDACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.12	\$3.29	\$3.49	\$3.70	\$3.94	\$4.21	\$4.44	\$4.68	\$4.94	\$5.21	\$177.81
NorthWestern Corporation	NWE	\$2.28	\$2.34	\$2.41	\$2.48	\$2.58	\$2.70	\$2.84	\$2.99	\$3.16	\$3.34	\$3.56	\$3.75	\$3.96	\$4.17	\$4.40	\$150.18
OGE Energy Corp.	OGE	\$1.26	\$1.36	\$1.47	\$1.58	\$1.63	\$1.68	\$1.74	\$1.79	\$1.86	\$1.92	\$1.99	\$2.10	\$2.22	\$2.34	\$2.46	\$84.11
Otter Tail Corporation	OTTR	\$1.34	\$1.39	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.58	\$2.72	\$2.86	\$3.02	\$103.13
Pinnacle West Capital Corporation	PNW	\$2.74	\$2.82	\$2.90	\$2.99	\$3.13	\$3.30	\$3.48	\$3.67	\$3.89	\$4.13	\$4.39	\$4.63	\$4.88	\$5.15	\$5.43	\$185.35
PNM Resources, Inc.	PNM	\$0.94	\$1.00	\$1.05	\$1.11	\$1.21	\$1.32	\$1.43	\$1.56	\$1.68	\$1.82	\$1.96	\$2.06	\$2.18	\$2.30	\$2.42	\$82.65
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.93	\$2.08	\$2.24	\$2.42	\$2.55	\$2.69	\$2.84	\$2.99	\$102.10
Southern Company	SO	\$2.38	\$2.40	\$2.42	\$2.45	\$2.51	\$2.58	\$2.65	\$2.74	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.60	\$3.79	\$129.47
WEC Energy Group, Inc.	WEC	\$2.18	\$2.27	\$2.37	\$2.48	\$2.59	\$2.72	\$2.86	\$3.01	\$3.16	\$3.33	\$3.51	\$3.70	\$3.90	\$4.12	\$4.34	\$148.27
Xcel Energy Inc.	XEL	\$1.55	\$1.67	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.24	\$3.41	\$116.54

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	3/16/18	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	(\$73.39)	\$0.00	\$1.82	\$2.35	\$2.49	\$2.59	\$2.74	\$2.89	\$3.06	\$3.23	\$3.42	\$3.62	\$3.83	\$4.04	\$4.26	\$4.49	\$166.58
Alliant Energy Corporation	LNT	(\$41.32)	\$0.00	\$0.94	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99	\$2.11	\$2.22	\$2.34	\$2.47	\$91.50
Ameren Corporation	AEE	(\$58.17)	\$0.00	\$1.49	\$1.93	\$2.11	\$2.25	\$2.44	\$2.64	\$2.85	\$3.06	\$3.29	\$3.52	\$3.76	\$3.96	\$4.18	\$4.41	\$163.38
American Electric Power Company, Inc.	AEP	(\$70.89)	\$0.00	\$2.45	\$3.17	\$3.31	\$3.43	\$3.63	\$3.85	\$4.07	\$4.32	\$4.58	\$4.86	\$5.15	\$5.44	\$5.73	\$6.04	\$223.99
Black Hills Corporation	BKH	(\$55.75)	\$0.00	\$1.20	\$1.55	\$1.72	\$1.83	\$1.99	\$2.15	\$2.33	\$2.53	\$2.74	\$2.97	\$3.21	\$3.39	\$3.57	\$3.76	\$139.53
CMS Energy Corporation	CMS	(\$46.01)	\$0.00	\$1.10	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.68	\$2.86	\$3.01	\$3.17	\$3.35	\$124.08
DTE Energy Company	DTE	(\$107.17)	\$0.00	\$2.67	\$3.47	\$3.74	\$3.95	\$4.23	\$4.54	\$4.85	\$5.19	\$5.54	\$5.91	\$6.30	\$6.65	\$7.01	\$7.39	\$273.87
Duke Energy Corporation	DUK	(\$81.78)	\$0.00	\$2.40	\$3.08	\$3.36	\$3.55	\$3.61	\$3.68	\$3.76	\$3.85	\$3.94	\$4.05	\$4.16	\$4.38	\$4.62	\$4.88	\$180.70
El Paso Electric Company	EE	(\$53.98)	\$0.00	\$1.09	\$1.41	\$1.65	\$1.81	\$1.93	\$2.07	\$2.21	\$2.36	\$2.53	\$2.70	\$2.89	\$3.05	\$3.22	\$3.39	\$125.77
Hawaiian Electric Industries, Inc.	HE	(\$35.12)	\$0.00	\$1.40	\$1.81	\$2.00	\$2.13	\$2.23	\$2.33	\$2.43	\$2.54	\$2.65	\$2.76	\$2.88	\$3.04	\$3.20	\$3.38	\$125.14
IDACORP, Inc.	IDA	(\$88.81)	\$0.00	\$1.91	\$2.45	\$2.67	\$2.82	\$2.96	\$3.12	\$3.29	\$3.49	\$3.70	\$3.94	\$4.21	\$4.44	\$4.68	\$4.94	\$183.02
NorthWestern Corporation	NWE	(\$56.57)	\$0.00	\$1.81	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.84	\$2.99	\$3.16	\$3.34	\$3.56	\$3.75	\$3.96	\$4.17	\$154.57
OGE Energy Corp.	OGE	(\$32.77)	\$0.00	\$1.00	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.74	\$1.79	\$1.86	\$1.92	\$1.99	\$2.10	\$2.22	\$2.34	\$86.57
Otter Tail Corporation	OTTR	(\$43.47)	\$0.00	\$1.07	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.58	\$2.72	\$2.86	\$106.15
Pinnacle West Capital Corporation	PNW	(\$82.88)	\$0.00	\$2.17	\$2.79	\$2.90	\$2.99	\$3.13	\$3.30	\$3.48	\$3.67	\$3.89	\$4.13	\$4.39	\$4.63	\$4.88	\$5.15	\$190.78
PNM Resources, Inc.	PNM	(\$39.54)	\$0.00	\$0.75	\$0.97	\$1.05	\$1.11	\$1.21	\$1.32	\$1.43	\$1.56	\$1.68	\$1.82	\$1.96	\$2.06	\$2.18	\$2.30	\$85.07
Portland General Electric Company	POR	(\$44.10)	\$0.00	\$1.10	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.93	\$2.08	\$2.24	\$2.42	\$2.55	\$2.69	\$2.84	\$105.09
Southern Company	SO	(\$47.14)	\$0.00	\$1.89	\$2.42	\$2.42	\$2.45	\$2.51	\$2.58	\$2.65	\$2.74	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.60	\$133.26
WEC Energy Group, Inc.	WEC	(\$64.56)	\$0.00	\$1.73	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.86	\$3.01	\$3.16	\$3.33	\$3.51	\$3.70	\$3.90	\$4.12	\$152.61
Xcel Energy Inc.	XEL	(\$46.97)	\$0.00	\$1.23	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.24	\$119.96

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

						Hig	n EPS Growti	n Rate Est	imate in Fii	rst Stage							
Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]			
		Stock	EP	S Growth Ra			Long-Term	F	Payout Rati	io	Iterative	Solution	Terminal	Terminal			
				- :	Value	High											
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2021	2028	Proof	IRR		PEG Ratio			
ALLETE, Inc.	ALE	\$73.39	6.10%	5.00%	4.50%	6.10%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	9.56%	22.51	4.13			
Alliant Energy Corporation	LNT	\$41.32	5.30%	5.45%	6.50%	6.50%	5.45%	64.00%	64.00%	65.91%	\$0.00	9.17%	22.51	4.13			
Ameren Corporation	AEE	\$58.17	6.90%	6.40%	7.50%	7.50%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	11.12%	22.51	4.13			
American Electric Power Company, Inc.	AEP	\$70.89	5.40%	5.63%	4.50%	5.63%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	12.46%	22.51	4.13			
Black Hills Corporation	BKH	\$55.75	4.60%	3.50%	7.50%	7.50%	5.45%	52.00%	54.00%	65.91%	\$0.00	11.13%	22.51	4.13			
CMS Energy Corporation	CMS	\$46.01	6.30%	7.04%	8.50%	8.50%	5.45%	61.00%	61.00%	65.91%	\$0.00	11.18%	22.51	4.13			
DTE Energy Company	DTE	\$107.17	6.00%	5.58%	6.50%	6.50%	5.45%	62.00%	61.00%	65.91%	\$0.00	10.24%	22.51	4.13			
Duke Energy Corporation	DUK	\$81.78	3.70%	4.24%	4.50%	4.50%	5.45%	75.00%	78.00%	65.91%	\$0.00	9.33%	22.51	4.13			
El Paso Electric Company	EE	\$53.98	5.10%	5.20%	5.00%	5.20%	5.45%	52.00%	59.00%	65.91%	\$0.00	9.05%	22.51	4.13			
Hawaiian Electric Industries, Inc.	HE	\$35.12	6.70%	8.50%	1.50%	8.50%	5.45%	69.00%	71.00%	65.91%	\$0.00	15.78%	22.51	4.13			
IDACORP, Inc.	IDA	\$88.81	4.10%	3.10%	3.50%	4.10%	5.45%	57.00%	60.00%	65.91%	\$0.00	8.37%	22.51	4.13			
NorthWestern Corporation	NWE	\$56.57	2.40%	3.12%	4.50%	4.50%	5.45%	63.00%	62.00%	65.91%	\$0.00	11.62%	22.51	4.13			
OGE Energy Corp.	OGE	\$32.77	6.00%	5.80%	2.50%	6.00%	5.45%	68.00%	74.00%	65.91%	\$0.00	11.52%	22.51	4.13			
Otter Tail Corporation	OTTR	\$43.47	NA	9.00%	7.00%	9.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	10.16%	22.51	4.13			
Pinnacle West Capital Corporation	PNW	\$82.88	3.00%	3.63%	5.50%	5.50%	5.45%	64.00%	62.00%	65.91%	\$0.00	10.11%	22.51	4.13			
PNM Resources, Inc.	PNM	\$39.54	5.80%	5.80%	7.50%	7.50%	5.45%	57.00%	56.00%	65.91%	\$0.00	8.94%	22.51	4.13			
Portland General Electric Company	POR	\$44.10	2.90%	3.50%	6.00%	6.00%	5.45%	59.00%	55.00%	65.91%	\$0.00	10.54%	22.51	4.13			
Southern Company	SO	\$47.14	4.50%	2.70%	4.00%	4.50%	5.45%	78.00%	72.00%	65.91%	\$0.00	12.04%	22.51	4.13			
WEC Energy Group, Inc.	WEC	\$64.56	4.20%	4.34%	6.00%	6.00%	5.45%	67.00%	66.00%	65.91%	\$0.00	10.19%	22.51	4.13			
Xcel Energy Inc.	XEL	\$46.97	5.80%	6.15%	4.50%	6.15%	5.45%	63.00%	67.00%	65.91%	\$0.00	10.53%	22.51	4.13			
											Mean						
												15.78%					
											Min	8.37%					
Projected Annual													fo=1				
Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ALLETE, Inc.	ALE	\$3.14	\$3.33	\$3.53	\$3.75	\$3.98	\$4.22	\$4.48	\$4.75	\$5.03	\$5.32	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33
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	\$3.58	\$3.77	\$3.98
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	\$5.97	\$6.29	\$6.64	\$7.00
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	\$9.02	\$9.51
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	\$5.86	\$6.18	\$6.51	\$6.87
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
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	\$9.42	\$9.93	\$10.47	\$11.04	\$11.64
Duke Energy Corporation	DUK	\$3.71	\$3.88	\$4.05	\$4.23	\$4.42	\$4.62	\$4.83	\$5.06	\$5.30	\$5.56	\$5.85	\$6.16	\$6.49	\$6.85	\$7.22	\$7.61
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	\$4.43	\$4.67	\$4.92	\$5.19
Hawaiian Electric Industries, Inc.	HE	\$2.29	\$2.48	\$2.70	\$2.70	\$3.17	\$3.44	\$3.74	\$4.03	\$4.34	\$4.64	\$4.94	\$5.23	\$5.52	\$5.82	\$6.14	\$6.47
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.74 \$5.01	\$5.23	\$5.47	\$5.73	\$6.02	\$6.33	\$6.68	\$5.02 \$7.04	\$7.42	\$7.83
NorthWestern Corporation	NWE	\$3.39	\$3.54	\$3.70	\$3.87	\$4.04	\$4.22	\$4.41	\$4.62	\$4.84	\$5.73 \$5.08	\$5.34	\$5.63	\$5.93	\$6.26	\$6.60	\$6.96
OGE Energy Corp.	OGE	\$1.69	\$1.79	\$1.90	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$3.00 \$2.84	\$3.00	\$3.03 \$3.17	\$3.34	\$3.52	\$3.71	\$3.91
OOL LINGS OOIP.	JUL	ψ1.03	ψ1.73	ψ1.30	Ψ2.01	Ψ2.10	Ψ2.20	Ψ2.40	Ψ2.07	Ψ2.03	Ψ2.07	ψυ.υυ	ψυ. 17	ΨΟ.ΟΤ	ψ0.02	ψυ. Γ	ψυ.υ ι

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\$3.74

\$2.81

\$2.07

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\$1.81

\$2.57

\$3.23

\$3.53

\$2.64

Otter Tail Corporation

PNM Resources, Inc.

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

Pinnacle West Capital Corporation

Portland General Electric Company

OTTR

PNW

PNM

POR

SO

WEC

XEL

\$1.60

\$3.95

\$1.46

\$2.16

\$2.83

\$2.96

\$2.21

\$1.74

\$4.17

\$1.57

\$2.29

\$2.96

\$3.14

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\$1.90

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\$1.69

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[30]

\$7.73 \$4.19 \$7.38 \$10.03 \$7.24 \$5.90 \$12.28 \$8.03 \$5.47 \$6.82 \$8.25 \$7.34 \$4.13

\$4.96

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\$5.18

Projected Annual	
Dividend Payout Ratio	

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Company Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Company Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%		65.91%	65.91%	
·	NWE		62.67%			62.56%	63.12%	63.67%	64.23%	64.22%				65.91%			
NorthWestern Corporation	OGE	63.00%	70.00%	62.33% 72.00%	62.00%	62.56% 72.84%		70.53%	69.37%	64.79% 68.22%	65.35% 67.06%	65.91%	65.91%	65.91%	65.91%	65.91% 65.91%	
OGE Energy Corp.		68.00%			74.00%		71.69%					65.91%	65.91%	65.91%	65.91%		
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96% 66.53%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Vaal Engage lag	VEL							hh h 3%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc. Projected Annual	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	00.5576									•
Projected Annual	XEL	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]		[55]	[56]	[57]				Termi
Projected Annual Cash Flows Company	Ticker	[46] 2018	[47] 2019	[48] 2020	[49] 2021	[50] 2022	[51] 2023	[52] 2024	[53] 2025	2026	[55] 2027	[56] 2028	[57] 2029	2030	2031	2032	Termi Valu
Projected Annual Cash Flows Company ALLETE, Inc.	Ticker ALE	[46] 2018 \$2.33	[47] 2019 \$2.45	[48] 2020 \$2.57	[49] 2021 \$2.70	[50] 2022 \$2.88	[51] 2023 \$3.06	[52] 2024 \$3.26	[53] 2025 \$3.46	2026 \$3.67	[55] 2027 \$3.89	[56] 2028 \$4.12	[57] 2029 \$4.35	2030 \$4.58	2031 \$4.83	2032 \$5.10	Termi Valu \$174.0
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation	Ticker ALE LNT	[46] 2018 \$2.33 \$1.20	[47] 2019 \$2.45 \$1.28	[48] 2020 \$2.57 \$1.36	[49] 2021 \$2.70 \$1.45	[50] 2022 \$2.88 \$1.55	[51] 2023 \$3.06 \$1.65	[52] 2024 \$3.26 \$1.76	[53] 2025 \$3.46 \$1.87	2026 \$3.67 \$1.99	[55] 2027 \$3.89 \$2.11	[56] 2028 \$4.12 \$2.24	[57] 2029 \$4.35 \$2.36	2030 \$4.58 \$2.49	2031 \$4.83 \$2.62	2032 \$5.10 \$2.76	Termi Valu \$174.0 \$94.4
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation	Ticker ALE LNT AEE	[46] 2018 \$2.33 \$1.20 \$1.89	[47] 2019 \$2.45 \$1.28 \$2.02	[48] 2020 \$2.57 \$1.36 \$2.16	[49] 2021 \$2.70 \$1.45 \$2.31	[50] 2022 \$2.88 \$1.55 \$2.52	[51] 2023 \$3.06 \$1.65 \$2.73	[52] 2024 \$3.26 \$1.76 \$2.96	[53] 2025 \$3.46 \$1.87 \$3.19	2026 \$3.67 \$1.99 \$3.44	[55] 2027 \$3.89 \$2.11 \$3.68	[56] 2028 \$4.12 \$2.24 \$3.93	[57] 2029 \$4.35 \$2.36 \$4.15	2030 \$4.58 \$2.49 \$4.37	2031 \$4.83 \$2.62 \$4.61	2032 \$5.10 \$2.76 \$4.86	Termi Valu \$174.0 \$94.4 \$166.0
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc.	Ticker ALE LNT	[46] 2018 \$2.33 \$1.20	[47] 2019 \$2.45 \$1.28	[48] 2020 \$2.57 \$1.36	[49] 2021 \$2.70 \$1.45	[50] 2022 \$2.88 \$1.55	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96	[52] 2024 \$3.26 \$1.76	[53] 2025 \$3.46 \$1.87	2026 \$3.67 \$1.99	[55] 2027 \$3.89 \$2.11	[56] 2028 \$4.12 \$2.24	[57] 2029 \$4.35 \$2.36	2030 \$4.58 \$2.49	2031 \$4.83 \$2.62	2032 \$5.10 \$2.76	
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation	Ticker ALE LNT AEE AEP	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29	2031 \$4.83 \$2.62 \$4.61 \$6.27	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77	Termii Valu \$174.0 \$94.4 \$166.0 \$225.7
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation	Ticker ALE LNT AEE AEP BKH	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47	2026 \$3.67 \$1.99 \$3.44 \$4.75	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64	2030 \$4.58 \$2.49 \$4.37 \$5.94	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53	2032 \$5.10 \$2.76 \$4.86 \$6.61	Termi Valu \$174.0 \$94.4 \$166.0 \$225.0 \$162.0 \$132.0
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company	Ticker ALE LNT AEE AEP BKH CMS	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09	Termi Valu \$174.0 \$94.4 \$166.0 \$225. \$162.0
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89	Termi Valu \$174.4 \$94.4 \$166.6 \$225. \$162.9 \$132.5 \$132.6 \$180.0
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company	Ticker ALE LNT AEE AEP BKH CMS DTE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29	Termi Valu \$174.0 \$94.4 \$166.0 \$225.0 \$162.0 \$132.0 \$176.0 \$180.0 \$123.0
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.40 \$3.04 \$1.38 \$1.86	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.67 \$3.81 \$3.41 \$1.66	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50	Termi Valu \$174.0 \$94.4 \$166.0 \$225.0 \$162.0 \$132.0 \$180.0 \$123.0 \$153.0
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61	Termi Valu \$174.4 \$94.4 \$166.4 \$225.5 \$162.4 \$132.5 \$176.3 \$183.4 \$153.4 \$185.5
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83	Termi Valu \$174.4 \$94.4 \$166.6 \$225. \$162.9 \$132. \$176.3 \$185. \$185. \$165.
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72	Termi Valu \$174.4 \$94.4 \$166.4 \$225.5 \$162.4 \$132.5 \$176.3 \$183.4 \$153.4 \$185.5
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Company Hawaiian Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$5.02 \$3.86 \$2.22 \$3.86 \$2.22 \$1.89 \$1.89 \$2.01	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.94	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27	Termi Valu \$174.4 \$94.4 \$166.6 \$225. \$162.9 \$132. \$176.3 \$185. \$185. \$185. \$165. \$92.9 \$111.8
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$2.05 \$2.05 \$2.33 \$4.37	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.94 \$5.49	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11	Termi Valu \$174. \$94.4 \$166. \$225. \$162. \$132. \$276. \$180. \$123. \$153. \$165. \$92.9 \$111. \$208.
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81 \$0.96	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94 \$1.03	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07 \$1.10	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20 \$1.17	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41 \$1.29	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63 \$1.42	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86 \$1.55	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11 \$1.69	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37 \$1.84	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65 \$1.99	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94 \$2.14	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21 \$2.26	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.94 \$5.49 \$2.38	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79 \$2.51	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11 \$2.65	Termi Valu \$174. \$94.4 \$166. \$225. \$162. \$132. \$276. \$180. \$123. \$153. \$165. \$92.9 \$111. \$208. \$90.4
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company 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	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81 \$0.96 \$1.43	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94 \$1.03 \$1.48	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07 \$1.10 \$1.54	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20 \$1.17 \$1.59	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41 \$1.29 \$1.73	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63 \$1.42 \$1.89	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86 \$1.55 \$2.05	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11 \$1.69 \$2.22	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37 \$1.84 \$2.41	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$3.68 \$2.12 \$1.99 \$4.65 \$1.99 \$2.60	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94 \$2.14 \$2.81	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21 \$2.26 \$2.97	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.45 \$2.38 \$3.13	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79 \$2.51 \$3.30	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11 \$2.65 \$3.48	Termi Valu \$174. \$94.4 \$166. \$225. \$162. \$132. \$276. \$185. \$165. \$92.9 \$111. \$208. \$90.4 \$118.
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc.	Ticker ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM	[46] 2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81 \$0.96	[47] 2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94 \$1.03	[48] 2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07 \$1.10	[49] 2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20 \$1.17	[50] 2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41 \$1.29	[51] 2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63 \$1.42	[52] 2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86 \$1.55	[53] 2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11 \$1.69	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37 \$1.84	[55] 2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65 \$1.99	[56] 2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94 \$2.14	[57] 2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21 \$2.26	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.94 \$5.49 \$2.38	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79 \$2.51	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11 \$2.65	Termi Valu \$174. \$94.4 \$166. \$225. \$162. \$132. \$276. \$180. \$123. \$153. \$165. \$92.9

Projected Ann	ual Data
Invector Cach	Flowe

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
•	-	Initial	0/40/40	10/01/10	0/00/40	0/00/00	0/00/04	0/00/00	0/00/00	0/00/04	0/00/07	0/00/00	0/00/07	0/00/00	0/00/00	0/00/00	0/00/04	0/00/00
Company	Ticker	Outflow	3/16/18	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	(\$73.39)	\$0.00	\$1.85	\$2.40	\$2.57	\$2.70	\$2.88	\$3.06	\$3.26	\$3.46	\$3.67	\$3.89	\$4.12	\$4.35	\$4.58	\$4.83	\$179.10
Alliant Energy Corporation	LNT	(\$41.32)	\$0.00	\$0.95	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.24	\$2.36	\$2.49	\$2.62	\$97.17
Ameren Corporation	AEE	(\$58.17)	\$0.00	\$1.50	\$1.96	\$2.16	\$2.31	\$2.52	\$2.73	\$2.96	\$3.19	\$3.44	\$3.68	\$3.93	\$4.15	\$4.37	\$4.61	\$170.90
American Electric Power Company, Inc.	AEP	(\$70.89)	\$0.00	\$2.47	\$3.20	\$3.37	\$3.50	\$3.73	\$3.96	\$4.21	\$4.47	\$4.75	\$5.04	\$5.35	\$5.64	\$5.94	\$6.27	\$232.33
Black Hills Corporation	BKH	(\$55.75)	\$0.00	\$1.26	\$1.64	\$1.87	\$2.04	\$2.26	\$2.50	\$2.75	\$3.01	\$3.28	\$3.57	\$3.86	\$4.07	\$4.29	\$4.53	\$167.72
CMS Energy Corporation	CMS	(\$46.01)	\$0.00	\$1.13	\$1.48	\$1.67	\$1.82	\$1.99	\$2.18	\$2.37	\$2.56	\$2.75	\$2.95	\$3.14	\$3.32	\$3.50	\$3.69	\$136.63
DTE Energy Company	DTE	(\$107.17)	\$0.00	\$2.70	\$3.51	\$3.81	\$4.04	\$4.35	\$4.68	\$5.02	\$5.38	\$5.75	\$6.14	\$6.55	\$6.90	\$7.28	\$7.67	\$284.45
Duke Energy Corporation	DUK	(\$81.78)	\$0.00	\$2.41	\$3.11	\$3.41	\$3.61	\$3.69	\$3.77	\$3.86	\$3.96	\$4.06	\$4.17	\$4.28	\$4.51	\$4.76	\$5.02	\$185.97
El Paso Electric Company	EE	(\$53.98)	\$0.00	\$1.09	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.38	\$2.55	\$2.73	\$2.92	\$3.08	\$3.24	\$3.42	\$126.79
Hawaiian Electric Industries, Inc.	HE	(\$35.12)	\$0.00	\$1.48	\$1.94	\$2.23	\$2.44	\$2.63	\$2.81	\$2.98	\$3.16	\$3.33	\$3.49	\$3.64	\$3.83	\$4.04	\$4.26	\$158.03
IDACORP, Inc.	IDA	(\$88.81)	\$0.00	\$1.93	\$2.48	\$2.73	\$2.89	\$3.05	\$3.23	\$3.42	\$3.63	\$3.86	\$4.12	\$4.40	\$4.64	\$4.89	\$5.16	\$191.17
NorthWestern Corporation	NWE	(\$56.57)	\$0.00	\$1.85	\$2.38	\$2.52	\$2.62	\$2.76	\$2.92	\$3.08	\$3.27	\$3.46	\$3.68	\$3.91	\$4.12	\$4.35	\$4.58	\$169.93
OGE Energy Corp.	OGE	(\$32.77)	\$0.00	\$1.03	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.97	\$2.05	\$2.12	\$2.20	\$2.32	\$2.45	\$2.58	\$95.62
Otter Tail Corporation	OTTR	(\$43.47)	\$0.00	\$1.09	\$1.43	\$1.49	\$1.55	\$1.70	\$1.86	\$2.01	\$2.17	\$2.33	\$2.49	\$2.64	\$2.79	\$2.94	\$3.10	\$114.83
Pinnacle West Capital Corporation	PNW	(\$82.88)	\$0.00	\$2.24	\$2.89	\$3.07	\$3.20	\$3.41	\$3.63	\$3.86	\$4.11	\$4.37	\$4.65	\$4.94	\$5.21	\$5.49	\$5.79	\$214.69
PNM Resources, Inc.	PNM	(\$39.54)	\$0.00	\$0.76	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.84	\$1.99	\$2.14	\$2.26	\$2.38	\$2.51	\$93.10
Portland General Electric Company	POR	(\$44.10)	\$0.00	\$1.14	\$1.47	\$1.54	\$1.59	\$1.73	\$1.89	\$2.05	\$2.22	\$2.41	\$2.60	\$2.81	\$2.97	\$3.13	\$3.30	\$122.22
Southern Company	SO	(\$47.14)	\$0.00	\$1.92	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.81	\$2.91	\$3.02	\$3.14	\$3.26	\$3.44	\$3.63	\$3.83	\$141.86
WEC Energy Group, Inc.	WEC	(\$64.56)	\$0.00	\$1.77	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.28	\$3.46	\$3.66	\$3.85	\$4.06	\$4.29	\$4.52	\$167.48
Xcel Energy Inc.	XEL	(\$46.97)	\$0.00	\$1.25	\$1.62	\$1.84	\$2.00	\$2.11	\$2.24	\$2.36	\$2.49	\$2.63	\$2.77	\$2.91	\$3.07	\$3.24	\$3.41	\$126.56

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

						Lo	w EPS Growth	n Rate Esti	mate in Fir	st Stage							
Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]			
		Stock	EP	S Growth Ra	ate Estima	tes	Long-Term	F	Payout Rat		Iterative	Solution	Terminal	Terminal			
					Value	Low	_										
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2021	2028	Proof	IRR	P/E Ratio	PEG Ratio			
ALLETE, Inc.	ALE	\$73.39	6.10%	5.00%	4.50%	4.50%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	8.45%	22.51	4.13			
Alliant Energy Corporation	LNT	\$41.32	5.30%	5.45%	6.50%	5.30%	5.45%	64.00%	64.00%	65.91%	\$0.00	8.35%	22.51	4.13			
Ameren Corporation	AEE	\$58.17	6.90%	6.40%	7.50%	6.40%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	10.35%	22.51	4.13			
American Electric Power Company, Inc.	AEP	\$70.89	5.40%	5.63%	4.50%	4.50%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	11.63%	22.51	4.13			
Black Hills Corporation	BKH	\$55.75	4.60%	3.50%	7.50%	3.50%	5.45%	52.00%	54.00%	65.91%	\$0.00	8.36%	22.51	4.13			
CMS Energy Corporation	CMS	\$46.01	6.30%	7.04%	8.50%	6.30%	5.45%	61.00%	61.00%	65.91%	\$0.00	9.66%	22.51	4.13			
DTE Energy Company	DTE	\$107.17	6.00%	5.58%	6.50%	5.58%	5.45%	62.00%	61.00%	65.91%	\$0.00	9.60%	22.51	4.13			
Duke Energy Corporation	DUK	\$81.78	3.70%	4.24%	4.50%	3.70%	5.45%	75.00%	78.00%	65.91%	\$0.00	8.76%	22.51	4.13			
El Paso Electric Company	EE	\$53.98	5.10%	5.20%	5.00%	5.00%	5.45%	52.00%	59.00%	65.91%	\$0.00	8.91%	22.51	4.13			
Hawaiian Electric Industries, Inc.	HE	\$35.12	6.70%	8.50%	1.50%	1.50%	5.45%	69.00%	71.00%	65.91%	\$0.00	10.52%	22.51	4.13			
IDACORP, Inc.	IDA	\$88.81	4.10%	3.10%	3.50%	3.10%	5.45%	57.00%	60.00%	65.91%	\$0.00	7.68%	22.51	4.13			
NorthWestern Corporation	NWE	\$56.57	2.40%	3.12%	4.50%	2.40%	5.45%	63.00%	62.00%	65.91%	\$0.00	10.09%	22.51	4.13			
OGE Energy Corp.	OGE	\$32.77	6.00%	5.80%	2.50%	2.50%	5.45%	68.00%	74.00%	65.91%	\$0.00	8.99%	22.51	4.13			
Otter Tail Corporation	OTTR	\$43.47	NA	9.00%	7.00%	7.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	8.81%	22.51	4.13			
Pinnacle West Capital Corporation	PNW	\$82.88	3.00%	3.63%	5.50%	3.00%	5.45%	64.00%	62.00%	65.91%	\$0.00	8.36%	22.51	4.13			
PNM Resources, Inc.	PNM	\$39.54	5.80%	5.80%	7.50%	5.80%	5.45%	57.00%	56.00%	65.91%	\$0.00	7.80%	22.51	4.13			
Portland General Electric Company	POR	\$44.10	2.90%	3.50%	6.00%	2.90%	5.45%	59.00%	55.00%	65.91%	\$0.00	8.37%	22.51	4.13			
Southern Company	SO	\$47.14	4.50%	2.70%	4.00%	2.70%	5.45%	78.00%	72.00%	65.91%	\$0.00	10.71%	22.51	4.13			
WEC Energy Group, Inc.	WEC	\$64.56	4.20%	4.34%	6.00%	4.20%	5.45%	67.00%	66.00%	65.91%	\$0.00	8.93%	22.51	4.13			
Xcel Energy Inc.	XEL	\$46.97	5.80%	6.15%	4.50%	4.50%	5.45%	63.00%	67.00%	65.91%	\$0.00	9.37%	22.51	4.13			
Acci Energy inc.	ALL	Ψ-10.07	0.0070	0.1070	4.0070	4.0070	0.4070	00.0070	07.0070	00.0170	Mean	9.18%	22.01	4.10			
											Max						
											Min						
Projected Annual											171111	7.0070					
Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Larrings per Griare		[1-]	[10]	[10]	[,,]	[10]	[10]	ركان	[۲۰]	رحدا	ردح	[47]	[20]	ردح	[21]	ردح	ركان
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	203
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	\$5.50	\$5.80	\$6.11	\$6.44
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	\$3.43	\$3.6
Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.89	\$4.13	\$4.38	\$4.64	\$4.91	\$5.18	\$5.47	\$5.76	\$6.08	\$6.4
American Electric Power Company, Inc.	AEP	\$4.23	\$4.42	\$4.62	\$4.83	\$5.43 \$5.04	\$5.03 \$5.27	\$5.53 \$5.51	\$5.77	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$5.76 \$7.81	\$8.23	\$8.6
Black Hills Corporation	BKH	\$2.63	\$2.72	\$2.82	\$4.83 \$2.92	\$3.04	\$3.27 \$3.12	\$3.23	\$3.7 <i>7</i> \$3.36	\$3.50	\$3.65	\$3.83	\$4.02	\$4.24	\$4.47	\$6.23 \$4.72	\$4.9
CMS Energy Corporation	CMS	\$2.03 \$1.98	\$2.72	\$2.02 \$2.24	\$2.38	\$3.02 \$2.53	\$3.12 \$2.69	\$3.23 \$2.86	\$3.03	\$3.30 \$3.22	\$3.40	\$3.60	\$3.80	\$4.24 \$4.01	\$4.47 \$4.23	\$4.72 \$4.46	\$4.9 \$4.7
DTE Energy Company	DTE	\$4.83	\$5.10	\$5.38	\$5.68	\$6.00	\$2.09 \$6.34	\$6.69	\$3.03 \$7.06	\$3.22 \$7.45	\$3.40 \$7.86	\$8.30	\$8.75	\$9.23	\$9.73	\$4.46 \$10.26	\$4.7 \$10.8
Duke Energy Company					\$5.00 \$4.14				\$4.80			\$5.49					\$7.1
	DUK	\$3.71	\$3.85 \$3.51	\$3.99 \$3.63		\$4.29 \$3.01	\$4.45 \$3.05	\$4.61 \$3.30		\$5.00 \$3.54	\$5.23		\$5.77	\$6.08 \$4.36	\$6.41 \$4.50	\$6.76	
El Paso Electric Company	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	\$4.36	\$4.59	\$4.84	\$5.1
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	\$3.6
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	\$6.49	\$6.84	\$7.2
NorthWestern Corporation	NWE	\$3.39	\$3.47	\$3.55 \$4.70	\$3.64	\$3.73	\$3.82 \$4.04	\$3.91 \$4.06	\$4.02	\$4.16 \$2.00	\$4.32	\$4.51	\$4.74	\$4.99 \$2.51	\$5.27	\$5.55	\$5.80
CM:L Engray Corp	CACE	W1 60	W1 72	@1 70	W1 00	W1 07	W1 O1	ፈላ ሀይ	ፈጋ ሀጋ	ፈጋ ሀሀ	wo 17	ぜつ クフ	(C) (C)	CO E1	W7 65	wo 70	ፈጋ 🗅

OGE

OTTR

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POR

SO

WEC

XEL

OGE Energy Corp.

Otter Tail Corporation

PNM Resources, Inc.

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

Pinnacle West Capital Corporation

Portland General Electric Company

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\$6.25

\$4.78

Projected Annual
Dividend Payout Ratio

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61] Terminal
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Value
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$4.48	\$152.92
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$85.73
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$4.45	\$152.12
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$6.03	\$206.00
Black Hills Corporation	BKH	\$1.47	\$1.54	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$118.05
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$3.26	\$111.49
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$7.52	\$256.70
Duke Energy Corporation	DUK	\$2.99	\$3.14	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$4.96	\$169.27
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$3.55	\$121.21
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$2.55	\$87.12
IDACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$5.01	\$171.13
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.37	\$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$138.98
OGE Energy Corp.	OGE	\$1.21	\$1.27	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.51	\$1.55	\$1.60	\$1.65	\$1.74	\$1.84	\$1.94	\$2.05	\$69.86
Otter Tail Corporation	OTTR	\$1.32	\$1.35	\$1.38	\$1.41	\$1.52	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.26	\$2.38	\$2.51	\$2.65	\$2.79	\$95.27
Pinnacle West Capital Corporation	PNW	\$2.68	\$2.73	\$2.79	\$2.84	\$2.95	\$3.08	\$3.22	\$3.39	\$3.58	\$3.79	\$4.03	\$4.25	\$4.48	\$4.73	\$4.98	\$170.16
PNM Resources, Inc.	PNM	\$0.93	\$0.98	\$1.03	\$1.08	\$1.18	\$1.27	\$1.38	\$1.49	\$1.61	\$1.74	\$1.87	\$1.97	\$2.08	\$2.19	\$2.31	\$78.98
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.88	\$2.02	\$2.19	\$2.30	\$2.43	\$2.56	\$2.70	\$92.29
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.41	\$2.46	\$2.53	\$2.61	\$2.71	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$118.94
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2.31	\$2.40	\$2.50	\$2.61	\$2.73	\$2.86	\$3.00	\$3.16	\$3.33	\$3.51	\$3.70	\$3.91	\$4.12	\$140.68
Xcel Energy Inc.	XEL	\$1.52	\$1.62	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$3.15	\$107.63

Projected Ann	ual Data
Invector Cach	Flowe

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
0	Talan	Initial	0/40/40	40/04/40	0/00/40	0/00/00	0/00/04	0/00/00	0/00/00	0/00/04	0/00/05	0/00/00	0/00/07	0/00/00	0/00/00	0/00/00	0/00/04	0/00/00
Company	Ticker	Outflow	3/16/18	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	(\$73.39)	\$0.00	\$1.80	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$157.40
Alliant Energy Corporation	LNT	(\$41.32)	\$0.00	\$0.93	\$1.20	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$88.25
Ameren Corporation	AEE	(\$58.17)	\$0.00	\$1.47	\$1.91	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$156.57
American Electric Power Company, Inc.	AEP	(\$70.89)	\$0.00	\$2.42	\$3.12	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$212.04
Black Hills Corporation	BKH	(\$55.75)	\$0.00	\$1.16	\$1.49	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$121.50
CMS Energy Corporation	CMS	(\$46.01)	\$0.00	\$1.08	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$114.76
DTE Energy Company	DTE	(\$107.17)	\$0.00	\$2.65	\$3.43	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$264.22
Duke Energy Corporation	DUK	(\$81.78)	\$0.00	\$2.38	\$3.05	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$174.23
El Paso Electric Company	EE	(\$53.98)	\$0.00	\$1.09	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$124.76
Hawaiian Electric Industries, Inc.	HE	(\$35.12)	\$0.00	\$1.29	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$89.67
IDACORP, Inc.	IDA	(\$88.81)	\$0.00	\$1.90	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$176.14
NorthWestern Corporation	NWE	(\$56.57)	\$0.00	\$1.78	\$2.27	\$2.32	\$2.37	\$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$143.05
OGE Energy Corp.	OGE	(\$32.77)	\$0.00	\$0.96	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.51	\$1.55	\$1.60	\$1.65	\$1.74	\$1.84	\$1.94	\$71.91
Otter Tail Corporation	OTTR	(\$43.47)	\$0.00	\$1.05	\$1.37	\$1.38	\$1.41	\$1.52	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.26	\$2.38	\$2.51	\$2.65	\$98.06
Pinnacle West Capital Corporation	PNW	(\$82.88)	\$0.00	\$2.13	\$2.72	\$2.79	\$2.84	\$2.95	\$3.08	\$3.22	\$3.39	\$3.58	\$3.79	\$4.03	\$4.25	\$4.48	\$4.73	\$175.14
PNM Resources, Inc.	PNM	(\$39.54)	\$0.00	\$0.74	\$0.96	\$1.03	\$1.08	\$1.18	\$1.27	\$1.38	\$1.49	\$1.61	\$1.74	\$1.87	\$1.97	\$2.08	\$2.19	\$81.29
Portland General Electric Company	POR	(\$44.10)	\$0.00	\$1.07	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.88	\$2.02	\$2.19	\$2.30	\$2.43	\$2.56	\$94.99
Southern Company	SO	(\$47.14)	\$0.00	\$1.85	\$2.36	\$2.33	\$2.33	\$2.36	\$2.41	\$2.46	\$2.53	\$2.61	\$2.71	\$2.82	\$2.97	\$3.13	\$3.30	\$122.42
WEC Energy Group, Inc.	WEC	(\$64.56)	\$0.00	\$1.71	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.73	\$2.86	\$3.00	\$3.16	\$3.33	\$3.51	\$3.70	\$3.91	\$144.80
Xcel Energy Inc.	XEL	(\$46.97)	\$0.00	\$1.21	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$110.78

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

Inputs		[1]	[2]	[3] S Growth Ra	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13] Terminal				
		Stock		5 Growin Ra	Value	iles	Long-Term	Г	Payout Rat	Ю	iterative	Solution	Terminal	reminai				
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2018	2021	2028	Proof	IRR	P/F Ratio	PEG Ratio				
ALLETE, Inc.	ALE	\$74.59	6.10%	5.00%	4.50%	5.20%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	8.79%	22.51	4.13				
Alliant Energy Corporation	LNT	\$41.63	5.30%	5.45%	6.50%	5.75%	5.45%	64.00%	64.00%	65.91%	\$0.00	8.59%	22.51	4.13				
Ameren Corporation	AEE	\$58.34	6.90%	6.40%	7.50%	6.93%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	10.69%	22.51	4.13				
American Electric Power Company, Inc.	AEP	\$71.29	5.40%	5.63%	4.50%	5.18%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	12.07%	22.51	4.13				
Black Hills Corporation	BKH	\$62.19	4.60%	3.50%	7.50%	5.20%	5.45%	52.00%	54.00%	65.91%	\$0.00	8.54%	22.51	4.13				
CMS Energy Corporation	CMS	\$46.64	6.30%	7.04%	8.50%	7.28%	5.45%	61.00%	61.00%	65.91%	\$0.00	10.20%	22.51	4.13				
DTE Energy Company	DTE	\$108.14	6.00%	5.58%	6.50%	6.03%	5.45%	62.00%	61.00%	65.91%	\$0.00	9.82%	22.51	4.13				
Duke Energy Corporation	DUK	\$83.84	3.70%	4.24%	4.50%	4.15%	5.45%	75.00%	78.00%	65.91%	\$0.00	8.84%	22.51	4.13				
El Paso Electric Company	EE	\$54.30	5.10%	5.20%	5.00%	5.10%	5.45%	52.00%	59.00%	65.91%	\$0.00	8.92%	22.51	4.13				
Hawaiian Electric Industries, Inc.	HE	\$34.36	6.70%	8.50%	1.50%	5.57%	5.45%	69.00%	71.00%	65.91%	\$0.00	13.80%	22.51	4.13				
IDACORP, Inc.	IDA	\$88.56	4.10%	3.10%	3.50%	3.57%	5.45%	57.00%	60.00%	65.91%	\$0.00	8.02%	22.51	4.13				
NorthWestern Corporation	NWE	\$57.95	2.40%	3.12%	4.50%	3.34%	5.45%	63.00%	62.00%	65.91%	\$0.00	10.53%	22.51	4.13				
OGE Energy Corp.	OGE	\$34.33	6.00%	5.80%	2.50%	4.77%	5.45%	68.00%	74.00%	65.91%	\$0.00	10.17%	22.51	4.13				
Otter Tail Corporation	OTTR	\$42.98	NA	9.00%	7.00%	8.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	9.59%	22.51	4.13				
Pinnacle West Capital Corporation	PNW	\$85.18	3.00%	3.63%	5.50%	4.04%	5.45%	64.00%	62.00%	65.91%	\$0.00	8.83%	22.51	4.13				
PNM Resources, Inc.	PNM	\$40.22	5.80%	5.80%	7.50%	6.37%	5.45%	57.00%	56.00%	65.91%	\$0.00	8.03%	22.51	4.13				
Portland General Electric Company	POR	\$45.11	2.90%	3.50%	6.00%	4.13%	5.45%	59.00%	55.00%	65.91%	\$0.00	9.02%	22.51	4.13				
Southern Company	SO	\$48.18	4.50%	2.70%	4.00%	3.73%	5.45%	78.00%	72.00%	65.91%	\$0.00	11.25%	22.51	4.13				
WEC Energy Group, Inc.	WEC	\$64.44	4.20%	4.34%	6.00%	4.85%	5.45%	67.00%	66.00%	65.91%	\$0.00	9.40%	22.51	4.13				
Xcel Energy Inc.	XEL	\$47.55	5.80%	6.15%	4.50%	5.48%	5.45%	63.00%	67.00%	65.91%	\$0.00	9.94%	22.51	4.13				
											Mean	9.75%						
											Max	13.80%						
											Min	8.02%						
Projected Annual																		
Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	\$3.14	\$3.30	\$3.48	\$3.66	\$3.85	\$4.05	\$4.26	\$4.48	\$4.72	\$4.97	\$5.23	\$5.52	\$5.82	\$6.13	\$6.47	\$6.82	\$7.19
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	\$3.20	\$3.37	\$3.55	\$3.75	\$3.95
Ameren Corporation	AEE	\$2.68	\$2.87	\$3.06	\$3.28	\$3.50	\$3.75	\$4.01	\$4.27	\$4.55	\$4.83	\$5.12	\$5.41	\$5.70	\$6.02	\$6.34	\$6.69	\$7.05
American Electric Power Company, Inc.	AEP	\$4.23	\$4.45	\$4.68	\$4.92	\$5.18	\$5.44	\$5.73	\$6.03	\$6.34	\$6.68	\$7.04	\$7.42	\$7.82	\$8.25	\$8.70	\$9.17	\$9.67
Black Hills Corporation	BKH	\$2.63	\$2.77	\$2.91	\$3.06	\$3.22	\$3.39	\$3.56	\$3.75	\$3.95	\$4.16	\$4.38	\$4.62	\$4.87	\$5.14	\$5.42	\$5.71	\$6.02
CMS Energy Corporation	CMS	\$1.98	\$2.12	\$2.28	\$2.44	\$2.62	\$2.81	\$3.02	\$3.23	\$3.44	\$3.66	\$3.89	\$4.11	\$4.33	\$4.57	\$4.82	\$5.08	\$5.36
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	\$9.07	\$9.56	\$10.08	\$10.63	\$11.21	\$11.82
Duke Energy Corporation	DUK	\$3.71	\$3.86	\$4.02	\$4.19	\$4.36	\$4.55	\$4.73	\$4.94	\$5.17	\$5.41	\$5.69	\$5.98	\$6.31	\$6.65	\$7.02	\$7.40	\$7.80
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	\$5.15	\$5.43
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	\$4.61	\$4.86	\$5.12	\$5.40
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	\$6.74	\$7.11	\$7.49	\$7.90
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	\$5.40	\$5.69	\$6.00	\$6.33	\$6.67
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	\$3.19	\$3.36	\$3.54	\$3.74
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	\$3.71	\$3.91	\$4.12	\$4.35	\$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	\$6.32	\$6.66	\$7.02	\$7.41	\$7.81	\$8.24
PNM Resources, Inc.	PNM	\$1.46	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.25	\$2.38	\$2.52	\$2.67	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$3.67
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	\$4.54

\$3.40

\$3.75

\$2.89

\$3.28

\$3.58

\$2.74

\$3.16

\$3.41

\$2.59

\$3.67

\$4.13

\$3.21

\$3.53

\$3.93

\$3.04

\$4.00

\$4.56

\$3.57

\$3.83

\$4.33

\$3.39

\$4.20

\$4.80

\$3.77

\$4.41

\$5.05

\$3.97

\$4.65

\$5.33

\$4.19

\$4.91

\$5.62

\$3.05

\$3.25

\$2.46

SO

WEC

XEL

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

\$2.83

\$2.96

\$2.21

\$2.94

\$3.10

\$2.33

\$5.17

\$5.92

\$4.66

\$5.46

\$6.25

\$4.91

\$5.75

\$6.59

\$5.18

Projected Annual	
Dividend Payout Ratio	

WEC Energy Group, Inc. Xcel Energy Inc.

WEC

XEL

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	-
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
•	AEP			64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	BKH	66.00%	65.00%	53.33%				59.10%	60.80%	62.50%							
Black Hills Corporation		52.00%	52.67%		54.00%	55.70%	57.40%				64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
DACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Kcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[6
		[10]	[]	[]	[]	[00]	[0.]	[]	[00]	[0.1]	[00]	[00]	[0.]	[00]	[00]	[00]	Term
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Va
ALLETE, Inc.	ALE	\$2.29	\$2.39	\$2.49	\$2.59	\$2.74	\$2.89	\$3.06	\$3.23	\$3.42	\$3.62	\$3.83	\$4.04	\$4.26	\$4.49	\$4.74	\$161
Alliant Energy Corporation	LNT	\$1.18	\$1.25	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99	\$2.11	\$2.22	\$2.34	\$2.47	\$2.60	\$88
Ameren Corporation	AEE	\$1.87	\$1.99	\$2.11	\$2.25	\$2.44	\$2.64	\$2.85	\$3.06	\$3.29	\$3.52	\$3.76	\$3.96	\$4.18	\$4.41	\$4.65	\$158
American Electric Power Company, Inc.	AEP	\$3.09	\$3.20	\$3.31	\$3.43	\$3.63	\$3.85	\$4.07	\$4.32	\$4.58	\$4.86	\$5.15	\$5.44	\$5.73	\$6.04	\$6.37	\$217
Black Hills Corporation	BKH	\$1.51	\$1.61	\$1.72	\$1.83	\$1.99	\$2.15	\$2.33	\$2.53	\$2.74	\$2.97	\$3.21	\$3.39	\$3.57	\$3.76	\$3.97	\$135
CMS Energy Corporation	CMS	\$1.39	\$1.49	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.68	\$2.86	\$3.01	\$3.17	\$3.35	\$3.53	\$120
OTE Energy Company	DTE	\$3.37	\$3.55	\$3.74	\$3.95	\$4.23	\$4.54	\$4.85	\$5.19	\$5.54	\$5.91	\$6.30	\$6.65	\$7.01	\$7.39	\$7.79	\$266
Duke Energy Corporation	DUK	\$3.02	\$3.19	\$3.36	\$3.55	\$3.61	\$3.68	\$3.76	\$3.85	\$3.94	\$4.05	\$4.16	\$4.38	\$4.62	\$4.88	\$5.14	\$175
El Paso Electric Company	EE	\$1.37	\$1.51	\$1.65	\$1.81	\$1.93	\$2.07	\$2.21	\$2.36	\$2.53	\$2.70	\$2.89	\$3.05	\$3.22	\$3.39	\$3.58	\$122
Hawaiian Electric Industries, Inc.	HE	\$1.76	\$1.88	\$2.00	\$2.13	\$2.23	\$2.33	\$2.43	\$2.54	\$2.65	\$2.76	\$2.88	\$3.04	\$3.20	\$3.38	\$3.56	\$12
DACORP, Inc.	IDA	\$2.41	\$2.54	\$2.67	\$2.82	\$2.96	\$3.12	\$3.29	\$3.49	\$3.70	\$3.94	\$4.21	\$4.44	\$4.68	\$4.94	\$5.21	\$177
NorthWestern Corporation	NWE	\$2.28	\$2.34	\$2.41	\$2.48	\$2.58	\$2.70	\$2.84	\$2.99	\$3.16	\$3.34	\$3.56	\$3.75	\$3.96	\$4.17	\$4.40	\$150
DGE Energy Corp.	OGE	\$1.26	\$1.36	\$1.47	\$1.58	\$1.63	\$1.68	\$1.74	\$1.79	\$1.86	\$1.92	\$1.99	\$2.10	\$2.22	\$2.34	\$2.46	\$84
Otter Tail Corporation	OTTR	\$1.34	\$1.39	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.58	\$2.72	\$2.86	\$3.02	\$103
Pinnacle West Capital Corporation	PNW	\$2.74	\$2.82	\$2.90	\$2.99	\$3.13	\$3.30	\$3.48	\$3.67	\$3.89	\$4.13	\$4.39	\$4.63	\$4.88	\$5.15	\$5.43	\$18
PNM Resources, Inc.	PNM	\$0.94	\$1.00	\$1.05	\$1.11	\$3.13 \$1.21	\$1.32	\$3.43	\$1.56	\$1.68	\$1.82	\$4.39 \$1.96	\$2.06	\$2.18	\$2.30	\$3.43 \$2.42	\$82
Portland General Electric Company	POR	\$1.38	\$1.41	\$1.43	\$1.11 \$1.45	\$1.56	\$1.67	\$1. 4 3 \$1.79	\$1.93	\$2.08	\$2.24	\$1.90	\$2.55	\$2.69	\$2.84	\$2.42 \$2.99	\$10
Southern Company	SO	\$2.38	\$2.40	\$1.43 \$2.42	\$1.45 \$2.45	\$1.50 \$2.51	\$1.67 \$2.58	\$1.79 \$2.65	\$1.93 \$2.74	\$2.06 \$2.84	\$2.24 \$2.95	\$2.42 \$3.07	\$2.55 \$3.23	\$2.69 \$3.41	\$2.6 4 \$3.60	\$2.99 \$3.79	\$102
NFC Energy Group, Inc	WEC	\$2.38 \$2.18	\$2.40 \$2.27	\$2.42 \$2.37	\$2.45 \$2.48	ֆ∠.51 \$2.59	\$2.58 \$2.72	\$2.65 \$2.86	\$2.74 \$3.01	ֆ∠.Ծ4 \$3.16	\$2.95 \$3.33	\$3.07 \$3.51	\$3.23 \$3.70	\$3.41 \$3.90	\$3.60 \$4.12	\$3.79 \$4.34	\$128 \$148

\$2.27

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\$4.12

\$3.24

\$4.34

\$3.41

\$3.90

\$3.07

\$148.27

\$116.54

Projected Annu	al Data
1	-1

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	3/16/18	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	(\$74.59)	\$0.00	\$1.82	\$2.35	\$2.49	\$2.59	\$2.74	\$2.89	\$3.06	\$3.23	\$3.42	\$3.62	\$3.83	\$4.04	\$4.26	\$4.49	\$166.58
Alliant Energy Corporation	LNT	(\$41.63)	\$0.00	\$0.94	\$1.21	\$1.32	\$1.40	\$1.48	\$1.57	\$1.67	\$1.77	\$1.88	\$1.99	\$2.11	\$2.22	\$2.34	\$2.47	\$91.50
Ameren Corporation	AEE	(\$58.34)	\$0.00	\$1.49	\$1.93	\$2.11	\$2.25	\$2.44	\$2.64	\$2.85	\$3.06	\$3.29	\$3.52	\$3.76	\$3.96	\$4.18	\$4.41	\$163.38
American Electric Power Company, Inc.	AEP	(\$71.29)	\$0.00	\$2.45	\$3.17	\$3.31	\$3.43	\$3.63	\$3.85	\$4.07	\$4.32	\$4.58	\$4.86	\$5.15	\$5.44	\$5.73	\$6.04	\$223.99
Black Hills Corporation	BKH	(\$62.19)	\$0.00	\$1.20	\$1.55	\$1.72	\$1.83	\$1.99	\$2.15	\$2.33	\$2.53	\$2.74	\$2.97	\$3.21	\$3.39	\$3.57	\$3.76	\$139.53
CMS Energy Corporation	CMS	(\$46.64)	\$0.00	\$1.10	\$1.44	\$1.60	\$1.72	\$1.86	\$2.01	\$2.17	\$2.34	\$2.51	\$2.68	\$2.86	\$3.01	\$3.17	\$3.35	\$124.08
DTE Energy Company	DTE	(\$108.14)	\$0.00	\$2.67	\$3.47	\$3.74	\$3.95	\$4.23	\$4.54	\$4.85	\$5.19	\$5.54	\$5.91	\$6.30	\$6.65	\$7.01	\$7.39	\$273.87
Duke Energy Corporation	DUK	(\$83.84)	\$0.00	\$2.40	\$3.08	\$3.36	\$3.55	\$3.61	\$3.68	\$3.76	\$3.85	\$3.94	\$4.05	\$4.16	\$4.38	\$4.62	\$4.88	\$180.70
El Paso Electric Company	EE	(\$54.30)	\$0.00	\$1.09	\$1.41	\$1.65	\$1.81	\$1.93	\$2.07	\$2.21	\$2.36	\$2.53	\$2.70	\$2.89	\$3.05	\$3.22	\$3.39	\$125.77
Hawaiian Electric Industries, Inc.	HE	(\$34.36)	\$0.00	\$1.40	\$1.81	\$2.00	\$2.13	\$2.23	\$2.33	\$2.43	\$2.54	\$2.65	\$2.76	\$2.88	\$3.04	\$3.20	\$3.38	\$125.14
IDACORP, Inc.	IDA	(\$88.56)	\$0.00	\$1.91	\$2.45	\$2.67	\$2.82	\$2.96	\$3.12	\$3.29	\$3.49	\$3.70	\$3.94	\$4.21	\$4.44	\$4.68	\$4.94	\$183.02
NorthWestern Corporation	NWE	(\$57.95)	\$0.00	\$1.81	\$2.32	\$2.41	\$2.48	\$2.58	\$2.70	\$2.84	\$2.99	\$3.16	\$3.34	\$3.56	\$3.75	\$3.96	\$4.17	\$154.57
OGE Energy Corp.	OGE	(\$34.33)	\$0.00	\$1.00	\$1.29	\$1.47	\$1.58	\$1.63	\$1.68	\$1.74	\$1.79	\$1.86	\$1.92	\$1.99	\$2.10	\$2.22	\$2.34	\$86.57
Otter Tail Corporation	OTTR	(\$42.98)	\$0.00	\$1.07	\$1.40	\$1.44	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.58	\$2.72	\$2.86	\$106.15
Pinnacle West Capital Corporation	PNW	(\$85.18)	\$0.00	\$2.17	\$2.79	\$2.90	\$2.99	\$3.13	\$3.30	\$3.48	\$3.67	\$3.89	\$4.13	\$4.39	\$4.63	\$4.88	\$5.15	\$190.78
PNM Resources, Inc.	PNM	(\$40.22)	\$0.00	\$0.75	\$0.97	\$1.05	\$1.11	\$1.21	\$1.32	\$1.43	\$1.56	\$1.68	\$1.82	\$1.96	\$2.06	\$2.18	\$2.30	\$85.07
Portland General Electric Company	POR	(\$45.11)	\$0.00	\$1.10	\$1.41	\$1.43	\$1.45	\$1.56	\$1.67	\$1.79	\$1.93	\$2.08	\$2.24	\$2.42	\$2.55	\$2.69	\$2.84	\$105.09
Southern Company	SO	(\$48.18)	\$0.00	\$1.89	\$2.42	\$2.42	\$2.45	\$2.51	\$2.58	\$2.65	\$2.74	\$2.84	\$2.95	\$3.07	\$3.23	\$3.41	\$3.60	\$133.26
WEC Energy Group, Inc.	WEC	(\$64.44)	\$0.00	\$1.73	\$2.23	\$2.37	\$2.48	\$2.59	\$2.72	\$2.86	\$3.01	\$3.16	\$3.33	\$3.51	\$3.70	\$3.90	\$4.12	\$152.61
Xcel Energy Inc.	XEL	(\$47.55)	\$0.00	\$1.23	\$1.59	\$1.80	\$1.93	\$2.03	\$2.14	\$2.25	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$3.07	\$3.24	\$119.96

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

							•			J								
Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]				
		Stock	EP	S Growth Ra			_ Long-Term	F	Payout Rat	io	Iterative	Solution	Terminal	Terminal				
					Value	High												
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2018	2021	2028	Proof	IRR		PEG Ratio				
ALLETE, Inc.	ALE	\$74.59	6.10%	5.00%	4.50%	6.10%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	9.41%	22.51	4.13				
Alliant Energy Corporation	LNT	\$41.63	5.30%	5.45%	6.50%	6.50%	5.45%	64.00%	64.00%	65.91%	\$0.00	9.10%	22.51	4.13				
Ameren Corporation	AEE	\$58.34	6.90%	6.40%	7.50%	7.50%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	11.09%	22.51	4.13				
American Electric Power Company, Inc.	AEP	\$71.29	5.40%	5.63%	4.50%	5.63%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	12.40%	22.51	4.13				
Black Hills Corporation	BKH	\$62.19	4.60%	3.50%	7.50%	7.50%	5.45%	52.00%	54.00%	65.91%	\$0.00	10.11%	22.51	4.13				
CMS Energy Corporation	CMS	\$46.64	6.30%	7.04%	8.50%	8.50%	5.45%	61.00%	61.00%	65.91%	\$0.00	11.05%	22.51	4.13				
DTE Energy Company	DTE	\$108.14	6.00%	5.58%	6.50%	6.50%	5.45%	62.00%	61.00%	65.91%	\$0.00	10.15%	22.51	4.13				
Duke Energy Corporation	DUK	\$83.84	3.70%	4.24%	4.50%	4.50%	5.45%	75.00%	78.00%	65.91%	\$0.00	9.09%	22.51	4.13				
El Paso Electric Company	EE	\$54.30	5.10%	5.20%	5.00%	5.20%	5.45%	52.00%	59.00%	65.91%	\$0.00	8.99%	22.51	4.13				
Hawaiian Electric Industries, Inc.	HE	\$34.36	6.70%	8.50%	1.50%	8.50%	5.45%	69.00%	71.00%	65.91%	\$0.00	16.02%	22.51	4.13				
IDACORP, Inc.	IDA	\$88.56	4.10%	3.10%	3.50%	4.10%	5.45%	57.00%	60.00%	65.91%	\$0.00	8.39%	22.51	4.13				
NorthWestern Corporation	NWE	\$57.95	2.40%	3.12%	4.50%	4.50%	5.45%	63.00%	62.00%	65.91%	\$0.00	11.37%	22.51	4.13				
OGE Energy Corp.	OGE	\$34.33	6.00%	5.80%	2.50%	6.00%	5.45%	68.00%	74.00%	65.91%	\$0.00	11.05%	22.51	4.13				
Otter Tail Corporation	OTTR	\$42.98	NA	9.00%	7.00%	9.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	10.27%	22.51	4.13				
Pinnacle West Capital Corporation	PNW	\$85.18	3.00%	3.63%	5.50%	5.50%	5.45%	64.00%	62.00%	65.91%	\$0.00	9.85%	22.51	4.13				
PNM Resources, Inc.	PNM	\$40.22	5.80%	5.80%	7.50%	7.50%	5.45%	57.00%	56.00%	65.91%	\$0.00	8.79%	22.51	4.13				
Portland General Electric Company	POR	\$45.11	2.90%	3.50%	6.00%	6.00%	5.45%	59.00%	55.00%	65.91%	\$0.00	10.32%	22.51	4.13				
Southern Company	SO	\$48.18	4.50%	2.70%	4.00%	4.50%	5.45%	78.00%	72.00%	65.91%	\$0.00	11.82%	22.51	4.13				
WEC Energy Group, Inc.	WEC	\$64.44	4.20%	4.34%	6.00%	6.00%	5.45%	67.00%	66.00%	65.91%	\$0.00	10.21%	22.51	4.13				
Xcel Energy Inc.	XEL	\$47.55	5.80%	6.15%	4.50%	6.15%	5.45%	63.00%	67.00%	65.91%	\$0.00	10.41%	22.51	4.13				
											Mean	10.50%						
											Max							
											Min	8.39%						
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	\$3.33	\$3.53	\$3.75	\$3.98	\$4.22	\$4.48	\$4.75	\$5.03	\$5.32	\$5.62	\$5.93	\$6.25	\$6.59	\$6.95	\$7.33	\$7.73
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	\$3.58	\$3.77	\$3.98	\$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	\$5.97	\$6.29	\$6.64	\$7.00	\$7.38
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	\$9.02	\$9.51	\$10.03
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	\$5.86	\$6.18	\$6.51	\$6.87	\$7.24
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	\$5.90
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	\$9.42	\$9.93	\$10.47	\$11.04	\$11.64	\$12.28
Duke Energy Corporation	DUK	\$3.71	\$3.88	\$4.05	\$4.23	\$4.42	\$4.62	\$4.83	\$5.06	\$5.30	\$5.56	\$5.85	\$6.16	\$6.49	\$6.85	\$7.22	\$7.61	\$8.03
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	\$4.43	\$4.67	\$4.92	\$5.19	\$5.47
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	\$5.52	\$5.82	\$6.14	\$6.47	\$6.82
IDACORP, Inc.	IDA	\$3.94	\$4.10	\$4.27	\$4.44	\$4.63	\$4.82	\$5.01	\$5.23	\$5.47	\$5.73	\$6.02	\$6.33	\$6.68	\$7.04	\$7.42	\$7.83	\$8.25
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	\$5.63	\$5.93	\$6.26	\$6.60	\$6.96	\$7.34
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	\$3.17	\$3.34	\$3.52	\$3.71	\$3.91	\$4.13
Otter Tail Corporation	OTTR	\$1.60	\$1.74	\$1.90	\$2.07	\$2.26	\$2.46	\$2.68	\$2.91	\$3.14	\$3.36	\$3.59	\$3.80	\$4.01	\$4.23	\$4.46	\$4.70	\$4.96
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	\$7.50	\$7.90	\$8.33	\$8.79	\$9.27
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	\$4.02
Dortland Congred Floatric Comment	DOD	ФО 4C	ФО ОО	ΦO 40	¢0.57	ΦO 7 0	фо. оо	фо. ос	ΦΩ.ΩΕ	ΦΩ 4Ω	<u></u> ተር ርዕ	<u>ቀ</u> ጋ. ዕጋ	¢4.05	¢4.07	¢4.50	Φ4.74	ФE 00	ФГ OO

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\$5.51

\$6.50

\$4.91

Portland General Electric Company

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

POR

SO

WEC

XEL

\$2.16

\$2.83

\$2.96

\$2.21

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\$5.00

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\$5.28

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\$7.23

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Projected	l Annual
Dividend	Payout Ratio

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	•
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
American Electric Power Company, Inc.	AEP	66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	so	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Xcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Projected Annual																	
•		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Cash Flows	Ticker																Terminal
Cash Flows Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Terminal Value
Company ALLETE, Inc.	ALE	2018 \$2.33	2019 \$2.45	2020 \$2.57	2021 \$2.70	2022 \$2.88	2023 \$3.06	2024 \$3.26	2025 \$3.46	2026 \$3.67	2027 \$3.89	2028 \$4.12	2029 \$4.35	2030 \$4.58	2031 \$4.83	2032 \$5.10	Terminal Value \$174.00
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation	ALE LNT	2018 \$2.33 \$1.20	2019 \$2.45 \$1.28	2020 \$2.57 \$1.36	2021 \$2.70 \$1.45	2022 \$2.88 \$1.55	2023 \$3.06 \$1.65	2024 \$3.26 \$1.76	2025 \$3.46 \$1.87	2026 \$3.67 \$1.99	2027 \$3.89 \$2.11	2028 \$4.12 \$2.24	2029 \$4.35 \$2.36	2030 \$4.58 \$2.49	2031 \$4.83 \$2.62	2032 \$5.10 \$2.76	Terminal Value \$174.00 \$94.41
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation	ALE LNT AEE	2018 \$2.33 \$1.20 \$1.89	2019 \$2.45 \$1.28 \$2.02	2020 \$2.57 \$1.36 \$2.16	2021 \$2.70 \$1.45 \$2.31	2022 \$2.88 \$1.55 \$2.52	2023 \$3.06 \$1.65 \$2.73	2024 \$3.26 \$1.76 \$2.96	2025 \$3.46 \$1.87 \$3.19	2026 \$3.67 \$1.99 \$3.44	2027 \$3.89 \$2.11 \$3.68	2028 \$4.12 \$2.24 \$3.93	2029 \$4.35 \$2.36 \$4.15	2030 \$4.58 \$2.49 \$4.37	2031 \$4.83 \$2.62 \$4.61	2032 \$5.10 \$2.76 \$4.86	Terminal Value \$174.00 \$94.41 \$166.04
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc.	ALE LNT AEE AEP	2018 \$2.33 \$1.20 \$1.89 \$3.12	2019 \$2.45 \$1.28 \$2.02 \$3.24	2020 \$2.57 \$1.36 \$2.16 \$3.37	2021 \$2.70 \$1.45 \$2.31 \$3.50	2022 \$2.88 \$1.55 \$2.52 \$3.73	2023 \$3.06 \$1.65 \$2.73 \$3.96	2024 \$3.26 \$1.76 \$2.96 \$4.21	2025 \$3.46 \$1.87 \$3.19 \$4.47	2026 \$3.67 \$1.99 \$3.44 \$4.75	2027 \$3.89 \$2.11 \$3.68 \$5.04	2028 \$4.12 \$2.24 \$3.93 \$5.35	2029 \$4.35 \$2.36 \$4.15 \$5.64	2030 \$4.58 \$2.49 \$4.37 \$5.94	2031 \$4.83 \$2.62 \$4.61 \$6.27	2032 \$5.10 \$2.76 \$4.86 \$6.61	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation	ALE LNT AEE	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation	ALE LNT AEE AEP BKH	2018 \$2.33 \$1.20 \$1.89 \$3.12	2019 \$2.45 \$1.28 \$2.02 \$3.24	2020 \$2.57 \$1.36 \$2.16 \$3.37	2021 \$2.70 \$1.45 \$2.31 \$3.50	2022 \$2.88 \$1.55 \$2.52 \$3.73	2023 \$3.06 \$1.65 \$2.73 \$3.96	2024 \$3.26 \$1.76 \$2.96 \$4.21	2025 \$3.46 \$1.87 \$3.19 \$4.47	2026 \$3.67 \$1.99 \$3.44 \$4.75	2027 \$3.89 \$2.11 \$3.68 \$5.04	2028 \$4.12 \$2.24 \$3.93 \$5.35	2029 \$4.35 \$2.36 \$4.15 \$5.64	2030 \$4.58 \$2.49 \$4.37 \$5.94	2031 \$4.83 \$2.62 \$4.61 \$6.27	2032 \$5.10 \$2.76 \$4.86 \$6.61	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company	ALE LNT AEE AEP BKH CMS	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation	ALE LNT AEE AEP BKH CMS DTE DUK	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company	ALE LNT AEE AEP BKH CMS DTE	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc.	ALE LNT AEE AEP BKH CMS DTE DUK EE	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68 \$123.19
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc.	ALE LNT AEE AEP BKH CMS DTE DUK EE HE	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68 \$123.19 \$153.53
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation	ALE LNT AEE AEP BKH CMS DTE DUK EE HE	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68 \$123.19 \$153.53 \$185.74
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp.	ALE LNT AEE AEP BKH CMS DTE DUK EE IDA NWE	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68 \$123.19 \$153.53 \$185.74 \$165.10
Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation	ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.86 \$2.43 \$2.33 \$1.29	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68 \$123.19 \$153.53 \$185.74 \$165.10 \$92.90
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation	ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.38 \$1.38 \$1.38 \$1.37 \$2.33 \$1.29 \$1.37 \$2.81	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.94 \$5.49	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68 \$123.19 \$153.53 \$185.74 \$165.10 \$92.90 \$111.56
Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company Hawaiian Electric Industries, Inc. IDACORP, Inc. NorthWestern Corporation OGE Energy Corp. Otter Tail Corporation Pinnacle West Capital Corporation PNM Resources, Inc.	ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.38 \$1.29 \$1.37	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$2.05 \$2.05 \$2.33 \$4.37	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.94	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68 \$123.19 \$153.53 \$185.74 \$165.10 \$92.90 \$111.56 \$208.58
Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Hawaiian Electric Company 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	ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.36 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81 \$0.96	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94 \$1.03	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07 \$1.10	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20 \$1.17	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41 \$1.29	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63 \$1.42	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86 \$1.55	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11 \$1.69	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37 \$1.84	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65 \$1.99	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94 \$2.14	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21 \$2.26	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.45 \$2.45 \$2.94 \$5.49 \$2.38	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79 \$2.51	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11 \$2.65	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68 \$123.19 \$153.53 \$185.74 \$165.10 \$92.90 \$111.56 \$208.58 \$90.46
Projected Annual Cash Flows Company ALLETE, Inc. Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Black Hills Corporation CMS Energy Corporation DTE Energy Company Duke Energy Company Duke Energy Corporation El Paso Electric Company 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.	ALE LNT AEE AEP BKH CMS DTE DUK EE HE IDA NWE OGE OTTR PNW PNM POR	2018 \$2.33 \$1.20 \$1.89 \$3.12 \$1.58 \$1.42 \$3.40 \$3.04 \$1.38 \$1.38 \$1.39 \$2.43 \$2.33 \$1.29 \$1.37 \$2.81 \$0.96 \$1.43	2019 \$2.45 \$1.28 \$2.02 \$3.24 \$1.72 \$1.54 \$3.60 \$3.22 \$1.51 \$2.04 \$2.58 \$2.42 \$1.41 \$1.43 \$2.94 \$1.03 \$1.48	2020 \$2.57 \$1.36 \$2.16 \$3.37 \$1.87 \$1.67 \$3.81 \$3.41 \$1.66 \$2.23 \$2.73 \$2.52 \$1.54 \$1.49 \$3.07 \$1.10 \$1.54	2021 \$2.70 \$1.45 \$2.31 \$3.50 \$2.04 \$1.82 \$4.04 \$3.61 \$1.82 \$2.44 \$2.89 \$2.62 \$1.67 \$1.55 \$3.20 \$1.17 \$1.59	2022 \$2.88 \$1.55 \$2.52 \$3.73 \$2.26 \$1.99 \$4.35 \$3.69 \$1.94 \$2.63 \$3.05 \$2.76 \$1.75 \$1.70 \$3.41 \$1.29 \$1.73	2023 \$3.06 \$1.65 \$2.73 \$3.96 \$2.50 \$2.18 \$4.68 \$3.77 \$2.08 \$2.81 \$3.23 \$2.92 \$1.82 \$1.86 \$3.63 \$1.42 \$1.89	2024 \$3.26 \$1.76 \$2.96 \$4.21 \$2.75 \$2.37 \$5.02 \$3.86 \$2.22 \$2.98 \$3.42 \$3.08 \$1.89 \$2.01 \$3.86 \$1.55 \$2.05	2025 \$3.46 \$1.87 \$3.19 \$4.47 \$3.01 \$2.56 \$5.38 \$3.96 \$2.38 \$3.16 \$3.63 \$3.27 \$1.97 \$2.17 \$4.11 \$1.69 \$2.22	2026 \$3.67 \$1.99 \$3.44 \$4.75 \$3.28 \$2.75 \$5.75 \$4.06 \$2.55 \$3.33 \$3.86 \$3.46 \$2.05 \$2.33 \$4.37 \$1.84 \$2.41	2027 \$3.89 \$2.11 \$3.68 \$5.04 \$3.57 \$2.95 \$6.14 \$4.17 \$2.73 \$3.49 \$4.12 \$3.68 \$2.12 \$2.49 \$4.65 \$1.99 \$2.60	2028 \$4.12 \$2.24 \$3.93 \$5.35 \$3.86 \$3.14 \$6.55 \$4.28 \$2.92 \$3.64 \$4.40 \$3.91 \$2.20 \$2.64 \$4.94 \$2.14 \$2.81	2029 \$4.35 \$2.36 \$4.15 \$5.64 \$4.07 \$3.32 \$6.90 \$4.51 \$3.08 \$3.83 \$4.64 \$4.12 \$2.32 \$2.79 \$5.21 \$2.26 \$2.97	2030 \$4.58 \$2.49 \$4.37 \$5.94 \$4.29 \$3.50 \$7.28 \$4.76 \$3.24 \$4.04 \$4.89 \$4.35 \$2.45 \$2.45 \$2.45 \$2.38 \$3.13	2031 \$4.83 \$2.62 \$4.61 \$6.27 \$4.53 \$3.69 \$7.67 \$5.02 \$3.42 \$4.26 \$5.16 \$4.58 \$2.58 \$3.10 \$5.79 \$2.51 \$3.30	2032 \$5.10 \$2.76 \$4.86 \$6.61 \$4.77 \$3.89 \$8.09 \$5.29 \$3.61 \$4.50 \$5.44 \$4.83 \$2.72 \$3.27 \$6.11 \$2.65 \$3.48	Terminal Value \$174.00 \$94.41 \$166.04 \$225.72 \$162.94 \$132.75 \$276.36 \$180.68 \$123.19 \$153.53 \$185.74 \$165.10 \$92.90 \$111.56 \$208.58 \$90.46 \$118.74

Projected Ar	nnual Data
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Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Initial																
Company	Ticker	Outflow	3/16/18	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	(\$74.59)	\$0.00	\$1.85	\$2.40	\$2.57	\$2.70	\$2.88	\$3.06	\$3.26	\$3.46	\$3.67	\$3.89	\$4.12	\$4.35	\$4.58	\$4.83	\$179.10
Alliant Energy Corporation	LNT	(\$41.63)	\$0.00	\$0.95	\$1.24	\$1.36	\$1.45	\$1.55	\$1.65	\$1.76	\$1.87	\$1.99	\$2.11	\$2.24	\$2.36	\$2.49	\$2.62	\$97.17
Ameren Corporation	AEE	(\$58.34)	\$0.00	\$1.50	\$1.96	\$2.16	\$2.31	\$2.52	\$2.73	\$2.96	\$3.19	\$3.44	\$3.68	\$3.93	\$4.15	\$4.37	\$4.61	\$170.90
American Electric Power Company, Inc.	AEP	(\$71.29)	\$0.00	\$2.47	\$3.20	\$3.37	\$3.50	\$3.73	\$3.96	\$4.21	\$4.47	\$4.75	\$5.04	\$5.35	\$5.64	\$5.94	\$6.27	\$232.33
Black Hills Corporation	BKH	(\$62.19)	\$0.00	\$1.26	\$1.64	\$1.87	\$2.04	\$2.26	\$2.50	\$2.75	\$3.01	\$3.28	\$3.57	\$3.86	\$4.07	\$4.29	\$4.53	\$167.72
CMS Energy Corporation	CMS	(\$46.64)	\$0.00	\$1.13	\$1.48	\$1.67	\$1.82	\$1.99	\$2.18	\$2.37	\$2.56	\$2.75	\$2.95	\$3.14	\$3.32	\$3.50	\$3.69	\$136.63
DTE Energy Company	DTE	(\$108.14)	\$0.00	\$2.70	\$3.51	\$3.81	\$4.04	\$4.35	\$4.68	\$5.02	\$5.38	\$5.75	\$6.14	\$6.55	\$6.90	\$7.28	\$7.67	\$284.45
Duke Energy Corporation	DUK	(\$83.84)	\$0.00	\$2.41	\$3.11	\$3.41	\$3.61	\$3.69	\$3.77	\$3.86	\$3.96	\$4.06	\$4.17	\$4.28	\$4.51	\$4.76	\$5.02	\$185.97
El Paso Electric Company	EE	(\$54.30)	\$0.00	\$1.09	\$1.41	\$1.66	\$1.82	\$1.94	\$2.08	\$2.22	\$2.38	\$2.55	\$2.73	\$2.92	\$3.08	\$3.24	\$3.42	\$126.79
Hawaiian Electric Industries, Inc.	HE	(\$34.36)	\$0.00	\$1.48	\$1.94	\$2.23	\$2.44	\$2.63	\$2.81	\$2.98	\$3.16	\$3.33	\$3.49	\$3.64	\$3.83	\$4.04	\$4.26	\$158.03
IDACORP, Inc.	IDA	(\$88.56)	\$0.00	\$1.93	\$2.48	\$2.73	\$2.89	\$3.05	\$3.23	\$3.42	\$3.63	\$3.86	\$4.12	\$4.40	\$4.64	\$4.89	\$5.16	\$191.17
NorthWestern Corporation	NWE	(\$57.95)	\$0.00	\$1.85	\$2.38	\$2.52	\$2.62	\$2.76	\$2.92	\$3.08	\$3.27	\$3.46	\$3.68	\$3.91	\$4.12	\$4.35	\$4.58	\$169.93
OGE Energy Corp.	OGE	(\$34.33)	\$0.00	\$1.03	\$1.33	\$1.54	\$1.67	\$1.75	\$1.82	\$1.89	\$1.97	\$2.05	\$2.12	\$2.20	\$2.32	\$2.45	\$2.58	\$95.62
Otter Tail Corporation	OTTR	(\$42.98)	\$0.00	\$1.09	\$1.43	\$1.49	\$1.55	\$1.70	\$1.86	\$2.01	\$2.17	\$2.33	\$2.49	\$2.64	\$2.79	\$2.94	\$3.10	\$114.83
Pinnacle West Capital Corporation	PNW	(\$85.18)	\$0.00	\$2.24	\$2.89	\$3.07	\$3.20	\$3.41	\$3.63	\$3.86	\$4.11	\$4.37	\$4.65	\$4.94	\$5.21	\$5.49	\$5.79	\$214.69
PNM Resources, Inc.	PNM	(\$40.22)	\$0.00	\$0.76	\$1.00	\$1.10	\$1.17	\$1.29	\$1.42	\$1.55	\$1.69	\$1.84	\$1.99	\$2.14	\$2.26	\$2.38	\$2.51	\$93.10
Portland General Electric Company	POR	(\$45.11)	\$0.00	\$1.14	\$1.47	\$1.54	\$1.59	\$1.73	\$1.89	\$2.05	\$2.22	\$2.41	\$2.60	\$2.81	\$2.97	\$3.13	\$3.30	\$122.22
Southern Company	SO	(\$48.18)	\$0.00	\$1.92	\$2.46	\$2.50	\$2.54	\$2.62	\$2.71	\$2.81	\$2.91	\$3.02	\$3.14	\$3.26	\$3.44	\$3.63	\$3.83	\$141.86
WEC Energy Group, Inc.	WEC	(\$64.44)	\$0.00	\$1.77	\$2.30	\$2.48	\$2.61	\$2.77	\$2.93	\$3.10	\$3.28	\$3.46	\$3.66	\$3.85	\$4.06	\$4.29	\$4.52	\$167.48
Xcel Energy Inc.	XEL	(\$47.55)	\$0.00	\$1.25	\$1.62	\$1.84	\$2.00	\$2.11	\$2.24	\$2.36	\$2.49	\$2.63	\$2.77	\$2.91	\$3.07	\$3.24	\$3.41	\$126.56

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

						LOV	w EFS Glowii	i Nate Est	mate in Fil	isi Slage								
Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]				
		Stock	EP	S Growth Ra		_	_ Long-Term	F	Payout Rat	io	Iterative	Solution	Terminal	Terminal				
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2018	2021	2028	Proof	IRR	P/F Ratio	PEG Ratio				
ALLETE, Inc.	ALE	\$74.59	6.10%	5.00%	4.50%	4.50%	5.45%	66.00%	64.00%	65.91%	(\$0.00)	8.30%	22.51	4.13				
Alliant Energy Corporation	LNT	\$41.63	5.30%	5.45%	6.50%	5.30%	5.45%	64.00%	64.00%	65.91%	\$0.00	8.28%	22.51	4.13				
Ameren Corporation	AEE	\$58.34	6.90%	6.40%	7.50%	6.40%	5.45%	61.00%	60.00%	65.91%	(\$0.00)	10.32%	22.51	4.13				
American Electric Power Company, Inc.	AEP	\$71.29	5.40%	5.63%	4.50%	4.50%	5.45%	66.00%	63.00%	65.91%	(\$0.00)	11.57%	22.51	4.13				
Black Hills Corporation	BKH	\$62.19	4.60%	3.50%	7.50%	3.50%	5.45%	52.00%	54.00%	65.91%	\$0.00	7.38%	22.51	4.13				
CMS Energy Corporation	CMS	\$46.64	6.30%	7.04%	8.50%	6.30%	5.45%	61.00%	61.00%	65.91%	\$0.00	9.53%	22.51	4.13				
DTE Energy Company	DTE	\$108.14	6.00%	7.04% 5.58%	6.50%	5.58%	5.45% 5.45%	62.00%	61.00%	65.91%	\$0.00	9.53%	22.51	4.13				
Duke Energy Company Duke Energy Corporation	DUK	\$83.84	3.70%	4.24%	4.50%	3.70%	5.45% 5.45%	75.00%	78.00%	65.91%	\$0.00	8.52%	22.51	4.13				
El Paso Electric Company	EE	\$54.30	5.10%	5.20%	5.00%	5.00%	5.45% 5.45%	52.00%	59.00%	65.91%	\$0.00	8.85%	22.51	4.13				
Hawaiian Electric Industries, Inc.	HE	\$34.36	6.70%	8.50%	1.50%	1.50%	5.45% 5.45%	69.00%	71.00%	65.91%	\$0.00	10.74%	22.51	4.13				
IDACORP, Inc.	IDA	\$88.56	4.10%	3.10%	3.50%	3.10%	5.45% 5.45%	57.00%	60.00%	65.91%	\$0.00	7.70%	22.51	4.13				
•					4.50%	3.10% 2.40%				65.91%			22.51					
NorthWestern Corporation	NWE OGE	\$57.95	2.40%	3.12% 5.80%	4.50% 2.50%		5.45% 5.45%	63.00% 68.00%	62.00% 74.00%	65.91%	\$0.00	9.85%	22.51	4.13 4.13				
OGE Energy Corp.		\$34.33	6.00%			2.50%					\$0.00	8.55%						
Otter Tail Corporation	OTTR	\$42.98	NA	9.00%	7.00%	7.00%	5.45%	72.00%	63.00%	65.91%	\$0.00	8.91%	22.51	4.13				
Pinnacle West Capital Corporation	PNW	\$85.18	3.00%	3.63%	5.50%	3.00%	5.45%	64.00%	62.00%	65.91%	\$0.00	8.10%	22.51	4.13				
PNM Resources, Inc.	PNM	\$40.22	5.80%	5.80%	7.50%	5.80%	5.45%	57.00%	56.00%	65.91%	\$0.00	7.65%	22.51	4.13				
Portland General Electric Company	POR	\$45.11	2.90%	3.50%	6.00%	2.90%	5.45%	59.00%	55.00%	65.91%	\$0.00	8.17%	22.51	4.13				
Southern Company	SO	\$48.18	4.50%	2.70%	4.00%	2.70%	5.45%	78.00%	72.00%	65.91%	\$0.00	10.49%	22.51	4.13				
WEC Energy Group, Inc.	WEC	\$64.44	4.20%	4.34%	6.00%	4.20%	5.45%	67.00%	66.00%	65.91%	\$0.00	8.95%	22.51	4.13				
Xcel Energy Inc.	XEL	\$47.55	5.80%	6.15%	4.50%	4.50%	5.45%	63.00%	67.00%	65.91%	\$0.00	9.25%	22.51	4.13				
											Mean Max							
											Min							
Projected Annual												1.0070						
Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	
Company	Ticker	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
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	\$5.50	\$5.80	\$6.11	\$6.44	
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	\$3.43	\$3.61	
Ameren Corporation	AEE	\$2.68	\$2.85	\$3.03	\$3.23	\$3.43	\$3.65	\$3.89	\$4.13	\$4.38	\$4.64	\$4.91	\$5.18	\$5.47	\$5.76	\$6.08	\$6.41	
American Electric Power Company, Inc.	AEP	\$4.23	\$4.42	\$4.62	\$4.83	\$5.04	\$5.27	\$5.51	\$5.77	\$6.04	\$6.34	\$6.67	\$7.02	\$7.40	\$7.81	\$8.23	\$8.68	
Black Hills Corporation	BKH	\$2.63	\$2.72	\$2.82	\$2.92	\$3.02	\$3.12	\$3.23	\$3.36	\$3.50	\$3.65	\$3.83	\$4.02	\$4.24	\$4.47	\$4.72	\$4.97	
CMS Energy Corporation	CMS	\$1.98	\$2.10	\$2.24	\$2.38	\$2.53	\$2.69	\$2.86	\$3.03	\$3.22	\$3.40	\$3.60	\$3.80	\$4.01	\$4.23	\$4.46	\$4.70	
DTE Energy Company	DTE	\$4.83	\$5.10	\$5.38	\$5.68	\$6.00	\$6.34	\$6.69	\$7.06	\$7.45	\$7.86	\$8.30	\$8.75	\$9.23	\$9.73	\$10.26	\$10.82	
Duke Energy Corporation	DUK	\$3.71	\$3.85	\$3.99	\$4.14	\$4.29	\$4.45	\$4.61	\$4.80	\$5.00	\$5.23	\$5.49	\$5.77	\$6.08	\$6.41	\$6.76	\$7.13	
El Paso Electric Company	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	\$4.36	\$4.59	\$4.84	\$5.11	
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	
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	\$6.49	\$6.84	\$7.21	
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	\$4.74	\$4.99	\$5.27	\$5.55	\$5.86	
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	
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	\$3.81	\$4.01	
Dinnada Wast Capital Corporation	DVIVV	<u></u> ቀ2 0E	¢4.07	¢4.40	ቀ 4 22	ΦΛ Λ Ε	ΦΛ Ε Ο	¢4 72	Φ1 OO	የ ፍ ዕር	የ ደ ጋር	¢E E 2	የ ፍ ዕለ	CC 12	CC 15	የ ራ ያለ	ウフィフ	

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XEL

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Pinnacle West Capital Corporation

Portland General Electric Company

PNM Resources, Inc.

Southern Company

Xcel Energy Inc.

WEC Energy Group, Inc.

[30]

\$6.79 \$3.81 \$6.76 \$9.15 \$5.24 \$4.95 \$11.41 \$7.52 \$5.39 \$3.87 \$7.60 \$6.18 \$3.10 \$4.23

\$7.56

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\$4.78

Projected Annual	
Dividend Payout Ratio	

WEC Energy Group, Inc. Xcel Energy Inc.

WEC

XEL

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%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	-
Alliant Energy Corporation	LNT	64.00%	64.00%	64.00%	64.00%	64.27%	64.54%	64.82%	65.09%	65.36%	65.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
Ameren Corporation	AEE	61.00%	60.67%	60.33%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
•	AEP									65.08%	65.49%					65.91%	
American Electric Power Company, Inc.		66.00%	65.00%	64.00%	63.00%	63.42%	63.83%	64.25%	64.66%			65.91%	65.91%	65.91%	65.91%		
Black Hills Corporation	BKH	52.00%	52.67%	53.33%	54.00%	55.70%	57.40%	59.10%	60.80%	62.50%	64.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
DTE Energy Company	DTE	62.00%	61.67%	61.33%	61.00%	61.70%	62.40%	63.10%	63.80%	64.50%	65.21%	65.91%	65.91%	65.91%	65.91%	65.91%	
Duke Energy Corporation	DUK	75.00%	76.00%	77.00%	78.00%	76.27%	74.54%	72.82%	71.09%	69.36%	67.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
El Paso Electric Company	EE	52.00%	54.33%	56.67%	59.00%	59.99%	60.97%	61.96%	62.95%	63.93%	64.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Hawaiian Electric Industries, Inc.	HE	69.00%	69.67%	70.33%	71.00%	70.27%	69.54%	68.82%	68.09%	67.36%	66.63%	65.91%	65.91%	65.91%	65.91%	65.91%	
IDACORP, Inc.	IDA	57.00%	58.00%	59.00%	60.00%	60.84%	61.69%	62.53%	63.37%	64.22%	65.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
NorthWestern Corporation	NWE	63.00%	62.67%	62.33%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
OGE Energy Corp.	OGE	68.00%	70.00%	72.00%	74.00%	72.84%	71.69%	70.53%	69.37%	68.22%	67.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Otter Tail Corporation	OTTR	72.00%	69.00%	66.00%	63.00%	63.42%	63.83%	64.25%	64.66%	65.08%	65.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Pinnacle West Capital Corporation	PNW	64.00%	63.33%	62.67%	62.00%	62.56%	63.12%	63.67%	64.23%	64.79%	65.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
PNM Resources, Inc.	PNM	57.00%	56.67%	56.33%	56.00%	57.42%	58.83%	60.25%	61.66%	63.08%	64.49%	65.91%	65.91%	65.91%	65.91%	65.91%	
Portland General Electric Company	POR	59.00%	57.67%	56.33%	55.00%	56.56%	58.12%	59.67%	61.23%	62.79%	64.35%	65.91%	65.91%	65.91%	65.91%	65.91%	
Southern Company	SO	78.00%	76.00%	74.00%	72.00%	71.13%	70.26%	69.39%	68.52%	67.65%	66.78%	65.91%	65.91%	65.91%	65.91%	65.91%	
WEC Energy Group, Inc.	WEC	67.00%	66.67%	66.33%	66.00%	65.99%	65.97%	65.96%	65.95%	65.93%	65.92%	65.91%	65.91%	65.91%	65.91%	65.91%	
Kcel Energy Inc.	XEL	63.00%	64.33%	65.67%	67.00%	66.84%	66.69%	66.53%	66.37%	66.22%	66.06%	65.91%	65.91%	65.91%	65.91%	65.91%	
Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[6
Sasii i lows		[+0]	[77]	[۳۰]	[40]	[50]	[51]	[02]	[55]	[04]	[55]	[JO]	[57]	[50]	[55]	[OO]	Terr
Company	Ticker	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Va
ALLETE, Inc.	ALE	\$2.26	\$2.34	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$4.48	\$152
Alliant Energy Corporation	LNT	\$1.17	\$1.23	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$2.51	\$85
Ameren Corporation	AEE	\$1.85	\$1.96	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$4.45	\$152
American Electric Power Company, Inc.	AEP	\$3.05	\$3.14	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$6.03	\$206
Black Hills Corporation	BKH	\$1.47	\$1.54	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$118
CMS Energy Corporation	CMS	\$1.36	\$1.45	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$3.26	\$11
DTE Energy Company	DTE	\$3.34	\$3.51	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$7.52	\$256
Duke Energy Corporation	DUK	\$2.99	\$3.14	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$4.96	\$169
El Paso Electric Company	EE	\$1.37	\$1.50	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$3.55	\$12°
Hawaiian Electric Industries, Inc.	HE	\$1.63	\$1.67	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$2.55	\$87
DACORP, Inc.	IDA	\$2.39	\$2.50	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$5.01	\$17°
NorthWestern Corporation	NWE	\$2.24	\$2.28	\$2.32	\$2.73	\$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.7 <i>9</i> \$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$4.07	\$13
OGE Energy Corp.	OGE	\$1.21	\$2.20 \$1.27	\$2.32 \$1.34	\$2.37 \$1.41	\$2.43 \$1.43	\$2.5 4 \$1.45	\$2.03 \$1.47	\$2.76 \$1.51	\$2.92 \$1.55	\$3.10 \$1.60	\$3.29 \$1.65	\$3.47 \$1.74	\$3.86 \$1.84	\$3.86 \$1.94	\$2.05	\$69
	OTTR	\$1.21 \$1.32		\$1.34 \$1.38	\$1.41 \$1.41	•			\$1.87	\$1.55 \$2.00	\$1.60 \$2.13	\$1.05 \$2.26	\$1.74 \$2.38		\$1.94 \$2.65	\$2.05 \$2.79	эоэ \$95
Otter Tail Corporation			\$1.35			\$1.52	\$1.64	\$1.75						\$2.51 \$4.49			
Pinnacle West Capital Corporation	PNW	\$2.68	\$2.73	\$2.79	\$2.84	\$2.95	\$3.08	\$3.22	\$3.39	\$3.58	\$3.79	\$4.03	\$4.25	\$4.48	\$4.73	\$4.98	\$17
PNM Resources, Inc.	PNM	\$0.93	\$0.98	\$1.03	\$1.08	\$1.18	\$1.27	\$1.38	\$1.49	\$1.61	\$1.74	\$1.87	\$1.97	\$2.08	\$2.19	\$2.31	\$78
Portland General Electric Company	POR	\$1.35	\$1.36	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.88	\$2.02	\$2.19	\$2.30	\$2.43	\$2.56	\$2.70	\$92
Southern Company	SO	\$2.33	\$2.33	\$2.33	\$2.33	\$2.36	\$2.41	\$2.46	\$2.53	\$2.61	\$2.71	\$2.82	\$2.97	\$3.13	\$3.30	\$3.48	\$118
WEC Energy Group, Inc.	WEC	\$2.15	\$2.23	\$2 31	\$2.40	\$2.50	\$2.61	\$2 73	\$2.86	\$3.00	\$3 16	\$3 33	\$3 51	\$3.70	\$3 91	\$4 12	\$140

\$1.62

\$2.23 \$2.31

\$2.15

\$1.52

\$1.73

\$2.40

\$1.85

\$2.50 \$2.61

\$1.92 \$2.01

\$2.73 \$2.86

\$2.10 \$2.20

\$3.00

\$2.31

\$3.16

\$2.42

\$3.33

\$2.55

\$3.51

\$2.69

\$3.70

\$2.83

\$3.91

\$2.99

\$4.12

\$3.15

\$140.68

\$107.63

Projected Annual Data
Investor Cash Flows

Investor Cash Flows		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
0.000	Talan	Initial	0/40/40	40/04/40	0/00/40	0/00/00	0/00/04	0/00/00	0/00/00	0/00/04	0/00/05	0/00/00	0/00/07	0/00/00	0/00/00	0/00/00	0/00/04	0/00/00
Company	Ticker	Outflow	3/16/18	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	(\$74.59)	\$0.00	\$1.80	\$2.31	\$2.42	\$2.50	\$2.63	\$2.76	\$2.91	\$3.06	\$3.24	\$3.42	\$3.62	\$3.82	\$4.03	\$4.25	\$157.40
Alliant Energy Corporation	LNT	(\$41.63)	\$0.00	\$0.93	\$1.20	\$1.30	\$1.37	\$1.45	\$1.53	\$1.62	\$1.71	\$1.81	\$1.92	\$2.03	\$2.14	\$2.26	\$2.38	\$88.25
Ameren Corporation	AEE	(\$58.34)	\$0.00	\$1.47	\$1.91	\$2.07	\$2.19	\$2.37	\$2.55	\$2.74	\$2.94	\$3.15	\$3.37	\$3.60	\$3.80	\$4.01	\$4.22	\$156.57
American Electric Power Company, Inc.	AEP	(\$71.29)	\$0.00	\$2.42	\$3.12	\$3.23	\$3.32	\$3.49	\$3.68	\$3.88	\$4.10	\$4.34	\$4.60	\$4.88	\$5.15	\$5.43	\$5.72	\$212.04
Black Hills Corporation	BKH	(\$62.19)	\$0.00	\$1.16	\$1.49	\$1.61	\$1.69	\$1.80	\$1.93	\$2.07	\$2.22	\$2.39	\$2.58	\$2.80	\$2.95	\$3.11	\$3.28	\$121.50
CMS Energy Corporation	CMS	(\$46.64)	\$0.00	\$1.08	\$1.41	\$1.54	\$1.64	\$1.76	\$1.89	\$2.03	\$2.17	\$2.32	\$2.48	\$2.64	\$2.78	\$2.94	\$3.10	\$114.76
DTE Energy Company	DTE	(\$108.14)	\$0.00	\$2.65	\$3.43	\$3.68	\$3.87	\$4.13	\$4.41	\$4.70	\$5.02	\$5.35	\$5.70	\$6.08	\$6.41	\$6.76	\$7.13	\$264.22
Duke Energy Corporation	DUK	(\$83.84)	\$0.00	\$2.38	\$3.05	\$3.30	\$3.47	\$3.52	\$3.58	\$3.64	\$3.72	\$3.81	\$3.90	\$4.01	\$4.23	\$4.46	\$4.70	\$174.23
El Paso Electric Company	EE	(\$54.30)	\$0.00	\$1.09	\$1.40	\$1.65	\$1.80	\$1.92	\$2.05	\$2.19	\$2.34	\$2.51	\$2.68	\$2.87	\$3.03	\$3.19	\$3.37	\$124.76
Hawaiian Electric Industries, Inc.	HE	(\$34.36)	\$0.00	\$1.29	\$1.64	\$1.71	\$1.75	\$1.76	\$1.78	\$1.81	\$1.85	\$1.91	\$1.98	\$2.06	\$2.18	\$2.29	\$2.42	\$89.67
IDACORP, Inc.	IDA	(\$88.56)	\$0.00	\$1.90	\$2.42	\$2.63	\$2.75	\$2.88	\$3.02	\$3.18	\$3.36	\$3.57	\$3.79	\$4.05	\$4.27	\$4.51	\$4.75	\$176.14
NorthWestern Corporation	NWE	(\$57.95)	\$0.00	\$1.78	\$2.27	\$2.32	\$2.37	\$2.45	\$2.54	\$2.65	\$2.78	\$2.92	\$3.10	\$3.29	\$3.47	\$3.66	\$3.86	\$143.05
OGE Energy Corp.	OGE	(\$34.33)	\$0.00	\$0.96	\$1.22	\$1.34	\$1.41	\$1.43	\$1.45	\$1.47	\$1.51	\$1.55	\$1.60	\$1.65	\$1.74	\$1.84	\$1.94	\$71.91
Otter Tail Corporation	OTTR	(\$42.98)	\$0.00	\$1.05	\$1.37	\$1.38	\$1.41	\$1.52	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.26	\$2.38	\$2.51	\$2.65	\$98.06
Pinnacle West Capital Corporation	PNW	(\$85.18)	\$0.00	\$2.13	\$2.72	\$2.79	\$2.84	\$2.95	\$3.08	\$3.22	\$3.39	\$3.58	\$3.79	\$4.03	\$4.25	\$4.48	\$4.73	\$175.14
PNM Resources, Inc.	PNM	(\$40.22)	\$0.00	\$0.74	\$0.96	\$1.03	\$1.08	\$1.18	\$1.27	\$1.38	\$1.49	\$1.61	\$1.74	\$1.87	\$1.97	\$2.08	\$2.19	\$81.29
Portland General Electric Company	POR	(\$45.11)	\$0.00	\$1.07	\$1.37	\$1.36	\$1.37	\$1.45	\$1.54	\$1.64	\$1.75	\$1.88	\$2.02	\$2.19	\$2.30	\$2.43	\$2.56	\$94.99
Southern Company	SO	(\$48.18)	\$0.00	\$1.85	\$2.36	\$2.33	\$2.33	\$2.36	\$2.41	\$2.46	\$2.53	\$2.61	\$2.71	\$2.82	\$2.97	\$3.13	\$3.30	\$122.42
WEC Energy Group, Inc.	WEC	(\$64.44)	\$0.00	\$1.71	\$2.20	\$2.31	\$2.40	\$2.50	\$2.61	\$2.73	\$2.86	\$3.00	\$3.16	\$3.33	\$3.51	\$3.70	\$3.91	\$144.80
Xcel Energy Inc.	XEL	(\$47.55)	\$0.00	\$1.21	\$1.55	\$1.73	\$1.85	\$1.92	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$110.78

Multi-Stage DCF Notes:

```
[1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of March 16, 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 - 3/16/2018) / 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]
```

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

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-day	Implied Market
Market Return	average)	Risk Premium
14.62%	3.13%	11.49%

-			[4] Market	[5]	[6]	[7]	[8]	[9]
Company	Ticker		apitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
AGILENT TECHNOLOGIES INC AMERICAN AIRLINES GROUP INC	A AAL	\$ \$	22,541.11 26,211.88	0.09% 0.11%	0.86% 0.72%	6.85% 18.86%	7.74% 19.65%	0.0070% 0.0208%
ADVANCE AUTO PARTS INC	AAP	φ \$	8,628.07	0.03%	0.72%	16.24%	16.46%	0.0208%
APPLE INC	AAPL	\$	903,275.79	3.65%	1.51%	12.24%	13.85%	0.5050%
ABBVIE INC AMERISOURCEBERGEN CORP	ABBV ABC	\$ \$	180,568.37 21,222.23	0.73% 0.09%	2.93% 1.58%	11.91% 9.76%	15.01% 11.41%	0.1095% 0.0098%
ABBOTT LABORATORIES	ABT	\$	110,333.38	0.45%	1.78%	12.67%	14.56%	0.0649%
ACCENTURE PLC-CL A	ACN	\$	103,550.33	0.42%	1.66%	10.85%	12.60%	0.0527%
ADOBE SYSTEMS INC ANALOG DEVICES INC	ADBE ADI	\$ \$	111,271.37 34,817.01	0.45% 0.14%	0.00% 2.00%	18.66% 9.68%	18.66% 11.77%	0.0838% 0.0165%
ARCHER-DANIELS-MIDLAND CO	ADM	\$	24,309.51	0.10%	3.08%	7.40%	10.60%	0.0104%
AUTOMATIC DATA PROCESSING	ADP	\$	51,933.47	0.21%	2.07%	12.23%	14.42%	0.0302%
ALLIANCE DATA SYSTEMS CORP AUTODESK INC	ADS ADSK	\$ \$	12,705.63 29,901.22	0.05% 0.12%	1.00% 0.00%	15.13% 53.87%	16.20% 53.87%	0.0083% 0.0650%
AMEREN CORPORATION	AEE	\$	13,463.80	0.05%	3.37%	8.45%	11.96%	0.0065%
AMERICAN ELECTRIC POWER	AEP	\$	33,382.46	0.13%	3.72%	5.12%	8.94%	0.0120%
AES CORP AETNA INC	AES AET	\$ \$	7,159.74 56,858.57	0.03% 0.23%	4.89% 1.16%	8.08% 11.51%	13.16% 12.74%	0.0038% 0.0292%
AFLAC INC	AFL	\$	35,262.41	0.14%	2.28%	5.00%	7.33%	0.0104%
ALLERGAN PLC	AGN	\$	55,349.10	0.22%	1.72%	8.88%	10.68%	0.0239%
AMERICAN INTERNATIONAL GROUP APARTMENT INVT & MGMT CO -A	AIG AIV	\$ \$	49,004.06 6,401.77	0.20% 0.03%	2.64% 3.73%	11.00% 5.78%	13.78% 9.61%	0.0273% 0.0025%
ASSURANT INC	AIZ	\$	4,719.11	N/A	2.52%	N/A	N/A	N/A
ARTHUR J GALLAGHER & CO	AJG	\$	12,883.06	0.05%	2.28%	11.67%	14.08%	0.0073%
AKAMAI TECHNOLOGIES INC ALBEMARLE CORP	AKAM ALB	\$ \$	12,585.74 10,883.50	0.05% 0.04%	0.00% 1.35%	11.50% 11.70%	11.50% 13.12%	0.0058% 0.0058%
ALIGN TECHNOLOGY INC	ALGN	\$	21,669.37	0.09%	0.00%	38.00%	38.00%	0.0332%
ALASKA AIR GROUP INC	ALK	\$	8,205.60	0.03%	1.91%	11.40%	13.42%	0.0044%
ALLSTATE CORP ALLEGION PLC	ALL ALLE	\$ \$	34,570.30 8,174.52	0.14% 0.03%	1.79% 0.89%	6.87% 11.55%	8.72% 12.50%	0.0122% 0.0041%
ALEXION PHARMACEUTICALS INC	ALLE	φ \$	28,098.12	0.03%	0.00%	19.46%	19.46%	0.0041%
APPLIED MATERIALS INC	AMAT	\$	62,452.87	0.25%	1.18%	11.88%	13.12%	0.0331%
ADVANCED MICRO DEVICES AMETEK INC	AMD AME	\$	11,115.94	0.04% 0.07%	0.00%	23.55%	23.55%	0.0106% 0.0093%
AFFILIATED MANAGERS GROUP	AMG	\$ \$	18,201.41 10,485.07	0.07%	0.71% 0.61%	11.85% 14.72%	12.60% 15.37%	0.0093%
AMGEN INC	AMGN	\$	135,638.64	0.55%	2.69%	5.25%	8.01%	0.0439%
AMERICAN TOWER CORR	AMP	\$	22,951.15	0.09%	2.32%	7.20%	9.60%	0.0089%
AMERICAN TOWER CORP AMAZON.COM INC	AMT AMZN	\$ \$	64,606.83 760,861.58	0.26% 3.07%	2.14% 0.00%	15.58% 31.94%	17.89% 31.94%	0.0467% 0.9813%
ANDEAVOR	ANDV	\$	15,177.88	0.06%	2.49%	21.38%	24.13%	0.0148%
ANSYS INC	ANSS	\$	13,948.65	0.06%	0.00%	11.70%	11.70%	0.0066%
ANTHEM INC AON PLC	ANTM AON	\$ \$	58,332.72 35,934.97	0.24% 0.15%	1.29% 1.06%	11.47% 11.18%	12.83% 12.30%	0.0302% 0.0178%
SMITH (A.O.) CORP	AOS	\$	11,259.43	0.05%	1.08%	15.00%	16.16%	0.0073%
APACHE CORP	APA	\$	13,785.52	0.06%	2.76%	-19.13%	-16.63%	-0.0093%
ANADARKO PETROLEUM CORP AIR PRODUCTS & CHEMICALS INC	APC APD	\$ \$	31,166.48 37,123.35	0.13% 0.15%	0.84% 2.47%	1.27% 13.90%	2.11% 16.55%	0.0027% 0.0248%
AMPHENOL CORP-CL A	APH	\$	28,104.51	0.11%	0.84%	10.54%	11.42%	0.0130%
APTIV PLC	APTV	\$	23,669.80	0.10%	1.16%	10.69%	11.92%	0.0114%
ALEXANDRIA REAL ESTATE EQUIT ARCONIC INC	ARE ARNC	\$ \$	12,982.87 11,856.89	0.05% 0.05%	2.86% 0.96%	6.78% 17.30%	9.73% 18.35%	0.0051% 0.0088%
ACTIVISION BLIZZARD INC	ATVI	\$	54,378.72	0.22%	0.47%	15.88%	16.39%	0.0360%
AVALONBAY COMMUNITIES INC	AVB	\$	22,889.33	0.09%	3.56%	6.24%	9.92%	0.0092%
BROADCOM LTD AVERY DENNISON CORP	AVGO AVY	\$ \$	104,688.36 9,834.78	0.42% 0.04%	2.75% 1.63%	13.25% 6.15%	16.18% 7.83%	0.0684% 0.0031%
AMERICAN WATER WORKS CO INC	AWK	φ \$	14,669.83	0.06%	2.18%	7.85%	10.12%	0.0060%
AMERICAN EXPRESS CO	AXP	\$	82,251.26	0.33%	1.52%	10.17%	11.76%	0.0391%
ACUITY BRANDS INC AUTOZONE INC	AYI AZO	\$ \$	6,329.22 17,738.16	0.03% 0.07%	0.35% 0.00%	11.00% 15.54%	11.37% 15.54%	0.0029% 0.0111%
BOEING CO/THE	BA	\$ \$	194,060.05	0.78%	2.10%	18.00%	20.29%	0.1590%
BANK OF AMERICA CORP	BAC	\$	328,906.81	1.33%	1.86%	15.65%	17.65%	0.2345%
BAXTER INTERNATIONAL INC BB&T CORP	BAX BBT	\$ \$	36,670.02 42,785.93	0.15% 0.17%	1.06% 2.64%	12.90% 14.24%	14.03% 17.07%	0.0208% 0.0295%
BEST BUY CO INC	BBY	Ф \$	20,383.93	0.17%	2.52%	9.22%	11.85%	0.0295%
BECTON DICKINSON AND CO	BDX	\$	59,443.96	0.24%	1.35%	13.50%	14.94%	0.0358%
FRANKLIN RESOURCES INC BROWN-FORMAN CORP-CLASS B	BEN BF/B	\$ \$	21,510.92 26,419.98	0.09% 0.11%	3.32% 1.97%	10.00% 13.70%	13.49% 15.80%	0.0117% 0.0169%
BRIGHTHOUSE FINANCIAL INC	BHF	Ф \$	6,555.18	0.11%	0.00%	8.00%	8.00%	0.0021%
BAKER HUGHES A GE CO	BHGE	\$	34,926.18	0.14%	2.10%	45.93%	48.51%	0.0684%
BIOGEN INC	BIIB	\$	60,849.66	0.25%	0.00%	4.92%	4.92%	0.0121%
BANK OF NEW YORK MELLON CORP BOOKING HOLDINGS INC	BK BKNG	\$ \$	55,415.07 104,858.19	0.22% 0.42%	1.89% 0.00%	8.80% 15.88%	10.78% 15.88%	0.0241% 0.0672%
BLACKROCK INC	BLK	\$	91,485.16	0.37%	2.06%	12.19%	14.37%	0.0531%
BALL CORP	BLL	\$	14,232.43	0.06%	1.00%	5.40%	6.43%	0.0037%
BRISTOL-MYERS SQUIBB CO BERKSHIRE HATHAWAY INC-CL B	BMY BRK/B	\$ \$	108,863.19 510,805.62	0.44% 2.06%	2.43% 0.00%	9.38% 6.70%	11.93% 6.70%	0.0524% 0.1382%
BOSTON SCIENTIFIC CORP	BSX	\$	38,401.26	0.16%	0.00%	9.12%	9.12%	0.0141%
BORGWARNER INC	BWA	\$	10,841.02	0.04%	1.29%	5.81%	7.13%	0.0031%
BOSTON PROPERTIES INC CITIGROUP INC	BXP C	\$ \$	19,625.82 188,107.12	0.08% 0.76%	2.56% 2.01%	6.12% 14.04%	8.76% 16.19%	0.0069% 0.1230%
CA INC	CA	\$	14,921.72	0.06%	2.87%	2.80%	5.71%	0.0034%
CONAGRA BRANDS INC	CAG	\$	14,668.19	0.06%	2.29%	8.95%	11.34%	0.0067%
CARDINAL HEALTH INC CATERPILLAR INC	CAH CAT	\$ \$	22,328.46 93,504.53	0.09% 0.38%	2.61% 2.02%	13.72% 20.40%	16.51% 22.62%	0.0149% 0.0854%
CHUBB LTD	CB	\$	65,427.58	0.26%	2.10%	8.73%	10.91%	0.0288%

			[4] Market	[5]	[6] Estimated	[7] Long-Term	[8]	[9] Weighted
Company CBRE GROUP INC - A	Ticker CBG		apitalization 16,099.48	Weight in Index 0.07%	Dividend Yield 0.00%	Growth Est. 13.00%	DCF Result 13.00%	DCF Result 0.0085%
CBOE GLOBAL MARKETS INC	CBOE	\$	13,436.68	0.05%	0.98%	22.34%	23.42%	0.0127%
CBS CORP-CLASS B NON VOTING	CBS	\$	19,515.36	0.08%	1.53%	13.54%	15.17%	0.0120%
CROWN CASTLE INTL CORP CARNIVAL CORP	CCI CCL	\$ \$	45,232.45 47,614.76	0.18% 0.19%	3.91% 2.70%	19.23% 12.71%	23.51% 15.59%	0.0429% 0.0300%
CADENCE DESIGN SYS INC	CDNS	\$	10,915.91	0.04%	0.00%	12.00%	12.00%	0.0053%
CELGENE CORP CERNER CORP	CELG CERN	\$ \$	67,402.46 20,374.91	0.27% 0.08%	0.00% 0.00%	17.80% 10.07%	17.80% 10.07%	0.0484% 0.0083%
CF INDUSTRIES HOLDINGS INC	CF	\$	8,942.08	0.04%	3.13%	12.70%	16.03%	0.0058%
CITIZENS FINANCIAL GROUP CHURCH & DWIGHT CO INC	CFG CHD	\$ \$	21,883.86 12,208.77	0.09% 0.05%	2.14% 1.75%	17.91% 11.31%	20.24% 13.15%	0.0179% 0.0065%
CHESAPEAKE ENERGY CORP	CHK	\$	2,782.28	0.01%	0.00%	-12.51%	-12.51%	-0.0014%
C.H. ROBINSON WORLDWIDE INC	CHRW	\$ \$	12,876.45	0.05%	2.08%	9.95%	12.13%	0.0063%
CHARTER COMMUNICATIONS INC-A CIGNA CORP	CHTR CI	\$ \$	90,195.54 41,026.86	0.36% 0.17%	0.00% 0.02%	6.52% 12.30%	6.52% 12.33%	0.0237% 0.0204%
CINCINNATI FINANCIAL CORP	CINF	\$	12,320.44	N/A	2.76%	N/A	N/A	N/A
COLGATE-PALMOLIVE CO CLOROX COMPANY	CL CLX	\$ \$	60,940.25 16,627.12	0.25% 0.07%	2.41% 2.67%	8.47% 7.66%	10.98% 10.43%	0.0270% 0.0070%
COMERICA INC	CMA	\$	17,081.49	0.07%	1.42%	22.57%	24.15%	0.0167%
COMCAST CORP-CLASS A CME GROUP INC	CMCSA CME	\$ \$	166,412.72 56,204.42	0.67% 0.23%	2.10% 3.84%	10.00% 17.35%	12.20% 21.52%	0.0820% 0.0488%
CHIPOTLE MEXICAN GRILL INC	CMG	\$	8,943.27	0.04%	0.00%	25.05%	25.05%	0.0090%
CUMMINS INC CMS ENERGY CORP	CMI CMS	\$ \$	26,836.52 12,505.58	0.11% 0.05%	2.68% 3.22%	10.24% 6.57%	13.06% 9.89%	0.0142% 0.0050%
CENTENE CORP	CNC	\$	18,482.98	0.07%	0.00%	16.22%	16.22%	0.0121%
CENTERPOINT ENERGY INC CAPITAL ONE FINANCIAL CORP	CNP COF	\$ \$	11,714.43 48,327.21	0.05% 0.20%	4.12% 1.70%	7.01% 16.46%	11.27% 18.29%	0.0053% 0.0357%
CAPITAL ONE PINANCIAL CORP	COG	φ \$	11,515.05	0.25%	0.97%	36.74%	37.89%	0.0357 %
ROCKWELL COLLINS INC	COL	\$	22,244.95	0.09%	0.97%	10.55%	11.57%	0.0104%
COOPER COS INC/THE CONOCOPHILLIPS	COO COP	\$ \$	11,554.07 64,519.54	0.05% 0.26%	0.03% 2.08%	10.73% 6.00%	10.77% 8.14%	0.0050% 0.0212%
COSTCO WHOLESALE CORP	COST	\$	81,563.52	0.33%	1.09%	10.93%	12.08%	0.0398%
COTY INC-CL A CAMPBELL SOUP CO	COTY CPB	\$ \$	14,112.45 13,101.63	0.06% 0.05%	2.66% 3.34%	16.71% 5.10%	19.59% 8.52%	0.0112% 0.0045%
SALESFORCE.COM INC	CRM	\$	92,147.06	0.37%	0.00%	26.75%	26.75%	0.0995%
CISCO SYSTEMS INC CSRA INC	CSCO CSRA	\$ \$	216,836.46 6,663.59	0.88% 0.03%	2.77% 0.98%	6.24% 7.70%	9.10% 8.72%	0.0797% 0.0023%
CSX CORP	CSX	\$	50,501.48	0.20%	1.53%	15.28%	16.93%	0.0345%
CINTAS CORP CENTURYLINK INC	CTAS CTL	\$ \$	18,452.38 18,326.73	0.07% 0.07%	0.94% 12.61%	12.23% -4.70%	13.23% 7.61%	0.0099% 0.0056%
COGNIZANT TECH SOLUTIONS-A	CTSH	\$	49,749.14	0.20%	0.88%	14.25%	15.19%	0.0305%
CITRIX SYSTEMS INC CVS HEALTH CORP	CTXS CVS	\$ \$	12,952.03 66,604.04	0.05% 0.27%	0.00% 3.36%	10.85% 11.90%	10.85%	0.0057% 0.0416%
CHEVRON CORP	CVX	\$	220,443.23	0.89%	3.88%	27.68%	15.46% 32.09%	0.2857%
CONCHO RESOURCES INC	CXO	\$ \$	22,135.09	N/A	0.00%	N/A	N/A	N/A
DOMINION ENERGY INC DELTA AIR LINES INC	D DAL	\$ \$	46,004.16 40,074.92	0.19% 0.16%	4.72% 2.28%	6.61% 19.40%	11.49% 21.90%	0.0213% 0.0354%
DEERE & CO	DE	\$	53,062.35	0.21%	1.50%	7.67%	9.22%	0.0198%
DISCOVER FINANCIAL SERVICES DOLLAR GENERAL CORP	DFS DG	\$ \$	27,060.75 25,915.31	0.11% 0.10%	1.95% 1.19%	7.98% 13.41%	10.01% 14.68%	0.0109% 0.0154%
QUEST DIAGNOSTICS INC	DGX	\$	14,153.81	0.06%	1.86%	9.70%	11.65%	0.0067%
DR HORTON INC DANAHER CORP	DHI DHR	\$ \$	16,450.29 71,103.26	0.07% 0.29%	1.11% 0.58%	20.24% 9.32%	21.47% 9.92%	0.0143% 0.0285%
WALT DISNEY CO/THE	DIS	\$	154,683.10	0.62%	1.64%	8.65%	10.36%	0.0647%
DISCOVERY COMMUNICATIONS-A DISH NETWORK CORP-A	DISCA DISH	\$ \$	15,810.83 19,013.55	0.06% 0.08%	0.00% 0.00%	11.00% -8.23%	11.00% -8.23%	0.0070% -0.0063%
DIGITAL REALTY TRUST INC	DLR	\$	22,787.91	0.09%	3.79%	7.15%	11.08%	0.0102%
DOLLAR TREE INC DOVER CORP	DLTR DOV	\$ \$	22,724.92 15,468.23	0.09% 0.06%	0.00% 1.93%	13.95% 13.53%	13.95% 15.59%	0.0128% 0.0097%
DR PEPPER SNAPPLE GROUP INC	DPS	\$	21,137.90	0.09%	2.11%	10.10%	12.32%	0.0105%
DUKE REALTY CORP DARDEN RESTAURANTS INC	DRE DRI	\$ \$	9,328.16 11,680.12	0.04% 0.05%	3.08% 2.68%	4.49% 10.25%	7.63% 13.06%	0.0029% 0.0062%
DTE ENERGY COMPANY	DTE	\$	18,377.15	0.07%	3.50%	5.67%	9.27%	0.0069%
DUKE ENERGY CORP DAVITA INC	DUK DVA	\$ \$	54,359.97 12,504.14	0.22% 0.05%	4.71% 0.00%	3.89% 18.33%	8.69% 18.33%	0.0191% 0.0093%
DEVON ENERGY CORP	DVN	\$	16,814.16	0.07%	0.84%	18.22%	19.14%	0.0130%
DOWDUPONT INC DXC TECHNOLOGY CO	DWDP DXC	\$ ¢	158,280.44 29,857.24	0.64% 0.12%	2.41% 0.69%	7.52% 14.95%	10.02% 15.69%	0.0641% 0.0189%
ELECTRONIC ARTS INC	EA	\$	39,420.68	0.16%	0.00%	13.57%	13.57%	0.0216%
EBAY INC ECOLAB INC	EBAY ECL	\$	42,972.90	0.17% 0.16%	0.00% 1.20%	10.03% 12.38%	10.03% 13.65%	0.0174% 0.0220%
CONSOLIDATED EDISON INC	ED	\$	39,885.57 24,040.25	0.10%	3.68%	3.57%	7.32%	0.0220%
EQUIFAX INC	EFX	\$	14,830.49	0.06%	1.31%	9.00%	10.37%	0.0062%
EDISON INTERNATIONAL ESTEE LAUDER COMPANIES-CL A	EIX EL	\$ \$	21,226.60 53,794.77	0.09% 0.22%	3.69% 1.01%	4.68% 12.57%	8.46% 13.65%	0.0072% 0.0296%
EASTMAN CHEMICAL CO	EMN	\$	15,410.38	0.06%	2.03%	9.40%	11.53%	0.0072%
EMERSON ELECTRIC CO EOG RESOURCES INC	EMR EOG	\$ \$	45,949.54 58,124.17	0.19% 0.23%	2.70% 0.70%	11.73% 7.30%	14.58% 8.02%	0.0271% 0.0188%
EQUINIX INC	EQIX	\$	33,267.08	0.13%	2.16%	22.04%	24.43%	0.0328%
EQUITY RESIDENTIAL EQT CORP	EQR EQT	\$ \$	22,174.85 13,342.66	0.09% 0.05%	3.57% 0.23%	6.20% 17.50%	9.88% 17.75%	0.0088% 0.0096%
EVERSOURCE ENERGY	ES	\$	18,461.77	0.07%	3.48%	5.68%	9.26%	0.0069%
EXPRESS SCRIPTS HOLDING CO ESSEX PROPERTY TRUST INC	ESRX ESS	\$ \$	42,665.22 16,092.04	0.17% 0.06%	0.00% 3.03%	7.99% 5.80%	7.99% 8.92%	0.0138% 0.0058%
E*TRADE FINANCIAL CORP	ETFC	\$	15,258.29	0.06%	0.00%	29.58%	29.58%	0.0182%
EATON CORP PLC ENTERGY CORP	ETN ETR	\$ ¢	35,477.59 14,259.17	0.14% 0.06%	3.15% 4.58%	9.20% 3.15%	12.49% 7.80%	0.0179% 0.0045%
ENVISION HEALTHCARE CORP	EVHC	\$	4,717.32	0.02%	0.00%	2.74%	2.74%	0.0005%
EDWARDS LIFESCIENCES CORP EXELON CORP	EW EXC	\$ ¢	29,894.77 37,037.83	0.12% 0.15%	0.00% 3.59%	16.60% 3.67%	16.60% 7.33%	0.0200% 0.0110%
EXPEDITORS INTL WASH INC	EXPD	\$	11,312.78	0.05%	1.39%	8.50%	9.95%	0.0045%
EXPEDIA INC EXTRA SPACE STORAGE INC	EXPE EXR	\$	17,187.54	0.07%	1.08% 3.80%	18.78% 5.72%	19.96% 9.63%	0.0139%
FORD MOTOR CO	F	Ф \$	10,836.71 44,302.87	0.04% 0.18%	5.96%	5.72% -8.36%	9.63% -2.64%	0.0042% -0.0047%
FASTENAL CO	FAST	\$	16,787.11	0.07%	2.50%	17.55%	20.27%	0.0137%
FACEBOOK INC-A	FB	Ф	542,230.18	2.19%	0.00%	24.60%	24.60%	0.5385%

			[4] Market	[5]	[6] Estimated	[7] Long-Term	[8]	[9] Weighted
Company FORTUNE BRANDS HOME & SECURI	Ticker FBHS	Ca	apitalization 9,188.96	Weight in Index 0.04%	Dividend Yield 1.25%	Growth Est. 12.03%	DCF Result 13.36%	DCF Result 0.0050%
FREEPORT-MCMORAN INC	FCX	φ \$	26,582.43	0.04%	0.59%	-0.11%	0.47%	0.0050%
FEDEX CORP FIRSTENERGY CORP	FDX FE	\$ \$	67,516.22 16,117.74	0.27% 0.07%	0.79% 4.25%	14.05% -2.83%	14.89% 1.36%	0.0406% 0.0009%
F5 NETWORKS INC	FFIV	\$	9,164.11	0.04%	0.00%	10.03%	10.03%	0.0037%
FIDELITY NATIONAL INFO SERV FISERV INC	FIS FISV	\$ \$	33,329.89 30,668.87	0.13% 0.12%	1.27% 0.00%	12.00% 7.65%	13.35% 7.65%	0.0180% 0.0095%
FIFTH THIRD BANCORP	FITB	φ \$	23,165.03	0.12%	2.19%	5.65%	7.90%	0.0095%
FOOT LOCKER INC FLIR SYSTEMS INC	FL FLIR	\$	5,346.38 6,936.26	0.02% N/A	3.05% 1.28%	5.42% N/A	8.56% N/A	0.0018% N/A
FLUOR CORP	FLR	э \$	8,064.63	0.03%	1.51%	21.31%	22.98%	0.0075%
FLOWSERVE CORP FMC CORP	FLS FMC	\$ \$	5,825.74	0.02% 0.04%	1.78% 0.90%	15.89%	17.81%	0.0042% 0.0064%
TWENTY-FIRST CENTURY FOX-A	FOXA	Ф \$	11,066.64 68,387.73	0.04%	1.01%	13.48% 8.75%	14.43% 9.81%	0.0064%
FEDERAL REALTY INVS TRUST	FRT	\$	8,628.69	0.03%	3.48%	4.33%	7.89%	0.0027%
TECHNIPFMC PLC FORTIVE CORP	FTI FTV	\$ \$	13,840.81 27,226.52	0.06% 0.11%	1.81% 0.37%	4.55% 10.64%	6.41% 11.03%	0.0036% 0.0121%
GENERAL DYNAMICS CORP	GD	\$	66,138.99	0.27%	1.68%	10.92%	12.69%	0.0339%
GENERAL ELECTRIC CO GGP INC	GE GGP	\$ \$	124,261.06 20,786.42	0.50% 0.08%	3.75% 4.20%	4.03% 4.56%	7.86% 8.86%	0.0394% 0.0074%
GILEAD SCIENCES INC	GILD	\$	104,299.92	0.42%	2.82%	2.79%	5.64%	0.0238%
GENERAL MILLS INC CORNING INC	GIS GLW	\$ \$	28,731.02 25,052.31	0.12% 0.10%	3.95% 2.35%	8.13% 6.95%	12.25% 9.38%	0.0142% 0.0095%
GENERAL MOTORS CO	GM	\$	53,135.89	0.21%	4.02%	5.28%	9.40%	0.0202%
ALPHABET INC-CL A GENUINE PARTS CO	GOOGL GPC	\$ \$	789,248.48 13,320.57	3.19% 0.05%	0.00% 3.15%	19.89% 8.29%	19.89% 11.57%	0.6338% 0.0062%
GLOBAL PAYMENTS INC	GPN	\$	18,824.67	0.08%	0.03%	22.05%	22.09%	0.0168%
GAP INC/THE GARMIN LTD	GPS GRMN	\$ \$	12,342.32 11,312.04	0.05% 0.05%	3.04% 3.49%	8.22% 6.30%	11.38% 9.90%	0.0057% 0.0045%
GOLDMAN SACHS GROUP INC	GS	э \$	105,565.11	0.43%	1.18%	12.88%	14.14%	0.0603%
GOODYEAR TIRE & RUBBER CO	GT	\$	6,856.05	N/A	1.87%	N/A	N/A	N/A
WW GRAINGER INC HALLIBURTON CO	GWW HAL	\$ \$	16,186.49 40,167.11	0.07% 0.16%	1.88% 1.59%	13.03% 75.82%	15.04% 78.02%	0.0098% 0.1265%
HASBRO INC	HAS	\$	10,895.35	0.04%	2.84%	8.93%	11.90%	0.0052%
HUNTINGTON BANCSHARES INC HANESBRANDS INC	HBAN HBI	\$ \$	17,250.21 7,098.97	0.07% 0.03%	2.86% 3.05%	11.82% 8.40%	14.85% 11.58%	0.0103% 0.0033%
HCA HEALTHCARE INC	HCA	\$	35,959.60	0.15%	0.39%	11.75%	12.16%	0.0177%
HCP INC HOME DEPOT INC	HCP HD	\$ \$	10,890.94 208,980.29	0.04% 0.84%	6.46% 2.25%	2.14% 14.58%	8.66% 17.00%	0.0038% 0.1434%
HESS CORP	HES	\$ \$	15,431.33	0.06%	2.23%	-11.08%	-9.09%	-0.0057%
HARTFORD FINANCIAL SVCS GRP	HIG	\$	19,252.01	0.08%	1.92%	9.50%	11.51%	0.0089%
HUNTINGTON INGALLS INDUSTRIE HILTON WORLDWIDE HOLDINGS IN	HII HLT	\$ \$	11,379.62 25,766.79	0.05% 0.10%	1.11% 0.81%	27.50% 5.51%	28.76% 6.34%	0.0132% 0.0066%
HARLEY-DAVIDSON INC	HOG	\$	7,433.78	0.03%	3.42%	9.60%	13.19%	0.0040%
HOLOGIC INC HONEYWELL INTERNATIONAL INC	HOLX HON	\$ \$	10,631.40 113,589.23	0.04% 0.46%	0.00% 1.99%	6.14% 9.48%	6.14% 11.57%	0.0026% 0.0531%
HELMERICH & PAYNE	HP	\$	7,028.44	N/A	4.34%	N/A	N/A	N/A
HEWLETT PACKARD ENTERPRISE HP INC	HPE HPQ	\$ \$	29,184.72 38,496.83	0.12% 0.16%	1.96% 2.39%	5.12% 7.19%	7.13% 9.67%	0.0084% 0.0150%
H&R BLOCK INC	HRB	\$	5,658.92	0.02%	3.55%	11.00%	14.74%	0.0034%
HORMEL FOODS CORP HARRIS CORP	HRL HRS	\$ \$	17,739.39 18,582.40	0.07% N/A	2.23% 1.46%	8.00% N/A	10.32% N/A	0.0074% N/A
HENRY SCHEIN INC	HSIC	\$ \$	10,382.40	0.04%	0.00%	9.88%	9.88%	0.0042%
HOST HOTELS & RESORTS INC	HST	\$ \$	14,080.24	0.06%	4.26%	3.70%	8.04%	0.0046%
HERSHEY CO/THE HUMANA INC	HSY HUM	\$ \$	21,263.07 37,660.52	0.09% 0.15%	2.70% 0.69%	9.33% 12.76%	12.16% 13.49%	0.0104% 0.0205%
INTL BUSINESS MACHINES CORP	IBM	\$	147,626.37	0.60%	3.86%	1.28%	5.16%	0.0307%
INTERCONTINENTAL EXCHANGE IN IDEXX LABORATORIES INC	ICE IDXX	\$ \$	43,398.39 17,836.65	0.18% 0.07%	1.25% 0.00%	12.39% 16.66%	13.72% 16.66%	0.0240% 0.0120%
INTL FLAVORS & FRAGRANCES	IFF	\$	10,950.42	0.04%	2.05%	8.20%	10.33%	0.0046%
ILLUMINA INC INCYTE CORP	ILMN INCY	\$ \$	37,324.77 19,068.24	0.15% 0.08%	0.00% 0.00%	15.51% 44.67%	15.51% 44.67%	0.0234% 0.0344%
IHS MARKIT LTD	INFO	\$	20,717.47	0.08%	0.00%	12.23%	12.23%	0.0102%
INTEL CORP INTUIT INC	INTC INTU	\$ \$	238,861.56 45,738.87	0.96% 0.18%	2.26% 0.86%	8.16% 16.03%	10.52% 16.96%	0.1014% 0.0313%
INTERNATIONAL PAPER CO	IP	\$	22,534.16	0.09%	3.59%	7.85%	11.58%	0.0105%
INTERPUBLIC GROUP OF COS INC IPG PHOTONICS CORP	IPG IPGP	\$ \$	9,065.79 13,346.46	0.04% 0.05%	3.56% 0.00%	4.85% 23.50%	8.50% 23.50%	0.0031% 0.0127%
IQVIA HOLDINGS INC	IQV	\$	22,012.07	0.09%	0.00%	14.84%	14.84%	0.0132%
INGERSOLL-RAND PLC IRON MOUNTAIN INC	IR IRM	\$	22,360.09	0.09% N/A	2.00% 7.07%	10.17% N/A	12.27% N/A	0.0111% N/A
INTUITIVE SURGICAL INC	ISRG	Ф \$	9,278.33 49,279.25	0.20%	0.00%	10.20%	10.20%	0.0203%
GARTNER INC	IT IT\	\$	11,265.21	0.05%	0.00%	15.00%	15.00%	0.0068%
ILLINOIS TOOL WORKS INVESCO LTD	ITW IVZ	\$ \$	58,390.66 13,517.30	0.24% 0.05%	2.03% 3.69%	9.67% 12.31%	11.80% 16.22%	0.0278% 0.0089%
HUNT (JB) TRANSPRT SVCS INC	JBHT	\$	13,203.47	0.05%	0.80%	14.30%	15.15%	0.0081%
JOHNSON CONTROLS INTERNATION JACOBS ENGINEERING GROUP INC	JCI JEC	\$ \$	33,988.07 8,634.87	0.14% 0.03%	2.81% 1.00%	10.40% 15.97%	13.36% 17.04%	0.0183% 0.0059%
JOHNSON & JOHNSON	JNJ	\$	358,615.27	1.45%	2.70%	7.17%	9.97%	0.1444%
JUNIPER NETWORKS INC JPMORGAN CHASE & CO	JNPR JPM	\$ \$	9,037.36 396,185.29	0.04% 1.60%	2.48% 2.12%	7.10% 9.40%	9.66% 11.62%	0.0035% 0.1859%
NORDSTROM INC	JWN	\$	8,236.44	0.03%	3.15%	8.05%	11.33%	0.0038%
KELLOGG CO KEYCORP	K KEY	\$ ¢	23,027.48 22,232.01	0.09% 0.09%	3.35% 2.42%	7.64% 15.75%	11.12% 18.36%	0.0103% 0.0165%
KRAFT HEINZ CO/THE	KHC	φ \$	79,661.70	0.09%	2.42% 3.94%	7.10%	11.18%	0.0165%
KIMCO REALTY CORP	KIM	\$	6,178.05	0.02%	7.80%	16.44%	24.88%	0.0062%
KLA-TENCOR CORP KIMBERLY-CLARK CORP	KLAC KMB	\$ \$	18,891.52 39,286.12	0.08% 0.16%	2.05% 3.57%	8.40% 16.91%	10.53% 20.78%	0.0080% 0.0330%
KINDER MORGAN INC	KMI	\$	36,201.55	0.15%	4.81%	18.00%	23.24%	0.0340%
CARMAX INC COCA-COLA CO/THE	KMX KO	\$ \$	11,369.91 185,335.15	0.05% 0.75%	0.00% 3.59%	13.77% 8.42%	13.77% 12.16%	0.0063% 0.0910%
MICHAEL KORS HOLDINGS LTD	KORS	\$	9,366.96	0.04%	0.00%	6.06%	6.06%	0.0023%
KROGER CO KOHLS CORP	KR KSS	\$ \$	20,879.46 10,606.14	0.08% 0.04%	2.58% 3.83%	5.79% 7.00%	8.45% 10.96%	0.0071% 0.0047%
KANSAS CITY SOUTHERN	KSU	\$	10,873.19	0.04%	1.38%	13.00%	14.47%	0.0064%
LOEWS CORP	L	\$	16,822.70	N/A	0.49%	N/A	N/A	N/A

			[4] Market	[5]	[6] Estimated	[7] Long-Term	[8]	[9] Weighted
Company	Ticker		apitalization	Weight in Index	Dividend Yield	Growth Est.	DCF Result	DCF Result
L BRANDS INC LEGGETT & PLATT INC	LB LEG	\$ \$	11,448.68 6,101.50	0.05% 0.02%	6.03% 3.21%	10.15% 11.00%	16.49% 14.39%	0.0076% 0.0035%
LENNAR CORP-A	LEN	\$	18,803.72	0.08%	0.27%	18.95%	19.24%	0.0146%
LABORATORY CRP OF AMER HLDGS	LH	\$	17,713.28	0.07%	0.00%	9.68%	9.68%	0.0069%
LKQ CORP L3 TECHNOLOGIES INC	LKQ LLL	\$ \$	12,245.49 16,064.07	0.05% 0.06%	0.00% 1.59%	13.00% 10.72%	13.00% 12.39%	0.0064% 0.0080%
ELI LILLY & CO	LLY	\$	88,184.65	0.36%	2.84%	9.93%	12.91%	0.0460%
LOCKHEED MARTIN CORP	LMT	\$	94,638.14	0.38%	2.47%	21.24%	23.97%	0.0916%
LINCOLN NATIONAL CORP ALLIANT ENERGY CORP	LNC LNT	\$ \$	16,666.15 9,284.33	0.07% 0.04%	1.76% 3.34%	8.00% 5.50%	9.83% 8.93%	0.0066% 0.0033%
LOWE'S COS INC	LOW	\$	72,189.17	0.29%	2.07%	16.60%	18.84%	0.0549%
LAM RESEARCH CORP	LRCX	\$	36,162.42	0.15%	1.00%	7.60%	8.64%	0.0126%
LEUCADIA NATIONAL CORP SOUTHWEST AIRLINES CO	LUK LUV	\$ \$	8,781.63 35,806.21	0.04% 0.14%	1.62% 0.90%	18.00% 15.04%	19.77% 16.01%	0.0070% 0.0231%
LYONDELLBASELL INDU-CL A	LYB	\$	42,288.55	0.17%	3.47%	6.90%	10.49%	0.0179%
MACY'S INC	M	\$	8,808.72	0.04%	5.56%	4.50%	10.19%	0.0036%
MASTERCARD INC - A MID-AMERICA APARTMENT COMM	MA MAA	\$ \$	191,930.32 10,448.02	0.77% 0.04%	0.54% 4.04%	20.55% 7.00%	21.15% 11.19%	0.1639% 0.0047%
MACERICH CO/THE	MAC	\$	8,300.42	0.03%	5.07%	5.09%	10.28%	0.0034%
MARRIOTT INTERNATIONAL -CL A	MAR	\$	50,344.28	0.20%	1.00%	15.18%	16.26%	0.0330%
MASCO CORP MATTEL INC	MAS MAT	\$ \$	13,027.68 4,766.77	0.05% 0.02%	1.04% 0.00%	16.27% 9.73%	17.40% 9.73%	0.0092% 0.0019%
MCDONALD'S CORP	MCD	\$	128,994.68	0.52%	2.52%	8.48%	11.11%	0.0578%
MICROCHIP TECHNOLOGY INC	MCHP	\$	23,007.80	0.09%	1.48%	14.29%	15.87%	0.0147%
MCKESSON CORP MOODY'S CORP	MCK MCO	\$ \$	31,431.67 31,972.46	0.13% 0.13%	0.85% 1.05%	14.73% 8.00%	15.64% 9.09%	0.0199% 0.0117%
MONDELEZ INTERNATIONAL INC-A	MDLZ	\$	64,237.72	0.26%	2.12%	11.42%	13.67%	0.0354%
MEDTRONIC PLC	MDT	\$	110,178.31	0.44%	2.29%	6.60%	8.97%	0.0399%
METLIFE INC MGM RESORTS INTERNATIONAL	MET MGM	\$ \$	49,053.93 20,383.56	0.20% 0.08%	3.48% 1.32%	36.55% 10.99%	40.67% 12.38%	0.0805% 0.0102%
MOHAWK INDUSTRIES INC	MHK	\$	18,450.07	0.07%	0.00%	9.82%	9.82%	0.0073%
MCCORMICK & CO-NON VTG SHRS	MKC	\$	14,123.54	0.06%	1.93%	9.00%	11.02%	0.0063%
MARTIN MARIETTA MATERIALS MARSH & MCLENNAN COS	MLM MMC	\$ \$	13,012.78 42,807.71	0.05% 0.17%	0.87% 1.87%	14.57% 13.29%	15.51% 15.28%	0.0081% 0.0264%
3M CO	MMM	\$	141,264.51	0.57%	2.28%	8.80%	11.18%	0.0638%
MONSTER BEVERAGE CORP	MNST	\$	33,213.86	0.13%	0.00%	18.25%	18.25%	0.0245%
ALTRIA GROUP INC MONSANTO CO	MO MON	\$ \$	120,089.40 51,913.11	0.48% 0.21%	4.68% 1.99%	2.57% 8.25%	7.30% 10.33%	0.0354% 0.0216%
MOSAIC CO/THE	MOS	\$	10,054.40	0.04%	0.38%	13.65%	14.06%	0.0057%
MARATHON PETROLEUM CORP	MPC	\$	33,055.55	0.13%	2.61%	15.24%	18.05%	0.0241%
MERCK & CO. INC. MARATHON OIL CORP	MRK MRO	\$ \$	150,096.93 12,848.31	0.61% 0.05%	3.47% 1.32%	6.42% 5.00%	10.00% 6.36%	0.0606% 0.0033%
MORGAN STANLEY	MS	\$	103,049.09	0.42%	1.91%	14.78%	16.83%	0.0700%
MICROSOFT CORP	MSFT	\$	728,400.40	2.94%	1.78%	11.08%	12.96%	0.3811%
MOTOROLA SOLUTIONS INC M & T BANK CORP	MSI MTB	\$ \$	17,555.10 28,271.72	0.07% 0.11%	1.94% 1.73%	4.07% -5.16%	6.05% -3.48%	0.0043% -0.0040%
METTLER-TOLEDO INTERNATIONAL	MTD	\$	15,623.52	0.06%	0.00%	12.53%	12.53%	0.0079%
MICRON TECHNOLOGY INC	MU	\$	70,049.56	0.28%	0.00%	10.00%	10.00%	0.0283%
MYLAN NV NAVIENT CORP	MYL NAVI	\$ \$	21,481.84 3,558.38	0.09% 0.01%	0.00% 4.81%	4.19% -6.00%	4.19% -1.33%	0.0036% -0.0002%
NOBLE ENERGY INC	NBL	\$	14,470.44	0.06%	1.36%	9.95%	11.38%	0.0066%
NORWEGIAN CRUISE LINE HOLDIN NASDAQ INC	NCLH NDAQ	\$ \$	12,567.54 13,986.01	0.05% 0.06%	0.31% 1.95%	20.04% 10.78%	20.37% 12.83%	0.0103% 0.0072%
NEXTERA ENERGY INC	NEE	Ф \$	75,816.66	0.06%	1.95% 2.77%	8.27%	12.63%	0.0072%
NEWMONT MINING CORP	NEM	\$	19,955.90	0.08%	1.32%	-11.20%	-9.96%	-0.0080%
NETFLIX INC NEWFIELD EXPLORATION CO	NFLX NFX	\$ ¢	138,190.89 4,847.26	0.56% 0.02%	0.00% 0.00%	46.79% 21.60%	46.79% 21.60%	0.2610% 0.0042%
NISOURCE INC	NI	\$ \$	7,905.54	0.02%	3.24%	5.24%	8.57%	0.0042 %
NIKE INC -CL B	NKE	\$	107,231.66	0.43%	1.17%	9.13%	10.35%	0.0448%
NIELSEN HOLDINGS PLC NORTHROP GRUMMAN CORP	NLSN NOC	\$ \$	11,947.58 58,951.28	0.05% 0.24%	4.22% 1.38%	9.75% 13.68%	14.18% 15.16%	0.0068% 0.0361%
NATIONAL OILWELL VARCO INC	NOV	\$	14,023.50	N/A	0.50%	N/A	N/A	N/A
NRG ENERGY INC	NRG	\$	9,625.28	0.04%	0.40%	53.92%	54.42%	0.0212%
NORFOLK SOUTHERN CORP NETAPP INC	NSC NTAP	\$ \$	39,359.18 17,128.30	0.16% 0.07%	2.08% 1.25%	14.33% 9.83%	16.56% 11.14%	0.0263% 0.0077%
NORTHERN TRUST CORP	NTRS	\$	24,184.63	0.10%	1.68%	14.77%	16.58%	0.0162%
NUCOR CORP	NUE	\$	21,171.41	0.09%	2.28%	5.00%	7.33%	0.0063%
NVIDIA CORP NEWELL BRANDS INC	NVDA NWL	\$ \$	151,540.40 13,905.83	0.61% 0.06%	0.24% 3.29%	9.68% 4.50%	9.93% 7.87%	0.0608% 0.0044%
NEWS CORP - CLASS A	NWSA	\$	9,753.32	0.04%	1.33%	13.33%	14.75%	0.0058%
REALTY INCOME CORP ONEOK INC	O OKE	\$ \$	14,630.12 23,738.76	0.06% 0.10%	5.12% 5.52%	4.87% 26.19%	10.11% 32.43%	0.0060% 0.0311%
OMNICOM GROUP	OMC	\$ \$	17,035.20	0.10%	3.27%	5.80%	9.17%	0.0063%
ORACLE CORP	ORCL	\$	216,377.00	0.87%	1.46%	8.31%	9.83%	0.0859%
O'REILLY AUTOMOTIVE INC OCCIDENTAL PETROLEUM CORP	ORLY OXY	\$ ¢	21,014.78 49,313.83	0.08% 0.20%	0.00% 4.78%	16.40% 8.05%	16.40% 13.03%	0.0139% 0.0259%
PAYCHEX INC	PAYX	\$ \$	23,760.12	0.20%	2.99%	8.50%	11.62%	0.0239 %
PEOPLE'S UNITED FINANCIAL	PBCT	\$	6,879.29	0.03%	3.50%	2.00%	5.54%	0.0015%
PACCAR INC P G & E CORP	PCAR PCG	\$ ¢	23,850.28 23,214.80	0.10% 0.09%	3.30% 4.03%	7.63% 2.80%	11.06% 6.88%	0.0106% 0.0065%
PATTERSON COS INC	PDCO	\$	2,262.70	0.01%	4.50%	3.97%	8.57%	0.0003%
PUBLIC SERVICE ENTERPRISE GP	PEG	\$	24,879.85	0.10%	3.65%	4.06%	7.78%	0.0078%
PEPSICO INC PFIZER INC	PEP PFE	\$ \$	158,518.56 218,946.37	0.64% 0.88%	3.20% 3.73%	6.92% 5.94%	10.23% 9.78%	0.0655% 0.0865%
PRINCIPAL FINANCIAL GROUP	PFG	\$	17,990.58	0.07%	3.35%	10.00%	13.52%	0.0098%
PROCTER & GAMBLE CO/THE	PG	\$	199,083.37	0.80%	3.57%	7.53%	11.23%	0.0902%
PROGRESSIVE CORP PARKER HANNIFIN CORP	PGR PH	\$ \$	36,062.21 24,309.30	0.15% 0.10%	2.04% 1.47%	9.33% 10.12%	11.47% 11.66%	0.0167% 0.0114%
PULTEGROUP INC	PHM	\$	8,416.34	0.03%	1.25%	19.58%	20.95%	0.0071%
PACKAGING CORP OF AMERICA	PKG	\$	11,181.40	0.05%	2.20%	8.50%	10.79%	0.0049%
PERKINELMER INC PROLOGIS INC	PKI PLD	\$ \$	8,546.41 33,801.80	0.03% 0.14%	0.37% 2.88%	44.49% 6.28%	44.94% 9.25%	0.0155% 0.0126%
PHILIP MORRIS INTERNATIONAL	PM	\$	160,697.17	0.65%	4.21%	11.40%	15.85%	0.1029%
PNC FINANCIAL SERVICES GROUP	PNC	\$	75,487.47	0.30%	2.08%	10.40%	12.59%	0.0384%
PENTAIR PLC PINNACLE WEST CAPITAL	PNR PNW	\$ \$	13,241.00 8,717.03	0.05% 0.04%	1.96% 3.62%	10.34% 2.80%	12.40% 6.47%	0.0066% 0.0023%
		~	5,00	2.2.70	0.0270	,	J. 11 /0	2.00=0/0

			[4] Market	[5]	[6] Estimated	[7] Long-Term	[8]	[9] Weighted
Company	Ticker		apitalization	Weight in Index	Dividend Yield	Growth Est.	DCF Result	DCF Result
PPG INDUSTRIES INC PPL CORP	PPG PPL	\$ \$	28,654.67 19,498.35	0.12% 0.08%	1.60% 5.83%	9.09% 5.47%	10.77% 11.46%	0.0125% 0.0090%
PERRIGO CO PLC	PRGO	\$	11,865.89	0.05%	0.79%	6.62%	7.43%	0.0036%
PRUDENTIAL FINANCIAL INC PUBLIC STORAGE	PRU PSA	\$ \$	45,850.30 34,470.49	0.19% 0.14%	3.15% 4.15%	8.00% 4.27%	11.27% 8.51%	0.0209% 0.0118%
PHILLIPS 66	PSX	\$	44,669.29	0.18%	3.09%	-16.49%	-13.65%	-0.0246%
PVH CORP QUANTA SERVICES INC	PVH PWR	\$ \$	11,060.13 5,453.60	0.04% N/A	0.10% 0.00%	11.32% N/A	11.43% N/A	0.0051% N/A
PRAXAIR INC	PX	\$	44,310.92	0.18%	2.24%	11.00%	13.36%	0.0239%
PIONEER NATURAL RESOURCES CO PAYPAL HOLDINGS INC	PXD PYPL	\$ \$	28,838.74 98,605.18	0.12% 0.40%	0.13% 0.00%	15.00% 18.50%	15.14% 18.50%	0.0176% 0.0737%
QUALCOMM INC	QCOM	\$	89,739.62	0.36%	3.85%	6.01%	9.98%	0.0362%
QORVO INC ROYAL CARIBBEAN CRUISES LTD	QRVO RCL	\$ \$	10,214.36 26,665.19	0.04% 0.11%	0.00% 1.99%	13.35% 18.83%	13.35% 21.01%	0.0055% 0.0226%
EVEREST RE GROUP LTD	RE	\$	10,675.52	0.04%	2.03%	10.00%	12.13%	0.0052%
REGENCY CENTERS CORP REGENERON PHARMACEUTICALS	REG REGN	\$ \$	9,899.31 36,972.31	0.04% 0.15%	3.81% 0.00%	8.58% 14.37%	12.55% 14.37%	0.0050% 0.0214%
REGIONS FINANCIAL CORP	RF	\$	22,039.48	0.09%	2.12%	15.10%	17.38%	0.0155%
ROBERT HALF INTL INC RED HAT INC	RHI RHT	\$ \$	7,386.11 27,288.75	0.03% 0.11%	1.80% 0.00%	10.03% 17.25%	11.92% 17.25%	0.0036% 0.0190%
RAYMOND JAMES FINANCIAL INC	RJF	\$ \$	14,207.65	0.06%	1.05%	17.00%	18.14%	0.0190%
RALPH LAUREN CORP RESMED INC	RL RMD	\$ \$	8,872.77	0.04%	1.83%	5.16%	7.04% 16.77%	0.0025%
ROCKWELL AUTOMATION INC	ROK	\$ \$	14,034.01 23,509.85	0.06% 0.09%	1.46% 1.81%	15.20% 10.92%	12.83%	0.0095% 0.0122%
ROPER TECHNOLOGIES INC	ROP	\$	29,477.26	0.12%	0.57%	13.37%	13.97%	0.0166%
ROSS STORES INC RANGE RESOURCES CORP	ROST RRC	\$ \$	29,329.71 3,755.43	0.12% 0.02%	1.01% 0.53%	14.06% 22.89%	15.14% 23.48%	0.0179% 0.0036%
REPUBLIC SERVICES INC	RSG	\$	22,774.24	0.09%	2.03%	10.18%	12.32%	0.0113%
RAYTHEON COMPANY SBA COMMUNICATIONS CORP	RTN SBAC	\$ \$	60,609.34 19,653.71	0.24% 0.08%	1.65% 0.00%	11.21% 24.90%	12.94% 24.90%	0.0317% 0.0198%
STARBUCKS CORP	SBUX	\$	82,930.40	0.33%	2.13%	15.57%	17.86%	0.0598%
SCANA CORP SCHWAB (CHARLES) CORP	SCG SCHW	\$ \$	5,735.49 75,012.04	0.02% 0.30%	5.35% 0.72%	-7.55% 25.21%	-2.40% 26.02%	-0.0006% 0.0788%
SEALED AIR CORP	SEE	\$	7,381.24	0.03%	1.48%	4.04%	5.55%	0.0017%
SHERWIN-WILLIAMS CO/THE SIGNET JEWELERS LTD	SHW SIG	\$ \$	38,490.20 2,340.14	0.16% 0.01%	0.83% 3.37%	11.12% 2.50%	12.00% 5.91%	0.0186% 0.0006%
JM SMUCKER CO/THE	SJM	\$	14,295.32	0.06%	2.47%	9.00%	11.59%	0.0067%
SCHLUMBERGER LTD SL GREEN REALTY CORP	SLB SLG	\$ \$	91,611.77 9,082.25	0.37% 0.04%	3.09% 3.28%	40.24% 2.21%	43.95% 5.52%	0.1626% 0.0020%
SNAP-ON INC	SNA	\$	8,671.35	0.04%	2.13%	9.27%	11.49%	0.0040%
SYNOPSYS INC SOUTHERN CO/THE	SNPS SO	\$ \$	13,107.14 44,550.57	N/A 0.18%	0.00% 5.40%	N/A 4.20%	N/A 9.72%	N/A 0.0175%
SIMON PROPERTY GROUP INC	SPG	\$	50,334.52	0.20%	5.03%	6.71%	11.91%	0.0242%
S&P GLOBAL INC STERICYCLE INC	SPGI SRCL	\$ \$	48,878.29 5,439.77	0.20% 0.02%	1.01% 0.00%	11.70% 8.18%	12.77% 8.18%	0.0252% 0.0018%
SEMPRA ENERGY	SRE	\$	29,823.81	0.12%	3.17%	21.19%	24.70%	0.0297%
SUNTRUST BANKS INC STATE STREET CORP	STI STT	\$ \$	33,497.51 39,291.10	0.14% 0.16%	2.41% 1.69%	13.21% 16.83%	15.78% 18.66%	0.0213% 0.0296%
SEAGATE TECHNOLOGY	STX	\$	17,115.28	0.07%	4.21%	10.85%	15.28%	0.0106%
CONSTELLATION BRANDS INC-A STANLEY BLACK & DECKER INC	STZ SWK	\$ \$	44,478.59 24,509.89	0.18% 0.10%	0.91% 1.62%	16.52% 11.50%	17.50% 13.21%	0.0314% 0.0131%
SKYWORKS SOLUTIONS INC	SWKS	\$	20,188.07	0.08%	1.18%	10.60%	11.84%	0.0096%
SYNCHRONY FINANCIAL STRYKER CORP	SYF SYK	\$ \$	26,759.64 62,756.29	0.11% 0.25%	1.88% 1.37%	8.40% 8.83%	10.36% 10.26%	0.0112% 0.0260%
SYMANTEC CORP	SYMC	\$	17,011.51	0.07%	1.17%	11.08%	12.31%	0.0085%
SYSCO CORP AT&T INC	SYY T	\$ \$	31,377.76 227,236.71	0.13% 0.92%	2.31% 5.42%	11.62% -1.60%	14.07% 3.78%	0.0178% 0.0347%
MOLSON COORS BREWING CO -B	TAP	\$	17,311.84	0.07%	2.10%	6.25%	8.41%	0.0059%
TRANSDIGM GROUP INC TE CONNECTIVITY LTD	TDG TEL	\$ \$	15,618.70 36,679.99	0.06% 0.15%	0.00% 1.57%	11.28% 10.18%	11.28% 11.82%	0.0071% 0.0175%
TARGET CORP	TGT TIF	\$	38,249.13	0.15%	3.70%	3.05% 11.10%	6.81%	0.0105%
TIFFANY & CO TJX COMPANIES INC	TJX	э \$	12,130.10 51,475.75	0.05% 0.21%	2.10% 1.88%	12.53%	13.31% 14.53%	0.0065% 0.0302%
TORCHMARK CORP THERMO FISHER SCIENTIFIC INC	TMK TMO	\$	9,764.27	0.04%	0.74%	8.00%	8.77%	0.0035%
TAPESTRY INC	TPR	\$ \$	84,551.44 15,033.25	0.34% 0.06%	0.31% 2.59%	12.25% 12.00%	12.58% 14.74%	0.0430% 0.0089%
TRIPADVISOR INC T ROWE PRICE GROUP INC	TRIP TROW	\$ ¢	6,083.33 28,260.79	0.02% 0.11%	0.00% 2.27%	18.06% 14.53%	18.06% 16.97%	0.0044% 0.0194%
TRAVELERS COS INC/THE	TRV	\$ \$	38,358.20	0.15%	2.12%	20.39%	22.72%	0.0352%
TRACTOR SUPPLY COMPANY TYSON FOODS INC-CL A	TSCO TSN	\$ \$	8,055.03 29,664.44	0.03% 0.12%	1.83% 1.70%	13.95% 8.00%	15.92% 9.76%	0.0052% 0.0117%
TOTAL SYSTEM SERVICES INC	TSS	\$ \$	16,349.85	0.07%	0.51%	12.75%	13.29%	0.0088%
TIME WARNER INC TEXAS INSTRUMENTS INC	TWX TXN	\$	75,084.11 108,112.14	0.30% 0.44%	1.71% 2.30%	5.00% 11.38%	6.76% 13.81%	0.0205% 0.0603%
TEXTRON INC	TXT	\$ \$	15,256.59	0.06%	0.16%	11.89%	12.07%	0.0003%
UNDER ARMOUR INC-CLASS A UNITED CONTINENTAL HOLDINGS	UAA UAL	\$	6,653.08 20,179.57	0.03% 0.08%	0.00% 0.00%	24.62% 17.78%	24.62% 17.78%	0.0066% 0.0145%
UDR INC	UDR	\$	9,643.03	0.04%	3.60%	5.66%	9.36%	0.0036%
UNIVERSAL HEALTH SERVICES-B ULTA BEAUTY INC	UHS ULTA	\$ ¢	11,619.42 13,532.99	0.05% 0.05%	0.26% 0.00%	9.11% 18.60%	9.38% 18.60%	0.0044% 0.0102%
UNITEDHEALTH GROUP INC	UNH	\$	220,491.67	0.89%	1.40%	12.59%	14.08%	0.1254%
UNUM GROUP UNION PACIFIC CORP	UNM UNP	\$ ¢	11,125.01 106,889.51	0.04% 0.43%	1.90% 2.04%	5.00% 11.95%	6.95% 14.11%	0.0031% 0.0609%
UNITED PARCEL SERVICE-CL B	UPS	\$	95,561.70	0.39%	3.19%	15.04%	18.47%	0.0712%
UNITED RENTALS INC US BANCORP	URI USB	\$ \$	15,728.03 87,923.25	0.06% 0.36%	0.00% 2.43%	17.76% 8.03%	17.76% 10.56%	0.0113% 0.0375%
UNITED TECHNOLOGIES CORP	UTX	\$	102,675.06	0.41%	2.28%	9.12%	11.50%	0.0477%
VISA INC-CLASS A SHARES VARIAN MEDICAL SYSTEMS INC	V VAR	\$ \$	256,598.83 11,397.92	1.04% 0.05%	0.66% 0.00%	17.57% 11.25%	18.29% 11.25%	0.1895% 0.0052%
VF CORP	VFC	\$	29,934.90	0.12%	2.33%	7.00%	9.41%	0.0114%
VIACOM INC-CLASS B VALERO ENERGY CORP	VIAB VLO	\$ \$	13,090.03 40,627.60	0.05% 0.16%	2.54% 3.40%	6.99% 11.94%	9.62% 15.54%	0.0051% 0.0255%
VULCAN MATERIALS CO	VMC	\$	15,516.34	0.06%	0.92%	20.86%	21.89%	0.0137%
VORNADO REALTY TRUST VERISK ANALYTICS INC	VNO VRSK	\$ \$	13,205.78 17,289.21	0.05% 0.07%	3.65% 0.00%	6.41% 12.11%	10.17% 12.11%	0.0054% 0.0085%
VERISIGN INC	VRSN	\$	12,229.42	0.05%	0.00%	9.90%	9.90%	0.0049%

			[4]	[5]	[6]	[7]	[8]	[9]
			Market		Estimated	Long-Term		Weighted
Company	Ticker	С	apitalization	Weight in Index	Dividend Yield	Growth Est.	DCF Result	DCF Result
VERTEX PHARMACEUTICALS INC	VRTX	\$	44,598.67	0.18%	0.00%	62.61%	62.61%	0.1127%
VENTAS INC	VTR	\$	17,862.73	0.07%	6.33%	3.49%	9.93%	0.0072%
VERIZON COMMUNICATIONS INC	VZ	\$	200,308.81	0.81%	4.92%	2.42%	7.40%	0.0599%
WATERS CORP	WAT	\$	16,795.27	0.07%	0.00%	9.01%	9.01%	0.0061%
WALGREENS BOOTS ALLIANCE IN	IC WBA	\$	66,939.49	0.27%	2.39%	11.16%	13.69%	0.0370%
WESTERN DIGITAL CORP	WDC	\$	31,675.29	0.13%	1.91%	14.08%	16.12%	0.0206%
WEC ENERGY GROUP INC	WEC	\$	19,705.75	0.08%	3.53%	3.09%	6.68%	0.0053%
WELLTOWER INC	WELL	\$	20,070.15	0.08%	6.51%	5.32%	12.00%	0.0097%
WELLS FARGO & CO	WFC	\$	272,573.59	1.10%	2.93%	11.06%	14.15%	0.1557%
WHIRLPOOL CORP	WHR	\$	11,298.07	0.05%	2.94%	12.07%	15.19%	0.0069%
WILLIS TOWERS WATSON PLC	WLTW	\$	21,524.79	0.09%	1.42%	10.00%	11.49%	0.0100%
WASTE MANAGEMENT INC	WM	\$	37,465.09	0.15%	2.11%	13.52%	15.76%	0.0238%
WILLIAMS COS INC	WMB	\$	22,511.58	0.09%	5.02%	-13.30%	-8.62%	-0.0078%
WALMART INC	WMT	\$	264,155.55	1.07%	2.36%	5.74%	8.17%	0.0872%
WESTROCK CO	WRK	\$	16,932.79	0.07%	2.60%	5.20%	7.86%	0.0054%
WESTERN UNION CO	WU	\$	9,204.34	0.04%	3.71%	4.46%	8.25%	0.0031%
WEYERHAEUSER CO	WY	\$	27,083.42	0.11%	3.62%	14.05%	17.92%	0.0196%
WYNDHAM WORLDWIDE CORP	WYN	\$	11,593.85	0.05%	2.18%	19.50%	21.89%	0.0102%
WYNN RESORTS LTD	WYNN	\$	19,033.58	N/A	1.53%	N/A	N/A	N/A
CIMAREX ENERGY CO	XEC	\$	8,826.12	0.04%	0.45%	71.38%	71.99%	0.0257%
XCEL ENERGY INC	XEL	\$	22,420.91	0.09%	3.45%	5.81%	9.36%	0.0085%
XL GROUP LTD	XL	\$	14,254.89	0.06%	1.68%	20.45%	22.30%	0.0128%
XILINX INC	XLNX	\$	19,373.60	0.08%	1.85%	8.53%	10.46%	0.0082%
EXXON MOBIL CORP	XOM	\$	318,318.16	1.29%	4.22%	8.92%	13.33%	0.1713%
DENTSPLY SIRONA INC	XRAY	\$	12,808.04	0.05%	0.64%	10.00%	10.67%	0.0055%
XEROX CORP	XRX	\$	7,920.35	0.03%	3.38%	1.00%	4.39%	0.0014%
XYLEM INC	XYL	\$	14,112.61	0.06%	1.07%	18.00%	19.17%	0.0109%
YUM! BRANDS INC	YUM	\$	27,764.84	0.11%	1.61%	12.13%	13.84%	0.0155%
ZIMMER BIOMET HOLDINGS INC	ZBH	\$	23,733.66	0.10%	0.87%	6.58%	7.48%	0.0072%
ZIONS BANCORPORATION	ZION	\$	10,910.47	0.04%	1.76%	10.10%	11.95%	0.0053%
ZOETIS INC	ZTS	\$	41,052.46	0.17%	0.59%	14.11%	14.74%	0.0244%
	Total Market Capitalization	: \$ 2	24,766,992.99					14.62%

Notes:

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

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

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-day	Implied Market
Market Return	average)	Risk Premium
15.68%	3.13%	12.56%
	S&P 500 Est. Required Market Return	S&P 500 Current 30-Year Est. Required Treasury (30-day Market Return average)

Company				[4]	[5]	[6]	[7]	[8]	[9]
AMERICAN AISH, INC. 6 GROUP PRO APPENDE ALT PARTS INC. APPEND ALT PARTS INC. APPENDE ALT PARTS INC. APPENDE ALT PARTS INC.		Ticker	С						
APPARE, AUTO PARTS BIRC APPL STORM CORP APPEL DO COMPRESSOR CORP AP				,					
APPLE BY APPLE				,					
AMERICAN PROPERTIES NO. AMERICAN PROPERT				,					
AGBOTTILAGONATORIES AGT 3 07761 00 0.45% 127% AGROSTIVE CLA ACM 3 07561 00 0.45% 127% ACCIVITATION CLA ACM 3 0.00586 0.05% ANALOG DEFINES INC AGI 3 3.4,466.21 0.15% 2.07% ALLIANGE SAN STETICLES CORP AGI 3 3.4,466.21 0.15% 2.07% ALLIANGE SAN STETICLES CORP AGI 3 3.4,466.21 0.15% 2.07% ALLIANGE SAN STETICLES CORP AGI 3 15,066.21 0.15% 2.07% ALLIANGE SAN STETICLES CORP AGI 3 15,066.21 0.005% ALLIANGE SAN STETICLES CORP AGI 3 15,066.21				•					
ACCENTIME PLOCAL ACM 3 10.088-10 0.45% 1.75% 1.00.00% 1.00% 1.05% 0.055% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.			-	•					
ANALO DE PUES INC ADI S \$2,295.23 0.55% 2.07% 10.00% 18.24% 0.0025% 0		ACN	\$	•	0.45%	1.75%	10.00%	11.84%	0.0538%
ACCHEROANNELSANDLAND CO ADM \$ 24,199.11 3.10% 2.59% 5.59% 5.59% 0.0002% AUTOMATIC DATA PROCESSING ADJ 25 2,17% 0.02% AUTOMATIC DATA PROCESSING ADJ 25 2,17% 0.02% AUTOMATIC DATA PROCESSING AUTOMATIC DATA				•					
AUTOMATE DATA PROCESSING ADP \$ 1,778-20 0.29% 2.27% 1.00% 13.09% 0.00% 0				,					
ALTODOES INC ALTEREAL DEPOCATION AFE S 1 2008.29 0.000% AS CORP. ALTEREAL DEPOCATION AFE S 1 2008.29 0.000% AS CORP. AS	AUTOMATIC DATA PROCESSING	ADP	\$	51,778.20	0.23%	2.27%	11.00%	13.39%	0.0313%
AMERICAN ELORIPOTATION AEE S 10.269.27 0. 0.4% 5.00% 3.47% 5.00% 9.57% 0.0085% 1.00%				•					
AMERICAN ELECTRIC POWER AEP \$ \$2,127.93 0,144 3.89% 4.50% 9.007.00 0.008 0.00				·					
AETHA INC AFT S 57,475.13 AETHA INC AFT S 55,446.11 AETHA INC AFT AETHA INC AETHA	AMERICAN ELECTRIC POWER	AEP	\$	32,127.93	0.14%	3.89%	4.50%	8.48%	0.0123%
ALLERGAN PLC ALLERGAN PLC AGR S 51654-10 0.225 ABATHENT INT'S MEMT CO A ARTHUS S 51657-39 ARATHUS I GALLAGHER & O ALC ALC ALC ALC ALC ALC ALC AL				•					
ALLEGAM PLC AGN S 8 1508-10 0 22% 188% 9.0% 10.98% 0.025% 0.025% 0.025% 0.007%				•					
APARTEENT INVITA MOMIT CO - A AV \$ - NA 390% NA NA NA NA ASSURANT IND (ALCE) \$ 4.754.42 0.026% 2.54% 4.00% 2.54% 15.00% 10.00100% 10.00100% 10.00100% 10.00100% 10.00100% 10.0				·					
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ARTHUR I GALLAGHER & CO AIG 3 12,666,04 0.06% 2.34% 15,00% 13,00% 14,00% 14,00% 15,00% 15,00% 11,00				- 4 753 42					
ALBEMARLE CORP ALB \$ 10,968.94 0.05% 1.38% 14.00% 15.44% 0.00078% ALGNI CEPONOL COYN ALGNI CEPONOL				·					
ALEN TECHNOLOGY INC ALE S 7,0056 48 0,00% 25,50% 25,50% 0,0029% ALESTATE CORP ALL S 7,0056 49 0,00% 1,16% 1,68% 0,00% 8,04% 0,0029% ALESTATE CORP ALL S 8 33,365,90 0,16% 1,165% 1,16				,					
ALASKA AR GROUP NO ALL \$ 7,955.48 ALLSTATE CORP ALL \$ 33,956.89 ALLSTATE CORP ALL \$ 3,956.89 ALLSTATE CORP AND CO				,					
ALLEGION PLC ALLE S 33,958 80 0 15% 1.55% 1.155% 1.55% 0.000% 1.000% 1.104% 0.0046% ALERION PLC ALLE S 8,067 46 0.04% 0.09% 1.000% 1.500% 1.104% 0.0046% ALERION PLC ALLEGION PLC ALLE S 8,067 46 0.04% 0.005% 1.500% 1.500% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000% 1.0000%			-	,					
ALEXINO PHARMACEUTICALS INC AMT \$ 26,762.23 0,12% 0,00% 19,00% 19,00% 0,0229% 1,07725% ADVANCED MICRO DEVICES AMD \$ 11,651.05 NA 0,00% NA 0,00% NA NA NA NA NA NA NA NA STANDER SERVICE AMD \$ 11,651.05 NA 0,00% NA 0,00% NA				,					
APPLIED MATERIALS INC ADVANCED MICRO DEVICES AMD S 17,853.79 0,08% 0,73% 0,70%				·					
AMDER MICRO DEVICES AMD \$ 11,551.05 N/A 0.00% N/A N/A N/A N/A AMFER N/S AFFILIATED MANAGERS GROUP AMG \$ 11,551.05 10,649.62 0.05% 0.68% 7.00% 7.70% 0.0037% AMERINE FINANCIAL INC AMG AMG \$ 10,649.62 0.05% 0.68% 7.00% 7.70% 0.0037% AMERINES FINANCIAL INC AMG AMG AMG AMG \$ 10,649.62 0.05% 0.68% 7.00% 7.70% 0.0037% AMERINES FINANCIAL INC AMFILIATED MANAGERS GROUP AMERINES FINANCIAL INC AM				·					
AMERICATE MANAGERS GROUP AMG S 17,863.79 AMGEN INC AMG S 10,649.62 AMGEN INC AMGEN			т .						
AMGEN INC AMERIPRISE FINANCIAL INC AMP \$ 135,167.00 0.61% 2.84% 6.65% 9.43% 0.0575% AMERIPRISE FINANCIAL INC AMP \$ 61,270.29 0.28% 2.19% 11.50% 13.82% 0.0382% AMERICAN TOWER CORP AMT \$ 61,270.29 0.28% 2.19% 11.50% 13.82% 0.0382% ANDEAUGR		AME	-	,					
AMERICAN DOWER CORP AMT \$ 22,201.55 0.10% 2.12% 13.55% 15.76% 0.0165% AMAZON COM INC AMZN \$ 747,996.60 3.38% 0.00% 60.00% 60.00% 2.0253% AMAZON COM INC AMZN \$ 747,996.60 3.38% 0.00% 60.00% 60.00% 2.0253% AMAZON COM INC AMZN \$ 747,996.60 3.38% 0.00% 60.00% 60.00% 2.0253% AMAZON COM INC AMZN \$ 747,996.60 3.38% 0.00% 60.00% 60.00% 2.0253% AMAZON COM INC AMZN \$ 747,996.60 3.38% 0.00% 60.00% 60.00% 2.0253% AMZN \$ 15.60% 7.791% 0.00565% AND STANDAR COM INC AMZN \$ 14,852.11 0.06% 0.00% 11.00% 11.00% 11.00% 0.0071% AND STANDAR COM INC AMZN \$ 14,852.11 0.06% 0.00% 11.00% 11.00% 11.00% 0.0074% AMZN \$ 14,852.11 0.06% 0.00% 11.00% 11.00% 11.00% 11.00% 0.0074% AMZN \$ 14,852.11 0.06% 13.31.30 0.06% 11.00% 1				•					
AMERICAN TOWER CORP AMT AMELICAN TOWER CORP AMZN AMAZON COMINIC AMZN AMZ				•					
AMAZON COM INC ANDEX 9 747,996.60 3.38% 0.00% 60.00% 60.00% 2.0553% ANDEX/OR ANDEX 9 15,677.50 0.00% 1.00% 11.00% 11.00% 0.0071% ANDEX/OR ANS 9 14,252.11 0.06% 0.00% 11.00% 11.00% 0.0071% ANDEX/OR ANTHENINC ANTM S8,506.41 0.26% 1.31% 11.00% 12.89% 0.0040% ANTHENINC ANTM S8,506.41 0.26% 1.31% 11.00% 11.00% 11.00% 0.0070% ANHHENINC ANTHENINC ANTHENIN				·					
ANTHEMINC ANTM \$8.506.1 0.26% 1.10% 11.00% 11.00% 0.0071% 0.0071% 0.0071% 0.0071% 0.0071% 0.0071% 0.0071% 0.0071% 0.0071% 0.0071% 0.0070% 0.00	AMAZON.COM INC	AMZN	\$	747,996.60	3.38%	0.00%	60.00%	60.00%	2.0253%
ANTHEM INC				·					
ADN PLC				·					
APACHE CORP				·					
ANADARKO PETROLEUM CORP				·					
AIR PRODUCTS & CHEMICALS INC APPL AMPHENOL CORP-CLA APPL S 25,657.61 0.12% 0.84% 9.50% 9.50% 10.38% 0.0130% APITUP LC APTU PLC APTU S 23,845.76 0.11% 0.98% 8.50% 9.52% 0.0102% ALEXANDRIA REAL ESTATE EQUIT ARE NA ARCONIC INC ARNC ARNC S 11,936.83 NA NA 0.97% NIA NIA NIA NIA ACONIC INC ARNC AVALONBAY COMMUNITIES INC AVB AVALONBAY COMMUNITIES INC AVB S 0.045.20 .45% 44.00% 9.00% 9.46% 0.0248% AVALONBAY COMMUNITIES INC AVB S 0.045.20 .45% 44.00% 17.0% 12.50% 14.31% 0.0666% AVERY DENNISON CORP AVERY DENNISON CORP AVERY DENNISON CORP AVERY DENNISON CORP AMERICAN WATER WORKS CO INC AMBRICAN WATER WORKS CO INC AMBRICAN WATER WORKS CO INC AMBRICAN EXPRESS CO AXP S 82,970.80 0.37% 1.51% 8.50% 10.07% 0.0070% AMBRICAN EXPRESS CO AXP S 82,970.80 0.37% 1.51% 8.50% 10.07% 0.0070% AMBRICAN EXPRESS CO AXP S 82,970.80 0.37% 1.51% 8.50% 10.07% 0.0070% AUGUSTON INC AUGUSTON INC AUGUSTON INC AUGUSTON INC BBA S 206,113.00 0.93% 1.62% 18.00% 19.77% 0.30043% BAXTER INTERNATIONAL INC BBA S 36,936.47 0.17% 0.93% 16.00% 18.12% 0.1685% BANK OF AMBRICA CORP BBT S 43,406.43 0.20% 2.51% 9.00% 11.62% 0.003% 10.07% 0.00370% BBATER INTERNATIONAL INC BBY S 25,717.95 0.12% 1.36% 10.00% 11.43% 0.003070% BEST BUY CO INC BBY S 25,717.95 0.12% 1.36% 10.00% 11.43% 0.003070% BRATER INTERNATIONAL INC BBY S 25,717.95 0.12% 1.36% 10.00% 11.43% 0.003070% BROWN-FORMAN CORP-CLASS B BF/B S 25,717.95 0.12% 1.36% 10.00% 11.43% 0.003070% BROWN-FORMAN CORP-CLASS B BF/B S 25,717.95 0.12% 1.18% 11.50% 12.75% 0.0148% BRIGHTHOUSE FINANCIAL INC BILK BRIGHTHOUSE FINANCIAL INC BILK BRIGHTHOUSE FINANCIAL INC BILK BRANC FOR WYORK MELLON CORP BK S 10,249.70 0.49% 2.46% 11.00% 15.00% 0.005% BROWN-FORMAN CORP-CLASS B BF/B S 25,717.95 0.12% 1.18% 11.50% 15.50% 0.0048% BRIGHTHOUSE FINANCIAL INC BILK BRANC FOR WYORK MELLON CORP BK S 10,249.70 0.49% 2.46% 11.450% 11.60% 0.005% BROWN-FORMAN CORP-CLASS B BR/B S 5.005.00 0.00% 15.00% 15.00% 0.005% BROWN-FORMAN CORP-CLASS B BR/B S 5.005.00 0.00% 15.00% 0.005% 0.005% BROWN-FORMAN CORP-CLASS B BR/B S 5.005.00 0.00% 15.00% 0.005% 0.005				·					
AMPHENOL CORP-CL APT				·					
ALEXANDRIA REAL ESTATE EQUIT ARCONIC INC ARNC \$ 11,938.83 NA 0,97% NA NA NA NA NA NA ACTIVISION BLIZZARD INC ATVI \$ 58,072,73 0,26% 0,44% 9,00% 9,46% 0,0249% AVALONBAY COMMUNITIES INC AVB S NA BROADCOM LID AVGO \$ 100,645.20 0,45% 2,84% 44.00% 47,46% 0,2156% AVERY DENNISON CORP AVFY DENNISON CORP AVERY DENNISON CORP AVFY DENNISON CORP BEAG CORP BEA			\$	27,657.61					
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BECTON DICKINSON AND CO BDX \$ 59,489.11 0.27% 1.36% 10.00% 11.43% 0.0307% FRANKLIN RESOURCES INC BEN \$ 21,831.08 0.10% 2.38% 8.00% 10.48% 0.0103% BROWN-FORMAN CORP-CLASS B BF/B \$ 25,717.95 0.12% 1.18% 11.50% 12.75% 0.0148% BRIGHTHOUSE FINANCIAL INC BHF N/A N/A 0.00% N/A N/A N/A BAKER HUGHES A GE CO BHGE \$ 12,544.68 N/A 2.46% N/A N/A N/A BIOGEN INC BIIB \$ 60,205.39 0.27% 0.00% 5.50% 5.50% 0.0149% BANK OF NEW YORK MELLON CORP BK \$ 7,027.79 0.26% 1.72% 9.00% 10.80% 0.0278% BOOKING HOLDINGS INC BKNG \$ 104,820.70 0.47% 0.00% 15.00% 15.00% 0.0710% BLACKROCK INC BLL \$ 14,350.89 0.06% 0.98% 15.00% 14.20% 0.0569% BALL CORP				·					
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BAKER HUGHES A GE CO BHGE \$ 12,544.68 N/A 2.46% N/A N/A N/A BIOGEN INC BIIB \$ 60,205.39 0.27% 0.00% 5.50% 5.50% 0.0149% BANK OF NEW YORK MELLON CORP BK \$ 57,027.79 0.26% 1.72% 9.00% 10.80% 0.0278% BOOKING HOLDINGS INC BKNG \$ 104,820.70 0.47% 0.00% 15.00% 15.00% 0.0710% BLACKROCK INC BLK \$ 88,834.59 0.40% 2.08% 12.00% 14.20% 0.0569% BALL CORP BLL \$ 14,350.89 0.06% 0.98% 15.00% 16.05% 0.0104% BRISTOL-MYERS SQUIBB CO BMY \$ 109,249.70 0.49% 2.40% 14.50% 17.07% 0.0842% BERKSHIRE HATHAWAY INC-CL B BRK/B \$ - N/A 0.00% N/A N/A N/A BOSTON SCIENTIFIC CORP BSX \$ 38,230.70 0.17% 0.00% 16.50% 16.50% 0.0047% BOSTON PROPERTIES INC			\$	·					
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BALL CORP BLL \$ 14,350.89 0.06% 0.98% 15.00% 16.05% 0.0104% BRISTOL-MYERS SQUIBB CO BMY \$ 109,249.70 0.49% 2.40% 14.50% 17.07% 0.0842% BERKSHIRE HATHAWAY INC-CL B BRK/B \$ - N/A 0.00% N/A N/A N/A BOSTON SCIENTIFIC CORP BSX \$ 38,230.70 0.17% 0.00% 16.50% 16.50% 0.0285% BORGWARNER INC BWA \$ 10,509.03 0.05% 1.36% 8.50% 9.92% 0.0047% BOSTON PROPERTIES INC BXP - N/A 2.62% N/A N/A N/A CITIGROUP INC C \$ 195,947.00 0.88% 1.73% 11.00% 12.83% 0.1134% CA INC CA \$ 14,905.01 0.07% 2.88% 6.00% 8.97% 0.0060% CONAGRA BRANDS INC CAG \$ 15,217.11 0.07% 2.24% 5.00% 7.30% 0.0050% CATERPILLAR INC CAT \$ 91,375.				·					
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BOSTON PROPERTIES INC BXP \$ - N/A 2.62% N/A N/A N/A CITIGROUP INC C \$ 195,947.00 0.88% 1.73% 11.00% 12.83% 0.1134% CA INC CA \$ 14,905.01 0.07% 2.88% 6.00% 8.97% 0.0060% CONAGRA BRANDS INC CAG \$ 15,217.11 0.07% 2.24% 5.00% 7.30% 0.0050% CARDINAL HEALTH INC CAH \$ 22,182.30 0.10% 2.78% 11.00% 13.93% 0.0139% CATERPILLAR INC CAT \$ 91,375.91 0.41% 2.03% 13.50% 15.67% 0.0646%				·					
CITIGROUP INC C \$ 195,947.00 0.88% 1.73% 11.00% 12.83% 0.1134% CA INC CA \$ 14,905.01 0.07% 2.88% 6.00% 8.97% 0.0060% CONAGRA BRANDS INC CAG \$ 15,217.11 0.07% 2.24% 5.00% 7.30% 0.0050% CARDINAL HEALTH INC CAH \$ 22,182.30 0.10% 2.78% 11.00% 13.93% 0.0139% CATERPILLAR INC CAT \$ 91,375.91 0.41% 2.03% 13.50% 15.67% 0.0646%			-	10,509.03 -					
CA INC CA \$ 14,905.01 0.07% 2.88% 6.00% 8.97% 0.0060% CONAGRA BRANDS INC CAG \$ 15,217.11 0.07% 2.24% 5.00% 7.30% 0.0050% CARDINAL HEALTH INC CAH \$ 22,182.30 0.10% 2.78% 11.00% 13.93% 0.0139% CATERPILLAR INC CAT \$ 91,375.91 0.41% 2.03% 13.50% 15.67% 0.0646%	CITIGROUP INC	С		195,947.00					
CARDINAL HEALTH INC CAH \$ 22,182.30 0.10% 2.78% 11.00% 13.93% 0.0139% CATERPILLAR INC CAT \$ 91,375.91 0.41% 2.03% 13.50% 15.67% 0.0646%				14,905.01	0.07%	2.88%	6.00%	8.97%	0.0060%
CATERPILLAR INC CAT \$ 91,375.91 0.41% 2.03% 13.50% 15.67% 0.0646%				·					
				·					
				•					

Company				[4] Market	[5]	[6] Estimated	[7] Long-Term	[8]	[9] Weighted
SEDE GLOSSE, MARRETS INC. CODE 3 1,360.00 0.305 0.305 0.305 0.305 1,400.00 1,40	COMPANY COMPAN	Ticker CBG		•	Weight in Index	Dividend Yield 0.00%	Growth Est.	DCF Result	DCF Result
BORNON SERTE NETH COPY		CBOE	-	•					
Death Company Color S			•	·					
CELORED COOP CPL 1 7,778 69 20% 200% 2				·					
CEMPINE CORP. CORP				·					
CF FINDERTER HILDRICES INC CF			-	·					
CHURCH S MOVERT CO INC. CHARTER COMMAND COPE NO. CHARTER COPE NO. CHARTER COMMAND COMMA		CF	\$	·	0.04%	3.18%	8.50%	11.82%	0.0051%
CHESTACK PRINTO CORP CHK S 2.981.83 NA			Ψ.	·					
CHRONOSON WORLDWIDE INC CHRW 5 12,024 4 0.09% 2.09% 3.50% 11.65% 0.005%			\$ \$	·					
CIGNIA CORP CICH S	C.H. ROBINSON WORLDWIDE INC	CHRW	Ψ.	12,532.44	0.06%	2.05%	9.50%	11.65%	0.0066%
CANDANT TIMMORIAL CORP			Ψ.	·					
CLORDERICA M. CAMPA CA		CINF	-	·	0.06%	2.82%	6.50%	9.41%	0.0052%
COMMENT CORPORALISS A COMMENT CORPORALISS A COMMENT CORPORAL STATE AND STA			-	·					
COMPART CORP. CLASS A CASS 171.286.30 C77% 2,66% 12.50% 14.69% C1115% CASS			-	·					
CHEPTER I MERICAN GRILL INC CLAMANS MOP CALL 3 2,000-24 01-9%, 2-71%, 18 100%, 10 10			\$	·					
CMART NUMBER CMART S			\$ \$	·					
ENTERFORD ENERGY NC CNP 5 11,793.93	CUMMINS INC	CMI		26,522.72	0.12%	2.71%	8.00%	10.82%	0.0129%
CENTER-PONT ENROY NO. CPP \$ 1,1676 88 0.05%			•	·					
CASTO CIVILLUSINISM COD 3 1.539.55 NA 0.99% NA NA NA NA NA NA CONTROLLUSION CONCOCUMENTS CODE 3 2.537.57 O.10% 0.97% 1.250% 0.107% 1.550% 0.107% 0.107% 1.550% 0.107% 0.107% 1.550% 0.107% 0.10			•	·					
ROCKWELL COLLINS INC COCOPER COS MONTH! COCO \$ 12,100.70 COSTO MINULE SILE CORP COSTO MINUL			•	·					
COOPER COS INC/THE COD \$ 1,537.87 CONCOCPRILIGRAL ECORP COP \$ 3,537.87 COMPORT COLA CONTY \$ 14,480.14 COPY \$ 2,145.87 COPY \$ 14,480.14 COPY \$ 2,145.87 COPY \$ 14,480.14 COPY \$ 2,145.87 COPY \$ 1,480.14 COPY \$			•	·					
COSITION CHOLESALE CORP COST & \$ 14,86-14		COO	•	·					
COTY MC-CL A COTY S S 14.48B-1.4 0.079% 2.289% 4.00% 2.289% 4.00% 3.228% 4.00% 3.289% 4.00% 3.00%				·					
CAMPRELL SOUP CO CPB \$ 13,934.27 ODORS ALESPONCE COM NC CPM \$ 91,928.33 AN O.00% NA O.00%			•	·					
CISCO SYSTEMS INC	CAMPBELL SOUP CO	CPB		13,934.22	0.06%	3.25%	4.00%	7.32%	0.0046%
CSRA OR			•	·					
CINTAS CORP			\$	•					
CENTURYLINK INC			\$	•					
CONDANT TECH SOLUTIONS—A CTSH \$ 4,0908.80 0.22% 0.96% 15.50% 14.52% 0.0022% 0.00% 15.50% 6.00% 0.0042% 0.00% 0.00% 6.50% 6.00% 0.0042% 0.00% 0.00% 0.00% 15.50% 6.00% 0.0042% 0.00%			\$ \$	•					
CVS HEALTH CORP CVS \$ 09,248.68 0.31% 2.93% 8.00% 11.05% 0.034	COGNIZANT TECH SOLUTIONS-A	CTSH		49,099.80	0.22%	0.96%	13.50%	14.52%	0.0322%
CHEVRON CORP CVX \$ 215,294.00 0.97% 3.95% 12.50% 15.70% 0.1622% CONCHO RESOURCES INC CXO \$ 22,266.34 0.01% 4.905% 20.50% 20.50% 0.206%			Ψ.	•					
DOMINION ENERGY INC			•	•					
DELTA AIR LINES INC DEL S 38,956,84 0.16% 2.23% 10.50% 12.85% 0.0228% DEERE & CO DE S 52,149,13 DISCOVER FINANCIAL SERVICES DFS S 28,221,92 0.13% 1.82% 7.00% 9.39% 0.120% 0.0391% 0.0120% 0.0148 (deeper and color) 1.100% 1.20% 0.0129% 0.0148 (deeper and color) 1.100% 1.20% 0.0129%				•					
DEERER & CO			\$ \$	•					
DOLLAR GENERAL CORP	DEERE & CO	DE	-	52,149.13	0.24%	1.49%	15.00%	16.60%	0.0391%
QUEST DIAGNOSTICS INC DGX \$ 14,231.04 0.06% 1.91% 10.00% 12.01% 0.0007% 0.0007% 0.0007% 0.0007% 0.0000% 0.000% 0.000% 0.000% 0.00000% 0.000000% 0.000000% 0.000000% 0.0000000% 0.000000% 0.0000000% 0.0000000% 0.0000000% 0.0000000000			\$	·					
DANAHER CORP			\$	·					
WALT DISNEY COTHE DIS 5 166,045.00 0.70% 0.62% 8.50% 10.19% 0.0717% DISCOVERY COMMUNICATIONS-A DISCA 9,082.16 0.04% 0.00% 13.50% 13.50% 0.0055% DISH NETWORK CORP-A DISH 5 19,302.45 0.09% 0.00% 1.00% 1.00% 0.0009% DISTAL REALTY TRUST INC DLT 5 2,1651.70 0.10% 0.00% 0.00% 21.00% 0.0009% DOLTAL REALTY TRUST INC DLT 5 2,1651.70 0.10% 0.00% 0.00% 21.00% 0.0205% DOVER CORP DOV 5 15,608.70 0.07% 1.88% 8.00% 9.96% 0.0070% DR PEPPER SNAPPLE GROUP INC DPS 5 2,1198.11 0.10% 2.05% 7.50% 9.63% 0.0002% DUKE REALTY CORP DEE - 0.00% 3.18% 33.50% 37.21% 0.0009% DARDEN RESTAURANTS INC DRI 5 11,662.55 0.06% 3.66% 7.00% 15.89% 0.00683% DUKE REALTY CORP DUK 5 15,003.20 0.06% 3.66% 7.00% 10.78% 0.00683% DUKE REALTY CORP DUK 5 13,3193.00 0.24% 4.84% 4.50% 9.45% 0.00227% DAVITA INC DAVITA INC DUK 5 13,738.27 0.06% 0.04% 0.04% 0.04% 0.05% 0.056% DOWN DUFFORT INC DWAP 5 16,114.60 0.04% 0.04% 0.04% 0.05% 0.056% DOWN DUFFORT INC DWAP 5 16,514.60 0.04% 0.04% 0.05% 0.056%				•					
DISCOVERY COMMUNICATIONS-A DISCA \$ 9.082.16 0.04% 0.00% 1.3.50% 13.50% 0.0055% DISIN NETWORK CORP-A DISH \$ 19.302.45 0.09% 0.00% 1.00% 1.00% 1.00% 0.0009% DISH NETWORK CORP-A DISH \$ 19.302.45 0.09% 0.00% 1.00% 1.00% 0.0009% DISH REALTY TRUST INC DLTR \$ 2.16.61.70 0.10% 0.00% 2.100% 2.100% 0.205% 0.0009% 0			т -	•					
DIGITAL REALTY TRUST INC	DISCOVERY COMMUNICATIONS-A	DISCA	\$	9,082.16	0.04%	0.00%	13.50%	13.50%	0.0055%
DOLLAR TREE INC DITR \$ 21,661.70 0.10% 0.00% 21,00% 21,00% 0.0205% 0.0070% DOVER CORP DOV \$ 15,660.870 0.07% 1.88% 8.00% 9.96% 0.0070% DR PEPPER SNAPPLE GROUP INC DPS \$ 21,198.11 0.10% 2.05% 7.50% 9.63% 0.0092% 0.000% 0.0083% 0.0083% 0.006% 0.00% 0.00% 0.00% 0.0083% 0.00% 0			\$ \$	19,302.45					
DR PEPPER SNAPPLE GROUP INC DPS S 21,198.11 0.10% 2.05% 7.50% 9.63% 0.0092% DUKE REALTY CORP DRE S - 0.00% 3.18% 33.50% 37.21% 0.0000% DARDEN RESTAURANTS INC DRI S 11,565.25 0.05% 2.71% 13.00% 15.89% 0.0083% DTE ENERGY COMPANY DTE S 18,010.35 0.08% 3.65% 7.00% 10,78% 0.0083% DTE ENERGY COMPANY DTE S 18,010.35 0.08% 3.65% 7.00% 10,78% 0.0083% DUKE ENERGY CORP DUK S 53,193.00 0.24% 4.84% 4.50% 9.45% 0.0227% 0.007%				21,651.70					
DUKE REALTY CORP			\$	•					
DTE			э \$	21,190.11 -					
DUKE ENERGY CORP DUK			\$	·					
DAVITA INC			\$ \$	•					
DOWDUPONT INC DWDP	DAVITA INC	DVA		13,738.24	0.06%	0.00%	9.00%	9.00%	0.0056%
DXC TECHNOLOGY CO			\$	•					
EBAY INC EBAY \$ 45,820.32 0.21% 0.00% 10.00% 10.00% 0.0207% ECOLAB INC ECL \$ 38,812.71 0.18% 1.22% 8.00% 9.27% 0.0162% CONSOLIDATED EDISON INC ED \$ 23,346.10 0.11% 3.84% 3.00% 6.90% 0.0073% EOUIFAX INC EFX \$ 14,515.20 0.07% 1.29% 8.50% 9.84% 0.0064% EDISON INTERNATIONAL EIX \$ 19,405.30 0.09% 4.11% 4.00% 8.19% 0.0072% ESTEE LAUDER COMPANIES-CL A EL \$ 53,146.07 0.24% 1.08% 13.50% 14.65% 0.0351% EATSTAMN CHEMICAL CO EMR \$ 15,216.03 0.07% 2.12% 10.50% 12.73% 0.0081% EMERSON ELECTRIC CO EMR \$ 45,056.01 0.20% 2.76% 12.00% 14.93% 0.0303% EOG RESOURCES INC EOG \$ 58,198.45 0.26% 0.75% 27.50% 28.35% 0.0745% EQUITY RESIDENTIAL			\$ \$	•					
ECOLAB INC ECL \$ 38,812.71 0.18% 1.22% 8.00% 9.27% 0.0162% CONSOLIDATED EDISON INC ED \$ 23,346.10 0.11% 3.84% 3.00% 6.90% 0.0073% EOUIFAX INC EFX \$ 14,515.20 0.07% 1.29% 8.50% 9.84% 0.0064% EDISSON INTERNATIONAL EIX \$ 19,405.30 0.09% 4.11% 4.00% 8.19% 0.0072% ESTEE LAUDER COMPANIES-CL A EL \$ 53,146.07 0.24% 1.08% 13,50% 14.65% 0.0351% EASTMAN CHEMICAL CO EMN \$ 15,216.03 0.07% 2.12% 10.50% 12.73% 0.0087% EMERSON ELECTRIC CO EMR \$ 45,056.01 0.20% 2.76% 12.00% 14.93% 0.0303% EOG RESOURCES INC EOG RESOURCES INC EOG RESOURCES INC EQIX \$ 30,465.88 0.14% 2.34% 23.00% 25.61% 0.0352% EOUTIVE RESIDENTIAL EQR \$ - N/A 3.57% N/A N/A N/A <t< td=""><td></td><td></td><td>\$</td><td>•</td><td></td><td></td><td></td><td></td><td></td></t<>			\$	•					
CONSOLIDATED EDISON INC ED \$ 23,346.10 0.11% 3.84% 3.00% 6.90% 0.0073% EQUIFAX INC EFX \$ 14,515.20 0.07% 1.29% 8.50% 9.84% 0.0064% EDISON INTERNATIONAL EIX \$ 19,405.30 0.09% 4.11% 4.00% 8.19% 0.0072% ESTEE LAUDER COMPANIES-CL A EL \$ 53,146.07 0.24% 1.08% 13.50% 14.65% 0.0351% EASTMAN CHEMICAL CO EMN \$ 15,216.03 0.07% 2.12% 10.50% 12.73% 0.0087% EMERSON ELECTRIC CO EMR \$ 45,056.01 0.20% 2.76% 12.00% 14.93% 0.0303% EOG RESOURCES INC EOG \$ 58,188.45 0.26% 0.75% 27.50% 28.35% 0.0745% EQUINIX INC EQIX \$ 30,465.88 0.14% 2.34% 23.00% 25.61% 0.0352% EQUITY RESIDENTIAL EQR - N/A 3.57% N/A N/A EVERSOURCE ENERGY ES <td< td=""><td></td><td></td><td>\$ \$</td><td>•</td><td></td><td></td><td></td><td></td><td></td></td<>			\$ \$	•					
EDISON INTERNATIONAL	CONSOLIDATED EDISON INC	ED	\$	23,346.10	0.11%	3.84%	3.00%	6.90%	0.0073%
ESTEE LAUDER COMPANIES-CL A EL \$ 53,146.07 0.24% 1.08% 13.50% 14.65% 0.0351% EASTMAN CHEMICAL CO EMN \$ 15,216.03 0.07% 2.12% 10.50% 12.73% 0.0087% EMERSON ELECTRIC CO EMR \$ 45,056.01 0.20% 2.76% 12.00% 14.93% 0.03303% EOG RESOURCES INC EOG \$ 58,198.45 0.26% 0.75% 27.50% 28.35% 0.0745% EQUINIX INC EQIX \$ 30,465.88 0.14% 2.34% 23.00% 25.61% 0.0352% EQUINIX INC EQIX \$ 30,465.88 0.14% 2.34% 23.00% 25.61% 0.0352% EQUITY RESIDENTIAL EQR \$ - N/A 3.57% N/A N/A N/A N/A N/A EQT CORP EQT \$ 8,852.63 0.04% 0.24% 20.50% 20.76% 0.0083% EVERSOURCE ENERGY ES \$ 18,021.25 0.08% 3.55% 6.50% 10.17% 0.0083% EXPRESS SCRIPTS HOLDING CO ESRX \$ 45,153.41 0.20% 0.00% 16.00% 16.00% 10.326% ESSEX PROPERTY TRUST INC ESS \$ - N/A 3.18% N/A N/A N/A E*TRADE FINANCIAL CORP ETFC \$ 14,933.86 0.07% 0.00% 15.50% 15.50% 0.0104% EATON CORP PLC ETN \$ 35,750.29 0.16% 3.25% 7.00% 10.386% 0.0167% ENTERGY CORP ETR \$ 13,838.43 0.06% 4.70% 2.00% 6.75% 0.0042% ENVISION HEALTHCARE CORP EVHC \$ 5,172.84 N/A 0.00% N/A N/A N/A EDWARDS LIFESCIENCES CORP EW \$ 29,252.32 0.13% 0.00% 16.50% 16.50% 16.50% 0.0218% EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITOR CORP EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITOR CORP EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITOR CORP EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITOR CORP EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITOR CORP EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITOR CORP EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITOR CORP EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITOR CORP EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDITOR CORP EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.006% EXPEDITOR CORP EXPEDI			\$ \$	·					
EMERSON ELECTRIC CO EMR \$ 45,056.01 0.20% 2.76% 12.00% 14.93% 0.0303% EOG RESOURCES INC EOG \$ 58,198.45 0.26% 0.75% 27.50% 28.35% 0.0745% EQUINIX INC EQIX \$ 30,465.88 0.14% 2.34% 23.00% 25.61% 0.0352% EQUITY RESIDENTIAL EQR \$ - N/A 3.57% N/A N/A N/A EQT CORP EQT \$ 8,852.63 0.04% 0.24% 20.50% 20.76% 0.0083% EVERSOURCE ENERGY ES \$ 18,021.25 0.08% 3.55% 6.50% 10.17% 0.0083% EVERSOURCE ENERGY ES \$ 18,021.25 0.08% 3.55% 6.50% 10.17% 0.0083% EVERSOURCE ENERGY ES \$ 18,021.25 0.08% 3.55% 6.50% 10.17% 0.0083% EVERSOURCE ENERGY ES \$ 18,021.25 0.08% 3.55% 6.50% 10.07% 0.00326% EXPECS S SCRIPTS HOLDING CO ESS			\$	·					
EOG RESOURCES INC EOG \$ 58,198.45 0.26% 0.75% 27.50% 28.35% 0.0745% EQUINIX INC EQIX \$ 30,465.88 0.14% 2.34% 23.00% 25.61% 0.0352% EQITY RESIDENTIAL EQR \$ - N/A 3.57% N/A N/A N/A EQT CORP EQT \$ 8,852.63 0.04% 0.24% 20.50% 20.76% 0.0083% EVERSOURCE ENERGY ES \$ 18,021.25 0.08% 3.55% 6.50% 10.17% 0.0083% EXPRESS SCRIPTS HOLDING CO ESRX \$ 45,153.41 0.20% 0.00% 16.00% 16.00% 0.0326% ESSEX PROPERTY TRUST INC ESS \$ - N/A 3.18% N/A N/A N/A E*TRADE FINANCIAL CORP ETFC \$ 14,933.86 0.07% 0.00% 15.50% 15.50% 0.0104% EATON CORP PLC ETN \$ 35,750.29 0.16% 3.25% 7.00% 10.36% 0.0167% ENTERGY CORP ETR \$ 1			\$	·					
EQUINIX INC EQIX \$ 30,465.88 0.14% 2.34% 23.00% 25.61% 0.0352% EQUITY RESIDENTIAL EQR \$ - N/A 3.57% N/A N/A N/A EQT CORP EQT \$ 8,852.63 0.04% 0.24% 20.50% 20.76% 0.0083% EVERSOURCE ENERGY ES \$ 18,021.25 0.08% 3.55% 6.50% 10.17% 0.0083% EXPRESS SCRIPTS HOLDING CO ESRX \$ 45,153.41 0.20% 0.00% 16.00% 16.00% 0.0326% ESSEX PROPERTY TRUST INC ESS \$ - N/A 3.18% N/A N/A N/A E*TRADE FINANCIAL CORP ETFC \$ 14,933.86 0.07% 0.00% 15.50% 15.50% 0.014% EATON CORP PLC ETN \$ 33,750.29 0.16% 3.25% 7.00% 15.50% 0.0167% ENTERGY CORP ETR \$ 13,838.43 0.06% 4.70% 2.00% 6.75% 0.0042% ENVISION HEALTHCARE CORP EVHC <			\$ \$	·					
EQT CORP EQT \$ 8,852.63 0.04% 0.24% 20.50% 20.76% 0.0083% EVERSOURCE ENERGY ES \$ 18,021.25 0.08% 3.55% 6.50% 10.17% 0.0083% EXPRESS SCRIPTS HOLDING CO ESRX \$ 45,153.41 0.20% 0.00% 16.00% 16.00% 0.0326% ESSEX PROPERTY TRUST INC ESS \$ - N/A 3.18% N/A N/A N/A E*TRADE FINANCIAL CORP ETFC \$ 14,933.86 0.07% 0.00% 15.50% 15.50% 0.0104% EATON CORP PLC ETN \$ 35,750.29 0.16% 3.25% 7.00% 10.36% 0.0167% ENTERGY CORP ETR \$ 13,838.43 0.06% 4.70% 2.00% 6.75% 0.0042% ENVISION HEALTHCARE CORP EVHC \$ 5,172.84 N/A 0.00% N/A N/A N/A EXELON CORP EW \$ 29,252.32 0.13% 0.00% 16.50% 0.0218% EXELON CORP EXC \$ 35,983.90	EQUINIX INC	EQIX	\$	•	0.14%	2.34%	23.00%	25.61%	0.0352%
EVERSOURCE ENERGY ES \$ 10,021.25 0.08% 3.55% 6.50% 10.17% 0.0083% EXPRESS SCRIPTS HOLDING CO ESRX \$ 45,153.41 0.20% 0.00% 16.00% 16.00% 0.0326% ESSEX PROPERTY TRUST INC ESS \$ - N/A 3.18% N/A N/A N/A E*TRADE FINANCIAL CORP ETFC \$ 14,933.86 0.07% 0.00% 15.50% 15.50% 0.0104% EATON CORP PLC ETN \$ 35,750.29 0.16% 3.25% 7.00% 10.36% 0.0167% ENTERGY CORP ETR \$ 13,838.43 0.06% 4.70% 2.00% 6.75% 0.0042% ENVISION HEALTHCARE CORP EVHC \$ 5,172.84 N/A 0.00% N/A N/A N/A EDWARDS LIFESCIENCES CORP EW \$ 29,252.32 0.13% 0.00% 16.50% 16.50% 0.0218% EXELON CORP EXC \$ 35,983.90 0.16% 3.69% 6.00% 9.80% 0.0159% EXPEDITIONS INTL WASH INC			\$ \$						
ESSEX PROPERTY TRUST INC ESS \$ - N/A 3.18% N/A N/A N/A E*TRADE FINANCIAL CORP ETFC \$ 14,933.86 0.07% 0.00% 15.50% 15.50% 0.0104% EATON CORP PLC ETN \$ 35,750.29 0.16% 3.25% 7.00% 10.36% 0.0167% ENTERGY CORP ETR \$ 13,838.43 0.06% 4.70% 2.00% 6.75% 0.0042% ENVISION HEALTHCARE CORP EVHC \$ 5,172.84 N/A 0.00% N/A N/A N/A EDWARDS LIFESCIENCES CORP EW \$ 29,252.32 0.13% 0.00% 16.50% 16.50% 0.0218% EXELON CORP EXC \$ 35,983.90 0.16% 3.69% 6.00% 9.80% 0.0159% EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDIA INC EXPE \$ 16,797.96 0.08%	EVERSOURCE ENERGY	ES	\$	18,021.25	0.08%	3.55%	6.50%	10.17%	0.0083%
E*TRADE FINANCIAL CORP ETFC \$ 14,933.86 0.07% 0.00% 15.50% 15.50% 0.0104% EATON CORP PLC ETN \$ 35,750.29 0.16% 3.25% 7.00% 10.36% 0.0167% ENTERGY CORP ETR \$ 13,838.43 0.06% 4.70% 2.00% 6.75% 0.0042% ENVISION HEALTHCARE CORP EVHC \$ 5,172.84 N/A 0.00% N/A N/A N/A EDWARDS LIFESCIENCES CORP EW \$ 29,252.32 0.13% 0.00% 16.50% 16.50% 0.0218% EXELON CORP EXC \$ 35,983.90 0.16% 3.69% 6.00% 9.80% 0.0159% EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDIA INC EXPE \$ 16,797.96 0.08% 1.23% 19.00% 20.35% 0.0154% EXTRA SPACE STORAGE INC EXR - N/A 4.00% N/A N/A N/A FORD MOTOR CO F			\$	·					
EATON CORP PLC ETN \$ 35,750.29 0.16% 3.25% 7.00% 10.36% 0.0167% ENTERGY CORP ETR \$ 13,838.43 0.06% 4.70% 2.00% 6.75% 0.0042% ENVISION HEALTHCARE CORP EVHC \$ 5,172.84 N/A 0.00% N/A N/A N/A EDWARDS LIFESCIENCES CORP EW \$ 29,252.32 0.13% 0.00% 16.50% 16.50% 0.0218% EXELON CORP EXC \$ 35,983.90 0.16% 3.69% 6.00% 9.80% 0.0159% EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDIA INC EXPE \$ 16,797.96 0.08% 1.23% 19.00% 20.35% 0.0154% EXTRA SPACE STORAGE INC EXR - N/A 4.00% N/A N/A N/A FORD MOTOR CO F \$ 42,146.13 0.19% 5.66% 3.00% 8.74% 0.0166% FASTENAL CO FAST \$ 16			Ф \$						
ENVISION HEALTHCARE CORP EVHC \$ 5,172.84 N/A 0.00% N/A N/A N/A EDWARDS LIFESCIENCES CORP EW \$ 29,252.32 0.13% 0.00% 16.50% 16.50% 0.0218% EXELON CORP EXC \$ 35,983.90 0.16% 3.69% 6.00% 9.80% 0.0159% EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDIA INC EXPE \$ 16,797.96 0.08% 1.23% 19.00% 20.35% 0.0154% EXTRA SPACE STORAGE INC EXR * - N/A 4.00% N/A N/A N/A FORD MOTOR CO F \$ 42,146.13 0.19% 5.66% 3.00% 8.74% 0.0166% FASTENAL CO FAST \$ 16,242.89 0.07% 2.62% 5.50% 8.19% 0.0060%	EATON CORP PLC	ETN	\$	35,750.29	0.16%	3.25%	7.00%	10.36%	0.0167%
EDWARDS LIFESCIENCES CORP EW \$ 29,252.32 0.13% 0.00% 16.50% 16.50% 0.0218% EXELON CORP EXC \$ 35,983.90 0.16% 3.69% 6.00% 9.80% 0.0159% EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDIA INC EXPE \$ 16,797.96 0.08% 1.23% 19.00% 20.35% 0.0154% EXTRA SPACE STORAGE INC EXR \$ - N/A 4.00% N/A N/A N/A FORD MOTOR CO F \$ 42,146.13 0.19% 5.66% 3.00% 8.74% 0.0166% FAST STENAL CO FAST \$ 16,242.89 0.07% 2.62% 5.50% 8.19% 0.0060%			\$ ¢	·					
EXPEDITORS INTL WASH INC EXPD \$ 11,276.77 0.05% 1.39% 9.00% 10.45% 0.0053% EXPEDIA INC EXPE \$ 16,797.96 0.08% 1.23% 19.00% 20.35% 0.0154% EXTRA SPACE STORAGE INC EXR \$ - N/A 4.00% N/A N/A N/A FORD MOTOR CO F \$ 42,146.13 0.19% 5.66% 3.00% 8.74% 0.0166% FASTENAL CO FAST \$ 16,242.89 0.07% 2.62% 5.50% 8.19% 0.0060%	EDWARDS LIFESCIENCES CORP	EW	\$	29,252.32	0.13%	0.00%	16.50%	16.50%	0.0218%
EXPEDIA INC EXPE \$ 16,797.96 0.08% 1.23% 19.00% 20.35% 0.0154% EXTRA SPACE STORAGE INC EXR - N/A 4.00% N/A N/A N/A FORD MOTOR CO F \$ 42,146.13 0.19% 5.66% 3.00% 8.74% 0.0166% FASTENAL CO FAST \$ 16,242.89 0.07% 2.62% 5.50% 8.19% 0.0060%			\$	·					
EXTRA SPACE STORAGE INC EXR \$ - N/A 4.00% N/A N/A N/A FORD MOTOR CO F \$ 42,146.13 0.19% 5.66% 3.00% 8.74% 0.0166% FASTENAL CO FAST \$ 16,242.89 0.07% 2.62% 5.50% 8.19% 0.0060%			\$ \$	·					
FASTENAL CO FAST \$ 16,242.89 0.07% 2.62% 5.50% 8.19% 0.0060%	EXTRA SPACE STORAGE INC	EXR	\$	· -	N/A	4.00%	N/A	N/A	N/A
·			\$ \$	·					
			\$	·					

			[4] Market	[5]	[6] Estimated	[7] Long-Term	[8]	[9] Weighted
Company FORTUNE BRANDS HOME & SECURI	Ticker FBHS	C;	apitalization 9,407.11	Weight in Index 0.04%	Dividend Yield 1.29%	Growth Est. 12.00%	DCF Result 13.37%	DCF Result 0.0057%
FREEPORT-MCMORAN INC	FCX	\$	25,875.76	N/A	0.00%	N/A	N/A	N/A
FEDEX CORP FIRSTENERGY CORP	FDX FE	\$ \$	64,419.51 14,273.68	0.29% 0.06%	0.96% 4.53%	11.00% 9.00%	12.01% 13.73%	0.0349% 0.0088%
F5 NETWORKS INC	FFIV	\$	9,094.78	0.04%	0.00%	10.00%	10.00%	0.0041%
FIDELITY NATIONAL INFO SERV FISERV INC	FIS FISV	\$ \$	33,060.24 30,505.68	0.15% 0.14%	1.29% 0.00%	7.50% 9.00%	8.84% 9.00%	0.0132% 0.0124%
FIFTH THIRD BANCORP	FITB	\$	23,753.31	0.11%	2.14%	8.50%	10.73%	0.0115%
FOOT LOCKER INC FLIR SYSTEMS INC	FL FLIR	\$ \$	5,446.78 6,959.46	0.02% 0.03%	3.38% 1.43%	7.00% 7.50%	10.50% 8.98%	0.0026% 0.0028%
FLUOR CORP	FLR	\$	7,998.20	0.04%	1.47%	2.00%	3.48%	0.0013%
FLOWSERVE CORP FMC CORP	FLS FMC	\$ \$	5,797.91 11,043.05	N/A 0.05%	1.71% 0.90%	N/A 13.50%	N/A 14.46%	N/A 0.0072%
TWENTY-FIRST CENTURY FOX-A	FOXA	\$	68,877.06	0.31%	0.97%	11.50%	12.53%	0.0389%
FEDERAL REALTY INVS TRUST TECHNIPFMC PLC	FRT FTI	\$	- N/A	N/A N/A	3.46% 0.00%	N/A N/A	N/A N/A	N/A N/A
FORTIVE CORP	FTV	\$	27,230.10	N/A	0.36%	N/A	N/A	N/A
GENERAL DYNAMICS CORP GENERAL ELECTRIC CO	GD GE	\$ \$	67,291.48 125,918.70	0.30% 0.57%	1.64% 3.31%	8.50% 8.50%	10.21% 11.95%	0.0310% 0.0679%
GGP INC	GGP	\$	-	N/A	4.64%	N/A	N/A	N/A
GILEAD SCIENCES INC GENERAL MILLS INC	GILD GIS	\$ \$	104,651.50 29,419.52	0.47% 0.13%	2.85% 3.87%	-1.00% 5.50%	1.84% 9.48%	0.0087% 0.0126%
CORNING INC	GLW	\$	25,165.14	0.11%	2.46%	11.50%	14.10%	0.0160%
GENERAL MOTORS CO ALPHABET INC-CL A	GM GOOGL	\$	52,976.00 N/A	0.24% N/A	4.02% 0.00%	5.50% N/A	9.63% N/A	0.0230% N/A
GENUINE PARTS CO	GPC	\$	13,271.41	0.06%	3.18%	7.50%	10.80%	0.0065%
GLOBAL PAYMENTS INC GAP INC/THE	GPN GPS	\$ \$	18,183.13	0.08% 0.06%	0.04% 2.98%	12.00% 4.00%	12.04% 7.04%	0.0099% 0.0040%
GARMIN LTD	GRMN	Ф \$	12,681.40 11,270.64	0.05%	2.96% 3.47%	4.00% 5.50%	9.07%	0.0046%
GOLDMAN SACHS GROUP INC	GS	\$	100,969.00	0.46%	1.13%	9.50%	10.68%	0.0487%
GOODYEAR TIRE & RUBBER CO WW GRAINGER INC	GT GWW	\$ \$	6,834.78 15,473.58	0.03% 0.07%	2.18% 1.86%	12.50% 4.50%	14.82% 6.40%	0.0046% 0.0045%
HALLIBURTON CO	HAL	\$	40,120.72	0.18%	1.57%	23.00%	24.75%	0.0448%
HASBRO INC HUNTINGTON BANCSHARES INC	HAS HBAN	\$ \$	11,630.95 17,468.09	0.05% 0.08%	2.70% 2.85%	11.00% 9.00%	13.85% 11.98%	0.0073% 0.0094%
HANESBRANDS INC	HBI	\$	7,123.74	0.03%	3.38%	9.50%	13.04%	0.0042%
HCA HEALTHCARE INC HCP INC	HCA HCP	\$ \$	35,812.57 -	0.16% N/A	1.37% 6.65%	13.00% N/A	14.46% N/A	0.0234% N/A
HOME DEPOT INC	HD	\$	207,833.90	0.94%	2.34%	11.00%	13.47%	0.1263%
HESS CORP HARTFORD FINANCIAL SVCS GRP	HES HIG	\$ \$	14,839.11 19,435.88	N/A 0.09%	2.14% 1.84%	N/A 12.50%	N/A 14.46%	N/A 0.0127%
HUNTINGTON INGALLS INDUSTRIE	HII	\$	11,768.85	0.05%	1.10%	9.50%	10.65%	0.0057%
HILTON WORLDWIDE HOLDINGS IN HARLEY-DAVIDSON INC	HLT HOG	\$ ¢	25,420.07 7,462.20	0.11% 0.03%	0.76% 3.34%	8.50% 8.00%	9.29% 11.47%	0.0107% 0.0039%
HOLOGIC INC	HOLX	\$	10,677.51	0.05%	0.00%	22.00%	22.00%	0.0106%
HONEYWELL INTERNATIONAL INC HELMERICH & PAYNE	HON HP	\$ ¢	115,210.50 7,077.10	0.52% 0.03%	1.97% 4.31%	8.50% 62.00%	10.55% 67.65%	0.0549% 0.0216%
HEWLETT PACKARD ENTERPRISE	HPE	\$	30,228.30	0.14%	1.58%	3.50%	5.11%	0.0070%
HP INC H&R BLOCK INC	HPQ HRB	\$	39,507.44 5,786.32	0.18% 0.03%	2.34% 3.47%	4.50% 9.00%	6.89% 12.63%	0.0123% 0.0033%
HORMEL FOODS CORP	HRL	φ \$	17,702.17	0.03%	2.24%	10.50%	12.86%	0.0103%
HARRIS CORP	HRS	\$ \$	18,467.18	0.08%	1.46%	10.50%	12.04%	0.0100%
HENRY SCHEIN INC HOST HOTELS & RESORTS INC	HSIC HST	Ф \$	10,536.26 -	0.05% N/A	0.00% 4.46%	9.00% N/A	9.00% N/A	0.0043% N/A
HERSHEY CO/THE	HSY	\$	20,993.16	0.09% 0.17%	2.63%	7.50%	10.23%	0.0097%
HUMANA INC INTL BUSINESS MACHINES CORP	HUM IBM	Ф \$	38,503.63 144,617.80	0.17% N/A	0.74% 4.03%	13.00% N/A	13.79% N/A	0.0240% N/A
INTERCONTINENTAL EXCHANGE IN	ICE	\$ \$	43,539.80	0.20%	1.29%	12.00%	13.37%	0.0263%
IDEXX LABORATORIES INC INTL FLAVORS & FRAGRANCES	IDXX IFF	φ \$	17,237.58 10,977.80	0.08% 0.05%	0.00% 2.07%	17.00% 8.00%	17.00% 10.15%	0.0132% 0.0050%
ILLUMINA INC	ILMN	\$	35,553.92	0.16%	0.00%	16.00%	16.00%	0.0257%
INCYTE CORP IHS MARKIT LTD	INCY INFO	\$ \$	19,561.89 20,343.65	N/A 0.09%	0.00% 0.00%	N/A 19.50%	N/A 19.50%	N/A 0.0179%
INTEL CORP	INTC	\$	237,463.20	1.07%	2.37%	7.50%	9.96%	0.1067%
INTUIT INC INTERNATIONAL PAPER CO	INTU IP	\$ \$	43,909.35 22,669.58	0.20% 0.10%	0.91% 3.46%	15.00% 18.50%	15.98% 22.28%	0.0317% 0.0228%
INTERPUBLIC GROUP OF COS INC	IPG	\$	9,445.81	0.04%	3.55%	10.00%	13.73%	0.0059%
IPG PHOTONICS CORP IQVIA HOLDINGS INC	IPGP IQV	\$ \$	13,074.75 21,501.92	0.06% 0.10%	0.00% 0.00%	15.00% 14.50%	15.00% 14.50%	0.0089% 0.0141%
INGERSOLL-RAND PLC	IR	\$	21,913.74	0.10%	2.06%	11.00%	13.17%	0.0130%
IRON MOUNTAIN INC INTUITIVE SURGICAL INC	IRM ISRG	\$ \$	8,729.71 48,424.32	0.04% 0.22%	7.22% 0.00%	9.50% 15.00%	17.06% 15.00%	0.0067% 0.0328%
GARTNER INC	IT	\$	10,927.38	0.05%	0.00%	13.50%	13.50%	0.0067%
ILLINOIS TOOL WORKS INVESCO LTD	ITW IVZ	\$ \$	56,957.25 13,800.69	0.26% 0.06%	1.88% 3.42%	11.50% 7.00%	13.49% 10.54%	0.0347% 0.0066%
HUNT (JB) TRANSPRT SVCS INC	JBHT	\$	13,027.56	0.06%	0.81%	12.00%	12.86%	0.0076%
JOHNSON CONTROLS INTERNATION JACOBS ENGINEERING GROUP INC	JCI JEC	\$ \$	34,849.33 8,438.21	0.16% 0.04%	2.76% 1.01%	-0.50% 8.00%	2.25% 9.05%	0.0035% 0.0034%
JOHNSON & JOHNSON	JNJ	\$	354,578.70	1.60%	2.67%	9.00%	11.79%	0.1887%
JUNIPER NETWORKS INC JPMORGAN CHASE & CO	JNPR JPM	\$ \$	9,517.62 398,116.40	0.04% 1.80%	2.77% 1.99%	4.50% 8.00%	7.33% 10.07%	0.0031% 0.1809%
NORDSTROM INC	JWN	\$	8,351.66	0.04%	2.95%	3.50%	6.50%	0.0025%
KELLOGG CO KEYCORP	K KEY	\$	24,025.80 23,533.84	0.11% 0.11%	3.16% 2.11%	8.00% 12.50%	11.29% 14.74%	0.0122% 0.0157%
KRAFT HEINZ CO/THE	KEY	Ф \$	23,533.84 81,593.83	0.11% N/A	2.11% 3.81%	12.50% N/A	14.74% N/A	0.0157% N/A
KIMCO REALTY CORP	KIM	\$	-	N/A	7.53%	N/A	N/A	N/A
KLA-TENCOR CORP KIMBERLY-CLARK CORP	KLAC KMB	Ф \$	18,324.54 39,414.37	0.08% 0.18%	2.56% 3.57%	15.50% 10.50%	18.26% 14.26%	0.0151% 0.0254%
KINDER MORGAN INC	KMI	\$	35,495.93	0.16%	3.12%	57.00%	61.01%	0.0977%
CARMAX INC COCA-COLA CO/THE	KMX KO	\$ \$	11,027.27 189,445.90	0.05% 0.85%	0.00% 3.51%	13.50% 5.00%	13.50% 8.60%	0.0067% 0.0735%
MICHAEL KORS HOLDINGS LTD	KORS	\$	9,238.06	0.04%	0.00%	3.00%	3.00%	0.0013%
KROGER CO KOHLS CORP	KR KSS	\$ \$	20,245.38 10,447.92	0.09% 0.05%	2.39% 3.92%	4.50% 7.00%	6.94% 11.06%	0.0063% 0.0052%
KANSAS CITY SOUTHERN	KSU	\$	11,196.92	0.05%	1.33%	12.50%	13.91%	0.0070%
LOEWS CORP	L	\$	17,255.60	0.08%	0.49%	14.00%	14.52%	0.0113%

			[4] Market	[5]	[6] Estimated	[7] Long-Term	[8]	[9] Weighted
Company	Ticker		apitalization	Weight in Index	Dividend Yield	Growth Est.	DCF Result	DCF Result
L BRANDS INC LEGGETT & PLATT INC	LB LEG	\$ \$	11,736.84 5,973.95	0.05% 0.03%	5.77% 3.18%	0.50% 7.50%	6.28% 10.80%	0.0033% 0.0029%
LENNAR CORP-A	LEN	\$	14,076.29	0.06%	0.27%	10.50%	10.78%	0.0069%
LABORATORY CRP OF AMER HLDGS LKQ CORP	LH LKQ	\$ \$	17,642.88 11,986.81	0.08% 0.05%	0.00% 0.00%	9.50% 11.50%	9.50% 11.50%	0.0076% 0.0062%
L3 TECHNOLOGIES INC	LLL	\$	16,142.34	0.07%	1.54%	11.00%	12.62%	0.0092%
ELI LILLY & CO LOCKHEED MARTIN CORP	LLY LMT	\$ \$	86,865.38 97,065.53	0.39% 0.44%	2.85% 2.40%	11.00% 12.50%	14.01% 15.05%	0.0549% 0.0659%
LINCOLN NATIONAL CORP	LNC	Ф \$	16,662.07	0.44%	1.78%	8.00%	9.85%	0.0039%
ALLIANT ENERGY CORP	LNT	\$	8,859.74	0.04%	3.50%	6.50%	10.11%	0.0040%
LOWE'S COS INC LAM RESEARCH CORP	LOW LRCX	\$ \$	71,598.96 33,921.61	0.32% 0.15%	2.02% 0.94%	13.50% 20.00%	15.66% 21.03%	0.0506% 0.0322%
LEUCADIA NATIONAL CORP	LUK	\$	8,541.44	0.04%	1.67%	31.00%	32.93%	0.0127%
SOUTHWEST AIRLINES CO LYONDELLBASELL INDU-CL A	LUV LYB	\$ \$	34,353.72 43,141.87	0.16% 0.19%	0.86% 3.66%	11.50% 3.50%	12.41% 7.22%	0.0192% 0.0141%
MACY'S INC	M	\$	8,808.05	0.04%	5.22%	2.50%	7.79%	0.0031%
MASTERCARD INC - A	MA	\$	190,005.00	0.86%	0.56% 4.27%	13.50% N/A	14.10%	0.1209%
MID-AMERICA APARTMENT COMM MACERICH CO/THE	MAA MAC	э \$	-	N/A N/A	4.27% 5.10%	N/A N/A	N/A N/A	N/A N/A
MARRIOTT INTERNATIONAL -CL A	MAR	\$	50,804.36	0.23%	0.95%	17.50%	18.53%	0.0425%
MASCO CORP MATTEL INC	MAS MAT	\$ \$	12,866.08 5,488.89	0.06% 0.02%	1.06% 0.00%	14.00% 1.50%	15.13% 1.50%	0.0088% 0.0004%
MCDONALD'S CORP	MCD	\$	123,119.60	0.56%	2.66%	10.00%	12.79%	0.0711%
MICROCHIP TECHNOLOGY INC MCKESSON CORP	MCHP MCK	\$ \$	22,342.07 31,772.08	0.10% 0.14%	1.53% 0.94%	14.50% 9.50%	16.14% 10.48%	0.0163% 0.0150%
MOODY'S CORP	MCO	\$	32,172.31	0.15%	1.05%	12.00%	13.11%	0.0190%
MONDELEZ INTERNATIONAL INC-A	MDLZ	\$	65,796.68	0.30%	2.09%	10.00%	12.19%	0.0362%
MEDTRONIC PLC METLIFE INC	MDT MET	\$ \$	111,278.80 49,382.80	0.50% 0.22%	2.31% 3.67%	6.00% 5.50%	8.38% 9.27%	0.0421% 0.0207%
MGM RESORTS INTERNATIONAL	MGM	\$	20,306.89	0.09%	1.34%	44.50%	46.14%	0.0423%
MOHAWK INDUSTRIES INC MCCORMICK & CO-NON VTG SHRS	MHK MKC	\$ \$	17,847.07 14,360.00	0.08% 0.06%	0.00% 1.90%	8.50% 10.50%	8.50% 12.50%	0.0068% 0.0081%
MARTIN MARIETTA MATERIALS	MLM	\$	13,015.34	0.06%	0.85%	17.50%	18.42%	0.0108%
MARSH & MCLENNAN COS	MMC	\$	43,162.10	0.19%	1.78%	10.50%	12.37%	0.0241%
3M CO MONSTER BEVERAGE CORP	MMM MNST	\$ \$	140,766.00 32,049.79	0.64% 0.14%	2.30% 0.00%	9.50% 13.50%	11.91% 13.50%	0.0757% 0.0195%
ALTRIA GROUP INC	MO	\$	124,946.50	0.56%	4.28%	10.00%	14.49%	0.0817%
MONSANTO CO MOSAIC CO/THE	MON MOS	\$ \$	54,215.16 9,580.16	0.24% 0.04%	1.76% 0.37%	7.50% 3.00%	9.33% 3.38%	0.0228% 0.0015%
MARATHON PETROLEUM CORP	MPC	\$	34,376.94	0.16%	2.80%	8.50%	11.42%	0.0177%
MERCK & CO. INC. MARATHON OIL CORP	MRK MRO	\$ \$	149,297.90 12,605.50	0.67% N/A	3.51% 1.35%	5.50% N/A	9.11% N/A	0.0614% N/A
MORGAN STANLEY	MS	φ \$	103,238.40	0.47%	1.76%	10.50%	12.35%	0.0575%
MICROSOFT CORP	MSFT	\$	727,583.10	3.28%	1.78%	9.50%	11.36%	0.3731%
MOTOROLA SOLUTIONS INC M & T BANK CORP	MSI MTB	\$ \$	17,572.14 29,697.82	0.08% 0.13%	1.99% 1.54%	12.00% 9.50%	14.11% 11.11%	0.0112% 0.0149%
METTLER-TOLEDO INTERNATIONAL	MTD	\$	15,523.38	0.07%	0.00%	11.50%	11.50%	0.0081%
MICRON TECHNOLOGY INC MYLAN NV	MU MYL	\$ \$	63,944.76 22,532.06	0.29% 0.10%	0.00% 0.00%	31.00% 10.00%	31.00% 10.00%	0.0895% 0.0102%
NAVIENT CORP	NAVI	\$	3,569.07	0.02%	4.72%	6.00%	10.86%	0.0017%
NOBLE ENERGY INC NORWEGIAN CRUISE LINE HOLDIN	NBL NCLH	\$ \$	15,033.20 12,668.05	N/A 0.06%	1.30% 0.00%	N/A 21.50%	N/A 21.50%	N/A 0.0123%
NASDAQ INC	NDAQ	\$	14,137.25	0.06%	1.79%	9.50%	11.38%	0.0073%
NEXTERA ENERGY INC	NEE	\$	72,587.12	0.33%	2.90%	8.50%	11.52%	0.0377%
NEWMONT MINING CORP NETFLIX INC	NEM NFLX	\$ \$	20,085.44 137,175.70	0.09% 0.62%	1.49% 0.00%	9.00% 44.50%	10.56% 44.50%	0.0096% 0.2755%
NEWFIELD EXPLORATION CO	NFX	\$	4,692.83	0.02%	0.00%	19.00%	19.00%	0.0040%
NISOURCE INC NIKE INC -CL B	NI NKE	\$ \$	7,778.31 105,738.60	0.04% 0.48%	3.38% 1.23%	18.00% 14.00%	21.68% 15.32%	0.0076% 0.0731%
NIELSEN HOLDINGS PLC	NLSN	\$	11,671.44	0.05%	4.15%	9.00%	13.34%	0.0070%
NORTHROP GRUMMAN CORP NATIONAL OILWELL VARCO INC	NOC NOV	\$ \$	60,296.43 13,925.14	0.27% 0.06%	1.27% 0.55%	8.50% 3.00%	9.82% 3.56%	0.0267% 0.0022%
NRG ENERGY INC	NRG	\$	9,372.51	N/A	0.41%	N/A	N/A	N/A
NORFOLK SOUTHERN CORP NETAPP INC	NSC NTAP	\$ \$	40,186.77	0.18%	2.05%	11.50%	13.67%	0.0248% 0.0134%
NORTHERN TRUST CORP	NTRS	э \$	17,055.96 24,509.16	0.08% 0.11%	1.25% 1.56%	16.00% 11.00%	17.35% 12.65%	0.0134%
NUCOR CORP	NUE	\$	21,500.73	0.10%	2.25%	20.00%	22.48%	0.0218%
NVIDIA CORP NEWELL BRANDS INC	NVDA NWL	\$ \$	146,155.10 13,561.07	0.66% 0.06%	0.25% 3.33%	23.50% 24.50%	23.78% 28.24%	0.1568% 0.0173%
NEWS CORP - CLASS A	NWSA	\$	9,451.69	N/A	1.23%	N/A	N/A	N/A
REALTY INCOME CORP ONEOK INC	O OKE	\$ \$	- 21,580.73	N/A 0.10%	5.24% 5.57%	N/A 17.50%	N/A 23.56%	N/A 0.0229%
OMNICOM GROUP	OMC	\$	16,946.48	0.08%	3.27%	7.50%	10.89%	0.0083%
ORACLE CORP O'REILLY AUTOMOTIVE INC	ORCL ORLY	\$	215,974.60 20,680.81	0.97% 0.09%	1.46% 0.00%	8.00% 13.50%	9.52% 13.50%	0.0928% 0.0126%
OCCIDENTAL PETROLEUM CORP	OXY	Ф \$	48,179.82	0.09%	4.96%	21.00%	26.48%	0.0576%
PAYCHEX INC	PAYX	\$	23,488.09	0.11%	3.41%	12.00%	15.61%	0.0166%
PEOPLE'S UNITED FINANCIAL PACCAR INC	PBCT PCAR	\$ \$	6,812.74 23,958.24	0.03% 0.11%	3.54% 3.23%	13.50% 6.50%	17.28% 9.83%	0.0053% 0.0106%
P G & E CORP	PCG	\$	21,480.73	0.10%	0.00%	8.50%	8.50%	0.0082%
PATTERSON COS INC PUBLIC SERVICE ENTERPRISE GP	PDCO PEG	\$ \$	2,363.01 23,649.15	0.01% 0.11%	4.41% 3.84%	14.50% 2.00%	19.23% 5.88%	0.0021% 0.0063%
PEPSICO INC	PEP	\$	159,489.80	0.72%	2.92%	7.50%	10.53%	0.0758%
PFIZER INC	PFE	\$ •	217,565.80	0.98%	3.73%	12.00% 5.00%	15.95% 8.40%	0.1566%
PRINCIPAL FINANCIAL GROUP PROCTER & GAMBLE CO/THE	PFG PG	э \$	17,705.25 201,604.70	0.08% 0.91%	3.32% 3.45%	5.00% 10.00%	8.40% 13.62%	0.0067% 0.1239%
PROGRESSIVE CORP	PGR	\$	34,326.03	0.15%	1.90%	15.00%	17.04%	0.0264%
PARKER HANNIFIN CORP PULTEGROUP INC	PH PHM	\$ \$	24,102.98 8,464.92	0.11% 0.04%	1.46% 1.36%	13.00% 17.00%	14.55% 18.48%	0.0158% 0.0071%
PACKAGING CORP OF AMERICA	PKG	\$	11,014.59	0.05%	2.16%	8.50%	10.75%	0.0053%
PERKINELMER INC PROLOGIS INC	PKI PLD	\$ ¢	8,507.98	0.04% N/A	0.36% 3.08%	11.00% N/A	11.38% N/A	0.0044% N/A
PHILIP MORRIS INTERNATIONAL	PM	\$ \$	169,300.80	0.76%	3.93%	8.00%	12.09%	0.0923%
PNC FINANCIAL SERVICES GROUP PENTAIR PLC	PNC PNR	\$	75,917.23 12,760.82	0.34% 0.06%	1.88% 1.99%	8.00% 12.00%	9.96% 14.11%	0.0341% 0.0081%
PINNACLE WEST CAPITAL	PNW	\$	8,482.58	0.04%	3.77%	5.50%	9.37%	0.0036%

			[4] Market	[5]	[6] Estimated	[7] Long-Term	[8]	[9] Weighted
Company	Ticker		apitalization	Weight in Index	Dividend Yield	Growth Est.	DCF Result	DCF Result
PPG INDUSTRIES INC PPL CORP	PPG PPL	\$ \$	29,366.53 19,109.45	0.13% 0.09%	1.56% 5.91%	10.50% 1.50%	12.14% 7.45%	0.0161% 0.0064%
PERRIGO CO PLC	PRGO	\$	11,976.45	0.05%	0.89%	0.50%	1.39%	0.0008%
PRUDENTIAL FINANCIAL INC PUBLIC STORAGE	PRU PSA	\$ \$	45,654.55 -	0.21% N/A	3.35% 4.00%	5.50% N/A	8.94% N/A	0.0184% N/A
PHILLIPS 66	PSX	\$	48,236.58	0.22%	3.24%	4.50%	7.81%	0.0170%
PVH CORP QUANTA SERVICES INC	PVH PWR	\$ \$	10,811.24 5,317.95	0.05% 0.02%	0.11% 0.00%	8.50% 17.00%	8.61% 17.00%	0.0042% 0.0041%
PRAXAIR INC	PX	\$	45,201.84	0.20%	2.14%	8.50%	10.73%	0.0219%
PIONEER NATURAL RESOURCES CO PAYPAL HOLDINGS INC	PXD PYPL	\$ \$	28,533.27 96,003.73	0.13% N/A	0.19% 0.00%	41.50% N/A	41.73% N/A	0.0537% N/A
QUALCOMM INC	QCOM	\$	91,493.60	0.41%	3.69%	4.50%	8.27%	0.0342%
QORVO INC ROYAL CARIBBEAN CRUISES LTD	QRVO RCL	\$ \$	10,652.82 26,712.28	0.05% 0.12%	0.00% 1.92%	26.50% 13.50%	26.50% 15.55%	0.0127% 0.0187%
EVEREST RE GROUP LTD	RE	\$	10,567.21	0.05%	2.06%	3.50%	5.60%	0.0027%
REGENCY CENTERS CORP REGENERON PHARMACEUTICALS	REG REGN	\$ \$	- 36,676.45	N/A 0.17%	3.77% 0.00%	N/A 14.00%	N/A 14.00%	N/A 0.0232%
REGIONS FINANCIAL CORP	RF	\$	22,409.18	0.10%	1.97%	12.00%	14.09%	0.0142%
ROBERT HALF INTL INC RED HAT INC	RHI RHT	\$ \$	7,478.20 27,162.88	0.03% 0.12%	1.88% 0.00%	5.50% 20.50%	7.43% 20.50%	0.0025% 0.0251%
RAYMOND JAMES FINANCIAL INC	RJF	\$	13,972.52	0.06%	1.04%	12.50%	13.61%	0.0086%
RALPH LAUREN CORP RESMED INC	RL RMD	\$ \$	8,555.20 13,877.70	0.04% 0.06%	1.90% 1.48%	3.50% 10.00%	5.43% 11.55%	0.0021% 0.0072%
ROCKWELL AUTOMATION INC	ROK	\$	23,496.03	0.11%	1.82%	6.00%	7.87%	0.0072%
ROPER TECHNOLOGIES INC ROSS STORES INC	ROP ROST	\$ \$	28,629.63 28,745.02	0.13% 0.13%	0.59% 1.20%	9.00% 9.50%	9.62% 10.76%	0.0124% 0.0140%
RANGE RESOURCES CORP	RRC	φ \$	3,736.73	0.02%	0.53%	23.50%	24.09%	0.0041%
REPUBLIC SERVICES INC RAYTHEON COMPANY	RSG RTN	\$ \$	22,874.28	0.10% 0.28%	2.10%	12.50%	14.73%	0.0152% 0.0350%
SBA COMMUNICATIONS CORP	SBAC	\$ \$	61,657.92 19,447.06	0.28%	1.49% 0.00%	11.00% 88.50%	12.57% 88.50%	0.0350%
STARBUCKS CORP	SBUX	\$	80,894.77	0.37%	2.26%	15.00%	17.43%	0.0636%
SCANA CORP SCHWAB (CHARLES) CORP	SCG SCHW	\$ \$	5,891.60 74,921.08	0.03% 0.34%	0.00% 0.72%	-0.50% 14.00%	-0.50% 14.77%	-0.0001% 0.0499%
SEALED AIR CORP	SEE	\$	7,384.51	0.03%	1.46%	12.00%	13.55%	0.0045%
SHERWIN-WILLIAMS CO/THE SIGNET JEWELERS LTD	SHW SIG	\$ \$	37,812.38 2,890.74	0.17% 0.01%	0.86% 2.84%	14.50% 5.00%	15.42% 7.91%	0.0263% 0.0010%
JM SMUCKER CO/THE	SJM	\$	14,730.51	0.07%	2.43%	8.00%	10.53%	0.0070%
SCHLUMBERGER LTD SL GREEN REALTY CORP	SLB SLG	\$ \$	92,452.39 -	0.42% N/A	3.00% 3.27%	17.50% N/A	20.76% N/A	0.0866% N/A
SNAP-ON INC	SNA	\$	8,822.97	0.04%	2.12%	9.00%	11.22%	0.0045%
SYNOPSYS INC SOUTHERN CO/THE	SNPS SO	\$ \$	13,203.19 43,567.50	0.06% 0.20%	0.00% 5.53%	9.00% 4.00%	9.00% 9.64%	0.0054% 0.0190%
SIMON PROPERTY GROUP INC	SPG	\$	-	N/A	4.99%	N/A	N/A	N/A
S&P GLOBAL INC STERICYCLE INC	SPGI SRCL	\$ \$	49,087.50 5,446.31	0.22% 0.02%	1.04% 0.00%	14.50% 6.50%	15.62% 6.50%	0.0346% 0.0016%
SEMPRA ENERGY	SRE	\$	27,557.29	0.12%	3.26%	7.50%	10.88%	0.0135%
SUNTRUST BANKS INC STATE STREET CORP	STI STT	\$ \$	33,948.39 39,036.97	0.15% 0.18%	2.24% 1.64%	7.00% 9.50%	9.32% 11.22%	0.0143% 0.0198%
SEAGATE TECHNOLOGY	STX	\$	16,755.72	0.08%	4.28%	4.50%	8.88%	0.0067%
CONSTELLATION BRANDS INC-A STANLEY BLACK & DECKER INC	STZ SWK	\$ \$	44,334.10 24,064.00	0.20% 0.11%	0.95% 1.61%	13.50% 9.50%	14.51% 11.19%	0.0290% 0.0121%
SKYWORKS SOLUTIONS INC	SWKS	\$	20,326.66	0.09%	1.15%	14.00%	15.23%	0.0140%
SYNCHRONY FINANCIAL STRYKER CORP	SYF SYK	\$ \$	28,830.39 61,092.90	0.13% 0.28%	1.63% 1.15%	9.00% 14.00%	10.70% 15.23%	0.0139% 0.0420%
SYMANTEC CORP	SYMC	\$	17,167.93	0.08%	1.09%	8.50%	9.64%	0.0075%
SYSCO CORP AT&T INC	SYY T	\$ \$	31,534.88 227,834.00	0.14% 1.03%	2.38% 5.42%	14.00% 5.50%	16.55% 11.07%	0.0235% 0.1138%
MOLSON COORS BREWING CO -B	TAP	\$	17,350.47	0.08%	2.09%	14.00%	16.24%	0.0127%
TRANSDIGM GROUP INC TE CONNECTIVITY LTD	TDG TEL	\$ \$	14,907.99 36,133.43	0.07% 0.16%	0.00% 1.56%	11.00% 9.50%	11.00% 11.13%	0.0074% 0.0182%
TARGET CORP	TGT	\$	37,937.93	0.17%	3.56%	5.00%	8.65%	0.0148%
TIFFANY & CO TJX COMPANIES INC	TIF TJX	\$ \$	12,689.79 52,266.17	0.06% 0.24%	2.11% 1.51%	8.00% 12.00%	10.19% 13.60%	0.0058% 0.0321%
TORCHMARK CORP	TMK	\$	9,877.04	0.04%	0.75%	7.50%	8.28%	0.0037%
THERMO FISHER SCIENTIFIC INC TAPESTRY INC	TMO TPR	\$ \$	84,890.65 14,647.52	0.38% 0.07%	0.32% 2.60%	9.00% 14.00%	9.33% 16.78%	0.0358% 0.0111%
TRIPADVISOR INC	TRIP	\$	5,893.63	0.03%	0.00%	3.50%	3.50%	0.0009%
T ROWE PRICE GROUP INC TRAVELERS COS INC/THE	TROW TRV	\$ \$	27,653.57 38,227.68	0.12% 0.17%	2.45% 2.06%	8.00% 3.00%	10.55% 5.09%	0.0132% 0.0088%
TRACTOR SUPPLY COMPANY	TSCO	\$	8,070.77	0.04%	1.82%	9.00%	10.90%	0.0040%
TYSON FOODS INC-CL A TOTAL SYSTEM SERVICES INC	TSN TSS	\$ \$	27,588.96 16,424.33	0.12% 0.07%	1.60% 0.58%	11.50% 11.50%	13.19% 12.11%	0.0164% 0.0090%
TIME WARNER INC	TWX	\$	73,841.41	0.33%	1.70%	9.50%	11.28%	0.0376%
TEXAS INSTRUMENTS INC TEXTRON INC	TXN TXT	\$ \$	107,996.20 15,553.77	0.49% 0.07%	2.27% 0.14%	10.50% 13.00%	12.89% 13.15%	0.0628% 0.0092%
UNDER ARMOUR INC-CLASS A	UAA	\$	7,578.37	0.03%	0.00%	3.50%	3.50%	0.0012%
UNITED CONTINENTAL HOLDINGS UDR INC	UAL UDR	\$ \$	20,699.13 -	0.09% N/A	0.00% 3.60%	2.50% N/A	2.50% N/A	0.0023% N/A
UNIVERSAL HEALTH SERVICES-B	UHS	\$	12,079.45	0.05%	0.31%	10.50%	10.83%	0.0059%
ULTA BEAUTY INC UNITEDHEALTH GROUP INC	ULTA UNH	\$ \$	12,614.22 217,763.40	0.06% 0.98%	0.00% 1.34%	21.00% 14.50%	21.00% 15.94%	0.0120% 0.1566%
UNUM GROUP	UNM	\$	11,135.33	0.05%	1.85%	12.00%	13.96%	0.0070%
UNION PACIFIC CORP UNITED PARCEL SERVICE-CL B	UNP UPS	\$ ¢	104,479.40 93,785.60	0.47% 0.42%	2.21% 3.35%	11.00% 8.50%	13.33% 11.99%	0.0629% 0.0508%
UNITED RENTALS INC	URI	\$	15,507.12	0.07%	0.00%	10.00%	10.00%	0.0070%
US BANCORP UNITED TECHNOLOGIES CORP	USB	\$	89,905.41	0.41% 0.47%	2.30%	7.00% 8.00%	9.38%	0.0381%
VISA INC-CLASS A SHARES	UTX V	ֆ \$	104,820.30 252,017.60	0.47% 1.14%	2.13% 0.69%	8.00% 11.50%	10.22% 12.23%	0.0483% 0.1391%
VARIAN MEDICAL SYSTEMS INC	VAR	\$	11,313.51	0.05%	0.00%	10.00%	10.00%	0.0051%
VF CORP VIACOM INC-CLASS B	VFC VIAB	\$ \$	28,719.82 13,222.12	0.13% 0.06%	2.53% 2.44%	9.00% 3.00%	11.64% 5.48%	0.0151% 0.0033%
VALERO ENERGY CORP	VLO	\$	40,866.70	0.18%	3.43%	7.00%	10.55%	0.0195%
VULCAN MATERIALS CO VORNADO REALTY TRUST	VMC VNO	\$ \$	15,765.25 12,839.55	0.07% 0.06%	0.94% 3.73%	19.00% -0.50%	20.03% 3.22%	0.0142% 0.0019%
VERISK ANALYTICS INC	VRSK	\$	17,172.29	0.08%	0.00%	9.50%	9.50%	0.0074%
VERISIGN INC	VRSN	\$	11,549.89	0.05%	0.00%	10.50%	10.50%	0.0055%

			[4]	[5]	[6]	[7]	[8]	[9]
			Market		Estimated	Long-Term		Weighted
Company	Ticker	С	apitalization	Weight in Index	Dividend Yield	Growth Est.	DCF Result	DCF Result
VERTEX PHARMACEUTICALS INC	VRTX	\$	43,431.16	N/A	0.00%	N/A	N/A	N/A
VENTAS INC	VTR	\$	-	N/A	6.39%	N/A	N/A	N/A
VERIZON COMMUNICATIONS INC	VZ	\$	199,933.40	0.90%	4.82%	4.00%	8.92%	0.0804%
WATERS CORP	WAT	\$	16,616.92	0.07%	0.00%	11.00%	11.00%	0.0082%
WALGREENS BOOTS ALLIANCE IN		\$	68,311.06	0.31%	2.32%	9.00%	11.42%	0.0352%
WESTERN DIGITAL CORP	WDC	\$	28,874.34	0.13%	2.06%	13.00%	15.19%	0.0198%
WEC ENERGY GROUP INC	WEC	\$	19,022.80	0.09%	3.72%	7.00%	10.85%	0.0093%
WELLTOWER INC	WELL	\$	-	N/A	6.72%	N/A	N/A	N/A
WELLS FARGO & CO	WFC	\$	279,508.80	1.26%	2.80%	5.00%	7.87%	0.0993%
WHIRLPOOL CORP	WHR	\$	11,432.16	0.05%	2.77%	8.00%	10.88%	0.0056%
WILLIS TOWERS WATSON PLC	WLTW	\$	21,108.40	N/A	1.50%	N/A	N/A	N/A
WASTE MANAGEMENT INC	WM	\$	37,011.72	0.17%	2.18%	9.50%	11.78%	0.0197%
WILLIAMS COS INC	WMB	\$	22,425.90	0.10%	5.01%	17.50%	22.95%	0.0232%
WALMART INC	WMT	\$	260,946.60	1.18%	2.35%	5.50%	7.91%	0.0932%
WESTROCK CO	WRK	\$	16,836.15	0.08%	2.60%	10.00%	12.73%	0.0097%
WESTERN UNION CO	WU	\$	9,029.84	0.04%	3.87%	6.00%	9.99%	0.0041%
WEYERHAEUSER CO	WY	\$	25,957.67	0.12%	3.71%	14.50%	18.48%	0.0216%
WYNDHAM WORLDWIDE CORP	WYN	\$	11,791.39	0.05%	2.27%	8.00%	10.36%	0.0055%
WYNN RESORTS LTD	WYNN	\$	18,409.46	0.08%	1.12%	14.00%	15.20%	0.0126%
CIMAREX ENERGY CO	XEC	\$	8,925.00	0.04%	0.68%	27.50%	28.27%	0.0114%
XCEL ENERGY INC	XEL	\$	21,899.82	0.10%	3.52%	4.50%	8.10%	0.0080%
XL GROUP LTD	XL	\$	14,283.74	0.06%	1.58%	11.50%	13.17%	0.0085%
XILINX INC	XLNX	\$	19,286.95	0.09%	1.85%	8.00%	9.92%	0.0086%
EXXON MOBIL CORP	XOM	\$	314,046.40	1.42%	4.24%	9.00%	13.43%	0.1903%
DENTSPLY SIRONA INC	XRAY	\$	13,075.72	0.06%	0.62%	8.50%	9.15%	0.0054%
XEROX CORP	XRX	\$	7,594.30	0.03%	3.35%	4.00%	7.42%	0.0025%
XYLEM INC	XYL	\$	13,863.32	0.06%	1.09%	14.00%	15.17%	0.0095%
YUM! BRANDS INC	YUM	\$	27,940.38	0.13%	1.75%	7.50%	9.32%	0.0117%
ZIMMER BIOMET HOLDINGS INC	ZBH	\$	24,330.51	0.11%	0.83%	6.50%	7.36%	0.0081%
ZIONS BANCORPORATION	ZION	\$	11,203.84	0.05%	1.64%	15.50%	17.27%	0.0087%
ZOETIS INC	ZTS	\$	40,265.65	0.18%	0.61%	13.00%	13.65%	0.0248%
	Total Market Capitalization	: \$ 2	22,159,934.02					15.68%

Notes:

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

Bloomberg and Value Line Beta Coefficients

		[1]	[2]
Company	Ticker	Bloomberg	Value Line
ALLETE, Inc.	ALE	0.638	0.750
Alliant Energy Corporation	LNT	0.552	0.700
Ameren Corporation	AEE	0.488	0.650
American Electric Power Company, Inc.	AEP	0.604	0.650
Black Hills Corporation	BKH	0.670	0.900
CMS Energy Corporation	CMS	0.537	0.650
DTE Energy Company	DTE	0.565	0.650
Duke Energy Corporation	DUK	0.536	0.600
El Paso Electric Company	EE	0.670	0.800
Hawaiian Electric Industries, Inc.	HE	0.555	0.700
IDACORP, Inc.	IDA	0.645	0.700
NorthWestern Corporation	NWE	0.555	0.700
OGE Energy Corp.	OGE	0.661	0.950
Otter Tail Corporation	OTTR	0.817	0.850
Pinnacle West Capital Corporation	PNW	0.638	0.700
PNM Resources, Inc.	PNM	0.696	0.750
Portland General Electric Company	POR	0.506	0.700
Southern Company	SO	0.385	0.550
Wisconsin Energy Corporation	WEC	0.548	0.600
Xcel Energy Inc.	XEL	0.530	0.600
Mean		0.590	0.708

Notes:

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

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

	[1]	[2]	[3]	[4]	[5]	[6]
			Ex-Ante Marke	t Risk Premium	CAPM	Result
		Average	Bloomberg	Value Line	Bloomberg	Value Line
	Risk-Free	Beta	Market DCF	Market DCF	Market DCF	Market DCF
	Rate	Coefficient	Derived	Derived	Derived	Derived
PROXY GROUP AVERAGE BLOOMBERG BETA COE	FFICIENT					
Current 30-Year Treasury (30-day average) [7]	3.13%	0.590	11.49%	12.56%	9.90%	10.53%
Near-Term Projected 30-Year Treasury [8]	3.42%	0.590	11.49%	12.56%	10.19%	10.82%
Mean					10.05%	10.68%

			Ex-Ante Market Risk Premium		CAPM	Result
		Average	Bloomberg	Value Line	Bloomberg	Value Line
	Risk-Free	Beta	Market DCF	Market DCF	Market DCF	Market DCF
	Rate	Coefficient	Derived	Derived	Derived	Derived
PROXY GROUP AVERAGE VALUE LINE AVERAGE B	ETA COEFFICIE	NT				
Current 30-Year Treasury (30-day average) [7]	3.13%	0.708	11.49%	12.56%	11.26%	12.01%
Near-Term Projected 30-Year Treasury [8]	3.42%	0.708	11.49%	12.56%	11.55%	12.30%
Mean					11.40%	12.16%

Notes:

[1] See Notes [7], [8] and [9]

[2] Source: RBH-4 [3] Source: RBH-3

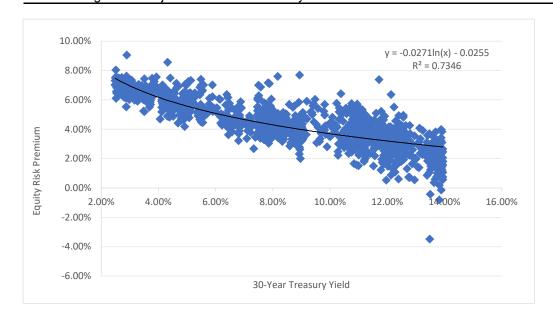
[4] Source: RBH-3

[5] Equals Col. [1] + (Col. [2] x Col. [3]) [6] Equals Col. [1] + (Col. [2] x Col. [4]) [7] Bloomberg Professional

[8] Source: Blue Chip Financial Forecasts, Vol. 37, No. 3, March 1, 2018, at 2.

Bond Yield Plus Risk Premium

	[1]	[2]	[3] 30-Year	[4]	[5]
			Treasury	Risk	Return on
	Constant	Slope	Yield	Premium	Equity
	-2.55%	-2.71%			
	Current 30-	Year Treasury	3.13%	6.84%	9.97%
Near-Tern	n Projected 30-	Year Treasury	3.42%	6.61%	10.02%
Long-Tern	n 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, [3] Source: Current = Bloomberg Professional,
 Near Term Projected = Blue Chip Financial Forecasts, Vol. 37, No. 3, March 1, 2018, at 2.
 Long Term Projected = Blue Chip Financial Forecasts, Vol. 36, No. 12, December 1, 2017, at 14.
 [4] Equals [1] + In([3]) x [2]
 [5] Equals [3] + [4]
 [6] Source: S&P Global Market Intelligence
 [7] Source: S&P Global Market Intelligence

- [8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
- [9] Equals [7] [8]

B [6]	ond Yield Plus [7]	Risk Premium [8]	[9]
Date of	_	30-Year	
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
1/1/1980	14.50%	9.36%	5.14%
1/7/1980 1/9/1980	14.39% 15.00%	9.38% 9.40%	5.01% 5.60%
1/14/1980	15.00%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980 1/30/1980	15.50% 13.86%	9.47% 9.52%	6.03% 4.34%
1/31/1980	12.61%	9.52%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980 2/14/1980	12.80% 13.00%	9.63% 9.65%	3.17% 3.35%
2/14/1980	13.50%	9.68%	3.82%
2/27/1980	13.75%	9.78%	3.97%
2/29/1980 2/29/1980	13.75% 14.00%	9.81%	3.94% 4.19%
2/29/1980	14.00%	9.81% 9.81%	4.19% 4.96%
3/7/1980	12.70%	9.89%	2.81%
3/14/1980	13.50%	9.97%	3.53%
3/26/1980 3/27/1980	14.16% 14.24%	10.10% 10.12%	4.06% 4.12%
3/28/1980	14.50%	10.13%	4.37%
4/11/1980	12.75%	10.27%	2.48%
4/14/1980 4/16/1980	13.85% 15.50%	10.29% 10.31%	3.56% 5.19%
4/22/1980	13.25%	10.35%	2.90%
4/22/1980	13.90%	10.35%	3.55%
4/24/1980 4/29/1980	16.80% 15.50%	10.38% 10.41%	6.43% 5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980	15.00%	10.45%	4.55%
5/8/1980 5/9/1980	13.75% 14.35%	10.46% 10.47%	3.29% 3.88%
5/13/1980	13.60%	10.47 %	3.00 <i>%</i> 3.12%
5/15/1980	13.25%	10.49%	2.76%
5/19/1980	13.75%	10.51%	3.24%
5/27/1980 5/27/1980	13.62% 14.60%	10.54% 10.54%	3.08% 4.06%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980 6/2/1980	13.80% 15.63%	10.56% 10.57%	3.24% 5.06%
6/9/1980	15.90%	10.57 %	5.30%
6/10/1980	13.78%	10.60%	3.18%
6/12/1980 6/19/1980	14.25% 13.40%	10.61% 10.62%	3.64% 2.78%
6/30/1980	13.40%	10.65%	2.75%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980 7/10/1980	14.75% 15.00%	10.67% 10.68%	4.08% 4.32%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.71%	3.09%
7/22/1980 7/24/1980	14.10% 15.00%	10.72% 10.73%	3.38% 4.27%
7/24/1980	13.48%	10.73%	4.27% 2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980 8/8/1980	14.00% 15.45%	10.78% 10.78%	3.22% 4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980 8/25/1980	16.25% 13.75%	10.79% 10.82%	5.46% 2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980 9/15/1980	13.50% 13.93%	10.88% 10.88%	2.62% 3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980 9/26/1980	15.00% 13.75%	10.93% 10.94%	4.07% 2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980 10/3/1980	13.90% 15.50%	10.97% 10.98%	2.93% 4.52%
10/7/1980	12.50%	10.99%	1.51%

В	ond Yield Plus	Risk Premium	
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate	Return on	Treasury	Risk
Case 10/9/1980	Equity 13.25%	Yield 11.00%	Premium 2.25%
10/9/1980	13.25%	11.00%	2.25% 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 10/31/1980	13.75% 14.25%	11.11% 11.11%	2.64% 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 11/10/1980	13.75% 14.85%	11.14% 11.15%	2.61% 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 11/26/1980	14.00% 14.00%	11.21% 11.21%	2.79% 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 12/17/1980	15.45% 13.25%	11.23% 11.23%	4.22% 2.02%
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980 12/22/1980	13.45% 15.00%	11.23% 11.23%	2.22% 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 1/7/1981	15.25% 14.30%	11.22% 11.21%	4.03% 3.09%
1/19/1981	15.25%	11.21%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981 1/27/1981	15.25% 15.00%	11.20% 11.21%	4.05% 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 2/20/1981	15.60% 15.25%	11.28% 11.33%	4.32% 3.92%
3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981 3/13/1981	16.00% 13.02%	11.50% 11.52%	4.50% 1.50%
3/13/1981	16.19%	11.52%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981 4/1/1981	15.30% 14.53%	11.60% 11.68%	3.70% 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 4/9/1981	16.50% 17.00%	11.78% 11.78%	4.72% 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 4/17/1981	13.50% 14.10%	11.87% 11.87%	1.63% 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 4/27/1981	12.50% 13.61%	11.97% 11.97%	0.53% 1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981 5/5/1981	16.22%	12.05%	4.17%
5/5/1981 5/7/1981	14.40% 16.25%	12.07% 12.11%	2.33% 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%

Electric Rate	B [6]	ond Yield Plus [7]	Risk Premium [8]	[9]
Case Equity Yield Premium 5/12/1981 13.50% 12.16% 1.34% 5/15/1981 15.75% 12.22% 3.53% 5/16/1981 14.88% 12.23% 2.65% 5/20/1981 14.00% 12.27% 1.73% 5/26/1981 14.00% 12.27% 1.73% 5/26/1981 14.00% 12.31% 2.69% 5/29/1981 15.00% 12.35% 4.15% 6/3/1981 16.50% 12.35% 4.15% 6/3/1981 16.676 12.37% 2.30% 6/3/1981 14.676 12.37% 2.30% 6/3/1981 14.676 12.37% 2.30% 6/10/1981 16.75% 12.42% 4.33% 6/17/1981 14.40% 12.46% 1.94% 6/30/1981 16.25% 12.54% 2.24% 6/30/1981 15.25% 12.56% 2.44% 6/30/1981 15.25% 12.56% 2.94% 7/1/1981 17.50%	Date of		30-Year	
5/16/1981 15.75% 12.22% 3.53% 5/18/1981 14.88% 12.23% 2.65% 5/20/1981 16.00% 12.26% 3.74% 5/20/1981 14.00% 12.27% 1.73% 5/26/1981 14.90% 12.30% 2.60% 5/27/1981 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% 6/26/1981 16.00% 12.56% 2.24% 6/26/1981 16.00% 12.56% 2.94% 7/1/1981 15.50% 12.56% 2.94% 7/1/1981 17.50% 12.56% 3.38% 7/1/1981 16.00% 12.65% 3.38% 7/1/1981 16.00%			•	
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% 12.31% 2.60% 5/27/1981 15.00% 12.31% 2.69% 5/29/1981 15.00% 12.35% 4.15% 6/3/1981 14.67% 12.35% 4.15% 6/3/1981 14.67% 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% 6/26/1981 16.00% 12.52% 3.48% 6/30/1981 15.25% 12.54% 2.71% 7/1/1981 17.50% 12.56% 2.94% 7/1/1981 16.00% 12.62% 3.38% 7/1/1981 16.00% 12.62% 3.38% 7/1/1981 16.00% 12.62% 3.38% 7/1/1981 16.00%				
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5/26/1981 14.90% 12.31% 2.60% 5/27/1981 15.00% 12.31% 2.69% 5/29/1981 15.50% 12.34% 3.16% 6/3/1981 14.67% 12.35% 4.15% 6/3/1981 14.67% 12.37% 2.30% 6/5/1981 14.67% 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 16.00% 12.52% 3.48% 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% 7/10/1981 15.00% 12.62% 3.38% 7/14/1981 16.00% 12.62% 3.38% 7/14/1981 16.00% 12.65% 3.35% 7/17/1981 15.00% 12.68% 2.32% 7/21/1981 13.00% 12.68% 2.32% 7/21/1981 13.50%				
5/27/1981 15.00% 12.34% 3.16% 6/29/1981 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% 6/17/1981 14.40% 12.42% 4.33% 6/17/1981 14.40% 12.47% 3.86% 6/25/1981 16.03% 12.47% 3.86% 6/25/1981 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 16.00% 12.66% 3.38% 7/14/1981 16.00% 12.65% 3.38% 7/14/1981 15.00% 12.67% 2.33% 7/20/1981 15.00% 12.67% 2.33% 7/14/1981 15.00% 12.68% 3.35% 7/17/1981 15.00% 12.67% 2.33% 7/20/1981 15.00%	5/21/1981	14.00%	12.27%	1.73%
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12/17/1981 16.50% 13.63% 2.87%				
	12/18/1981	15.45%	13.63%	1.82%

Bond Yield Plus Risk Premium			
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981 12/31/1981	16.25% 16.15%	13.67% 13.67%	2.58% 2.48%
1/4/1982	15.50%	13.67%	2.46% 1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982 1/14/1982	14.75% 15.75%	13.74% 13.75%	1.01% 2.00%
1/15/1982	15.75%	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 1/28/1982	16.84% 13.00%	13.81% 13.81%	3.03% -0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982 2/8/1982	16.44% 15.50%	13.84% 13.86%	2.60% 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 2/26/1982	15.17% 15.25%	13.89% 13.89%	1.28% 1.36%
3/1/1982	15.23%	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 3/12/1982	17.10% 16.25%	13.88% 13.88%	3.22% 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 3/31/1982	15.50% 17.00%	13.90% 13.91%	1.60% 3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982 4/5/1982	15.50% 15.50%	13.91% 13.92%	1.59%
4/8/1982	16.40%	13.92%	1.58% 2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%
4/27/1982 4/28/1982	15.00% 15.75%	13.94% 13.94%	1.06% 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 5/14/1982	16.00% 15.50%	13.94% 13.92%	2.06% 1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982 5/20/1982	15.00% 15.10%	13.91% 13.91%	1.09% 1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982 5/27/1982	17.75%	13.91%	3.84%
5/28/1982	15.00% 15.50%	13.89% 13.89%	1.11% 1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982 6/9/1982	16.60% 17.86%	13.89% 13.88%	2.71% 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 6/23/1982	14.90% 16.00%	13.87% 13.86%	1.03% 2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982 7/1/1982	14.70% 16.00%	13.86% 13.84%	0.84% 2.16%
7/1/1982 7/2/1982	16.00% 15.62%	13.84% 13.84%	2.16% 1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982 7/14/1982	16.80% 15.76%	13.82% 13.82%	2.98% 1.94%
1/17/1302	10.7070	10.02 /0	1.57/0

Bond Yield Plus Risk Premium				
[6] Date of	[7]	[8] 30-Year	[9]	
Electric Rate	Return on	Treasury	Risk	
Case 7/14/1982	Equity	Yield	Premium 2.20%	
7/14/1982	16.02% 16.50%	13.82% 13.80%	2.20%	
7/22/1982	14.50%	13.77%	0.73%	
7/22/1982	17.00%	13.77%	3.23%	
7/27/1982	16.75%	13.75%	3.00%	
7/29/1982 8/11/1982	16.50% 17.50%	13.74% 13.68%	2.76% 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 8/30/1982	15.50% 15.00%	13.56% 13.55%	1.94% 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 9/16/1982	16.25% 16.00%	13.50% 13.50%	2.75% 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 10/1/1982	15.25% 15.50%	13.46% 13.42%	1.79% 2.08%	
10/1/1982	15.50%	13.42 %	2.58%	
10/22/1982	15.75%	13.24%	2.51%	
10/22/1982	17.15%	13.24%	3.91%	
10/29/1982 11/1/1982	15.54% 15.50%	13.16% 13.15%	2.38% 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 11/23/1982	15.50% 15.85%	12.89% 12.89%	2.61% 2.96%	
11/30/1982	16.50%	12.81%	3.69%	
12/1/1982	17.04%	12.79%	4.25%	
12/6/1982 12/6/1982	15.00%	12.73%	2.27%	
12/10/1982	16.35% 15.50%	12.73% 12.66%	3.62% 2.84%	
12/13/1982	16.00%	12.65%	3.35%	
12/14/1982	15.30%	12.63%	2.67%	
12/14/1982 12/20/1982	16.40% 16.00%	12.63% 12.57%	3.77% 3.43%	
12/21/1982	14.75%	12.57 %	2.19%	
12/21/1982	15.85%	12.56%	3.29%	
12/22/1982	16.25%	12.54%	3.71%	
12/22/1982 12/22/1982	16.58%	12.54% 12.54%	4.04% 4.21%	
12/29/1982	16.75% 14.90%	12.34%	4.21% 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 1/5/1983	16.77% 17.33%	12.47% 12.40%	4.30% 4.93%	
1/11/1983	15.90%	12.34%	3.56%	
1/12/1983	14.63%	12.33%	2.30%	
1/12/1983 1/20/1983	15.50% 17.75%	12.33% 12.24%	3.17% 5.51%	
1/20/1983	17.75%	12.24%	5.51% 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 2/1/1983	16.14% 18.50%	12.17% 12.13%	3.97% 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 2/23/1983	15.50% 15.10%	11.97% 11.96%	3.53% 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 3/18/1983	13.00% 15.25%	11.77% 11.73%	1.23% 3.52%	
3/23/1983	15.40%	11.69%	3.71%	

B ₁	ond Yield Plus [7]	Risk Premium [8]	[9]
Date of		30-Year	[9]
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983 3/31/1983	16.71% 15.00%	11.61% 11.59%	5.10% 3.41%
4/4/1983	15.00%	11.59%	3.41%
4/8/1983	15.50%	11.51%	3.99%
4/11/1983	14.81%	11.49%	3.32%
4/19/1983 4/20/1983	14.50% 16.00%	11.38% 11.36%	3.12% 4.64%
4/20/1983	16.00%	11.24%	4.04% 4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983 5/12/1983	16.46% 14.14%	11.12% 11.11%	5.34% 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 5/27/1983	15.50% 15.00%	10.98% 10.96%	4.52% 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% 4.19%
6/17/1983 7/1/1983	15.03% 14.80%	10.84% 10.78%	4.19% 4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983 7/19/1983	13.20% 15.00%	10.75% 10.74%	2.45% 4.26%
7/19/1983	15.00%	10.74%	4.26%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983 8/3/1983	16.34% 16.50%	10.75% 10.75%	5.59% 5.75%
8/19/1983	15.00%	10.75%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983 9/7/1983	14.75% 15.00%	10.84% 10.86%	3.91% 4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983 9/20/1983	14.50% 16.50%	10.91% 10.91%	3.59% 5.59%
9/28/1983	14.50%	10.91%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983 10/4/1983	16.15% 14.80%	10.95% 10.96%	5.20% 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 10/19/1983	14.50% 16.25%	11.00% 11.01%	3.50% 5.24%
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983 11/1/1983	15.20% 16.00%	11.04% 11.06%	4.16% 4.94%
11/9/1983	14.90%	11.00%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983 11/30/1983	16.15% 15.00%	11.13% 11.14%	5.02% 3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983 12/9/1983	15.90% 14.75%	11.16% 11.17%	4.74% 3.58%
12/9/1983	14.75% 14.50%	11.17%	3.58% 3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983 12/20/1983	14.69% 16.00%	11.22% 11.22%	3.47% 4.78%
12/20/1983	16.00%	11.22%	5.03%
12/22/1983	14.75%	11.23%	3.52%
12/22/1983	15.75%	11.23%	4.52% 3.48%
1/3/1984	14.75%	11.27%	3.48%

В	ond Yield Plus	Risk Premium	
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate	Return on	Treasury	Risk
Case 1/10/1984	Equity 15.90%	Yield 11.30%	Premium 4.60%
1/12/1984	15.60%	11.31%	4.29%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984 1/30/1984	15.90% 16.10%	11.33% 11.37%	4.57% 4.73%
1/30/1984	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 2/9/1984	14.75% 15.25%	11.40% 11.42%	3.35% 3.83%
2/15/1984	15.25%	11.42%	4.26%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984 2/28/1984	14.75% 14.50%	11.47% 11.51%	3.28% 2.99%
3/2/1984	14.30 %	11.51%	2.99%
3/20/1984	16.00%	11.64%	4.36%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984 4/2/1984	14.71% 15.50%	11.68% 11.71%	3.03% 3.79%
4/6/1984	14.74%	11.71%	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 4/30/1984	14.64% 14.40%	11.85% 11.87%	2.79% 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% 3.04%
5/29/1984 6/13/1984	15.10% 15.25%	12.06% 12.15%	3.04%
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984 7/2/1984	15.25% 13.35%	12.26% 12.27%	2.99%
7/2/1984	16.00%	12.21%	1.08% 3.69%
7/12/1984	16.50%	12.32%	4.18%
7/13/1984	16.25%	12.33%	3.92%
7/17/1984 7/18/1984	14.14% 15.30%	12.35% 12.36%	1.79% 2.94%
7/18/1984	15.50%	12.36%	2.94% 3.14%
7/19/1984	14.30%	12.37%	1.93%
7/24/1984	16.79%	12.39%	4.40%
7/31/1984 8/3/1984	16.00% 14.25%	12.43% 12.44%	3.57% 1.81%
8/17/1984	14.25%	12.44%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984	16.30%	12.51%	3.79%
8/31/1984 9/6/1984	15.55% 16.00%	12.52% 12.53%	3.03% 3.47%
9/10/1984	14.75%	12.53%	2.21%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984 9/28/1984	14.50% 15.00%	12.57% 12.57%	1.93% 2.43%
9/28/1984	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 10/26/1984	15.00% 16.40%	12.59% 12.58%	2.41% 3.82%
10/26/1964	16.40%	12.58%	3.62% 3.67%
11/7/1984	15.60%	12.58%	3.02%
11/9/1984	16.00%	12.58%	3.42%
11/14/1984 11/20/1984	15.75% 15.25%	12.58% 12.58%	3.17% 2.67%
11/20/1984	15.25% 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 12/4/1984	15.80% 16.50%	12.56% 12.56%	3.24% 3.94%
12/4/1984	16.50%	12.56%	3.94% 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%

B ₁	ond Yield Plus [7]	Risk Premium [8]	[9]
Date of	[/]	30-Year	
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985 1/11/1985	15.75% 16.30%	12.47% 12.46%	3.28% 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 1/31/1985	14.90% 14.75%	12.40% 12.39%	2.50% 2.36%
2/8/1985	14.47%	12.35%	2.12%
3/1/1985	13.84%	12.31%	1.53%
3/8/1985 3/14/1985	16.85% 15.50%	12.28% 12.25%	4.57% 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 4/16/1985	15.50% 15.70%	12.11% 12.06%	3.39% 3.64%
4/22/1985	14.00%	12.02%	1.98%
4/26/1985	15.50%	11.98%	3.52%
4/29/1985 5/2/1985	15.00% 14.68%	11.97% 11.94%	3.03% 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 6/14/1985	16.00% 15.50%	11.71% 11.61%	4.29% 3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985 8/2/1985	14.50% 14.80%	11.33% 11.29%	3.17% 3.51%
8/7/1985	15.00%	11.29%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985 9/9/1985	14.50% 14.60%	11.15% 11.11%	3.35% 3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985 9/27/1985	15.00% 15.50%	11.06% 11.05%	3.94% 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 10/24/1985	15.25% 15.40%	11.03% 10.96%	4.22% 4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985 10/29/1985	16.00% 16.65%	10.95% 10.94%	5.05% 5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985 11/8/1985	15.50% 14.30%	10.90% 10.89%	4.60% 3.41%
12/12/1985	14.30%	10.89%	3.41% 4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985 12/20/1985	14.50% 15.00%	10.67% 10.67%	3.83% 4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986 2/5/1986	15.00%	10.32% 10.32%	4.68%
2/5/1966	15.75% 13.30%	10.32%	5.43% 3.01%
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986 2/24/1986	16.00% 14.50%	10.23% 10.18%	5.77% 4.32%
2/24/1986	14.50%	10.15%	4.32% 3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986 3/27/1986	13.50% 14.10%	10.00% 9.86%	3.50% 4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%

_		Risk Premium	
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986 4/23/1986	13.40% 15.00%	9.69% 9.57%	3.71%
5/16/1986	14.50%	9.37% 9.32%	5.43% 5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986 6/2/1986	15.10% 12.81%	9.18% 9.17%	5.92% 3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986 6/26/1986	12.00% 14.75%	8.91% 8.91%	3.09% 5.84%
6/30/1986	13.00%	8.87%	5.04% 4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986 7/17/1986	12.60% 12.40%	8.71% 8.66%	3.89% 3.74%
7/17/1986	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 9/19/1986	12.75% 13.25%	8.06% 8.03%	4.69% 5.22%
10/1/1986	14.00%	7.95%	6.05%
10/3/1986	13.40%	7.93%	5.47%
10/31/1986 11/5/1986	13.50% 13.00%	7.77% 7.75%	5.73% 5.25%
12/3/1986	12.90%	7.75% 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 12/30/1986	13.80% 13.00%	7.51% 7.49%	6.29% 5.51%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.47%	4.93%
1/27/1987 3/2/1987	12.71% 12.47%	7.46% 7.47%	5.25% 5.00%
3/3/1987	13.60%	7.47% 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 3/31/1987	13.00% 13.00%	7.47% 7.46%	5.53% 5.54%
4/6/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987 4/27/1987	14.50% 12.00%	7.50% 7.54%	7.00% 4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987 6/15/1987	13.50% 13.20%	7.70% 7.78%	5.80% 5.42%
6/29/1987	15.20%	7.76%	5.42% 7.17%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987 7/15/1987	12.90% 13.50%	7.86% 7.88%	5.04% 5.62%
7/16/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%
7/27/1987 7/27/1987	13.00% 13.40%	7.92% 7.92%	5.08% 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 8/27/1987	12.75% 13.25%	8.06% 8.06%	4.69% 5.19%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	12.75%	8.31%	4.44%
9/30/1987 10/2/1987	13.00% 11.50%	8.31% 8.33%	4.69% 3.17%
10/2/1987	13.00%	8.43%	4.57%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987 11/30/1987	13.00% 12.00%	8.64% 8.68%	4.36% 3.32%
11/30/1987	12.00% 14.20%	8.68% 8.70%	3.32% 5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%

_		Risk Premium	
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate Case	Return on	Treasury Yield	Risk Premium
12/16/1987	Equity 13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987 12/21/1987	13.50% 12.01%	8.80%	4.70% 3.20%
12/21/1987	12.01%	8.81% 8.81%	3.20% 3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987 1/20/1988	13.00% 13.80%	8.81% 8.94%	4.19% 4.86%
1/26/1988	13.90%	8.95%	4.95%
1/29/1988	13.20%	8.96%	4.24%
2/4/1988 3/1/1988	12.60% 11.56%	8.96% 8.94%	3.64% 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 4/7/1988	12.50% 13.25%	8.92% 8.93%	3.58% 4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988 5/16/1988	13.50% 13.00%	8.99% 8.99%	4.51% 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 8/23/1988	12.75% 11.70%	8.92% 8.93%	3.83% 2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988 10/13/1988	12.60% 13.10%	8.95% 8.93%	3.65% 4.17%
12/19/1988	13.10%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%
12/21/1988 12/27/1988	12.90% 13.00%	9.02% 9.03%	3.88% 3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
1/27/1989 1/31/1989	13.00% 13.00%	9.05% 9.05%	3.95% 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 3/30/1989	13.00% 14.00%	9.05% 9.05%	3.95% 4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989 6/2/1989	12.40% 13.20%	9.05% 9.00%	3.35% 4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989 8/14/1989	13.00% 12.50%	8.90% 8.77%	4.10% 3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989 12/15/1989	13.00% 13.00%	8.49% 8.34%	4.51%
12/20/1989	12.90%	8.32%	4.66% 4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989 1/10/1990	13.00% 12.80%	8.29% 8.24%	4.71% 4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990 2/9/1990	12.00% 12.10%	8.20% 8.17%	3.80% 3.93%
2/24/1990	12.10%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990 4/12/1990	15.76% 12.52%	8.17% 8.18%	7.59% 4.34%
4/12/1990 4/19/1990	12.52% 12.75%	8.18% 8.20%	4.34% 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%

В	ond Yield Plus	Risk Premium	
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate	Return on	Treasury	Risk
Case	Equity	Yield	Premium
6/4/1990 6/6/1990	12.90% 12.25%	8.30% 8.31%	4.60% 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 7/6/1990	12.50% 12.10%	8.33% 8.34%	4.17% 3.76%
7/6/1990	12.35%	8.34%	4.01%
8/10/1990	12.55%	8.41%	4.14%
8/16/1990	13.21%	8.43%	4.78%
8/22/1990 8/24/1990	13.10% 13.00%	8.45% 8.46%	4.65% 4.54%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%
10/5/1990 10/19/1990	12.84% 13.00%	8.62% 8.67%	4.22% 4.33%
10/19/1990	12.30%	8.68%	4.33% 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 12/19/1990	13.10% 12.00%	8.67% 8.66%	4.43% 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 1/4/1991	13.10% 12.50%	8.65% 8.65%	4.45% 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 2/12/1991	12.50% 13.00%	8.59% 8.58%	3.91% 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 3/8/1991	12.30% 13.00%	8.52% 8.52%	3.78% 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 6/12/1991	12.75% 12.00%	8.44% 8.41%	4.31% 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 7/19/1991	12.50% 12.10%	8.37% 8.34%	4.13% 3.76%
8/1/1991	12.10%	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 10/17/1991	12.25% 13.00%	8.23% 8.20%	4.02% 4.80%
10/17/1991	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 11/5/1991	12.00% 12.25%	8.19% 8.19%	3.81% 4.06%
11/12/1991	12.23%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991 11/27/1991	12.50% 12.10%	8.18% 8.18%	4.32% 3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991 12/20/1991	12.80% 12.65%	8.15% 8.1 <i>4</i> %	4.65% 4.51%
12/20/1991 1/9/1992	12.65% 12.80%	8.14% 8.09%	4.51% 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 1/31/1992	12.65% 12.00%	8.05% 8.04%	4.60% 3.96%
2/11/1992	12.40%	8.03%	4.37%

B [6] Date of	ond Yield Plus [7]	Risk Premium [8] 30-Year	ı [9]
Electric Rate	Return on	Treasury	Risk
<u>Case</u> 2/25/1992	Equity 12.50%	Yield 8.01%	Premium 4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%
4/2/1992 4/9/1992	12.10% 11.45%	7.95% 7.94%	4.15% 3.51%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.93%	3.57%
5/5/1992 5/12/1992	11.50% 11.87%	7.89% 7.88%	3.61% 3.99%
5/12/1992	12.46%	7.88%	3.99% 4.58%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992 6/29/1992	12.35% 11.00%	7.85% 7.85%	4.50% 3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/13/1992 7/22/1992	13.50% 11.20%	7.84% 7.83%	5.66% 3.37%
8/3/1992	12.00%	7.83% 7.81%	3.37% 4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992 9/30/1992	11.40% 11.75%	7.71% 7.70%	3.69% 4.05%
10/2/1992	13.00%	7.70% 7.70%	4.05% 5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992 11/3/1992	11.75% 12.00%	7.71% 7.71%	4.04% 4.29%
12/3/1992	11.85%	7.71%	4.17%
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992 12/17/1992	12.40% 12.00%	7.66% 7.66%	4.74% 4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992 12/31/1992	12.00% 11.90%	7.63% 7.63%	4.37% 4.27%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993 2/15/1993	11.40% 12.30%	7.56% 7.52%	3.84% 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 5/11/1993	11.75% 11.75%	7.29% 7.25%	4.46% 4.50%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.23%	4.27%
5/28/1993 6/3/1993	11.00% 12.00%	7.22% 7.21%	3.78% 4.79%
6/16/1993	12.00%	7.21% 7.19%	4.79%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993 7/23/1993	11.38% 10.46%	7.10% 7.09%	4.28% 3.37%
8/24/1993	11.50%	6.96%	4.54%
9/21/1993	10.50%	6.81%	3.69%
9/29/1993 9/30/1993	11.47% 11.60%	6.77% 6.76%	4.70% 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 12/16/1993	10.55% 10.60%	6.48% 6.48%	4.07% 4.12%
12/10/1993	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 1/28/1994	11.00% 11.35%	6.40% 6.39%	4.60% 4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994 2/25/1994	11.25% 12.00%	6.35% 6.35%	4.90% 5.65%
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_		Risk Premium	
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate	Return on	Treasury	Risk
Case 3/1/1994	Equity 11.00%	Yield 6.35%	Premium 4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994 5/13/1994	11.75% 10.50%	6.45% 6.46%	5.30% 4.04%
6/3/1994	11.00%	6.54%	4.04% 4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994 11/9/1994	10.00% 10.85%	7.33% 7.39%	2.67% 3.46%
11/9/1994	10.85%	7.39%	3.46%
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994 12/8/1994	11.06% 11.50%	7.49% 7.54%	3.57% 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 12/28/1994	11.50% 12.15%	7.58% 7.61%	3.92% 4.54%
1/9/1995	12.13%	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 3/9/1995	11.90% 11.50%	7.70% 7.71%	4.20% 3.79%
3/20/1995	12.00%	7.71%	4.28%
3/23/1995	12.81%	7.72%	5.09%
3/29/1995	11.60%	7.72%	3.88%
4/6/1995 4/7/1995	11.10% 11.00%	7.71% 7.71%	3.39% 3.29%
4/19/1995	11.00%	7.71%	3.30%
5/12/1995	11.63%	7.68%	3.95%
5/25/1995	11.20%	7.65%	3.55%
6/9/1995 6/21/1995	11.25% 12.25%	7.60% 7.56%	3.65% 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 9/27/1995	11.50% 11.75%	7.12% 7.12%	4.38% 4.63%
9/29/1995	11.73%	7.12%	3.89%
11/9/1995	11.38%	6.90%	4.48%
11/9/1995	12.36%	6.90%	5.46%
11/17/1995 12/4/1995	11.00% 11.35%	6.86% 6.78%	4.14% 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 3/29/1996	12.25% 10.67%	6.48% 6.42%	5.77% 4.25%
4/8/1996	11.00%	6.42%	4.58%
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
4/24/1996 4/30/1996	11.25% 11.00%	6.43% 6.43%	4.82% 4.57%
5/13/1996	11.00%	6.44%	4.56%
5/23/1996	11.25%	6.43%	4.82%
6/25/1996	11.25%	6.48%	4.77%
6/27/1996 8/12/1996	11.20% 10.40%	6.48% 6.57%	4.72% 3.83%
9/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996 12/18/1996	11.30% 11.75%	6.83% 6.83%	4.47% 4.92%
12/16/1996	11.75%	6.83%	4.92% 4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997 3/31/1997	11.80% 10.02%	6.82% 6.80%	4.98% 3.22%
3/31/199 <i>7</i> 4/2/1997	11.65%	6.80%	3.22% 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%

_		Risk Premium	
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate Case	Return on	Treasury Yield	Risk Premium
12/12/1997	Equity 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 3/6/1998	11.25% 10.75%	6.29% 6.27%	4.96% 4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998 9/15/1998	11.40% 11.90%	5.94% 5.78%	5.46% 6.12%
11/30/1998	12.60%	5.76%	7.02%
12/10/1998	12.20%	5.54%	6.66%
12/17/1998	12.10%	5.52%	6.58%
2/5/1999 3/4/1999	10.30% 10.50%	5.38% 5.34%	4.92% 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 1/7/2000	11.10% 11.50%	5.90% 6.05%	5.20% 5.45%
1/7/2000	11.50%	6.05%	5.45%
2/17/2000	10.60%	6.17%	4.43%
3/28/2000 5/24/2000	11.25% 11.00%	6.20% 6.18%	5.05% 4.82%
7/18/2000	12.20%	6.16%	4.82% 6.04%
9/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000 1/23/2001	12.10% 11.25%	5.88% 5.79%	6.22% 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 7/25/2001	11.02% 11.02%	5.60% 5.60%	5.42% 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 9/20/2001	11.00% 10.00%	5.55% 5.55%	5.45% 4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/3/2001 12/20/2001	12.88% 12.50%	5.49% 5.50%	7.39% 7.00%
1/22/2002	10.00%	5.50% 5.50%	4.50%
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002 6/10/2002	10.17% 12.00%	5.46% 5.47%	4.71% 6.53%
6/18/2002	11.16%	5.48%	5.68%
6/20/2002	11.00%	5.48%	5.52%
6/20/2002 7/15/2002	12.30% 11.00%	5.48% 5.48%	6.82% 5.52%
9/12/2002	12.30%	5.45% 5.45%	5.52% 6.85%
9/26/2002	10.45%	5.41%	5.04%
12/4/2002	11.55%	5.29%	6.26%
12/13/2002 12/20/2002	11.75% 11.40%	5.27% 5.25%	6.48% 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 3/7/2003	10.75% 9.96%	5.03% 5.02%	5.72% 4.94%
3/20/2003	12.00%	4.98%	7.02%
4/3/2003	12.00%	4.96%	7.04%
4/15/2003 6/25/2003	11.15% 10.75%	4.94% 4.79%	6.21% 5.96%
6/25/2003	10.75%	4.79% 4.79%	5.96% 5.96%
7/9/2003	9.75%	4.79%	4.96%
7/16/2003	9.75%	4.79%	4.96%
7/25/2003 8/26/2003	9.50% 10.50%	4.80% 4.83%	4.70% 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% 12.00%	4.94% 4.94%	6.56% 7.06%
12/19/2003	12.00%	4.94%	7.06%

_		Risk Premium	
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
1/13/2004 3/2/2004	12.00% 10.75%	4.95% 4.99%	7.05% 5.76%
3/26/2004	10.75%	4.99% 5.02%	5.76%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004 5/27/2004	10.25% 10.25%	5.08% 5.08%	5.17% 5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004 7/16/2004	10.50% 11.60%	5.10% 5.11%	5.40% 6.49%
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004 12/14/2004	11.00% 10.97%	5.06% 5.07%	5.94% 5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004 12/22/2004	10.70% 11.50%	5.07% 5.07%	5.63% 6.43%
12/29/2004	9.85%	5.07% 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 3/10/2005	10.50% 11.00%	4.96% 4.93%	5.54% 6.07%
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005 5/18/2005	10.25% 10.25%	4.87% 4.78%	5.38% 5.47%
5/25/2005	10.25%	4.76%	5.47 %
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005 8/5/2005	11.50% 11.75%	4.64% 4.62%	6.86% 7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005 12/12/2005	10.75% 11.00%	4.54% 4.55%	6.21% 6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005 12/22/2005	10.40% 11.00%	4.54% 4.54%	5.86% 6.46%
12/22/2005	11.00%	4.54% 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 1/27/2006	11.00% 9.75%	4.53% 4.52%	6.47% 5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006 5/17/2006	10.60% 11.60%	4.64% 4.69%	5.96% 6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006 7/24/2006	10.20%	4.83% 4.86%	5.37% 4.74%
7/24/2006	9.60% 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 9/14/2006	10.54% 10.00%	4.90% 4.91%	5.64% 5.09%
10/6/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006 11/21/2006	10.08% 10.12%	4.95% 4.95%	5.13% 5.17%
12/1/2006	10.12%	4.95% 4.95%	5.17%
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95% 4.95%	5.80% 5.05%
12/21/2006 12/21/2006	10.90% 11.25%	4.95% 4.95%	5.95% 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%

Bolto of Blectric Rate Case Equity Viel Premium 1/11/2007 10.10% 4.95% 5.15% 1/11/2007 10.10% 4.95% 5.15% 1/12/2007 10.40% 4.95% 5.45% 1/19/2007 10.80% 4.94% 5.86% 3/21/2007 10.80% 4.94% 5.86% 3/21/2007 10.20% 4.81% 5.19% 5/15/2007 10.25% 4.81% 5.44% 5/22/2007 10.25% 4.81% 5.44% 5/22/2007 10.25% 4.81% 5.44% 5/22/2007 10.25% 4.80% 5.40% 5/22/2007 10.20% 4.80% 5.40% 5/22/2007 10.20% 4.80% 5.90% 5/25/2007 10.50% 4.80% 5.90% 5/25/2007 9.67% 4.80% 5.90% 6/21/2007 10.25% 4.81% 5.37% 6/22/2007 10.50% 4.83% 5.37% 6/22/2007 10.50% 4.83% 5.37% 6/22/2007 10.50% 4.83% 5.37% 6/22/2007 10.50% 4.83% 5.67% 6/22/2007 10.50% 4.83% 5.67% 6/22/2007 10.50% 4.83% 5.67% 6/22/2007 10.50% 4.83% 5.67% 6/22/2007 10.50% 4.83% 5.67% 6/22/2007 10.00% 4.87% 5.13% 7/19/2007 10.00% 4.87% 5.13% 7/19/2007 10.00% 4.87% 5.13% 7/19/2007 10.00% 4.87% 5.13% 7/19/2007 10.00% 4.87% 5.13% 8/15/2007 10.00% 4.87% 5.13% 8/15/2007 10.00% 4.87% 5.13% 8/15/2007 10.00% 4.87% 5.09% 10/17/2007 9.96% 4.86% 5.89% 12/13/2007 10.90% 4.87% 6.03% 12/6/2007 10.75% 4.86% 5.89% 12/13/2007 10.20% 4.86% 5.89% 12/13/2007 10.20% 4.86% 5.89% 12/13/2007 10.20% 4.86% 5.94% 12/22/2007 10.25% 4.86% 5.94% 12/22/2007 10.25% 4.86% 5.99% 12/13/2007 10.20% 4.86% 5.94% 12/22/2007 10.20% 4.86% 5.94% 12/22/2007 10.25% 4.86% 5.94% 12/22/2007 10.25% 4.86% 5.94% 12/22/2007 10.25% 4.86% 5.94% 12/22/2008 10.25% 4.86% 5.94% 12/22/2008 10.25% 4.86% 5.94% 12/22/2008 10.25% 4.86% 5.94% 12/22/2008 10.25% 4.86% 5.95% 12/22/2008 10.25% 4.60% 5.65% 4.60% 5.65% 4.26% 5.96% 12/22/2008 10.25% 4.60% 5.65% 4.26% 5.99% 12/13/2008 10.25% 4.60% 5.65% 4.26% 5.99% 12/13/2008 10.	_		Risk Premium	
Case Equity Yield Premium 1/11/2007 10.10% 4.95% 5.15% 1/12/2007 10.10% 4.95% 5.15% 1/13/2007 10.40% 4.95% 5.15% 1/13/2007 10.80% 4.94% 5.86% 3/21/2007 11.35% 4.87% 6.48% 3/21/2007 10.00% 4.81% 5.44% 5/17/2007 10.25% 4.81% 5.44% 5/17/2007 10.25% 4.81% 5.44% 5/17/2007 10.25% 4.81% 5.44% 5/22/2007 10.50% 4.80% 5.70% 5/23/2007 10.50% 4.80% 5.70% 5/23/2007 10.70% 4.80% 5.90% 5/23/2007 10.50% 4.83% 5.67% 6/21/2007 10.50% 4.83% 5.67% 6/22/2007 10.50% 4.83% 5.67% 6/22/2007 10.50% 4.83% 5.67% 6/22/2007 10.50% 4.8	[6] Date of	[7]	[8] 30-Year	[9]
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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%				
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%				
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%				
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%				
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%				
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%				
1/14/2009 10.50% 4.15% 6.35% 1/21/2009 10.50% 4.12% 6.38% 1/21/2009 10.50% 4.12% 6.38%				
1/21/200910.50%4.12%6.38%1/21/200910.50%4.12%6.38%				
1/21/2009 10.50% 4.12% 6.38%				
	1/21/2009	10.50%	4.12%	6.38%

_		Risk Premium	
[6] Date of	[7]	[8] 30-Year	[9]
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009 3/4/2009	8.75% 10.50%	4.06% 3.96%	4.69% 6.54%
3/4/2009	10.50%	3.96%	6.54% 7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009 4/30/2009	10.00% 11.25%	3.79% 3.78%	6.21% 7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009 6/22/2009	10.50% 10.00%	3.74% 3.76%	6.76% 6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%
7/17/2009	10.50%	3.78%	6.72%
8/31/2009 10/14/2009	10.25% 10.70%	3.82% 4.01%	6.43% 6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009 11/24/2009	10.70% 10.25%	4.10% 4.15%	6.60% 6.10%
11/25/2009	10.25%	4.15% 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 12/16/2009	10.70% 10.90%	4.18% 4.21%	6.52% 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% 5.07%
12/22/2009 12/22/2009	10.20% 10.40%	4.23% 4.23%	5.97% 6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
1/4/2010 1/11/2010	10.80% 11.00%	4.28% 4.30%	6.52% 6.70%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010 1/27/2010	10.40% 10.70%	4.35% 4.35%	6.05% 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 3/4/2010	9.63% 10.50%	4.41% 4.41%	5.22% 6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010 3/25/2010	10.00% 10.15%	4.41% 4.42%	5.59% 5.73%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010 4/29/2010	9.90% 10.06%	4.46% 4.46%	5.44% 5.60%
4/29/2010	10.06%	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 5/28/2010	10.10% 10.20%	4.44% 4.44%	5.66% 5.76%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010 6/28/2010	9.67% 10.50%	4.43% 4.43%	5.24% 6.07%
6/30/2010	9.40%	4.43% 4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.53%	4.43%	6.10%
7/15/2010 7/30/2010	10.70% 10.70%	4.43% 4.41%	6.27% 6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010 9/3/2010	9.90% 10.60%	4.37% 4.35%	5.53% 6.25%
9/3/2010	10.80%	4.33%	6.37%
9/16/2010	10.00%	4.33%	5.67%
9/16/2010	10.00%	4.33%	5.67%

Bond Yield Plus Risk Premium								
[6] Date of	[7]	[8] 30-Year	[9]					
Electric Rate	Return on	Treasury	Risk					
Case	Equity	Yield	Premium					
9/30/2010 10/14/2010	9.75% 10.35%	4.29% 4.24%	5.46% 6.11%					
10/28/2010	10.33%	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 12/1/2010	10.00% 10.13%	4.18% 4.16%	5.82% 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 12/17/2010	10.44% 10.00%	4.15% 4.15%	6.29% 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 1/12/2011	10.15% 10.30%	4.13% 4.12%	6.02% 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 1/31/2011	10.13% 9.60%	4.12% 4.12%	6.01% 5.48%					
2/3/2011	9.00% 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 4/26/2011	10.74% 9.67%	4.23% 4.23%	6.51% 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 6/8/2011	10.50% 10.75%	4.27% 4.30%	6.23% 6.45%					
6/16/2011	9.20%	4.32%	4.88%					
6/17/2011	9.95%	4.32%	5.63%					
7/13/2011	10.20%	4.36%	5.84%					
8/1/2011	9.20%	4.39%	4.81%					
8/8/2011 8/11/2011	10.00% 10.00%	4.38% 4.38%	5.62% 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 10/20/2011	10.30% 10.50%	4.14% 4.10%	6.16% 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 12/20/2011	10.30% 10.20%	3.80% 3.76%	6.50% 6.44%					
12/20/2011	10.20%	3.76% 3.76%	6.44% 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 1/27/2012	10.50% 10.50%	3.57% 3.56%	6.93% 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 3/29/2012	10.40% 10.37%	3.41%	6.99% 7.05%					
3/29/2012 4/4/2012	10.37%	3.32% 3.30%	7.05% 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 5/29/2012	10.00% 10.05%	3.14% 3.11%	6.86% 6.94%					
6/7/2012	10.05%	3.11%	7.22%					
6/14/2012	9.40%	3.06%	6.34%					
6/15/2012	10.40%	3.06%	7.34%					

B ₁	ond Yield Plus [7]	Risk Premium [8]	[9]
Date of Electric Rate	_	30-Year	
Case	Return on Equity	Treasury Yield	Risk Premium
6/18/2012	9.60%	3.06%	6.54%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012 6/29/2012	10.10% 10.00%	3.04% 3.04%	7.06% 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 9/13/2012	9.81% 9.80%	3.01% 2.94%	6.80% 6.86%
9/19/2012	9.80%	2.94%	6.86%
9/19/2012	10.05%	2.94%	7.11%
9/26/2012	9.50%	2.94%	6.56%
10/12/2012 10/23/2012	9.60% 9.75%	2.93% 2.93%	6.67% 6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012 11/29/2012	9.75% 9.88%	2.89% 2.89%	6.86% 6.99%
12/5/2012	9.86 <i>%</i> 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 12/14/2012	10.50% 10.40%	2.88% 2.88%	7.62% 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 12/20/2012	9.80% 10.25%	2.87% 2.87%	6.93% 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 12/21/2012	10.45% 10.20%	2.87% 2.87%	7.58% 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 1/16/2013	9.70% 9.60%	2.85% 2.84%	6.85% 6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013 3/14/2013	10.00% 9.30%	2.86% 2.88%	7.14% 6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013 5/31/2013	10.20% 9.00%	2.98% 2.98%	7.22% 6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
7/12/2013 8/8/2013	9.36% 9.83%	3.07% 3.14%	6.29% 6.69%
8/14/2013	9.05%	3.14%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013 10/3/2013	10.20%	3.31% 3.33%	6.89% 6.32%
11/6/2013	9.65% 10.20%	3.33% 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% 3.47%	6.78% 6.03%
12/4/2013 12/5/2013	9.50% 10.20%	3.47% 3.48%	6.03% 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 12/16/2013	9.95% 9.95%	3.50% 3.50%	6.45% 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%

B ₁	ond Yield Plus [7]	Risk Premium [8]	[9]
Date of	_	30-Year	
Electric Rate Case	Return on Equity	Treasury Yield	Risk Premium
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013 12/30/2013	10.15% 9.50%	3.51% 3.54%	6.64% 5.96%
2/20/2014	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 3/26/2014	9.40% 9.96%	3.73% 3.73%	5.67% 6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014 6/6/2014	9.70%	3.68%	6.02%
6/30/2014	10.40% 9.55%	3.67% 3.64%	6.73% 5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014 7/29/2014	9.75% 9.45%	3.61% 3.60%	6.14% 5.85%
7/29/2014	9.43%	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 9/11/2014	9.80% 9.60%	3.54% 3.51%	6.26% 6.09%
9/11/2014	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 11/14/2014	10.20% 10.20%	3.37% 3.35%	6.83% 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 12/10/2014	9.25% 9.25%	3.29% 3.29%	5.96% 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 1/23/2015	9.83% 9.50%	3.26% 3.14%	6.57% 6.36%
2/24/2015	9.83%	3.04%	6.79%
3/18/2015	9.75%	2.98%	6.77%
3/25/2015 3/26/2015	9.50% 9.72%	2.96% 2.95%	6.54% 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 6/17/2015	9.75% 9.00%	2.83% 2.82%	6.92% 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 11/19/2015	9.00% 10.00%	2.81% 2.88%	6.19% 7.12%
11/19/2015	10.30%	2.88%	7.42%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015 12/9/2015	9.14% 9.14%	2.90% 2.90%	6.24% 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 12/30/2015	9.50% 9.50%	2.91% 2.93%	6.59% 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 6/3/2016	9.80% 9.75%	2.83% 2.80%	6.97% 6.95%
6/8/2016	9.48%	2.80%	6.68%
6/15/2016	9.00%	2.78%	6.22%
6/15/2016 7/18/2016	9.00% 9.98%	2.78% 2.71%	6.22% 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%

Fig. Date of Case Return on Case Electric Rate Sequity Vield Premium Vield Vie	В	ond Yield Plus	Risk Premium	
Electric Rate Return on Case Treasury Yield Risk Premium Premium 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 9.50% 2.48% 7.02% 11/15/2016 9.55% 2.49% 7.06% 11/18/2016 10.00% 2.50% 7.50% 11/18/2016 10.55% 2.51% 8.04% 12/1/2016 10.55% 2.51% 7.49% 12/16/2016 8.64% 2.52% 6.12% 12/16/2016 8.64% 2.52% 6.12% 12/14/2016 9.10% 2.53% 7.07% 12/14/2016 9.10% 2.53% 7.07% 12/14/2016 9.10% 2.53% 6.57% 12/14/2016 9.0% 2.54% 6.46% 12/21/2016 9.0% 2.55% 7.05% 12/14/2016 9.0% 2.55% 7.05% 12/18/2017		[7]	[8]	[9]
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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 9.40% 2.85% 6.55% 1/18/2018 9.70% 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%	11/30/2017	10.00%	2.88%	7.12%
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 9.40% 2.85% 6.55% 1/18/2018 9.70% 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%	11/30/2017	10.00%	2.88%	7.12%
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 9.40% 2.85% 6.55% 1/18/2018 9.70% 2.84% 6.46% 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%	12/5/2017	9.50%	2.88%	6.62%
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 9.40% 2.85% 6.55% 1/18/2018 9.70% 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%	12/6/2017	8.40%	2.87%	5.53%
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 9.40% 2.85% 6.55% 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%	12/6/2017	8.40%	2.87%	5.53%
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 9.40% 2.85% 6.55% 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%	12/7/2017	9.80%	2.87%	6.93%
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 9.40% 2.85% 6.55% 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%	12/14/2017	9.60%	2.86%	6.74%
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 9.40% 2.85% 6.55% 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%				
12/21/2017 9.10% 2.85% 6.25% 12/28/2017 9.50% 2.85% 6.65% 12/29/2017 9.40% 2.85% 6.55% 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%				
12/28/2017 9.50% 2.85% 6.65% 12/29/2017 9.40% 2.85% 6.55% 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%				
12/29/2017 9.40% 2.85% 6.55% 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%				
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%				
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%				
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%				
2/23/2018 9.90% 2.85% 7.05% 3/12/2018 9.25% 2.86% 6.39%				
3/12/2018 9.25% 2.86% 6.39%				
 				

of Cases: 1547 Average: 4.62%

Alternative Bond Yield Plus Risk Premium Analyses

	[1]	[2]	[3]	[4]
	30-Year	Moody's Utility	Moody's Utility A	
	Treasury Yield	A Yield	Credit Spread	VIX
30-Day Average	3.13%	4.11%	0.98%	20.77
Near-Term Projected	3.42%	4.11%	0.69%	20.77
Long-Term Projected	4.20%	4.11%	-0.09%	20.77

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.84018742
R Square	0.705914901
Adjusted R Square	0.704643639
Standard Error	0.005347816
Observations	698

ANOVA

	df	SS	MS	F	Significance F
Regression	3	0.047642182	0.015880727	555.2870491	6.4248E-184
Residual	694	0.019847797	2.85991E-05		
Total	697	0.067489979			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.027641505	0.002136414	-12.93827056	1.86264E-34	-0.031836115	-0.02344689	-0.03183612	-0.02344689
LN(30-Year Treasury)	-0.025710034	0.000654983	-39.2529626	2.1273E-178	-0.02699602	-0.02442405	-0.02699602	-0.02442405
Moody's Utility A Credit Spread	0.193728304	0.085735373	2.259607634	0.024154915	0.025396491	0.362060117	0.025396491	0.362060117
VIX	0.000179552	5.49974E-05	3.264734872	0.00114946	7.15707E-05	0.000287533	7.15707E-05	0.000287533

	Risk Premium	Return on Equity
Regression Result - Credit Spread, VIX	6.71%	9.83%
Regression Result - Credit Spread, VIX	6.42%	9.84%
Regression Result - Credit Spread, VIX	5.74%	9.94%

- Notes:

 [1] Source: Bloomberg Professional
 [2] Source: Bloomberg Professional
 [3] Source: Bloomberg Professional
 [4] Source: Bloomberg Professional
 [5] Source: S&P Global Market Intelligence
 [6] Source: S&P Global Market Intelligence
 [7] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period) as of March 16, 2018
 [8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period) as of March 16, 2018
 [9] Equals LN[8]
 [10] Equals [8] [7]
 [11] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period) as of March 16, 2018
 [12] Equals [6] [7]

[5]	[6] Return on Equity	[7] 30 Year Treasury	[8] Moody's Utility A	[9] LN(30-Year	[10] Moody's Utility A	[11]	[12]
Date of Electric Rate Case	(%)	(%)	Yield	Treasury)	Credit Spread	VIX	Risk Premium
1/1/1980	14.50%	9.36%		-2.37	•		5.14%
1/7/1980 1/9/1980	14.39%	9.38%		-2.37			5.01% 5.60%
1/14/1980	15.00% 15.17%	9.40% 9.42%		-2.36 -2.36			5.75%
1/17/1980	13.93%	9.44%		-2.36			4.49%
1/23/1980	15.50%	9.47%		-2.36			6.03%
1/30/1980 1/31/1980	13.86% 12.61%	9.52% 9.53%		-2.35 -2.35			4.34% 3.08%
2/6/1980	13.71%	9.58%		-2.35			4.13%
2/13/1980	12.80%	9.63%		-2.34			3.17%
2/14/1980 2/19/1980	13.00% 13.50%	9.65% 9.68%		-2.34 -2.34			3.35% 3.82%
2/27/1980	13.75%	9.78%		-2.32			3.97%
2/29/1980	13.75%	9.81%		-2.32			3.94%
2/29/1980 2/29/1980	14.00% 14.77%	9.81% 9.81%		-2.32 -2.32			4.19% 4.96%
3/7/1980	12.70%	9.89%		-2.31			2.81%
3/14/1980	13.50%	9.97%		-2.31			3.53%
3/26/1980 3/27/1980	14.16% 14.24%	10.10% 10.12%		-2.29 -2.29			4.06% 4.12%
3/28/1980	14.50%	10.13%		-2.29			4.37%
4/11/1980	12.75%	10.27%		-2.28			2.48%
4/14/1980 4/16/1980	13.85% 15.50%	10.29% 10.31%		-2.27 -2.27			3.56% 5.19%
4/22/1980	13.25%	10.35%		-2.27 -2.27			2.90%
4/22/1980	13.90%	10.35%		-2.27			3.55%
4/24/1980 4/29/1980	16.80%	10.38% 10.41%		-2.27 -2.26			6.43% 5.09%
5/6/1980	15.50% 13.70%	10.41%		-2.26 -2.26			3.25%
5/7/1980	15.00%	10.45%		-2.26			4.55%
5/8/1980	13.75%	10.46%		-2.26			3.29%
5/9/1980 5/13/1980	14.35% 13.60%	10.47% 10.48%		-2.26 -2.26			3.88% 3.12%
5/15/1980	13.25%	10.49%		-2.25			2.76%
5/19/1980	13.75%	10.51%		-2.25			3.24%
5/27/1980 5/27/1980	13.62% 14.60%	10.54% 10.54%		-2.25 -2.25			3.08% 4.06%
5/29/1980	16.00%	10.56%		-2.25			5.44%
5/30/1980	13.80%	10.56%		-2.25			3.24%
6/2/1980 6/9/1980	15.63% 15.90%	10.57% 10.60%		-2.25 -2.24			5.06% 5.30%
6/10/1980	13.78%	10.60%		-2.24			3.18%
6/12/1980	14.25%	10.61%		-2.24			3.64%
6/19/1980 6/30/1980	13.40% 13.00%	10.62% 10.65%		-2.24 -2.24			2.78% 2.35%
6/30/1980	13.40%	10.65%		-2.24			2.75%
7/9/1980	14.75%	10.67%		-2.24			4.08%
7/10/1980 7/15/1980	15.00%	10.68% 10.70%		-2.24 -2.24			4.32% 5.10%
7/13/1980	15.80% 13.80%	10.70%		-2.24 -2.23			3.09%
7/22/1980	14.10%	10.72%		-2.23			3.38%
7/24/1980 7/25/1980	15.00%	10.73% 10.73%		-2.23 -2.23			4.27% 2.75%
7/23/1980	13.48% 14.58%	10.75%		-2.23 -2.23			3.83%
8/8/1980	13.50%	10.78%		-2.23			2.72%
8/8/1980 8/8/1980	14.00%	10.78% 10.78%		-2.23 -2.23			3.22% 4.67%
8/11/1980	15.45% 14.85%	10.78%		-2.23 -2.23			4.07%
8/14/1980	14.00%	10.79%		-2.23			3.21%
8/14/1980 8/25/1980	16.25%	10.79% 10.82%		-2.23 -2.22			5.46% 2.93%
8/27/1980	13.75% 13.80%	10.82 %		-2.22 -2.22			2.97%
8/29/1980	12.50%	10.84%		-2.22			1.66%
9/15/1980 9/15/1980	13.50% 13.93%	10.88% 10.88%		-2.22 -2.22			2.62% 3.05%
9/15/1980	15.80%	10.88%		-2.22 -2.22			4.92%
9/24/1980	12.50%	10.93%		-2.21			1.57%
9/24/1980 9/26/1980	15.00% 13.75%	10.93% 10.94%		-2.21 -2.21			4.07% 2.81%
9/20/1980	13.75%	10.94%		-2.21 -2.21			3.14%
9/30/1980	14.20%	10.96%		-2.21			3.24%
10/1/1980 10/3/1980	13.90% 15.50%	10.97% 10.98%		-2.21 -2.21			2.93% 4.52%
10/7/1980	12.50%	10.99%		-2.21 -2.21			1.51%
10/9/1980	13.25%	11.00%		-2.21			2.25%
10/9/1980 10/9/1980	14.50% 14.50%	11.00% 11.00%		-2.21 -2.21			3.50% 3.50%
10/16/1980	16.10%	11.00%		-2.21 -2.21			5.08%
10/17/1980	14.50%	11.03%		-2.20			3.47%
10/31/1980 10/31/1980	13.75%	11.11% 11.11%		-2.20 -2.20			2.64% 3.14%
10/31/1980	14.25% 15.00%	11.11% 11.12%		-2.20 -2.20			3.14% 3.88%
11/5/1980	13.75%	11.12%		-2.20			2.63%
11/5/1980	14.00%	11.12%		-2.20			2.88%
11/8/1980 11/10/1980	13.75% 14.85%	11.14% 11.15%		-2.19 -2.19			2.61% 3.70%
11/17/1980	14.00%	11.18%		-2.19			2.82%
11/18/1980	14.00%	11.19%		-2.19 2.10			2.81%
11/19/1980 11/24/1980	13.00% 14.00%	11.19% 11.21%		-2.19 -2.19			1.81% 2.79%
11/26/1980	14.00%	11.21%		-2.19 -2.19			2.79%
12/8/1980	14.15%	11.22%		-2.19			2.93%
12/8/1980 12/9/1980	15.10% 15.35%	11.22% 11.22%		-2.19 -2.19			3.88% 4.13%
12/12/1980	15.45%	11.23%		-2.19			4.22%

[5]	[6] Return on Equity	[7] 30 Year Treasury	[8] Moody's Utility A	[9] LN(30-Year	[10] Moody's Utility A	[11]	[12]
Date of Electric Rate Case	(%)	(%)	Yield	Treasury)	Credit Spread	VIX	Risk Premium
12/17/1980 12/18/1980	13.25% 15.80%	11.23% 11.23%		-2.19 -2.19			2.02% 4.57%
12/19/1980	14.50%	11.23%		-2.19 -2.19			3.27%
12/19/1980	14.64%	11.23%	1	-2.19			3.41%
12/22/1980	13.45%	11.23%		-2.19 2.10			2.22%
12/22/1980 12/30/1980	15.00% 14.50%	11.23% 11.22%		-2.19 -2.19			3.77% 3.28%
12/30/1980	14.95%	11.22%		-2.19			3.73%
12/31/1980	13.39%	11.22%		-2.19			2.17%
1/2/1981 1/7/1981	15.25% 14.30%	11.22% 11.21%		-2.19 -2.19			4.03% 3.09%
1/19/1981	15.25%	11.20%		-2.19 -2.19			4.05%
1/23/1981	13.10%	11.20%	1	-2.19			1.90%
1/23/1981	14.40%	11.20%		-2.19			3.20%
1/26/1981 1/27/1981	15.25% 15.00%	11.20% 11.21%		-2.19 -2.19			4.05% 3.79%
1/31/1981	13.47%	11.22%		-2.19			2.25%
2/3/1981	15.25%	11.23%		-2.19			4.02%
2/5/1981 2/11/1981	15.75%	11.25% 11.28%		-2.19 -2.18			4.50% 4.32%
2/11/1981 2/20/1981	15.60% 15.25%	11.26%		-2.18 -2.18			4.32% 3.92%
3/11/1981	15.40%	11.49%		-2.16			3.91%
3/12/1981	14.51%	11.50%		-2.16			3.01%
3/12/1981 3/13/1981	16.00% 13.02%	11.50% 11.52%		-2.16 -2.16			4.50% 1.50%
3/18/1981	16.19%	11.55%		-2.16 -2.16			4.64%
3/19/1981	13.75%	11.56%		-2.16			2.19%
3/23/1981	14.30%	11.58%		-2.16			2.72%
3/25/1981 4/1/1981	15.30%	11.60% 11.68%		-2.15 -2.15			3.70% 2.85%
4/3/1981	14.53% 19.10%	11.71%		-2.15 -2.14			7.39%
4/9/1981	15.00%	11.78%		-2.14			3.22%
4/9/1981	15.30%	11.78%		-2.14			3.52%
4/9/1981 4/9/1981	16.50%	11.78% 11.78%		-2.14 -2.14			4.72% 5.22%
4/10/1981	17.00% 13.75%	11.80%		-2.14 -2.14			1.95%
4/13/1981	13.57%	11.82%		-2.14			1.75%
4/15/1981	15.30%	11.85%		-2.13			3.45%
4/16/1981 4/17/1981	13.50% 14.10%	11.87% 11.87%		-2.13 -2.13			1.63% 2.23%
4/21/1981	14.10%	11.90%		-2.13 -2.13			2.10%
4/21/1981	16.80%	11.90%		-2.13			4.90%
4/24/1981	16.00%	11.95%		-2.12			4.05%
4/27/1981 4/27/1981	12.50% 13.61%	11.97% 11.97%		-2.12 -2.12			0.53% 1.64%
4/29/1981	13.65%	12.00%		-2.12 -2.12			1.65%
4/30/1981	13.50%	12.02%		-2.12			1.48%
5/4/1981	16.22%	12.05%		-2.12			4.17%
5/5/1981 5/7/1981	14.40% 16.25%	12.07% 12.11%		-2.11 -2.11			2.33% 4.14%
5/7/1981	16.27%	12.11%		-2.11 -2.11			4.16%
5/8/1981	13.00%	12.13%	1	-2.11			0.87%
5/8/1981	16.00%	12.13%		-2.11			3.87%
5/12/1981 5/15/1981	13.50% 15.75%	12.16% 12.22%		-2.11 -2.10			1.34% 3.53%
5/18/1981	14.88%	12.23%		-2.10			2.65%
5/20/1981	16.00%	12.26%		-2.10			3.74%
5/21/1981 5/26/1981	14.00%	12.27% 12.30%		-2.10 -2.10			1.73% 2.60%
5/27/1981	14.90% 15.00%	12.31%		-2.10 -2.09			2.69%
5/29/1981	15.50%	12.34%	1	-2.09			3.16%
6/1/1981	16.50%	12.35%		-2.09			4.15%
6/3/1981 6/5/1981	14.67% 13.00%	12.37% 12.39%		-2.09 -2.09			2.30% 0.61%
6/10/1981	16.75%	12.42%		-2.09 -2.09			4.33%
6/17/1981	14.40%	12.46%	1	-2.08			1.94%
6/18/1981 6/25/1981	16.33%	12.47% 12.51%		-2.08 -2.08			3.86% 2.24%
6/26/1981	14.75% 16.00%	12.51%		-2.08 -2.08			2.24% 3.48%
6/30/1981	15.25%	12.54%	1	-2.08			2.71%
7/1/1981	15.50%	12.56%		-2.07			2.94%
7/1/1981 7/10/1981	17.50% 16.00%	12.56% 12.62%		-2.07 -2.07			4.94% 3.38%
7/10/1981	16.90%	12.64%		-2.07 -2.07			4.26%
7/15/1981	16.00%	12.65%	1	-2.07			3.35%
7/17/1981	15.00%	12.67%		-2.07			2.33%
7/20/1981 7/21/1981	15.00% 14.00%	12.68% 12.69%		-2.07 -2.06			2.32% 1.31%
7/21/1981	13.48%	12.74%		-2.06 -2.06			0.74%
7/31/1981	13.50%	12.78%	1	-2.06			0.72%
7/31/1981 7/31/1081	15.00%	12.78%		-2.06			2.22%
7/31/1981 8/5/1981	16.00% 15.71%	12.78% 12.83%		-2.06 -2.05			3.22% 2.88%
8/10/1981	14.50%	12.87%		-2.05			1.63%
8/11/1981	15.00%	12.88%	1	-2.05			2.12%
8/20/1981 8/20/1981	13.50%	12.95%		-2.04 -2.04			0.55% 3.55%
8/20/1981 8/24/1981	16.50% 15.00%	12.95% 12.97%		-2.04 -2.04			3.55% 2.03%
8/28/1981	15.00%	13.01%		-2.04			1.99%
9/3/1981	14.50%	13.05%	1	-2.04			1.45%
9/10/1981 9/11/1981	14.50%	13.11% 13.12%		-2.03 -2.03			1.39% 2.88%
9/11/1981 9/16/1981	16.00% 16.00%	13.12%		-2.03 -2.03			2.88% 2.85%
9/17/1981	16.50%	13.16%	1	-2.03			3.34%
9/23/1981	15.85%	13.20%	•	-2.03			2.65%

[5]	[6] Return on Equity	[7] 30 Year Treasury	[8] Moody's Utility A	[9] LN(30-Year	[10] Moody's Utility A	[11]	[12]
Date of Electric Rate Case	(%)	(%)	Yield	Treasury)	Credit Spread	VIX	Risk Premium
9/28/1981	15.50%	13.23%		-2.02 -2.02			2.27% 2.42%
10/9/1981 10/15/1981	15.75% 16.25%	13.33% 13.37%		-2.02 -2.01			2.42% 2.88%
10/16/1981	15.50%	13.38%)	-2.01			2.12%
10/16/1981 10/19/1981	16.50%	13.38% 13.39%		-2.01 -2.01			3.12% 0.86%
10/19/1981	14.25% 15.25%	13.41%		-2.01 -2.01			1.84%
10/20/1981	17.00%	13.41%)	-2.01			3.59%
10/23/1981	16.00%	13.45%		-2.01			2.55% -3.48%
10/27/1981 10/29/1981	10.00% 14.75%	13.48% 13.51%		-2.00 -2.00			-3.46% 1.24%
10/29/1981	16.50%	13.51%)	-2.00			2.99%
11/3/1981 11/5/1981	15.17%	13.53% 13.55%		-2.00 -2.00			1.64% 3.05%
11/6/1981	16.60% 15.17%	13.56%		-2.00 -2.00			1.61%
11/24/1981	15.50%	13.61%)	-1.99			1.89%
11/25/1981 11/25/1981	15.25%	13.61% 13.61%		-1.99 -1.99			1.64% 1.74%
11/25/1981	15.35% 16.10%	13.61%		-1.99			2.49%
11/25/1981	16.10%	13.61%		-1.99			2.49%
12/1/1981 12/1/1981	15.70%	13.61% 13.61%		-1.99 -1.99			2.09% 2.39%
12/1/1981	16.00% 16.49%	13.61%		-1.99			2.88%
12/1/1981	16.50%	13.61%)	-1.99			2.89%
12/4/1981 12/11/1981	16.00%	13.61% 13.63%		-1.99 -1.99			2.39% 2.62%
12/11/1981	16.25% 14.00%	13.63%		-1.99 -1.99			0.37%
12/15/1981	15.81%	13.63%)	-1.99			2.18%
12/15/1981 12/16/1981	16.00%	13.63% 13.63%		-1.99 -1.99			2.37% 1.62%
12/17/1981	15.25% 16.50%	13.63%		-1.99 -1.99			2.87%
12/18/1981	15.45%	13.63%)	-1.99			1.82%
12/30/1981 12/30/1981	14.25%	13.67% 13.67%		-1.99 -1.99			0.58% 2.33%
12/30/1981	16.00% 16.25%	13.67%		-1.99 -1.99			2.58%
12/31/1981	16.15%	13.67%)	-1.99			2.48%
1/4/1982 1/11/1982	15.50%	13.67% 13.72%		-1.99 -1.99			1.83% 0.78%
1/11/1982	14.50% 17.00%	13.72%		-1.99 -1.99			3.28%
1/13/1982	14.75%	13.74%)	-1.98			1.01%
1/14/1982 1/15/1982	15.75%	13.75% 13.76%		-1.98 -1.98			2.00% 1.24%
1/15/1982	15.00% 16.50%	13.76%		-1.98			2.74%
1/22/1982	16.25%	13.79%)	-1.98			2.46%
1/27/1982 1/28/1982	16.84%	13.81% 13.81%		-1.98 -1.98			3.03% -0.81%
1/28/1982	13.00% 15.50%	13.82%		-1.98			1.68%
2/1/1982	15.85%	13.82%		-1.98			2.03%
2/3/1982 2/8/1982	16.44% 15.50%	13.84% 13.86%		-1.98 -1.98			2.60% 1.64%
2/11/1982	16.00%	13.88%		-1.97			2.12%
2/11/1982	16.20%	13.88%		-1.97			2.32%
2/17/1982 2/19/1982	15.00% 15.17%	13.89% 13.89%		-1.97 -1.97			1.11% 1.28%
2/26/1982	15.25%	13.89%		-1.97			1.36%
3/1/1982	15.03%	13.89%		-1.97			1.14%
3/1/1982 3/3/1982	16.00% 15.00%	13.89% 13.88%		-1.97 -1.97			2.11% 1.12%
3/8/1982	17.10%	13.88%		-1.97			3.22%
3/12/1982 3/17/1982	16.25%	13.88%		-1.97			2.37%
3/17/1962	17.30% 15.10%	13.88% 13.89%		-1.97 -1.97			3.42% 1.21%
3/27/1982	15.40%	13.89%)	-1.97			1.51%
3/30/1982 3/31/1982	15.50%	13.90% 13.91%		-1.97 -1.97			1.60% 3.09%
4/1/1982	17.00% 14.70%	13.91%		-1.97 -1.97			0.79%
4/1/1982	16.50%	13.91%)	-1.97			2.59%
4/2/1982 4/5/1982	15.50% 15.50%	13.91% 13.92%		-1.97 -1.97			1.59% 1.58%
4/8/1982	16.40%	13.93%		-1.97			2.47%
4/13/1982	14.50%	13.94%		-1.97			0.56%
4/23/1982 4/27/1982	15.75% 15.00%	13.94% 13.94%		-1.97 -1.97			1.81% 1.06%
4/28/1982	15.75%	13.94%		-1.97			1.81%
4/30/1982	14.70%	13.94%		-1.97			0.76%
4/30/1982 5/3/1982	15.50% 16.60%	13.94% 13.94%		-1.97 -1.97			1.56% 2.66%
5/4/1982	16.00%	13.94%		-1.97			2.06%
5/14/1982	15.50%	13.92%		-1.97			1.58%
5/18/1982 5/19/1982	15.42% 14.69%	13.92% 13.92%		-1.97 -1.97			1.50% 0.77%
5/20/1982	15.00%	13.91%)	-1.97			1.09%
5/20/1982 5/20/1982	15.10%	13.91%		-1.97 1.07			1.19%
5/20/1982 5/20/1982	15.50% 16.30%	13.91% 13.91%		-1.97 -1.97			1.59% 2.39%
5/21/1982	17.75%	13.91%)	-1.97			3.84%
5/27/1982	15.00%	13.89%		-1.97			1.11%
5/28/1982 5/28/1982	15.50% 17.00%	13.89% 13.89%		-1.97 -1.97			1.61% 3.11%
6/1/1982	13.75%	13.89%)	-1.97			-0.14%
6/1/1982 6/9/1982	16.60%	13.89%		-1.97 -1.97			2.71% 3.98%
6/9/1982	17.86% 15.75%	13.88% 13.88%		-1.97 -1.97			3.98% 1.87%
6/15/1982	14.85%	13.88%)	-1.97			0.97%
6/18/1982	15.50%	13.87%)	-1.98			1.63%

[5]	[6] Return on Equity	[7] 30 Year Treasury	[8] Moody's Utility A	[9] LN(30-Year	[10] Moody's Utility A	[11]	[12]
Date of Electric Rate Case	(%)	(%)	Yield	Treasury)	Credit Spread	VIX	Risk Premium
6/21/1982	14.90%	13.87%		-1.98	·		1.03%
6/23/1982 6/23/1982	16.00% 16.17%	13.86% 13.86%		-1.98 -1.98			2.14% 2.31%
6/24/1982	14.85%	13.86%)	-1.98			0.99%
6/25/1982	14.70%	13.86%		-1.98			0.84%
7/1/1982 7/2/1982	16.00% 15.62%	13.84% 13.84%		-1.98 -1.98			2.16% 1.78%
7/2/1982	17.00%	13.84%		-1.98			3.16%
7/13/1982	14.00%	13.82%		-1.98			0.18%
7/13/1982 7/14/1982	16.80% 15.76%	13.82% 13.82%		-1.98 -1.98			2.98% 1.94%
7/14/1982	16.02%	13.82%)	-1.98			2.20%
7/19/1982	16.50%	13.80%		-1.98			2.70%
7/22/1982 7/22/1982	14.50% 17.00%	13.77% 13.77%		-1.98 -1.98			0.73% 3.23%
7/27/1982	16.75%	13.75%		-1.98			3.00%
7/29/1982	16.50%	13.74%		-1.99			2.76%
8/11/1982 8/18/1982	17.50% 17.07%	13.68% 13.63%		-1.99 -1.99			3.82% 3.44%
8/20/1982	15.73%	13.60%)	-1.99			2.13%
8/25/1982	16.00%	13.57%		-2.00			2.43%
8/26/1982 8/30/1982	15.50% 15.00%	13.56% 13.55%		-2.00 -2.00			1.94% 1.45%
9/3/1982	16.20%	13.53%)	-2.00			2.67%
9/8/1982	15.00%	13.52%		-2.00			1.48%
9/15/1982 9/15/1982	13.08% 16.25%	13.50% 13.50%		-2.00 -2.00			-0.42% 2.75%
9/16/1982	16.00%	13.50%		-2.00			2.50%
9/17/1982	15.25%	13.50%		-2.00			1.75%
9/23/1982 9/24/1982	17.17% 14.50%	13.47% 13.46%		-2.00 -2.01			3.70% 1.04%
9/27/1982	15.25%	13.46%		-2.01			1.79%
10/1/1982	15.50%	13.42%		-2.01			2.08%
10/15/1982 10/22/1982	15.90% 15.75%	13.32% 13.24%		-2.02 -2.02			2.58% 2.51%
10/22/1982	17.15%	13.24%		-2.02			3.91%
10/29/1982	15.54%	13.16%		-2.03			2.38%
11/1/1982 11/3/1982	15.50% 17.20%	13.15% 13.13%		-2.03 -2.03			2.35% 4.07%
11/4/1982	16.25%	13.11%		-2.03			3.14%
11/5/1982	16.20%	13.09%		-2.03			3.11%
11/9/1982 11/23/1982	16.00% 15.50%	13.05% 12.89%		-2.04 -2.05			2.95% 2.61%
11/23/1982	15.85%	12.89%)	-2.05			2.96%
11/30/1982	16.50%	12.81%		-2.06			3.69%
12/1/1982 12/6/1982	17.04% 15.00%	12.79% 12.73%		-2.06 -2.06			4.25% 2.27%
12/6/1982	16.35%	12.73%		-2.06			3.62%
12/10/1982	15.50%	12.66%		-2.07			2.84%
12/13/1982 12/14/1982	16.00% 15.30%	12.65% 12.63%		-2.07 -2.07			3.35% 2.67%
12/14/1982	16.40%	12.63%)	-2.07			3.77%
12/20/1982	16.00%	12.57%		-2.07			3.43%
12/21/1982 12/21/1982	14.75% 15.85%	12.56% 12.56%		-2.07 -2.07			2.19% 3.29%
12/22/1982	16.25%	12.54%)	-2.08			3.71%
12/22/1982 12/22/1982	16.58%	12.54%		-2.08			4.04%
12/22/1982	16.75% 14.90%	12.54% 12.48%		-2.08 -2.08			4.21% 2.42%
12/29/1982	16.25%	12.48%)	-2.08			3.77%
12/30/1982 12/30/1982	16.00%	12.47% 12.47%		-2.08 -2.08			3.53% 3.88%
12/30/1982	16.35% 16.77%	12.47%		-2.08 -2.08			4.30%
1/5/1983	17.33%	12.40%)	-2.09			4.93%
1/11/1983 1/12/1983	15.90% 14.63%	12.34% 12.33%		-2.09 -2.09			3.56% 2.30%
1/12/1983	15.50%	12.33%		-2.09			3.17%
1/20/1983	17.75%	12.24%		-2.10			5.51%
1/21/1983 1/24/1983	15.00% 14.50%	12.22% 12.21%		-2.10 -2.10			2.78% 2.29%
1/24/1983	15.50%	12.21%		-2.10			3.29%
1/25/1983	15.85%	12.19%		-2.10			3.66%
1/27/1983 2/1/1983	16.14% 18.50%	12.17% 12.13%		-2.11 -2.11			3.97% 6.37%
2/4/1983	14.00%	12.10%		-2.11			1.90%
2/10/1983	15.00%	12.06%		-2.12			2.94%
2/21/1983 2/22/1983	15.50% 15.50%	11.98% 11.97%		-2.12 -2.12			3.52% 3.53%
2/23/1983	15.10%	11.96%		-2.12			3.14%
2/23/1983	16.00%	11.96%		-2.12			4.04%
3/2/1983 3/9/1983	15.25% 15.20%	11.89% 11.82%		-2.13 -2.13			3.36% 3.38%
3/15/1983	13.00%	11.77%)	-2.14			1.23%
3/18/1983 3/23/1983	15.25%	11.73%		-2.14 -2.15			3.52% 3.71%
3/23/1983 3/24/1983	15.40% 15.00%	11.69% 11.67%		-2.15 -2.15			3.71% 3.33%
3/29/1983	15.50%	11.63%)	-2.15			3.87%
3/30/1983 3/31/1983	16.71%	11.61% 11.50%		-2.15 -2.15			5.10% 3.41%
3/31/1983 4/4/1983	15.00% 15.20%	11.59% 11.58%		-2.15 -2.16			3.41% 3.62%
4/8/1983	15.50%	11.51%)	-2.16			3.99%
4/11/1983 4/19/1983	14.81% 14.50%	11.49% 11.38%		-2.16 -2.17			3.32% 3.12%
4/19/1983	14.50% 16.00%	11.36%		-2.17 -2.18			4.64%
4/29/1983	16.00%	11.24%		-2.19			4.76%

Date of Florent Rela Citize 16.00% 11.25% 2.14% 2.14% 3.25	[5]	[6] Return on Equity	[7] 30 Year Treasury	[8] Moody's Utility A	[9] LN(30-Year	[10] Moody's Utility A	[11]	[12]
Septimized 15,000						Credit Spread	VIX	
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3/20/1984 16.00% 11.64% -2.15 4.36% 3/23/1984 15.50% 11.67% -2.15 3.83% 3/26/1984 14.71% 11.68% -2.15 3.03% 4/2/1984 15.50% 11.71% -2.14 3.79% 4/6/1984 14.74% 11.75% -2.14 2.99% 4/11/1984 15.72% 11.78% -2.14 3.94% 4/17/1984 15.00% 11.81% -2.14 3.19% 4/18/1984 16.20% 11.82% -2.14 4.38% 4/25/1984 14.64% 11.85% -2.13 2.79% 4/30/1984 14.40% 11.88% -2.13 2.53% 5/16/1984 14.69% 11.98% -2.12 3.02% 5/22/1984 14.40% 12.02% -2.12 3.04%	2/28/1984	14.50%	11.51%	1	-2.16			2.99%
3/23/1984 15.50% 11.67% -2.15 3.83% 3/26/1984 14.71% 11.68% -2.15 3.03% 4/2/1984 15.50% 11.71% -2.14 3.79% 4/6/1984 14.74% 11.75% -2.14 2.99% 4/11/1984 15.72% 11.78% -2.14 3.94% 4/17/1984 15.00% 11.81% -2.14 3.19% 4/18/1984 16.20% 11.82% -2.14 4.38% 4/25/1984 14.64% 11.85% -2.13 2.79% 4/30/1984 14.40% 11.87% -2.13 2.53% 5/16/1984 14.69% 11.98% -2.12 2.71% 5/16/1984 15.00% 11.98% -2.12 3.02% 5/22/1984 14.40% 12.02% -2.12 2.38% 5/29/1984 15.10% 12.06% -2.12 3.04%								
3/26/1984 14.71% 11.68% -2.15 3.03% 4/2/1984 15.50% 11.71% -2.14 3.79% 4/6/1984 14.74% 11.75% -2.14 2.99% 4/11/1984 15.72% 11.78% -2.14 3.94% 4/17/1984 15.00% 11.81% -2.14 3.19% 4/18/1984 16.20% 11.82% -2.14 4.38% 4/25/1984 14.64% 11.85% -2.13 2.79% 4/30/1984 14.40% 11.87% -2.13 2.53% 5/16/1984 14.69% 11.98% -2.12 2.71% 5/16/1984 15.00% 11.98% -2.12 3.02% 5/22/1984 14.40% 12.02% -2.12 2.38% 5/29/1984 15.10% 12.06% -2.12 3.04%								
4/2/1984 15.50% 11.71% -2.14 3.79% 4/6/1984 14.74% 11.75% -2.14 2.99% 4/11/1984 15.72% 11.78% -2.14 3.94% 4/17/1984 15.00% 11.81% -2.14 3.19% 4/18/1984 16.20% 11.82% -2.14 4.38% 4/25/1984 14.64% 11.85% -2.13 2.79% 4/30/1984 14.40% 11.87% -2.13 2.53% 5/16/1984 14.69% 11.98% -2.12 2.71% 5/16/1984 15.00% 11.98% -2.12 3.02% 5/22/1984 14.40% 12.02% -2.12 2.38% 5/29/1984 15.10% 12.06% -2.12 3.04%								
4/11/1984 15.72% 11.78% -2.14 3.94% 4/17/1984 15.00% 11.81% -2.14 3.19% 4/18/1984 16.20% 11.82% -2.14 4.38% 4/25/1984 14.64% 11.85% -2.13 2.79% 4/30/1984 14.40% 11.87% -2.13 2.53% 5/16/1984 14.69% 11.98% -2.12 2.71% 5/16/1984 15.00% 11.98% -2.12 3.02% 5/22/1984 14.40% 12.02% -2.12 2.38% 5/29/1984 15.10% 12.06% -2.12 3.04%	4/2/1984	15.50%	11.71%	1	-2.14			3.79%
4/17/1984 15.00% 11.81% -2.14 3.19% 4/18/1984 16.20% 11.82% -2.14 4.38% 4/25/1984 14.64% 11.85% -2.13 2.79% 4/30/1984 14.40% 11.87% -2.13 2.53% 5/16/1984 14.69% 11.98% -2.12 2.71% 5/16/1984 15.00% 11.98% -2.12 3.02% 5/22/1984 14.40% 12.02% -2.12 2.38% 5/29/1984 15.10% 12.06% -2.12 3.04%								
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5/16/1984 15.00% 11.98% -2.12 3.02% 5/22/1984 14.40% 12.02% -2.12 2.38% 5/29/1984 15.10% 12.06% -2.12 3.04%		14.40%						
5/22/1984 14.40% 12.02% -2.12 2.38% 5/29/1984 15.10% 12.06% -2.12 3.04%								
5/29/1984 15.10% 12.06% -2.12 3.04%								
	6/13/1984	15.25%	12.15%	•	-2.11			3.10%

[5]	[6] Return on Equity	[7] 30 Year Treasury	[8] Moody's Utility A	[9] LN(30-Year	[10] Moody's Utility A	[11]	[12]
Date of Electric Rate Case	(%)	(%)	Yield	Treasury)	Credit Spread	VIX	Risk Premium
6/15/1984	15.60%	12.17%		-2.11			3.43%
6/22/1984 6/29/1984	16.25%	12.21% 12.26%		-2.10 -2.10			4.04% 2.99%
7/2/1984	15.25% 13.35%	12.27%		-2.10 -2.10			1.08%
7/10/1984	16.00%	12.31%		-2.09			3.69%
7/12/1984	16.50%	12.32%		-2.09			4.18%
7/13/1984	16.25%	12.33%		-2.09			3.92%
7/17/1984 7/18/1984	14.14%	12.35% 12.36%		-2.09 -2.09			1.79% 2.94%
7/18/1984	15.30% 15.50%	12.36%		-2.09 -2.09			3.14%
7/19/1984	14.30%	12.37%		-2.09			1.93%
7/24/1984	16.79%	12.39%		-2.09			4.40%
7/31/1984 8/3/1984	16.00%	12.43%		-2.09			3.57%
8/17/1984	14.25% 14.30%	12.44% 12.49%		-2.08 -2.08			1.81% 1.81%
8/20/1984	15.00%	12.49%		-2.08			2.51%
8/27/1984	16.30%	12.51%	1	-2.08			3.79%
8/31/1984	15.55%	12.52%		-2.08			3.03%
9/6/1984 9/10/1984	16.00% 14.75%	12.53% 12.54%		-2.08 -2.08			3.47% 2.21%
9/13/1984	15.00%	12.55%		-2.08			2.45%
9/17/1984	17.38%	12.56%		-2.08			4.82%
9/26/1984	14.50%	12.57%		-2.07			1.93%
9/28/1984 9/28/1984	15.00%	12.57% 12.57%		-2.07 -2.07			2.43% 3.68%
10/9/1984	16.25% 14.75%	12.58%		-2.07 -2.07			2.17%
10/12/1984	15.60%	12.59%		-2.07			3.01%
10/22/1984	15.00%	12.59%		-2.07			2.41%
10/26/1984	16.40%	12.58%		-2.07			3.82%
10/31/1984 11/7/1984	16.25% 15.60%	12.58% 12.58%		-2.07 -2.07			3.67% 3.02%
11/9/1984	16.00%	12.58%		-2.07			3.42%
11/14/1984	15.75%	12.58%		-2.07			3.17%
11/20/1984	15.25%	12.58%		-2.07			2.67%
11/20/1984 11/23/1984	15.92% 15.00%	12.58% 12.58%		-2.07 -2.07			3.34% 2.42%
11/28/1984	16.15%	12.57%		-2.07 -2.07			3.58%
12/3/1984	15.80%	12.56%		-2.07			3.24%
12/4/1984	16.50%	12.56%		-2.07			3.94%
12/18/1984 12/19/1984	16.40%	12.53% 12.53%		-2.08 -2.08			3.87% 2.22%
12/19/1984	14.75% 15.00%	12.53%		-2.08 -2.08			2.47%
12/20/1984	16.00%	12.53%		-2.08			3.47%
12/28/1984	16.00%	12.50%		-2.08			3.50%
1/3/1985 1/10/1985	14.75%	12.49% 12.47%		-2.08 -2.08			2.26% 3.28%
1/10/1985	15.75% 16.30%	12.47%		-2.08 -2.08			3.84%
1/23/1985	15.80%	12.43%		-2.08			3.37%
1/24/1985	15.82%	12.43%		-2.09			3.39%
1/25/1985 1/30/1985	16.75%	12.42% 12.40%		-2.09 -2.09			4.33% 2.50%
1/31/1985	14.90% 14.75%	12.40%		-2.09 -2.09			2.36%
2/8/1985	14.47%	12.35%		-2.09			2.12%
3/1/1985	13.84%	12.31%		-2.10			1.53%
3/8/1985 3/14/1985	16.85% 15.50%	12.28% 12.25%		-2.10 -2.10			4.57% 3.25%
3/15/1985	15.62%	12.25%		-2.10 -2.10			3.37%
3/29/1985	15.62%	12.17%		-2.11			3.45%
4/3/1985	14.60%	12.14%		-2.11			2.46%
4/9/1985 4/16/1985	15.50%	12.11% 12.06%		-2.11 -2.12			3.39% 3.64%
4/22/1985	15.70% 14.00%	12.00%		-2.12 -2.12			1.98%
4/26/1985	15.50%	11.98%		-2.12			3.52%
4/29/1985	15.00%	11.97%		-2.12			3.03%
5/2/1985 5/8/1985	14.68% 15.62%	11.94% 11.89%		-2.13 -2.13			2.74% 3.73%
5/10/1985	16.50%	11.87%		-2.13			4.63%
5/29/1985	14.61%	11.73%	1	-2.14			2.88%
5/31/1985 6/14/1985	16.00%	11.71% 11.61%		-2.14 -2.15			4.29% 3.89%
7/9/1985	15.50% 15.00%	11.61% 11.45%		-2.15 -2.17			3.55%
7/16/1985	14.50%	11.39%		-2.17			3.11%
7/26/1985	14.50%	11.33%		-2.18			3.17%
8/2/1985	14.80%	11.29%		-2.18			3.51%
8/7/1985 8/28/1985	15.00% 14.25%	11.27% 11.15%		-2.18 -2.19			3.73% 3.10%
8/28/1985	15.50%	11.15%		-2.19			4.35%
8/29/1985	14.50%	11.15%	1	-2.19			3.35%
9/9/1985	14.60%	11.11%		-2.20 2.20			3.49%
9/9/1985 9/17/1985	14.90% 14.90%	11.11% 11.08%		-2.20 -2.20			3.79% 3.82%
9/17/1983	15.00%	11.06%		-2.20 -2.20			3.94%
9/27/1985	15.50%	11.05%	1	-2.20			4.45%
9/27/1985	15.80%	11.05%		-2.20			4.75%
10/2/1985 10/2/1985	14.00% 14.75%	11.03% 11.03%		-2.20 -2.20			2.97% 3.72%
10/2/1983	14.75% 15.25%	11.03%		-2.20 -2.20			4.22%
10/24/1985	15.40%	10.96%	1	-2.21			4.44%
10/24/1985	15.82%	10.96%		-2.21			4.86%
10/24/1985 10/28/1985	15.85% 16.00%	10.96% 10.95%		-2.21 -2.21			4.89% 5.05%
10/28/1983	16.65%	10.94%		-2.21 -2.21			5.71%
10/31/1985	15.06%	10.93%	1	-2.21			4.13%
11/4/1985	14.50%	10.92%		-2.21			3.58%
11/7/1985	15.50%	10.90%		-2.22			4.60%

[5]	[6] Return on Equity	[7] 30 Year Treasury	[8] Moody's Utility A	[9] LN(30-Year	[10] Moody's Utility A	[11]	[12]
Date of Electric Rate Case	(%)	(%)	Yield	Treasury)	Credit Spread	VIX	Risk Premium
11/8/1985	14.30%	10.89%		-2.22			3.41%
12/12/1985	14.75%	10.73%		-2.23			4.02%
12/18/1985	15.00%	10.69%		-2.24 -2.24			4.31%
12/20/1985 12/20/1985	14.50% 14.50%	10.67% 10.67%		-2.24 -2.24			3.83% 3.83%
12/20/1985	15.00%	10.67%		-2.24			4.33%
1/24/1986	15.40%	10.41%		-2.26			4.99%
1/31/1986	15.00%	10.35%		-2.27			4.65%
2/5/1986 2/5/1986	15.00%	10.32% 10.32%		-2.27 -2.27			4.68% 5.43%
2/10/1986	15.75% 13.30%	10.32 %		-2.27 -2.27			3.43%
2/11/1986	12.50%	10.28%		-2.27			2.22%
2/14/1986	14.40%	10.24%		-2.28			4.16%
2/18/1986 2/24/1986	16.00%	10.23%		-2.28 -2.28			5.77% 4.32%
2/24/1986	14.50% 14.00%	10.18% 10.15%		-2.26 -2.29			4.32% 3.85%
3/5/1986	14.90%	10.08%		-2.29			4.82%
3/11/1986	14.50%	10.02%		-2.30			4.48%
3/12/1986 3/27/1986	13.50%	10.00% 9.86%		-2.30 -2.32			3.50% 4.24%
3/31/1986	14.10% 13.50%	9.84%		-2.32 -2.32			3.66%
4/1/1986	14.00%	9.83%		-2.32			4.17%
4/2/1986	15.50%	9.81%		-2.32			5.69%
4/4/1986 4/14/1986	15.00%	9.78% 9.69%		-2.32 -2.33			5.22% 3.71%
4/23/1986	13.40% 15.00%	9.57%		-2.35 -2.35			5.43%
5/16/1986	14.50%	9.32%		-2.37			5.18%
5/16/1986	14.50%	9.32%		-2.37			5.18%
5/29/1986	13.90%	9.19%		-2.39			4.71%
5/30/1986 6/2/1986	15.10% 12.81%	9.18% 9.17%		-2.39 -2.39			5.92% 3.64%
6/11/1986	14.00%	9.07%		-2.40			4.93%
6/24/1986	16.63%	8.94%		-2.41			7.69%
6/26/1986	12.00%	8.91%		-2.42			3.09%
6/26/1986 6/30/1986	14.75% 13.00%	8.91% 8.87%		-2.42 -2.42			5.84% 4.13%
7/10/1986	14.34%	8.75%		-2.44			5.59%
7/11/1986	12.75%	8.73%		-2.44			4.02%
7/14/1986	12.60%	8.71%		-2.44			3.89%
7/17/1986 7/25/1986	12.40% 14.25%	8.66% 8.57%		-2.45 -2.46			3.74% 5.68%
8/6/1986	13.50%	8.44%		-2.47			5.06%
8/14/1986	13.50%	8.35%		-2.48			5.15%
9/16/1986	12.75%	8.06%		-2.52			4.69%
9/19/1986 10/1/1986	13.25% 14.00%	8.03% 7.95%		-2.52 -2.53			5.22% 6.05%
10/3/1986	13.40%	7.93%		-2.53 -2.53			5.47%
10/31/1986	13.50%	7.77%		-2.55			5.73%
11/5/1986	13.00%	7.75%		-2.56			5.25%
12/3/1986 12/4/1986	12.90% 14.44%	7.58% 7.58%		-2.58 -2.58			5.32% 6.86%
12/16/1986	13.60%	7.52%		-2.59			6.08%
12/22/1986	13.80%	7.51%		-2.59			6.29%
12/30/1986	13.00%	7.49%		-2.59			5.51%
1/2/1987 1/12/1987	13.00% 12.40%	7.49% 7.47%		-2.59 -2.59			5.51% 4.93%
1/27/1987	12.71%	7.46%		-2.60			5.25%
3/2/1987	12.47%	7.47%		-2.59			5.00%
3/3/1987 3/4/1987	13.60%	7.47% 7.47%		-2.59 -2.59			6.13% 4.91%
3/10/1987	12.38% 13.50%	7.47%		-2.59 -2.59			6.03%
3/13/1987	13.00%	7.47%		-2.59			5.53%
3/31/1987	13.00%	7.46%		-2.59			5.54%
4/6/1987 4/14/1987	13.00% 12.50%	7.47% 7.49%		-2.59 -2.59			5.53% 5.01%
4/16/1987	14.50%	7.50%		-2.59			7.00%
4/27/1987	12.00%	7.54%		-2.59			4.46%
5/5/1987	12.85%	7.58%		-2.58			5.27%
5/12/1987 5/28/1987	12.65% 13.50%	7.62% 7.70%		-2.57 -2.56			5.03% 5.80%
6/15/1987	13.20%	7.78%		-2.55			5.42%
6/29/1987	15.00%	7.83%		-2.55			7.17%
6/30/1987	12.50%	7.84%		-2.55			4.66%
7/8/1987 7/10/1987	12.00% 12.90%	7.86% 7.86%		-2.54 -2.54			4.14% 5.04%
7/15/1987	13.50%	7.88%		-2.54			5.62%
7/16/1987	13.50%	7.88%		-2.54			5.62%
7/16/1987	15.00%	7.88%		-2.54			7.12%
7/27/1987 7/27/1987	13.00% 13.40%	7.92% 7.92%		-2.54 -2.54			5.08% 5.48%
7/27/1987	13.50%	7.92%		-2.54			5.58%
7/31/1987	12.98%	7.95%		-2.53			5.03%
8/26/1987 8/26/1987	12.63%	8.06%		-2.52			4.57%
8/26/1987 8/27/1987	12.75% 13.25%	8.06% 8.06%		-2.52 -2.52			4.69% 5.19%
9/9/1987	13.25%	8.14%		-2.52 -2.51			4.86%
9/30/1987	12.75%	8.31%		-2.49			4.44%
9/30/1987	13.00%	8.31%		-2.49 2.40			4.69%
10/2/1987 10/15/1987	11.50% 13.00%	8.33% 8.43%		-2.49 -2.47			3.17% 4.57%
11/2/1987	13.00%	8.55%		-2.47 -2.46			4.45%
11/19/1987	13.00%	8.64%		-2.45			4.36%
11/30/1987	12.00%	8.68%		-2.44			3.32%
12/3/1987 12/15/1987	14.20% 13.25%	8.70% 8.77%		-2.44 -2.43			5.50% 4.48%
12/10/1307	13.2370	5.11/0		∠.⊤∪			1.70/0

[5]	[6] Return on Equity	[7] 30 Year Treasury	[8] Moody's Utility A	[9] LN(30-Year	[10] Moody's Utility A	[11]	[12]
Date of Electric Rate Case	(%)	(%)	Yield	Treasury)	Credit Spread	VIX	Risk Premium
12/16/1987 12/16/1987	13.50%	8.78%		-2.43 -2.43			4.72% 4.94%
12/17/1987	13.72% 11.75%	8.78% 8.79%		-2.43 -2.43			2.96%
12/18/1987	13.50%	8.80%)	-2.43			4.70%
12/21/1987 12/22/1987	12.01%	8.81% 8.81%		-2.43 -2.43			3.20% 3.19%
12/22/1987	12.00% 12.00%	8.81%		-2.43 -2.43			3.19%
12/22/1987	12.75%	8.81%)	-2.43			3.94%
12/22/1987 1/20/1988	13.00%	8.81% 8.94%		-2.43 -2.42			4.19% 4.86%
1/20/1988	13.80% 13.90%	8.95%		-2.42 -2.41			4.00% 4.95%
1/29/1988	13.20%	8.96%)	-2.41			4.24%
2/4/1988 3/1/1988	12.60%	8.96% 8.94%		-2.41 -2.41			3.64% 2.62%
3/1/1988	11.56% 12.87%	8.92%		-2.41 -2.42			3.95%
3/24/1988	11.24%	8.92%)	-2.42			2.32%
3/30/1988 4/1/1988	12.72% 12.50%	8.92% 8.92%		-2.42 -2.42			3.80% 3.58%
4/7/1988	13.25%	8.93%		-2.42			4.32%
4/25/1988	10.96%	8.96%		-2.41			2.00%
5/3/1988 5/11/1988	12.91% 13.50%	8.97% 8.99%		-2.41 -2.41			3.94% 4.51%
5/16/1988	13.00%	8.99%		-2.41			4.01%
6/30/1988	12.75%	9.00%		-2.41			3.75%
7/1/1988 7/20/1988	12.75% 13.40%	8.99% 8.96%		-2.41 -2.41			3.76% 4.44%
8/5/1988	12.75%	8.92%)	-2.42			3.83%
8/23/1988	11.70%	8.93%		-2.42			2.77%
8/29/1988 8/30/1988	12.75% 13.50%	8.94% 8.94%		-2.41 -2.41			3.81% 4.56%
9/8/1988	12.60%	8.95%)	-2.41			3.65%
10/13/1988 12/19/1988	13.10%	8.93%		-2.42			4.17%
12/19/1988	13.00% 12.25%	9.02% 9.02%		-2.41 -2.41			3.98% 3.23%
12/20/1988	13.00%	9.02%)	-2.41			3.98%
12/21/1988 12/27/1988	12.90%	9.02% 9.03%		-2.41 -2.40			3.88% 3.97%
12/28/1988	13.00% 13.10%	9.03%		-2.40 -2.40			4.07%
12/30/1988	13.40%	9.04%)	-2.40			4.36%
1/27/1989 1/31/1989	13.00%	9.05% 9.05%		-2.40 -2.40			3.95% 3.95%
2/17/1989	13.00% 13.00%	9.05%		-2.40			3.95%
2/20/1989	12.40%	9.05%		-2.40			3.35%
3/1/1989 3/8/1989	12.76% 13.00%	9.05% 9.05%		-2.40 -2.40			3.71% 3.95%
3/30/1989	14.00%	9.05%		-2.40			4.95%
4/5/1989	14.20%	9.05%		-2.40			5.15%
4/18/1989 5/5/1989	13.00% 12.40%	9.05% 9.05%		-2.40 -2.40			3.95% 3.35%
6/2/1989	13.20%	9.00%		-2.41			4.20%
6/8/1989	13.50%	8.98%		-2.41			4.52%
6/27/1989 6/30/1989	13.25% 13.00%	8.91% 8.90%		-2.42 -2.42			4.34% 4.10%
8/14/1989	12.50%	8.77%)	-2.43			3.73%
9/28/1989 10/24/1989	12.25%	8.63% 8.54%		-2.45 -2.46			3.62% 3.96%
11/9/1989	12.50% 13.00%	8.49%		-2.47			4.51%
12/15/1989	13.00%	8.34%		-2.48			4.66%
12/20/1989 12/21/1989	12.90% 12.90%	8.32% 8.31%		-2.49 -2.49			4.58% 4.59%
12/27/1989	12.50%	8.29%		-2.49			4.21%
12/27/1989	13.00%	8.29%		-2.49		40.4	4.71%
1/10/1990 1/11/1990	12.80% 12.90%	8.24% 8.24%		-2.50 -2.50		19.9 19.9	
1/17/1990	12.80%	8.22%)	-2.50		21.5	59 4.58%
1/26/1990	12.00%	8.20%		-2.50		22.8	
2/9/1990 2/24/1990	12.10% 12.86%	8.17% 8.15%		-2.50 -2.51		23.5 23.3	
3/30/1990	12.90%	8.16%		-2.51		22.	
4/4/1990 4/12/1990	15.76% 12.52%	8.17% 8.18%		-2.51 -2.50		22.′ 22.(
4/19/1990		8.20%		-2.50		21.9	
5/21/1990	12.10%	8.28%		-2.49		21.4	
5/29/1990 5/31/1990	12.40% 12.00%	8.30% 8.30%		-2.49 -2.49		21.2 21.1	
6/4/1990	12.90%	8.30%)	-2.49		21.0	08 4.60%
6/6/1990 6/15/1000	12.25%	8.31%		-2.49 2.40		21.0	
6/15/1990 6/20/1990	13.20% 12.92%	8.32% 8.32%		-2.49 -2.49		20.7 20.6	
6/27/1990	12.90%	8.33%)	-2.49		20.5	51 4.57%
6/29/1990 7/6/1990	12.50% 12.10%	8.33% 8.34%		-2.48 -2.48		20.4 20.2	
7/6/1990 7/6/1990	12.10% 12.35%	8.34%		-2.48 -2.48		20.2	
8/10/1990	12.55%	8.41%)	-2.48		20.4	19 4.14%
8/16/1990 8/22/1990	13.21% 13.10%	8.43% 8.45%		-2.47 -2.47		20.6 20.7	
8/24/1990	13.00%	8.46%)	-2.47		20.9	96 4.54%
9/26/1990	11.45%	8.59%		-2.45		21.9	
10/2/1990 10/5/1990	13.00% 12.84%	8.61% 8.62%		-2.45 -2.45		22.0 22.1	
10/19/1990	13.00%	8.67%)	-2.45		22.6	66 4.33%
10/25/1990 11/21/1990	12.30%	8.68%		-2.44 -2.44		22.5 22.9	
17/21/1990	12.70% 12.30%	8.69% 8.67%		-2.44 -2.44		22.9	
12/17/1990	12.87%	8.67%		-2.45		23.0	

[5]	[6] Return on Equity	[7] 30 Year Treasury	[8] Moody's Utility A	[9] LN(30-Year	[10] Moody's Utility A	[11]	[12]
Date of Electric Rate Case	(%)	(%)	Yield	Treasury)	Credit Spread	VIX	Risk Premium
12/18/1990	13.10%	8.67%		-2.45	•	23.03	4.43%
12/19/1990	12.00%	8.66%		-2.45		23.05	3.34%
12/20/1990 12/21/1990	12.75% 12.50%	8.66% 8.66%		-2.45 -2.45		23.07 23.09	4.09% 3.84%
12/27/1990	12.79%	8.66%		-2.45		23.18	4.13%
1/2/1991	13.10%	8.65%		-2.45		23.30	4.45%
1/4/1991	12.50%	8.65%		-2.45		23.38	3.85%
1/15/1991 1/25/1991	12.75% 11.70%	8.64% 8.63%		-2.45 -2.45		23.76 23.95	4.11% 3.07%
2/4/1991	12.50%	8.60%		-2.45		23.96	3.90%
2/7/1991	12.50%	8.59%		-2.45		24.02	3.91%
2/12/1991 2/14/1991	13.00%	8.58% 8.57%		-2.46 -2.46		24.10 24.12	4.43% 4.15%
2/14/1991	12.72% 12.80%	8.55%		-2.46 -2.46		24.12	4.25%
3/6/1991	13.10%	8.53%		-2.46		24.32	4.57%
3/8/1991	12.30%	8.52%		-2.46		24.36	3.78%
3/8/1991 4/22/1991	13.00% 13.00%	8.52% 8.49%		-2.46 -2.47		24.36 24.40	4.48% 4.51%
5/7/1991	13.50%	8.47%		-2.47		24.26	5.03%
5/13/1991	13.25%	8.47%		-2.47		24.08	4.78%
5/30/1991 6/12/1991	12.75%	8.44%		-2.47 -2.48		23.34 22.76	4.31%
6/25/1991	12.00% 11.70%	8.41% 8.39%		-2.48 -2.48		22.70	3.59% 3.31%
6/28/1991	12.50%	8.38%		-2.48		22.05	4.12%
7/1/1991	12.00%	8.38%		-2.48		21.99	3.62%
7/3/1991 7/19/1991	12.50% 12.10%	8.37% 8.34%		-2.48 -2.48		21.89 21.21	4.13% 3.76%
8/1/1991	12.10%	8.32%		-2.49		20.60	4.58%
8/16/1991	13.20%	8.29%		-2.49		19.80	4.91%
9/27/1991	12.50%	8.23%		-2.50		18.90	4.27%
9/30/1991 10/17/1991	12.25% 13.00%	8.23% 8.20%		-2.50 -2.50		18.86 18.16	4.02% 4.80%
10/23/1991	12.50%	8.20%		-2.50		17.80	4.30%
10/23/1991	12.55%	8.20%		-2.50		17.80	4.35%
10/31/1991 11/1/1991	11.80%	8.19% 8.19%		-2.50 -2.50		17.52 17.49	3.61% 3.81%
11/5/1991	12.00% 12.25%	8.19%		-2.50		17.49	4.06%
11/12/1991	12.50%	8.18%	D	-2.50		17.27	4.32%
11/12/1991 11/25/1991	13.25%	8.18%		-2.50 2.50		17.27 17.14	5.07%
11/26/1991	12.40% 11.60%	8.18% 8.18%		-2.50 -2.50		17.14	4.22% 3.42%
11/26/1991	12.50%	8.18%		-2.50		17.14	4.32%
11/27/1991	12.10%	8.18%		-2.50		17.13	3.92%
12/18/1991 12/19/1991	12.25% 12.60%	8.15% 8.15%		-2.51 -2.51		17.04 17.05	4.10% 4.45%
12/19/1991	12.80%	8.15%		-2.51		17.05	4.65%
12/20/1991	12.65%	8.14%		-2.51		17.07	4.51%
1/9/1992 1/16/1992	12.80%	8.09% 8.07%		-2.51 -2.52		17.13 17.12	4.71% 4.68%
1/10/1992	12.75% 12.00%	8.06%		-2.52 -2.52		17.12	3.94%
1/22/1992	13.00%	8.06%	D	-2.52		17.12	4.94%
1/27/1992	12.65%	8.05%		-2.52		17.13	4.60%
1/31/1992 2/11/1992	12.00% 12.40%	8.04% 8.03%		-2.52 -2.52		17.14 17.15	3.96% 4.37%
2/25/1992	12.50%	8.01%	D	-2.52		17.14	4.49%
3/16/1992	11.43%	7.98%		-2.53		17.28	3.45%
3/18/1992 4/2/1992	12.28% 12.10%	7.98% 7.95%		-2.53 -2.53		17.27 17.24	4.30% 4.15%
4/9/1992	11.45%	7.94%		-2.53		17.22	3.51%
4/10/1992	11.50%	7.93%		-2.53		17.21	3.57%
4/14/1992 5/5/1992	11.50% 11.50%	7.93% 7.89%		-2.53 -2.54		17.18 17.12	3.57% 3.61%
5/12/1992	11.87%	7.88%		-2.54		17.12	3.99%
5/12/1992	12.46%	7.88%		-2.54		17.13	4.58%
6/1/1992 6/12/1992	12.30%	7.87% 7.86%		-2.54 -2.54		17.02 16.99	4.43% 3.04%
6/26/1992	10.90% 12.35%	7.85%		-2.54 -2.54		16.89	4.50%
6/29/1992	11.00%	7.85%	D	-2.54		16.88	3.15%
6/30/1992	13.00%	7.85%		-2.55 2.55		16.86	5.15%
7/13/1992 7/13/1992	11.90% 13.50%	7.84% 7.84%		-2.55 -2.55		16.79 16.79	4.06% 5.66%
7/22/1992	11.20%	7.83%		-2.55		16.64	3.37%
8/3/1992	12.00%	7.81%		-2.55		16.54	4.19%
8/6/1992 9/22/1992	12.50% 12.00%	7.80% 7.71%		-2.55 -2.56		16.51 15.79	4.70% 4.29%
9/28/1992	11.40%	7.71%		-2.56		15.72	3.69%
9/30/1992	11.75%	7.70%		-2.56		15.71	4.05%
10/2/1992 10/12/1992	13.00% 12.20%	7.70% 7.70%		-2.56 -2.56		15.73 15.76	5.30% 4.50%
10/16/1992	13.16%	7.70%		-2.56		15.74	5.46%
10/30/1992	11.75%	7.71%		-2.56		15.70	4.04%
11/3/1992 12/3/1992	12.00% 11.85%	7.71% 7.68%		-2.56 -2.57		15.70 15.30	4.29% 4.17%
12/3/1992	11.85%	7.66%		-2.57 -2.57		15.30	3.34%
12/16/1992	11.90%	7.66%		-2.57		15.03	4.24%
12/16/1992 12/17/1992	12.40%	7.66% 7.66%		-2.57		15.03	4.74%
12/17/1992 12/22/1992	12.00% 12.30%	7.66% 7.65%		-2.57 -2.57		14.99 14.90	4.34% 4.65%
12/22/1992	12.40%	7.65%		-2.57		14.90	4.75%
12/29/1992	12.25%	7.63%		-2.57	0.73%	14.78	4.62%
12/30/1992 12/31/1992	12.00% 11.90%	7.63% 7.63%		-2.57 -2.57	0.73% 0.74%	14.76 14.74	4.37% 4.27%
1/12/1993	12.00%	7.61%	8.37%	-2.58	0.76%	14.61	4.39%
1/21/1993	11.25%	7.59% 7.56%		-2.58 2.58	0.75%	14.44	3.66%
2/2/1993	11.40%	7.56%	8.28%	-2.58	0.72%	14.27	3.84%

[5]	[6] Return on	[7] 30 Year	[8]	[9]	[10]	[11]	[12]
Date of Electric Rate Case	Equity (%)	Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
2/15/1993	12.30%	7.52%	8.23%	-2.59	0.71%	14.12	4.78%
2/24/1993 2/26/1993	11.90% 11.80%	7.49% 7.48%		-2.59 -2.59	0.70% 0.70%	14.14 14.14	4.41% 4.32%
2/26/1993	12.20%	7.48%		-2.59	0.70%	14.14	4.72%
4/23/1993 5/11/1993	11.75% 11.75%	7.29% 7.25%		-2.62 -2.62	0.74% 0.75%	13.84 13.84	4.46% 4.50%
5/14/1993	11.50%	7.24%	8.00%	-2.63	0.76%	13.84	4.26%
5/25/1993 5/28/1993	11.50% 11.00%	7.23% 7.22%		-2.63 -2.63	0.76% 0.77%	13.82 13.80	4.27% 3.78%
6/3/1993	12.00%	7.21%	7.98%	-2.63	0.77%	13.77	4.79%
6/16/1993 6/18/1993	11.50% 12.10%	7.19% 7.18%		-2.63 -2.63	0.78% 0.78%	13.76 13.76	4.31% 4.92%
6/25/1993 7/21/1993	11.67%	7.17%		-2.64	0.79%	13.71	4.50%
7/21/1993	11.38% 10.46%	7.10% 7.09%		-2.65 -2.65	0.81% 0.81%	13.22 13.17	4.28% 3.37%
8/24/1993 9/21/1993	11.50%	6.96% 6.81%		-2.67 -2.69	0.87% 0.94%	12.74 12.73	4.54% 3.69%
9/29/1993	10.50% 11.47%	6.77%		-2.69 -2.69	0.94%	12.73	4.70%
9/30/1993 11/2/1993	11.60%	6.76% 6.60%		-2.69 -2.72	0.96% 0.99%	12.77 12.70	4.84% 4.20%
11/12/1993	10.80% 12.00%	6.57%		-2.72 -2.72	1.00%	12.70	5.43%
11/26/1993 12/14/1993	11.00%	6.52% 6.48%		-2.73 -2.74	1.01% 1.01%	12.79 12.71	4.48% 4.07%
12/14/1993	10.55% 10.60%	6.48%		-2.74 -2.74	1.01%	12.71	4.12%
12/21/1993 1/4/1994	11.30%	6.47% 6.44%		-2.74 -2.74	1.01% 1.01%	12.62 12.49	4.83% 3.63%
1/4/1994	10.07% 11.00%	6.42%		-2.74 -2.75	1.01%	12.49	4.58%
1/21/1994	11.00%	6.40%		-2.75 -2.75	1.01%	12.41	4.60% 4.96%
1/28/1994 2/3/1994	11.35% 11.40%	6.39% 6.38%		-2.75 -2.75	1.01% 1.01%	12.37 12.31	4.96% 5.02%
2/17/1994	10.60%	6.36%		-2.76	1.01%	12.35	4.24%
2/25/1994 2/25/1994	11.25% 12.00%	6.35% 6.35%		-2.76 -2.76	1.02% 1.02%	12.35 12.35	4.90% 5.65%
3/1/1994	11.00%	6.35%	7.37%	-2.76	1.02%	12.37	4.65%
3/4/1994 4/25/1994	11.00% 11.00%	6.35% 6.41%		-2.76 -2.75	1.02% 1.01%	12.41 13.10	4.65% 4.59%
5/10/1994	11.75%	6.45%		-2.74	1.01%	13.27	
5/13/1994 6/3/1994	10.50% 11.00%	6.46% 6.54%		-2.74 -2.73	1.01% 0.99%	13.32 13.39	
6/27/1994	11.40%	6.65%		-2.71	0.98%	13.45	
8/5/1994 10/31/1994	12.75% 10.00%	6.88% 7.33%		-2.68 -2.61	0.95% 0.90%	13.50 13.87	
11/9/1994	10.85%	7.39%		-2.61	0.89%	14.06	
11/9/1994 11/18/1994	10.85% 11.20%	7.39% 7.45%		-2.61 -2.60	0.89% 0.88%	14.06 14.14	
11/22/1994	11.60%	7.47%		-2.59	0.88%	14.17	
11/28/1994 12/8/1994	11.06% 11.50%	7.49% 7.54%		-2.59 -2.58	0.88% 0.88%	14.25 14.30	
12/8/1994	11.70%	7.54%	8.43%	-2.58	0.88%	14.30	4.16%
12/14/1994 12/15/1994	10.95% 11.50%	7.56% 7.57%		-2.58 -2.58	0.89% 0.89%	14.29 14.27	3.39% 3.93%
12/19/1994	11.50%	7.58%	8.47%	-2.58	0.89%	14.24	3.92%
12/28/1994 1/9/1995	12.15% 12.28%	7.61% 7.64%		-2.58 -2.57	0.88% 0.89%	14.20 14.02	
1/31/1995	11.00%	7.69%		-2.57	0.89%	13.66	
2/10/1995 2/17/1995	12.60% 11.90%	7.70% 7.70%		-2.56 -2.56	0.89% 0.90%	13.54 13.45	4.90% 4.20%
3/9/1995	11.50%	7.71%		-2.56	0.90%	13.39	
3/20/1995 3/23/1995	12.00% 12.81%	7.72% 7.72%		-2.56 -2.56	0.89% 0.89%	13.37 13.37	
3/29/1995	11.60%	7.72%		-2.56	0.90%	13.32	
4/6/1995 4/7/1995	11.10% 11.00%	7.71% 7.71%		-2.56 -2.56	0.90% 0.90%	13.26 13.25	
4/19/1995	11.00%	7.70%		-2.56	0.91%	13.19	3.30%
5/12/1995 5/25/1995	11.63% 11.20%	7.68% 7.65%		-2.57 -2.57	0.90% 0.91%	13.25 13.25	3.95% 3.55%
6/9/1995 6/21/1995	11.25%	7.60% 7.56%		-2.58 -2.58	0.92% 0.92%	13.30 13.25	
6/30/1995	12.25% 11.10%	7.50% 7.52%		-2.56 -2.59	0.92%	13.25	
9/11/1995	11.30%	7.20%		-2.63	0.97%	12.35	
9/27/1995 9/27/1995	11.30% 11.50%	7.12% 7.12%		-2.64 -2.64	0.98% 0.98%	12.22 12.22	
9/27/1995	11.75%	7.12% 7.11%		-2.64 2.64	0.98% 0.98%	12.22	
9/29/1995 11/9/1995	11.00% 11.38%	6.90%		-2.64 -2.67	1.01%	12.23 12.47	
11/9/1995 11/17/1995	12.36%	6.90% 6.86%		-2.67 -2.68	1.01% 1.02%	12.47 12.52	
12/4/1995	11.00% 11.35%	6.78%		-2.69	1.04%	12.52	
12/11/1995 12/20/1995	11.40%	6.74% 6.70%		-2.70 -2.70	1.04% 1.05%	12.52 12.49	4.66% 4.90%
12/27/1995	11.60% 12.00%	6.66%		-2.70 -2.71	1.06%	12.49	
2/5/1996 3/29/1996	12.25%	6.48% 6.42%		-2.74 -2.75	1.11% 1.11%	12.63 13.51	5.77% 4.25%
4/8/1996	10.67% 11.00%	6.42%	7.53%	-2.75	1.11%	13.68	4.58%
4/11/1996 4/11/1996	12.59%	6.43% 6.43%		-2.74 -2.74	1.11% 1.11%	13.78 13.78	
4/24/1996	12.59% 11.25%	6.43%	7.55%	-2.74	1.11%	13.95	4.82%
4/30/1996 5/13/1996	11.00%	6.43% 6.44%	7.55%	-2.74 -2.74	1.12% 1.13%	14.00 14.14	
5/13/1996 5/23/1996	11.00% 11.25%	6.44%		-2.74 -2.74	1.14%	14.14 14.26	4.82%
6/25/1996 6/27/1996	11.25%	6.48% 6.48%	7.60%	-2.74 -2.74	1.12% 1.12%	14.79 14.81	4.77% 4.72%
8/12/1996	11.20% 10.40%	6.57%	7.67%	-2.72	1.10%	15.38	3.83%
9/27/1996 10/16/1996	11.00%	6.71% 6.76%		-2.70 -2.69	1.05% 1.03%	16.06 16.26	
10/10/1990	12.25%	0.10%	, 1.1970	-∠.∪ઝ	1.0370	10.20	J. 7 3/0

[5]	[6] Return on	[7] 30 Year	[8]	[9]	[10]	[11]	[12]
Date of Electric Rate Case	Equity (%)	Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
11/5/1996	11.00%	6.81%	7.83%	-2.69	1.02%	16.52	4.19%
11/26/1996 12/18/1996	11.30% 11.75%	6.83% 6.83%		-2.68 -2.68	1.01% 1.02%	16.59 16.75	
12/31/1996	11.50%	6.83%	7.85%	-2.68	1.02%	16.82	
1/3/1997 2/13/1997	10.70% 11.80%	6.83% 6.82%		-2.68 -2.68	1.02% 1.01%	16.85 17.26	
2/20/1997	11.80%	6.82%	7.83%	-2.69	1.01%	17.38	4.98%
3/31/1997 4/2/1997	10.02% 11.65%	6.80% 6.80%		-2.69 -2.69	1.00% 1.00%	17.89 17.95	
4/28/1997	11.50%	6.81%	7.80%	-2.69	0.99%	18.21	4.69%
4/29/1997 7/17/1997	11.70% 12.00%	6.81% 6.77%		-2.69 -2.69	0.99% 0.97%	18.20 19.16	
12/12/1997 12/23/1997	11.00%	6.60%		-2.72	1.00%	22.66	
2/2/1998	11.12% 12.75%	6.57% 6.39%		-2.72 -2.75	1.01% 1.08%	22.93 23.59	
3/2/1998 3/6/1998	11.25%	6.29% 6.27%		-2.77 -2.77	1.10% 1.11%	23.58 23.59	
3/0/1998	10.75% 10.50%	6.22%		-2.77 -2.78	1.11%	23.59	
4/30/1998 7/10/1998	12.20%	6.12% 5.94%		-2.79 -2.82	1.14% 1.23%	23.81 23.19	6.08% 5.46%
9/15/1998	11.40% 11.90%	5.78%		-2.85	1.31%	23.19	
11/30/1998 12/10/1998	12.60%	5.58% 5.54%		-2.89 -2.89	1.47% 1.50%	26.16 26.43	
12/17/1998	12.20% 12.10%	5.52%		-2.69 -2.90	1.52%	26.43 26.68	
2/5/1999 3/4/1999	10.30%	5.38% 5.34%		-2.92 -2.93	1.63% 1.67%	27.62 28.37	
4/6/1999	10.50% 10.94%	5.32%		-2.93 -2.93	1.70%	28.67	
7/29/1999 9/23/1999	10.75%	5.52% 5.70%		-2.90	1.74%	25.43 24.82	
11/17/1999	10.75% 11.10%	5.70% 5.90%		-2.86 -2.83	1.73% 1.73%	24.62 24.18	
1/7/2000	11.50%	6.05%		-2.81	1.75%	23.47	
1/7/2000 2/17/2000	11.50% 10.60%	6.05% 6.17%		-2.81 -2.78	1.75% 1.77%	23.47 23.25	
3/28/2000	11.25%	6.20%	8.04%	-2.78	1.85%	22.96	
5/24/2000 7/18/2000	11.00% 12.20%	6.18% 6.16%		-2.78 -2.79	2.00% 2.11%	23.84 23.38	
9/29/2000	11.16%	6.03%	8.31%	-2.81	2.28%	22.46	
11/28/2000 11/30/2000	12.90% 12.10%	5.89% 5.88%		-2.83 -2.83	2.40% 2.40%	22.95 22.99	
1/23/2001	11.25%	5.79%	8.20%	-2.85	2.41%	23.36	
2/8/2001 5/8/2001	11.50% 10.75%	5.77% 5.62%		-2.85 -2.88	2.40% 2.35%	23.05 24.55	
6/26/2001	11.00%	5.62%		-2.88	2.31%	25.13	
7/25/2001 7/25/2001	11.02% 11.02%	5.60% 5.60%		-2.88 -2.88	2.29% 2.29%	24.97 24.97	
7/31/2001	11.00%	5.59%		-2.88	2.29%	24.93	
8/31/2001 9/7/2001	10.50% 10.75%	5.56% 5.55%		-2.89 -2.89	2.26% 2.25%	24.44 24.43	
9/10/2001	11.00%	5.55%	7.80%	-2.89	2.25%	24.45	5.45%
9/20/2001 10/24/2001	10.00% 10.30%	5.55% 5.54%		-2.89 -2.89	2.25% 2.24%	25.04 25.81	
11/28/2001	10.60%	5.49%	7.75%	-2.90	2.26%	26.46	
12/3/2001 12/20/2001	12.88% 12.50%	5.49% 5.50%		-2.90 -2.90	2.26% 2.26%	26.44 26.24	
1/22/2002	10.00%	5.50%		-2.90 2.01	2.27% 2.24%	25.40	
3/27/2002 4/22/2002	10.10% 11.80%	5.45% 5.45%		-2.91 -2.91	2.24% 2.22%	24.99 24.82	
5/28/2002 6/10/2002	10.17%	5.46% 5.47%		-2.91 -2.91	2.17% 2.16%	24.60 24.58	
6/18/2002	12.00% 11.16%	5.47% 5.48%		-2.91 -2.90	2.15%	24.36	
6/20/2002 6/20/2002	11.00%	5.48% 5.48%		-2.90 -2.90	2.15% 2.15%	24.32 24.32	
7/15/2002	12.30% 11.00%	5.48%		-2.90 -2.90	2.13%	24.32	
9/12/2002 9/26/2002	12.30%	5.45% 5.41%		-2.91 -2.92	2.06% 2.07%	25.13 25.82	
12/4/2002	10.45% 11.55%	5.29%		-2.94	2.07%	28.10	
12/13/2002 12/20/2002	11.75% 11.40%	5.27% 5.25%		-2.94 -2.95	2.08% 2.08%	28.40 28.60	
1/8/2003	11.10%	5.19%	7.29%	-2.96	2.10%	29.15	5.91%
1/31/2003 2/28/2003	12.45% 12.30%	5.13% 5.05%		-2.97 -2.99	2.11% 2.14%	29.86 31.05	
3/6/2003	10.75%	5.03%	7.17%	-2.99	2.14%	31.26	5.72%
3/7/2003 3/20/2003	9.96% 12.00%	5.02% 4.98%		-2.99 -3.00	2.14% 2.15%	31.32 31.68	
4/3/2003	12.00%	4.96%	7.10%	-3.00	2.14%	31.78	7.04%
4/15/2003 6/25/2003	11.15% 10.75%	4.94% 4.79%		-3.01 -3.04	2.13% 2.06%	31.70 27.93	
6/26/2003	10.75%	4.79%	6.84%	-3.04	2.05%	27.82	5.96%
7/9/2003 7/16/2003	9.75% 9.75%	4.79% 4.79%		-3.04 -3.04	2.03% 2.01%	27.00 26.47	
7/25/2003	9.50%	4.80%	6.79%	-3.04	1.99%	25.90	4.70%
8/26/2003 12/17/2003	10.50% 9.85%	4.83% 4.94%		-3.03 -3.01	1.90% 1.57%	24.64 20.20	
12/17/2003	10.70%	4.94%	6.51%	-3.01	1.57%	20.20	5.76%
12/18/2003 12/19/2003	11.50% 12.00%	4.94% 4.94%		-3.01 -3.01	1.57% 1.56%	20.12 20.04	
12/19/2003	12.00%	4.94%	6.50%	-3.01	1.56%	20.04	7.06%
12/23/2003 1/13/2004	10.50% 12.00%	4.94% 4.95%		-3.01 -3.01	1.56% 1.51%	19.90 19.03	
3/2/2004	10.75%	4.99%	6.38%	-3.00	1.39%	18.08	5.76%
3/26/2004 4/5/2004	10.25% 11.25%	5.02% 5.03%		-2.99 -2.99	1.33% 1.32%	17.88 17.76	
5/18/2004	10.50%	5.07%	6.36%	-2.98	1.28%	17.32	5.43%
5/25/2004 5/27/2004	10.25% 10.25%	5.08% 5.08%		-2.98 -2.98	1.28% 1.28%	17.31 17.29	
3/21/2004	10.25%	J.UU /0	0.00 /0	۷.۵۵	1.20/0	11.23	J. 17 /0

[5]	[6] Return on	[7] 30 Year	[8]	[9]	[10]	[11]	[12]
Date of Electric Rate Case	Equity (%)	Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
6/2/2004 6/30/2004	11.22%	5.08% 5.10%	6.35%	-2.98 -2.98	1.27% 1.22%	17.22 16.86	6.14%
6/30/2004	10.50% 10.50%	5.10%	6.32%	-2.96 -2.98	1.22%	16.86	
7/16/2004 8/25/2004	11.60%	5.11% 5.10%		-2.97 -2.98	1.19% 1.17%	16.55 16.46	
9/9/2004	10.25% 10.40%	5.10%		-2.98 -2.98	1.16%	16.46	
11/9/2004	10.50%	5.07%		-2.98	1.13%	15.90	
11/23/2004 12/14/2004	11.00% 10.97%	5.06% 5.07%		-2.98 -2.98	1.13% 1.11%	15.75 15.58	
12/21/2004	11.25%	5.07%		-2.98	1.10%	15.38	
12/21/2004 12/22/2004	11.50% 10.70%	5.07% 5.07%		-2.98 -2.98	1.10% 1.10%	15.38 15.35	
12/22/2004	11.50%	5.07%		-2.98	1.10%	15.35	
12/29/2004 1/6/2005	9.85% 10.70%	5.07% 5.08%		-2.98 -2.98	1.10% 1.09%	15.14 15.04	
2/18/2005	10.30%	4.98%		-3.00 -3.00	1.11% 1.11%	14.45 14.27	
2/25/2005 3/10/2005	10.50% 11.00%	4.96% 4.93%		-3.00 -3.01	1.11%	14.27	
3/24/2005	10.30%	4.90%		-3.02	1.09%	14.00	
4/4/2005 4/7/2005	10.00% 10.25%	4.88% 4.87%		-3.02 -3.02	1.09% 1.09%	13.96 13.93	
5/18/2005	10.25%	4.78%		-3.04	1.08%	13.74	
5/25/2005 5/26/2005	10.75% 9.75%	4.76% 4.76%		-3.04 -3.04	1.07% 1.07%	13.62 13.60	
6/1/2005	9.75%	4.75%	5.82%	-3.05	1.07%	13.54	5.00%
7/19/2005 8/5/2005	11.50% 11.75%	4.64% 4.62%		-3.07 -3.07	1.08% 1.07%	13.10 12.83	
8/15/2005	10.13%	4.61%	5.68%	-3.08	1.07%	12.77	5.52%
9/28/2005 10/4/2005	10.00% 10.75%	4.54% 4.54%		-3.09 -3.09	1.07% 1.07%	12.79 12.80	
12/12/2005	11.00%	4.55%	5.63%	-3.09	1.08%	12.96	6.45%
12/13/2005 12/21/2005	10.75% 10.29%	4.55% 4.54%		-3.09 -3.09	1.08% 1.09%	12.96 12.90	
12/21/2005	10.40%	4.54%	5.63%	-3.09	1.09%	12.90	5.86%
12/22/2005 12/22/2005	11.00% 11.15%	4.54% 4.54%		-3.09 -3.09	1.09% 1.09%	12.88 12.88	
12/28/2005	10.00%	4.54%	5.63%	-3.09	1.09%	12.83	5.46%
12/28/2005 1/5/2006	10.00% 11.00%	4.54% 4.53%		-3.09 -3.09	1.09% 1.09%	12.83 12.76	
1/27/2006	9.75%	4.52%	5.62%	-3.10	1.10%	12.59	5.23%
3/3/2006 4/17/2006	10.39% 10.20%	4.53% 4.61%		-3.09 -3.08	1.12% 1.14%	12.36 12.34	
4/26/2006	10.60%	4.64%	5.78%	-3.07	1.14%	12.38	5.96%
5/17/2006 6/6/2006	11.60% 10.00%	4.69% 4.74%		-3.06 -3.05	1.15% 1.16%	12.45 12.68	
6/27/2006	10.75%	4.80%	5.98%	-3.04	1.18%	13.07	5.95%
7/6/2006 7/24/2006	10.20% 9.60%	4.83% 4.86%		-3.03 -3.02	1.18% 1.19%	13.10 13.18	
7/26/2006	10.50%	4.86%	6.06%	-3.02	1.20%	13.19	5.64%
7/28/2006 8/23/2006	10.05% 9.55%	4.86% 4.89%		-3.02 -3.02	1.20% 1.21%	13.17 13.20	
9/1/2006	10.54%	4.90%	6.10%	-3.02	1.21%	13.24	5.64%
9/14/2006 10/6/2006	10.00% 9.67%	4.91% 4.92%		-3.01 -3.01	1.21% 1.20%	13.28 13.35	
11/21/2006	10.08%	4.95%	6.15%	-3.01	1.19%	13.13	5.13%
11/21/2006 11/21/2006	10.08% 10.12%	4.95% 4.95%		-3.01 -3.01	1.19% 1.19%	13.13 13.13	
12/1/2006	10.12%	4.95%	6.14%	-3.00	1.19%	13.09	5.30%
12/1/2006 12/7/2006	10.50% 10.75%	4.95% 4.95%		-3.00 -3.00	1.19% 1.19%	13.09 13.09	
12/21/2006	10.75%	4.95%	6.14%	-3.01	1.18%	13.02	5.95%
12/21/2006 12/22/2006	11.25%	4.95% 4.95%		-3.01 -3.01	1.18% 1.18%	13.02 13.01	
1/5/2007	10.25% 10.00%	4.95%		-3.01	1.18%	13.01	
1/11/2007 1/11/2007	10.10% 10.10%	4.95% 4.95%		-3.01 -3.01	1.18% 1.18%	13.02 13.02	
1/11/2007	10.10%	4.95%	6.13%	-3.01	1.18%	13.02	5.95%
1/12/2007 1/13/2007	10.10% 10.40%	4.95% 4.95%		-3.01 -3.01	1.18% 1.18%	13.01 13.01	
1/19/2007	10.40%	4.94%		-3.01	1.18%	12.96	
3/21/2007 3/22/2007	11.35% 9.75%	4.87% 4.86%		-3.02 -3.02	1.16% 1.16%	12.51 12.50	
5/15/2007	10.00%	4.81%		-3.02	1.14%	12.10	
5/17/2007 5/17/2007	10.25%	4.81% 4.81%		-3.04 -3.04	1.13% 1.13%	12.09 12.09	
5/22/2007	10.25% 10.20%	4.80%		-3.04	1.13%	12.09	
5/22/2007 5/23/2007	10.50%	4.80% 4.80%		-3.04 -3.04	1.13% 1.13%	12.07 12.08	
5/25/2007	10.70% 9.67%	4.80%		-3.04 -3.04	1.13%	12.06	
6/15/2007	9.90%	4.82%		-3.03	1.12%	12.22	
6/21/2007 6/22/2007	10.20% 10.50%	4.83% 4.83%		-3.03 -3.03	1.12% 1.12%	12.26 12.28	
6/28/2007	10.75%	4.84%	5.95%	-3.03	1.11%	12.37	5.91%
7/12/2007 7/19/2007	9.67% 10.00%	4.86% 4.87%		-3.02 -3.02	1.11% 1.11%	12.56 12.66	
7/19/2007	10.00%	4.87%	5.97%	-3.02	1.11%	12.66	5.13%
8/15/2007 10/9/2007	10.40% 10.00%	4.88% 4.91%		-3.02 -3.01	1.11% 1.16%	13.79 16.01	
10/17/2007	9.10%	4.91%	6.08%	-3.01	1.17%	16.21	4.19%
10/31/2007 11/29/2007	9.96% 10.90%	4.90% 4.87%		-3.02 -3.02	1.18% 1.21%	16.70 18.30	
12/6/2007	10.75%	4.86%	6.08%	-3.02	1.22%	18.51	5.89%
12/13/2007 12/14/2007	9.96% 10.70%	4.86% 4.86%		-3.02 -3.02	1.24% 1.24%	18.64 18.69	
12/14/2007	10.80%	4.86%		-3.02	1.24%	18.69	

[5]	[6] Return on	[7] 30 Year	[8]	[9]	[10]	[11]	[12]
Date of Electric Rate Case	Equity (%)	Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
12/19/2007 12/20/2007	10.20%	4.86%	6.10%	-3.03 -3.03	1.25% 1.25%	18.79 18.81	5.34% 5.35%
12/20/2007	10.20% 11.00%	4.85% 4.85%	6.10%	-3.03	1.25%	18.81	6.15%
12/28/2007 12/31/2007	10.25%	4.85% 4.85%		-3.03 -3.03	1.26% 1.27%	18.97 19.02	5.40% 6.40%
1/8/2008	11.25% 10.75%	4.83%	6.12%	-3.03	1.29%	19.29	5.92%
1/17/2008 1/28/2008	10.75% 9.40%	4.81% 4.80%		-3.03 -3.04	1.31% 1.33%	19.69 20.26	5.94% 4.60%
1/30/2008	9.40% 10.00%	4.79%	6.12%	-3.04	1.33%	20.40	5.21%
1/31/2008 2/29/2008	10.71% 10.25%	4.79% 4.75%		-3.04 -3.05	1.34% 1.40%	20.47 21.74	5.92% 5.50%
3/12/2008	10.25%	4.73%	6.16%	-3.05	1.43%	22.28	5.52%
3/25/2008 4/22/2008	9.10% 10.25%	4.68% 4.60%		-3.06 -3.08	1.48% 1.56%	22.87 23.58	4.42% 5.65%
4/24/2008	10.25%	4.60%	6.16%	-3.08	1.56%	23.63	5.50%
5/1/2008 5/19/2008	10.70% 11.00%	4.59% 4.56%		-3.08 -3.09	1.57% 1.60%	23.67 23.32	6.11% 6.44%
5/27/2008	10.00%	4.55%	6.16%	-3.09	1.61%	23.04	5.45%
6/10/2008 6/27/2008	10.70% 10.50%	4.54% 4.54%		-3.09 -3.09	1.62% 1.64%	22.89 22.80	6.16% 5.96%
6/27/2008	11.04%	4.54%	6.18%	-3.09	1.64%	22.80	6.50%
7/10/2008 7/16/2008	10.43% 9.40%	4.52% 4.52%		-3.10 -3.10	1.66% 1.67%	23.10 23.31	5.91% 4.88%
7/30/2008	10.80%	4.51%	6.20%	-3.10	1.69%	23.46	6.29%
7/31/2008 8/11/2008	10.70% 10.25%	4.51% 4.51%		-3.10 -3.10	1.70% 1.71%	23.47 23.47	6.19% 5.74%
8/26/2008	10.18%	4.50%	6.24%	-3.10	1.74%	23.15	5.68%
9/10/2008 9/24/2008	10.30% 10.65%	4.50% 4.48%		-3.10 -3.11	1.75% 1.79%	23.00 23.48	5.80% 6.17%
9/24/2008	10.65%	4.48%	6.28%	-3.11	1.79%	23.48	6.17%
9/24/2008 9/30/2008	10.65% 10.20%	4.48% 4.48%		-3.11 -3.11	1.79% 1.81%	23.48 23.86	6.17% 5.72%
10/8/2008	10.15%	4.46%	6.31%	-3.11	1.85%	24.69	5.69%
11/13/2008 11/17/2008	10.55% 10.20%	4.45% 4.44%		-3.11 -3.11	2.08% 2.09%	29.46 29.86	
12/1/2008	10.25%	4.40%	6.59%	-3.12	2.20%	31.89	5.85%
12/23/2008 12/29/2008	11.00% 10.00%	4.27% 4.24%		-3.15 -3.16	2.35% 2.38%	34.12 34.45	
12/29/2008	10.20%	4.24%	6.62%	-3.16	2.38%	34.45	5.96%
12/31/2008 1/14/2009	10.75% 10.50%	4.22% 4.15%		-3.17 -3.18	2.40% 2.48%	34.60 35.54	
1/21/2009	10.50%	4.12%	6.63%	-3.19	2.51%	36.23	6.38%
1/21/2009 1/21/2009	10.50% 10.50%	4.12% 4.12%		-3.19 -3.19	2.51% 2.51%	36.23 36.23	
1/27/2009	10.76%	4.09%	6.63%	-3.20	2.54%	36.73	6.67%
1/30/2009 2/4/2009	10.50% 8.75%	4.08% 4.06%		-3.20 -3.20	2.56% 2.57%	37.07 37.43	
3/4/2009	10.50%	3.96%	6.64%	-3.23	2.67%	40.24	6.54%
3/12/2009 4/2/2009	11.50% 11.10%	3.93% 3.85%		-3.24 -3.26	2.71% 2.80%	41.05 42.57	7.57% 7.25%
4/21/2009 4/24/2009	10.61%	3.80% 3.79%		-3.27 -3.27	2.85% 2.87%	43.37 43.56	
4/30/2009	10.00% 11.25%	3.78%		-3.2 <i>1</i> -3.28	2.89%	43.86	
5/4/2009 5/20/2009	10.74%	3.77% 3.74%		-3.28 -3.29	2.89% 2.92%	43.97 44.59	
5/28/2009	10.25% 10.50%	3.74%		-3.29	2.92%	44.59	
6/22/2009 6/24/2009	10.00%	3.76% 3.77%		-3.28 -3.28	2.90% 2.89%	45.53 45.50	
7/8/2009	10.80% 10.63%	3.77%		-3.28	2.88%	45.07	
7/17/2009 8/31/2009	10.50% 10.25%	3.78% 3.82%		-3.28 -3.27	2.84% 2.52%	44.06 37.95	6.72% 6.43%
10/14/2009	10.70%	4.01%	6.13%	-3.22	2.12%	33.83	6.69%
10/23/2009 11/2/2009	10.88% 10.70%	4.06% 4.09%		-3.20 -3.20	2.05% 1.99%	32.98 32.32	
11/3/2009	10.70%	4.10%	6.08%	-3.20	1.99%	32.25	6.60%
11/24/2009 11/25/2009	10.25% 10.75%	4.15% 4.16%		-3.18 -3.18	1.87% 1.86%	30.69 30.55	6.10% 6.59%
11/30/2009	10.35%	4.17%	6.02%	-3.18	1.85%	30.16	6.18%
12/3/2009 12/7/2009	10.50% 10.70%	4.18% 4.18%		-3.18 -3.17	1.83% 1.82%	29.82 29.54	
12/16/2009	10.90%	4.21%	5.98%	-3.17	1.77%	28.63	6.69%
12/16/2009 12/18/2009	11.00% 10.40%	4.21% 4.22%		-3.17 -3.16	1.77% 1.75%	28.63 28.43	
12/18/2009	10.40%	4.22%	5.98%	-3.16	1.75%	28.43	6.18%
12/22/2009 12/22/2009	10.20% 10.40%	4.23% 4.23%		-3.16 -3.16	1.74% 1.74%	28.21 28.21	5.97% 6.17%
12/22/2009	10.40%	4.23%	5.97%	-3.16	1.74%	28.21	6.17%
12/30/2009 1/4/2010	10.00% 10.80%	4.26% 4.28%		-3.16 -3.15	1.70% 1.68%	27.51 27.19	5.74% 6.52%
1/11/2010	11.00%	4.30%		-3.15	1.64%	26.61	6.70%
1/26/2010 1/27/2010	10.13% 10.40%	4.35% 4.35%	5.90%	-3.13 -3.13	1.55% 1.54%	25.68 25.61	6.05%
1/27/2010	10.40%	4.35%	5.90%	-3.13	1.54%	25.61	6.05%
1/27/2010 2/9/2010	10.70% 9.80%	4.35% 4.38%		-3.13 -3.13	1.54% 1.49%	25.61 25.07	6.35% 5.42%
2/18/2010 2/24/2010	10.60%	4.40% 4.41%	5.85%	-3.12 -3.12	1.45% 1.43%	24.73 24.53	
3/2/2010	10.18% 9.63%	4.41%	5.82%	-3.12	1.41%	24.29	5.22%
3/4/2010 3/5/2010	10.50%	4.41% 4.41%		-3.12 -3.12	1.41% 1.40%	24.16 24.10	
3/11/2010	10.50% 11.90%	4.42%	5.80%	-3.12	1.39%	23.86	7.48%
3/17/2010 3/25/2010	10.00% 10.15%	4.41% 4.42%		-3.12 -3.12	1.37% 1.36%	23.63 23.23	
4/2/2010	10.10%	4.43%	5.76%	-3.12	1.33%	22.90	5.67%
4/27/2010	10.00%	4.46%	5.74%	-3.11	1.29%	22.04	5.54%

[5]	[6] Return on	[7] 30 Year	[8]	[9]	[10]	[11]	[12]
Date of Electric Rate Case	Equity (%)	Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
4/29/2010 4/29/2010	9.90% 10.06%	4.46% 4.46%		-3.11 -3.11	1.28% 1.28%	22.00 22.00	5.44% 5.60%
4/29/2010	10.26%	4.46%	5.74%	-3.11	1.28%	22.00	5.80%
5/12/2010 5/12/2010	10.30% 10.30%	4.45% 4.45%		-3.11 -3.11	1.27% 1.27%	22.12 22.12	5.85% 5.85%
5/28/2010	10.10%	4.44%	5.70%	-3.11	1.26%	22.65	5.66%
5/28/2010 6/7/2010	10.20% 10.30%	4.44% 4.44%		-3.11 -3.11	1.26% 1.25%	22.65 22.90	5.76% 5.86%
6/16/2010	10.00%	4.44%	5.69%	-3.11	1.25%	23.01	5.56%
6/28/2010 6/28/2010	9.67% 10.50%	4.43% 4.43%		-3.12 -3.12	1.25% 1.25%	23.13 23.13	5.24% 6.07%
6/30/2010 7/1/2010	9.40%	4.43% 4.43%		-3.12 -3.12	1.25% 1.25%	23.24 23.28	4.97% 5.82%
7/15/2010	10.25% 10.53%	4.43%	5.67%	-3.12	1.24%	23.32	6.10%
7/15/2010 7/30/2010	10.70% 10.70%	4.43% 4.41%		-3.12 -3.12	1.24% 1.24%	23.32 23.44	6.27% 6.29%
8/4/2010	10.50%	4.41%	5.65%	-3.12	1.24%	23.39	6.09%
8/6/2010 8/25/2010	9.83% 9.90%	4.41% 4.37%		-3.12 -3.13	1.24% 1.23%	23.33 23.38	5.42% 5.53%
9/3/2010	10.60%	4.35%	5.58%	-3.14	1.23%	23.47	6.25%
9/14/2010 9/16/2010	10.70% 10.00%	4.33% 4.33%		-3.14 -3.14	1.23% 1.23%	23.48 23.47	6.37% 5.67%
9/16/2010	10.00%	4.33%	5.56%	-3.14	1.23%	23.47	5.67%
9/30/2010 10/14/2010	9.75% 10.35%	4.29% 4.24%		-3.15 -3.16	1.23% 1.24%	23.56 23.60	5.46% 6.11%
10/28/2010	10.70%	4.21%		-3.17	1.24%	23.68 23.61	6.49% 6.18%
11/2/2010 11/4/2010	10.38% 10.70%	4.20% 4.20%		-3.17 -3.17	1.24% 1.24%	23.57	6.50%
11/19/2010 11/22/2010	10.20%	4.18% 4.18%		-3.18 -3.18	1.24% 1.24%	23.31 23.29	6.02% 5.82%
12/1/2010	10.00% 10.13%	4.16%	5.40%	-3.18	1.24%	23.30	5.97%
12/6/2010 12/9/2010	9.86% 10.25%	4.15% 4.15%		-3.18 -3.18	1.24% 1.23%	23.29 23.27	5.71% 6.10%
12/13/2010	10.70%	4.15%	5.38%	-3.18	1.24%	23.27	6.55%
12/14/2010 12/15/2010	10.13% 10.44%	4.15% 4.15%		-3.18 -3.18	1.24% 1.24%	23.27 23.26	5.98% 6.29%
12/17/2010	10.00%	4.15%	5.38%	-3.18	1.24%	23.25	5.85%
12/20/2010 12/21/2010	10.60% 10.30%	4.15% 4.14%		-3.18 -3.18	1.23% 1.23%	23.24 23.24	6.45% 6.16%
12/27/2010	9.90%	4.14%	5.37%	-3.18	1.23%	23.23	5.76%
12/29/2010 1/5/2011	11.15% 10.15%	4.14% 4.13%		-3.18 -3.19	1.23% 1.23%	23.24 23.23	7.01% 6.02%
1/12/2011 1/13/2011	10.30% 10.30%	4.12% 4.12%		-3.19 -3.19	1.23% 1.23%	23.24 23.24	6.18% 6.18%
1/18/2011	10.00%	4.12%	5.35%	-3.19	1.23%	23.23	5.88%
1/20/2011 1/20/2011	9.30% 10.13%	4.12% 4.12%		-3.19 -3.19	1.23% 1.23%	23.25 23.25	
1/31/2011	9.60%	4.12%	5.34%	-3.19	1.22%	23.29	5.48%
2/3/2011 2/25/2011	10.00% 10.00%	4.12% 4.14%		-3.19 -3.18	1.22% 1.20%	23.24 22.18	5.88% 5.86%
3/25/2011	9.80%	4.18%	5.35%	-3.18	1.17%	21.16	5.62%
3/30/2011 4/12/2011	10.00% 10.00%	4.18% 4.21%		-3.17 -3.17	1.16% 1.14%	21.04 20.42	
4/25/2011 4/26/2011	10.74% 9.67%	4.23% 4.23%		-3.16 -3.16	1.13% 1.13%	19.99 19.95	
4/27/2011	10.40%	4.24%	5.37%	-3.16	1.13%	19.90	6.16%
5/4/2011 5/4/2011	10.00% 10.00%	4.24% 4.24%		-3.16 -3.16	1.13% 1.13%	19.70 19.70	
5/24/2011	10.50%	4.27%	5.38%	-3.15	1.11%	19.25	6.23%
6/8/2011 6/16/2011	10.75% 9.20%	4.30% 4.32%		-3.15 -3.14	1.09% 1.09%	18.77 18.68	
6/17/2011	9.95%	4.32%	5.40%	-3.14	1.09%	18.68	5.63%
7/13/2011 8/1/2011	10.20% 9.20%	4.36% 4.39%		-3.13 -3.13	1.06% 1.05%	18.30 18.37	5.84% 4.81%
8/8/2011 8/11/2011	10.00% 10.00%	4.38% 4.38%		-3.13 -3.13	1.05% 1.05%	18.65 18.93	
8/12/2011	10.35%	4.37%	5.42%	-3.13	1.05%	19.02	5.98%
8/19/2011 9/2/2011	10.25% 12.88%	4.36% 4.32%		-3.13 -3.14	1.05% 1.05%	19.46 20.21	5.89% 8.56%
9/22/2011	10.00%	4.24%	5.31%	-3.16	1.07%	21.37	5.76%
10/12/2011 10/20/2011	10.30% 10.50%	4.14% 4.10%		-3.18 -3.19	1.09% 1.10%	22.86 23.31	6.16% 6.40%
11/30/2011 11/30/2011	10.90%	3.87% 3.87%		-3.25 -3.25	1.15% 1.15%	25.36 25.36	
12/14/2011	10.90% 10.00%	3.80%		-3.25 -3.27	1.17%	25.30 25.73	
12/14/2011 12/20/2011	10.30% 10.20%	3.80% 3.76%		-3.27 -3.28	1.17% 1.17%	25.73 25.78	
12/21/2011	10.20%	3.76%	4.93%	-3.28	1.17%	25.74	6.44%
12/22/2011 12/22/2011	9.90% 10.40%	3.75% 3.75%		-3.28 -3.28	1.17% 1.17%	25.71 25.71	6.15% 6.65%
12/23/2011	10.19%	3.74%	4.92%	-3.28	1.17%	25.69	6.45%
1/25/2012 1/27/2012	10.50% 10.50%	3.57% 3.56%		-3.33 -3.34	1.23% 1.23%	26.11 26.15	6.93% 6.94%
2/15/2012	10.20%	3.47%	4.71%	-3.36 -3.37	1.23%	26.31	6.73%
2/23/2012 2/27/2012	9.90% 10.25%	3.44% 3.43%	4.67%	-3.37	1.24% 1.24%	26.35 26.35	6.82%
2/29/2012 3/29/2012	10.40% 10.37%	3.41% 3.32%		-3.38 -3.41	1.25% 1.26%	26.35 26.11	6.99% 7.05%
4/4/2012	10.00%	3.30%	4.56%	-3.41	1.27%	26.03	6.70%
4/26/2012 5/2/2012	10.00% 10.00%	3.21% 3.18%		-3.44 -3.45	1.28% 1.29%	26.06 25.99	6.79% 6.82%
5/7/2012	9.80%	3.17%	4.46%	-3.45	1.29%	25.91	6.63%
5/15/2012 5/29/2012	10.00% 10.05%	3.14% 3.11%		-3.46 -3.47	1.28% 1.29%	25.54 24.77	6.86% 6.94%
6/7/2012	10.30%	3.08%	4.38%	-3.48	1.30%	24.41	7.22%

[5]	[6] Return on	[7] 30 Year	[8]	[9]	[10]	[11]	[12]
Date of Electric Rate Case	Equity (%)	Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
6/14/2 6/15/2		3.06% 3.06%		-3.49 -3.49	1.30% 1.30%	24.11 24.02	6.34% 7.34%
6/18/2	2012 9.60%	3.06%	4.36%	-3.49	1.30%	23.92	6.54%
6/19/2 6/26/2		3.05% 3.04%		-3.49 -3.49	1.30% 1.30%	23.83 23.49	6.20% 7.06%
6/29/2	2012 10.00%	3.04%	4.34%	-3.49	1.30%	23.17	6.96%
7/9/2 7/16/2		3.03% 3.02%		-3.50 -3.50	1.30% 1.29%	22.46 21.98	7.17% 6.78%
7/20/2	2012 9.31%	3.01%	4.30%	-3.50	1.30%	21.69	6.30%
7/20/2 9/13/2		3.01% 2.94%		-3.50 -3.53	1.30% 1.28%	21.69 18.81	6.80% 6.86%
9/19/2	2012 9.80%	2.94%	4.22%	-3.53	1.28%	18.58	6.86%
9/19/2 9/26/2		2.94% 2.94%		-3.53 -3.53	1.28% 1.27%	18.58 18.36	7.11% 6.56%
10/12/2	2012 9.60%	2.93%	4.19%	-3.53	1.26%	17.97	6.67%
10/23/2 10/24/2		2.93% 2.93%		-3.53 -3.53	1.24% 1.24%	17.79 17.78	6.82% 7.37%
11/9/2	2012 10.30%	2.92%	4.14%	-3.53	1.22%	17.75	7.38%
11/28/2 11/29/2		2.90% 2.89%		-3.54 -3.54	1.22% 1.22%	17.57 17.56	7.50% 6.86%
11/29/2	9.88%	2.89%	4.11%	-3.54	1.22%	17.56	6.99%
12/5/2 12/5/2		2.89% 2.89%		-3.54 -3.54	1.22% 1.22%	17.53 17.53	6.82% 7.51%
12/12/2	2012 9.80%	2.88%	4.09%	-3.55	1.21%	17.47	6.92%
12/13/2 12/13/2		2.88% 2.88%		-3.55 -3.55	1.21% 1.21%	17.46 17.46	6.62% 7.62%
12/14/2	2012 10.40%	2.88%	4.09%	-3.55	1.21%	17.46	7.52%
12/19/2 12/19/2		2.87% 2.87%		-3.55 -3.55	1.21% 1.21%	17.48 17.48	6.84% 7.38%
12/20/2	2012 9.50%	2.87%	4.09%	-3.55	1.21%	17.49	6.63%
12/20/2 12/20/2		2.87% 2.87%		-3.55 -3.55	1.21% 1.21%	17.49 17.49	6.93% 7.38%
12/20/2	2012 10.25%	2.87%	4.09%	-3.55	1.21%	17.49	7.38%
12/20/2 12/20/2				-3.55 -3.55	1.21% 1.21%	17.49 17.49	7.43% 7.53%
12/20/2	2012 10.45%	2.87%	4.09%	-3.55	1.21%	17.49	7.58%
12/21/2 12/26/2		2.87% 2.86%		-3.55 -3.55	1.22% 1.22%	17.51 17.56	7.33% 6.94%
1/9/2	2013 9.70%	2.85%	4.06%	-3.56	1.22%	17.59	6.85%
1/9/2 1/9/2		2.85% 2.85%		-3.56 -3.56	1.22% 1.22%	17.59 17.59	6.85% 6.85%
1/16/2	2013 9.60%	2.84%	4.05%	-3.56	1.21%	17.46	6.76%
1/16/2 2/13/2		2.84% 2.84%		-3.56 -3.56	1.21% 1.19%	17.46 16.98	6.76% 7.36%
2/22/2	2013 9.75%	2.85%	4.03%	-3.56	1.17%	16.67	6.90%
2/27/2 3/14/2		2.86% 2.88%		-3.56 -3.55	1.17% 1.14%	16.59 16.04	7.14% 6.42%
3/27/2	2013 9.80%	2.90%	4.03%	-3.54	1.13%	15.69	6.90%
5/1/2 5/15/2		2.94% 2.96%		-3.53 -3.52	1.08% 1.07%	15.18 14.97	
5/30/2	2013 10.20%	2.98%	4.05%	-3.51	1.07%	14.93	7.22%
5/31/2 6/11/2		2.98% 3.00%		-3.51 -3.51	1.07% 1.06%	14.93 14.90	
6/21/2	2013 9.75%	3.02%	4.08%	-3.50	1.06%	14.98	6.73%
6/25/2 7/12/2		3.03% 3.07%		-3.50 -3.48	1.06% 1.06%	15.03 15.07	
8/8/2	2013 9.83%	3.14%	4.20%	-3.46	1.05%	14.71	6.69%
8/14/2 9/11/2		3.16% 3.26%		-3.45 -3.42	1.05% 1.04%	14.60 14.52	
9/11/2	2013 10.25%	3.26%	4.31%	-3.42	1.04%	14.52	6.99%
9/24/2 10/3/2		3.31% 3.33%		-3.41 -3.40	1.04% 1.04%	14.42 14.33	
11/6/2	2013 10.20%	3.41%	4.44%	-3.38	1.03%	14.42	6.79%
11/21/2 11/26/2		3.44% 3.45%		-3.37 -3.37	1.03% 1.03%	14.40 14.40	
12/3/2	2013 10.25%	3.47%		-3.36	1.02%	14.35	
12/4/2 12/5/2		3.47% 3.48%		-3.36 -3.36	1.02% 1.02%	14.35 14.34	
12/9/2	2013 8.72%	3.48%		-3.36	1.02%	14.33	5.24%
12/9/2 12/13/2		3.48% 3.50%		-3.36 -3.35	1.02% 1.02%	14.33 14.37	
12/16/2	2013 9.95%	3.50%		-3.35	1.02%	14.39	
12/16/2 12/16/2				-3.35 -3.35	1.02% 1.02%	14.39 14.39	
12/17/2	2013 9.50%	3.51%		-3.35	1.02%	14.41	5.99%
12/17/2 12/18/2				-3.35 -3.35	1.02% 1.02%	14.41 14.42	7.44% 5.21%
12/18/2				-3.35 -3.35	1.02% 1.02%	14.42	6.29% 6.64%
12/19/2 12/30/2				-3.34	1.01%	14.44 14.42	
2/20/2 2/26/2	2014 9.20%	3.68%		-3.30 -3.30	0.96% 0.96%	14.66 14.68	
3/17/2	2014 9.55%	3.72%	4.67%	-3.29	0.96%	14.65	5.83%
3/26/2 3/26/2				-3.29 -3.29	0.95% 0.95%	14.57 14.57	
4/2/2	2014 9.70%	3.73%	4.68%	-3.29	0.95%	14.44	5.97%
5/16/2 5/30/2				-3.30 -3.30	0.93% 0.93%	14.41 14.30	6.10% 6.02%
6/6/2	2014 10.40%	3.67%	4.60%	-3.30	0.93%	14.18	6.73%
6/30/2 7/2/2				-3.31 -3.31	0.92% 0.92%	13.92 13.88	
7/10/2	2014 9.95%	3.63%	4.54%	-3.32	0.91%	13.75	6.32%
7/23/2 7/29/2				-3.32 -3.32	0.91% 0.90%	13.51 13.50	6.14% 5.85%
7/31/2				-3.32	0.90%	13.51	6.30%

[5]	[6] Return on	[7] 30 Year	[8]	[9]	[10]	[11]	[12]
Date of Electric Rate Case	Equity (%)	Treasury (%)	Moody's Utility A Yield	LN(30-Year Treasury)	Moody's Utility A Credit Spread	VIX	Risk Premium
8/20/2014 8/25/2014	9.75%	3.57% 3.56%		-3.33 -3.34	0.90% 0.90%	13.60 13.59	6.18% 6.04%
8/29/2014	9.60% 9.80%	3.54%	4.44%	-3.34	0.90%	13.56	6.26%
9/11/2014 9/15/2014	9.60% 10.25%	3.51% 3.51%		-3.35 -3.35	0.90% 0.91%	13.51 13.51	6.09% 6.74%
10/9/2014	9.80%	3.45%	4.36%	-3.37	0.91%	13.59	6.35%
11/6/2014 11/6/2014	9.56% 10.20%	3.37% 3.37%		-3.39 -3.39	0.92% 0.92%	13.99 13.99	6.19% 6.83%
11/14/2014	10.20%	3.35%	4.28%	-3.40	0.93%	13.82	6.85%
11/26/2014 11/26/2014	9.70% 10.20%	3.33% 3.33%		-3.40 -3.40	0.94% 0.94%	13.78 13.78	6.37% 6.87%
12/4/2014	9.68%	3.31%	4.25%	-3.41	0.95%	13.74	6.37%
12/10/2014 12/10/2014	9.25% 9.25%	3.29% 3.29%		-3.41 -3.41	0.95% 0.95%	13.74 13.74	5.96% 5.96%
12/11/2014	10.07%	3.29%	4.24%	-3.42	0.95%	13.77	6.78%
12/12/2014 12/17/2014	10.20% 9.17%	3.28% 3.27%		-3.42 -3.42	0.95% 0.96%	13.81 13.91	6.92% 5.90%
12/18/2014	9.83%	3.26%	4.22%	-3.42	0.96%	13.91	6.57%
1/23/2015 2/24/2015	9.50% 9.83%	3.14% 3.04%		-3.46 -3.49	0.99% 1.02%	14.34 14.74	6.36% 6.79%
3/18/2015	9.75%	2.98%		-3.51	1.04%	15.00	6.77%
3/25/2015 3/26/2015	9.50% 9.72%	2.96% 2.95%		-3.52 -3.52	1.04% 1.04%	15.05 15.08	6.54% 6.77%
4/23/2015 4/29/2015	10.20%	2.87% 2.86%		-3.55 -3.56	1.07% 1.07%	15.30 15.31	7.33% 6.67%
5/1/2015	9.53% 9.60%	2.85%	3.93%	-3.56	1.08%	15.33	6.75%
5/26/2015 6/17/2015	9.75% 9.00%	2.83% 2.82%		-3.56 -3.57	1.10% 1.13%	15.23 15.39	6.92% 6.18%
6/17/2015	9.00%	2.82%	3.95%	-3.57	1.13%	15.39	6.18%
9/2/2015 9/10/2015	9.50% 9.30%	2.79% 2.79%		-3.58 -3.58	1.21% 1.22%	15.78 16.16	6.71% 6.51%
10/15/2015	9.00%	2.81%	4.06%	-3.57	1.24%	16.63	6.19%
11/19/2015 11/19/2015	10.00% 10.30%	2.88% 2.88%		-3.55 -3.55	1.27% 1.27%	16.29 16.29	7.12% 7.42%
12/3/2015	10.00%	2.90%	4.18%	-3.54	1.28%	16.34	7.10%
12/9/2015 12/9/2015	9.14% 9.14%	2.90% 2.90%		-3.54 -3.54	1.29% 1.29%	16.41 16.41	6.24% 6.24%
12/11/2015	10.30%	2.90%	4.20%	-3.54	1.29%	16.48	7.40%
12/15/2015 12/17/2015	9.60% 9.70%	2.91% 2.91%		-3.54 -3.54	1.30% 1.30%	16.54 16.57	6.69% 6.79%
12/18/2015	9.50%	2.91%	4.21%	-3.54	1.30%	16.59	
12/30/2015 1/6/2016	9.50% 9.50%	2.93% 2.94%		-3.53 -3.53	1.30% 1.31%	16.68 16.79	
2/23/2016 3/16/2016	9.75%	2.94% 2.91%		-3.53 -3.54	1.38% 1.40%	18.56 18.90	
4/29/2016	9.85% 9.80%	2.83%		-3.5 4	1.42%	18.85	
6/3/2016 6/8/2016	9.75% 9.48%	2.80% 2.80%		-3.57 -3.58	1.40% 1.40%	18.45 18.23	
6/15/2016	9.00%	2.78%	4.19%	-3.58	1.40%	18.05	6.22%
6/15/2016 7/18/2016	9.00% 9.98%	2.78% 2.71%		-3.58 -3.61	1.40% 1.40%	18.05 17.44	6.22% 7.27%
8/9/2016	9.85%	2.66%	4.05%	-3.63	1.39%	17.20	7.19%
8/18/2016 8/24/2016	9.50% 9.75%	2.63% 2.62%		-3.64 -3.64	1.40% 1.40%	17.06 16.94	6.87% 7.13%
9/1/2016	9.50%	2.59%	3.98%	-3.65	1.39%	16.87	6.91%
9/8/2016 9/28/2016	10.00% 9.58%	2.58% 2.54%		-3.66 -3.67	1.39% 1.39%	16.77 16.50	
9/30/2016	9.90%	2.53%	3.91%	-3.68	1.39%	16.47	7.37%
11/9/2016 11/10/2016	9.80% 9.50%	2.48% 2.48%		-3.70 -3.70	1.36% 1.36%	15.53 15.50	
11/15/2016 11/18/2016	9.55%	2.49% 2.50%		-3.69 -3.69	1.36% 1.35%	15.33 15.13	
11/29/2016	10.00% 10.55%	2.51%		-3.69	1.34%	14.80	
12/1/2016 12/6/2016	10.00% 8.64%	2.51% 2.52%		-3.68 -3.68	1.34% 1.33%	14.74 14.64	7.49% 6.12%
12/6/2016	8.64%	2.52%	3.85%	-3.68	1.33%	14.64	6.12%
12/7/2016 12/12/2016	10.10% 9.60%	2.52% 2.53%		-3.68 -3.68	1.33% 1.33%	14.61 14.55	7.58% 7.07%
12/14/2016	9.10%	2.53%	3.86%	-3.68	1.32%	14.49	6.57%
12/19/2016 12/19/2016	9.00% 9.37%	2.54% 2.54%		-3.67 -3.67	1.32% 1.32%	14.42 14.42	6.46% 6.83%
12/22/2016	9.60%	2.55%	3.86%	-3.67	1.31%	14.36	7.05%
12/22/2016 12/28/2016	9.90% 9.50%	2.55% 2.55%		-3.67 -3.67	1.31% 1.31%	14.36 14.31	7.35% 6.95%
1/18/2017 1/24/2017	9.45%	2.58%		-3.66	1.28%	14.12	6.87% 6.41%
1/24/2017	9.00% 10.10%	2.59% 2.60%		-3.65 -3.65	1.27% 1.27%	14.09 14.02	
2/15/2017 2/22/2017	9.60%	2.62% 2.64%		-3.64 -3.64	1.25% 1.25%	13.82 13.74	6.98% 6.96%
2/24/2017	9.60% 9.75%	2.64%	3.89%	-3.63	1.25%	13.69	7.11%
2/28/2017 3/2/2017	10.10% 9.41%	2.64% 2.65%		-3.63 -3.63	1.25% 1.24%	13.67 13.65	7.46% 6.76%
3/20/2017	9.50%	2.68%	3.91%	-3.62	1.23%	13.46	6.82%
4/4/2017 4/12/2017	10.25% 9.40%	2.71% 2.74%		-3.61 -3.60	1.22% 1.21%	13.02 12.97	
4/20/2017	9.50%	2.76%	3.95%	-3.59	1.19%	13.02	6.74%
5/3/2017 5/11/2017	9.50% 9.20%	2.79% 2.81%		-3.58 -3.57	1.19% 1.18%	12.95 12.88	
5/18/2017	9.50%	2.83%	4.01%	-3.57	1.18%	12.90	6.67%
5/23/2017 6/16/2017	9.70% 9.65%	2.84% 2.89%	4.05%	-3.56 -3.54	1.18% 1.16%	12.89 12.66	
6/22/2017 6/22/2017	9.70% 9.70%	2.90% 2.90%		-3.54 -3.54	1.16% 1.16%	12.54 12.54	6.80% 6.80%
7/24/2017	9.50%	2.95%	4.09%	-3.52	1.15%	12.13	6.55%
8/15/2017	10.00%	2.97%	4.10%	-3.52	1.13%	11.69	7.03%

[5]	[6] Return on	[7] 30 Year	[8]	[9]	[10]	[11]	[12]
	Equity	Treasury	Moody's Utility A	LN(30-Year	Moody's Utility A		
Date of Electric Rate Case	(%)	(%)	Yield	Treasury)	Credit Spread	VIX	Risk Premium
9/22/2017	9.60%	2.93%	4.07%	-3.53	1.14%	11.45	6.67%
9/28/2017	9.80%	2.92%	4.07%	-3.53	1.14%	11.42	6.88%
10/20/2017	9.50%	2.91%	4.04%	-3.54	1.13%	11.24	6.59%
10/26/2017	10.20%	2.91%	4.03%	-3.54	1.12%	11.22	7.29%
10/26/2017	10.25%	2.91%	4.03%	-3.54	1.12%	11.22	7.34%
10/26/2017	10.30%	2.91%	4.03%	-3.54	1.12%	11.22	7.39%
11/6/2017	10.25%	2.90%	4.03%	-3.54	1.12%	11.17	7.35%
11/15/2017	11.95%	2.89%	4.02%	-3.54	1.12%	11.16	9.06%
11/30/2017	10.00%	2.88%	4.00%	-3.55	1.12%	11.11	7.12%
11/30/2017	10.00%	2.88%	4.00%	-3.55	1.12%	11.11	7.12%
12/5/2017	9.50%	2.88%	3.99%	-3.55	1.11%	11.10	6.62%
12/6/2017	8.40%	2.87%	3.99%	-3.55	1.11%	11.09	5.53%
12/6/2017	8.40%	2.87%	3.99%	-3.55	1.11%	11.09	5.53%
12/7/2017	9.80%	2.87%	3.99%	-3.55	1.11%	11.08	6.93%
12/14/2017	9.60%	2.86%	3.98%	-3.55	1.11%	11.04	6.74%
12/14/2017	9.65%	2.86%	3.98%	-3.55	1.11%	11.04	6.79%
12/18/2017	9.50%	2.86%	3.97%	-3.55	1.11%	11.02	6.64%
12/20/2017	9.58%	2.86%	3.97%	-3.56	1.11%	11.00	6.72%
12/21/2017	9.10%	2.85%	3.97%	-3.56	1.11%	10.99	6.25%
12/28/2017	9.50%	2.85%	3.96%	-3.56	1.11%	10.94	6.65%
12/29/2017	9.40%	2.85%	3.95%	-3.56	1.11%	10.93	6.55%
1/18/2018	9.70%	2.84%	3.93%	-3.56	1.10%	10.74	6.86%
1/31/2018	9.30%	2.84%	3.92%	-3.56	1.08%	10.68	6.46%
2/2/2018	9.98%	2.84%	3.92%	-3.56	1.08%	10.73	7.14%
2/23/2018	9.90%	2.85%	3.92%	-3.56	1.07%	11.70	7.05%
3/12/2018	9.25%	2.86%	3.92%	-3.55	1.05%	12.14	6.39%
3/15/2018	9.00%	2.87%	3.92%	-3.55	1.05%	12.23	6.13%

Average: # of Rate Cases:

4.62% 1,547

Summary of Adjustment Clauses & Alternative Regulation/Incentive Plans

			Adjustment Clauses						Alternative Regulation / Incentive Plans					
				Capital	jaourroni Olaac					7 (1011	iativo riogaia	activity internative		
		Fuel/		Investment										
		Purchased Power/Gas	Decoupling	(New and Replacement)	Energy	Danawahlaa	Environmenta		Formula-	Price Freeze/	Earnings	Formula-	Service Quality/	Morgor
Company	Parent Stat		(F/P) [1]	(2)	Energy Efficiency [3]	& RPS [4]	l [5]	Other [6]	Based Rates		Sharings	Based ROE	Performance	Merger Savings
ALLETE (Minnesota Power)	ALE MN		(1717[1]	[2]	✓	<u> </u>		✓ ✓	Dased Nates	Оар	Ghanng	Dased NOL	1 enomiance	Davings
Superior Water, Light and Power Company	ALE WI													
Interstate Power and Light Company	LNT IA				✓	✓	✓	✓		✓				
Wisconsin Power and Light Company	LNT WI				,	,		√		✓	√	,	,	
Ameren Illinois Company Union Electric Company	AEE IL AEE MC		Р		√	✓	√	√	~		✓	✓	✓	
AEP Texas Central Company	AEP TX		Г	✓	↓		↓	√						
AEP Texas North Company	AEP TX			✓	✓			√						
Appalachian Power Company	AEP VA			✓	\checkmark	✓	✓	✓						
Appalachian Power/Wheeling Power	AEP WV		_	√	√	,		√						
Indiana Michigan Power Company	AEP IN		P	✓	√	√	√	√						
Indiana Michigan Power Company Kentucky Power Company	AEP MI AEP KY		P	√	v	•	v	v						
Kingsport Power Company	AEP TN		Г	•	•		•	✓						
Ohio Power Company	AEP OH		F	✓	✓	✓		✓		✓	✓			
Public Service Company of Oklahoma	AEP OK		Р	✓	\checkmark		✓	✓						
Southwestern Electric Power Company	AEP AR		Р	✓	✓		√	✓		,	,			
Southwestern Electric Power Company Southwestern Electric Power Company	AEP LA AEP TX			./	./	./	✓	√ .1	_	√	✓			
Black Hills Colorado Electric Utility Company, LP	BKH CO			∨ ✓	∨ ✓	∨ ✓		∨ ✓		V				
Black Hills Power, Inc.	BKH SD		Р	√ ·	√	·	✓	✓						
Black Hills Power, Inc.	BKH WY													
Cheyenne Light, Fuel and Power Company	BKH WY		Р		✓			✓						
Consumers Energy Company	CMS MI	√			√	√	,	√						
DTE Electric Company Duke Energy Carolinas, LLC	DTE MI DUK NC		D		√	v	v	v		✓				
Duke Energy Carolinas, LLC	DUK NO		P		· ✓	√	√	√		·				
Duke Energy Florida, LLC	DUK FL		•		✓		✓	✓		✓				
Duke Energy Indiana, LLC	DUK IN		Р	✓	\checkmark	✓	✓	✓		✓				
Duke Energy Kentucky, Inc.	DUK KY		P	,	√			√		✓				
Duke Energy Ohio, Inc.	DUK OH		Р	√	√	√		✓			✓			
Duke Energy Progress, LLC Duke Energy Progress, LLC	DUK NC			V	√	∨ ✓	✓	✓						
El Paso Electric Company	EE NIV				✓			√						
El Paso Electric Company	EE TX	✓		✓	✓			✓						
Hawaii Electric Light Company, Inc.	HE HI		F		✓	✓		√		✓	✓			
Hawaiian Electric Company, Inc.	HE HI		F		√	√		√			√			
Maui Electric Company, Limited Idaho Power Co.	HE HI IDA ID		F		√	V		v			v			
Idaho Power Co.	IDA OR		1		· ✓	✓	✓	√			•			
NorthWestern Corporation	NWE MT				✓			✓						
NorthWestern Corporation	NWE SD				\checkmark		✓	✓						
Oklahoma Gas and Electric Company	OGE AR		P	✓	√		✓	√						
Oklahoma Gas and Electric Company Otter Tail Power Company	OGE OK		Р	./	√	./	./	√						
Otter Tail Power Company	OTTR ND			↓	•	∨ ✓	∨ ✓	∨ ✓						
Otter Tail Power Company	OTTR SD			✓	✓	·	√	✓						
Arizona Public Service Company	PNW AZ		Р		✓	✓	✓	✓		✓				
Public Service Company of New Mexico	PNM NV				✓	✓		√						
Texas New Mexico Power	PNM TX		5	✓	√		,	√						
Portland General Electric Company Alabama Power Company	POR OR SO AL		Р	./	~	V	√	√	./					
Georgia Power Company	SO GA			↓	✓		√	√	·					
Gulf Power Company	SO FL				✓		√	√						
Mississippi Power Company	SO MS	S ✓	Р		✓	✓	✓	✓	✓			✓	✓	
Wisconsin Electric Power Company	WEC MI				✓	✓		✓		,				
Wisconsin Electric Power Company	WEC WI									✓				
Wisconsin Public Service Corporation Northern States Power Company - MN	WEC WI		E	S	✓	S	√	✓						
Northern States Power Company - MN Northern States Power Company - MN	XEL IVIN		Г	↓	•	↓	▼	↓		✓	✓			
Northern States Power Company - MN	XEL SD		Р	√	✓		✓	✓		✓	•			
Northern States Power Company - WI	XEL MI	✓			✓									
Northern States Power Company - WI	XEL WI													
Public Service Company of Colorado	XEL CO		Р	✓	√	√	✓	√		√	✓			
Southwestern Public Service Company Southwestern Public Service Company	XEL NM XEL TX			1	√	✓		√		✓				
Southwestern Public Service Company	∧⊑L IX	· •		v	v			٧						

Notes:

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

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

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

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

- [4] Recovers costs associated with renewable energy projects, clean energy, Distributed Energy Resources, REC purchases, net metering, RPS expense, and renewable PPAs.
- [5] EPA upgrade costs, emissions control & allowance purchase costs, nuclear decommissioning, and other costs to comply with state and federal environmental mandates.
- [6] Pension expenses, bad debt costs, storm costs, vegetation management, RTO/Transmission Expense, capacity costs, transmission costs, government & franchise fees and taxes, economic development, and low income programs.

Sources: Company SEC Form 10-Ks; Operating company tariffs; Regulatory Research Associates, *Alternative Regulation/Incentive Plans: A State-by-State Overview*, November 19, 2013; Regulatory Research Associates, *Adjustment Clauses: A State-by-State Overview, August 22, 2016*.

Kansas City Power & Light Company Capitalization June 30, 2018 Projected

(\$ in 000's)

					AFTER-TAX 25.74%
			REQUIRED	WEIGHTED	WEIGHTED
CAPITAL COMPONENT	AMOUNT	PERCENT	RETURN	RETURN	RETURN
KCP&L Long-Term Debt [1]	\$2,549,380	50.25%	4.96%	2.4939%	1.8520%
KCP&L Common Equity	2,524,510	49.75%	9.85%	4.9009%	4.9009%
Total KCP&L Capital	\$5,073,890	100.00%		7.3948%	6.7529%

^[1] Excludes unamortized debt expenses and discounts. Includes current maturities of long-term debt.

Kansas City Power & Light Company Capitalization December 31, 2017 Actual

(\$ in 000's)

CAPITAL COMPONENT	AMOUNT	PERCENT	REQUIRED RETURN	WEIGHTED RETURN	AFTER-TAX 38.90% WEIGHTED RETURN
KCP&L Long-Term Debt [1]	\$2,599,380	50.84%	5.35%	2.7196%	1.6617%
KCP&L Common Equity	2,513,719	49.16%	9.30%	4.5721%	4.5721%
Total KCP&L Capital	\$5,113,099	100.00%	-	7.2917%	6.2338%

^[1] Excludes unamortized debt expenses and discounts. Includes current maturities of long-term debt.

Kansas City Power & Light Company Weighted Average Cost of Long-Term Debt Capital June 30, 2018 (Projected)

Line	lssue	[a] Initial Offering	[b] Date of Offering	[c] Date of Maturity	[d] Price to Public	[e]	[f] Issuance Expense Amortization	[g] Issuance Discount Amortization	[h] Long-term Debt Capital Outstanding	[i] Annual Cost of Long-term Debt Capital
	Pledged General Mortgage Bonds									
1	MATES Series 1993-A	\$40,000,000	12/7/1993	12/1/2023	\$40,000,000	2.95%	\$34,080	\$0	\$40,000,000	\$1,214,080
2	MATES Series 1993-B	\$39,480,000	12/7/1993	12/1/2023	\$39,480,000	2.95%	\$34,297	\$0	\$39,480,000	\$1,198,957
3	EIRR La Cygne 2005 Series - 4.65% Coupon	\$0	2/23/1994	9/1/2035	\$0	4.65%	\$0	\$0	\$0	\$0
4	Mortgage Bonds Series 2009A - 7.15%	\$400,000,000	3/24/2009	4/1/2019	\$400,000,000	7.15%	\$401,853	\$43,026	\$400,000,000	\$29,044,879
	Unsecured Notes									
5	Senior Notes Due 2047 - 4.20% Coupon (1)	\$300,000,000	6/15/2017	6/15/2047	\$300,000,000	4.20%	\$99,806	\$27,025	\$300,000,000	\$12,726,831
6	Senior Notes Due 2035 - 6.05% Coupon (2)	\$250,000,000	11/17/2005	11/15/2035	\$250,000,000	6.05%	\$81,364	\$50,071	\$250,000,000	\$15,256,435
7	Senior Notes Due 2041 - 5.30% Coupon (3)	\$400,000,000	9/20/2011	10/1/2041	\$400,000,000	5.30%	\$129,595	\$85,471	\$400,000,000	\$21,415,066
8	Senior Notes Due 2023 - 3.15% Coupon (1)	\$300,000,000	3/14/2013	3/15/2023	\$300,000,000	3.15%	\$232,246	\$27,944	\$300,000,000	\$9,710,189
9	Senior Notes Due 2023 - 3.65% Coupon (1)	\$350,000,000	8/13/2015	8/15/2025	\$350,000,000	3.65%	\$292,838	\$124,135	\$350,000,000	\$13,191,973
10	2018 Series Due 2048 - 4.20% Coupon	\$300,000,000	3/1/2018	3/15/2048	\$300,000,000	4.20%	\$98,077	\$8,700	\$300,000,000	\$12,706,777
	Environmental Improvement Revenue Refunding Bonds									
11	2007 Series A Due 2035	\$73,250,000	9/19/2007	9/1/2035	\$73,250,000	2.70%	\$6,651	\$0	\$73,250,000	\$1,984,401
12	2007 Series B Due 2035	\$73,250,000	9/19/2007	9/1/2035	\$73,250,000	2.70%	\$6,651	\$0	\$73,250,000	\$1,984,401
13	2008 Series Due 2038	\$23,400,000	5/28/2008	5/1/2038	\$23,400,000	2.88%	\$8,593	\$0	\$23,400,000	\$681,343
	Other Long-Term Debt									
14	Reacquired Bond Cost Amortizations									\$500,771
15	Interest Rate Hedging Expense Amortizations									\$4,922,884
										. , ,
16	Total KCP&L Long-Term Debt Capital			Jι	ıne 30, 2018 (Project	ed)			\$2,549,380,000	\$126,538,988
17	KCP&L Weighted Avg. Cost of Long-Term Debt Capital			Jι	ıne 30, 2018 (Project	ed)			4.96%	

Notes:

Expenses associated with the Senior Notes are being amortized over a 10 year period.
 Expenses associated with the Senior Notes are being amortized over a 30 year period.
 Expenses associated with the Senior Notes are being amortized over a 30 year period.

Cost of Long-Term Debt Comparison

						Bloomb	erg Fair Valu	e Curve	
		Initial	Date of	Date of	Years to		BFV		
Line	lssue	Offering	Offering	Maturity	Maturity	Coupon	Term	A-Rated	BBB-Rated
	Pledged General Mortgage Bonds								
1	MATES Series 1993-A	\$40,000,000	12/7/1993	12/1/2023	30	2.95%	30	6.81%	7.23%
2	MATES Series 1993-B	\$39,480,000	12/7/1993	12/1/2023	30	2.95%	30	6.81%	7.23%
3	EIRR La Cygne 2005 Series - 4.65% Coupon	\$0	2/23/1994	9/1/2035	42	4.65%	30	7.24%	7.57%
4	Mortgage Bonds Series 2009A - 7.15%	\$400,000,000	3/24/2009	4/1/2019	10	7.15%	10	5.38%	6.67%
	Unsecured Notes								
5	Senior Notes Due 2047 - 4.20% Coupon	\$300,000,000	6/15/2017	6/15/2047	30	4.20%	30	3.95%	4.28%
6	Senior Notes Due 2035 - 6.05% Coupon	\$250,000,000	11/17/2005	11/15/2035	30	6.05%	30	5.57%	6.02%
7	Senior Notes Due 2041 - 5.30% Coupon	\$400,000,000	9/20/2011	10/1/2041	30	5.30%	30	4.44%	5.07%
8	Senior Notes Due 2023 - 3.15% Coupon	\$300,000,000	3/14/2013	3/15/2023	10	3.15%	10	3.05%	3.65%
9	Senior Notes Due 2023 - 3.65% Coupon	\$350,000,000	8/13/2015	8/15/2025	10	3.65%	10	3.45%	3.83%
10	2018 Series Due 2028 - 4.20% Coupon	\$300,000,000	3/1/2018	3/15/2048	30	4.20%	30	4.09%	4.39%
	Environmental Improvement Revenue Refunding Bonds								
11	2007 Series A Due 2035	\$73,250,000	9/19/2007	9/1/2035	28	2.70%	30	6.31%	6.44%
12	2007 Series B Due 2035	\$73,250,000	9/19/2007	9/1/2035	28	2.70%	30	6.31%	6.44%
13	2008 Series Due 2038	\$23,400,000	5/28/2008	5/1/2038	30	2.88%	30	6.13%	6.47%
	legue	Offerings				Coupon		A Patad	BBB-Rated
	Issue	Offerings				Coupon		A-Rated	
TC	DTAL	\$2,549,380,000		We	eighted Averag	e 4.68%		4.49%	5.06%

Sources: Schedule RBH-9 and Bloomberg Professional [1] Date of Offering in the future.

Proxy Group Capital Structure

	% Common Equity									
Company	Ticker	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	2016Q1	2015Q4	Average
ALLETE, Inc.	ALE	61.03%	60.62%	60.28%	59.02%	59.28%	59.08%	58.83%	58.04%	59.52%
Alliant Energy Corporation	LNT	52.09%	51.23%	50.84%	50.73%	50.68%	51.22%	51.65%	51.24%	51.21%
Ameren Corporation	AEE	53.56%	53.11%	52.77%	52.62%	53.99%	53.11%	52.82%	52.22%	53.03%
American Electric Power Company, Inc.	AEP	49.16%	49.40%	49.71%	49.90%	49.81%	49.66%	49.13%	48.82%	49.45%
Black Hills Corporation	BKH	54.75%	53.84%	53.20%	52.81%	52.73%	52.55%	52.57%	52.51%	53.12%
CMS Energy Corporation	CMS	53.25%	52.97%	52.10%	51.24%	51.30%	52.32%	51.42%	50.63%	51.90%
DTE Energy Company	DTE	50.50%	50.63%	50.50%	50.50%	50.13%	49.35%	50.53%	50.39%	50.31%
Duke Energy Corporation	DUK	53.78%	54.62%	54.37%	54.66%	54.58%	54.85%	56.18%	56.81%	54.98%
El Paso Electric Company	EE	49.81%	48.01%	47.48%	47.73%	47.73%	46.22%	45.95%	49.86%	47.85%
Hawaiian Electric Industries, Inc.	HE	58.11%	57.76%	57.71%	57.70%	58.00%	57.67%	57.51%	57.48%	57.74%
IDACORP, Inc.	IDA	54.22%	53.48%	53.22%	53.15%	53.15%	52.46%	50.70%	52.34%	52.84%
NorthWestern Corporation	NWE	48.86%	48.61%	48.61%	48.13%	47.72%	47.66%	47.54%	47.31%	48.05%
OGE Energy Corp.	OGE	53.05%	52.75%	53.46%	56.09%	56.23%	55.50%	55.17%	54.30%	54.57%
Otter Tail Corporation	OTTR	57.24%	55.31%	55.31%	55.06%	54.80%	54.15%	53.10%	52.75%	54.71%
Pinnacle West Capital Corporation	PNW	53.05%	53.32%	53.20%	54.59%	54.70%	53.13%	55.54%	55.50%	54.13%
PNM Resources, Inc.	PNM	47.58%	46.89%	46.38%	46.01%	46.07%	44.88%	45.35%	45.32%	46.06%
Portland General Electric Company	POR	50.17%	50.32%	50.28%	49.82%	49.72%	49.64%	50.89%	50.61%	50.18%
Southern Company	SO	50.14%	49.99%	51.41%	51.10%	49.85%	49.21%	47.54%	49.11%	49.79%
WEC Energy Group, Inc.	WEC	55.82%	55.48%	54.80%	56.26%	56.21%	55.88%	55.80%	55.39%	55.71%
Xcel Energy Inc.	XEL	53.93%	54.37%	54.94%	54.37%	53.45%	54.17%	54.68%	54.43%	54.29%
Mean		53.01%	52.64%	52.53%	52.57%	52.51%	52.14%	52.14%	52.25%	52.47%

Operating Company Capital Structure												
					% (Common Eq	uity					
Operating Company	Parent	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	2016Q1	2015Q4	Average		
ALLETE (Minnesota Power)	ALE	59.73%	59.16%	58.71%	56.92%	56.90%	56.63%	56.60%	55.86%	57.57%		
Superior Water, Light and Power Company	ALE	62.33%	62.08%	61.85%	61.12%	61.65%	61.52%	61.06%	60.23%	61.48%		
Interstate Power and Light Company	LNT	51.79%	50.89%	50.23%	50.24%	48.99%	50.54%	51.52%	50.91%	50.64%		
Wisconsin Power and Light Company	LNT	52.39%	51.56%	51.45%	51.22%	52.38%	51.89%	51.78%	51.56%	51.78%		
Ameren Illinois Company	AEE	54.98%	54.55%	54.09%	53.44%	55.82%	55.11%	53.67%	53.42%	54.38%		
Union Electric Company	AEE	52.14%	51.68%	51.45%	51.80%	52.15%	51.10%	51.97%	51.03%	51.67%		
AEP Texas Central Company	AEP	NA	NA	NA	46.01%	45.44%	45.01%	44.18%	43.63%	44.85%		
AEP Texas North Company	AEP	NA	NA	NA	43.29%	43.17%	42.84%	42.64%	42.36%	42.86%		
Appalachian Power Company	AEP	48.30%	47.85%	48.17%	46.89%	46.68%	46.41%	47.20%	46.77%	47.28%		
Indiana Michigan Power Company	AEP	46.65%	46.27%	49.54%	49.11%	49.03%	48.50%	48.26%	52.65%	48.75%		
Kentucky Power Company	AEP	43.22%	43.30%	43.57%	43.45%	43.52%	43.50%	43.58%	43.26%	43.43%		
Kingsport Power Company	AEP	45.88%	50.58%	48.98%	65.24%	65.24%	64.34%	65.21%	59.70%	58.14%		
Ohio Power Company	AEP	57.64%	56.72%	56.75%	56.51%	56.08%	54.87%	50.03%	50.09%	54.84%		
Public Service Company of Oklahoma	AEP	48.85%	48.26%	48.20%	48.47%	48.52%	47.42%	46.80%	46.45%	47.87%		
Southwestern Electric Power Company	AEP	48.66%	48.14%	48.33%	45.95%	46.12%	49.66%	49.51%	49.59%	48.24%		
Wheeling Power Company	AEP	54.13%	54.10%	54.10%	54.12%	54.31%	54.08%	53.90%	53.73%	54.06%		
Black Hills Colorado Electric Utility Company, LP	BKH	54.96%	55.01%	53.08%	52.20%	51.85%	51.39%	51.06%	50.85%	52.55%		
Black Hills Power, Inc.	BKH	56.14%	53.26%	53.24%	52.88%	53.13%	53.13%	53.27%	53.35%	53.55%		
Cheyenne Light, Fuel and Power Company	BKH	53.16%	53.27%	53.29%	53.35%	53.22%	53.14%	53.36%	53.32%	53.26%		
Consumers Energy Company	CMS	53.25%	52.97%	52.10%	51.24%	51.30%	52.32%	51.42%	50.63%	51.90%		
DTE Electric Company	DTE	50.50%	50.63%	50.50%	50.50%	50.13%	49.35%	50.53%	50.39%	50.31%		
Duke Energy Carolinas, LLC	DUK	53.98%	53.49%	53.32%	52.81%	53.59%	53.84%	54.59%	58.07%	54.21%		
Duke Energy Florida, LLC	DUK	49.46%	47.74%	46.95%	50.83%	50.52%	53.43%	55.81%	55.28%	51.25%		
Duke Energy Indiana, LLC	DUK	51.71%	51.89%	52.15%	51.59%	51.14%	49.35%	50.89%	50.27%	51.12%		
Duke Energy Kentucky, Inc.	DUK	50.69%	55.74%	55.43%	54.74%	54.87%	54.14%	53.94%	56.11%	54.46%		
Duke Energy Ohio, Inc.	DUK	65.79%	65.38%	65.36%	66.39%	65.96%	65.21%	69.15%	68.71%	66.49%		
Duke Energy Progress, LLC	DUK	51.06%	53.51%	52.99%	51.58%	51.37%	53.15%	52.70%	52.40%	52.35%		
El Paso Electric Company	EE	49.81%	48.01%	47.48%	47.73%	47.73%	46.22%	45.95%	49.86%	47.85%		
Hawaii Electric Light Company, Inc.	HE	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Hawaiian Electric Company, Inc.	HE	58.11%	57.76%	57.71%	57.70%	58.00%	57.67%	57.51%	57.48%	57.74%		
Maui Electric Company, Limited	HE	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Idaho Power Co.	IDA	54.22%	53.48%	53.22%	53.15%	53.15%	52.46%	50.70%	52.34%	52.84%		

North-Western Companytion	N I) A / F	40.000/	40.040/	40.040/	40.400/	47 700/	47.000/	47 5 40/	47.040/	40.050/
NorthWestern Corporation	NWE	48.86%	48.61%	48.61%	48.13%	47.72%	47.66%	47.54%	47.31%	48.05%
Oklahoma Gas and Electric Company	OGE	53.05%	52.75%	53.46%	56.09%	56.23%	55.50%	55.17%	54.30%	54.57%
Otter Tail Power Company	OTTR	57.24%	55.31%	55.31%	55.06%	54.80%	54.15%	53.10%	52.75%	54.71%
Arizona Public Service Company	PNW	53.05%	53.32%	53.20%	54.59%	54.70%	53.13%	55.54%	55.50%	54.13%
Public Service Company of New Mexico	PNM	47.58%	46.89%	46.38%	46.01%	46.07%	44.88%	45.35%	45.32%	46.06%
Texas-New Mexico Power Company	PNM	NA	NA	NA						
Portland General Electric Company	POR	50.17%	50.32%	50.28%	49.82%	49.72%	49.64%	50.89%	50.61%	50.18%
Alabama Power Company	SO	47.93%	47.25%	47.00%	46.97%	47.29%	46.58%	46.48%	46.50%	47.00%
Georgia Power Company	SO	50.35%	51.55%	50.36%	51.63%	51.71%	50.48%	50.50%	51.08%	50.96%
Gulf Power Company	SO	54.97%	54.41%	58.80%	56.16%	53.63%	53.29%	50.74%	50.77%	54.10%
Mississippi Power Company	SO	47.32%	46.76%	49.50%	49.62%	46.78%	46.51%	42.44%	48.09%	47.13%
Wisconsin Electric Power Company	WEC	55.97%	55.76%	55.58%	56.74%	57.27%	57.15%	56.95%	57.25%	56.58%
Wisconsin Public Service Corporation	WEC	55.68%	55.21%	54.02%	55.78%	55.15%	54.61%	54.65%	53.53%	54.83%
Northern States Power Company - MN	XEL	52.22%	52.78%	52.62%	52.31%	52.08%	51.86%	53.68%	53.26%	52.60%
Northern States Power Company - WI	XEL	55.57%	55.22%	55.66%	54.93%	54.89%	54.57%	54.43%	54.27%	54.94%
Public Service Company of Colorado	XEL	55.64%	54.88%	57.00%	56.32%	56.37%	55.93%	56.49%	56.34%	56.12%
Southwestern Public Service Company	XEL	52.29%	54.61%	54.48%	53.93%	50.45%	54.30%	54.13%	53.83%	53.50%
Mean		52.67%	52.57%	52.60%	52.49%	52.32%	52.14%	52.11%	52.20%	52.24%

Source: S&P Global Market Intelligence

Proxy Group Capital Structure

-	% Long-Term Debt										
Company	Ticker	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	2016Q1	2015Q4	Average	
ALLETE, Inc.	ALE	38.97%	39.38%	39.72%	40.98%	40.72%	40.92%	41.17%	41.96%	40.48%	
Alliant Energy Corporation	LNT	47.91%	48.77%	49.16%	49.27%	49.32%	48.78%	48.35%	48.76%	48.79%	
Ameren Corporation	AEE	46.44%	46.89%	47.23%	47.38%	46.01%	46.89%	47.18%	47.78%	46.97%	
American Electric Power Company, Inc.	AEP	50.84%	50.60%	50.29%	50.10%	50.19%	50.34%	50.87%	51.18%	50.55%	
Black Hills Corporation	BKH	45.25%	46.16%	46.80%	47.19%	47.27%	47.45%	47.43%	47.49%	46.88%	
CMS Energy Corporation	CMS	46.75%	47.03%	47.90%	48.76%	48.70%	47.68%	48.58%	49.37%	48.10%	
DTE Energy Company	DTE	49.50%	49.37%	49.50%	49.50%	49.87%	50.65%	49.47%	49.61%	49.69%	
Duke Energy Corporation	DUK	46.22%	45.38%	45.63%	45.34%	45.42%	45.15%	43.82%	43.19%	45.02%	
El Paso Electric Company	EE	50.19%	51.99%	52.52%	52.27%	52.27%	53.78%	54.05%	50.14%	52.15%	
Hawaiian Electric Industries, Inc.	HE	41.89%	42.24%	42.29%	42.30%	42.00%	42.33%	42.49%	42.52%	42.26%	
IDACORP, Inc.	IDA	45.78%	46.52%	46.78%	46.85%	46.85%	47.54%	49.30%	47.66%	47.16%	
NorthWestern Corporation	NWE	51.14%	51.39%	51.39%	51.87%	52.28%	52.34%	52.46%	52.69%	51.95%	
OGE Energy Corp.	OGE	46.95%	47.25%	46.54%	43.91%	43.77%	44.50%	44.83%	45.70%	45.43%	
Otter Tail Corporation	OTTR	42.76%	44.69%	44.69%	44.94%	45.20%	45.85%	46.90%	47.25%	45.29%	
Pinnacle West Capital Corporation	PNW	46.95%	46.68%	46.80%	45.41%	45.30%	46.87%	44.46%	44.50%	45.87%	
PNM Resources, Inc.	PNM	52.42%	53.11%	53.62%	53.99%	53.93%	55.12%	54.65%	54.68%	53.94%	
Portland General Electric Company	POR	49.83%	49.68%	49.72%	50.18%	50.28%	50.36%	49.11%	49.39%	49.82%	
Southern Company	SO	49.86%	50.01%	48.59%	48.90%	50.15%	50.79%	52.46%	50.89%	50.21%	
WEC Energy Group, Inc.	WEC	44.18%	44.52%	45.20%	43.74%	43.79%	44.12%	44.20%	44.61%	44.29%	
Xcel Energy Inc.	XEL	46.07%	45.63%	45.06%	45.63%	46.55%	45.83%	45.32%	45.57%	45.71%	
Mean		46.99%	47.36%	47.47%	47.43%	47.49%	47.86%	47.86%	47.75%	47.53%	

Operating Company Capital Structure										
	% Long Term Debt									
Operating Company	Parent	2017Q3	2017Q2	2017Q1	2016Q4	2016Q3	2016Q2	2016Q1	2015Q4	Average
ALLETE (Minnesota Power)	ALE	40.27%	40.84%	41.29%	43.08%	43.10%	43.37%	43.40%	44.14%	42.43%
Superior Water, Light and Power Company	ALE	37.67%	37.92%	38.15%	38.88%	38.35%	38.48%	38.94%	39.77%	38.52%
Interstate Power and Light Company	LNT	48.21%	49.11%	49.77%	49.76%	51.01%	49.46%	48.48%	49.09%	49.36%
Wisconsin Power and Light Company	LNT	47.61%	48.44%	48.55%	48.78%	47.62%	48.11%	48.22%	48.44%	48.22%
Ameren Illinois Company	AEE	45.02%	45.45%	45.91%	46.56%	44.18%	44.89%	46.33%	46.58%	45.62%
Union Electric Company	AEE	47.86%	48.32%	48.55%	48.20%	47.85%	48.90%	48.03%	48.97%	48.33%
AEP Texas Central Company	AEP	NA	NA	NA	53.99%	54.56%	54.99%	55.82%	56.37%	55.15%
AEP Texas North Company	AEP	NA	NA	NA	56.71%	56.83%	57.16%	57.36%	57.64%	57.14%
Appalachian Power Company	AEP	51.70%	52.15%	51.83%	53.11%	53.32%	53.59%	52.80%	53.23%	52.72%
Indiana Michigan Power Company	AEP	53.35%	53.73%	50.46%	50.89%	50.97%	51.50%	51.74%	47.35%	51.25%
Kentucky Power Company	AEP	56.78%	56.70%	56.43%	56.55%	56.48%	56.50%	56.42%	56.74%	56.57%
Kingsport Power Company	AEP	54.12%	49.42%	51.02%	34.76%	34.76%	35.66%	34.79%	40.30%	41.86%
Ohio Power Company	AEP	42.36%	43.28%	43.25%	43.49%	43.92%	45.13%	49.97%	49.91%	45.16%
Public Service Company of Oklahoma	AEP	51.15%	51.74%	51.80%	51.53%	51.48%	52.58%	53.20%	53.55%	52.13%
Southwestern Electric Power Company	AEP	51.34%	51.86%	51.67%	54.05%	53.88%	50.34%	50.49%	50.41%	51.76%
Wheeling Power Company	AEP	45.87%	45.90%	45.90%	45.88%	45.69%	45.92%	46.10%	46.27%	45.94%
Black Hills Colorado Electric Utility Company, LP	BKH	45.04%	44.99%	46.92%	47.80%	48.15%	48.61%	48.94%	49.15%	47.45%
Black Hills Power, Inc.	BKH	43.86%	46.74%	46.76%	47.12%	46.87%	46.87%	46.73%	46.65%	46.45%
Cheyenne Light, Fuel and Power Company	BKH	46.84%	46.73%	46.71%	46.65%	46.78%	46.86%	46.64%	46.68%	46.74%
Consumers Energy Company	CMS	46.75%	47.03%	47.90%	48.76%	48.70%	47.68%	48.58%	49.37%	48.10%
DTE Electric Company	DTE	49.50%	49.37%	49.50%	49.50%	49.87%	50.65%	49.47%	49.61%	49.69%
Duke Energy Carolinas, LLC	DUK	46.02%	46.51%	46.68%	47.19%	46.41%	46.16%	45.41%	41.93%	45.79%
Duke Energy Florida, LLC	DUK	50.54%	52.26%	53.05%	49.17%	49.48%	46.57%	44.19%	44.72%	48.75%
Duke Energy Indiana, LLC	DUK	48.29%	48.11%	47.85%	48.41%	48.86%	50.65%	49.11%	49.73%	48.88%
Duke Energy Kentucky, Inc.	DUK	49.31%	44.26%	44.57%	45.26%	45.13%	45.86%	46.06%	43.89%	45.54%
Duke Energy Ohio, Inc.	DUK	34.21%	34.62%	34.64%	33.61%	34.04%	34.79%	30.85%	31.29%	33.51%
Duke Energy Progress, LLC	DUK	48.94%	46.49%	47.01%	48.42%	48.63%	46.85%	47.30%	47.60%	47.65%
El Paso Electric Company	EE	50.19%	51.99%	52.52%	52.27%	52.27%	53.78%	54.05%	50.14%	52.15%
Hawaii Electric Light Company, Inc.	HE	NA								
Hawaiian Electric Company, Inc.	HE	41.89%	42.24%	42.29%	42.30%	42.00%	42.33%	42.49%	42.52%	42.26%
Maui Electric Company, Limited	HE	NA								
Idaho Power Co.	IDA	45.78%	46.52%	46.78%	46.85%	46.85%	47.54%	49.30%	47.66%	47.16%

NorthWestern Corporation	NWE	51.14%	51.39%	51.39%	51.87%	52.28%	52.34%	52.46%	52.69%	51.95%
Oklahoma Gas and Electric Company	OGE	46.95%	47.25%	46.54%	43.91%	43.77%	44.50%	44.83%	45.70%	45.43%
Otter Tail Power Company	OTTR	42.76%	44.69%	44.69%	44.94%	45.20%	45.85%	46.90%	47.25%	45.29%
Arizona Public Service Company	PNW	46.95%	46.68%	46.80%	45.41%	45.30%	46.87%	44.46%	44.50%	45.87%
Public Service Company of New Mexico	PNM	52.42%	53.11%	53.62%	53.99%	53.93%	55.12%	54.65%	54.68%	53.94%
Texas-New Mexico Power Company	PNM	NA								
Portland General Electric Company	POR	49.83%	49.68%	49.72%	50.18%	50.28%	50.36%	49.11%	49.39%	49.82%
Alabama Power Company	SO	52.07%	52.75%	53.00%	53.03%	52.71%	53.42%	53.52%	53.50%	53.00%
Georgia Power Company	SO	49.65%	48.45%	49.64%	48.37%	48.29%	49.52%	49.50%	48.92%	49.04%
Gulf Power Company	SO	45.03%	45.59%	41.20%	43.84%	46.37%	46.71%	49.26%	49.23%	45.90%
Mississippi Power Company	SO	52.68%	53.24%	50.50%	50.38%	53.22%	53.49%	57.56%	51.91%	52.87%
Wisconsin Electric Power Company	WEC	44.03%	44.24%	44.42%	43.26%	42.73%	42.85%	43.05%	42.75%	43.42%
Wisconsin Public Service Corporation	WEC	44.32%	44.79%	45.98%	44.22%	44.85%	45.39%	45.35%	46.47%	45.17%
Northern States Power Company - MN	XEL	47.78%	47.22%	47.38%	47.69%	47.92%	48.14%	46.32%	46.74%	47.40%
Northern States Power Company - WI	XEL	44.43%	44.78%	44.34%	45.07%	45.11%	45.43%	45.57%	45.73%	45.06%
Public Service Company of Colorado	XEL	44.36%	45.12%	43.00%	43.68%	43.63%	44.07%	43.51%	43.66%	43.88%
Southwestern Public Service Company	XEL	47.71%	45.39%	45.52%	46.07%	49.55%	45.70%	45.87%	46.17%	46.50%
Mean		47.33%	47.43%	47.40%	47.51%	47.68%	47.86%	47.89%	47.80%	47.76%