Exhibit 2
Affidavit of Robert Hevert

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 1 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 2 of 182

BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 2017-305-E

IN RE: Request of South Carolina Office of Regulatory Staff for Rate Relief to SCE&G Rates Pursuant to S.C. Code Ann. § 58-27-920	)))))))	**AFFIDAVIT OF ROBERT B. HEVERT**

Personally appeared before me Robert B. Hevert who, having first been duly sworn, deposes and states as follows:

1. My name is Robert B. Hevert and I am over eighteen years of age. I am qualified and competent to make this affidavit.

2. I make this affidavit based upon my personal knowledge, except as to any matters stated upon information belief, and, as to those matters, I believe them to be true.

3. I am a Partner with ScottMadden, Inc. In this position, I advise numerous energy and utility clients on a wide range of financial and economic issues.

4. South Carolina Electric & Gas Company engaged me to assist in its evaluation of the request filed by the South Carolina Office of Regulatory Staff in the above-captioned matter.

5. In this regard, I have prepared Attachment A, my sworn statement, which I incorporate into this affidavit by this specific reference as if repeated verbatim herein.

6. For my sworn statement, I use the question and answer format that is customarily used in proceedings before the Public Service Commission of South Carolina.

7. The answers set forth in Attachment A are based upon my personal knowledge, except as to those matters stated upon information belief, and, as to those matters, I believe them to be true. Each opinion stated in Attachment A is accurate, true, and correct.

FURTHER AFFIANT SAYETH NOT.

Robert B. Hevert

Sworn and subscribed to before me
this 6th day of December, 2017

Notary Public for Massachusetts
My commission expires: March 11, 2022

KIMBERLY H. DAO
MY COMM. EXPIRES
MARCH 11, 2022
NOTARY PUBLIC
COMMONWEALTH OF
MASSACHUSETTS

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 3 of 182

ATTACHMENT A

to

Affidavit of Robert B. Hevert

[which consists of the sworn statement of Robert B. Hevert consisting of 60 pages, Resume of Robert B. Hevert (Attachment A to Sworn Statement of Robert B. Hevert), and Exhibit No. ____RBH-1 through Exhibit No. __RBH-6]

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 4 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 5 of 182

BEFORE THE PUBLIC SERVICE COMMISSION

OF SOUTH CAROLINA

SWORN STATEMENT OF

ROBERT B. HEVERT

ON BEHALF OF

SOUTH CAROLINA ELECTRIC & GAS COMPANY

DOCKET NO. 2017-305-E

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 6 of 182

TABLE OF CONTENTS

I. INTRODUCTION 3

II. PURPOSE AND OVERVIEW OF SWORN STATEMENT 4

III. SUMMARY OF CONCLUSIONS 6

IV. SUMMARY OF ISSUES SURROUNDING COST OF EQUITY ESTIMATION IN REGULATORY PROCEEDINGS 8

V. PROXY GROUP SELECTION 12

VI. COST OF EQUITY ESTIMATION 16

Constant Growth DCF Model 18

Multi-Stage DCF Model 26

CAPM Analysis 32

Bond Yield Plus Risk Premium Approach 37

VII. CAPITAL MARKET ENVIRONMENT 40

VIII. *PRO FORMA* EFFECT OF ORS'S REQUEST ON THE COMPANY'S EARNED RETURN ON COMMON EQUITY 51

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 7 of 182

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, AFFILIATION, AND BUSINESS ADDRESS.

A. My name is Robert B. Hevert. I am Partner of ScottMadden, Inc. ("ScottMadden"). My business address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts, 01581.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS SWORN STATEMENT?

A. I am submitting this Sworn Statement to the Public Service Commission of South Carolina ("Commission") on behalf of South Carolina Electric & Gas Company, referred to throughout my Sworn Statement as "SCE&G," or the "Company."

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I hold a Bachelor's degree in Business and Economics from the University of Delaware, and an MBA with a concentration in Finance from the University of Massachusetts. I also hold the Chartered Financial Analyst designation.

Q. PLEASE DESCRIBE YOUR EXPERIENCE IN THE ENERGY AND UTILITY INDUSTRIES.

A. I have worked in regulated industries for more than 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 regarding various financial and regulatory matters in more than 200 proceedings before numerous utility

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 8 of 182

regulatory agencies, including 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 as Attachment A to my Sworn Statement.

II. PURPOSE AND OVERVIEW OF SWORN STATEMENT

Q. WHAT IS THE PURPOSE OF YOUR SWORN STATEMENT?

A. The purpose of my Sworn Statement is to provide an estimate of the Company's current market-required Return on Equity. I then compare that market-required return with the *pro forma* Return on Equity to be earned if the proposal set forth in the South Carolina Office of Regulatory Staff's ("ORS") Request for Rate Relief to SCE&G's Rates Pursuant to S.C. Code Ann. § 58-27-920 (the "Request") is granted. My analyses and conclusions are supported by the data presented in Exhibit No.___(RBH-1) through Exhibit No.___(RBH-6), which have been prepared by me or under my direction.

Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE MARKET-REQUIRED RETURN ON EQUITY FOR A COMPANY SUCH AS SCE&G?

A. My analyses indicate that a recommended Cost of Equity for the Company currently would be in the range of 10.25 percent to 11.00 percent. Based on the quantitative and qualitative analyses discussed throughout my Sworn Statement, I conclude that an ROE of 10.75 percent is reasonable and appropriate.[1] However, the *pro forma* effect of

[1] I am aware that certain members of the South Carolina General Assembly have argued that the Base Load Review Act (the "Act") should be amended or repealed such that the Company would not be authorized to recover certain costs. I have previously provided testimony to the Commission regarding the financial community's views of the importance of the Act in addressing the risks associated with developing nuclear projects. *See, e.g.*, Docket 2009-489-E. If the Act were to be amended or repealed as described above, the Company then would be subject to additional risks not contemplated in my 10.75 percent ROE estimate. As discussed in Section VII, although I have not quantified the effect of that additional risk, it would require a premium over my current estimate.

ORS's proposal is to reduce the Company's earned Return on Equity to approximately 3.40 percent. That return, which falls below the return on A-rated utility debt, clearly fails to meet the Comparable Risk, Capital Attraction, and Financial Integrity standards established by *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*") and *Bluefield Water Works and Improvement Co. v. Public Service Comm'n*. 262 U.S. 679, 692 (1923) ("*Bluefield*"). By my plain reading of those standards, the *pro forma* return that would result from ORS's Request therefore is neither just nor reasonable.

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE ANALYSES THAT LED TO YOUR ROE RECOMMENDATION.

A. As discussed in more detail in Section VII, in light of recent market conditions, and given the fact that equity analysts and investors tend to use multiple methodologies in developing their return requirements, it is important to consider the results of several analytical approaches in determining the Company's ROE. To develop my ROE estimate, I therefore considered the Constant Growth and Multi-Stage forms of the DCF model, the Capital Asset Pricing Model, and the Bond Yield Plus Risk Premium approach.

Q. HOW IS THE REMAINDER OF YOUR SWORN STATEMENT ORGANIZED?

A. The remainder of my Sworn Statement is organized as follows:

Section III – Provides a summary of my conclusions and recommendations;

Section IV – Discusses the regulatory guidelines and financial considerations pertinent to the development of the cost of capital;

Section V – Explains my selection of the proxy group of electric utilities used to develop my analytical results;

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 9 of 182

Section VI – Explains my analyses and the analytical bases for my ROE recommendation;

Section VII – Highlights the current capital market conditions and the effect of those conditions on the Company's Cost of Equity; and

Section VIII – Discusses the *pro forma* effect of ORS's Request on the Company's earned ROE.

III. SUMMARY OF CONCLUSIONS

Q. WHAT ARE THE KEY FACTORS CONSIDERED IN YOUR ANALYSES AND UPON WHICH YOU BASE YOUR RECOMMENDED ROE?

A. My analyses and recommendations considered the following:

- The *Hope* and *Bluefield* decisions that established the standards for determining a fair and reasonable allowed return on equity including: consistency of the allowed return with other businesses having similar risk; adequacy of the return to provide access to capital and support credit quality; and that the end result must lead to just and reasonable rates; and
- The effect of the current capital market conditions on investors' return requirements, and in particular, the Company's need to access the capital markets.

Q. WHAT ARE THE RESULTS OF YOUR ANALYSES?

A. The results of my analyses are summarized in Table 1 below.[2]

[2] *See* Exhibit No.___(RBH-1) through Exhibit No.___(RBH-6).

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 10 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 11 of 182

Table 1: Summary of Analytical Results

Discounted Cash Flow	***Mean Low***	***Mean***	***Mean High***
Constant Growth DCF			
30-Day Constant Growth DCF	7.76%	8.54%	9.34%
90-Day Constant Growth DCF	7.80%	8.58%	9.37%
180-Day Constant Growth DCF	7.86%	8.64%	9.43%
Multi-Stage DCF (Gordon Method)			
30-Day Multi-Stage DCF	8.56%	8.73%	8.91%
90-Day Multi-Stage DCF	8.60%	8.77%	8.96%
180-Day Multi-Stage DCF	8.66%	8.64%	9.02%
Multi-Stage DCF (Terminal P/E)			
30-Day Multi-Stage DCF	9.77%	10.23%	10.71%
90-Day Multi-Stage DCF	9.80%	10.36%	10.83%
180-Day Multi-Stage DCF	10.06%	10.52%	11.00%
CAPM Results		***Bloomberg Derived Market Risk Premium***	***Value Line Derived Market Risk Premium***
Average Bloomberg Beta Coefficient			
Current 30-Year Treasury (2.86%)		9.19%	9.29%
Near Term Projected 30-Year Treasury (3.32%)		9.65%	9.74%
Average Value Line Beta Coefficient			
Current 30-Year Treasury (2.86%)		10.74%	10.86%
Near Term Projected 30-Year Treasury (3.32%)		11.19%	11.31%
	Low	***Mid***	***High***
Bond Yield Risk Premium	9.97%	10.02%	10.33%

Based on the analytical results, and in light of the considerations discussed throughout the balance of my Sworn Statement regarding the current capital market environment, it is my view that a reasonable range of estimates is from 10.25 percent to

11.00 percent, and within that range, 10.75 percent is a reasonable estimate of the Company's current Cost of Equity.

IV. SUMMARY OF ISSUES SURROUNDING COST OF EQUITY ESTIMATION IN REGULATORY PROCEEDINGS

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 provide funds to a firm only if the return they *expect* is equal to, or greater than, the return 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" as measures of those costs; 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 risk 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. In that important respect, the returns required by debt and equity investors represent a cost to the Company.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 12 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 13 of 182

1 Although both debt and equity have required costs, they differ in certain
2 fundamental ways. Most noticeably, the Cost of Debt is contractually defined and can be
3 directly observed as the interest rate or yield on debt securities.[3] The Cost of Equity, on
4 the other hand, is neither directly observable nor a contractual obligation. Rather, equity
5 investors have a claim on cash flows only after debt holders are paid; the uncertainty (or
6 risk) associated with those residual cash flows determines the Cost of Equity. Because
7 equity investors bear the "residual risk," they take greater risks and require higher returns
8 than debt holders. In that basic sense, equity and debt investors differ: they invest in
9 different securities, face different risks, and require different returns.

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

[3] The observed interest rate may be adjusted to reflect issuance or debt directly observable costs.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 14 of 182

Q. PLEASE PROVIDE A BRIEF SUMMARY OF THE GUIDELINES ESTABLISHED BY THE UNITED STATES SUPREME COURT (THE "COURT") FOR THE PURPOSE OF DETERMINING THE RETURN ON EQUITY.

A. 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.*; and (2) *Federal Power Comm'n v. Hope Natural Gas Co.* In *Bluefield*, the Court stated:

> A public utility is entitled to such rates as will permit it to earn a return upon the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit, and enable it to raise the money necessary for the proper discharge of its public duties.[4]

The Court therefore recognized that: (1) a regulated public utility cannot remain financially sound unless the return it is allowed to earn on its invested capital is at least equal to the Cost of Capital (the principle relating to the demand for capital); and (2) a regulated public utility will not be able to attract capital if it does not offer investors an opportunity to earn a return on their investment equal to the return they expect to earn on other investments of similar risk (the principle relating to the supply of capital).

In *Hope*, the Court reiterated the financial integrity and capital attraction principles of the *Bluefield* case:

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock . . .By that standard the return to the equity owner should be

[4] *Bluefield*, 262 U.S. at 692.

> commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.[5]

In summary, the Court clearly has 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.

Q. DOES SOUTH CAROLINA PROVIDE SIMILAR GUIDANCE?

A. Yes. The Commission and the South Carolina courts uphold the precedents of the *Hope* and *Bluefield* cases. Specifically, the standards established in the *Hope* and *Bluefield* decisions were acknowledged by the Commission in an Order issued in 2010.[6] That Order outlines four principal guidelines regarding the determination of the rate of return:

> (1) The rate of return should be sufficient to allow SCE&G the opportunity to earn a return equal to firms facing similar risks;
>
> (2) The rate of return should be adequate to assure investors of the financial soundness of the utility and to support the utility's credit and ability to raise capital needed for on-going utility operations at reasonable cost;
>
> (3) The rate of return should be determined with due regard for the present business and capital market conditions facing the utility;
>
> (4) The rate of return is not formula-based, but requires an informed expert judgment by the Commission balancing the interests of shareholders and customers.[7]

---

[5] *Hope*, 320 U.S. at 603.

[6] Public Service Comm'n of South Carolina, Docket No. 2009-489-E, Order No. 2010-471 dated July 15, 2010, pp. 28-30.

[7] *Ibid.*, at 30 *citing* Docket No. 2004-178-E, Order No. 2005-2 dated January 6, 2005, p. 85. *See also* Public Service Comm'n of South Carolina, Docket No. 2012-218-E, Order No. 2012-951 dated December 20, 2012, pp. 41-42.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 15 of 182

The *Hope* and *Bluefield* standards were also recognized by the Supreme Court of South Carolina in *Southern Bell Tel. & Tel. Co. v. Public Service Comm'n of South Carolina*.[8]

Q. ASIDE FROM THE STANDARDS ESTABLISHED BY THE COMMISSION AND THE COURTS, WHY IS IT IMPORTANT FOR A PUBLIC UTILITY TO BE ALLOWED THE OPPORTUNITY TO EARN A RETURN THAT IS ADEQUATE TO ATTRACT EQUITY CAPITAL AT REASONABLE TERMS?

A. A return that is adequate to attract capital at reasonable terms enables the utility to provide safe and reliable 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 comparable risk. That is, a reasonable Return on Equity provides the Company the opportunity to earn an ROE 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.

V. PROXY GROUP SELECTION

Q. AS A PRELIMINARY MATTER, WHY IS IT NECESSARY TO SELECT A GROUP OF PROXY COMPANIES TO DETERMINE THE COST OF EQUITY FOR SCE&G?

A. First, it is important to bear in mind that the Cost of Equity for a given enterprise depends on the risks attendant to the business in which the company is engaged. According to financial theory, the value of a given company is equal to the aggregate market value of

[8] *Southern Bell Tel. & Tel. Co. v. Public Service Comm'n of South Carolina*, 244 S.E.2d 278 (1978).

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 16 of 182

its constituent business units. The value of the individual business units reflects the risks and opportunities inherent in the business sectors in which those units operate. In this proceeding, we are focused on estimating the Cost of Equity for SCE&G, which is an operating subsidiary of SCANA Corporation. Because the ROE is a market-based concept and SCE&G is not a publicly traded entity, it is necessary to establish a group of companies that are both publicly traded and reasonably comparable to the Company in certain fundamental respects to serve as its "proxy" in the ROE estimation process.

Even if SCE&G were a publicly traded entity, it is possible that short-term events could bias its market value in one way or another during a given period. A significant benefit of using a proxy group, therefore, is that it serves to moderate the effects of anomalous, temporary events that may be associated with any one company.

Q. DOES THE SELECTION OF A PROXY GROUP SUGGEST THAT ANALYTICAL RESULTS WILL BE TIGHTLY CLUSTERED AROUND AVERAGE (*I.E.*, MEAN) RESULTS?

A. Not necessarily. The DCF approach is based on the theory that a stock's current price represents the present value of its future expected cash flows. The Constant Growth form of the DCF model is defined as the sum of the expected dividend yield and projected long-term growth. Notwithstanding the care taken to ensure risk comparability, market expectations with respect to future risks and growth opportunities will vary from company to company. Therefore, even within a group of similarly situated companies, it is common for analytical results to reflect a seemingly wide range. At issue, then, is how to estimate a Company's ROE from within that range. Such a determination necessarily must consider a wide range of both quantitative and qualitative information.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 17 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 18 of 182

Q. PLEASE PROVIDE A SUMMARY PROFILE OF SCE&G.

A. SCE&G provides electric generation, transmission and distribution services in central, southern, and southwestern portions of South Carolina to approximately 709,000 retail customers.[9] SCANA's current long-term issuer credit rating from Standard & Poor's ("S&P") is BBB (Watch: Negative), Baa3 (Watch: Negative) from Moody's Investors Service ("Moody's"), and BB+ (Watch: Negative) from FitchRatings ("Fitch"). SCE&G currently is rated BBB (Watch: Negative) by S&P, Baa2 (Watch: Negative) by Moody's, and BBB- (Watch: Negative) by Fitch.[10] Those ratings reflect recent downgrades by each of the three rating agencies.

Q. HOW DID YOU SELECT THE COMPANIES INCLUDED IN YOUR PROXY GROUP?

A. A proxy group should consist of companies with risk profiles comparable to the subject company. In selecting a proxy group, my objective was to balance the competing interests of selecting companies that are highly representative of the risks and prospects faced by SCE&G, while at the same time ensuring that there is a sufficient number of companies in the proxy group. Based on those two considerations, I began with the universe of companies that Value Line classifies as Electric Utilities, and applied the following screening criteria:

- I excluded companies that do not consistently pay quarterly cash dividends;
- I excluded companies that were not covered by at least two utility industry equity analysts;

[9] SCANA Corp., 2016 SEC Form 10-K, at 24.

[10] Source: Bloomberg Professional, S&P Global Market Intelligence.

- I excluded companies that do not have investment grade senior unsecured bond and/or corporate credit ratings from S&P;
- I excluded companies that were not vertically-integrated, i.e. utilities that own and operate regulated generation, transmission and distribution assets;
- I excluded companies whose regulated operating income over the three most recently reported fiscal years composed less than 60.00 percent of the respective totals for that company;
- I excluded 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;[11]
- I excluded companies whose coal-fired generation constituted less than 10.00 percent of net generation; and
- I eliminated companies that are currently known to be party to a merger or other significant transaction.

Q. DID YOU INCLUDE SCANA CORPORATION IN YOUR ANALYSIS?

A. No. To avoid the circular logic that otherwise would occur, it has been my consistent practice to exclude the subject company (or its parent) from the proxy group.

Q. WHAT COMPANIES MET THOSE SCREENING CRITERIA?

A. The criteria discussed above resulted in an initial proxy group of the following 19 companies:

[11] In prior cases, 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, I have lowered the threshold to 60.00 percent.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 19 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 20 of 182

1 **Table 2: Proxy Group Screening Results**

Company	Ticker
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Black Hills Corp.	BKH
CMS Energy Corporation	CMS
Dominion Energy, Inc.	D
DTE Energy Company	DTE
Duke Energy Corporation	DUK
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

VI. COST OF EQUITY ESTIMATION

2 **Q. PLEASE BRIEFLY DISCUSS THE ROE IN THE CONTEXT OF THE**
3 **REGULATED RATE OF RETURN.**

4 A. Regulated utilities primarily use common stock and long-term debt to finance their
5 permanent property, plant, and equipment. The overall rate of return ("ROR") for a
6 regulated utility is based on its weighted average cost of capital, in which the cost rates of
7 the individual sources of capital are weighted by their respective book values. While the

cost of debt and cost of preferred stock 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. The ROE is estimated by applying various financial models to market-based data. By their very nature, those models produce a range of results, from which the market-required ROE must be determined. As discussed throughout my Sworn Statement, that determination must be based on a comprehensive review of relevant data and information and does not necessarily lend itself to a strict mathematical solution. The key consideration in determining the ROE is to ensure 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. As a result, a number of models have been developed to estimate the Cost of Equity. As a practical matter, however, all of the models available for estimating the Cost of Equity are subject to limiting assumptions or other methodological constraints. Consequently, many finance texts recommend using multiple approaches when estimating the Cost of Equity.[12] 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, are inclined to rely on multiple analytical approaches.

[12] *See*, for example, Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed., 1994, at 341; and Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd ed., 2000, at 214.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 21 of 182

In essence, practitioners and academics 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 alternate methodologies and the reasonableness of their individual and collective results.

Consequently, I believe it is both prudent and appropriate to use multiple methodologies in order to mitigate the effects of assumptions and inputs associated with relying exclusively on any single approach. Such use, however, must be tempered with due caution as to the results generated by each individual approach. As such, I have considered the Constant Growth and Multi-Stage forms of the DCF model, the Capital Asset Pricing Model, and the Bond Yield Plus Risk Premium approach.

Constant Growth DCF Model

Q. ARE DCF MODELS WIDELY USED IN REGULATORY PROCEEDINGS?

A. Yes, in my experience the Constant Growth DCF model is recognized in regulatory proceedings, as well as in financial literature. Nonetheless, neither the DCF nor any other model should be applied without considerable judgment in the selection of data and the interpretation of results.

Q. PLEASE DESCRIBE THE DCF APPROACH.

A. The DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its simplest form, the DCF model

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 22 of 182

expresses the Cost of Equity as the sum of the expected dividend yield and long-term growth rate, and is expressed as follows:

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

where P represents the current stock price, $D_1 \ldots D_\infty$ 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:

$$k = \frac{D_0\ (1+g)}{P} + g \quad [2]$$

Equation [2] often is referred to as the "Constant Growth DCF" model, in which the first term is the expected dividend yield and the second term is the expected long-term annual growth rate.

Q. WHAT ASSUMPTIONS ARE REQUIRED FOR THE CONSTANT GROWTH DCF MODEL?

A. The Constant Growth DCF model requires the following assumptions: (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. Under those assumptions, dividends, earnings, book value, and the stock price all grow at the same, constant rate. The model further assumes the current Cost of Equity (that is, the model's results) will remain unchanged in perpetuity.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 23 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 24 of 182

Q. WHAT MARKET DATA DID YOU USE TO CALCULATE THE DIVIDEND YIELD COMPONENT OF YOUR DCF MODEL?

A. The dividend yield is based on the proxy companies' current annualized dividend, and average closing stock prices over the 30, 90, and 180-trading day periods as of October 31, 2017.

Q. WHY DID YOU USE THREE AVERAGING PERIODS TO CALCULATE AN AVERAGE STOCK PRICE?

A. I did so to ensure that the model's results are not skewed by anomalous events that may affect stock prices on any given trading day. At the same time, the averaging period should be reasonably representative of expected capital market conditions over the long term. In my view, the use of the 30-, 90-, and 180-day averaging periods reasonably balances those concerns. As discussed later in my Sworn Statement, however, to the extent the averaging conventions include periods during which utility stocks were valued at unusually high levels, Discounted Cash Flow-based methods may provide unreasonably low results.

Q. DID YOU MAKE ANY ADJUSTMENTS TO THE DIVIDEND YIELD TO ACCOUNT FOR PERIODIC GROWTH IN DIVIDENDS?

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 calculate the expected dividend yield by applying one-half of the long-term growth rate to the current dividend yield.[13] That adjustment ensures that the expected dividend yield is,

[13] *See* Exhibit No.___(RBH-1).

on average, representative of the coming twelve-month period, and does not overstate the dividends to be paid during that time.

Q. IS IT IMPORTANT TO SELECT APPROPRIATE MEASURES OF LONG-TERM GROWTH IN APPLYING THE DCF MODEL?

A. Yes. In its Constant Growth form, the DCF model (*i.e.*, as presented in Equation [2] above) assumes a single growth estimate in perpetuity. Accordingly, in order to reduce the long-term growth rate to a single measure, one must assume a fixed payout ratio, and the same constant growth rate for earnings per share ("EPS"), dividends per share, and book value per share. Because dividends are sustained by earnings growth, the model should incorporate a variety of measures of long-term earnings growth. That can be accomplished by averaging those measures of long-term growth that tend to be least influenced by capital allocation decisions that companies may make in response to near-term changes in the business environment. Because such decisions may directly affect near-term dividend payout ratios, estimates of earnings growth are more indicative of long-term investor expectations than are dividend growth estimates. Therefore, for the purposes of the Constant Growth DCF model, growth in EPS represents the appropriate measure of long-term growth.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 25 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 26 of 182

Q. PLEASE SUMMARIZE THE FINDINGS OF ACADEMIC RESEARCH ON THE APPROPRIATE MEASURE FOR ESTIMATING EQUITY RETURNS USING THE DCF MODEL.

A. The relationship between various growth rates and stock valuation metrics has been the subject of much academic research.[14] As noted over 40 years ago by Charles Phillips in The Economics of Regulation:

> 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 per share earnings, so that the earnings-price ratio has assumed increased emphasis in rate cases.[15]

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.[16] 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."[17] Other research specifically notes the importance of analysts' growth estimates in determining the Cost of Equity, and in the valuation of equity securities. Dr.

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

[15] Charles F. Phillips, Jr., The Economics of Regulation, Revised Edition, 1969, Richard D. Irwin, Inc., at 285.

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

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

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."[18] 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."[19]

To that point, the research of Carleton and Vander Weide demonstrates earnings growth projections have a statistically significant relationship to stock valuation levels, while dividend growth projections do not. Those findings suggest investors form their investment decisions based on expectations of growth in earnings, not dividends. Consequently, earnings growth rather than dividend growth is the appropriate estimate for the purpose of the Constant Growth DCF model.

Q. PLEASE SUMMARIZE YOUR INPUTS TO THE CONSTANT GROWTH DCF MODEL.

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:

1. The average daily closing prices for the 30-trading days, 90-trading days, and 180-trading days ended October 31, 2017, for the term P_0; and
2. The annualized dividend per share as of October 31, 2017, for the term D_0.

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

[19] 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.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 27 of 182

I then calculated my DCF results using each of the following growth terms:

1. The Zacks consensus long-term earnings growth estimates;
2. The First Call consensus long-term earnings growth estimates; and
3. The Value Line long-term earnings growth estimates.

Q. HOW DID YOU CALCULATE THE HIGH AND LOW DCF RESULTS?

A. I calculated the proxy group mean and median high DCF results using the maximum EPS growth rate as reported by Value Line, Zack's, and First Call for each proxy group company in combination with the dividend yield for each of the proxy group companies. The proxy group mean and median high results then reflect the average maximum DCF result for the proxy group as a whole. I used a similar approach to calculate the proxy group mean and median low results using instead the minimum growth rate as reported by Value Line, Zack's, and First Call for each proxy group company.

As noted earlier, the Constant Growth DCF model is subject to several assumptions that likely are not consistent with current market conditions. For example, the model assumes the current payout ratio will remain constant in perpetuity, even though (on average, across the proxy companies) it has fallen below long-term levels. The model further assumes the return estimated today will be the same return required at all times in the future, even though the Federal Reserve only recently has begun its move toward monetary policy normalization. That process of normalization, together with the uncertainty surrounding the "unwinding" of the assets put on the Federal Reserve's balance sheet during its "Quantitative Easing" initiatives, introduce a degree of risk, and a likelihood of increasing interest rates not present in the current market. As also discussed later in my Sworn Statement, other methods more directly reflect the risk premium required

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 28 of 182

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.

Q. WHAT ARE THE RESULTS OF YOUR DCF ANALYSIS?

A. My Constant Growth DCF results are summarized Table 3, below (*see* Exhibit No.___(RBH-1).

Table 3: Constant Growth DCF Results

	Mean Low	***Mean***	***Mean High***
30-Day Average	7.76%	8.54%	9.34%
90-Day Average	7.80%	8.58%	9.37%
180-Day Average	7.86%	8.64%	9.43%

Q. HOW DID YOU REFLECT THE CONSTANT GROWTH DCF RESULTS IN YOUR ROE RANGE AND RECOMMENDATION?

A. 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 1,373 vertically-integrated electric utility rate cases provided by Regulatory Research Associates that disclosed the awarded ROE since 1980, none are below 9.00 percent.[20] On that basis alone, the mean and mean low results are highly improbable.

I then considered why the Constant Growth model is producing such low estimates of the Company's Cost of Equity. In one sense, relatively low dividend yields should be associated with relatively high growth rates. That is, low dividend yields are the result of relatively high stock prices which, in turn, should be associated with relatively high growth

[20] Source: Regulatory Research Associates. By reference to authorized returns, the Mean High results also are low.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 29 of 182

rates. If those relationships do not hold, the model's results should be viewed with caution. My recommendation therefore considers the full range of DCF results, along with the range of results from the methods discussed in the following sections of my Sworn Statement.

Multi-Stage DCF Model

Q. IS IT REASONABLE TO CONSIDER ANALYTICAL MODELS IN ADDITION TO THE CONSTANT GROWTH DCF MODEL?

A. Yes. First, as noted earlier, 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. Second, the Constant Growth DCF model assumes that earnings, dividends and book value will grow at the same, constant rate in perpetuity; that the payout ratio will remain constant in perpetuity; that the Price/Earnings ("P/E") ratio will remain constant; and that the return required today will be the same return required every year in the future. However, those assumptions are not likely to hold. In particular, it is likely that over time, payout ratios will increase from their current levels. In addition, to the extent that long-term interest rates increase over the next few years, it is likely that the Cost of Equity also will increase. It therefore is appropriate to consider more than one analytical model in estimating the ROE.

Q. WHAT OTHER FORM OF THE DCF MODEL HAVE YOU USED?

A. To address the considerations underlying the Constant Growth form of the DCF model discussed above, I also considered the Multi-Stage (three-stage) Discounted Cash Flow 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 (*i.e.*, time periods). As with the Constant Growth form of the DCF model, the Multi-Stage form defines the Cost

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 30 of 182

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. As such, the Multi-Stage DCF model enables analysts to address the limiting, and likely unrealistic, assumptions underlying the Constant Growth form of the model.

Q. PLEASE DESCRIBE THE STRUCTURE OF YOUR MULTI-STAGE MODEL.

A. As noted above, the model sets the subject company's stock price equal to the present value of future cash flows received over three "stages." 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, 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 4 (below).

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 31 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 32 of 182

Table 4: Multi-Stage DCF Model Structure

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

Q. WHAT ARE THE ANALYTICAL BENEFITS OF YOUR THREE-STAGE MODEL?

A. The primary 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 and the 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.[21]

The model also enables an assessment of 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 "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.

Q. PLEASE SUMMARIZE YOUR INPUTS TO THE MULTI-STAGE DCF MODEL.

A. I applied the Multi-Stage model to the proxy group described earlier in my Sworn Statement. My assumptions with respect to the various model inputs are described in Table 5 (below).

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

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 33 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 34 of 182

1 **Table 5: Multi-Stage DCF Model Assumptions**

	Stage			
	Initial	**First**	**Transition**	**Terminal**
Stock Price	30-, 90-, and 180-day average stock price as of October 31, 2017			
Earnings Growth	2016 actual EPS escalated by Period 1 growth rate	EPS growth as average of (1) Value Line; (2) Zacks; (3) First Call growth rates	Transition to Long-term GDP growth	Long-term GDP growth
Payout Ratio		Value Line company-specific	Transition to long-term industry payout ratio	Long-term industry average payout ratio
Terminal Value				Expected dividend in final year divided by solved Cost of Equity less long-term growth rate

2

3 **Q. HOW DID YOU CALCULATE THE LONG-TERM GDP GROWTH RATE?**

4 A. The long-term growth rate of 5.37 percent is based on the real GDP growth rate of
5 3.22 percent from 1929 through 2016, and an inflation rate of 2.08 percent. The GDP
6 growth rate is calculated as the compound growth rate in the chain-weighted GDP for the
7 period from 1929 through 2016.[22] The rate of inflation of 2.08 percent is an average of

[22] *See* Bureau of Economic Analysis, "Current-Dollar and 'Real' Gross Domestic Product," October 27, 2017 update.

two components: (1) the compound annual forward rate starting in ten years (*i.e.*, 2027, 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 1.95 percent;[23] and (2) the projected Blue Chip Financial Forecast of CPI for 2024 – 2028 of 2.20 percent.[24]

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. I also performed a series of analyses in which the terminal value is based on the current 30-day average P/E ratio for the proxy group.

Q. WHAT WERE YOUR SPECIFIC ASSUMPTIONS WITH RESPECT TO THE PAYOUT RATIO?

A. As noted in Table 5, for the first two periods I relied on the first year and long-term projected payout ratios reported by Value Line for each of the proxy companies.[25] 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 long-term industry average of 65.91 percent.[26]

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[23] *See* Board of Governors of the Federal Reserve System, "Table H.15 Selected Interest Rates."

[24] Blue Chip Financial Forecasts, June 1, 2017, at 14.

[25] As reported in the Value Line Investment Survey as "All Div'ds to Net Prof." Please note that Value Line is a source frequently relied upon in rate proceedings, and is the only source that consistently provides intermediate-term payout ratio projections.

[26] Source: Bloomberg Professional.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 35 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 36 of 182

Q. PLEASE SUMMARIZE THE RESULTS OF YOUR MULTI-STAGE DCF ANALYSES.

A. Tables 6a and 6b (below) presents the results of the Multi-Stage DCF analyses (*see also* Exhibit No.___(RBH-2)).

Table 6a: Multi-Stage Discounted Cash Flow Model Results

	Low	***Mean***	***High***
30-Day Average	8.56%	8.73%	8.91%
90-Day Average	8.60%	8.77%	8.96%
180-Day Average	8.66%	8.64%	9.02%

Table 6b: Multi-Stage Discounted Cash Flow Model Results Current P/E Ratio

	Low	***Mean***	***High***
30-Day Average	9.77%	10.23%	10.71%
90-Day Average	9.80%	10.36%	10.83%
180-Day Average	10.06%	10.52%	11.00%

Q. DID YOU UNDERTAKE ANY ADDITIONAL ANALYSES TO SUPPORT YOUR RECOMMENDATION?

A. Yes. As noted earlier, I also applied the CAPM and Risk Premium analysis in estimating the Company's Cost of Equity.

CAPM Analysis

Q. PLEASE BRIEFLY DESCRIBE THE GENERAL FORM OF THE CAPM ANALYSIS.

A. The CAPM analysis is a risk premium approach 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:

$$k = r_f + \beta(r_m - r_f) \quad [3]$$

Where:

k = the required market ROE;

β = Beta coefficient of an individual security;

r_f = the risk-free rate of return; and

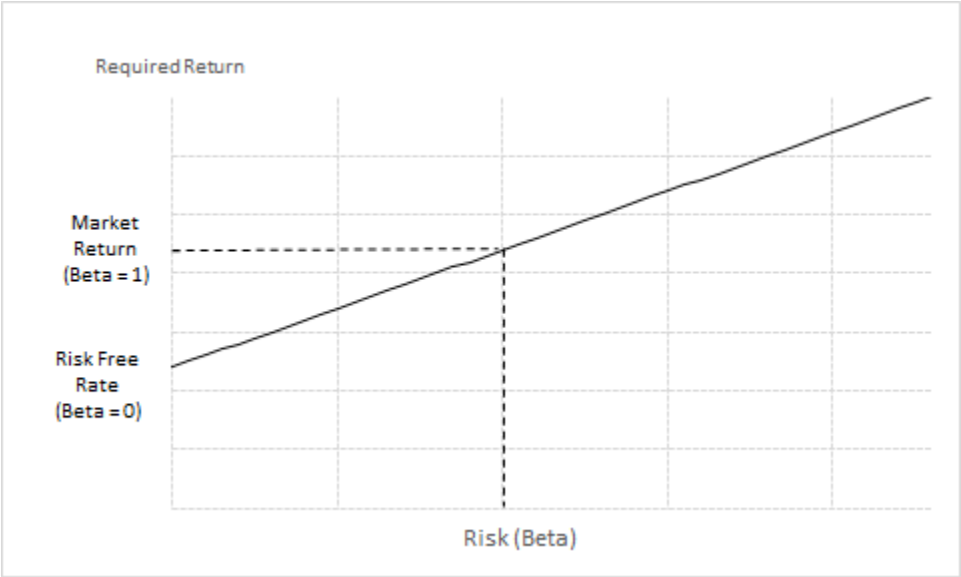
r_m = the required return on the market as a whole.

Equation [3] describes the Security Market Line ("SML"), or the CAPM risk-return relationship, which is graphically depicted in Chart 1 below. The intercept is the risk-free rate (r_f), which has a Beta coefficient of zero, and the slope is the expected Market Risk Premium ($r_m - r_f$). By definition, r_m (the return on the market) has a Beta coefficient of 1.00. Under the CAPM, the expected Equity Risk Premium for a given security is proportional to its Beta coefficient.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 37 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 38 of 182

Chart 1: Security Market Line



In Equation [3], the term $(r_m - r_f)$ represents the Market Risk Premium.[27] According to the theory underlying the CAPM, because unsystematic risk can be diversified away by adding securities to investment portfolios, the market will not compensate investors for bearing that risk. Therefore, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

$$\beta_j = \frac{\sigma_j}{\sigma_m} \text{ x } \rho_{j,m} \quad \text{Equation [4]}$$

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.

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

Intuitively, companies with higher Beta coefficients have had more volatile returns, and have moved more closely with the overall market than companies with lower Beta coefficients. The implication is that a company with a Beta coefficient of 1.00 is as risky as the overall market; companies with Beta coefficients less than 1.00 are less risky, and those whose Beta coefficients are greater than 1.00 have greater risk than the overall market.

Q. WHAT ASSUMPTIONS DID YOU INCLUDE IN YOUR CAPM ANALYSIS?

A. Because utility assets represent long duration investments, I used two different measures of the risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds (2.86 percent); and (2) the projected 30-year Treasury yield (3.32 percent).

Q. WHY HAVE YOU RELIED ON THE 30-YEAR TREASURY YIELD FOR YOUR CAPM ANALYSIS?

A. In determining the risk-free rate, it is important to select the term (or maturity) that best matches the life of the underlying investment. Electric utilities typically are long-duration investments and as such, the 30-year Treasury yield is most suitable for the purpose of calculating the Cost of Equity.

Q. PLEASE DESCRIBE YOUR *EX-ANTE* (*I.E.*, FORWARD-LOOKING) APPROACH TO ESTIMATING THE MARKET RISK PREMIUM.

A. The approach is based on the market required return, less the current 30-year Treasury yield. To estimate the market required return, I calculated the market capitalization weighted average ROE based on the Constant Growth DCF model. To do so, I relied on data from two sources: (1) Bloomberg; and (2) Value Line. With respect to Bloomberg-derived growth estimates, I calculated the expected dividend yield (using the

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 39 of 182

same one-half growth rate assumption described earlier) and combined that amount with the projected earnings growth rate to arrive at the market capitalization weighted average DCF result. I performed that calculation for each of the S&P 500 companies for which Bloomberg provided consensus growth rates. I then subtracted the current 30-year Treasury yield from that amount to arrive at the market DCF-derived *ex-ante* market risk premium estimate. In the case of Value Line, I performed the same calculation, again using all companies for which five-year earnings growth rates were available. The results of those calculations are provided in Exhibit No.___(RBH-3).

Q. HOW DID YOU APPLY YOUR EXPECTED MARKET RISK PREMIUM AND RISK-FREE RATE ESTIMATES?

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.

Q. WHAT BETA COEFFICIENT DID YOU USE IN YOUR CAPM MODEL?

A. As shown in Exhibit No.___(RBH-4), I considered Beta coefficients reported by two sources, Bloomberg and Value Line. Although both services adjust their calculated (or "raw") Beta coefficients to reflect the tendency to regress to the market mean of 1.00, Value Line calculates the Beta coefficient over a five-year period, whereas Bloomberg's calculation is based on two years of data.

Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A. As shown in Table 7 (below) the CAPM analyses suggest an ROE range of 9.19 percent to 11.31 percent (*see also* Exhibit No.___(RBH-5)).

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 40 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 41 of 182

Table 7: Summary of CAPM Results[28]

	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
Average Bloomberg Beta Coefficient		
Current 30-Year Treasury (2.86%)	9.19%	9.29%
Near Term Projected 30-Year Treasury (3.32%)	9.65%	9.74%
Average Value Line Beta Coefficient		
Current 30-Year Treasury (2.86%)	10.74%	10.86%
Near Term Projected 30-Year Treasury (3.32%)	11.19%	11.31%

Bond Yield Plus Risk Premium Approach

Q. PLEASE GENERALLY DESCRIBE THE BOND YIELD PLUS RISK PREMIUM APPROACH.

A. This approach is based on the basic financial principle that because equity investors bear the residual risk associated with ownership, they require a premium over the return they would have earned as a bondholder. That is, because 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, because 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-*

[28] *See* Exhibit No.___(RBH-5).

post, estimates. An alternative approach is to use actual authorized returns for electric utilities to estimate the Equity Risk Premium.

Q. PLEASE EXPLAIN HOW YOU PERFORMED YOUR BOND YIELD PLUS RISK PREMIUM ANALYSIS.

A. As suggested above, I first defined the Risk Premium as the difference between the authorized ROE and the then-prevailing level of the long-term (*i.e.*, 30-year) Treasury yield. I then gathered data for 1,526 electric utility rate proceedings between January 1980 and October 31, 2017. 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"). 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 covers a number of economic cycles,[29] 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.[30] That is, as interest rates fall, the Equity Risk Premium increases. That finding is particularly relevant given the low level of current Treasury yields relative to other measures of equity risk discussed later in my Sworn Statement.

[29] *See* National Bureau of Economic Research, U.S. Business Cycle Expansion and Contractions.

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

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 42 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 43 of 182

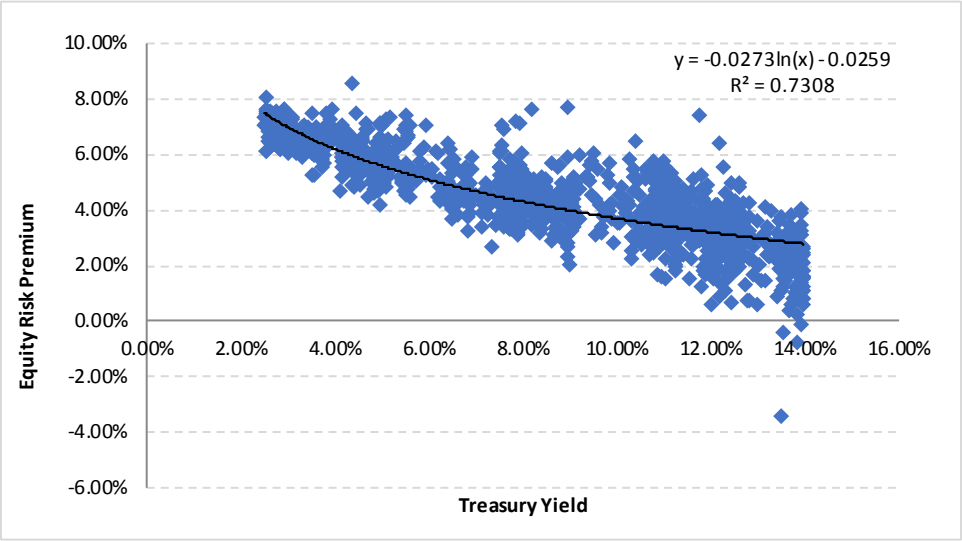
Q. HOW DID YOU MODEL THE RELATIONSHIP BETWEEN INTEREST RATES AND THE EQUITY RISK PREMIUM?

A. 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:

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

As shown on Chart 2 (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 2: Equity Risk Premium



As Chart 2 illustrates, the Equity Risk Premium increases as interest rates fall. The finding – that there is an inverse relationship between interest rates and the Equity Risk Premium

– is supported by published research. For example, Dr. Roger Morin notes that: "… [p]ublished studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and Lakonishok (1983), Morin (2005), and McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates - rising when rates fell and declining when interest rates rose."[31] Consequently, simply applying the long-term average Equity Risk Premium of 4.59 percent would significantly understate the Cost of Equity and produce results well below any reasonable estimate. Based on the regression coefficients in Chart 2, however, the implied ROE is between 9.97 percent and 10.33 percent (*see* Table 8 below and Exhibit No.___(RBH-6)).

Table 8: Summary of Bond Yield Plus Risk Premium Results

	Return on Equity
Current 30-Year Treasury (2.86%)	9.97%
Near-Term Projected 30-Year Treasury (3.32%)	10.02%
Long-Term Projected 30-Year Treasury (4.40%)	10.33%

VII. CAPITAL MARKET ENVIRONMENT

Q. DO ECONOMIC CONDITIONS INFLUENCE THE REQUIRED COST OF CAPITAL AND REQUIRED RETURN ON COMMON EQUITY?

A. Yes. As discussed in Section VI, the models used to estimate the Cost of Equity are meant to reflect, and therefore are influenced by, current and expected capital market conditions. As such, it is important to assess the reasonableness of any financial model's results in the context of observable market data. To the extent certain ROE estimates are

[31] Roger A: Morin, New Regulatory Finance, Public Utilities Reports, Inc. 2006, at 128 [clarification added]

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 44 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 45 of 182

1 incompatible with such data or inconsistent with basic financial principles, it is appropriate
2 to consider whether alternative estimation techniques are likely to provide more
3 meaningful and reliable results.

4 **Q. DO YOU HAVE ANY GENERAL OBSERVATIONS REGARDING THE**
5 **RELATIONSHIP BETWEEN FEDERAL RESERVE MONETARY POLICY,**
6 **CAPITAL MARKET CONDITIONS, AND THE COMPANY'S COST OF**
7 **EQUITY?**

8 A. Yes, I do. Much has been reported about the Federal Reserve's Quantitative Easing
9 policy and its effect on interest rates. Although the Federal Reserve completed its
10 Quantitative Easing initiative in October 2014, it was not until December 2015 that it raised
11 the Federal Funds rate, and began the process of rate normalization.[32] Therefore, a
12 significant issue is how investors will react as that process continues, and eventually is
13 completed. A viable outcome is that investors will perceive greater prospects of
14 macroeconomic growth, which will increase the growth rates included in the Constant
15 Growth DCF model. At the same time, higher growth and the absence of Federal market
16 intervention could provide the opportunity for interest rates to increase, thereby increasing
17 the dividend yield portion of the DCF model. In that case, both terms of the Constant
18 Growth DCF model would increase, producing increased ROE estimates.

19 As noted below, market-based data indicate that investors see a probability of
20 increasing interest rates. Because those dynamics affect different models in different ways,
21 it would be inappropriate to rely on a single method to estimate the Company's Cost of
22 Equity. A more reasoned approach is to understand the relationships among Federal

[32] *See* Federal Reserve Press Release (December 16, 2015).

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 Sworn Statement, 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.

A. Beginning in 2008, the Federal Reserve proceeded on a steady path of initiatives intended to lower long-term Treasury yields.[33] 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."[34] Under that policy, "Securities held outright" on the Federal Reserve's balance sheet increased from approximately $489 billion at the beginning of October 2008 to $4.25 trillion by the end of October 2017.[35] 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 22.07 percent of GDP in October 2017.[36] As such, the Federal Reserve provided a significant source of liquidity, and had a substantial effect on capital markets.

[33] *See* Federal Reserve Press Release, dated June 19, 2013.

[34] Federal Reserve Bank of New York, Domestic Open Market Operations During 2012, April 2013, at 29.

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

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

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 46 of 182

Q. DOES YOUR RECOMMENDATION CONSIDER THE INTEREST RATE ENVIRONMENT?

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 made. Although all analyses require an element of judgment, the application of that judgment must be consistent with 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 relatively low and will remain at that level. 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 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

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 47 of 182

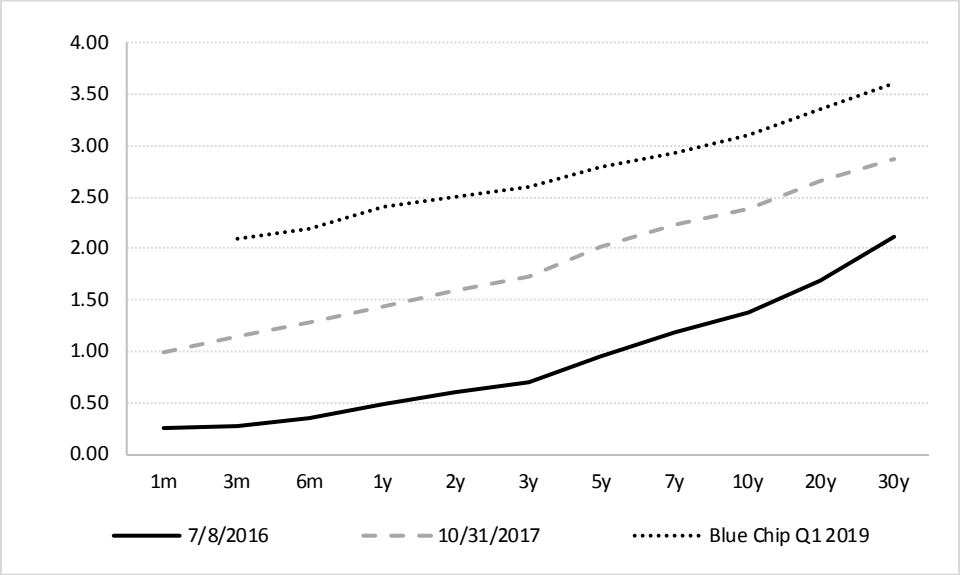
rates, they have maintained below-normal rates to stimulate economic expansion and capital market recovery. It therefore is reasonable to conclude that the Federal Reserve and other central banks have been acting as market-movers, thereby having a significant effect on the market prices of both bonds 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 over the past several years, rates have risen since July 8, 2016 (when the 30-year Treasury yield hit an all-time low of 2.11 percent). As the Federal Reserve increased the Federal Funds target rate by 25 basis points in December 2016 (from 0.25 percent - 0.50 percent to 0.50 percent - 0.75 percent), March 2017 (to 0.75 percent - 1.00 percent) and June 2017 (to 1.00 percent – 1.25 percent), short-term and long-term interest rates increased by a corresponding amount (*see* Chart 3 below).[37]

[37] Federal Reserve Board Schedule H.15. Six-month and 1-year Treasury yields increased by 92 basis points and 95 basis points, respectively, July 8, 2016 to October 31, 2017. The 10-year and 30-year Treasury yields increased by 101 basis points and 77 basis points, respectively, by October 31, 2017.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 48 of 182

Chart 3: Treasury Yield Curve: 7/8/2016, 10/31/2017 and Projected Q1 2019[38]



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."[39] 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.[40] At the same time, the Federal Reserve will continue to consider increases to the Federal Funds target rate. As noted below, current market data indicate an approximately 100.00 percent likelihood of further rate increases by January 2018.

[38] Federal Reserve Board Schedule H.15; Blue Chip Financial Forecasts, Vol. 36, No. 11, November 1, 2017, at 2. Three-year, 7-year and 20-year projected Treasury yields interpolated.

[39] Federal Reserve Press Release, September 20, 2017.

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

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 49 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 50 of 182

Q. DOES MARKET-BASED DATA INDICATE THAT INVESTORS SEE A PROBABILITY OF INCREASING 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 that investors expect long-term interest rates to increase. Similarly, investors' expectations for increased long-term Treasury yields are apparent in the prices investors are willing to pay today for the option to buy or sell long-term Government bonds, at today's price, in the future. Because the value of bonds falls as interest rates increase, the option to sell bonds at today's price becomes more valuable when interest rates are expected to increase.[41] Currently, option prices show that investors are willing to pay about 30.00 percent more for the option to sell bonds in the future (at today's price) than they are willing to pay for the option to buy those bonds.[42] That market-based data tells us that investors consider an increase in interest rates as likely.

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 three increases between December 14, 2016 and June 14, 2017. As shown in Table 9, (below) the market is now anticipating at least one additional rate hike (100.00 percent probability) and possibly two or more (86.80 percent) by November 2018.

[41] In other words, if there is a high probability that interest rates will increase and bond prices will fall, there is value in the option to sell those bonds in the future at today's price. Conversely, if there is a strong probability that interest rates will decrease (price of bonds will increase), there is value in the option to buy those bonds in the future at today's price.

[42] The option to sell the TLT index in January 2020 at today's price is approximately 1.30 times the value of the option to buy the fund. Source: http://www.nasdaq.com/symbol/tlt/option-chain?dateindex=7.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 51 of 182

Table 9: Probability of Federal Funds Rate Increases[43]

Target Rate (bps)	Federal Reserve Meeting Date							
	12/13/17	1/31/18	3/21/18	5/2/18	6/13/18	8/1/18	9/26/18	11/8/18
100-125	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
125-150	91.5%	89.6%	49.2%	46.2%	25.4%	23.4%	12.9%	13.2%
150-175	8.5%	10.2%	46.0%	46.2%	46.2%	44.5%	35.9%	35.3%
175-200		0.2%	4.7%	7.3%	24.8%	26.5%	34.8%	34.0%
200-225			0.1%	0.4%	3.5%	5.2%	13.9%	14.4%
225-250					0.2%	0.4%	2.2%	2.8%
250-275							0.2%	0.3%

Lastly, we can view the market's expectations of future interest rates based on the current yield curve. Those expected rates, often referred to as "forward yields" are derived from the "Expectations" theory, which states that (for example) the current 30-year Treasury yield equals the combination of the current one-year Treasury yield, and the 29-year Treasury yield expected in one year. That is, an investor would be indifferent to (1) holding a 30-year Treasury to maturity, or (2) holding a one-year Treasury to maturity, then a 29-year Treasury bond, also to maturity.[44] Chart 4, below, shows the difference between the forward and spot Treasury yields over time. As Chart 4 indicates, since 2006 the implied forward 29- and 28- year yields (one and two years hence, respectively) consistently exceeded the (interpolated) spot yields. That is, just as economists' projections implied increased interest rates, so did observable Treasury yields.

[43] Source: http://www.cmegroup.com/trading/interest-rates/countdown-to-fomc.html, accessed November 20, 2017.

[44] In addition to the Expectations theory, there are other theories regarding the term structure of interest rates including: the Liquidity Premium Theory, which asserts that investors require a premium for holding long term bonds; the Market Segmentation Theory, which states that securities of different terms are not substitutable and, as such, the supply of and demand for short-term and long-term instruments is developed independently; and the Preferred Habitat Theory, which states that in addition to interest rate expectations, certain investors have distinct investment horizons and will require a return premium for bonds with maturities outside of that preference.

Chart 4: Forward vs. Interpolated Treasury Yields[45]

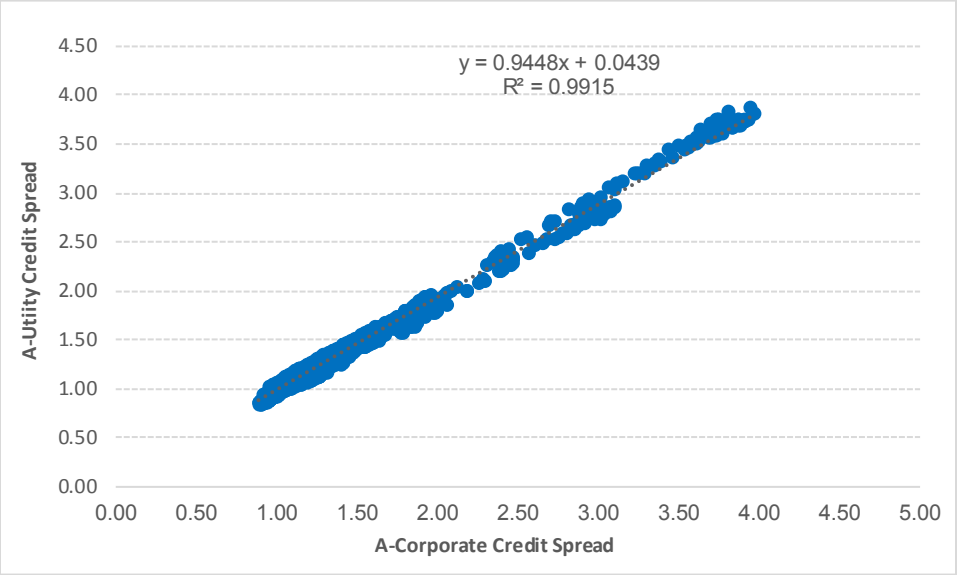
Q. HAVE YOU ALSO REVIEWED THE RELATIONSHIP BETWEEN CREDIT SPREADS FOR A-RATED UTILITY DEBT RELATIVE TO A-RATED CORPORATE DEBT?

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

[45] Source: Federal Reserve Schedule H.15. Spot yields are interpolated.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 52 of 182

Chart 5: Corporate and Utility Credit Spreads (A-Rated)[46]



Q. WHAT DO YOU CONCLUDE FROM THOSE ANALYSES?

A. First, interest rates clearly have increased from the low levels experienced in early 2016. Second, market-based data indicate investors' expectations of rising interest rates in the near- and longer-term. The observation that interest rates have increased indicates that the financial community sees the strong prospect of increased growth throughout the economy. As that occurs, and as interest rates continue to rise, it would be reasonable to expect lower utility valuations, higher dividend yields, and higher growth rates. In the context of the Discounted Cash Flow model, those variables would combine to indicate increases in the Cost of Equity.

Although the market data discussed above indicate increasing costs of capital, it is important to keep in mind that estimating the Cost of Equity is an empirical exercise, but rote application of a specific form of an analysis, or the mechanical use of specific model

[46] Source: Federal Reserve Schedule H.15.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 53 of 182

inputs, may well produce misleading results. The methods used to estimate the Cost of Equity, or the weight given to any one method, may change from case to case; and that the returns authorized in other jurisdictions provide a relevant, observable, and verifiable benchmark for assessing the reasonableness of analytical assumptions, results, and conclusions.

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, 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.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 54 of 182

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 VI, on balance, the DCF-based results should be viewed very carefully, and that somewhat more weight should be afforded the Risk Premium-based methods. Doing so results in a recommended range of 10.25 percent to 11.00 percent, with my ROE estimate of 10.75 percent falling at the mid-point of that range.

VIII. *PRO FORMA* EFFECT OF ORS'S REQUEST ON THE COMPANY'S EARNED RETURN ON COMMON EQUITY

Q. AS A PRELIMINARY MATTER, WHAT IS THE RELATIONSHIP BETWEEN THE MARKET-REQUIRED RETURN ON EQUITY DISCUSSED EARLIER IN YOUR SWORN STATEMENT, AND THE EARNED RETURN ON EQUITY CALCULATED IN YOUR *PRO FORMA* ANALYSES?

A. The market-required return measures the return investors require if they are to invest in the equity of a company comparable to SCE&G. As a matter of ratemaking, that return is applied to the book value of common equity to develop the return portion of the overall revenue requirement. For the purpose of this analysis, I therefore assumed that the market-required ROE is the same as earned Return on Common Equity.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 55 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 56 of 182

Q. PLEASE NOW SUMMARIZE YOUR ANALYSIS OF THE *PRO FORMA* EFFECT OF ORS'S REQUEST.

A. As noted in Section II, my analysis is structured to estimate the effect of ORS's Request on the Company's expected Return on Common Equity. To do so, I began with the Company's "As Adjusted" South Carolina Retail Operating Revenues and Expenses for the twelve months ended September 2017, and replicated its reported 8.39 percent Return on Equity.[47] Having done so, I calculated the *pro forma* effect of ORS's Request on the Company's (September 2017) earned return and compared those results to those reported in Mr. Byron Hinson's October 31, 2017 Affidavit, which was previously filed in this proceeding. As Mr. Hinson noted, the effect is significant and material: the *pro forma* earned Return on Common Equity falls to about 3.40 percent.

Q. BASED ON THE COMPANY'S SEPTEMBER 2017 FINANCIAL STATEMENTS, WHAT WAS ITS EARNED RETURN ON COMMON EQUITY?

A. The South Carolina retail jurisdictional earned return on equity was 8.39 percent. That return assumes a capital structure of 47.82 percent long-term debt, a 5.86 percent cost of debt, and an equity ratio of 52.18 percent.[48] As a point of reference, the jurisdictional earned ROE was 236 basis points below the 10.75 percent estimated ROE, and 253 basis points above the 5.86 percent embedded cost of debt.

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[47] Source: Quarterly Report for South Carolina Electric & Gas Company, Electric Retail Operations for the twelve months ended September 30, 2017.

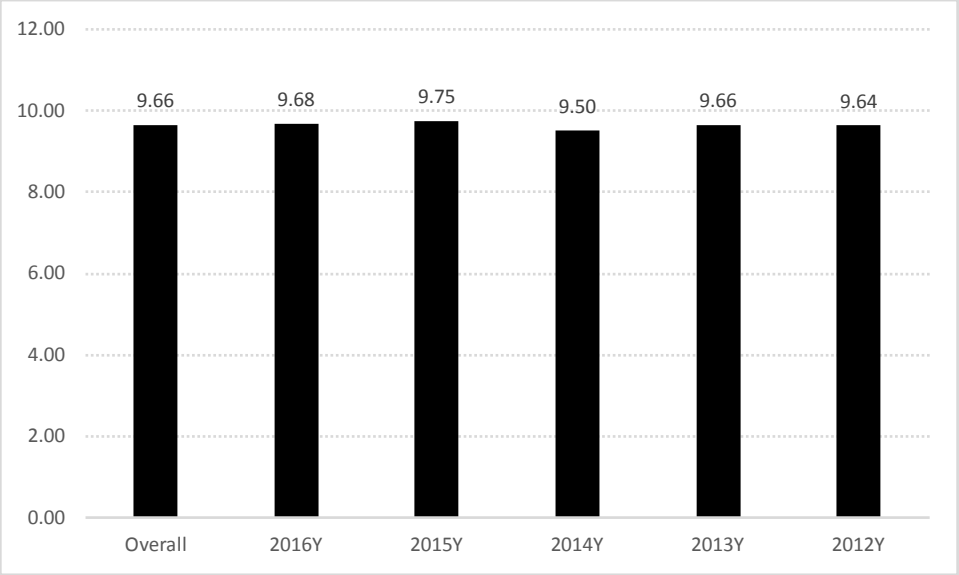
[48] *Ibid*.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 57 of 182

Q. HOW DOES THE COMPANY'S EARNED RETURN COMPARE TO THOSE OF THE UTILITY OPERATING COMPANIES HELD WITHIN YOUR PROXY GROUP?

A. As Chart 6 (below) demonstrates, since 2012 the median earned Return on Average Common Equity among the operating companies within the proxy group was in the range of 9.50 percent to 9.75 percent.

Chart 6: Operating Utility Median Earned Return on Average Common Equity (%)[49]



Q. WHAT IS THE *PRO FORMA* EFFECT OF ORS'S REQUEST ON THE COMPANY'S EARNED RETURN ON COMMON EQUITY?

A. As discussed in Mr. Hinson's Affidavit, the effect of excluding approximately $413 million in revenue is to reduce the Company's Return on Equity to approximately 3.40 percent. As noted above, the median earned return for comparable vertically integrated

[49] Source: S&P Global Market Intelligence

electric utilities has been about 9.66 percent, or 625 basis points greater than the 3.40 percent *pro forma* return.

Q. HAVE YOU ALSO REVIEWED EQUITY RETURNS THAT HAVE BEEN AUTHORIZED FOR VERTICALLY INTEGRATED ELECTRIC UTILITIES?

A. Yes, I have. From January 2014 through November 2017, the mean and median authorized equity return for vertically integrated electric utilities were 9.85 percent and 9.80 percent, respectively.[50] Similar to the earned returns noted above, authorized returns have been about 640 to 645 basis points above the 3.40 percent *pro forma* return.

Q. ARE AUTHORIZED RETURNS, AND THE REGULATORY ENVIRONMENT IN WHICH THEY ARE DETERMINED, IMPORTANT TO INVESTORS AND THE FINANCIAL COMMUNITY?

A. Yes, they are. Any operating utility's credit rating and outlook depend substantially on the extent to which rating agencies view the regulatory environment credit supportive, or not. Moody's, for example, finds the regulatory environment to be so important that 50.00 percent of the factors that weigh in its ratings determination are determined by the nature of regulation.[51] Given the capital-intensive nature of utility operations, the corresponding need to access external capital, and the weight rating agencies place on the nature of the regulatory environment, it is important to consider the extent to which the jurisdictions that recently have authorized ROEs for electric utilities are viewed as having constructive regulatory environments.

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[50] *Ibid*.

[51] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, December 23, 2017, at 6.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 58 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 59 of 182

Q. HAS SOUTH CAROLINA GENERALLY BEEN VIEWED AS HAVING A CONSTRUCTIVE REGULATORY ENVIRONMENT?

A. Yes, it has. Regulatory Research Associates ("RRA"), which is a widely referenced source of rate case data, provides an assessment of the extent to which regulatory jurisdictions are constructive from investors' perspectives, or not. As RRA explains, less constructive environments are associated with higher levels of risk:

> RRA maintains three principal rating categories for regulatory climates: Above Average, Average, and Below Average. Within the principal rating categories, the numbers 1, 2, and 3 indicate relative position. The designation 1 indicates a stronger rating; 2, a mid-range rating; and, 3, a weaker rating. The evaluations are assigned from an investor perspective and indicate the relative regulatory risk associated with the ownership of securities issued by the jurisdiction's utilities. The evaluation reflects our assessment of the probable level and quality of the earnings to be realized by the state's utilities as a result of regulatory, legislative, and court actions.[52]

Until recently, RRA ranked South Carolina as "Average/1", which falls in the top one-third of the 53 regulatory commissions ranked by it. In early October 2017, RRA reduced South Carolina's ranking to "Average/2", due to the "heightened risk surrounding the recovery of the nuclear costs." [53]

Q. DID YOU CONSIDER THOSE DISTINCTIONS IN YOUR REVIEW OF AUTHORIZED RETURNS RELATIVE TO THE *PRO FORMA* ROE?

A. Yes, I did. As Table 10 (below) indicates, authorized ROEs for vertically integrated electric utilities in jurisdictions rated Average/2 range from 9.20 percent to 10.10 percent; among those ranked Average/1 and higher (that is, South Carolina's ranking until October

[52] Source: Regulatory Research Associates, accessed November 29, 2017.

[53] *Ibid*.

2017) the range and median authorized returns are approximately 30 to 40 basis points higher.

Table 10: Average Authorized ROE by RRA Ranking[54]

	Authorized ROE (%) Vertically Integrated Electric Utilities		
RRA Ranking	Greater than Average/2	Average/2	Less than Average/2
Average	10.03	9.65	9.70
Median	10.04	9.64	9.50
Maximum	10.55	10.10	11.95
Minimum	9.50	9.20	9.30

Q. WHAT CONCLUSIONS DO YOU DRAW FROM THAT DATA?

A. Quite simply, even among the lowest-rated jurisdictions, the median authorized ROE is about 2.80 times greater than the 3.40 percent *pro forma* ROE.[55] Among the higher-ranked jurisdictions, the difference is nearly 300 percent (or 3.00 times).

Q. FROM A SOMEWHAT DIFFERENT PERSPECTIVE, HOW DOES THE 3.40 PERCENT ROE COMPARE TO THE MARGINAL COST OF DEBT FOR A AND BAA-RATED UTILITIES?

A. The average yield on the Moody's A-rated utility bond index during 2017 has been 4.04 percent; the yield on the Baa-rated index has been 4.42 percent. The *pro forma* ROE falls approximately 60 to 100 basis points below those yields for less risky debt capital.

[54] Source: Regulatory Research Associates.

[55] 9.50%≈ 2.8 x 3.40%.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 60 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 61 of 182

Q. WHY IS IT NOTABLE THAT THE *PRO FORMA* COST OF EQUITY FALLS BELOW THE COST OF DEBT?

A. As noted in Section IV, debt and equity are entirely different securities with different risk/return characteristics, different lives, and different investors. Debt investors have a contractual, priority claim on cash flows not available to equity investors and as such, equity investors bear the residual risk of ownership. Further, because the life of debt is finite, debt investors' exposure to business and financial risk likewise is finite. Equity, on the other hand is perpetual and as such, equity investors are exposed to residual risk in perpetuity. Because equity bears perpetual residual risk, it requires a return much greater than the cost of debt.

A visible measure of the difference in risks to which debt and equity investors are exposed is the difference in their respective Beta coefficients. As noted in Exhibit No.___(RBH-4), the average Beta coefficient for my proxy group is 0.703.[56] Duff & Phelps notes that as of December 2016, Beta coefficients for A-rated debt was negative 0.03.[57] That is, the Beta coefficients of A-rated debt are well below those of the equity Beta coefficients for electric utilities, indicating a far different risk profile. In fact, the debt Beta coefficients in the range of 0.70 are associated with Caa rated debt, well below investment grade.[58] Those substantial differences in Beta coefficients are clear indications that the risks assumed by debt investors are far different than those assumed by equity investors.

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[56] Based on Value Line Beta coefficients.

[57] Duff & Phelps 2017 Valuation Handbook, John Wiley & Sons, Inc., 2017, at Appendix 3b.

[58] *Ibid*. The reported Debt Beta coefficients for Baa-rated companies was 0.13.

Q. WHAT ARE THE IMPLICATIONS OF AN ROE BELOW THE MARGINAL COST OF DEBT?

A. It is not financially feasible, either in theory or in practice, for the Return on Equity to fall below the cost of debt on a sustained basis. In theory, that is the case simply because of the difference in risks faced by debt holders on the one hand, and equity investors on the other. In practice, no company would be able to raise equity on the basis of an expected return that is less than the cost of debt, because no investor would accept that risk/reward profile. Moreover, an ROE below the cost of debt places considerable doubt on the subject company's ability to service its debt. Under those circumstances, a highly likely outcome is extreme financial distress and ultimately, bankruptcy.

Q. YOU STATED EARLIER THAT, FOR THE PURPOSE OF YOUR ANALYSIS, YOU ASSUMED THE MARKET-BASED COST OF EQUITY EQUALS THE ACCOUNTING-BASED RETURN ON EQUITY. IF ORS'S REQUEST IS APPROVED, WOULD THAT ASSUMPTION HOLD?

A. No, it would not. Rather, the market-required Cost of Equity is likely to increase. Recall that (as discussed in Section V), the Cost of Equity is estimated by reference to a group of proxy companies. None of those companies has earned, or is expected to earn, an equity return less than their cost of debt. As noted above, we do know that the regulatory environment is important to both debt and equity investors. We also know that as the risk of financial distress increases (arising, for example, from an equity return well below the cost of debt), so does the market-required Return on Equity.

Thus, while I have not attempted to quantify how investors would react to a decision that is tantamount to authorizing an equity return of 3.40 percent, I do know, based on my

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 62 of 182

experience and research, that such a low return has never been authorized in the United States for an electric utility comparable to SCE&G.[59] What is clear and indisputable, however, is that the market-required Cost of Equity for SCE&G, if ORS's Request is granted, would be well above the 10.75 percent estimated Return on Equity set forth in this Sworn Statement.

Q. IN YOUR VIEW, IS AN EQUITY RETURN SO FAR BELOW THOSE AVAILABLE TO AND EARNED BY OTHER UTILITIES, AND LESS THAN THE COST OF DEBT (BOTH MARGINAL AND EMBEDDED) CONSISTENT WITH THE *HOPE* AND *BLUEFIELD* STANDARDS?

A. No, it would not meet those standards. Because ORS's Request, if granted, would result in the Company's allowed return on equity being reduced to a *pro forma* 3.40 percent, it would have equity investors earn a return below the cost of debt, below equity returns that have been earned by other utilities, and below the equity returns authorized for other utilities of comparable risk. Consequently, the *pro forma* return would fall far short of the "comparable risk" standard, which calls for equity investors to earn returns comparable to those on other investments of comparable risk. In my opinion, such a return is insufficient to assure confidence in the financial soundness of the utility, inadequate to maintain and support credit, and inadequate to enable the Company to raise the capital needed for the proper discharge of its utility obligations.

Based on my experience, and in my opinion, an equity return below the cost of debt is confiscatory on its face. Equity investors committed their capital based on the expectation of a return comparable to those available to other electric utilities. They

[59] Source: Regulatory Research Associates.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 63 of 182

certainly did not commit their capital with the expectation of a return lower than that which they would receive from investing in less risky debt. From the perspective of the investors that have supplied the capital required to fund the entirety of the Company's utility investments, a decision to impose an equity return below the cost of debt would be seen as severe, and a significant departure from the equity returns available on comparable investments. In that sense, it is my firmly held opinion that any decision by the Commission that results in the Company's ROE being reduced to 3.40 percent is confiscatory.

Q. DOES THIS CONCLUDE YOUR SWORN STATEMENT?

A. Yes, it does.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 64 of 182

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MANAGEMENT CONSULTANTS

Attachment A
Resume of:
Robert B. Hevert
Partner

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 65 of 182

Summary

Bob Hevert is a financial and economic consultant with more than 30 years of broad experience in the energy and utility industries. He has an extensive background in the areas of corporate finance, mergers and acquisitions, project finance, asset and business unit valuation, rate and regulatory matters, energy market assessment, and corporate strategic planning. He has provided expert testimony on a wide range of financial, strategic, and economic matters on more than 200 occasions at the state, provincial, and federal levels.

Prior to joining ScottMadden, Bob served as managing partner at Sussex Economic Advisors, LLC. Throughout the course of his career, he has worked with numerous leading energy companies and financial institutions throughout North America. He has provided expert testimony and support of litigation in various regulatory proceedings on a variety of energy and economic issues. Bob earned a B.S. in business and economics from the University of Delaware and an M.B.A. with a concentration in finance from the University of Massachusetts at Amherst. Bob also holds the Chartered Financial Analyst designation.

Areas of Specialization

- Regulation and rates
- Utilities
- Fossil/hydro generation
- Markets and RTOs
- Nuclear generation
- Mergers and acquisitions
- Regulatory strategy and rate case support
- Capital project planning
- Strategic and business planning

Recent Expert Testimony Submission/Appearance

- Federal Energy Regulatory Commission – Return on Equity
- New Jersey Board of Public Utilities – Merger Approval
- New Mexico Public Regulation Commission – Cost of Capital and Financial Integrity
- United States District Court – PURPA and FERC Regulations
- Alberta Utilities Commission – Return on Equity and Capital Structure

Recent Assignments

- Provided expert testimony on the cost of capital for ratemaking purposes before numerous state utility regulatory agencies, the Alberta Utilities Commission, and the Federal Energy Regulatory Commission
- For an independent electric transmission provider in Texas, prepared an expert report on the economic damages with respect to failure to meet guaranteed completion dates. The report was filed as part of an arbitration proceeding and included a review of the ratemaking implications of economic damages
- Advised the board of directors of a publicly traded electric and natural gas combination utility on dividend policy issues, earnings payout trends and related capital market considerations
- Assisted a publicly traded utility with a strategic buy-side evaluation of a gas utility with more than $1 billion in assets. The assignment included operational performance benchmarking, calculation of merger synergies, risk analysis, and review of the regulatory implications of the transaction
- Provided testimony before the Arkansas Public Service Commission in support of the acquisition of SourceGas LLC by Black Hills Corporation. The testimony addressed certain balance sheet capitalization and credit rating issues
- For the State of Maine Public Utility Commission, prepared a report that summarized the Northeast and Atlantic Canada natural gas power markets and analyzed the potential benefits and costs associated with natural gas pipeline expansions. The independent report was filed at the Maine Public Utility Commission

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MANAGEMENT CONSULTANTS

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Regulatory Commission of Alaska				
ENSTAR Natural Gas Company	06/16	ENSTAR Natural Gas Company	Matter No. TA 285-4	Return on Equity
ENSTAR Natural Gas Company	08/14	ENSTAR Natural Gas Company	Matter No. TA 262-4	Return on Equity
Alberta Utilities Commission				
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc., and FortisAlberta Inc.	10/17	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc., and FortisAlberta Inc.	2018 General Cost of Capital, Proceeding ID. 22570	Rate of Return
EPCOR Energy Alberta G.P. Inc.	01/17	EPCOR Energy Alberta G.P. Inc.	Proceeding 22357	Energy Price Setting Plan
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	02/16	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	2016 General Cost of Capital, Proceeding ID. 20622	Rate of Return
Arizona Corporation Commission				
Southwest Gas Corporation	05/16	Southwest Gas Corporation	Docket No. G-01551A-16-017	Return on Equity
Southwest Gas Corporation	11/10	Southwest Gas Corporation	Docket No. G-01551A-10-0458	Return on Equity
Arkansas Public Service Commission				
Oklahoma Gas and Electric Company	09/16	Oklahoma Gas and Electric Company	Docket No. 16-052-U	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	11/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 15-098-U	Return on Equity
SourceGas Arkansas, Inc.	03/15	SourceGas Arkansas, Inc.	Docket No. 15-011-U	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	01/07	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 06-161-U	Return on Equity
California Public Utilities Commission				
Southwest Gas Corporation	12/12	Southwest Gas Corporation	Docket No. A-12-12-024	Return on Equity
Colorado Public Utilities Commission				
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Return on Equity
Xcel Energy, Inc.	03/15	Public Service Company of Colorado	Docket No. 15AL-0135G	Return on Equity (gas)
Xcel Energy, Inc.	06/14	Public Service Company of Colorado	Docket No. 14AL-0660E	Return on Equity (electric)
Xcel Energy, Inc.	12/12	Public Service Company of Colorado	Docket No. 12AL-1268G	Return on Equity (gas)
Xcel Energy, Inc.	11/11	Public Service Company of Colorado	Docket No. 11AL-947E	Return on Equity (electric)
Xcel Energy, Inc.	12/10	Public Service Company of Colorado	Docket No. 10AL-963G	Return on Equity (electric)
Atmos Energy Corporation	07/09	Atmos Energy Colorado-Kansas Division	Docket No. 09AL-507G	Return on Equity (gas)

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 66 of 182

scottmadden
MANAGEMENT CONSULTANTS

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Xcel Energy, Inc.	12/06	Public Service Company of Colorado	Docket No. 06S-656G	Return on Equity (gas)
Xcel Energy, Inc.	04/06	Public Service Company of Colorado	Docket No. 06S-234EG	Return on Equity (electric)
Xcel Energy, Inc.	08/05	Public Service Company of Colorado	Docket No. 05S-369ST	Return on Equity (steam)
Xcel Energy, Inc.	05/05	Public Service Company of Colorado	Docket No. 05S-246G	Return on Equity (gas)
Connecticut Public Utilities Regulatory Authority				
Connecticut Light and Power Company	06/14	Connecticut Light and Power Company	Docket No. 14-05-06	Return on Equity
Southern Connecticut Gas Company	09/08	Southern Connecticut Gas Company	Docket No. 08-08-17	Return on Equity
Southern Connecticut Gas Company	12/07	Southern Connecticut Gas Company	Docket No. 05-03-17PH02	Return on Equity
Connecticut Natural Gas Corporation	12/07	Connecticut Natural Gas Corporation	Docket No. 06-03-04PH02	Return on Equity
Delaware Public Service Commission				
Delmarva Power & Light Company	08/17	Delmarva Power & Light Company	Docket No. 17-0977 (Electric)	Return on Equity
Delmarva Power & Light Company	08/17	Delmarva Power & Light Company	Docket No. 17-0978 (Gas)	Return on Equity
Delmarva Power & Light Company	05/16	Delmarva Power & Light Company	Case No. 16-649 (Electric)	Return on Equity
Delmarva Power & Light Company	05/16	Delmarva Power & Light Company	Case No. 16-650 (Gas)	Return on Equity
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 13-115	Return on Equity
Delmarva Power & Light Company	12/12	Delmarva Power & Light Company	Case No. 12-546	Return on Equity
Delmarva Power & Light Company	03/12	Delmarva Power & Light Company	Case No. 11-528	Return on Equity
District of Columbia Public Service Commission				
Potomac Electric Power Company	07/16	Potomac Electric Power Company	Formal Case No. FC1139	Return on Equity
Washington Gas Light Company	02/16	Washington Gas Light Company	Formal Case No. FC1137	Return on Equity
Potomac Electric Power Company	03/13	Potomac Electric Power Company	Formal Case No. FC1103-2013-E	Return on Equity
Potomac Electric Power Company	07/11	Potomac Electric Power Company	Formal Case No. FC1087	Return on Equity
Federal Energy Regulatory Commission				
Sabine Pipeline, LLC	09/15	Sabine Pipeline, LLC	Docket No. RP15-1322-000	Return on Equity
NextEra Energy Transmission West, LLC	07/15	NextEra Energy Transmission West, LLC	Docket No. ER15-2239-000	Return on Equity
Maritimes & Northeast Pipeline, LLC	05/15	Maritimes & Northeast Pipeline, LLC	Docket No. RP15-1026-000	Return on Equity
Public Service Company of New Mexico	12/12	Public Service Company of New Mexico	Docket No. ER13-685-000	Return on Equity
Public Service Company of New Mexico	10/10	Public Service Company of New Mexico	Docket No. ER11-1915-000	Return on Equity

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 67 of 182

scottmadden
MANAGEMENT CONSULTANTS

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Portland Natural Gas Transmission System	05/10	Portland Natural Gas Transmission System	Docket No. RP10-729-000	Return on Equity
Florida Gas Transmission Company, LLC	10/09	Florida Gas Transmission Company, LLC	Docket No. RP10-21-000	Return on Equity
Maritimes and Northeast Pipeline, LLC	07/09	Maritimes and Northeast Pipeline, LLC	Docket No. RP09-809-000	Return on Equity
Spectra Energy	02/08	Saltville Gas Storage	Docket No. RP08-257-000	Return on Equity
Panhandle Energy Pipelines	08/07	Panhandle Energy Pipelines	Docket No. PL07-2-000	Response to draft policy statement regarding inclusion of MLPs in proxy groups for determination of gas pipeline ROEs
Southwest Gas Storage Company	08/07	Southwest Gas Storage Company	Docket No. RP07-541-000	Return on Equity
Southwest Gas Storage Company	06/07	Southwest Gas Storage Company	Docket No. RP07-34-000	Return on Equity
Sea Robin Pipeline LLC	06/07	Sea Robin Pipeline LLC	Docket No. RP07-513-000	Return on Equity
Transwestern Pipeline Company	09/06	Transwestern Pipeline Company	Docket No. RP06-614-000	Return on Equity
GPU International and Aquila	11/00	GPU International	Docket No. EC01-24-000	Market Power Study
Florida Public Service Commission				
Florida Power & Light Company	03/16	Florida Power & Light Company	Docket No. 160021-EI	Return on Equity
Tampa Electric Company	04/13	Tampa Electric Company	Docket No. 130040-EI	Return on Equity
Georgia Public Service Commission				
Atlanta Gas Light Company	05/10	Atlanta Gas Light Company	Docket No. 31647-U	Return on Equity
Hawaii Public Utilities Commission				
Maui Electric Company, Limited	10/17	Maui Electric Company, Limited	Docket No. 2017-0150	Return on Equity
Hawaiian Electric Company, Inc.	12/16	Hawaiian Electric Company, Inc.	Docket No. 2016-0328	Return on Equity
Hawai'i Electric Light Company, Inc.	09/16	Hawai'i Electric Light Company, Inc.	Docket No. 2015-0170	Return on Equity
Maui Electric Company, Limited	12/14	Maui Electric Company, Limited	Docket No. 2014-0318	Return on Equity
Hawaiian Electric Company, Inc.	06/14	Hawaiian Electric Company, Inc.	Docket No. 2013-0373	Return on Equity
Hawai'i Electric Light Company, Inc.	08/12	Hawai'i Electric Light Company, Inc.	Docket No. 2012-0099	Return on Equity
Illinois Commerce Commission				
Ameren Illinois Company d/b/a Ameren Illinois	01/15	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 15-0142	Return on Equity

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 68 of 182

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	03/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Docket No. 14-0371	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	01/13	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 13-0192	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0279	Return on Equity (electric)
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0282	Return on Equity (gas)
Indiana Utility Regulatory Commission				
Indiana Michigan Power Company	7/17	Indiana Michigan Power Company	Cause No. 44967	Return on Equity
Duke Energy Indiana, Inc.	12/15	Duke Energy Indiana, Inc.	Cause No. 44720	Return on Equity
Duke Energy Indiana, Inc.	12/14	Duke Energy Indiana, Inc.	Cause No. 44526	Return on Equity
Northern Indiana Public Service Company	05/09	Northern Indiana Public Service Company	Cause No. 43894	Assessment of Valuation Approaches
Kansas Corporation Commission				
Kansas City Power & Light Company	01/15	Kansas City Power & Light Company	Docket No. 15-KCPE-116-RTS	Return on Equity
Maine Public Utilities Commission				
Northern Utilities, Inc.	05/17	Northern Utilities, Inc.	Docket No. 2017-00065	Return on Equity
Central Maine Power Company	06/11	Central Maine Power Company	Docket No. 2010-327	Response to Bench Analysis provided by Commission Staff relating to the Company's credit and collections processes
Maryland Public Service Commission				
Delmarva Power & Light Company	07/17	Delmarva Power & Light Company	Case No. 9455	Return on Equity
Potomac Electric Power Company	03/17	Potomac Electric Power Company	Case No. 9443	Return on Equity
Potomac Electric Power Company	06/16	Potomac Electric Power Company	Case No. 9424	Return on Equity
Potomac Electric Power Company	06/16	Potomac Electric Power Company	Case No. 9418	Return on Equity
Potomac Electric Power Company	12/13	Potomac Electric Power Company	Case No. 9336	Return on Equity
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 9317	Return on Equity

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 69 of 182

scottmadden
MANAGEMENT CONSULTANTS

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Potomac Electric Power Company	11/12	Potomac Electric Power Company	Case No. 9311	Return on Equity
Potomac Electric Power Company	12/11	Potomac Electric Power Company	Case No. 9286	Return on Equity
Delmarva Power & Light Company	12/11	Delmarva Power & Light Company	Case No. 9285	Return on Equity
Delmarva Power & Light Company	12/10	Delmarva Power & Light Company	Case No. 9249	Return on Equity
Massachusetts Department of Public Utilities				
Boston Gas Company, Colonial Gas Company each d/b/a National Grid	11/17	Boston Gas Company, Colonial Gas Company each d/b/a National Grid	DPU 17-170	Return on Equity
NSTAR Electric Company Western and Massachusetts Electric Company each d/b/a Eversource Energy	01/17	NSTAR Electric Company Western Massachusetts Electric Company each d/b/a Eversource Energy	DPU 17-05	Return on Equity
National Grid	11/15	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 15-155	Return on Equity
Fitchburg Gas and Electric Light Company d/b/a Unitil	06/15	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 15-80	Return on Equity
NSTAR Gas Company	12/14	NSTAR Gas Company	DPU 14-150	Return on Equity
Fitchburg Gas and Electric Light Company d/b/a Unitil	07/13	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 13-90	Return on Equity
Bay State Gas Company d/b/a Columbia Gas of Massachusetts	04/12	Bay State Gas Company d/b/a Columbia Gas of Massachusetts	DPU 12-25	Capital Cost Recovery
National Grid	08/09	Massachusetts Electric Company d/b/a National Grid	DPU 09-39	Revenue Decoupling and Return on Equity
National Grid	08/09	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 09-38	Return on Equity – Solar Generation
Bay State Gas Company	04/09	Bay State Gas Company	DPU 09-30	Return on Equity
NSTAR Electric	09/04	NSTAR Electric	DTE 04-85	Divestiture of Power Purchase Agreement
NSTAR Electric	08/04	NSTAR Electric	DTE 04-78	Divestiture of Power Purchase Agreement

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 70 of 182

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
NSTAR Electric	07/04	NSTAR Electric	DTE 04-68	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-61	Divestiture of Power Purchase Agreement
NSTAR Electric	06/04	NSTAR Electric	DTE 04-60	Divestiture of Power Purchase Agreement
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Bay State Gas Company	01/93	Bay State Gas Company	DPU 93-14	Divestiture of Shelf Registration
Bay State Gas Company	01/91	Bay State Gas Company	DPU 91-25	Divestiture of Shelf Registration
Michigan Public Service Commission				
Indiana Michigan Power Company	05/17	Indiana Michigan Power Company	Case No. U-18370	Return on Equity
Minnesota Public Utilities Commission				
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/17	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-17-285	Return on Equity
ALLETE, Inc., d/b/a Minnesota Power Inc.	11/16	ALLETE, Inc., d/b/a Minnesota Power Inc.	Docket No. E015/GR-16-664	Return on Equity
Otter Tail Power Corporation	02/16	Otter Tail Power Company	Docket No. E017/GR-15-1033	Return on Equity
Minnesota Energy Resources Corporation	09/15	Minnesota Energy Resources Corporation	Docket No. G-011/GR-15-736	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-15-424	Return on Equity
Xcel Energy, Inc.	11/13	Northern States Power Company	Docket No. E002/GR-13-868	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/13	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-13-316	Return on Equity
Xcel Energy, Inc.	11/12	Northern States Power Company	Docket No. E002/GR-12-961	Return on Equity
Otter Tail Power Corporation	04/10	Otter Tail Power Company	Docket No. E-017/GR-10-239	Return on Equity
Minnesota Power a division of ALLETE, Inc.	11/09	Minnesota Power	Docket No. E-015/GR-09-1151	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	11/08	CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-08-1075	Return on Equity
Otter Tail Power Corporation	10/07	Otter Tail Power Company	Docket No. E-017/GR-07-1178	Return on Equity

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 71 of 182

scottmadden
MANAGEMENT CONSULTANTS

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Xcel Energy, Inc.	11/05	Northern States Power Company -Minnesota	Docket No. E-002/GR-05-1428	Return on Equity (electric)
Xcel Energy, Inc.	09/04	Northern States Power Company - Minnesota	Docket No. G-002/GR-04-1511	Return on Equity (gas)
Mississippi Public Service Commission				
CenterPoint Energy Resources, Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Mississippi Gas	07/09	CenterPoint Energy Mississippi Gas	Docket No. 09-UN-334	Return on Equity
Missouri Public Service Commission				
Laclede Gas Company and Missouri Gas Energy	11/17	Laclede Gas Company and Missouri Gas Energy	Case No. GR-2017-0215 Case No. GR-2017-0216	Goodwill Adjustment on Capital Structure
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a/ Liberty Utilities	09/17	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a/ Liberty Utilities	Case No. GR-2018-0013	New Ratemaking Mechanisms
Union Electric Company d/b/a Ameren Missouri	07/16	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2016-0179	Return on Equity (electric)
Kansas City Power & Light Company	07/16	Kansas City Power & Light Company	Case No. ER-2016-0285	Return on Equity (electric)
Kansas City Power & Light Company	02/16	Kansas City Power & Light Company	Case No. ER-2016-0156	Return on Equity (electric)
Kansas City Power & Light Company	10/14	Kansas City Power & Light Company	Case No. ER-2014-0370	Return on Equity (electric)
Union Electric Company d/b/a Ameren Missouri	07/14	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2014-0258	Return on Equity (electric)
Union Electric Company d/b/a Ameren Missouri	06/14	Union Electric Company d/b/a Ameren Missouri	Case No. EC-2014-0223	Return on Equity (electric)
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	02/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Case No. GR-2014-0152	Return on Equity
Laclede Gas Company	12/12	Laclede Gas Company	Case No. GR-2013-0171	Return on Equity
Union Electric Company d/b/a Ameren Missouri	02/12	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2012-0166	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	09/10	Union Electric Company d/b/a AmerenUE	Case No. ER-2011-0028	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	06/10	Union Electric Company d/b/a AmerenUE	Case No. GR-2010-0363	Return on Equity (gas)
Montana Public Service Commission				
Northwestern Corporation	09/12	Northwestern Corporation d/b/a Northwestern Energy	Docket No. D2012.9.94	Return on Equity (gas)

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 72 of 182

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Nevada Public Utilities Commission				
Southwest Gas Corporation	04/12	Southwest Gas Corporation	Docket No. 12-04005	Return on Equity (gas)
Nevada Power Company	06/11	Nevada Power Company	Docket No. 11-06006	Return on Equity (electric)
New Hampshire Public Utilities Commission				
Northern Utilities, Inc.	06/17	Northern Utilities, Inc.	Docket No. DG 17-070	Return on Equity
Liberty Utilities d/b/a EnergyNorth Natural Gas	04/17	Liberty Utilities d/b/a EnergyNorth Natural Gas	Docket No. DG 17-048	Return on Equity
Unitil Energy Systems, Inc.	04/16	Unitil Energy Systems, Inc.	Docket No. DE 16-384	Return on Equity
Liberty Utilities d/b/a Granite State Electric Company	04/16	Liberty Utilities d/b/a Granite State Electric Company	Docket No. DE 16-383	Return on Equity
Liberty Utilities d/b/a EnergyNorth Natural Gas	08/14	Liberty Utilities d/b/a EnergyNorth Natural Gas	Docket No. DG 14-180	Return on Equity
Liberty Utilities d/b/a Granite State Electric Company	03/13	Liberty Utilities d/b/a Granite State Electric Company	Docket No. DE 13-063	Return on Equity
EnergyNorth Natural Gas d/b/a National Grid NH	02/10	EnergyNorth Natural Gas d/b/a National Grid NH	Docket No. DG 10-017	Return on Equity
Unitil Energy Systems, Inc., EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	08/08	Unitil Energy Systems, Inc., EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	Docket No. DG 07-072	Carrying Charge Rate on Cash Working Capital
New Jersey Board of Public Utilities				
Atlantic City Electric Company	03/17	Atlantic City Electric Company	Docket No. ER17030308	Return on Equity
Pivotal Utility Holdings, Inc.	08/16	Elizabethtown Gas	Docket No. GR16090826	Return on Equity
The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	04/16	The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	BPU Docket No. GM15101196	Merger Approval
Atlantic City Electric Company	03/16	Atlantic City Electric Company	Docket No. ER16030252	Return on Equity
Pepco Holdings, Inc.	04/14	Atlantic City Electric Company	Docket No. ER14030245	Return on Equity
Orange and Rockland Utilities	11/13	Rockland Electric Company	Docket No. ER13111135	Return on Equity

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 73 of 182

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Atlantic City Electric Company	12/12	Atlantic City Electric Company	Docket No. ER12121071	Return on Equity
Atlantic City Electric Company	08/11	Atlantic City Electric Company	Docket No. ER11080469	Return on Equity
Pepco Holdings, Inc.	09/06	Atlantic City Electric Company	Docket No. EM06090638	Divestiture and Valuation of Electric Generating Assets
Pepco Holdings, Inc.	12/05	Atlantic City Electric Company	Docket No. EM05121058	Market Value of Electric Generation Assets; Auction
Conectiv	06/03	Atlantic City Electric Company	Docket No. EO03020091	Market Value of Electric Generation Assets; Auction Process
New Mexico Public Regulation Commission				
Public Service Company of New Mexico	12/16	Public Service Company of New Mexico	Case No. 16-00276-UT	Return on Equity (electric)
Public Service Company of New Mexico	08/15	Public Service Company of New Mexico	Case No. 15-00261-UT	Return on Equity (electric)
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 14-00332-UT	Return on Equity (electric)
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 13-00390-UT	Cost of Capital and Financial Integrity
Southwestern Public Service Company	02/11	Southwestern Public Service Company	Case No. 10-00395-UT	Return on Equity (electric)
Public Service Company of New Mexico	06/10	Public Service Company of New Mexico	Case No. 10-00086-UT	Return on Equity (electric)
Public Service Company of New Mexico	09/08	Public Service Company of New Mexico	Case No. 08-00273-UT	Return on Equity (electric)
Xcel Energy, Inc.	07/07	Southwestern Public Service Company	Case No. 07-00319-UT	Return on Equity (electric)
New York State Public Service Commission				
Consolidated Edison Company of New York, Inc.	01/15	Consolidated Edison Company of New York, Inc.	Case No. 15-E-0050	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	11/14	Orange and Rockland Utilities, Inc.	Case Nos. 14-E-0493 and 14-G-0494	Return on Equity (electric and gas)
Consolidated Edison Company of New York, Inc.	01/13	Consolidated Edison Company of New York, Inc.	Case No. 13-E-0030	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Electric Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Electric Service	Case No. 12-E-0201	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Gas Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Gas Service	Case No. 12-G-0202	Return on Equity (gas)

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 74 of 182

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Orange and Rockland Utilities, Inc.	07/11	Orange and Rockland Utilities, Inc.	Case No. 11-E-0408	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	07/10	Orange and Rockland Utilities, Inc.	Case No. 10-E-0362	Return on Equity (electric)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-G-0795	Return on Equity (gas)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-S-0794	Return on Equity (steam)
Niagara Mohawk Power Corporation	07/01	Niagara Mohawk Power Corporation	Case No. 01-E-1046	Power Purchase and Sale Agreement; Standard Offer Service Agreement
North Carolina Utilities Commission				
Duke Energy Carolinas, LLC	08/17	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1146	Return on Equity
Duke Energy Progress, LLC	06/17	Duke Energy Progress, LLC	Docket No. E-2, Sub 1142	Return on Equity
Public Service Company of North Carolina, Inc.	03/16	Public Service Company of North Carolina, Inc.	Docket No. G-5, Sub 565	Return on Equity
Dominion North Carolina Power	03/16	Dominion North Carolina Power	Docket No. E-22, Sub 532	Return on Equity
Duke Energy Carolinas, LLC	02/13	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1026	Return on Equity
Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	10/12	Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	Docket No. E-2, Sub 1023	Return on Equity
Virginia Electric and Power Company d/b/a Dominion North Carolina Power	03/12	Virginia Electric and Power Company d/b/a Dominion North Carolina Power	Docket No. E-22, Sub 479	Return on Equity (electric)
Duke Energy Carolinas, LLC	07/11	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 989	Return on Equity (electric)
North Dakota Public Service Commission				
Otter Tail Power Company	11/08	Otter Tail Power Company	Docket No. 08-862	Return on Equity (electric)
Oklahoma Corporation Commission				
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/16	CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	Cause No. PUD201600094	Return on Equity
Oklahoma Gas & Electric Company	12/15	Oklahoma Gas & Electric Company	Cause No. PUD201500273	Return on Equity
Public Service Company of Oklahoma	07/15	Public Service Company of Oklahoma	Cause No. PUD201500208	Return on Equity
Oklahoma Gas & Electric Company	07/11	Oklahoma Gas & Electric Company	Cause No. PUD201100087	Return on Equity

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 75 of 182

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/09	CenterPoint Energy Oklahoma Gas	Cause No. PUD200900055	Return on Equity
Pennsylvania Public Utility Commission				
Pike County Light & Power Company	01/14	Pike County Light & Power Company	Docket No. R-2013-2397237	Return on Equity (electric & gas)
Veolia Energy Philadelphia, Inc.	12/13	Veolia Energy Philadelphia, Inc.	Docket No. R-2013-2386293	Return on Equity (steam)
Rhode Island Public Utilities Commission				
The Narragansett Electric Company d/b/a National Grid	11/17	The Narragansett Electric Company d/b/a National Grid	Docket No. 4770	Return on Equity (electric & gas)
The Narragansett Electric Company d/b/a National Grid	04/12	The Narragansett Electric Company d/b/a National Grid	Docket No. 4323	Return on Equity (electric & gas)
National Grid RI – Gas	08/08	National Grid RI – Gas	Docket No. 3943	Revenue Decoupling and Return on Equity
South Carolina Public Service Commission				
Duke Energy Progress, LLC	07/16	Duke Energy Progress, LLC	Docket No. 2016-227-E	Return on Equity
Duke Energy Carolinas, LLC	03/13	Duke Energy Carolinas, LLC	Docket No. 2013-59-E	Return on Equity
South Carolina Electric & Gas	06/12	South Carolina Electric & Gas	Docket No. 2012-218-E	Return on Equity
Duke Energy Carolinas, LLC	08/11	Duke Energy Carolinas, LLC	Docket No. 2011-271-E	Return on Equity
South Carolina Electric & Gas	03/10	South Carolina Electric & Gas	Docket No. 2009-489-E	Return on Equity
South Dakota Public Utilities Commission				
Otter Tail Power Company	08/10	Otter Tail Power Company	Docket No. EL10-011	Return on Equity (electric)
Northern States Power Company	06/09	South Dakota Division of Northern States Power	Docket No. EL09-009	Return on Equity (electric)
Otter Tail Power Company	10/08	Otter Tail Power Company	Docket No. EL08-030	Return on Equity (electric)
Texas Public Utility Commission				
Southwestern Public Service Company	08/17	Southwestern Public Service Company	Docket No. 47527	Return on Equity
Oncor Electric Delivery Company, LLC	03/17	Oncor Electric Delivery Company, LLC	Docket No. 46957	Return on Equity
El Paso Electric Company	02/17	El Paso Electric Company	Docket No. 46831	Return on Equity
Southwestern Public Service Company	12/16	Southwestern Public Service Company	Docket No. 46449	Return on Equity (electric)

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 76 of 182

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Sharyland Utilities, L.P.	12/16	Sharyland Utilities, L.P.	Docket No. 45414	Return on Equity
Southwestern Public Service Company	02/16	Southwestern Public Service Company	Docket No. 44524	Return on Equity (electric)
Wind Energy Transmission Texas, LLC	05/15	Wind Energy Transmission Texas, LLC	Docket No. 44746	Return on Equity
Cross Texas Transmission	12/14	Cross Texas Transmission	Docket No. 43950	Return on Equity
Southwestern Public Service Company	12/14	Southwestern Public Service Company	Docket No. 43695	Return on Equity (electric)
Sharyland Utilities, L.P.	05/13	Sharyland Utilities, L.P.	Docket No. 41474	Return on Equity
Wind Energy Texas Transmission, LLC	08/12	Wind Energy Texas Transmission, LLC	Docket No. 40606	Return on Equity
Southwestern Electric Power Company	07/12	Southwestern Electric Power Company	Docket No. 40443	Return on Equity
Oncor Electric Delivery Company, LLC	01/11	Oncor Electric Delivery Company, LLC	Docket No. 38929	Return on Equity
Texas-New Mexico Power Company	08/10	Texas-New Mexico Power Company	Docket No. 38480	Return on Equity (electric)
CenterPoint Energy Houston Electric LLC	06/10	CenterPoint Energy Houston Electric LLC	Docket No. 38339	Return on Equity
Xcel Energy, Inc.	05/10	Southwestern Public Service Company	Docket No. 38147	Return on Equity (electric)
Texas-New Mexico Power Company	08/08	Texas-New Mexico Power Company	Docket No. 36025	Return on Equity (electric)
Xcel Energy, Inc.	05/06	Southwestern Public Service Company	Docket No. 32766	Return on Equity (electric)
Texas Railroad Commission				
Atmos Pipeline - Texas	01/17	Atmos Pipeline - Texas	Docket No. 10580	Return on Equity
CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	12/16	CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	D-GUD-10567	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	03/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10432	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/12	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10182	Return on Equity
Atmos Energy Corporation – West Texas Division	06/12	Atmos Energy Corporation – West Texas Division	GUD 10175	Return on Equity
Atmos Energy Corporation – Mid-Texas Division	06/12	Atmos Energy Corporation – Mid-Texas Division	GUD 10171	Return on Equity

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 77 of 182

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	12/10	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10038	Return on Equity
Atmos Pipeline – Texas	09/10	Atmos Pipeline - Texas	GUD 10000	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/09	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 9902	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	03/08	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	GUD 9791	Return on Equity
Utah Public Service Commission				
Questar Gas Company	12/07	Questar Gas Company	Docket No. 07-057-13	Return on Equity
Vermont Public Service Board				
Central Vermont Public Service Corporation; Green Mountain Power	02/12	Central Vermont Public Service Corporation; Green Mountain Power	Docket No. 7770	Merger Policy
Central Vermont Public Service Corporation	12/10	Central Vermont Public Service Corporation	Docket No. 7627	Return on Equity (electric)
Green Mountain Power	04/06	Green Mountain Power	Docket Nos. 7175 and 7176	Return on Equity (electric)
Vermont Gas Systems, Inc.	12/05	Vermont Gas Systems	Docket Nos. 7109 and 7160	Return on Equity (gas)
Virginia State Corporation Commission				
Virginia Electric and Power Company	03/17	Virginia Electric and Power Company	Case No. PUR-2017-00038	Return on Equity
Virginia Natural Gas, Inc.	03/17	Virginia Natural Gas, Inc.	Case No. PUE-2016-00143	Return on Equity
Virginia Electric and Power Company	10/16	Virginia Electric and Power Company	Case No. PUE-2016-00112; PUE-2016-00113; PUE-2016-00136	Return on Equity
Washington Gas Light Company	07/16	Washington Gas Light Company	Case No. PUE-2016-00001	Return on Equity
Virginia Electric and Power Company	06/16	Virginia Electric and Power Company	Case Nos. PUE-2016-00063; PUE-2016-00062; PUE-2016-00061; PUE-2016-00060; PUE-2016-00059	Return on Equity

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 78 of 182

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Virginia Electric and Power Company	12/15	Virginia Electric and Power Company	Case Nos. PUE-2015-0058; PUE-2015-0059; PUE-2015-0060; PUE-2015-0061; PUE-2015-0075; PUE-2015-0089; PUE-2015-0102; PUE-2015-0104	Return on Equity
Virginia Electric and Power Company	03/15	Virginia Electric and Power Company	Case No. PUE-2015-00027	Return on Equity
Virginia Electric and Power Company	03/13	Virginia Electric and Power Company	Case No. PUE-2013-00020	Return on Equity
Virginia Natural Gas, Inc.	02/11	Virginia Natural Gas, Inc.	Case No. PUE-2010-00142	Capital Structure
Columbia Gas of Virginia, Inc.	06/06	Columbia Gas of Virginia, Inc.	Case No. PUE-2005-00098	Merger Synergies
Dominion Resources	10/01	Virginia Electric and Power Company	Case No. PUE000584	Corporate Structure and Electric Generation Strategy

Expert Report

United States District Court, Western District of Texas, Austin Division				
Southwestern Public Service Company	02/12	Southwestern Public Service Company	C.A. No. A-09-CA-917-SS	PURPA and FERC regulations

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 79 of 182

Constant Growth Discounted Cash Flow Model
30 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth
ALLETE, Inc.	ALE	$2.14	$78.26	2.73%	2.81%	6.10%	5.00%	6.00%	5.70%
Alliant Energy Corporation	LNT	$1.26	$42.63	2.96%	3.05%	6.20%	7.50%	6.00%	6.57%
Ameren Corporation	AEE	$1.83	$59.93	3.05%	3.15%	6.70%	7.00%	6.00%	6.57%
American Electric Power Company, Inc.	AEP	$2.48	$72.35	3.43%	3.49%	4.80%	2.77%	4.00%	3.86%
Black Hills Corporation	BKH	$1.78	$67.67	2.63%	2.72%	5.60%	6.64%	7.50%	6.58%
CMS Energy Corporation	CMS	$1.33	$47.26	2.81%	2.91%	6.50%	7.58%	6.50%	6.86%
Dominion Resources, Inc.	D	$3.08	$78.42	3.93%	4.03%	5.40%	4.00%	5.50%	4.97%
DTE Energy Company	DTE	$3.30	$109.51	3.01%	3.10%	6.00%	4.91%	6.00%	5.64%
Duke Energy Corporation	DUK	$3.56	$86.05	4.14%	4.22%	4.00%	3.24%	4.50%	3.91%
IDACORP, Inc.	IDA	$2.36	$89.88	2.63%	2.68%	4.50%	4.00%	3.50%	4.00%
NorthWestern Corporation	NWE	$2.10	$58.16	3.61%	3.66%	1.50%	2.57%	4.50%	2.86%
OGE Energy Corp.	OGE	$1.33	$36.47	3.65%	3.77%	4.90%	8.60%	6.00%	6.50%
Otter Tail Corporation	OTTR	$1.28	$44.91	2.85%	2.93%	NA	5.20%	6.50%	5.85%
Pinnacle West Capital Corporation	PNW	$2.78	$86.85	3.20%	3.29%	5.00%	5.46%	5.50%	5.32%
PNM Resources, Inc.	PNM	$0.97	$41.49	2.34%	2.41%	5.40%	6.45%	7.50%	6.45%
Portland General Electric Company	POR	$1.36	$46.10	2.95%	3.02%	3.70%	3.97%	6.00%	4.56%
Southern Company	SO	$2.32	$50.43	4.60%	4.68%	3.80%	2.63%	3.50%	3.31%
WEC Energy Group, Inc.	WEC	$2.08	$65.10	3.20%	3.28%	5.10%	5.45%	6.00%	5.52%
Xcel Energy Inc.	XEL	$1.44	$48.29	2.98%	3.06%	5.50%	NA	4.50%	5.00%
Proxy Group Mean				3.19%	3.28%	5.04%	5.17%	5.55%	5.26%
Proxy Group Median				3.01%	3.10%	5.25%	5.10%	6.00%	5.52%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of October 31, 2017
[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])

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 80 of 182

Constant Growth Discounted Cash Flow Model
90 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth
ALLETE, Inc.	ALE	$2.14	$75.64	2.83%	2.91%	6.10%	5.00%	6.00%	5.70%
Alliant Energy Corporation	LNT	$1.26	$41.87	3.01%	3.11%	6.20%	7.50%	6.00%	6.57%
Ameren Corporation	AEE	$1.83	$58.31	3.14%	3.24%	6.70%	7.00%	6.00%	6.57%
American Electric Power Company, Inc.	AEP	$2.48	$71.59	3.46%	3.53%	4.80%	2.77%	4.00%	3.86%
Black Hills Corporation	BKH	$1.78	$68.86	2.59%	2.67%	5.60%	6.64%	7.50%	6.58%
CMS Energy Corporation	CMS	$1.33	$47.23	2.82%	2.91%	6.50%	7.58%	6.50%	6.86%
Dominion Resources, Inc.	D	$3.08	$78.00	3.95%	4.05%	5.40%	4.00%	5.50%	4.97%
DTE Energy Company	DTE	$3.30	$109.02	3.03%	3.11%	6.00%	4.91%	6.00%	5.64%
Duke Energy Corporation	DUK	$3.56	$85.82	4.15%	4.23%	4.00%	3.24%	4.50%	3.91%
IDACORP, Inc.	IDA	$2.36	$88.14	2.68%	2.73%	4.50%	4.00%	3.50%	4.00%
NorthWestern Corporation	NWE	$2.10	$59.45	3.53%	3.58%	1.50%	2.57%	4.50%	2.86%
OGE Energy Corp.	OGE	$1.33	$35.87	3.71%	3.83%	4.90%	8.60%	6.00%	6.50%
Otter Tail Corporation	OTTR	$1.28	$42.31	3.03%	3.11%	NA	5.20%	6.50%	5.85%
Pinnacle West Capital Corporation	PNW	$2.78	$87.45	3.18%	3.26%	5.00%	5.46%	5.50%	5.32%
PNM Resources, Inc.	PNM	$0.97	$40.79	2.38%	2.45%	5.40%	6.45%	7.50%	6.45%
Portland General Electric Company	POR	$1.36	$46.08	2.95%	3.02%	3.70%	3.97%	6.00%	4.56%
Southern Company	SO	$2.32	$49.11	4.72%	4.80%	3.80%	2.63%	3.50%	3.31%
WEC Energy Group, Inc.	WEC	$2.08	$64.16	3.24%	3.33%	5.10%	5.45%	6.00%	5.52%
Xcel Energy Inc.	XEL	$1.44	$48.04	3.00%	3.07%	5.50%	NA	4.50%	5.00%
Proxy Group Mean				3.23%	3.31%	5.04%	5.17%	5.55%	5.26%
Proxy Group Median				3.03%	3.11%	5.25%	5.10%	6.00%	5.52%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of October 31, 2017
[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])

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 81 of 182

Constant Growth Discounted Cash Flow Model
180 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Average Earnings Growth
ALLETE, Inc.	ALE	$2.14	$72.53	2.95%	3.03%	6.10%	5.00%	6.00%	5.70%
Alliant Energy Corporation	LNT	$1.26	$40.93	3.08%	3.18%	6.20%	7.50%	6.00%	6.57%
Ameren Corporation	AEE	$1.83	$56.76	3.22%	3.33%	6.70%	7.00%	6.00%	6.57%
American Electric Power Company, Inc.	AEP	$2.48	$69.93	3.55%	3.61%	4.80%	2.77%	4.00%	3.86%
Black Hills Corporation	BKH	$1.78	$68.15	2.61%	2.70%	5.60%	6.64%	7.50%	6.58%
CMS Energy Corporation	CMS	$1.33	$46.38	2.87%	2.97%	6.50%	7.58%	6.50%	6.86%
Dominion Resources, Inc.	D	$3.08	$77.96	3.95%	4.05%	5.40%	4.00%	5.50%	4.97%
DTE Energy Company	DTE	$3.30	$106.70	3.09%	3.18%	6.00%	4.91%	6.00%	5.64%
Duke Energy Corporation	DUK	$3.56	$84.43	4.22%	4.30%	4.00%	3.24%	4.50%	3.91%
IDACORP, Inc.	IDA	$2.36	$86.24	2.74%	2.79%	4.50%	4.00%	3.50%	4.00%
NorthWestern Corporation	NWE	$2.10	$59.66	3.52%	3.57%	1.50%	2.57%	4.50%	2.86%
OGE Energy Corp.	OGE	$1.33	$35.58	3.74%	3.86%	4.90%	8.60%	6.00%	6.50%
Otter Tail Corporation	OTTR	$1.28	$40.44	3.17%	3.26%	NA	5.20%	6.50%	5.85%
Pinnacle West Capital Corporation	PNW	$2.78	$86.07	3.23%	3.32%	5.00%	5.46%	5.50%	5.32%
PNM Resources, Inc.	PNM	$0.97	$39.09	2.48%	2.56%	5.40%	6.45%	7.50%	6.45%
Portland General Electric Company	POR	$1.36	$45.80	2.97%	3.04%	3.70%	3.97%	6.00%	4.56%
Southern Company	SO	$2.32	$49.61	4.68%	4.75%	3.80%	2.63%	3.50%	3.31%
WEC Energy Group, Inc.	WEC	$2.08	$62.56	3.32%	3.42%	5.10%	5.45%	6.00%	5.52%
Xcel Energy Inc.	XEL	$1.44	$46.59	3.09%	3.17%	5.50%	NA	4.50%	5.00%
Proxy Group Mean				3.29%	3.37%	5.04%	5.17%	5.55%	5.26%
Proxy Group Median				3.17%	3.26%	5.25%	5.10%	6.00%	5.52%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of October 31, 2017
[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])

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 82 of 182

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	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$78.26	6.10%	5.00%	6.00%	5.70%	5.37%	64.00%	58.00%	65.91%	$0.00	8.41%	22.81	4.25
Alliant Energy Corporation	LNT	$42.63	6.20%	7.50%	6.00%	6.57%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.50%	22.14	4.13
Ameren Corporation	AEE	$59.93	6.70%	7.00%	6.00%	6.57%	5.37%	64.00%	60.00%	65.91%	($0.00)	8.97%	19.27	3.59
American Electric Power Company, Inc.	AEP	$72.35	4.80%	2.77%	4.00%	3.86%	5.37%	68.00%	63.00%	65.91%	($0.00)	9.37%	17.37	3.24
Black Hills Corporation	BKH	$67.67	5.60%	6.64%	7.50%	6.58%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.42%	22.73	4.24
CMS Energy Corporation	CMS	$47.26	6.50%	7.58%	6.50%	6.86%	5.37%	61.00%	61.00%	65.91%	($0.00)	8.81%	20.18	3.76
Dominion Resources, Inc.	D	$78.42	5.40%	4.00%	5.50%	4.97%	5.37%	85.00%	88.00%	65.91%	($0.00)	8.80%	20.26	3.77
DTE Energy Company	DTE	$109.51	6.00%	4.91%	6.00%	5.64%	5.37%	58.00%	64.00%	65.91%	($0.00)	8.72%	20.70	3.86
Duke Energy Corporation	DUK	$86.05	4.00%	3.24%	4.50%	3.91%	5.37%	76.00%	79.00%	65.91%	($0.00)	8.42%	22.76	4.24
IDACORP, Inc.	IDA	$89.88	4.50%	4.00%	3.50%	4.00%	5.37%	54.00%	61.00%	65.91%	($0.00)	8.33%	23.44	4.37
NorthWestern Corporation	NWE	$58.16	1.50%	2.57%	4.50%	2.86%	5.37%	62.00%	62.00%	65.91%	($0.00)	9.06%	18.80	3.50
OGE Energy Corp.	OGE	$36.47	4.90%	8.60%	6.00%	6.50%	5.37%	65.00%	72.00%	65.91%	($0.00)	9.19%	18.18	3.39
Otter Tail Corporation	OTTR	$44.91	NA	5.20%	6.50%	5.85%	5.37%	74.00%	61.00%	65.91%	$0.00	8.13%	25.12	4.68
Pinnacle West Capital Corporation	PNW	$86.85	5.00%	5.46%	5.50%	5.32%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.76%	20.44	3.81
PNM Resources, Inc.	PNM	$41.49	5.40%	6.45%	7.50%	6.45%	5.37%	48.00%	57.00%	65.91%	($0.00)	8.49%	22.22	4.14
Portland General Electric Company	POR	$46.10	3.70%	3.97%	6.00%	4.56%	5.37%	59.00%	57.00%	65.91%	($0.00)	8.64%	21.20	3.95
Southern Company	SO	$50.43	3.80%	2.63%	3.50%	3.31%	5.37%	77.00%	76.00%	65.91%	$0.00	9.21%	18.06	3.36
WEC Energy Group, Inc.	WEC	$65.10	5.10%	5.45%	6.00%	5.52%	5.37%	67.00%	67.00%	65.91%	$0.00	8.85%	19.95	3.72
Xcel Energy Inc.	XEL	$48.29	5.50%	NA	4.50%	5.00%	5.37%	62.00%	66.00%	65.91%	($0.00)	8.73%	20.65	3.85
											Mean	8.73%	20.86	
											Max	9.37%		
											Min	8.13%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.32	$3.51	$3.71	$3.92	$4.14	$4.38	$4.62	$4.88	$5.14	$5.42	$5.71	$6.02	$6.34
Alliant Energy Corporation	LNT	$1.65	$1.76	$1.87	$2.00	$2.13	$2.27	$2.41	$2.56	$2.71	$2.87	$3.03	$3.19	$3.36	$3.54
Ameren Corporation	AEE	$2.68	$2.86	$3.04	$3.24	$3.46	$3.68	$3.92	$4.16	$4.41	$4.66	$4.92	$5.19	$5.46	$5.76
American Electric Power Company, Inc.	AEP	$4.23	$4.39	$4.56	$4.74	$4.92	$5.11	$5.32	$5.55	$5.81	$6.09	$6.40	$6.75	$7.11	$7.49
Black Hills Corporation	BKH	$2.63	$2.80	$2.99	$3.18	$3.39	$3.62	$3.85	$4.09	$4.33	$4.58	$4.83	$5.09	$5.37	$5.65
CMS Energy Corporation	CMS	$1.98	$2.12	$2.26	$2.42	$2.58	$2.76	$2.94	$3.13	$3.32	$3.51	$3.71	$3.91	$4.12	$4.34
Dominion Resources, Inc.	D	$3.44	$3.61	$3.79	$3.98	$4.18	$4.38	$4.60	$4.84	$5.09	$5.36	$5.64	$5.94	$6.26	$6.60
DTE Energy Company	DTE	$4.83	$5.10	$5.39	$5.69	$6.01	$6.35	$6.71	$7.08	$7.47	$7.88	$8.30	$8.75	$9.22	$9.71
Duke Energy Corporation	DUK	$3.71	$3.86	$4.01	$4.16	$4.33	$4.50	$4.68	$4.89	$5.11	$5.36	$5.64	$5.94	$6.26	$6.60
IDACORP, Inc.	IDA	$3.94	$4.10	$4.26	$4.43	$4.61	$4.79	$5.00	$5.22	$5.46	$5.73	$6.03	$6.35	$6.69	$7.05
NorthWestern Corporation	NWE	$3.39	$3.49	$3.59	$3.69	$3.79	$3.90	$4.03	$4.18	$4.35	$4.55	$4.77	$5.03	$5.30	$5.58
OGE Energy Corp.	OGE	$1.69	$1.80	$1.92	$2.04	$2.17	$2.32	$2.46	$2.61	$2.77	$2.93	$3.09	$3.25	$3.43	$3.61
Otter Tail Corporation	OTTR	$1.60	$1.69	$1.79	$1.90	$2.01	$2.13	$2.25	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.27
Pinnacle West Capital Corporation	PNW	$3.95	$4.16	$4.38	$4.61	$4.86	$5.12	$5.39	$5.68	$5.98	$6.30	$6.64	$7.00	$7.37	$7.77
PNM Resources, Inc.	PNM	$1.65	$1.76	$1.87	$1.99	$2.12	$2.26	$2.40	$2.54	$2.69	$2.85	$3.01	$3.17	$3.34	$3.52
Portland General Electric Company	POR	$2.16	$2.26	$2.36	$2.47	$2.58	$2.70	$2.83	$2.96	$3.11	$3.27	$3.44	$3.62	$3.82	$4.02
Southern Company	SO	$2.83	$2.92	$3.02	$3.12	$3.22	$3.33	$3.45	$3.59	$3.75	$3.92	$4.12	$4.34	$4.57	$4.82
WEC Energy Group, Inc.	WEC	$2.96	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.31	$4.54	$4.79	$5.05	$5.32	$5.60	$5.90
Xcel Energy Inc.	XEL	$2.21	$2.32	$2.44	$2.56	$2.69	$2.82	$2.96	$3.12	$3.28	$3.45	$3.63	$3.83	$4.03	$4.25

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 83 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.12	$2.19	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97	$4.18
Alliant Energy Corporation	LNT	$1.11	$1.18	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22	$2.34
Ameren Corporation	AEE	$1.83	$1.92	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60	$3.79
American Electric Power Company, Inc.	AEP	$2.99	$3.05	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69	$4.94
Black Hills Corporation	BKH	$1.43	$1.52	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54	$3.73
CMS Energy Corporation	CMS	$1.29	$1.38	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72	$2.86
Dominion Resources, Inc.	D	$3.07	$3.25	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13	$4.35
DTE Energy Company	DTE	$2.96	$3.21	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08	$6.40
Duke Energy Corporation	DUK	$2.93	$3.07	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13	$4.35
IDACORP, Inc.	IDA	$2.21	$2.38	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41	$4.65
NorthWestern Corporation	NWE	$2.16	$2.22	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49	$3.68
OGE Energy Corp.	OGE	$1.17	$1.28	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26	$2.38
Otter Tail Corporation	OTTR	$1.25	$1.27	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04	$2.15
Pinnacle West Capital Corporation	PNW	$2.62	$2.76	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86	$5.12
PNM Resources, Inc.	PNM	$0.84	$0.94	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20	$2.32
Portland General Electric Company	POR	$1.33	$1.38	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52	$2.65
Southern Company	SO	$2.25	$2.32	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01	$3.17
WEC Energy Group, Inc.	WEC	$2.09	$2.21	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89
Xcel Energy Inc.	XEL	$1.44	$1.54	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66	$2.80

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 84 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($78.26)	$0.00	$0.35	$2.18	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97
Alliant Energy Corporation	LNT	($42.63)	$0.00	$0.19	$1.14	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22
Ameren Corporation	AEE	($59.93)	$0.00	$0.31	$1.89	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60
American Electric Power Company, Inc.	AEP	($72.35)	$0.00	$0.50	$3.04	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69
Black Hills Corporation	BKH	($67.67)	$0.00	$0.24	$1.48	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54
CMS Energy Corporation	CMS	($47.26)	$0.00	$0.22	$1.33	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72
Dominion Resources, Inc.	D	($78.42)	$0.00	$0.51	$3.15	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13
DTE Energy Company	DTE	($109.51)	$0.00	$0.49	$3.04	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08
Duke Energy Corporation	DUK	($86.05)	$0.00	$0.49	$2.99	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13
IDACORP, Inc.	IDA	($89.88)	$0.00	$0.37	$2.26	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41
NorthWestern Corporation	NWE	($58.16)	$0.00	$0.36	$2.19	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49
OGE Energy Corp.	OGE	($36.47)	$0.00	$0.20	$1.21	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26
Otter Tail Corporation	OTTR	($44.91)	$0.00	$0.21	$1.29	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04
Pinnacle West Capital Corporation	PNW	($86.85)	$0.00	$0.44	$2.69	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86
PNM Resources, Inc.	PNM	($41.49)	$0.00	$0.14	$0.87	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20
Portland General Electric Company	POR	($46.10)	$0.00	$0.22	$1.36	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52
Southern Company	SO	($50.43)	$0.00	$0.38	$2.29	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01
WEC Energy Group, Inc.	WEC	($65.10)	$0.00	$0.35	$2.15	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69
Xcel Energy Inc.	XEL	($48.29)	$0.00	$0.24	$1.47	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 85 of 182

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	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$78.26	6.10%	5.00%	6.00%	6.10%	5.37%	64.00%	58.00%	65.91%	$0.00	8.49%	22.22	4.14
Alliant Energy Corporation	LNT	$42.63	6.20%	7.50%	6.00%	7.50%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.70%	20.84	3.88
Ameren Corporation	AEE	$59.93	6.70%	7.00%	6.00%	7.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	9.07%	18.74	3.49
American Electric Power Company, Inc.	AEP	$72.35	4.80%	2.77%	4.00%	4.80%	5.37%	68.00%	63.00%	65.91%	($0.00)	9.62%	16.32	3.04
Black Hills Corporation	BKH	$67.67	5.60%	6.64%	7.50%	7.50%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.61%	21.43	3.99
CMS Energy Corporation	CMS	$47.26	6.50%	7.58%	6.50%	7.58%	5.37%	61.00%	61.00%	65.91%	($0.00)	8.97%	19.27	3.59
Dominion Resources, Inc.	D	$78.42	5.40%	4.00%	5.50%	5.50%	5.37%	85.00%	88.00%	65.91%	$0.00	8.92%	19.53	3.64
DTE Energy Company	DTE	$109.51	6.00%	4.91%	6.00%	6.00%	5.37%	58.00%	64.00%	65.91%	($0.00)	8.80%	20.21	3.77
Duke Energy Corporation	DUK	$86.05	4.00%	3.24%	4.50%	4.50%	5.37%	76.00%	79.00%	65.91%	($0.00)	8.54%	21.86	4.07
IDACORP, Inc.	IDA	$89.88	4.50%	4.00%	3.50%	4.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	8.43%	22.67	4.22
NorthWestern Corporation	NWE	$58.16	1.50%	2.57%	4.50%	4.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	9.49%	16.85	3.14
OGE Energy Corp.	OGE	$36.47	4.90%	8.60%	6.00%	8.60%	5.37%	65.00%	72.00%	65.91%	($0.00)	9.74%	15.88	2.96
Otter Tail Corporation	OTTR	$44.91	NA	5.20%	6.50%	6.50%	5.37%	74.00%	61.00%	65.91%	$0.00	8.25%	24.06	4.48
Pinnacle West Capital Corporation	PNW	$86.85	5.00%	5.46%	5.50%	5.50%	5.37%	63.00%	63.00%	65.91%	$0.00	8.80%	20.20	3.76
PNM Resources, Inc.	PNM	$41.49	5.40%	6.45%	7.50%	7.50%	5.37%	48.00%	57.00%	65.91%	($0.00)	8.71%	20.77	3.87
Portland General Electric Company	POR	$46.10	3.70%	3.97%	6.00%	6.00%	5.37%	59.00%	57.00%	65.91%	($0.00)	8.97%	19.29	3.59
Southern Company	SO	$50.43	3.80%	2.63%	3.50%	3.80%	5.37%	77.00%	76.00%	65.91%	$0.00	9.34%	17.46	3.25
WEC Energy Group, Inc.	WEC	$65.10	5.10%	5.45%	6.00%	6.00%	5.37%	67.00%	67.00%	65.91%	($0.00)	8.96%	19.32	3.60
Xcel Energy Inc.	XEL	$48.29	5.50%	NA	4.50%	5.50%	5.37%	62.00%	66.00%	65.91%	($0.00)	8.84%	19.97	3.72
											Mean	8.91%	19.84	
											Max	9.74%		
											Min	8.25%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.33	$3.53	$3.75	$3.98	$4.22	$4.47	$4.74	$5.01	$5.29	$5.58	$5.88	$6.19	$6.53
Alliant Energy Corporation	LNT	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Ameren Corporation	AEE	$2.68	$2.87	$3.07	$3.28	$3.51	$3.76	$4.01	$4.27	$4.53	$4.80	$5.07	$5.35	$5.63	$5.94
American Electric Power Company, Inc.	AEP	$4.23	$4.43	$4.65	$4.87	$5.10	$5.35	$5.61	$5.89	$6.19	$6.51	$6.85	$7.22	$7.61	$8.02
Black Hills Corporation	BKH	$2.63	$2.83	$3.04	$3.27	$3.51	$3.78	$4.05	$4.32	$4.60	$4.88	$5.16	$5.43	$5.73	$6.03
CMS Energy Corporation	CMS	$1.98	$2.13	$2.29	$2.47	$2.65	$2.85	$3.06	$3.27	$3.48	$3.69	$3.90	$4.11	$4.33	$4.57
Dominion Resources, Inc.	D	$3.44	$3.63	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56	$5.86	$6.17	$6.50	$6.85
DTE Energy Company	DTE	$4.83	$5.12	$5.43	$5.75	$6.10	$6.46	$6.84	$7.24	$7.65	$8.08	$8.52	$8.98	$9.46	$9.97
Duke Energy Corporation	DUK	$3.71	$3.88	$4.05	$4.23	$4.42	$4.62	$4.84	$5.07	$5.32	$5.59	$5.88	$6.20	$6.53	$6.88
IDACORP, Inc.	IDA	$3.94	$4.12	$4.30	$4.50	$4.70	$4.91	$5.14	$5.38	$5.65	$5.94	$6.25	$6.58	$6.94	$7.31
NorthWestern Corporation	NWE	$3.39	$3.54	$3.70	$3.87	$4.04	$4.22	$4.42	$4.63	$4.86	$5.11	$5.37	$5.66	$5.97	$6.29
OGE Energy Corp.	OGE	$1.69	$1.84	$1.99	$2.16	$2.35	$2.55	$2.76	$2.97	$3.17	$3.38	$3.58	$3.77	$3.97	$4.18
Otter Tail Corporation	OTTR	$1.60	$1.70	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.62	$2.77	$2.92	$3.08	$3.25	$3.42
Pinnacle West Capital Corporation	PNW	$3.95	$4.17	$4.40	$4.64	$4.89	$5.16	$5.45	$5.74	$6.05	$6.38	$6.73	$7.09	$7.47	$7.87
PNM Resources, Inc.	PNM	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Portland General Electric Company	POR	$2.16	$2.29	$2.43	$2.57	$2.73	$2.89	$3.06	$3.24	$3.42	$3.61	$3.81	$4.02	$4.23	$4.46
Southern Company	SO	$2.83	$2.94	$3.05	$3.17	$3.29	$3.41	$3.55	$3.70	$3.87	$4.06	$4.27	$4.50	$4.74	$4.99
WEC Energy Group, Inc.	WEC	$2.96	$3.14	$3.33	$3.53	$3.74	$3.96	$4.19	$4.44	$4.69	$4.95	$5.22	$5.50	$5.80	$6.11
Xcel Energy Inc.	XEL	$2.21	$2.33	$2.46	$2.60	$2.74	$2.89	$3.05	$3.21	$3.39	$3.57	$3.76	$3.97	$4.18	$4.40

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 86 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.13	$2.21	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08	$4.30
Alliant Energy Corporation	LNT	$1.12	$1.20	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37	$2.49
Ameren Corporation	AEE	$1.84	$1.93	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71	$3.91
American Electric Power Company, Inc.	AEP	$3.01	$3.10	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01	$5.28
Black Hills Corporation	BKH	$1.44	$1.55	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77	$3.98
CMS Energy Corporation	CMS	$1.30	$1.40	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86	$3.01
Dominion Resources, Inc.	D	$3.08	$3.28	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29	$4.52
DTE Energy Company	DTE	$2.97	$3.23	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24	$6.57
Duke Energy Corporation	DUK	$2.95	$3.11	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30	$4.53
IDACORP, Inc.	IDA	$2.22	$2.40	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57	$4.82
NorthWestern Corporation	NWE	$2.20	$2.30	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93	$4.14
OGE Energy Corp.	OGE	$1.19	$1.33	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62	$2.76
Otter Tail Corporation	OTTR	$1.26	$1.28	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14	$2.25
Pinnacle West Capital Corporation	PNW	$2.63	$2.77	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92	$5.19
PNM Resources, Inc.	PNM	$0.85	$0.96	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37	$2.49
Portland General Electric Company	POR	$1.35	$1.42	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79	$2.94
Southern Company	SO	$2.26	$2.34	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12	$3.29
WEC Energy Group, Inc.	WEC	$2.10	$2.23	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82	$4.03
Xcel Energy Inc.	XEL	$1.45	$1.55	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75	$2.90

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 87 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($78.26)	$0.00	$0.36	$2.20	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08
Alliant Energy Corporation	LNT	($42.63)	$0.00	$0.19	$1.16	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37
Ameren Corporation	AEE	($59.93)	$0.00	$0.31	$1.90	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71
American Electric Power Company, Inc.	AEP	($72.35)	$0.00	$0.50	$3.09	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01
Black Hills Corporation	BKH	($67.67)	$0.00	$0.24	$1.50	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77
CMS Energy Corporation	CMS	($47.26)	$0.00	$0.22	$1.35	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86
Dominion Resources, Inc.	D	($78.42)	$0.00	$0.52	$3.17	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29
DTE Energy Company	DTE	($109.51)	$0.00	$0.50	$3.06	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24
Duke Energy Corporation	DUK	($86.05)	$0.00	$0.49	$3.01	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30
IDACORP, Inc.	IDA	($89.88)	$0.00	$0.37	$2.27	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57
NorthWestern Corporation	NWE	($58.16)	$0.00	$0.37	$2.25	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93
OGE Energy Corp.	OGE	($36.47)	$0.00	$0.20	$1.24	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62
Otter Tail Corporation	OTTR	($44.91)	$0.00	$0.21	$1.30	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14
Pinnacle West Capital Corporation	PNW	($86.85)	$0.00	$0.44	$2.70	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92
PNM Resources, Inc.	PNM	($41.49)	$0.00	$0.14	$0.88	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37
Portland General Electric Company	POR	($46.10)	$0.00	$0.23	$1.39	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79
Southern Company	SO	($50.43)	$0.00	$0.38	$2.30	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12
WEC Energy Group, Inc.	WEC	($65.10)	$0.00	$0.35	$2.17	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82
Xcel Energy Inc.	XEL	($48.29)	$0.00	$0.24	$1.49	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 88 of 182

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$78.26	6.10%	5.00%	6.00%	5.00%	5.37%	64.00%	58.00%	65.91%	$0.00	8.27%	23.89	4.45
Alliant Energy Corporation	LNT	$42.63	6.20%	7.50%	6.00%	6.00%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.39%	22.99	4.28
Ameren Corporation	AEE	$59.93	6.70%	7.00%	6.00%	6.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	8.84%	19.99	3.72
American Electric Power Company, Inc.	AEP	$72.35	4.80%	2.77%	4.00%	2.77%	5.37%	68.00%	63.00%	65.91%	($0.00)	9.08%	18.68	3.48
Black Hills Corporation	BKH	$67.67	5.60%	6.64%	7.50%	5.60%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.23%	24.23	4.51
CMS Energy Corporation	CMS	$47.26	6.50%	7.58%	6.50%	6.50%	5.37%	61.00%	61.00%	65.91%	($0.00)	8.73%	20.66	3.85
Dominion Resources, Inc.	D	$78.42	5.40%	4.00%	5.50%	4.00%	5.37%	85.00%	88.00%	65.91%	($0.00)	8.57%	21.66	4.04
DTE Energy Company	DTE	$109.51	6.00%	4.91%	6.00%	4.91%	5.37%	58.00%	64.00%	65.91%	($0.00)	8.56%	21.72	4.05
Duke Energy Corporation	DUK	$86.05	4.00%	3.24%	4.50%	3.24%	5.37%	76.00%	79.00%	65.91%	($0.00)	8.28%	23.85	4.44
IDACORP, Inc.	IDA	$89.88	4.50%	4.00%	3.50%	3.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	8.23%	24.24	4.52
NorthWestern Corporation	NWE	$58.16	1.50%	2.57%	4.50%	1.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	8.74%	20.62	3.84
OGE Energy Corp.	OGE	$36.47	4.90%	8.60%	6.00%	4.90%	5.37%	65.00%	72.00%	65.91%	$0.00	8.80%	20.22	3.77
Otter Tail Corporation	OTTR	$44.91	NA	5.20%	6.50%	5.20%	5.37%	74.00%	61.00%	65.91%	$0.00	8.01%	26.23	4.89
Pinnacle West Capital Corporation	PNW	$86.85	5.00%	5.46%	5.50%	5.00%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.69%	20.88	3.89
PNM Resources, Inc.	PNM	$41.49	5.40%	6.45%	7.50%	5.40%	5.37%	48.00%	57.00%	65.91%	($0.00)	8.28%	23.80	4.43
Portland General Electric Company	POR	$46.10	3.70%	3.97%	6.00%	3.70%	5.37%	59.00%	57.00%	65.91%	($0.00)	8.46%	22.45	4.18
Southern Company	SO	$50.43	3.80%	2.63%	3.50%	2.63%	5.37%	77.00%	76.00%	65.91%	$0.00	9.04%	18.92	3.53
WEC Energy Group, Inc.	WEC	$65.10	5.10%	5.45%	6.00%	5.10%	5.37%	67.00%	67.00%	65.91%	$0.00	8.75%	20.51	3.82
Xcel Energy Inc.	XEL	$48.29	5.50%	NA	4.50%	4.50%	5.37%	62.00%	66.00%	65.91%	($0.00)	8.62%	21.35	3.98
											Mean	8.56%	21.94	
											Max	9.08%		
											Min	8.01%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.30	$3.46	$3.63	$3.82	$4.01	$4.21	$4.43	$4.66	$4.90	$5.16	$5.44	$5.73	$6.04
Alliant Energy Corporation	LNT	$1.65	$1.75	$1.85	$1.97	$2.08	$2.21	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.23	$3.41
Ameren Corporation	AEE	$2.68	$2.84	$3.01	$3.19	$3.38	$3.59	$3.80	$4.02	$4.25	$4.48	$4.73	$4.98	$5.25	$5.53
American Electric Power Company, Inc.	AEP	$4.23	$4.35	$4.47	$4.59	$4.72	$4.85	$5.00	$5.19	$5.40	$5.64	$5.92	$6.24	$6.57	$6.92
Black Hills Corporation	BKH	$2.63	$2.78	$2.93	$3.10	$3.27	$3.45	$3.65	$3.85	$4.06	$4.28	$4.51	$4.75	$5.01	$5.28
CMS Energy Corporation	CMS	$1.98	$2.11	$2.25	$2.39	$2.55	$2.71	$2.88	$3.06	$3.24	$3.43	$3.62	$3.81	$4.02	$4.23
Dominion Resources, Inc.	D	$3.44	$3.58	$3.72	$3.87	$4.02	$4.19	$4.36	$4.56	$4.77	$5.00	$5.26	$5.54	$5.84	$6.15
DTE Energy Company	DTE	$4.83	$5.07	$5.32	$5.58	$5.85	$6.14	$6.44	$6.77	$7.12	$7.49	$7.89	$8.31	$8.75	$9.22
Duke Energy Corporation	DUK	$3.71	$3.83	$3.95	$4.08	$4.21	$4.35	$4.51	$4.69	$4.89	$5.11	$5.37	$5.66	$5.96	$6.28
IDACORP, Inc.	IDA	$3.94	$4.08	$4.22	$4.37	$4.52	$4.68	$4.86	$5.06	$5.28	$5.53	$5.81	$6.12	$6.45	$6.80
NorthWestern Corporation	NWE	$3.39	$3.44	$3.49	$3.54	$3.60	$3.65	$3.73	$3.83	$3.97	$4.13	$4.32	$4.55	$4.80	$5.06
OGE Energy Corp.	OGE	$1.69	$1.77	$1.86	$1.95	$2.05	$2.15	$2.25	$2.37	$2.49	$2.62	$2.76	$2.91	$3.06	$3.23
Otter Tail Corporation	OTTR	$1.60	$1.68	$1.77	$1.86	$1.96	$2.06	$2.17	$2.28	$2.40	$2.53	$2.67	$2.81	$2.96	$3.12
Pinnacle West Capital Corporation	PNW	$3.95	$4.15	$4.35	$4.57	$4.80	$5.04	$5.30	$5.57	$5.86	$6.16	$6.49	$6.84	$7.21	$7.59
PNM Resources, Inc.	PNM	$1.65	$1.74	$1.83	$1.93	$2.04	$2.15	$2.26	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.26
Portland General Electric Company	POR	$2.16	$2.24	$2.32	$2.41	$2.50	$2.59	$2.69	$2.81	$2.94	$3.08	$3.23	$3.41	$3.59	$3.78
Southern Company	SO	$2.83	$2.90	$2.98	$3.06	$3.14	$3.22	$3.32	$3.44	$3.58	$3.74	$3.92	$4.13	$4.35	$4.59
WEC Energy Group, Inc.	WEC	$2.96	$3.11	$3.27	$3.44	$3.61	$3.80	$3.99	$4.20	$4.42	$4.65	$4.90	$5.16	$5.44	$5.73
Xcel Energy Inc.	XEL	$2.21	$2.31	$2.41	$2.52	$2.64	$2.75	$2.88	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89	$4.10

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 89 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.11	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78	$3.98
Alliant Energy Corporation	LNT	$1.10	$1.17	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13	$2.24
Ameren Corporation	AEE	$1.82	$1.90	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46	$3.65
American Electric Power Company, Inc.	AEP	$2.96	$2.98	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33	$4.56
Black Hills Corporation	BKH	$1.42	$1.50	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30	$3.48
CMS Energy Corporation	CMS	$1.29	$1.37	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65	$2.79
Dominion Resources, Inc.	D	$3.04	$3.19	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85	$4.06
DTE Energy Company	DTE	$2.94	$3.16	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77	$6.08
Duke Energy Corporation	DUK	$2.91	$3.03	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93	$4.14
IDACORP, Inc.	IDA	$2.20	$2.35	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25	$4.48
NorthWestern Corporation	NWE	$2.13	$2.17	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16	$3.33
OGE Energy Corp.	OGE	$1.15	$1.24	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02	$2.13
Otter Tail Corporation	OTTR	$1.25	$1.25	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95	$2.06
Pinnacle West Capital Corporation	PNW	$2.61	$2.74	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75	$5.00
PNM Resources, Inc.	PNM	$0.83	$0.92	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04	$2.15
Portland General Electric Company	POR	$1.32	$1.36	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37	$2.49
Southern Company	SO	$2.24	$2.29	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87	$3.02
WEC Energy Group, Inc.	WEC	$2.08	$2.19	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58	$3.78
Xcel Energy Inc.	XEL	$1.43	$1.52	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56	$2.70

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 90 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($78.26)	$0.00	$0.35	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78
Alliant Energy Corporation	LNT	($42.63)	$0.00	$0.18	$1.13	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13
Ameren Corporation	AEE	($59.93)	$0.00	$0.30	$1.87	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46
American Electric Power Company, Inc.	AEP	($72.35)	$0.00	$0.49	$3.00	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33
Black Hills Corporation	BKH	($67.67)	$0.00	$0.24	$1.46	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30
CMS Energy Corporation	CMS	($47.26)	$0.00	$0.21	$1.33	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65
Dominion Resources, Inc.	D	($78.42)	$0.00	$0.51	$3.10	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85
DTE Energy Company	DTE	($109.51)	$0.00	$0.49	$3.01	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77
Duke Energy Corporation	DUK	($86.05)	$0.00	$0.49	$2.96	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93
IDACORP, Inc.	IDA	($89.88)	$0.00	$0.37	$2.24	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25
NorthWestern Corporation	NWE	($58.16)	$0.00	$0.36	$2.15	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16
OGE Energy Corp.	OGE	($36.47)	$0.00	$0.19	$1.18	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02
Otter Tail Corporation	OTTR	($44.91)	$0.00	$0.21	$1.28	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95
Pinnacle West Capital Corporation	PNW	($86.85)	$0.00	$0.44	$2.68	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75
PNM Resources, Inc.	PNM	($41.49)	$0.00	$0.14	$0.86	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04
Portland General Electric Company	POR	($46.10)	$0.00	$0.22	$1.35	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37
Southern Company	SO	($50.43)	$0.00	$0.37	$2.27	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87
WEC Energy Group, Inc.	WEC	($65.10)	$0.00	$0.35	$2.14	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58
Xcel Energy Inc.	XEL	($48.29)	$0.00	$0.24	$1.46	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 91 of 182

Multi-Stage Growth Discounted Cash Flow Model
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]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
					Value									PEG
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	Ratio
ALLETE, Inc.	ALE	$75.64	6.10%	5.00%	6.00%	5.70%	5.37%	64.00%	58.00%	65.91%	$0.00	8.52%	22.04	4.11
Alliant Energy Corporation	LNT	$41.87	6.20%	7.50%	6.00%	6.57%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.56%	21.75	4.05
Ameren Corporation	AEE	$58.31	6.70%	7.00%	6.00%	6.57%	5.37%	64.00%	60.00%	65.91%	($0.00)	9.07%	18.75	3.49
American Electric Power Company, Inc.	AEP	$68.86	4.80%	2.77%	4.00%	3.86%	5.37%	68.00%	63.00%	65.91%	($0.00)	9.57%	16.51	3.08
Black Hills Corporation	BKH	$68.86	5.60%	6.64%	7.50%	6.58%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.37%	23.12	4.31
CMS Energy Corporation	CMS	$47.23	6.50%	7.58%	6.50%	6.86%	5.37%	61.00%	61.00%	65.91%	($0.00)	8.81%	20.17	3.76
Dominion Resources, Inc.	D	$78.00	5.40%	4.00%	5.50%	4.97%	5.37%	85.00%	88.00%	65.91%	($0.00)	8.81%	20.14	3.75
DTE Energy Company	DTE	$109.02	6.00%	4.91%	6.00%	5.64%	5.37%	58.00%	64.00%	65.91%	($0.00)	8.74%	20.61	3.84
Duke Energy Corporation	DUK	$85.82	4.00%	3.24%	4.50%	3.91%	5.37%	76.00%	79.00%	65.91%	($0.00)	8.43%	22.70	4.23
IDACORP, Inc.	IDA	$88.14	4.50%	4.00%	3.50%	4.00%	5.37%	54.00%	61.00%	65.91%	($0.00)	8.39%	22.99	4.28
NorthWestern Corporation	NWE	$59.45	1.50%	2.57%	4.50%	2.86%	5.37%	62.00%	62.00%	65.91%	($0.00)	8.98%	19.22	3.58
OGE Energy Corp.	OGE	$35.87	4.90%	8.60%	6.00%	6.50%	5.37%	65.00%	72.00%	65.91%	($0.00)	9.25%	17.88	3.33
Otter Tail Corporation	OTTR	$42.31	NA	5.20%	6.50%	5.85%	5.37%	74.00%	61.00%	65.91%	$0.00	8.30%	23.65	4.41
Pinnacle West Capital Corporation	PNW	$87.45	5.00%	5.46%	5.50%	5.32%	5.37%	63.00%	63.00%	65.91%	$0.00	8.74%	20.59	3.84
PNM Resources, Inc.	PNM	$40.79	5.40%	6.45%	7.50%	6.45%	5.37%	48.00%	57.00%	65.91%	($0.00)	8.54%	21.85	4.07
Portland General Electric Company	POR	$46.08	3.70%	3.97%	6.00%	4.56%	5.37%	59.00%	57.00%	65.91%	$0.00	8.64%	21.19	3.95
Southern Company	SO	$49.11	3.80%	2.63%	3.50%	3.31%	5.37%	77.00%	76.00%	65.91%	$0.00	9.32%	17.56	3.27
WEC Energy Group, Inc.	WEC	$64.16	5.10%	5.45%	6.00%	5.52%	5.37%	67.00%	67.00%	65.91%	$0.00	8.90%	19.66	3.66
Xcel Energy Inc.	XEL	$48.04	5.50%	NA	4.50%	5.00%	5.37%	62.00%	66.00%	65.91%	($0.00)	8.75%	20.54	3.83
											Mean	8.77%	20.57	
											Max	9.57%		
											Min	8.30%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.32	$3.51	$3.71	$3.92	$4.14	$4.38	$4.62	$4.88	$5.14	$5.42	$5.71	$6.02	$6.34
Alliant Energy Corporation	LNT	$1.65	$1.76	$1.87	$2.00	$2.13	$2.27	$2.41	$2.56	$2.71	$2.87	$3.03	$3.19	$3.36	$3.54
Ameren Corporation	AEE	$2.68	$2.86	$3.04	$3.24	$3.46	$3.68	$3.92	$4.16	$4.41	$4.66	$4.92	$5.19	$5.46	$5.76
American Electric Power Company, Inc.	AEP	$4.23	$4.39	$4.56	$4.74	$4.92	$5.11	$5.32	$5.55	$5.81	$6.09	$6.40	$6.75	$7.11	$7.49
Black Hills Corporation	BKH	$2.63	$2.80	$2.99	$3.18	$3.39	$3.62	$3.85	$4.09	$4.33	$4.58	$4.83	$5.09	$5.37	$5.65
CMS Energy Corporation	CMS	$1.98	$2.12	$2.26	$2.42	$2.58	$2.76	$2.94	$3.13	$3.32	$3.51	$3.71	$3.91	$4.12	$4.34
Dominion Resources, Inc.	D	$3.44	$3.61	$3.79	$3.98	$4.18	$4.38	$4.60	$4.84	$5.09	$5.36	$5.64	$5.94	$6.26	$6.60
DTE Energy Company	DTE	$4.83	$5.10	$5.39	$5.69	$6.01	$6.35	$6.71	$7.08	$7.47	$7.88	$8.30	$8.75	$9.22	$9.71
Duke Energy Corporation	DUK	$3.71	$3.86	$4.01	$4.16	$4.33	$4.50	$4.68	$4.89	$5.11	$5.36	$5.64	$5.94	$6.26	$6.60
IDACORP, Inc.	IDA	$3.94	$4.10	$4.26	$4.43	$4.61	$4.79	$5.00	$5.22	$5.46	$5.73	$6.03	$6.35	$6.69	$7.05
NorthWestern Corporation	NWE	$3.39	$3.49	$3.59	$3.69	$3.79	$3.90	$4.03	$4.18	$4.35	$4.55	$4.77	$5.03	$5.30	$5.58
OGE Energy Corp.	OGE	$1.69	$1.80	$1.92	$2.04	$2.17	$2.32	$2.46	$2.61	$2.77	$2.93	$3.09	$3.25	$3.43	$3.61
Otter Tail Corporation	OTTR	$1.60	$1.69	$1.79	$1.90	$2.01	$2.13	$2.25	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.27
Pinnacle West Capital Corporation	PNW	$3.95	$4.16	$4.38	$4.61	$4.86	$5.12	$5.39	$5.68	$5.98	$6.30	$6.64	$7.00	$7.37	$7.77
PNM Resources, Inc.	PNM	$1.65	$1.76	$1.87	$1.99	$2.12	$2.26	$2.40	$2.54	$2.69	$2.85	$3.01	$3.17	$3.34	$3.52
Portland General Electric Company	POR	$2.16	$2.26	$2.36	$2.47	$2.58	$2.70	$2.83	$2.96	$3.11	$3.27	$3.44	$3.62	$3.82	$4.02
Southern Company	SO	$2.83	$2.92	$3.02	$3.12	$3.22	$3.33	$3.45	$3.59	$3.75	$3.92	$4.12	$4.34	$4.57	$4.82
WEC Energy Group, Inc.	WEC	$2.96	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.31	$4.54	$4.79	$5.05	$5.32	$5.60	$5.90
Xcel Energy Inc.	XEL	$2.21	$2.32	$2.44	$2.56	$2.69	$2.82	$2.96	$3.12	$3.28	$3.45	$3.63	$3.83	$4.03	$4.25

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 92 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.12	$2.19	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97	$4.18
Alliant Energy Corporation	LNT	$1.11	$1.18	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22	$2.34
Ameren Corporation	AEE	$1.83	$1.92	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60	$3.79
American Electric Power Company, Inc.	AEP	$2.99	$3.05	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69	$4.94
Black Hills Corporation	BKH	$1.43	$1.52	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54	$3.73
CMS Energy Corporation	CMS	$1.29	$1.38	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72	$2.86
Dominion Resources, Inc.	D	$3.07	$3.25	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13	$4.35
DTE Energy Company	DTE	$2.96	$3.21	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08	$6.40
Duke Energy Corporation	DUK	$2.93	$3.07	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13	$4.35
IDACORP, Inc.	IDA	$2.21	$2.38	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41	$4.65
NorthWestern Corporation	NWE	$2.16	$2.22	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49	$3.68
OGE Energy Corp.	OGE	$1.17	$1.28	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26	$2.38
Otter Tail Corporation	OTTR	$1.25	$1.27	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04	$2.15
Pinnacle West Capital Corporation	PNW	$2.62	$2.76	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86	$5.12
PNM Resources, Inc.	PNM	$0.84	$0.94	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20	$2.32
Portland General Electric Company	POR	$1.33	$1.38	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52	$2.65
Southern Company	SO	$2.25	$2.32	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01	$3.17
WEC Energy Group, Inc.	WEC	$2.09	$2.21	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89
Xcel Energy Inc.	XEL	$1.44	$1.54	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66	$2.80

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 93 of 182

Projected Annual Data

Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]
Company	Ticker	Initial Outflow	10/31/17	12/31/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28
ALLETE, Inc.	ALE	($75.64)	$0.00	$0.35	$2.18	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97
Alliant Energy Corporation	LNT	($41.87)	$0.00	$0.19	$1.14	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22
Ameren Corporation	AEE	($58.31)	$0.00	$0.31	$1.89	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60
American Electric Power Company, Inc.	AEP	($68.86)	$0.00	$0.50	$3.04	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69
Black Hills Corporation	BKH	($68.86)	$0.00	$0.24	$1.48	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54
CMS Energy Corporation	CMS	($47.23)	$0.00	$0.22	$1.33	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72
Dominion Resources, Inc.	D	($78.00)	$0.00	$0.51	$3.15	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13
DTE Energy Company	DTE	($109.02)	$0.00	$0.49	$3.04	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08
Duke Energy Corporation	DUK	($85.82)	$0.00	$0.49	$2.99	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13
IDACORP, Inc.	IDA	($88.15)	$0.00	$0.37	$2.26	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41
NorthWestern Corporation	NWE	($59.45)	$0.00	$0.36	$2.19	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49
OGE Energy Corp.	OGE	($35.87)	$0.00	$0.20	$1.21	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26
Otter Tail Corporation	OTTR	($42.31)	$0.00	$0.21	$1.29	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04
Pinnacle West Capital Corporation	PNW	($87.45)	$0.00	$0.44	$2.69	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86
PNM Resources, Inc.	PNM	($40.79)	$0.00	$0.14	$0.87	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20
Portland General Electric Company	POR	($46.08)	$0.00	$0.22	$1.36	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52
Southern Company	SO	($49.11)	$0.00	$0.38	$2.29	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01
WEC Energy Group, Inc.	WEC	($64.16)	$0.00	$0.35	$2.15	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69
Xcel Energy Inc.	XEL	($48.04)	$0.00	$0.24	$1.47	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 94 of 182

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.64	6.10%	5.00%	6.00%	6.10%	5.37%	64.00%	58.00%	65.91%	$0.00	8.60%	21.47	4.00
Alliant Energy Corporation	LNT	$41.87	6.20%	7.50%	6.00%	7.50%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.76%	20.47	3.81
Ameren Corporation	AEE	$58.31	6.70%	7.00%	6.00%	7.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	9.18%	18.23	3.40
American Electric Power Company, Inc.	AEP	$68.86	4.80%	2.77%	4.00%	4.80%	5.37%	68.00%	63.00%	65.91%	($0.00)	9.84%	15.52	2.89
Black Hills Corporation	BKH	$68.86	5.60%	6.64%	7.50%	7.50%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.55%	21.79	4.06
CMS Energy Corporation	CMS	$47.23	6.50%	7.58%	6.50%	7.58%	5.37%	61.00%	61.00%	65.91%	($0.00)	8.97%	19.26	3.59
Dominion Resources, Inc.	D	$78.00	5.40%	4.00%	5.50%	5.50%	5.37%	85.00%	88.00%	65.91%	$0.00	8.94%	19.42	3.62
DTE Energy Company	DTE	$109.02	6.00%	4.91%	6.00%	6.00%	5.37%	58.00%	64.00%	65.91%	($0.00)	8.82%	20.12	3.75
Duke Energy Corporation	DUK	$85.82	4.00%	3.24%	4.50%	4.50%	5.37%	76.00%	79.00%	65.91%	($0.00)	8.55%	21.80	4.06
IDACORP, Inc.	IDA	$88.14	4.50%	4.00%	3.50%	4.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	8.49%	22.23	4.14
NorthWestern Corporation	NWE	$59.45	1.50%	2.57%	4.50%	4.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	9.40%	17.23	3.21
OGE Energy Corp.	OGE	$35.87	4.90%	8.60%	6.00%	8.60%	5.37%	65.00%	72.00%	65.91%	($0.00)	9.81%	15.62	2.91
Otter Tail Corporation	OTTR	$42.31	NA	5.20%	6.50%	6.50%	5.37%	74.00%	61.00%	65.91%	$0.00	8.43%	22.66	4.22
Pinnacle West Capital Corporation	PNW	$87.45	5.00%	5.46%	5.50%	5.50%	5.37%	63.00%	63.00%	65.91%	$0.00	8.78%	20.34	3.79
PNM Resources, Inc.	PNM	$40.79	5.40%	6.45%	7.50%	7.50%	5.37%	48.00%	57.00%	65.91%	($0.00)	8.77%	20.43	3.81
Portland General Electric Company	POR	$46.08	3.70%	3.97%	6.00%	6.00%	5.37%	59.00%	57.00%	65.91%	($0.00)	8.97%	19.28	3.59
Southern Company	SO	$49.11	3.80%	2.63%	3.50%	3.80%	5.37%	77.00%	76.00%	65.91%	$0.00	9.46%	16.98	3.16
WEC Energy Group, Inc.	WEC	$64.16	5.10%	5.45%	6.00%	6.00%	5.37%	67.00%	67.00%	65.91%	$0.00	9.01%	19.04	3.55
Xcel Energy Inc.	XEL	$48.04	5.50%	NA	4.50%	5.50%	5.37%	62.00%	66.00%	65.91%	($0.00)	8.86%	19.87	3.70
											Mean	8.96%	19.57	
											Max	9.84%		
											Min	8.43%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.33	$3.53	$3.75	$3.98	$4.22	$4.47	$4.74	$5.01	$5.29	$5.58	$5.88	$6.19	$6.53
Alliant Energy Corporation	LNT	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Ameren Corporation	AEE	$2.68	$2.87	$3.07	$3.28	$3.51	$3.76	$4.01	$4.27	$4.53	$4.80	$5.07	$5.35	$5.63	$5.94
American Electric Power Company, Inc.	AEP	$4.23	$4.43	$4.65	$4.87	$5.10	$5.35	$5.61	$5.89	$6.19	$6.51	$6.85	$7.22	$7.61	$8.02
Black Hills Corporation	BKH	$2.63	$2.83	$3.04	$3.27	$3.51	$3.78	$4.05	$4.32	$4.60	$4.88	$5.16	$5.43	$5.73	$6.03
CMS Energy Corporation	CMS	$1.98	$2.13	$2.29	$2.47	$2.65	$2.85	$3.06	$3.27	$3.48	$3.69	$3.90	$4.11	$4.33	$4.57
Dominion Resources, Inc.	D	$3.44	$3.63	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56	$5.86	$6.17	$6.50	$6.85
DTE Energy Company	DTE	$4.83	$5.12	$5.43	$5.75	$6.10	$6.46	$6.84	$7.24	$7.65	$8.08	$8.52	$8.98	$9.46	$9.97
Duke Energy Corporation	DUK	$3.71	$3.88	$4.05	$4.23	$4.42	$4.62	$4.84	$5.07	$5.32	$5.59	$5.88	$6.20	$6.53	$6.88
IDACORP, Inc.	IDA	$3.94	$4.12	$4.30	$4.50	$4.70	$4.91	$5.14	$5.38	$5.65	$5.94	$6.25	$6.58	$6.94	$7.31
NorthWestern Corporation	NWE	$3.39	$3.54	$3.70	$3.87	$4.04	$4.22	$4.42	$4.63	$4.86	$5.11	$5.37	$5.66	$5.97	$6.29
OGE Energy Corp.	OGE	$1.69	$1.84	$1.99	$2.16	$2.35	$2.55	$2.76	$2.97	$3.17	$3.38	$3.58	$3.77	$3.97	$4.18
Otter Tail Corporation	OTTR	$1.60	$1.70	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.62	$2.77	$2.92	$3.08	$3.25	$3.42
Pinnacle West Capital Corporation	PNW	$3.95	$4.17	$4.40	$4.64	$4.89	$5.16	$5.45	$5.74	$6.05	$6.38	$6.73	$7.09	$7.47	$7.87
PNM Resources, Inc.	PNM	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Portland General Electric Company	POR	$2.16	$2.29	$2.43	$2.57	$2.73	$2.89	$3.06	$3.24	$3.42	$3.61	$3.81	$4.02	$4.23	$4.46
Southern Company	SO	$2.83	$2.94	$3.05	$3.17	$3.29	$3.41	$3.55	$3.70	$3.87	$4.06	$4.27	$4.50	$4.74	$4.99
WEC Energy Group, Inc.	WEC	$2.96	$3.14	$3.33	$3.53	$3.74	$3.96	$4.19	$4.44	$4.69	$4.95	$5.22	$5.50	$5.80	$6.11
Xcel Energy Inc.	XEL	$2.21	$2.33	$2.46	$2.60	$2.74	$2.89	$3.05	$3.21	$3.39	$3.57	$3.76	$3.97	$4.18	$4.40

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 95 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.13	$2.21	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08	$4.30
Alliant Energy Corporation	LNT	$1.12	$1.20	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37	$2.49
Ameren Corporation	AEE	$1.84	$1.93	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71	$3.91
American Electric Power Company, Inc.	AEP	$3.01	$3.10	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01	$5.28
Black Hills Corporation	BKH	$1.44	$1.55	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77	$3.98
CMS Energy Corporation	CMS	$1.30	$1.40	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86	$3.01
Dominion Resources, Inc.	D	$3.08	$3.28	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29	$4.52
DTE Energy Company	DTE	$2.97	$3.23	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24	$6.57
Duke Energy Corporation	DUK	$2.95	$3.11	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30	$4.53
IDACORP, Inc.	IDA	$2.22	$2.40	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57	$4.82
NorthWestern Corporation	NWE	$2.20	$2.30	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93	$4.14
OGE Energy Corp.	OGE	$1.19	$1.33	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62	$2.76
Otter Tail Corporation	OTTR	$1.26	$1.28	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14	$2.25
Pinnacle West Capital Corporation	PNW	$2.63	$2.77	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92	$5.19
PNM Resources, Inc.	PNM	$0.85	$0.96	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37	$2.49
Portland General Electric Company	POR	$1.35	$1.42	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79	$2.94
Southern Company	SO	$2.26	$2.34	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12	$3.29
WEC Energy Group, Inc.	WEC	$2.10	$2.23	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82	$4.03
Xcel Energy Inc.	XEL	$1.45	$1.55	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75	$2.90

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 96 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($75.64)	$0.00	$0.36	$2.20	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08
Alliant Energy Corporation	LNT	($41.87)	$0.00	$0.19	$1.16	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37
Ameren Corporation	AEE	($58.31)	$0.00	$0.31	$1.90	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71
American Electric Power Company, Inc.	AEP	($68.86)	$0.00	$0.50	$3.09	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01
Black Hills Corporation	BKH	($68.86)	$0.00	$0.24	$1.50	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77
CMS Energy Corporation	CMS	($47.23)	$0.00	$0.22	$1.35	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86
Dominion Resources, Inc.	D	($78.00)	$0.00	$0.52	$3.17	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29
DTE Energy Company	DTE	($109.02)	$0.00	$0.50	$3.06	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24
Duke Energy Corporation	DUK	($85.82)	$0.00	$0.49	$3.01	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30
IDACORP, Inc.	IDA	($88.14)	$0.00	$0.37	$2.27	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57
NorthWestern Corporation	NWE	($59.45)	$0.00	$0.37	$2.25	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93
OGE Energy Corp.	OGE	($35.87)	$0.00	$0.20	$1.24	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62
Otter Tail Corporation	OTTR	($42.31)	$0.00	$0.21	$1.30	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14
Pinnacle West Capital Corporation	PNW	($87.45)	$0.00	$0.44	$2.70	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92
PNM Resources, Inc.	PNM	($40.79)	$0.00	$0.14	$0.88	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37
Portland General Electric Company	POR	($46.08)	$0.00	$0.23	$1.39	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79
Southern Company	SO	($49.11)	$0.00	$0.38	$2.30	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12
WEC Energy Group, Inc.	WEC	($64.16)	$0.00	$0.35	$2.17	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82
Xcel Energy Inc.	XEL	($48.04)	$0.00	$0.24	$1.49	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 97 of 182

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.64	6.10%	5.00%	6.00%	5.00%	5.37%	64.00%	58.00%	65.91%	$0.00	8.37%	23.09	4.30
Alliant Energy Corporation	LNT	$41.87	6.20%	7.50%	6.00%	6.00%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.44%	22.58	4.21
Ameren Corporation	AEE	$58.31	6.70%	7.00%	6.00%	6.00%	5.37%	64.00%	60.00%	65.91%	$0.00	8.94%	19.45	3.62
American Electric Power Company, Inc.	AEP	$68.86	4.80%	2.77%	4.00%	2.77%	5.37%	68.00%	63.00%	65.91%	($0.00)	9.28%	17.75	3.31
Black Hills Corporation	BKH	$68.86	5.60%	6.64%	7.50%	5.60%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.19%	24.64	4.59
CMS Energy Corporation	CMS	$47.23	6.50%	7.58%	6.50%	6.50%	5.37%	61.00%	61.00%	65.91%	($0.00)	8.73%	20.65	3.85
Dominion Resources, Inc.	D	$78.00	5.40%	4.00%	5.50%	4.00%	5.37%	85.00%	88.00%	65.91%	($0.00)	8.59%	21.54	4.01
DTE Energy Company	DTE	$109.02	6.00%	4.91%	6.00%	4.91%	5.37%	58.00%	64.00%	65.91%	($0.00)	8.58%	21.62	4.03
Duke Energy Corporation	DUK	$85.82	4.00%	3.24%	4.50%	3.24%	5.37%	76.00%	79.00%	65.91%	($0.00)	8.29%	23.78	4.43
IDACORP, Inc.	IDA	$88.14	4.50%	4.00%	3.50%	3.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	8.29%	23.77	4.43
NorthWestern Corporation	NWE	$59.45	1.50%	2.57%	4.50%	1.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	8.66%	21.09	3.93
OGE Energy Corp.	OGE	$35.87	4.90%	8.60%	6.00%	4.90%	5.37%	65.00%	72.00%	65.91%	$0.00	8.86%	19.87	3.70
Otter Tail Corporation	OTTR	$42.31	NA	5.20%	6.50%	5.20%	5.37%	74.00%	61.00%	65.91%	$0.00	8.18%	24.70	4.60
Pinnacle West Capital Corporation	PNW	$87.45	5.00%	5.46%	5.50%	5.00%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.67%	21.03	3.92
PNM Resources, Inc.	PNM	$40.79	5.40%	6.45%	7.50%	5.40%	5.37%	48.00%	57.00%	65.91%	($0.00)	8.33%	23.41	4.36
Portland General Electric Company	POR	$46.08	3.70%	3.97%	6.00%	3.70%	5.37%	59.00%	57.00%	65.91%	($0.00)	8.46%	22.44	4.18
Southern Company	SO	$49.11	3.80%	2.63%	3.50%	2.63%	5.37%	77.00%	76.00%	65.91%	$0.00	9.14%	18.40	3.43
WEC Energy Group, Inc.	WEC	$64.16	5.10%	5.45%	6.00%	5.10%	5.37%	67.00%	67.00%	65.91%	$0.00	8.80%	20.21	3.76
Xcel Energy Inc.	XEL	$48.04	5.50%	NA	4.50%	4.50%	5.37%	62.00%	66.00%	65.91%	($0.00)	8.64%	21.23	3.96
											Mean	8.60%	21.64	
											Max	9.28%		
											Min	8.18%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.30	$3.46	$3.63	$3.82	$4.01	$4.21	$4.43	$4.66	$4.90	$5.16	$5.44	$5.73	$6.04
Alliant Energy Corporation	LNT	$1.65	$1.75	$1.85	$1.97	$2.08	$2.21	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.23	$3.41
Ameren Corporation	AEE	$2.68	$2.84	$3.01	$3.19	$3.38	$3.59	$3.80	$4.02	$4.25	$4.48	$4.73	$4.98	$5.25	$5.53
American Electric Power Company, Inc.	AEP	$4.23	$4.35	$4.47	$4.59	$4.72	$4.85	$5.00	$5.19	$5.40	$5.64	$5.92	$6.24	$6.57	$6.92
Black Hills Corporation	BKH	$2.63	$2.78	$2.93	$3.10	$3.27	$3.45	$3.65	$3.85	$4.06	$4.28	$4.51	$4.75	$5.01	$5.28
CMS Energy Corporation	CMS	$1.98	$2.11	$2.25	$2.39	$2.55	$2.71	$2.88	$3.06	$3.24	$3.43	$3.62	$3.81	$4.02	$4.23
Dominion Resources, Inc.	D	$3.44	$3.58	$3.72	$3.87	$4.02	$4.19	$4.36	$4.56	$4.77	$5.00	$5.26	$5.54	$5.84	$6.15
DTE Energy Company	DTE	$4.83	$5.07	$5.32	$5.58	$5.85	$6.14	$6.44	$6.77	$7.12	$7.49	$7.89	$8.31	$8.75	$9.22
Duke Energy Corporation	DUK	$3.71	$3.83	$3.95	$4.08	$4.21	$4.35	$4.51	$4.69	$4.89	$5.11	$5.37	$5.66	$5.96	$6.28
IDACORP, Inc.	IDA	$3.94	$4.08	$4.22	$4.37	$4.52	$4.68	$4.86	$5.06	$5.28	$5.53	$5.81	$6.12	$6.45	$6.80
NorthWestern Corporation	NWE	$3.39	$3.44	$3.49	$3.54	$3.60	$3.65	$3.73	$3.83	$3.97	$4.13	$4.32	$4.55	$4.80	$5.06
OGE Energy Corp.	OGE	$1.69	$1.77	$1.86	$1.95	$2.05	$2.15	$2.25	$2.37	$2.49	$2.62	$2.76	$2.91	$3.06	$3.23
Otter Tail Corporation	OTTR	$1.60	$1.68	$1.77	$1.86	$1.96	$2.06	$2.17	$2.28	$2.40	$2.53	$2.67	$2.81	$2.96	$3.12
Pinnacle West Capital Corporation	PNW	$3.95	$4.15	$4.35	$4.57	$4.80	$5.04	$5.30	$5.57	$5.86	$6.16	$6.49	$6.84	$7.21	$7.59
PNM Resources, Inc.	PNM	$1.65	$1.74	$1.83	$1.93	$2.04	$2.15	$2.26	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.26
Portland General Electric Company	POR	$2.16	$2.24	$2.32	$2.41	$2.50	$2.59	$2.69	$2.81	$2.94	$3.08	$3.23	$3.41	$3.59	$3.78
Southern Company	SO	$2.83	$2.90	$2.98	$3.06	$3.14	$3.22	$3.32	$3.44	$3.58	$3.74	$3.92	$4.13	$4.35	$4.59
WEC Energy Group, Inc.	WEC	$2.96	$3.11	$3.27	$3.44	$3.61	$3.80	$3.99	$4.20	$4.42	$4.65	$4.90	$5.16	$5.44	$5.73
Xcel Energy Inc.	XEL	$2.21	$2.31	$2.41	$2.52	$2.64	$2.75	$2.88	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89	$4.10

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 98 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.11	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78	$3.98
Alliant Energy Corporation	LNT	$1.10	$1.17	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13	$2.24
Ameren Corporation	AEE	$1.82	$1.90	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46	$3.65
American Electric Power Company, Inc.	AEP	$2.96	$2.98	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33	$4.56
Black Hills Corporation	BKH	$1.42	$1.50	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30	$3.48
CMS Energy Corporation	CMS	$1.29	$1.37	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65	$2.79
Dominion Resources, Inc.	D	$3.04	$3.19	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85	$4.06
DTE Energy Company	DTE	$2.94	$3.16	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77	$6.08
Duke Energy Corporation	DUK	$2.91	$3.03	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93	$4.14
IDACORP, Inc.	IDA	$2.20	$2.35	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25	$4.48
NorthWestern Corporation	NWE	$2.13	$2.17	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16	$3.33
OGE Energy Corp.	OGE	$1.15	$1.24	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02	$2.13
Otter Tail Corporation	OTTR	$1.25	$1.25	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95	$2.06
Pinnacle West Capital Corporation	PNW	$2.61	$2.74	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75	$5.00
PNM Resources, Inc.	PNM	$0.83	$0.92	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04	$2.15
Portland General Electric Company	POR	$1.32	$1.36	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37	$2.49
Southern Company	SO	$2.24	$2.29	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87	$3.02
WEC Energy Group, Inc.	WEC	$2.08	$2.19	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58	$3.78
Xcel Energy Inc.	XEL	$1.43	$1.52	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56	$2.70

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 99 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($75.64)	$0.00	$0.35	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78
Alliant Energy Corporation	LNT	($41.87)	$0.00	$0.18	$1.13	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13
Ameren Corporation	AEE	($58.31)	$0.00	$0.30	$1.87	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46
American Electric Power Company, Inc.	AEP	($68.86)	$0.00	$0.49	$3.00	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33
Black Hills Corporation	BKH	($68.86)	$0.00	$0.24	$1.46	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30
CMS Energy Corporation	CMS	($47.24)	$0.00	$0.21	$1.33	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65
Dominion Resources, Inc.	D	($78.00)	$0.00	$0.51	$3.10	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85
DTE Energy Company	DTE	($109.02)	$0.00	$0.49	$3.01	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77
Duke Energy Corporation	DUK	($85.82)	$0.00	$0.49	$2.96	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93
IDACORP, Inc.	IDA	($88.15)	$0.00	$0.37	$2.24	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25
NorthWestern Corporation	NWE	($59.45)	$0.00	$0.36	$2.15	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16
OGE Energy Corp.	OGE	($35.87)	$0.00	$0.19	$1.18	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02
Otter Tail Corporation	OTTR	($42.31)	$0.00	$0.21	$1.28	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95
Pinnacle West Capital Corporation	PNW	($87.45)	$0.00	$0.44	$2.68	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75
PNM Resources, Inc.	PNM	($40.79)	$0.00	$0.14	$0.86	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04
Portland General Electric Company	POR	($46.08)	$0.00	$0.22	$1.35	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37
Southern Company	SO	($49.11)	$0.00	$0.37	$2.27	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87
WEC Energy Group, Inc.	WEC	($64.16)	$0.00	$0.35	$2.14	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58
Xcel Energy Inc.	XEL	($48.04)	$0.00	$0.24	$1.46	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 100 of 182

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.53	6.10%	5.00%	6.00%	5.70%	5.37%	64.00%	58.00%	65.91%	$0.00	8.65%	21.14	3.94
Alliant Energy Corporation	LNT	$40.93	6.20%	7.50%	6.00%	6.57%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.63%	21.26	3.96
Ameren Corporation	AEE	$56.76	6.70%	7.00%	6.00%	6.57%	5.37%	64.00%	60.00%	65.91%	($0.00)	9.17%	18.25	3.40
American Electric Power Company, Inc.	AEP	$68.15	4.80%	2.77%	4.00%	3.86%	5.37%	68.00%	63.00%	65.91%	($0.00)	9.62%	16.34	3.04
Black Hills Corporation	BKH	$68.15	5.60%	6.64%	7.50%	6.58%	5.37%	51.00%	51.00%	65.91%	$0.00	8.40%	22.89	4.26
CMS Energy Corporation	CMS	$46.38	6.50%	7.58%	6.50%	6.86%	5.37%	61.00%	61.00%	65.91%	($0.00)	8.87%	19.81	3.69
Dominion Resources, Inc.	D	$77.96	5.40%	4.00%	5.50%	4.97%	5.37%	85.00%	88.00%	65.91%	($0.00)	8.82%	20.13	3.75
DTE Energy Company	DTE	$106.70	6.00%	4.91%	6.00%	5.64%	5.37%	58.00%	64.00%	65.91%	($0.00)	8.81%	20.17	3.76
Duke Energy Corporation	DUK	$84.43	4.00%	3.24%	4.50%	3.91%	5.37%	76.00%	79.00%	65.91%	($0.00)	8.48%	22.31	4.16
IDACORP, Inc.	IDA	$86.24	4.50%	4.00%	3.50%	4.00%	5.37%	54.00%	61.00%	65.91%	$0.00	8.46%	22.49	4.19
NorthWestern Corporation	NWE	$59.66	1.50%	2.57%	4.50%	2.86%	5.37%	62.00%	62.00%	65.91%	$0.00	8.97%	19.29	3.59
OGE Energy Corp.	OGE	$35.58	4.90%	8.60%	6.00%	6.50%	5.37%	65.00%	72.00%	65.91%	($0.00)	9.28%	17.73	3.30
Otter Tail Corporation	OTTR	$40.44	NA	5.20%	6.50%	5.85%	5.37%	74.00%	61.00%	65.91%	$0.00	8.44%	22.60	4.21
Pinnacle West Capital Corporation	PNW	$86.07	5.00%	5.46%	5.50%	5.32%	5.37%	63.00%	63.00%	65.91%	$0.00	8.80%	20.26	3.77
PNM Resources, Inc.	PNM	$39.09	5.40%	6.45%	7.50%	6.45%	5.37%	48.00%	57.00%	65.91%	($0.00)	8.68%	20.96	3.91
Portland General Electric Company	POR	$45.80	3.70%	3.97%	6.00%	4.56%	5.37%	59.00%	57.00%	65.91%	$0.00	8.66%	21.06	3.92
Southern Company	SO	$49.61	3.80%	2.63%	3.50%	3.31%	5.37%	77.00%	76.00%	65.91%	$0.00	9.28%	17.75	3.31
WEC Energy Group, Inc.	WEC	$62.56	5.10%	5.45%	6.00%	5.52%	5.37%	67.00%	67.00%	65.91%	$0.00	8.99%	19.16	3.57
Xcel Energy Inc.	XEL	$46.59	5.50%	NA	4.50%	5.00%	5.37%	62.00%	66.00%	65.91%	$0.00	8.86%	19.91	3.71
											Mean	8.84%	20.18	
											Max	9.62%		
											Min	8.40%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.32	$3.51	$3.71	$3.92	$4.14	$4.38	$4.62	$4.88	$5.14	$5.42	$5.71	$6.02	$6.34
Alliant Energy Corporation	LNT	$1.65	$1.76	$1.87	$2.00	$2.13	$2.27	$2.41	$2.56	$2.71	$2.87	$3.03	$3.19	$3.36	$3.54
Ameren Corporation	AEE	$2.68	$2.86	$3.04	$3.24	$3.46	$3.68	$3.92	$4.16	$4.41	$4.66	$4.92	$5.19	$5.46	$5.76
American Electric Power Company, Inc.	AEP	$4.23	$4.39	$4.56	$4.74	$4.92	$5.11	$5.32	$5.55	$5.81	$6.09	$6.40	$6.75	$7.11	$7.49
Black Hills Corporation	BKH	$2.63	$2.80	$2.99	$3.18	$3.39	$3.62	$3.85	$4.09	$4.33	$4.58	$4.83	$5.09	$5.37	$5.65
CMS Energy Corporation	CMS	$1.98	$2.12	$2.26	$2.42	$2.58	$2.76	$2.94	$3.13	$3.32	$3.51	$3.71	$3.91	$4.12	$4.34
Dominion Resources, Inc.	D	$3.44	$3.61	$3.79	$3.98	$4.18	$4.38	$4.60	$4.84	$5.09	$5.36	$5.64	$5.94	$6.26	$6.60
DTE Energy Company	DTE	$4.83	$5.10	$5.39	$5.69	$6.01	$6.35	$6.71	$7.08	$7.47	$7.88	$8.30	$8.75	$9.22	$9.71
Duke Energy Corporation	DUK	$3.71	$3.86	$4.01	$4.16	$4.33	$4.50	$4.68	$4.89	$5.11	$5.36	$5.64	$5.94	$6.26	$6.60
IDACORP, Inc.	IDA	$3.94	$4.10	$4.26	$4.43	$4.61	$4.79	$5.00	$5.22	$5.46	$5.73	$6.03	$6.35	$6.69	$7.05
NorthWestern Corporation	NWE	$3.39	$3.49	$3.59	$3.69	$3.79	$3.90	$4.03	$4.18	$4.35	$4.55	$4.77	$5.03	$5.30	$5.58
OGE Energy Corp.	OGE	$1.69	$1.80	$1.92	$2.04	$2.17	$2.32	$2.46	$2.61	$2.77	$2.93	$3.09	$3.25	$3.43	$3.61
Otter Tail Corporation	OTTR	$1.60	$1.69	$1.79	$1.90	$2.01	$2.13	$2.25	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.27
Pinnacle West Capital Corporation	PNW	$3.95	$4.16	$4.38	$4.61	$4.86	$5.12	$5.39	$5.68	$5.98	$6.30	$6.64	$7.00	$7.37	$7.77
PNM Resources, Inc.	PNM	$1.65	$1.76	$1.87	$1.99	$2.12	$2.26	$2.40	$2.54	$2.69	$2.85	$3.01	$3.17	$3.34	$3.52
Portland General Electric Company	POR	$2.16	$2.26	$2.36	$2.47	$2.58	$2.70	$2.83	$2.96	$3.11	$3.27	$3.44	$3.62	$3.82	$4.02
Southern Company	SO	$2.83	$2.92	$3.02	$3.12	$3.22	$3.33	$3.45	$3.59	$3.75	$3.92	$4.12	$4.34	$4.57	$4.82
WEC Energy Group, Inc.	WEC	$2.96	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.31	$4.54	$4.79	$5.05	$5.32	$5.60	$5.90
Xcel Energy Inc.	XEL	$2.21	$2.32	$2.44	$2.56	$2.69	$2.82	$2.96	$3.12	$3.28	$3.45	$3.63	$3.83	$4.03	$4.25

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 101 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.12	$2.19	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97	$4.18
Alliant Energy Corporation	LNT	$1.11	$1.18	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22	$2.34
Ameren Corporation	AEE	$1.83	$1.92	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60	$3.79
American Electric Power Company, Inc.	AEP	$2.99	$3.05	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69	$4.94
Black Hills Corporation	BKH	$1.43	$1.52	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54	$3.73
CMS Energy Corporation	CMS	$1.29	$1.38	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72	$2.86
Dominion Resources, Inc.	D	$3.07	$3.25	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13	$4.35
DTE Energy Company	DTE	$2.96	$3.21	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08	$6.40
Duke Energy Corporation	DUK	$2.93	$3.07	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13	$4.35
IDACORP, Inc.	IDA	$2.21	$2.38	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41	$4.65
NorthWestern Corporation	NWE	$2.16	$2.22	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49	$3.68
OGE Energy Corp.	OGE	$1.17	$1.28	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26	$2.38
Otter Tail Corporation	OTTR	$1.25	$1.27	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04	$2.15
Pinnacle West Capital Corporation	PNW	$2.62	$2.76	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86	$5.12
PNM Resources, Inc.	PNM	$0.84	$0.94	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20	$2.32
Portland General Electric Company	POR	$1.33	$1.38	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52	$2.65
Southern Company	SO	$2.25	$2.32	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01	$3.17
WEC Energy Group, Inc.	WEC	$2.09	$2.21	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89
Xcel Energy Inc.	XEL	$1.44	$1.54	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66	$2.80

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 102 of 182

Projected Annual Data

Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]
Company	Ticker	Initial Outflow	10/31/17	12/31/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28
ALLETE, Inc.	ALE	($72.53)	$0.00	$0.35	$2.18	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97
Alliant Energy Corporation	LNT	($40.93)	$0.00	$0.19	$1.14	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22
Ameren Corporation	AEE	($56.76)	$0.00	$0.31	$1.89	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60
American Electric Power Company, Inc.	AEP	($68.15)	$0.00	$0.50	$3.04	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69
Black Hills Corporation	BKH	($68.15)	$0.00	$0.24	$1.48	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54
CMS Energy Corporation	CMS	($46.38)	$0.00	$0.22	$1.33	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72
Dominion Resources, Inc.	D	($77.96)	$0.00	$0.51	$3.15	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13
DTE Energy Company	DTE	($106.70)	$0.00	$0.49	$3.04	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08
Duke Energy Corporation	DUK	($84.43)	$0.00	$0.49	$2.99	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13
IDACORP, Inc.	IDA	($86.24)	$0.00	$0.37	$2.26	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41
NorthWestern Corporation	NWE	($59.66)	$0.00	$0.36	$2.19	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49
OGE Energy Corp.	OGE	($35.59)	$0.00	$0.20	$1.21	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26
Otter Tail Corporation	OTTR	($40.44)	$0.00	$0.21	$1.29	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04
Pinnacle West Capital Corporation	PNW	($86.07)	$0.00	$0.44	$2.69	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86
PNM Resources, Inc.	PNM	($39.09)	$0.00	$0.14	$0.87	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20
Portland General Electric Company	POR	($45.80)	$0.00	$0.22	$1.36	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52
Southern Company	SO	($49.61)	$0.00	$0.38	$2.29	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01
WEC Energy Group, Inc.	WEC	($62.56)	$0.00	$0.35	$2.15	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69
Xcel Energy Inc.	XEL	($46.59)	$0.00	$0.24	$1.47	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 103 of 182

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.53	6.10%	5.00%	6.00%	6.10%	5.37%	64.00%	58.00%	65.91%	$0.00	8.74%	20.59	3.84
Alliant Energy Corporation	LNT	$40.93	6.20%	7.50%	6.00%	7.50%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.84%	20.01	3.73
Ameren Corporation	AEE	$56.76	6.70%	7.00%	6.00%	7.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	9.28%	17.75	3.31
American Electric Power Company, Inc.	AEP	$68.15	4.80%	2.77%	4.00%	4.80%	5.37%	68.00%	63.00%	65.91%	($0.00)	9.89%	15.35	2.86
Black Hills Corporation	BKH	$68.15	5.60%	6.64%	7.50%	7.50%	5.37%	51.00%	51.00%	65.91%	$0.00	8.59%	21.57	4.02
CMS Energy Corporation	CMS	$46.38	6.50%	7.58%	6.50%	7.58%	5.37%	61.00%	61.00%	65.91%	($0.00)	9.04%	18.92	3.52
Dominion Resources, Inc.	D	$77.96	5.40%	4.00%	5.50%	5.50%	5.37%	85.00%	88.00%	65.91%	$0.00	8.94%	19.41	3.62
DTE Energy Company	DTE	$106.70	6.00%	4.91%	6.00%	6.00%	5.37%	58.00%	64.00%	65.91%	$0.00	8.89%	19.69	3.67
Duke Energy Corporation	DUK	$84.43	4.00%	3.24%	4.50%	4.50%	5.37%	76.00%	79.00%	65.91%	$0.00	8.61%	21.43	3.99
IDACORP, Inc.	IDA	$86.24	4.50%	4.00%	3.50%	4.50%	5.37%	54.00%	61.00%	65.91%	$0.00	8.56%	21.75	4.05
NorthWestern Corporation	NWE	$59.66	1.50%	2.57%	4.50%	4.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	9.38%	17.29	3.22
OGE Energy Corp.	OGE	$35.58	4.90%	8.60%	6.00%	8.60%	5.37%	65.00%	72.00%	65.91%	($0.00)	9.85%	15.49	2.89
Otter Tail Corporation	OTTR	$40.44	NA	5.20%	6.50%	6.50%	5.37%	74.00%	61.00%	65.91%	$0.00	8.57%	21.65	4.03
Pinnacle West Capital Corporation	PNW	$86.07	5.00%	5.46%	5.50%	5.50%	5.37%	63.00%	63.00%	65.91%	$0.00	8.84%	20.02	3.73
PNM Resources, Inc.	PNM	$39.09	5.40%	6.45%	7.50%	7.50%	5.37%	48.00%	57.00%	65.91%	($0.00)	8.91%	19.60	3.65
Portland General Electric Company	POR	$45.80	3.70%	3.97%	6.00%	6.00%	5.37%	59.00%	57.00%	65.91%	($0.00)	8.99%	19.16	3.57
Southern Company	SO	$49.61	3.80%	2.63%	3.50%	3.80%	5.37%	77.00%	76.00%	65.91%	$0.00	9.41%	17.16	3.20
WEC Energy Group, Inc.	WEC	$62.56	5.10%	5.45%	6.00%	6.00%	5.37%	67.00%	67.00%	65.91%	$0.00	9.11%	18.56	3.46
Xcel Energy Inc.	XEL	$46.59	5.50%	NA	4.50%	5.50%	5.37%	62.00%	66.00%	65.91%	$0.00	8.97%	19.26	3.59
											Mean	9.02%	19.19	
											Max	9.89%		
											Min	8.56%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.33	$3.53	$3.75	$3.98	$4.22	$4.47	$4.74	$5.01	$5.29	$5.58	$5.88	$6.19	$6.53
Alliant Energy Corporation	LNT	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Ameren Corporation	AEE	$2.68	$2.87	$3.07	$3.28	$3.51	$3.76	$4.01	$4.27	$4.53	$4.80	$5.07	$5.35	$5.63	$5.94
American Electric Power Company, Inc.	AEP	$4.23	$4.43	$4.65	$4.87	$5.10	$5.35	$5.61	$5.89	$6.19	$6.51	$6.85	$7.22	$7.61	$8.02
Black Hills Corporation	BKH	$2.63	$2.83	$3.04	$3.27	$3.51	$3.78	$4.05	$4.32	$4.60	$4.88	$5.16	$5.43	$5.73	$6.03
CMS Energy Corporation	CMS	$1.98	$2.13	$2.29	$2.47	$2.65	$2.85	$3.06	$3.27	$3.48	$3.69	$3.90	$4.11	$4.33	$4.57
Dominion Resources, Inc.	D	$3.44	$3.63	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56	$5.86	$6.17	$6.50	$6.85
DTE Energy Company	DTE	$4.83	$5.12	$5.43	$5.75	$6.10	$6.46	$6.84	$7.24	$7.65	$8.08	$8.52	$8.98	$9.46	$9.97
Duke Energy Corporation	DUK	$3.71	$3.88	$4.05	$4.23	$4.42	$4.62	$4.84	$5.07	$5.32	$5.59	$5.88	$6.20	$6.53	$6.88
IDACORP, Inc.	IDA	$3.94	$4.12	$4.30	$4.50	$4.70	$4.91	$5.14	$5.38	$5.65	$5.94	$6.25	$6.58	$6.94	$7.31
NorthWestern Corporation	NWE	$3.39	$3.54	$3.70	$3.87	$4.04	$4.22	$4.42	$4.63	$4.86	$5.11	$5.37	$5.66	$5.97	$6.29
OGE Energy Corp.	OGE	$1.69	$1.84	$1.99	$2.16	$2.35	$2.55	$2.76	$2.97	$3.17	$3.38	$3.58	$3.77	$3.97	$4.18
Otter Tail Corporation	OTTR	$1.60	$1.70	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.62	$2.77	$2.92	$3.08	$3.25	$3.42
Pinnacle West Capital Corporation	PNW	$3.95	$4.17	$4.40	$4.64	$4.89	$5.16	$5.45	$5.74	$6.05	$6.38	$6.73	$7.09	$7.47	$7.87
PNM Resources, Inc.	PNM	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Portland General Electric Company	POR	$2.16	$2.29	$2.43	$2.57	$2.73	$2.89	$3.06	$3.24	$3.42	$3.61	$3.81	$4.02	$4.23	$4.46
Southern Company	SO	$2.83	$2.94	$3.05	$3.17	$3.29	$3.41	$3.55	$3.70	$3.87	$4.06	$4.27	$4.50	$4.74	$4.99
WEC Energy Group, Inc.	WEC	$2.96	$3.14	$3.33	$3.53	$3.74	$3.96	$4.19	$4.44	$4.69	$4.95	$5.22	$5.50	$5.80	$6.11
Xcel Energy Inc.	XEL	$2.21	$2.33	$2.46	$2.60	$2.74	$2.89	$3.05	$3.21	$3.39	$3.57	$3.76	$3.97	$4.18	$4.40

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 104 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.13	$2.21	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08	$4.30
Alliant Energy Corporation	LNT	$1.12	$1.20	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37	$2.49
Ameren Corporation	AEE	$1.84	$1.93	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71	$3.91
American Electric Power Company, Inc.	AEP	$3.01	$3.10	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01	$5.28
Black Hills Corporation	BKH	$1.44	$1.55	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77	$3.98
CMS Energy Corporation	CMS	$1.30	$1.40	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86	$3.01
Dominion Resources, Inc.	D	$3.08	$3.28	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29	$4.52
DTE Energy Company	DTE	$2.97	$3.23	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24	$6.57
Duke Energy Corporation	DUK	$2.95	$3.11	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30	$4.53
IDACORP, Inc.	IDA	$2.22	$2.40	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57	$4.82
NorthWestern Corporation	NWE	$2.20	$2.30	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93	$4.14
OGE Energy Corp.	OGE	$1.19	$1.33	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62	$2.76
Otter Tail Corporation	OTTR	$1.26	$1.28	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14	$2.25
Pinnacle West Capital Corporation	PNW	$2.63	$2.77	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92	$5.19
PNM Resources, Inc.	PNM	$0.85	$0.96	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37	$2.49
Portland General Electric Company	POR	$1.35	$1.42	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79	$2.94
Southern Company	SO	$2.26	$2.34	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12	$3.29
WEC Energy Group, Inc.	WEC	$2.10	$2.23	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82	$4.03
Xcel Energy Inc.	XEL	$1.45	$1.55	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75	$2.90

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 105 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($72.53)	$0.00	$0.36	$2.20	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08
Alliant Energy Corporation	LNT	($40.93)	$0.00	$0.19	$1.16	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37
Ameren Corporation	AEE	($56.76)	$0.00	$0.31	$1.90	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71
American Electric Power Company, Inc.	AEP	($68.15)	$0.00	$0.50	$3.09	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01
Black Hills Corporation	BKH	($68.15)	$0.00	$0.24	$1.50	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77
CMS Energy Corporation	CMS	($46.38)	$0.00	$0.22	$1.35	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86
Dominion Resources, Inc.	D	($77.96)	$0.00	$0.52	$3.17	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29
DTE Energy Company	DTE	($106.70)	$0.00	$0.50	$3.06	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24
Duke Energy Corporation	DUK	($84.43)	$0.00	$0.49	$3.01	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30
IDACORP, Inc.	IDA	($86.24)	$0.00	$0.37	$2.27	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57
NorthWestern Corporation	NWE	($59.66)	$0.00	$0.37	$2.25	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93
OGE Energy Corp.	OGE	($35.58)	$0.00	$0.20	$1.24	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62
Otter Tail Corporation	OTTR	($40.44)	$0.00	$0.21	$1.30	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14
Pinnacle West Capital Corporation	PNW	($86.07)	$0.00	$0.44	$2.70	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92
PNM Resources, Inc.	PNM	($39.09)	$0.00	$0.14	$0.88	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37
Portland General Electric Company	POR	($45.80)	$0.00	$0.23	$1.39	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79
Southern Company	SO	($49.61)	$0.00	$0.38	$2.30	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12
WEC Energy Group, Inc.	WEC	($62.56)	$0.00	$0.35	$2.17	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82
Xcel Energy Inc.	XEL	($46.59)	$0.00	$0.24	$1.49	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 106 of 182

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

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.53	6.10%	5.00%	6.00%	5.00%	5.37%	64.00%	58.00%	65.91%	$0.00	8.50%	22.14	4.12
Alliant Energy Corporation	LNT	$40.93	6.20%	7.50%	6.00%	6.00%	5.37%	63.00%	63.00%	65.91%	($0.00)	8.51%	22.07	4.11
Ameren Corporation	AEE	$56.76	6.70%	7.00%	6.00%	6.00%	5.37%	64.00%	60.00%	65.91%	$0.00	9.04%	18.93	3.53
American Electric Power Company, Inc.	AEP	$68.15	4.80%	2.77%	4.00%	2.77%	5.37%	68.00%	63.00%	65.91%	($0.00)	9.32%	17.56	3.27
Black Hills Corporation	BKH	$68.15	5.60%	6.64%	7.50%	5.60%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.21%	24.40	4.55
CMS Energy Corporation	CMS	$46.38	6.50%	7.58%	6.50%	6.50%	5.37%	61.00%	61.00%	65.91%	($0.00)	8.79%	20.28	3.78
Dominion Resources, Inc.	D	$77.96	5.40%	4.00%	5.50%	4.00%	5.37%	85.00%	88.00%	65.91%	($0.00)	8.59%	21.53	4.01
DTE Energy Company	DTE	$106.70	6.00%	4.91%	6.00%	4.91%	5.37%	58.00%	64.00%	65.91%	($0.00)	8.65%	21.16	3.94
Duke Energy Corporation	DUK	$84.43	4.00%	3.24%	4.50%	3.24%	5.37%	76.00%	79.00%	65.91%	($0.00)	8.34%	23.38	4.36
IDACORP, Inc.	IDA	$86.24	4.50%	4.00%	3.50%	3.50%	5.37%	54.00%	61.00%	65.91%	$0.00	8.35%	23.26	4.33
NorthWestern Corporation	NWE	$59.66	1.50%	2.57%	4.50%	1.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	8.65%	21.16	3.94
OGE Energy Corp.	OGE	$35.58	4.90%	8.60%	6.00%	4.90%	5.37%	65.00%	72.00%	65.91%	$0.00	8.89%	19.71	3.67
Otter Tail Corporation	OTTR	$40.44	NA	5.20%	6.50%	5.20%	5.37%	74.00%	61.00%	65.91%	$0.00	8.31%	23.59	4.40
Pinnacle West Capital Corporation	PNW	$86.07	5.00%	5.46%	5.50%	5.00%	5.37%	63.00%	63.00%	65.91%	$0.00	8.72%	20.69	3.86
PNM Resources, Inc.	PNM	$39.09	5.40%	6.45%	7.50%	5.40%	5.37%	48.00%	57.00%	65.91%	($0.00)	8.46%	22.45	4.18
Portland General Electric Company	POR	$45.80	3.70%	3.97%	6.00%	3.70%	5.37%	59.00%	57.00%	65.91%	($0.00)	8.48%	22.30	4.15
Southern Company	SO	$49.61	3.80%	2.63%	3.50%	2.63%	5.37%	77.00%	76.00%	65.91%	$0.00	9.10%	18.60	3.46
WEC Energy Group, Inc.	WEC	$62.56	5.10%	5.45%	6.00%	5.10%	5.37%	67.00%	67.00%	65.91%	$0.00	8.89%	19.69	3.67
Xcel Energy Inc.	XEL	$46.59	5.50%	NA	4.50%	4.50%	5.37%	62.00%	66.00%	65.91%	$0.00	8.74%	20.58	3.83
											Mean	8.66%	21.24	
											Max	9.32%		
											Min	8.21%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.30	$3.46	$3.63	$3.82	$4.01	$4.21	$4.43	$4.66	$4.90	$5.16	$5.44	$5.73	$6.04
Alliant Energy Corporation	LNT	$1.65	$1.75	$1.85	$1.97	$2.08	$2.21	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.23	$3.41
Ameren Corporation	AEE	$2.68	$2.84	$3.01	$3.19	$3.38	$3.59	$3.80	$4.02	$4.25	$4.48	$4.73	$4.98	$5.25	$5.53
American Electric Power Company, Inc.	AEP	$4.23	$4.35	$4.47	$4.59	$4.72	$4.85	$5.00	$5.19	$5.40	$5.64	$5.92	$6.24	$6.57	$6.92
Black Hills Corporation	BKH	$2.63	$2.78	$2.93	$3.10	$3.27	$3.45	$3.65	$3.85	$4.06	$4.28	$4.51	$4.75	$5.01	$5.28
CMS Energy Corporation	CMS	$1.98	$2.11	$2.25	$2.39	$2.55	$2.71	$2.88	$3.06	$3.24	$3.43	$3.62	$3.81	$4.02	$4.23
Dominion Resources, Inc.	D	$3.44	$3.58	$3.72	$3.87	$4.02	$4.19	$4.36	$4.56	$4.77	$5.00	$5.26	$5.54	$5.84	$6.15
DTE Energy Company	DTE	$4.83	$5.07	$5.32	$5.58	$5.85	$6.14	$6.44	$6.77	$7.12	$7.49	$7.89	$8.31	$8.75	$9.22
Duke Energy Corporation	DUK	$3.71	$3.83	$3.95	$4.08	$4.21	$4.35	$4.51	$4.69	$4.89	$5.11	$5.37	$5.66	$5.96	$6.28
IDACORP, Inc.	IDA	$3.94	$4.08	$4.22	$4.37	$4.52	$4.68	$4.86	$5.06	$5.28	$5.53	$5.81	$6.12	$6.45	$6.80
NorthWestern Corporation	NWE	$3.39	$3.44	$3.49	$3.54	$3.60	$3.65	$3.73	$3.83	$3.97	$4.13	$4.32	$4.55	$4.80	$5.06
OGE Energy Corp.	OGE	$1.69	$1.77	$1.86	$1.95	$2.05	$2.15	$2.25	$2.37	$2.49	$2.62	$2.76	$2.91	$3.06	$3.23
Otter Tail Corporation	OTTR	$1.60	$1.68	$1.77	$1.86	$1.96	$2.06	$2.17	$2.28	$2.40	$2.53	$2.67	$2.81	$2.96	$3.12
Pinnacle West Capital Corporation	PNW	$3.95	$4.15	$4.35	$4.57	$4.80	$5.04	$5.30	$5.57	$5.86	$6.16	$6.49	$6.84	$7.21	$7.59
PNM Resources, Inc.	PNM	$1.65	$1.74	$1.83	$1.93	$2.04	$2.15	$2.26	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.26
Portland General Electric Company	POR	$2.16	$2.24	$2.32	$2.41	$2.50	$2.59	$2.69	$2.81	$2.94	$3.08	$3.23	$3.41	$3.59	$3.78
Southern Company	SO	$2.83	$2.90	$2.98	$3.06	$3.14	$3.22	$3.32	$3.44	$3.58	$3.74	$3.92	$4.13	$4.35	$4.59
WEC Energy Group, Inc.	WEC	$2.96	$3.11	$3.27	$3.44	$3.61	$3.80	$3.99	$4.20	$4.42	$4.65	$4.90	$5.16	$5.44	$5.73
Xcel Energy Inc.	XEL	$2.21	$2.31	$2.41	$2.52	$2.64	$2.75	$2.88	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89	$4.10

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 107 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.11	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78	$3.98
Alliant Energy Corporation	LNT	$1.10	$1.17	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13	$2.24
Ameren Corporation	AEE	$1.82	$1.90	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46	$3.65
American Electric Power Company, Inc.	AEP	$2.96	$2.98	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33	$4.56
Black Hills Corporation	BKH	$1.42	$1.50	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30	$3.48
CMS Energy Corporation	CMS	$1.29	$1.37	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65	$2.79
Dominion Resources, Inc.	D	$3.04	$3.19	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85	$4.06
DTE Energy Company	DTE	$2.94	$3.16	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77	$6.08
Duke Energy Corporation	DUK	$2.91	$3.03	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93	$4.14
IDACORP, Inc.	IDA	$2.20	$2.35	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25	$4.48
NorthWestern Corporation	NWE	$2.13	$2.17	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16	$3.33
OGE Energy Corp.	OGE	$1.15	$1.24	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02	$2.13
Otter Tail Corporation	OTTR	$1.25	$1.25	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95	$2.06
Pinnacle West Capital Corporation	PNW	$2.61	$2.74	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75	$5.00
PNM Resources, Inc.	PNM	$0.83	$0.92	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04	$2.15
Portland General Electric Company	POR	$1.32	$1.36	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37	$2.49
Southern Company	SO	$2.24	$2.29	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87	$3.02
WEC Energy Group, Inc.	WEC	$2.08	$2.19	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58	$3.78
Xcel Energy Inc.	XEL	$1.43	$1.52	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56	$2.70

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 108 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($72.53)	$0.00	$0.35	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78
Alliant Energy Corporation	LNT	($40.93)	$0.00	$0.18	$1.13	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13
Ameren Corporation	AEE	($56.76)	$0.00	$0.30	$1.87	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46
American Electric Power Company, Inc.	AEP	($68.15)	$0.00	$0.49	$3.00	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33
Black Hills Corporation	BKH	($68.15)	$0.00	$0.24	$1.46	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30
CMS Energy Corporation	CMS	($46.38)	$0.00	$0.21	$1.33	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65
Dominion Resources, Inc.	D	($77.96)	$0.00	$0.51	$3.10	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85
DTE Energy Company	DTE	($106.70)	$0.00	$0.49	$3.01	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77
Duke Energy Corporation	DUK	($84.43)	$0.00	$0.49	$2.96	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93
IDACORP, Inc.	IDA	($86.24)	$0.00	$0.37	$2.24	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25
NorthWestern Corporation	NWE	($59.66)	$0.00	$0.36	$2.15	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16
OGE Energy Corp.	OGE	($35.58)	$0.00	$0.19	$1.18	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02
Otter Tail Corporation	OTTR	($40.44)	$0.00	$0.21	$1.28	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95
Pinnacle West Capital Corporation	PNW	($86.07)	$0.00	$0.44	$2.68	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75
PNM Resources, Inc.	PNM	($39.09)	$0.00	$0.14	$0.86	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04
Portland General Electric Company	POR	($45.80)	$0.00	$0.22	$1.35	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37
Southern Company	SO	($49.61)	$0.00	$0.37	$2.27	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87
WEC Energy Group, Inc.	WEC	($62.56)	$0.00	$0.35	$2.14	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58
Xcel Energy Inc.	XEL	($46.59)	$0.00	$0.24	$1.46	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 109 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 110 of 182

Multi-Stage DCF Notes:

[1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of October 31, 2017
[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 [64]
[11] Equals result of Excel Solver function; goal: Column [10] equals $0.00
[12] Equals Column [63] / Column [30]
[13] Equals Column [12] / (Column [6] x 100)
[14] Source: Value Line
[15] Equals Column [14] x (1 + Column [5])
[16] Equals Column [15] x (1 + Column [5])
[17] Equals Column [16] x (1 + Column [5])
[18] Equals Column [17] x (1 + Column [5])
[19] Equals Column [18] x (1 + Column [5])
[20] Equals (1 + (Column [5] + (((Column [6] − Column [5]) / (2027 − 2022 + 1)) x (2022 − 2021)))) x Column [19]
[21] Equals (1 + (Column [5] + (((Column [6] − Column [5]) / (2027 − 2022 + 1)) x (2023 − 2021)))) x Column [20]
[22] Equals (1 + (Column [5] + (((Column [6] − Column [5]) / (2027 − 2022 + 1)) x (2024 − 2021)))) x Column [21]
[23] Equals (1 + (Column [5] + (((Column [6] − Column [5]) / (2027 − 2022 + 1)) x (2025 − 2021)))) x Column [22]
[24] Equals (1 + (Column [5] + (((Column [6] − Column [5]) / (2027 − 2022 + 1)) x (2026 − 2021)))) x Column [23]
[25] Equals Column [24] x (1 + Column [6])
[26] Equals Column [25] x (1 + Column [6])
[27] Equals Column [26] x (1 + Column [6])
[28] Equals Column [27] x (1 + Column [6])
[29] Equals Column [28] x (1 + Column [6])
[30] Equals Column [29] x (1 + Column [6])
[31] Equals Column [7]
[32] Equals Column [31] + ((Column [35] − Column [31]) / 4)
[33] Equals Column [32] + ((Column [35] − Column [31]) / 4)
[34] Equals Column [33] + ((Column [35] − Column [31]) / 4)
[35] Equals Column [8]
[36] Equals Column [35] + ((Column [41] − Column [35]) / 6)
[37] Equals Column [36] + ((Column [41] − Column [35]) / 6)
[38] Equals Column [37] + ((Column [41] − Column [35]) / 6)
[39] Equals Column [38] + ((Column [41] − Column [35]) / 6)
[40] Equals Column [39] + ((Column [41] − Column [35]) / 6)
[41] Equals Column [9]
[42] Equals Column [9]
[43] Equals Column [9]
[44] Equals Column [9]
[45] Equals Column [9]
[46] Equals Column [9]
[47] Equals Column [15] x Column [31]
[48] Equals Column [16] x Column [32]
[49] Equals Column [17] x Column [33]
[50] Equals Column [18] x Column [34]
[51] Equals Column [19] x Column [35]
[52] Equals Column [20] x Column [36]
[53] Equals Column [21] x Column [37]
[54] Equals Column [22] x Column [38]
[55] Equals Column [23] x Column [39]
[56] Equals Column [24] x Column [40]
[57] Equals Column [25] x Column [41]
[58] Equals Column [26] x Column [42]
[59] Equals Column [27] x Column [43]
[60] Equals Column [28] x Column [44]
[61] Equals Column [29] x Column [45]
[62] Equals Column [30] x Column [46]
[63] Equals (Column [62] x (1 + Column [6])) / (Column [11] − Column [6])
[64] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [65] through Column [81]
[65] Equals $0.00
[66] Equals Column [47] x (12/31/2017 - 10/31/2017) / 365
[67] Equals Column [47] x (1 + (0.5 x Column [5]))
[68] Equals Column [49]
[69] Equals Column [50]
[70] Equals Column [51]
[71] Equals Column [52]
[72] Equals Column [53]
[73] Equals Column [54]
[74] Equals Column [55]
[75] Equals Column [56]
[76] Equals Column [57]
[77] Equals Column [58]
[78] Equals Column [59]
[79] Equals Column [60]
[80] Equals Column [61]
[81] Equals Column [62] + [63]

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio of 26.81
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	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$78.26	6.10%	5.00%	6.00%	5.70%	5.37%	64.00%	58.00%	65.91%	($0.00)	9.38%	26.81	5.00
Alliant Energy Corporation	LNT	$42.63	6.20%	7.50%	6.00%	6.57%	5.37%	63.00%	63.00%	65.91%	$0.00	9.64%	26.81	5.00
Ameren Corporation	AEE	$59.93	6.70%	7.00%	6.00%	6.57%	5.37%	64.00%	60.00%	65.91%	($0.00)	10.92%	26.81	5.00
American Electric Power Company, Inc.	AEP	$72.35	4.80%	2.77%	4.00%	3.86%	5.37%	68.00%	63.00%	65.91%	($0.00)	11.88%	26.81	5.00
Black Hills Corporation	BKH	$67.67	5.60%	6.64%	7.50%	6.58%	5.37%	51.00%	51.00%	65.91%	($0.00)	9.42%	26.81	5.00
CMS Energy Corporation	CMS	$47.26	6.50%	7.58%	6.50%	6.86%	5.37%	61.00%	61.00%	65.91%	$0.00	10.49%	26.81	5.00
Dominion Resources, Inc.	D	$78.42	5.40%	4.00%	5.50%	4.97%	5.37%	85.00%	88.00%	65.91%	($0.00)	10.42%	26.81	5.00
DTE Energy Company	DTE	$109.51	6.00%	4.91%	6.00%	5.64%	5.37%	58.00%	64.00%	65.91%	($0.00)	10.25%	26.81	5.00
Duke Energy Corporation	DUK	$86.05	4.00%	3.24%	4.50%	3.91%	5.37%	76.00%	79.00%	65.91%	($0.00)	9.38%	26.81	5.00
IDACORP, Inc.	IDA	$89.88	4.50%	4.00%	3.50%	4.00%	5.37%	54.00%	61.00%	65.91%	($0.00)	9.14%	26.81	5.00
NorthWestern Corporation	NWE	$58.16	1.50%	2.57%	4.50%	2.86%	5.37%	62.00%	62.00%	65.91%	($0.00)	11.14%	26.81	5.00
OGE Energy Corp.	OGE	$36.47	4.90%	8.60%	6.00%	6.50%	5.37%	65.00%	72.00%	65.91%	$0.00	11.44%	26.81	5.00
Otter Tail Corporation	OTTR	$44.91	NA	5.20%	6.50%	5.85%	5.37%	74.00%	61.00%	65.91%	$0.00	8.53%	26.81	5.00
Pinnacle West Capital Corporation	PNW	$86.85	5.00%	5.46%	5.50%	5.32%	5.37%	63.00%	63.00%	65.91%	($0.00)	10.37%	26.81	5.00
PNM Resources, Inc.	PNM	$41.49	5.40%	6.45%	7.50%	6.45%	5.37%	48.00%	57.00%	65.91%	($0.00)	9.62%	26.81	5.00
Portland General Electric Company	POR	$46.10	3.70%	3.97%	6.00%	4.56%	5.37%	59.00%	57.00%	65.91%	$0.00	10.04%	26.81	5.00
Southern Company	SO	$50.43	3.80%	2.63%	3.50%	3.31%	5.37%	77.00%	76.00%	65.91%	($0.00)	11.48%	26.81	5.00
WEC Energy Group, Inc.	WEC	$65.10	5.10%	5.45%	6.00%	5.52%	5.37%	67.00%	67.00%	65.91%	($0.00)	10.59%	26.81	5.00
Xcel Energy Inc.	XEL	$48.29	5.50%	NA	4.50%	5.00%	5.37%	62.00%	66.00%	65.91%	$0.00	10.27%	26.81	5.00

DCF Result	
Mean	10.23%
Max	11.88%
Min	8.53%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.32	$3.51	$3.71	$3.92	$4.14	$4.38	$4.62	$4.88	$5.14	$5.42	$5.71	$6.02	$6.34
Alliant Energy Corporation	LNT	$1.65	$1.76	$1.87	$2.00	$2.13	$2.27	$2.41	$2.56	$2.71	$2.87	$3.03	$3.19	$3.36	$3.54
Ameren Corporation	AEE	$2.68	$2.86	$3.04	$3.24	$3.46	$3.68	$3.92	$4.16	$4.41	$4.66	$4.92	$5.19	$5.46	$5.76
American Electric Power Company, Inc.	AEP	$4.23	$4.39	$4.56	$4.74	$4.92	$5.11	$5.32	$5.55	$5.81	$6.09	$6.40	$6.75	$7.11	$7.49
Black Hills Corporation	BKH	$2.63	$2.80	$2.99	$3.18	$3.39	$3.62	$3.85	$4.09	$4.33	$4.58	$4.83	$5.09	$5.37	$5.65
CMS Energy Corporation	CMS	$1.98	$2.12	$2.26	$2.42	$2.58	$2.76	$2.94	$3.13	$3.32	$3.51	$3.71	$3.91	$4.12	$4.34
Dominion Resources, Inc.	D	$3.44	$3.61	$3.79	$3.98	$4.18	$4.38	$4.60	$4.84	$5.09	$5.36	$5.64	$5.94	$6.26	$6.60
DTE Energy Company	DTE	$4.83	$5.10	$5.39	$5.69	$6.01	$6.35	$6.71	$7.08	$7.47	$7.88	$8.30	$8.75	$9.22	$9.71
Duke Energy Corporation	DUK	$3.71	$3.86	$4.01	$4.16	$4.33	$4.50	$4.68	$4.89	$5.11	$5.36	$5.64	$5.94	$6.26	$6.60
IDACORP, Inc.	IDA	$3.94	$4.10	$4.26	$4.43	$4.61	$4.79	$5.00	$5.22	$5.46	$5.73	$6.03	$6.35	$6.69	$7.05
NorthWestern Corporation	NWE	$3.39	$3.49	$3.59	$3.69	$3.79	$3.90	$4.03	$4.18	$4.35	$4.55	$4.77	$5.03	$5.30	$5.58
OGE Energy Corp.	OGE	$1.69	$1.80	$1.92	$2.04	$2.17	$2.32	$2.46	$2.61	$2.77	$2.93	$3.09	$3.25	$3.43	$3.61
Otter Tail Corporation	OTTR	$1.60	$1.69	$1.79	$1.90	$2.01	$2.13	$2.25	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.27
Pinnacle West Capital Corporation	PNW	$3.95	$4.16	$4.38	$4.61	$4.86	$5.12	$5.39	$5.68	$5.98	$6.30	$6.64	$7.00	$7.37	$7.77
PNM Resources, Inc.	PNM	$1.65	$1.76	$1.87	$1.99	$2.12	$2.26	$2.40	$2.54	$2.69	$2.85	$3.01	$3.17	$3.34	$3.52
Portland General Electric Company	POR	$2.16	$2.26	$2.36	$2.47	$2.58	$2.70	$2.83	$2.96	$3.11	$3.27	$3.44	$3.62	$3.82	$4.02
Southern Company	SO	$2.83	$2.92	$3.02	$3.12	$3.22	$3.33	$3.45	$3.59	$3.75	$3.92	$4.12	$4.34	$4.57	$4.82
WEC Energy Group, Inc.	WEC	$2.96	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.31	$4.54	$4.79	$5.05	$5.32	$5.60	$5.90
Xcel Energy Inc.	XEL	$2.21	$2.32	$2.44	$2.56	$2.69	$2.82	$2.96	$3.12	$3.28	$3.45	$3.63	$3.83	$4.03	$4.25

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 111 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.12	$2.19	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97	$4.18
Alliant Energy Corporation	LNT	$1.11	$1.18	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22	$2.34
Ameren Corporation	AEE	$1.83	$1.92	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60	$3.79
American Electric Power Company, Inc.	AEP	$2.99	$3.05	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69	$4.94
Black Hills Corporation	BKH	$1.43	$1.52	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54	$3.73
CMS Energy Corporation	CMS	$1.29	$1.38	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72	$2.86
Dominion Resources, Inc.	D	$3.07	$3.25	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13	$4.35
DTE Energy Company	DTE	$2.96	$3.21	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08	$6.40
Duke Energy Corporation	DUK	$2.93	$3.07	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13	$4.35
IDACORP, Inc.	IDA	$2.21	$2.38	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41	$4.65
NorthWestern Corporation	NWE	$2.16	$2.22	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49	$3.68
OGE Energy Corp.	OGE	$1.17	$1.28	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26	$2.38
Otter Tail Corporation	OTTR	$1.25	$1.27	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04	$2.15
Pinnacle West Capital Corporation	PNW	$2.62	$2.76	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86	$5.12
PNM Resources, Inc.	PNM	$0.84	$0.94	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20	$2.32
Portland General Electric Company	POR	$1.33	$1.38	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52	$2.65
Southern Company	SO	$2.25	$2.32	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01	$3.17
WEC Energy Group, Inc.	WEC	$2.09	$2.21	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89
Xcel Energy Inc.	XEL	$1.44	$1.54	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66	$2.80

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 112 of 182

Projected Annual Data

Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]
Company	Ticker	Initial Outflow	10/31/17	12/31/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28
ALLETE, Inc.	ALE	($78.26)	$0.00	$0.35	$2.18	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97
Alliant Energy Corporation	LNT	($42.63)	$0.00	$0.19	$1.14	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22
Ameren Corporation	AEE	($59.93)	$0.00	$0.31	$1.89	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60
American Electric Power Company, Inc.	AEP	($72.35)	$0.00	$0.50	$3.04	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69
Black Hills Corporation	BKH	($67.67)	$0.00	$0.24	$1.48	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54
CMS Energy Corporation	CMS	($47.25)	$0.00	$0.22	$1.33	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72
Dominion Resources, Inc.	D	($78.42)	$0.00	$0.51	$3.15	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13
DTE Energy Company	DTE	($109.51)	$0.00	$0.49	$3.04	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08
Duke Energy Corporation	DUK	($86.05)	$0.00	$0.49	$2.99	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13
IDACORP, Inc.	IDA	($89.88)	$0.00	$0.37	$2.26	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41
NorthWestern Corporation	NWE	($58.16)	$0.00	$0.36	$2.19	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49
OGE Energy Corp.	OGE	($36.47)	$0.00	$0.20	$1.21	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26
Otter Tail Corporation	OTTR	($44.91)	$0.00	$0.21	$1.29	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04
Pinnacle West Capital Corporation	PNW	($86.85)	$0.00	$0.44	$2.69	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86
PNM Resources, Inc.	PNM	($41.49)	$0.00	$0.14	$0.87	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20
Portland General Electric Company	POR	($46.10)	$0.00	$0.22	$1.36	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52
Southern Company	SO	($50.43)	$0.00	$0.38	$2.29	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01
WEC Energy Group, Inc.	WEC	($65.10)	$0.00	$0.35	$2.15	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69
Xcel Energy Inc.	XEL	($48.29)	$0.00	$0.24	$1.47	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 113 of 182

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio of 26.81
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	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$78.26	6.10%	5.00%	6.00%	6.10%	5.37%	64.00%	58.00%	65.91%	($0.00)	9.62%	26.81	5.00
Alliant Energy Corporation	LNT	$42.63	6.20%	7.50%	6.00%	7.50%	5.37%	63.00%	63.00%	65.91%	$0.00	10.20%	26.81	5.00
Ameren Corporation	AEE	$59.93	6.70%	7.00%	6.00%	7.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	11.18%	26.81	5.00
American Electric Power Company, Inc.	AEP	$72.35	4.80%	2.77%	4.00%	4.80%	5.37%	68.00%	63.00%	65.91%	($0.00)	12.47%	26.81	5.00
Black Hills Corporation	BKH	$67.67	5.60%	6.64%	7.50%	7.50%	5.37%	51.00%	51.00%	65.91%	($0.00)	9.95%	26.81	5.00
CMS Energy Corporation	CMS	$47.26	6.50%	7.58%	6.50%	7.58%	5.37%	61.00%	61.00%	65.91%	$0.00	10.92%	26.81	5.00
Dominion Resources, Inc.	D	$78.42	5.40%	4.00%	5.50%	5.50%	5.37%	85.00%	88.00%	65.91%	($0.00)	10.75%	26.81	5.00
DTE Energy Company	DTE	$109.51	6.00%	4.91%	6.00%	6.00%	5.37%	58.00%	64.00%	65.91%	($0.00)	10.47%	26.81	5.00
Duke Energy Corporation	DUK	$86.05	4.00%	3.24%	4.50%	4.50%	5.37%	76.00%	79.00%	65.91%	($0.00)	9.74%	26.81	5.00
IDACORP, Inc.	IDA	$89.88	4.50%	4.00%	3.50%	4.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	9.44%	26.81	5.00
NorthWestern Corporation	NWE	$58.16	1.50%	2.57%	4.50%	4.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	12.17%	26.81	5.00
OGE Energy Corp.	OGE	$36.47	4.90%	8.60%	6.00%	8.60%	5.37%	65.00%	72.00%	65.91%	$0.00	12.73%	26.81	5.00
Otter Tail Corporation	OTTR	$44.91	NA	5.20%	6.50%	6.50%	5.37%	74.00%	61.00%	65.91%	$0.00	8.91%	26.81	5.00
Pinnacle West Capital Corporation	PNW	$86.85	5.00%	5.46%	5.50%	5.50%	5.37%	63.00%	63.00%	65.91%	($0.00)	10.47%	26.81	5.00
PNM Resources, Inc.	PNM	$41.49	5.40%	6.45%	7.50%	7.50%	5.37%	48.00%	57.00%	65.91%	($0.00)	10.24%	26.81	5.00
Portland General Electric Company	POR	$46.10	3.70%	3.97%	6.00%	6.00%	5.37%	59.00%	57.00%	65.91%	$0.00	10.91%	26.81	5.00
Southern Company	SO	$50.43	3.80%	2.63%	3.50%	3.80%	5.37%	77.00%	76.00%	65.91%	($0.00)	11.79%	26.81	5.00
WEC Energy Group, Inc.	WEC	$65.10	5.10%	5.45%	6.00%	6.00%	5.37%	67.00%	67.00%	65.91%	($0.00)	10.88%	26.81	5.00
Xcel Energy Inc.	XEL	$48.29	5.50%	NA	4.50%	5.50%	5.37%	62.00%	66.00%	65.91%	$0.00	10.58%	26.81	5.00

DCF Result	
Mean	10.71%
Max	12.73%
Min	8.91%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.33	$3.53	$3.75	$3.98	$4.22	$4.47	$4.74	$5.01	$5.29	$5.58	$5.88	$6.19	$6.53
Alliant Energy Corporation	LNT	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Ameren Corporation	AEE	$2.68	$2.87	$3.07	$3.28	$3.51	$3.76	$4.01	$4.27	$4.53	$4.80	$5.07	$5.35	$5.63	$5.94
American Electric Power Company, Inc.	AEP	$4.23	$4.43	$4.65	$4.87	$5.10	$5.35	$5.61	$5.89	$6.19	$6.51	$6.85	$7.22	$7.61	$8.02
Black Hills Corporation	BKH	$2.63	$2.83	$3.04	$3.27	$3.51	$3.78	$4.05	$4.32	$4.60	$4.88	$5.16	$5.43	$5.73	$6.03
CMS Energy Corporation	CMS	$1.98	$2.13	$2.29	$2.47	$2.65	$2.85	$3.06	$3.27	$3.48	$3.69	$3.90	$4.11	$4.33	$4.57
Dominion Resources, Inc.	D	$3.44	$3.63	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56	$5.86	$6.17	$6.50	$6.85
DTE Energy Company	DTE	$4.83	$5.12	$5.43	$5.75	$6.10	$6.46	$6.84	$7.24	$7.65	$8.08	$8.52	$8.98	$9.46	$9.97
Duke Energy Corporation	DUK	$3.71	$3.88	$4.05	$4.23	$4.42	$4.62	$4.84	$5.07	$5.32	$5.59	$5.88	$6.20	$6.53	$6.88
IDACORP, Inc.	IDA	$3.94	$4.12	$4.30	$4.50	$4.70	$4.91	$5.14	$5.38	$5.65	$5.94	$6.25	$6.58	$6.94	$7.31
NorthWestern Corporation	NWE	$3.39	$3.54	$3.70	$3.87	$4.04	$4.22	$4.42	$4.63	$4.86	$5.11	$5.37	$5.66	$5.97	$6.29
OGE Energy Corp.	OGE	$1.69	$1.84	$1.99	$2.16	$2.35	$2.55	$2.76	$2.97	$3.17	$3.38	$3.58	$3.77	$3.97	$4.18
Otter Tail Corporation	OTTR	$1.60	$1.70	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.62	$2.77	$2.92	$3.08	$3.25	$3.42
Pinnacle West Capital Corporation	PNW	$3.95	$4.17	$4.40	$4.64	$4.89	$5.16	$5.45	$5.74	$6.05	$6.38	$6.73	$7.09	$7.47	$7.87
PNM Resources, Inc.	PNM	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Portland General Electric Company	POR	$2.16	$2.29	$2.43	$2.57	$2.73	$2.89	$3.06	$3.24	$3.42	$3.61	$3.81	$4.02	$4.23	$4.46
Southern Company	SO	$2.83	$2.94	$3.05	$3.17	$3.29	$3.41	$3.55	$3.70	$3.87	$4.06	$4.27	$4.50	$4.74	$4.99
WEC Energy Group, Inc.	WEC	$2.96	$3.14	$3.33	$3.53	$3.74	$3.96	$4.19	$4.44	$4.69	$4.95	$5.22	$5.50	$5.80	$6.11
Xcel Energy Inc.	XEL	$2.21	$2.33	$2.46	$2.60	$2.74	$2.89	$3.05	$3.21	$3.39	$3.57	$3.76	$3.97	$4.18	$4.40

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 114 of 182

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	ALE	$2.13	$2.21	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08	$4.30
Alliant Energy Corporation	LNT	$1.12	$1.20	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37	$2.49
Ameren Corporation	AEE	$1.84	$1.93	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71	$3.91
American Electric Power Company, Inc.	AEP	$3.01	$3.10	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01	$5.28
Black Hills Corporation	BKH	$1.44	$1.55	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77	$3.98
CMS Energy Corporation	CMS	$1.30	$1.40	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86	$3.01
Dominion Resources, Inc.	D	$3.08	$3.28	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29	$4.52
DTE Energy Company	DTE	$2.97	$3.23	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24	$6.57
Duke Energy Corporation	DUK	$2.95	$3.11	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30	$4.53
IDACORP, Inc.	IDA	$2.22	$2.40	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57	$4.82
NorthWestern Corporation	NWE	$2.20	$2.30	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93	$4.14
OGE Energy Corp.	OGE	$1.19	$1.33	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62	$2.76
Otter Tail Corporation	OTTR	$1.26	$1.28	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14	$2.25
Pinnacle West Capital Corporation	PNW	$2.63	$2.77	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92	$5.19
PNM Resources, Inc.	PNM	$0.85	$0.96	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37	$2.49
Portland General Electric Company	POR	$1.35	$1.42	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79	$2.94
Southern Company	SO	$2.26	$2.34	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12	$3.29
WEC Energy Group, Inc.	WEC	$2.10	$2.23	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82	$4.03
Xcel Energy Inc.	XEL	$1.45	$1.55	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75	$2.90

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 115 of 182

Projected Annual Data

Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]
Company	Ticker	Initial Outflow	10/31/17	12/31/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28
ALLETE, Inc.	ALE	($78.26)	$0.00	$0.36	$2.20	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08
Alliant Energy Corporation	LNT	($42.63)	$0.00	$0.19	$1.16	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37
Ameren Corporation	AEE	($59.93)	$0.00	$0.31	$1.90	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71
American Electric Power Company, Inc.	AEP	($72.35)	$0.00	$0.50	$3.09	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01
Black Hills Corporation	BKH	($67.67)	$0.00	$0.24	$1.50	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77
CMS Energy Corporation	CMS	($47.25)	$0.00	$0.22	$1.35	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86
Dominion Resources, Inc.	D	($78.42)	$0.00	$0.52	$3.17	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29
DTE Energy Company	DTE	($109.51)	$0.00	$0.50	$3.06	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24
Duke Energy Corporation	DUK	($86.05)	$0.00	$0.49	$3.01	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30
IDACORP, Inc.	IDA	($89.88)	$0.00	$0.37	$2.27	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57
NorthWestern Corporation	NWE	($58.16)	$0.00	$0.37	$2.25	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93
OGE Energy Corp.	OGE	($36.47)	$0.00	$0.20	$1.24	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62
Otter Tail Corporation	OTTR	($44.91)	$0.00	$0.21	$1.30	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14
Pinnacle West Capital Corporation	PNW	($86.85)	$0.00	$0.44	$2.70	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92
PNM Resources, Inc.	PNM	($41.49)	$0.00	$0.14	$0.88	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37
Portland General Electric Company	POR	($46.10)	$0.00	$0.23	$1.39	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79
Southern Company	SO	($50.43)	$0.00	$0.38	$2.30	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12
WEC Energy Group, Inc.	WEC	($65.10)	$0.00	$0.35	$2.17	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82
Xcel Energy Inc.	XEL	($48.29)	$0.00	$0.24	$1.49	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 116 of 182

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio of 26.81
30 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$78.26	6.10%	5.00%	6.00%	5.00%	5.37%	64.00%	58.00%	65.91%	($0.00)	8.97%	26.81	5.00
Alliant Energy Corporation	LNT	$42.63	6.20%	7.50%	6.00%	6.00%	5.37%	63.00%	63.00%	65.91%	$0.00	9.31%	26.81	5.00
Ameren Corporation	AEE	$59.93	6.70%	7.00%	6.00%	6.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	10.58%	26.81	5.00
American Electric Power Company, Inc.	AEP	$72.35	4.80%	2.77%	4.00%	2.77%	5.37%	68.00%	63.00%	65.91%	($0.00)	11.19%	26.81	5.00
Black Hills Corporation	BKH	$67.67	5.60%	6.64%	7.50%	5.60%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.85%	26.81	5.00
CMS Energy Corporation	CMS	$47.26	6.50%	7.58%	6.50%	6.50%	5.37%	61.00%	61.00%	65.91%	$0.00	10.28%	26.81	5.00
Dominion Resources, Inc.	D	$78.42	5.40%	4.00%	5.50%	4.00%	5.37%	85.00%	88.00%	65.91%	($0.00)	9.82%	26.81	5.00
DTE Energy Company	DTE	$109.51	6.00%	4.91%	6.00%	4.91%	5.37%	58.00%	64.00%	65.91%	($0.00)	9.82%	26.81	5.00
Duke Energy Corporation	DUK	$86.05	4.00%	3.24%	4.50%	3.24%	5.37%	76.00%	79.00%	65.91%	($0.00)	8.97%	26.81	5.00
IDACORP, Inc.	IDA	$89.88	4.50%	4.00%	3.50%	3.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	8.84%	26.81	5.00
NorthWestern Corporation	NWE	$58.16	1.50%	2.57%	4.50%	1.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	10.28%	26.81	5.00
OGE Energy Corp.	OGE	$36.47	4.90%	8.60%	6.00%	4.90%	5.37%	65.00%	72.00%	65.91%	$0.00	10.46%	26.81	5.00
Otter Tail Corporation	OTTR	$44.91	NA	5.20%	6.50%	5.20%	5.37%	74.00%	61.00%	65.91%	$0.00	8.15%	26.81	5.00
Pinnacle West Capital Corporation	PNW	$86.85	5.00%	5.46%	5.50%	5.00%	5.37%	63.00%	63.00%	65.91%	($0.00)	10.17%	26.81	5.00
PNM Resources, Inc.	PNM	$41.49	5.40%	6.45%	7.50%	5.40%	5.37%	48.00%	57.00%	65.91%	($0.00)	9.00%	26.81	5.00
Portland General Electric Company	POR	$46.10	3.70%	3.97%	6.00%	3.70%	5.37%	59.00%	57.00%	65.91%	$0.00	9.52%	26.81	5.00
Southern Company	SO	$50.43	3.80%	2.63%	3.50%	2.63%	5.37%	77.00%	76.00%	65.91%	$0.00	11.05%	26.81	5.00
WEC Energy Group, Inc.	WEC	$65.10	5.10%	5.45%	6.00%	5.10%	5.37%	67.00%	67.00%	65.91%	($0.00)	10.33%	26.81	5.00
Xcel Energy Inc.	XEL	$48.29	5.50%	NA	4.50%	4.50%	5.37%	62.00%	66.00%	65.91%	$0.00	9.97%	26.81	5.00

DCF Result	
Mean	9.77%
Max	11.19%
Min	8.15%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.30	$3.46	$3.63	$3.82	$4.01	$4.21	$4.43	$4.66	$4.90	$5.16	$5.44	$5.73	$6.04
Alliant Energy Corporation	LNT	$1.65	$1.75	$1.85	$1.97	$2.08	$2.21	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.23	$3.41
Ameren Corporation	AEE	$2.68	$2.84	$3.01	$3.19	$3.38	$3.59	$3.80	$4.02	$4.25	$4.48	$4.73	$4.98	$5.25	$5.53
American Electric Power Company, Inc.	AEP	$4.23	$4.35	$4.47	$4.59	$4.72	$4.85	$5.00	$5.19	$5.40	$5.64	$5.92	$6.24	$6.57	$6.92
Black Hills Corporation	BKH	$2.63	$2.78	$2.93	$3.10	$3.27	$3.45	$3.65	$3.85	$4.06	$4.28	$4.51	$4.75	$5.01	$5.28
CMS Energy Corporation	CMS	$1.98	$2.11	$2.25	$2.39	$2.55	$2.71	$2.88	$3.06	$3.24	$3.43	$3.62	$3.81	$4.02	$4.23
Dominion Resources, Inc.	D	$3.44	$3.58	$3.72	$3.87	$4.02	$4.19	$4.36	$4.56	$4.77	$5.00	$5.26	$5.54	$5.84	$6.15
DTE Energy Company	DTE	$4.83	$5.07	$5.32	$5.58	$5.85	$6.14	$6.44	$6.77	$7.12	$7.49	$7.89	$8.31	$8.75	$9.22
Duke Energy Corporation	DUK	$3.71	$3.83	$3.95	$4.08	$4.21	$4.35	$4.51	$4.69	$4.89	$5.11	$5.37	$5.66	$5.96	$6.28
IDACORP, Inc.	IDA	$3.94	$4.08	$4.22	$4.37	$4.52	$4.68	$4.86	$5.06	$5.28	$5.53	$5.81	$6.12	$6.45	$6.80
NorthWestern Corporation	NWE	$3.39	$3.44	$3.49	$3.54	$3.60	$3.65	$3.73	$3.83	$3.97	$4.13	$4.32	$4.55	$4.80	$5.06
OGE Energy Corp.	OGE	$1.69	$1.77	$1.86	$1.95	$2.05	$2.15	$2.25	$2.37	$2.49	$2.62	$2.76	$2.91	$3.06	$3.23
Otter Tail Corporation	OTTR	$1.60	$1.68	$1.77	$1.86	$1.96	$2.06	$2.17	$2.28	$2.40	$2.53	$2.67	$2.81	$2.96	$3.12
Pinnacle West Capital Corporation	PNW	$3.95	$4.15	$4.35	$4.57	$4.80	$5.04	$5.30	$5.57	$5.86	$6.16	$6.49	$6.84	$7.21	$7.59
PNM Resources, Inc.	PNM	$1.65	$1.74	$1.83	$1.93	$2.04	$2.15	$2.26	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.26
Portland General Electric Company	POR	$2.16	$2.24	$2.32	$2.41	$2.50	$2.59	$2.69	$2.81	$2.94	$3.08	$3.23	$3.41	$3.59	$3.78
Southern Company	SO	$2.83	$2.90	$2.98	$3.06	$3.14	$3.22	$3.32	$3.44	$3.58	$3.74	$3.92	$4.13	$4.35	$4.59
WEC Energy Group, Inc.	WEC	$2.96	$3.11	$3.27	$3.44	$3.61	$3.80	$3.99	$4.20	$4.42	$4.65	$4.90	$5.16	$5.44	$5.73
Xcel Energy Inc.	XEL	$2.21	$2.31	$2.41	$2.52	$2.64	$2.75	$2.88	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89	$4.10

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 117 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.11	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78	$3.98
Alliant Energy Corporation	LNT	$1.10	$1.17	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13	$2.24
Ameren Corporation	AEE	$1.82	$1.90	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46	$3.65
American Electric Power Company, Inc.	AEP	$2.96	$2.98	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33	$4.56
Black Hills Corporation	BKH	$1.42	$1.50	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30	$3.48
CMS Energy Corporation	CMS	$1.29	$1.37	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65	$2.79
Dominion Resources, Inc.	D	$3.04	$3.19	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85	$4.06
DTE Energy Company	DTE	$2.94	$3.16	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77	$6.08
Duke Energy Corporation	DUK	$2.91	$3.03	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93	$4.14
IDACORP, Inc.	IDA	$2.20	$2.35	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25	$4.48
NorthWestern Corporation	NWE	$2.13	$2.17	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16	$3.33
OGE Energy Corp.	OGE	$1.15	$1.24	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02	$2.13
Otter Tail Corporation	OTTR	$1.25	$1.25	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95	$2.06
Pinnacle West Capital Corporation	PNW	$2.61	$2.74	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75	$5.00
PNM Resources, Inc.	PNM	$0.83	$0.92	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04	$2.15
Portland General Electric Company	POR	$1.32	$1.36	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37	$2.49
Southern Company	SO	$2.24	$2.29	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87	$3.02
WEC Energy Group, Inc.	WEC	$2.08	$2.19	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58	$3.78
Xcel Energy Inc.	XEL	$1.43	$1.52	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56	$2.70

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 118 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($78.26)	$0.00	$0.35	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78
Alliant Energy Corporation	LNT	($42.63)	$0.00	$0.18	$1.13	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13
Ameren Corporation	AEE	($59.93)	$0.00	$0.30	$1.87	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46
American Electric Power Company, Inc.	AEP	($72.35)	$0.00	$0.49	$3.00	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33
Black Hills Corporation	BKH	($67.67)	$0.00	$0.24	$1.46	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30
CMS Energy Corporation	CMS	($47.25)	$0.00	$0.21	$1.33	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65
Dominion Resources, Inc.	D	($78.42)	$0.00	$0.51	$3.10	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85
DTE Energy Company	DTE	($109.51)	$0.00	$0.49	$3.01	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77
Duke Energy Corporation	DUK	($86.05)	$0.00	$0.49	$2.96	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93
IDACORP, Inc.	IDA	($89.88)	$0.00	$0.37	$2.24	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25
NorthWestern Corporation	NWE	($58.16)	$0.00	$0.36	$2.15	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16
OGE Energy Corp.	OGE	($36.47)	$0.00	$0.19	$1.18	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02
Otter Tail Corporation	OTTR	($44.91)	$0.00	$0.21	$1.28	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95
Pinnacle West Capital Corporation	PNW	($86.85)	$0.00	$0.44	$2.68	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75
PNM Resources, Inc.	PNM	($41.49)	$0.00	$0.14	$0.86	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04
Portland General Electric Company	POR	($46.10)	$0.00	$0.22	$1.35	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37
Southern Company	SO	($50.43)	$0.00	$0.37	$2.27	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87
WEC Energy Group, Inc.	WEC	($65.10)	$0.00	$0.35	$2.14	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58
Xcel Energy Inc.	XEL	($48.29)	$0.00	$0.24	$1.46	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 119 of 182

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio of 26.81
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]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.64	6.10%	5.00%	6.00%	5.70%	5.37%	64.00%	58.00%	65.91%	($0.00)	9.69%	26.81	5.00
Alliant Energy Corporation	LNT	$41.87	6.20%	7.50%	6.00%	6.57%	5.37%	63.00%	63.00%	65.91%	$0.00	9.81%	26.81	5.00
Ameren Corporation	AEE	$58.31	6.70%	7.00%	6.00%	6.57%	5.37%	64.00%	60.00%	65.91%	($0.00)	11.17%	26.81	5.00
American Electric Power Company, Inc.	AEP	$68.86	4.80%	2.77%	4.00%	3.86%	5.37%	68.00%	63.00%	65.91%	($0.00)	12.36%	26.81	5.00
Black Hills Corporation	BKH	$68.86	5.60%	6.64%	7.50%	6.58%	5.37%	51.00%	51.00%	65.91%	($0.00)	9.27%	26.81	5.00
CMS Energy Corporation	CMS	$47.23	6.50%	7.58%	6.50%	6.86%	5.37%	61.00%	61.00%	65.91%	$0.00	10.49%	26.81	5.00
Dominion Resources, Inc.	D	$78.00	5.40%	4.00%	5.50%	4.97%	5.37%	85.00%	88.00%	65.91%	($0.00)	10.47%	26.81	5.00
DTE Energy Company	DTE	$109.02	6.00%	4.91%	6.00%	5.64%	5.37%	58.00%	64.00%	65.91%	($0.00)	10.29%	26.81	5.00
Duke Energy Corporation	DUK	$85.82	4.00%	3.24%	4.50%	3.91%	5.37%	76.00%	79.00%	65.91%	($0.00)	9.41%	26.81	5.00
IDACORP, Inc.	IDA	$88.14	4.50%	4.00%	3.50%	4.00%	5.37%	54.00%	61.00%	65.91%	($0.00)	9.31%	26.81	5.00
NorthWestern Corporation	NWE	$59.45	1.50%	2.57%	4.50%	2.86%	5.37%	62.00%	62.00%	65.91%	($0.00)	10.93%	26.81	5.00
OGE Energy Corp.	OGE	$35.87	4.90%	8.60%	6.00%	6.50%	5.37%	65.00%	72.00%	65.91%	$0.00	11.60%	26.81	5.00
Otter Tail Corporation	OTTR	$42.31	NA	5.20%	6.50%	5.85%	5.37%	74.00%	61.00%	65.91%	$0.00	9.06%	26.81	5.00
Pinnacle West Capital Corporation	PNW	$87.45	5.00%	5.46%	5.50%	5.32%	5.37%	63.00%	63.00%	65.91%	($0.00)	10.30%	26.81	5.00
PNM Resources, Inc.	PNM	$40.79	5.40%	6.45%	7.50%	6.45%	5.37%	48.00%	57.00%	65.91%	($0.00)	9.77%	26.81	5.00
Portland General Electric Company	POR	$46.08	3.70%	3.97%	6.00%	4.56%	5.37%	59.00%	57.00%	65.91%	$0.00	10.05%	26.81	5.00
Southern Company	SO	$49.11	3.80%	2.63%	3.50%	3.31%	5.37%	77.00%	76.00%	65.91%	($0.00)	11.74%	26.81	5.00
WEC Energy Group, Inc.	WEC	$64.16	5.10%	5.45%	6.00%	5.52%	5.37%	67.00%	67.00%	65.91%	($0.00)	10.72%	26.81	5.00
Xcel Energy Inc.	XEL	$48.04	5.50%	NA	4.50%	5.00%	5.37%	62.00%	66.00%	65.91%	$0.00	10.32%	26.81	5.00

DCF Result	
Mean	10.36%
Max	12.36%
Min	9.06%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.32	$3.51	$3.71	$3.92	$4.14	$4.38	$4.62	$4.88	$5.14	$5.42	$5.71	$6.02	$6.34
Alliant Energy Corporation	LNT	$1.65	$1.76	$1.87	$2.00	$2.13	$2.27	$2.41	$2.56	$2.71	$2.87	$3.03	$3.19	$3.36	$3.54
Ameren Corporation	AEE	$2.68	$2.86	$3.04	$3.24	$3.46	$3.68	$3.92	$4.16	$4.41	$4.66	$4.92	$5.19	$5.46	$5.76
American Electric Power Company, Inc.	AEP	$4.23	$4.39	$4.56	$4.74	$4.92	$5.11	$5.32	$5.55	$5.81	$6.09	$6.40	$6.75	$7.11	$7.49
Black Hills Corporation	BKH	$2.63	$2.80	$2.99	$3.18	$3.39	$3.62	$3.85	$4.09	$4.33	$4.58	$4.83	$5.09	$5.37	$5.65
CMS Energy Corporation	CMS	$1.98	$2.12	$2.26	$2.42	$2.58	$2.76	$2.94	$3.13	$3.32	$3.51	$3.71	$3.91	$4.12	$4.34
Dominion Resources, Inc.	D	$3.44	$3.61	$3.79	$3.98	$4.18	$4.38	$4.60	$4.84	$5.09	$5.36	$5.64	$5.94	$6.26	$6.60
DTE Energy Company	DTE	$4.83	$5.10	$5.39	$5.69	$6.01	$6.35	$6.71	$7.08	$7.47	$7.88	$8.30	$8.75	$9.22	$9.71
Duke Energy Corporation	DUK	$3.71	$3.86	$4.01	$4.16	$4.33	$4.50	$4.68	$4.89	$5.11	$5.36	$5.64	$5.94	$6.26	$6.60
IDACORP, Inc.	IDA	$3.94	$4.10	$4.26	$4.43	$4.61	$4.79	$5.00	$5.22	$5.46	$5.73	$6.03	$6.35	$6.69	$7.05
NorthWestern Corporation	NWE	$3.39	$3.49	$3.59	$3.69	$3.79	$3.90	$4.03	$4.18	$4.35	$4.55	$4.77	$5.03	$5.30	$5.58
OGE Energy Corp.	OGE	$1.69	$1.80	$1.92	$2.04	$2.17	$2.32	$2.46	$2.61	$2.77	$2.93	$3.09	$3.25	$3.43	$3.61
Otter Tail Corporation	OTTR	$1.60	$1.69	$1.79	$1.90	$2.01	$2.13	$2.25	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.27
Pinnacle West Capital Corporation	PNW	$3.95	$4.16	$4.38	$4.61	$4.86	$5.12	$5.39	$5.68	$5.98	$6.30	$6.64	$7.00	$7.37	$7.77
PNM Resources, Inc.	PNM	$1.65	$1.76	$1.87	$1.99	$2.12	$2.26	$2.40	$2.54	$2.69	$2.85	$3.01	$3.17	$3.34	$3.52
Portland General Electric Company	POR	$2.16	$2.26	$2.36	$2.47	$2.58	$2.70	$2.83	$2.96	$3.11	$3.27	$3.44	$3.62	$3.82	$4.02
Southern Company	SO	$2.83	$2.92	$3.02	$3.12	$3.22	$3.33	$3.45	$3.59	$3.75	$3.92	$4.12	$4.34	$4.57	$4.82
WEC Energy Group, Inc.	WEC	$2.96	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.31	$4.54	$4.79	$5.05	$5.32	$5.60	$5.90
Xcel Energy Inc.	XEL	$2.21	$2.32	$2.44	$2.56	$2.69	$2.82	$2.96	$3.12	$3.28	$3.45	$3.63	$3.83	$4.03	$4.25

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 120 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.12	$2.19	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97	$4.18
Alliant Energy Corporation	LNT	$1.11	$1.18	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22	$2.34
Ameren Corporation	AEE	$1.83	$1.92	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60	$3.79
American Electric Power Company, Inc.	AEP	$2.99	$3.05	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69	$4.94
Black Hills Corporation	BKH	$1.43	$1.52	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54	$3.73
CMS Energy Corporation	CMS	$1.29	$1.38	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72	$2.86
Dominion Resources, Inc.	D	$3.07	$3.25	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13	$4.35
DTE Energy Company	DTE	$2.96	$3.21	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08	$6.40
Duke Energy Corporation	DUK	$2.93	$3.07	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13	$4.35
IDACORP, Inc.	IDA	$2.21	$2.38	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41	$4.65
NorthWestern Corporation	NWE	$2.16	$2.22	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49	$3.68
OGE Energy Corp.	OGE	$1.17	$1.28	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26	$2.38
Otter Tail Corporation	OTTR	$1.25	$1.27	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04	$2.15
Pinnacle West Capital Corporation	PNW	$2.62	$2.76	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86	$5.12
PNM Resources, Inc.	PNM	$0.84	$0.94	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20	$2.32
Portland General Electric Company	POR	$1.33	$1.38	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52	$2.65
Southern Company	SO	$2.25	$2.32	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01	$3.17
WEC Energy Group, Inc.	WEC	$2.09	$2.21	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89
Xcel Energy Inc.	XEL	$1.44	$1.54	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66	$2.80

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 121 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($75.64)	$0.00	$0.35	$2.18	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97
Alliant Energy Corporation	LNT	($41.87)	$0.00	$0.19	$1.14	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22
Ameren Corporation	AEE	($58.31)	$0.00	$0.31	$1.89	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60
American Electric Power Company, Inc.	AEP	($68.86)	$0.00	$0.50	$3.04	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69
Black Hills Corporation	BKH	($68.86)	$0.00	$0.24	$1.48	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54
CMS Energy Corporation	CMS	($47.23)	$0.00	$0.22	$1.33	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72
Dominion Resources, Inc.	D	($78.00)	$0.00	$0.51	$3.15	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13
DTE Energy Company	DTE	($109.02)	$0.00	$0.49	$3.04	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08
Duke Energy Corporation	DUK	($85.82)	$0.00	$0.49	$2.99	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13
IDACORP, Inc.	IDA	($88.14)	$0.00	$0.37	$2.26	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41
NorthWestern Corporation	NWE	($59.45)	$0.00	$0.36	$2.19	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49
OGE Energy Corp.	OGE	($35.87)	$0.00	$0.20	$1.21	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26
Otter Tail Corporation	OTTR	($42.31)	$0.00	$0.21	$1.29	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04
Pinnacle West Capital Corporation	PNW	($87.45)	$0.00	$0.44	$2.69	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86
PNM Resources, Inc.	PNM	($40.79)	$0.00	$0.14	$0.87	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20
Portland General Electric Company	POR	($46.08)	$0.00	$0.22	$1.36	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52
Southern Company	SO	($49.11)	$0.00	$0.38	$2.29	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01
WEC Energy Group, Inc.	WEC	($64.16)	$0.00	$0.35	$2.15	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69
Xcel Energy Inc.	XEL	($48.04)	$0.00	$0.24	$1.47	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 122 of 182

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio of 26.81
90 Day Average Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.64	6.10%	5.00%	6.00%	6.10%	5.37%	64.00%	58.00%	65.91%	($0.00)	9.93%	26.81	5.00
Alliant Energy Corporation	LNT	$41.87	6.20%	7.50%	6.00%	7.50%	5.37%	63.00%	63.00%	65.91%	$0.00	10.36%	26.81	5.00
Ameren Corporation	AEE	$58.31	6.70%	7.00%	6.00%	7.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	11.43%	26.81	5.00
American Electric Power Company, Inc.	AEP	$68.86	4.80%	2.77%	4.00%	4.80%	5.37%	68.00%	63.00%	65.91%	($0.00)	12.96%	26.81	5.00
Black Hills Corporation	BKH	$68.86	5.60%	6.64%	7.50%	7.50%	5.37%	51.00%	51.00%	65.91%	($0.00)	9.80%	26.81	5.00
CMS Energy Corporation	CMS	$47.23	6.50%	7.58%	6.50%	7.58%	5.37%	61.00%	61.00%	65.91%	$0.00	10.92%	26.81	5.00
Dominion Resources, Inc.	D	$78.00	5.40%	4.00%	5.50%	5.50%	5.37%	85.00%	88.00%	65.91%	($0.00)	10.80%	26.81	5.00
DTE Energy Company	DTE	$109.02	6.00%	4.91%	6.00%	6.00%	5.37%	58.00%	64.00%	65.91%	($0.00)	10.51%	26.81	5.00
Duke Energy Corporation	DUK	$85.82	4.00%	3.24%	4.50%	4.50%	5.37%	76.00%	79.00%	65.91%	($0.00)	9.77%	26.81	5.00
IDACORP, Inc.	IDA	$88.14	4.50%	4.00%	3.50%	4.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	9.61%	26.81	5.00
NorthWestern Corporation	NWE	$59.45	1.50%	2.57%	4.50%	4.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	11.96%	26.81	5.00
OGE Energy Corp.	OGE	$35.87	4.90%	8.60%	6.00%	8.60%	5.37%	65.00%	72.00%	65.91%	$0.00	12.89%	26.81	5.00
Otter Tail Corporation	OTTR	$42.31	NA	5.20%	6.50%	6.50%	5.37%	74.00%	61.00%	65.91%	$0.00	9.44%	26.81	5.00
Pinnacle West Capital Corporation	PNW	$87.45	5.00%	5.46%	5.50%	5.50%	5.37%	63.00%	63.00%	65.91%	($0.00)	10.41%	26.81	5.00
PNM Resources, Inc.	PNM	$40.79	5.40%	6.45%	7.50%	7.50%	5.37%	48.00%	57.00%	65.91%	($0.00)	10.39%	26.81	5.00
Portland General Electric Company	POR	$46.08	3.70%	3.97%	6.00%	6.00%	5.37%	59.00%	57.00%	65.91%	$0.00	10.92%	26.81	5.00
Southern Company	SO	$49.11	3.80%	2.63%	3.50%	3.80%	5.37%	77.00%	76.00%	65.91%	($0.00)	12.06%	26.81	5.00
WEC Energy Group, Inc.	WEC	$64.16	5.10%	5.45%	6.00%	6.00%	5.37%	67.00%	67.00%	65.91%	($0.00)	11.02%	26.81	5.00
Xcel Energy Inc.	XEL	$48.04	5.50%	NA	4.50%	5.50%	5.37%	62.00%	66.00%	65.91%	$0.00	10.63%	26.81	5.00

DCF Result	
Mean	10.83%
Max	12.96%
Min	9.44%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.33	$3.53	$3.75	$3.98	$4.22	$4.47	$4.74	$5.01	$5.29	$5.58	$5.88	$6.19	$6.53
Alliant Energy Corporation	LNT	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Ameren Corporation	AEE	$2.68	$2.87	$3.07	$3.28	$3.51	$3.76	$4.01	$4.27	$4.53	$4.80	$5.07	$5.35	$5.63	$5.94
American Electric Power Company, Inc.	AEP	$4.23	$4.43	$4.65	$4.87	$5.10	$5.35	$5.61	$5.89	$6.19	$6.51	$6.85	$7.22	$7.61	$8.02
Black Hills Corporation	BKH	$2.63	$2.83	$3.04	$3.27	$3.51	$3.78	$4.05	$4.32	$4.60	$4.88	$5.16	$5.43	$5.73	$6.03
CMS Energy Corporation	CMS	$1.98	$2.13	$2.29	$2.47	$2.65	$2.85	$3.06	$3.27	$3.48	$3.69	$3.90	$4.11	$4.33	$4.57
Dominion Resources, Inc.	D	$3.44	$3.63	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56	$5.86	$6.17	$6.50	$6.85
DTE Energy Company	DTE	$4.83	$5.12	$5.43	$5.75	$6.10	$6.46	$6.84	$7.24	$7.65	$8.08	$8.52	$8.98	$9.46	$9.97
Duke Energy Corporation	DUK	$3.71	$3.88	$4.05	$4.23	$4.42	$4.62	$4.84	$5.07	$5.32	$5.59	$5.88	$6.20	$6.53	$6.88
IDACORP, Inc.	IDA	$3.94	$4.12	$4.30	$4.50	$4.70	$4.91	$5.14	$5.38	$5.65	$5.94	$6.25	$6.58	$6.94	$7.31
NorthWestern Corporation	NWE	$3.39	$3.54	$3.70	$3.87	$4.04	$4.22	$4.42	$4.63	$4.86	$5.11	$5.37	$5.66	$5.97	$6.29
OGE Energy Corp.	OGE	$1.69	$1.84	$1.99	$2.16	$2.35	$2.55	$2.76	$2.97	$3.17	$3.38	$3.58	$3.77	$3.97	$4.18
Otter Tail Corporation	OTTR	$1.60	$1.70	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.62	$2.77	$2.92	$3.08	$3.25	$3.42
Pinnacle West Capital Corporation	PNW	$3.95	$4.17	$4.40	$4.64	$4.89	$5.16	$5.45	$5.74	$6.05	$6.38	$6.73	$7.09	$7.47	$7.87
PNM Resources, Inc.	PNM	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Portland General Electric Company	POR	$2.16	$2.29	$2.43	$2.57	$2.73	$2.89	$3.06	$3.24	$3.42	$3.61	$3.81	$4.02	$4.23	$4.46
Southern Company	SO	$2.83	$2.94	$3.05	$3.17	$3.29	$3.41	$3.55	$3.70	$3.87	$4.06	$4.27	$4.50	$4.74	$4.99
WEC Energy Group, Inc.	WEC	$2.96	$3.14	$3.33	$3.53	$3.74	$3.96	$4.19	$4.44	$4.69	$4.95	$5.22	$5.50	$5.80	$6.11
Xcel Energy Inc.	XEL	$2.21	$2.33	$2.46	$2.60	$2.74	$2.89	$3.05	$3.21	$3.39	$3.57	$3.76	$3.97	$4.18	$4.40

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 123 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.13	$2.21	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08	$4.30
Alliant Energy Corporation	LNT	$1.12	$1.20	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37	$2.49
Ameren Corporation	AEE	$1.84	$1.93	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71	$3.91
American Electric Power Company, Inc.	AEP	$3.01	$3.10	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01	$5.28
Black Hills Corporation	BKH	$1.44	$1.55	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77	$3.98
CMS Energy Corporation	CMS	$1.30	$1.40	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86	$3.01
Dominion Resources, Inc.	D	$3.08	$3.28	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29	$4.52
DTE Energy Company	DTE	$2.97	$3.23	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24	$6.57
Duke Energy Corporation	DUK	$2.95	$3.11	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30	$4.53
IDACORP, Inc.	IDA	$2.22	$2.40	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57	$4.82
NorthWestern Corporation	NWE	$2.20	$2.30	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93	$4.14
OGE Energy Corp.	OGE	$1.19	$1.33	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62	$2.76
Otter Tail Corporation	OTTR	$1.26	$1.28	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14	$2.25
Pinnacle West Capital Corporation	PNW	$2.63	$2.77	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92	$5.19
PNM Resources, Inc.	PNM	$0.85	$0.96	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37	$2.49
Portland General Electric Company	POR	$1.35	$1.42	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79	$2.94
Southern Company	SO	$2.26	$2.34	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12	$3.29
WEC Energy Group, Inc.	WEC	$2.10	$2.23	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82	$4.03
Xcel Energy Inc.	XEL	$1.45	$1.55	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75	$2.90

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 124 of 182

Projected Annual Data

Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]
Company	Ticker	Initial Outflow	10/31/17	12/31/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28
ALLETE, Inc.	ALE	($75.64)	$0.00	$0.36	$2.20	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08
Alliant Energy Corporation	LNT	($41.87)	$0.00	$0.19	$1.16	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37
Ameren Corporation	AEE	($58.31)	$0.00	$0.31	$1.90	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71
American Electric Power Company, Inc.	AEP	($68.86)	$0.00	$0.50	$3.09	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01
Black Hills Corporation	BKH	($68.86)	$0.00	$0.24	$1.50	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77
CMS Energy Corporation	CMS	($47.23)	$0.00	$0.22	$1.35	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86
Dominion Resources, Inc.	D	($78.00)	$0.00	$0.52	$3.17	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29
DTE Energy Company	DTE	($109.02)	$0.00	$0.50	$3.06	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24
Duke Energy Corporation	DUK	($85.82)	$0.00	$0.49	$3.01	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30
IDACORP, Inc.	IDA	($88.14)	$0.00	$0.37	$2.27	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57
NorthWestern Corporation	NWE	($59.45)	$0.00	$0.37	$2.25	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93
OGE Energy Corp.	OGE	($35.87)	$0.00	$0.20	$1.24	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62
Otter Tail Corporation	OTTR	($42.31)	$0.00	$0.21	$1.30	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14
Pinnacle West Capital Corporation	PNW	($87.45)	$0.00	$0.44	$2.70	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92
PNM Resources, Inc.	PNM	($40.79)	$0.00	$0.14	$0.88	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37
Portland General Electric Company	POR	($46.08)	$0.00	$0.23	$1.39	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79
Southern Company	SO	($49.11)	$0.00	$0.38	$2.30	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12
WEC Energy Group, Inc.	WEC	($64.16)	$0.00	$0.35	$2.17	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82
Xcel Energy Inc.	XEL	($48.04)	$0.00	$0.24	$1.49	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 125 of 182

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio of 26.81
90 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$75.64	6.10%	5.00%	6.00%	5.00%	5.37%	64.00%	58.00%	65.91%	($0.00)	9.27%	26.81	5.00
Alliant Energy Corporation	LNT	$41.87	6.20%	7.50%	6.00%	6.00%	5.37%	63.00%	63.00%	65.91%	$0.00	9.47%	26.81	5.00
Ameren Corporation	AEE	$58.31	6.70%	7.00%	6.00%	6.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	10.83%	26.81	5.00
American Electric Power Company, Inc.	AEP	$68.86	4.80%	2.77%	4.00%	2.77%	5.37%	68.00%	63.00%	65.91%	($0.00)	11.67%	26.81	5.00
Black Hills Corporation	BKH	$68.86	5.60%	6.64%	7.50%	5.60%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.70%	26.81	5.00
CMS Energy Corporation	CMS	$47.23	6.50%	7.58%	6.50%	6.50%	5.37%	61.00%	61.00%	65.91%	$0.00	10.28%	26.81	5.00
Dominion Resources, Inc.	D	$78.00	5.40%	4.00%	5.50%	4.00%	5.37%	85.00%	88.00%	65.91%	($0.00)	9.87%	26.81	5.00
DTE Energy Company	DTE	$109.02	6.00%	4.91%	6.00%	4.91%	5.37%	58.00%	64.00%	65.91%	($0.00)	9.86%	26.81	5.00
Duke Energy Corporation	DUK	$85.82	4.00%	3.24%	4.50%	3.24%	5.37%	76.00%	79.00%	65.91%	($0.00)	9.00%	26.81	5.00
IDACORP, Inc.	IDA	$88.14	4.50%	4.00%	3.50%	3.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	9.01%	26.81	5.00
NorthWestern Corporation	NWE	$59.45	1.50%	2.57%	4.50%	1.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	10.08%	26.81	5.00
OGE Energy Corp.	OGE	$35.87	4.90%	8.60%	6.00%	4.90%	5.37%	65.00%	72.00%	65.91%	$0.00	10.61%	26.81	5.00
Otter Tail Corporation	OTTR	$42.31	NA	5.20%	6.50%	5.20%	5.37%	74.00%	61.00%	65.91%	$0.00	8.67%	26.81	5.00
Pinnacle West Capital Corporation	PNW	$87.45	5.00%	5.46%	5.50%	5.00%	5.37%	63.00%	63.00%	65.91%	($0.00)	10.11%	26.81	5.00
PNM Resources, Inc.	PNM	$40.79	5.40%	6.45%	7.50%	5.40%	5.37%	48.00%	57.00%	65.91%	($0.00)	9.15%	26.81	5.00
Portland General Electric Company	POR	$46.08	3.70%	3.97%	6.00%	3.70%	5.37%	59.00%	57.00%	65.91%	$0.00	9.53%	26.81	5.00
Southern Company	SO	$49.11	3.80%	2.63%	3.50%	2.63%	5.37%	77.00%	76.00%	65.91%	$0.00	11.31%	26.81	5.00
WEC Energy Group, Inc.	WEC	$64.16	5.10%	5.45%	6.00%	5.10%	5.37%	67.00%	67.00%	65.91%	($0.00)	10.47%	26.81	5.00
Xcel Energy Inc.	XEL	$48.04	5.50%	NA	4.50%	4.50%	5.37%	62.00%	66.00%	65.91%	$0.00	10.02%	26.81	5.00

DCF Result	
Mean	9.89%
Max	11.67%
Min	8.67%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.30	$3.46	$3.63	$3.82	$4.01	$4.21	$4.43	$4.66	$4.90	$5.16	$5.44	$5.73	$6.04
Alliant Energy Corporation	LNT	$1.65	$1.75	$1.85	$1.97	$2.08	$2.21	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.23	$3.41
Ameren Corporation	AEE	$2.68	$2.84	$3.01	$3.19	$3.38	$3.59	$3.80	$4.02	$4.25	$4.48	$4.73	$4.98	$5.25	$5.53
American Electric Power Company, Inc.	AEP	$4.23	$4.35	$4.47	$4.59	$4.72	$4.85	$5.00	$5.19	$5.40	$5.64	$5.92	$6.24	$6.57	$6.92
Black Hills Corporation	BKH	$2.63	$2.78	$2.93	$3.10	$3.27	$3.45	$3.65	$3.85	$4.06	$4.28	$4.51	$4.75	$5.01	$5.28
CMS Energy Corporation	CMS	$1.98	$2.11	$2.25	$2.39	$2.55	$2.71	$2.88	$3.06	$3.24	$3.43	$3.62	$3.81	$4.02	$4.23
Dominion Resources, Inc.	D	$3.44	$3.58	$3.72	$3.87	$4.02	$4.19	$4.36	$4.56	$4.77	$5.00	$5.26	$5.54	$5.84	$6.15
DTE Energy Company	DTE	$4.83	$5.07	$5.32	$5.58	$5.85	$6.14	$6.44	$6.77	$7.12	$7.49	$7.89	$8.31	$8.75	$9.22
Duke Energy Corporation	DUK	$3.71	$3.83	$3.95	$4.08	$4.21	$4.35	$4.51	$4.69	$4.89	$5.11	$5.37	$5.66	$5.96	$6.28
IDACORP, Inc.	IDA	$3.94	$4.08	$4.22	$4.37	$4.52	$4.68	$4.86	$5.06	$5.28	$5.53	$5.81	$6.12	$6.45	$6.80
NorthWestern Corporation	NWE	$3.39	$3.44	$3.49	$3.54	$3.60	$3.65	$3.73	$3.83	$3.97	$4.13	$4.32	$4.55	$4.80	$5.06
OGE Energy Corp.	OGE	$1.69	$1.77	$1.86	$1.95	$2.05	$2.15	$2.25	$2.37	$2.49	$2.62	$2.76	$2.91	$3.06	$3.23
Otter Tail Corporation	OTTR	$1.60	$1.68	$1.77	$1.86	$1.96	$2.06	$2.17	$2.28	$2.40	$2.53	$2.67	$2.81	$2.96	$3.12
Pinnacle West Capital Corporation	PNW	$3.95	$4.15	$4.35	$4.57	$4.80	$5.04	$5.30	$5.57	$5.86	$6.16	$6.49	$6.84	$7.21	$7.59
PNM Resources, Inc.	PNM	$1.65	$1.74	$1.83	$1.93	$2.04	$2.15	$2.26	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.26
Portland General Electric Company	POR	$2.16	$2.24	$2.32	$2.41	$2.50	$2.59	$2.69	$2.81	$2.94	$3.08	$3.23	$3.41	$3.59	$3.78
Southern Company	SO	$2.83	$2.90	$2.98	$3.06	$3.14	$3.22	$3.32	$3.44	$3.58	$3.74	$3.92	$4.13	$4.35	$4.59
WEC Energy Group, Inc.	WEC	$2.96	$3.11	$3.27	$3.44	$3.61	$3.80	$3.99	$4.20	$4.42	$4.65	$4.90	$5.16	$5.44	$5.73
Xcel Energy Inc.	XEL	$2.21	$2.31	$2.41	$2.52	$2.64	$2.75	$2.88	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89	$4.10

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 126 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.11	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78	$3.98
Alliant Energy Corporation	LNT	$1.10	$1.17	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13	$2.24
Ameren Corporation	AEE	$1.82	$1.90	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46	$3.65
American Electric Power Company, Inc.	AEP	$2.96	$2.98	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33	$4.56
Black Hills Corporation	BKH	$1.42	$1.50	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30	$3.48
CMS Energy Corporation	CMS	$1.29	$1.37	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65	$2.79
Dominion Resources, Inc.	D	$3.04	$3.19	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85	$4.06
DTE Energy Company	DTE	$2.94	$3.16	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77	$6.08
Duke Energy Corporation	DUK	$2.91	$3.03	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93	$4.14
IDACORP, Inc.	IDA	$2.20	$2.35	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25	$4.48
NorthWestern Corporation	NWE	$2.13	$2.17	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16	$3.33
OGE Energy Corp.	OGE	$1.15	$1.24	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02	$2.13
Otter Tail Corporation	OTTR	$1.25	$1.25	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95	$2.06
Pinnacle West Capital Corporation	PNW	$2.61	$2.74	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75	$5.00
PNM Resources, Inc.	PNM	$0.83	$0.92	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04	$2.15
Portland General Electric Company	POR	$1.32	$1.36	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37	$2.49
Southern Company	SO	$2.24	$2.29	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87	$3.02
WEC Energy Group, Inc.	WEC	$2.08	$2.19	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58	$3.78
Xcel Energy Inc.	XEL	$1.43	$1.52	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56	$2.70

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 127 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($75.64)	$0.00	$0.35	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78
Alliant Energy Corporation	LNT	($41.87)	$0.00	$0.18	$1.13	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13
Ameren Corporation	AEE	($58.31)	$0.00	$0.30	$1.87	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46
American Electric Power Company, Inc.	AEP	($68.86)	$0.00	$0.49	$3.00	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33
Black Hills Corporation	BKH	($68.86)	$0.00	$0.24	$1.46	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30
CMS Energy Corporation	CMS	($47.23)	$0.00	$0.21	$1.33	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65
Dominion Resources, Inc.	D	($78.00)	$0.00	$0.51	$3.10	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85
DTE Energy Company	DTE	($109.02)	$0.00	$0.49	$3.01	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77
Duke Energy Corporation	DUK	($85.82)	$0.00	$0.49	$2.96	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93
IDACORP, Inc.	IDA	($88.14)	$0.00	$0.37	$2.24	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25
NorthWestern Corporation	NWE	($59.45)	$0.00	$0.36	$2.15	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16
OGE Energy Corp.	OGE	($35.87)	$0.00	$0.19	$1.18	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02
Otter Tail Corporation	OTTR	($42.31)	$0.00	$0.21	$1.28	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95
Pinnacle West Capital Corporation	PNW	($87.45)	$0.00	$0.44	$2.68	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75
PNM Resources, Inc.	PNM	($40.79)	$0.00	$0.14	$0.86	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04
Portland General Electric Company	POR	($46.08)	$0.00	$0.22	$1.35	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37
Southern Company	SO	($49.11)	$0.00	$0.37	$2.27	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87
WEC Energy Group, Inc.	WEC	($64.16)	$0.00	$0.35	$2.14	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58
Xcel Energy Inc.	XEL	($48.04)	$0.00	$0.24	$1.46	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 128 of 182

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio of 26.81
180 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.53	6.10%	5.00%	6.00%	5.70%	5.37%	64.00%	58.00%	65.91%	($0.00)	10.07%	26.81	5.00
Alliant Energy Corporation	LNT	$40.93	6.20%	7.50%	6.00%	6.57%	5.37%	63.00%	63.00%	65.91%	$0.00	10.01%	26.81	5.00
Ameren Corporation	AEE	$56.76	6.70%	7.00%	6.00%	6.57%	5.37%	64.00%	60.00%	65.91%	($0.00)	11.42%	26.81	5.00
American Electric Power Company, Inc.	AEP	$68.15	4.80%	2.77%	4.00%	3.86%	5.37%	68.00%	63.00%	65.91%	($0.00)	12.46%	26.81	5.00
Black Hills Corporation	BKH	$68.15	5.60%	6.64%	7.50%	6.58%	5.37%	51.00%	51.00%	65.91%	($0.00)	9.36%	26.81	5.00
CMS Energy Corporation	CMS	$46.38	6.50%	7.58%	6.50%	6.86%	5.37%	61.00%	61.00%	65.91%	$0.00	10.66%	26.81	5.00
Dominion Resources, Inc.	D	$77.96	5.40%	4.00%	5.50%	4.97%	5.37%	85.00%	88.00%	65.91%	($0.00)	10.47%	26.81	5.00
DTE Energy Company	DTE	$106.70	6.00%	4.91%	6.00%	5.64%	5.37%	58.00%	64.00%	65.91%	($0.00)	10.49%	26.81	5.00
Duke Energy Corporation	DUK	$84.43	4.00%	3.24%	4.50%	3.91%	5.37%	76.00%	79.00%	65.91%	($0.00)	9.56%	26.81	5.00
IDACORP, Inc.	IDA	$86.24	4.50%	4.00%	3.50%	4.00%	5.37%	54.00%	61.00%	65.91%	($0.00)	9.51%	26.81	5.00
NorthWestern Corporation	NWE	$59.66	1.50%	2.57%	4.50%	2.86%	5.37%	62.00%	62.00%	65.91%	($0.00)	10.90%	26.81	5.00
OGE Energy Corp.	OGE	$35.58	4.90%	8.60%	6.00%	6.50%	5.37%	65.00%	72.00%	65.91%	$0.00	11.67%	26.81	5.00
Otter Tail Corporation	OTTR	$40.44	NA	5.20%	6.50%	5.85%	5.37%	74.00%	61.00%	65.91%	$0.00	9.46%	26.81	5.00
Pinnacle West Capital Corporation	PNW	$86.07	5.00%	5.46%	5.50%	5.32%	5.37%	63.00%	63.00%	65.91%	($0.00)	10.45%	26.81	5.00
PNM Resources, Inc.	PNM	$39.09	5.40%	6.45%	7.50%	6.45%	5.37%	48.00%	57.00%	65.91%	($0.00)	10.15%	26.81	5.00
Portland General Electric Company	POR	$45.80	3.70%	3.97%	6.00%	4.56%	5.37%	59.00%	57.00%	65.91%	$0.00	10.10%	26.81	5.00
Southern Company	SO	$49.61	3.80%	2.63%	3.50%	3.31%	5.37%	77.00%	76.00%	65.91%	($0.00)	11.64%	26.81	5.00
WEC Energy Group, Inc.	WEC	$62.56	5.10%	5.45%	6.00%	5.52%	5.37%	67.00%	67.00%	65.91%	($0.00)	10.96%	26.81	5.00
Xcel Energy Inc.	XEL	$46.59	5.50%	NA	4.50%	5.00%	5.37%	62.00%	66.00%	65.91%	$0.00	10.61%	26.81	5.00

DCF Result	
Mean	10.52%
Max	12.46%
Min	9.36%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.32	$3.51	$3.71	$3.92	$4.14	$4.38	$4.62	$4.88	$5.14	$5.42	$5.71	$6.02	$6.34
Alliant Energy Corporation	LNT	$1.65	$1.76	$1.87	$2.00	$2.13	$2.27	$2.41	$2.56	$2.71	$2.87	$3.03	$3.19	$3.36	$3.54
Ameren Corporation	AEE	$2.68	$2.86	$3.04	$3.24	$3.46	$3.68	$3.92	$4.16	$4.41	$4.66	$4.92	$5.19	$5.46	$5.76
American Electric Power Company, Inc.	AEP	$4.23	$4.39	$4.56	$4.74	$4.92	$5.11	$5.32	$5.55	$5.81	$6.09	$6.40	$6.75	$7.11	$7.49
Black Hills Corporation	BKH	$2.63	$2.80	$2.99	$3.18	$3.39	$3.62	$3.85	$4.09	$4.33	$4.58	$4.83	$5.09	$5.37	$5.65
CMS Energy Corporation	CMS	$1.98	$2.12	$2.26	$2.42	$2.58	$2.76	$2.94	$3.13	$3.32	$3.51	$3.71	$3.91	$4.12	$4.34
Dominion Resources, Inc.	D	$3.44	$3.61	$3.79	$3.98	$4.18	$4.38	$4.60	$4.84	$5.09	$5.36	$5.64	$5.94	$6.26	$6.60
DTE Energy Company	DTE	$4.83	$5.10	$5.39	$5.69	$6.01	$6.35	$6.71	$7.08	$7.47	$7.88	$8.30	$8.75	$9.22	$9.71
Duke Energy Corporation	DUK	$3.71	$3.86	$4.01	$4.16	$4.33	$4.50	$4.68	$4.89	$5.11	$5.36	$5.64	$5.94	$6.26	$6.60
IDACORP, Inc.	IDA	$3.94	$4.10	$4.26	$4.43	$4.61	$4.79	$5.00	$5.22	$5.46	$5.73	$6.03	$6.35	$6.69	$7.05
NorthWestern Corporation	NWE	$3.39	$3.49	$3.59	$3.69	$3.79	$3.90	$4.03	$4.18	$4.35	$4.55	$4.77	$5.03	$5.30	$5.58
OGE Energy Corp.	OGE	$1.69	$1.80	$1.92	$2.04	$2.17	$2.32	$2.46	$2.61	$2.77	$2.93	$3.09	$3.25	$3.43	$3.61
Otter Tail Corporation	OTTR	$1.60	$1.69	$1.79	$1.90	$2.01	$2.13	$2.25	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.27
Pinnacle West Capital Corporation	PNW	$3.95	$4.16	$4.38	$4.61	$4.86	$5.12	$5.39	$5.68	$5.98	$6.30	$6.64	$7.00	$7.37	$7.77
PNM Resources, Inc.	PNM	$1.65	$1.76	$1.87	$1.99	$2.12	$2.26	$2.40	$2.54	$2.69	$2.85	$3.01	$3.17	$3.34	$3.52
Portland General Electric Company	POR	$2.16	$2.26	$2.36	$2.47	$2.58	$2.70	$2.83	$2.96	$3.11	$3.27	$3.44	$3.62	$3.82	$4.02
Southern Company	SO	$2.83	$2.92	$3.02	$3.12	$3.22	$3.33	$3.45	$3.59	$3.75	$3.92	$4.12	$4.34	$4.57	$4.82
WEC Energy Group, Inc.	WEC	$2.96	$3.12	$3.30	$3.48	$3.67	$3.87	$4.08	$4.31	$4.54	$4.79	$5.05	$5.32	$5.60	$5.90
Xcel Energy Inc.	XEL	$2.21	$2.32	$2.44	$2.56	$2.69	$2.82	$2.96	$3.12	$3.28	$3.45	$3.63	$3.83	$4.03	$4.25

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 129 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.12	$2.19	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97	$4.18
Alliant Energy Corporation	LNT	$1.11	$1.18	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22	$2.34
Ameren Corporation	AEE	$1.83	$1.92	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60	$3.79
American Electric Power Company, Inc.	AEP	$2.99	$3.05	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69	$4.94
Black Hills Corporation	BKH	$1.43	$1.52	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54	$3.73
CMS Energy Corporation	CMS	$1.29	$1.38	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72	$2.86
Dominion Resources, Inc.	D	$3.07	$3.25	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13	$4.35
DTE Energy Company	DTE	$2.96	$3.21	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08	$6.40
Duke Energy Corporation	DUK	$2.93	$3.07	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13	$4.35
IDACORP, Inc.	IDA	$2.21	$2.38	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41	$4.65
NorthWestern Corporation	NWE	$2.16	$2.22	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49	$3.68
OGE Energy Corp.	OGE	$1.17	$1.28	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26	$2.38
Otter Tail Corporation	OTTR	$1.25	$1.27	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04	$2.15
Pinnacle West Capital Corporation	PNW	$2.62	$2.76	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86	$5.12
PNM Resources, Inc.	PNM	$0.84	$0.94	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20	$2.32
Portland General Electric Company	POR	$1.33	$1.38	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52	$2.65
Southern Company	SO	$2.25	$2.32	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01	$3.17
WEC Energy Group, Inc.	WEC	$2.09	$2.21	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89
Xcel Energy Inc.	XEL	$1.44	$1.54	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66	$2.80

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 130 of 182

Projected Annual Data

Investor Cash Flows		[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]
Company	Ticker	Initial Outflow	10/31/17	12/31/17	6/30/18	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28
ALLETE, Inc.	ALE	($72.53)	$0.00	$0.35	$2.18	$2.26	$2.33	$2.40	$2.60	$2.80	$3.02	$3.25	$3.50	$3.77	$3.97
Alliant Energy Corporation	LNT	($40.93)	$0.00	$0.19	$1.14	$1.26	$1.34	$1.43	$1.53	$1.64	$1.75	$1.86	$1.98	$2.10	$2.22
Ameren Corporation	AEE	($56.76)	$0.00	$0.31	$1.89	$2.01	$2.11	$2.21	$2.39	$2.58	$2.77	$2.98	$3.20	$3.42	$3.60
American Electric Power Company, Inc.	AEP	($68.15)	$0.00	$0.50	$3.04	$3.10	$3.16	$3.22	$3.38	$3.55	$3.74	$3.96	$4.19	$4.45	$4.69
Black Hills Corporation	BKH	($68.15)	$0.00	$0.24	$1.48	$1.62	$1.73	$1.84	$2.06	$2.29	$2.53	$2.79	$3.07	$3.36	$3.54
CMS Energy Corporation	CMS	($46.38)	$0.00	$0.22	$1.33	$1.47	$1.57	$1.68	$1.82	$1.96	$2.11	$2.26	$2.42	$2.58	$2.72
Dominion Resources, Inc.	D	($77.96)	$0.00	$0.51	$3.15	$3.44	$3.64	$3.86	$3.88	$3.90	$3.92	$3.92	$3.92	$3.92	$4.13
DTE Energy Company	DTE	($106.70)	$0.00	$0.49	$3.04	$3.47	$3.76	$4.07	$4.31	$4.58	$4.85	$5.14	$5.45	$5.77	$6.08
Duke Energy Corporation	DUK	($84.43)	$0.00	$0.49	$2.99	$3.23	$3.38	$3.55	$3.60	$3.65	$3.71	$3.77	$3.84	$3.92	$4.13
IDACORP, Inc.	IDA	($86.24)	$0.00	$0.37	$2.26	$2.55	$2.73	$2.92	$3.09	$3.27	$3.47	$3.68	$3.92	$4.18	$4.41
NorthWestern Corporation	NWE	($59.66)	$0.00	$0.36	$2.19	$2.29	$2.35	$2.42	$2.53	$2.65	$2.78	$2.94	$3.11	$3.31	$3.49
OGE Energy Corp.	OGE	($35.58)	$0.00	$0.20	$1.21	$1.40	$1.53	$1.67	$1.75	$1.83	$1.91	$1.99	$2.07	$2.14	$2.26
Otter Tail Corporation	OTTR	($40.44)	$0.00	$0.21	$1.29	$1.28	$1.29	$1.30	$1.39	$1.49	$1.59	$1.70	$1.82	$1.94	$2.04
Pinnacle West Capital Corporation	PNW	($86.07)	$0.00	$0.44	$2.69	$2.91	$3.06	$3.22	$3.42	$3.63	$3.86	$4.09	$4.34	$4.61	$4.86
PNM Resources, Inc.	PNM	($39.09)	$0.00	$0.14	$0.87	$1.04	$1.16	$1.29	$1.40	$1.52	$1.65	$1.79	$1.94	$2.09	$2.20
Portland General Electric Company	POR	($45.80)	$0.00	$0.22	$1.36	$1.43	$1.48	$1.54	$1.65	$1.78	$1.91	$2.06	$2.22	$2.39	$2.52
Southern Company	SO	($49.61)	$0.00	$0.38	$2.29	$2.39	$2.46	$2.53	$2.57	$2.61	$2.66	$2.72	$2.78	$2.86	$3.01
WEC Energy Group, Inc.	WEC	($62.56)	$0.00	$0.35	$2.15	$2.33	$2.46	$2.59	$2.73	$2.87	$3.02	$3.17	$3.33	$3.50	$3.69
Xcel Energy Inc.	XEL	($46.59)	$0.00	$0.24	$1.47	$1.64	$1.75	$1.86	$1.96	$2.06	$2.16	$2.27	$2.39	$2.52	$2.66

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 131 of 182

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio of 26.81
180 Day Average Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	High Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.53	6.10%	5.00%	6.00%	6.10%	5.37%	64.00%	58.00%	65.91%	($0.00)	10.31%	26.81	5.00
Alliant Energy Corporation	LNT	$40.93	6.20%	7.50%	6.00%	7.50%	5.37%	63.00%	63.00%	65.91%	$0.00	10.57%	26.81	5.00
Ameren Corporation	AEE	$56.76	6.70%	7.00%	6.00%	7.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	11.69%	26.81	5.00
American Electric Power Company, Inc.	AEP	$68.15	4.80%	2.77%	4.00%	4.80%	5.37%	68.00%	63.00%	65.91%	($0.00)	13.06%	26.81	5.00
Black Hills Corporation	BKH	$68.15	5.60%	6.64%	7.50%	7.50%	5.37%	51.00%	51.00%	65.91%	($0.00)	9.89%	26.81	5.00
CMS Energy Corporation	CMS	$46.38	6.50%	7.58%	6.50%	7.58%	5.37%	61.00%	61.00%	65.91%	$0.00	11.09%	26.81	5.00
Dominion Resources, Inc.	D	$77.96	5.40%	4.00%	5.50%	5.50%	5.37%	85.00%	88.00%	65.91%	($0.00)	10.81%	26.81	5.00
DTE Energy Company	DTE	$106.70	6.00%	4.91%	6.00%	6.00%	5.37%	58.00%	64.00%	65.91%	($0.00)	10.71%	26.81	5.00
Duke Energy Corporation	DUK	$84.43	4.00%	3.24%	4.50%	4.50%	5.37%	76.00%	79.00%	65.91%	($0.00)	9.92%	26.81	5.00
IDACORP, Inc.	IDA	$86.24	4.50%	4.00%	3.50%	4.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	9.81%	26.81	5.00
NorthWestern Corporation	NWE	$59.66	1.50%	2.57%	4.50%	4.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	11.92%	26.81	5.00
OGE Energy Corp.	OGE	$35.58	4.90%	8.60%	6.00%	8.60%	5.37%	65.00%	72.00%	65.91%	$0.00	12.97%	26.81	5.00
Otter Tail Corporation	OTTR	$40.44	NA	5.20%	6.50%	6.50%	5.37%	74.00%	61.00%	65.91%	$0.00	9.85%	26.81	5.00
Pinnacle West Capital Corporation	PNW	$86.07	5.00%	5.46%	5.50%	5.50%	5.37%	63.00%	63.00%	65.91%	($0.00)	10.56%	26.81	5.00
PNM Resources, Inc.	PNM	$39.09	5.40%	6.45%	7.50%	7.50%	5.37%	48.00%	57.00%	65.91%	($0.00)	10.77%	26.81	5.00
Portland General Electric Company	POR	$45.80	3.70%	3.97%	6.00%	6.00%	5.37%	59.00%	57.00%	65.91%	$0.00	10.97%	26.81	5.00
Southern Company	SO	$49.61	3.80%	2.63%	3.50%	3.80%	5.37%	77.00%	76.00%	65.91%	($0.00)	11.96%	26.81	5.00
WEC Energy Group, Inc.	WEC	$62.56	5.10%	5.45%	6.00%	6.00%	5.37%	67.00%	67.00%	65.91%	($0.00)	11.25%	26.81	5.00
Xcel Energy Inc.	XEL	$46.59	5.50%	NA	4.50%	5.50%	5.37%	62.00%	66.00%	65.91%	$0.00	10.91%	26.81	5.00

DCF Result	
Mean	11.00%
Max	13.06%
Min	9.81%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.33	$3.53	$3.75	$3.98	$4.22	$4.47	$4.74	$5.01	$5.29	$5.58	$5.88	$6.19	$6.53
Alliant Energy Corporation	LNT	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Ameren Corporation	AEE	$2.68	$2.87	$3.07	$3.28	$3.51	$3.76	$4.01	$4.27	$4.53	$4.80	$5.07	$5.35	$5.63	$5.94
American Electric Power Company, Inc.	AEP	$4.23	$4.43	$4.65	$4.87	$5.10	$5.35	$5.61	$5.89	$6.19	$6.51	$6.85	$7.22	$7.61	$8.02
Black Hills Corporation	BKH	$2.63	$2.83	$3.04	$3.27	$3.51	$3.78	$4.05	$4.32	$4.60	$4.88	$5.16	$5.43	$5.73	$6.03
CMS Energy Corporation	CMS	$1.98	$2.13	$2.29	$2.47	$2.65	$2.85	$3.06	$3.27	$3.48	$3.69	$3.90	$4.11	$4.33	$4.57
Dominion Resources, Inc.	D	$3.44	$3.63	$3.83	$4.04	$4.26	$4.50	$4.74	$5.00	$5.27	$5.56	$5.86	$6.17	$6.50	$6.85
DTE Energy Company	DTE	$4.83	$5.12	$5.43	$5.75	$6.10	$6.46	$6.84	$7.24	$7.65	$8.08	$8.52	$8.98	$9.46	$9.97
Duke Energy Corporation	DUK	$3.71	$3.88	$4.05	$4.23	$4.42	$4.62	$4.84	$5.07	$5.32	$5.59	$5.88	$6.20	$6.53	$6.88
IDACORP, Inc.	IDA	$3.94	$4.12	$4.30	$4.50	$4.70	$4.91	$5.14	$5.38	$5.65	$5.94	$6.25	$6.58	$6.94	$7.31
NorthWestern Corporation	NWE	$3.39	$3.54	$3.70	$3.87	$4.04	$4.22	$4.42	$4.63	$4.86	$5.11	$5.37	$5.66	$5.97	$6.29
OGE Energy Corp.	OGE	$1.69	$1.84	$1.99	$2.16	$2.35	$2.55	$2.76	$2.97	$3.17	$3.38	$3.58	$3.77	$3.97	$4.18
Otter Tail Corporation	OTTR	$1.60	$1.70	$1.81	$1.93	$2.06	$2.19	$2.33	$2.47	$2.62	$2.77	$2.92	$3.08	$3.25	$3.42
Pinnacle West Capital Corporation	PNW	$3.95	$4.17	$4.40	$4.64	$4.89	$5.16	$5.45	$5.74	$6.05	$6.38	$6.73	$7.09	$7.47	$7.87
PNM Resources, Inc.	PNM	$1.65	$1.77	$1.91	$2.05	$2.20	$2.37	$2.54	$2.71	$2.88	$3.06	$3.24	$3.41	$3.59	$3.78
Portland General Electric Company	POR	$2.16	$2.29	$2.43	$2.57	$2.73	$2.89	$3.06	$3.24	$3.42	$3.61	$3.81	$4.02	$4.23	$4.46
Southern Company	SO	$2.83	$2.94	$3.05	$3.17	$3.29	$3.41	$3.55	$3.70	$3.87	$4.06	$4.27	$4.50	$4.74	$4.99
WEC Energy Group, Inc.	WEC	$2.96	$3.14	$3.33	$3.53	$3.74	$3.96	$4.19	$4.44	$4.69	$4.95	$5.22	$5.50	$5.80	$6.11
Xcel Energy Inc.	XEL	$2.21	$2.33	$2.46	$2.60	$2.74	$2.89	$3.05	$3.21	$3.39	$3.57	$3.76	$3.97	$4.18	$4.40

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 132 of 182

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual Cash Flows		[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ALLETE, Inc.	ALE	$2.13	$2.21	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08	$4.30
Alliant Energy Corporation	LNT	$1.12	$1.20	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37	$2.49
Ameren Corporation	AEE	$1.84	$1.93	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71	$3.91
American Electric Power Company, Inc.	AEP	$3.01	$3.10	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01	$5.28
Black Hills Corporation	BKH	$1.44	$1.55	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77	$3.98
CMS Energy Corporation	CMS	$1.30	$1.40	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86	$3.01
Dominion Resources, Inc.	D	$3.08	$3.28	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29	$4.52
DTE Energy Company	DTE	$2.97	$3.23	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24	$6.57
Duke Energy Corporation	DUK	$2.95	$3.11	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30	$4.53
IDACORP, Inc.	IDA	$2.22	$2.40	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57	$4.82
NorthWestern Corporation	NWE	$2.20	$2.30	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93	$4.14
OGE Energy Corp.	OGE	$1.19	$1.33	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62	$2.76
Otter Tail Corporation	OTTR	$1.26	$1.28	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14	$2.25
Pinnacle West Capital Corporation	PNW	$2.63	$2.77	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92	$5.19
PNM Resources, Inc.	PNM	$0.85	$0.96	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37	$2.49
Portland General Electric Company	POR	$1.35	$1.42	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79	$2.94
Southern Company	SO	$2.26	$2.34	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12	$3.29
WEC Energy Group, Inc.	WEC	$2.10	$2.23	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82	$4.03
Xcel Energy Inc.	XEL	$1.45	$1.55	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75	$2.90

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 133 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($72.53)	$0.00	$0.36	$2.20	$2.29	$2.37	$2.45	$2.65	$2.87	$3.10	$3.35	$3.60	$3.87	$4.08
Alliant Energy Corporation	LNT	($40.93)	$0.00	$0.19	$1.16	$1.29	$1.39	$1.49	$1.61	$1.73	$1.86	$1.99	$2.12	$2.25	$2.37
Ameren Corporation	AEE	($56.76)	$0.00	$0.31	$1.90	$2.04	$2.14	$2.26	$2.45	$2.65	$2.85	$3.07	$3.29	$3.52	$3.71
American Electric Power Company, Inc.	AEP	($68.15)	$0.00	$0.50	$3.09	$3.19	$3.28	$3.37	$3.56	$3.77	$3.99	$4.23	$4.48	$4.76	$5.01
Black Hills Corporation	BKH	($68.15)	$0.00	$0.24	$1.50	$1.67	$1.79	$1.93	$2.16	$2.42	$2.69	$2.97	$3.27	$3.58	$3.77
CMS Energy Corporation	CMS	($46.38)	$0.00	$0.22	$1.35	$1.50	$1.62	$1.74	$1.89	$2.05	$2.21	$2.37	$2.54	$2.71	$2.86
Dominion Resources, Inc.	D	($77.96)	$0.00	$0.52	$3.17	$3.49	$3.72	$3.96	$4.00	$4.03	$4.06	$4.07	$4.08	$4.07	$4.29
DTE Energy Company	DTE	($106.70)	$0.00	$0.50	$3.06	$3.51	$3.81	$4.14	$4.40	$4.68	$4.97	$5.27	$5.59	$5.92	$6.24
Duke Energy Corporation	DUK	($84.43)	$0.00	$0.49	$3.01	$3.28	$3.46	$3.65	$3.72	$3.78	$3.85	$3.93	$4.00	$4.08	$4.30
IDACORP, Inc.	IDA	($86.24)	$0.00	$0.37	$2.27	$2.59	$2.78	$3.00	$3.18	$3.37	$3.58	$3.82	$4.07	$4.34	$4.57
NorthWestern Corporation	NWE	($59.66)	$0.00	$0.37	$2.25	$2.40	$2.51	$2.62	$2.77	$2.93	$3.11	$3.30	$3.51	$3.73	$3.93
OGE Energy Corp.	OGE	($35.58)	$0.00	$0.20	$1.24	$1.48	$1.65	$1.84	$1.96	$2.08	$2.19	$2.29	$2.39	$2.48	$2.62
Otter Tail Corporation	OTTR	($40.44)	$0.00	$0.21	$1.30	$1.30	$1.32	$1.34	$1.44	$1.55	$1.66	$1.78	$1.90	$2.03	$2.14
Pinnacle West Capital Corporation	PNW	($86.07)	$0.00	$0.44	$2.70	$2.92	$3.08	$3.25	$3.46	$3.67	$3.90	$4.14	$4.40	$4.67	$4.92
PNM Resources, Inc.	PNM	($39.09)	$0.00	$0.14	$0.88	$1.08	$1.21	$1.35	$1.48	$1.63	$1.77	$1.93	$2.08	$2.25	$2.37
Portland General Electric Company	POR	($45.80)	$0.00	$0.23	$1.39	$1.49	$1.57	$1.65	$1.79	$1.94	$2.10	$2.27	$2.45	$2.65	$2.79
Southern Company	SO	($49.61)	$0.00	$0.38	$2.30	$2.42	$2.51	$2.59	$2.64	$2.69	$2.75	$2.81	$2.88	$2.96	$3.12
WEC Energy Group, Inc.	WEC	($62.56)	$0.00	$0.35	$2.17	$2.36	$2.50	$2.65	$2.80	$2.96	$3.12	$3.28	$3.45	$3.63	$3.82
Xcel Energy Inc.	XEL	($46.59)	$0.00	$0.24	$1.49	$1.66	$1.78	$1.91	$2.01	$2.12	$2.23	$2.35	$2.48	$2.61	$2.75

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 134 of 182

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio of 26.81
180 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Low Growth	Growth	2017	2021	2027	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$72.53	6.10%	5.00%	6.00%	5.00%	5.37%	64.00%	58.00%	65.91%	($0.00)	9.65%	26.81	5.00
Alliant Energy Corporation	LNT	$40.93	6.20%	7.50%	6.00%	6.00%	5.37%	63.00%	63.00%	65.91%	$0.00	9.68%	26.81	5.00
Ameren Corporation	AEE	$56.76	6.70%	7.00%	6.00%	6.00%	5.37%	64.00%	60.00%	65.91%	($0.00)	11.08%	26.81	5.00
American Electric Power Company, Inc.	AEP	$68.15	4.80%	2.77%	4.00%	2.77%	5.37%	68.00%	63.00%	65.91%	($0.00)	11.77%	26.81	5.00
Black Hills Corporation	BKH	$68.15	5.60%	6.64%	7.50%	5.60%	5.37%	51.00%	51.00%	65.91%	($0.00)	8.79%	26.81	5.00
CMS Energy Corporation	CMS	$46.38	6.50%	7.58%	6.50%	6.50%	5.37%	61.00%	61.00%	65.91%	$0.00	10.44%	26.81	5.00
Dominion Resources, Inc.	D	$77.96	5.40%	4.00%	5.50%	4.00%	5.37%	85.00%	88.00%	65.91%	($0.00)	9.87%	26.81	5.00
DTE Energy Company	DTE	$106.70	6.00%	4.91%	6.00%	4.91%	5.37%	58.00%	64.00%	65.91%	($0.00)	10.05%	26.81	5.00
Duke Energy Corporation	DUK	$84.43	4.00%	3.24%	4.50%	3.24%	5.37%	76.00%	79.00%	65.91%	($0.00)	9.15%	26.81	5.00
IDACORP, Inc.	IDA	$86.24	4.50%	4.00%	3.50%	3.50%	5.37%	54.00%	61.00%	65.91%	($0.00)	9.20%	26.81	5.00
NorthWestern Corporation	NWE	$59.66	1.50%	2.57%	4.50%	1.50%	5.37%	62.00%	62.00%	65.91%	($0.00)	10.05%	26.81	5.00
OGE Energy Corp.	OGE	$35.58	4.90%	8.60%	6.00%	4.90%	5.37%	65.00%	72.00%	65.91%	$0.00	10.69%	26.81	5.00
Otter Tail Corporation	OTTR	$40.44	NA	5.20%	6.50%	5.20%	5.37%	74.00%	61.00%	65.91%	$0.00	9.08%	26.81	5.00
Pinnacle West Capital Corporation	PNW	$86.07	5.00%	5.46%	5.50%	5.00%	5.37%	63.00%	63.00%	65.91%	($0.00)	10.26%	26.81	5.00
PNM Resources, Inc.	PNM	$39.09	5.40%	6.45%	7.50%	5.40%	5.37%	48.00%	57.00%	65.91%	($0.00)	9.53%	26.81	5.00
Portland General Electric Company	POR	$45.80	3.70%	3.97%	6.00%	3.70%	5.37%	59.00%	57.00%	65.91%	$0.00	9.58%	26.81	5.00
Southern Company	SO	$49.61	3.80%	2.63%	3.50%	2.63%	5.37%	77.00%	76.00%	65.91%	$0.00	11.21%	26.81	5.00
WEC Energy Group, Inc.	WEC	$62.56	5.10%	5.45%	6.00%	5.10%	5.37%	67.00%	67.00%	65.91%	($0.00)	10.70%	26.81	5.00
Xcel Energy Inc.	XEL	$46.59	5.50%	NA	4.50%	4.50%	5.37%	62.00%	66.00%	65.91%	$0.00	10.30%	26.81	5.00

DCF Result	
Mean	10.06%
Max	11.77%
Min	8.79%

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]
Company	Ticker	2016	2017	2018	2019	2020	2021	**2022**	2023	2024	2025	2026	**2027**	2028	2029
ALLETE, Inc.	ALE	$3.14	$3.30	$3.46	$3.63	$3.82	$4.01	$4.21	$4.43	$4.66	$4.90	$5.16	$5.44	$5.73	$6.04
Alliant Energy Corporation	LNT	$1.65	$1.75	$1.85	$1.97	$2.08	$2.21	$2.34	$2.47	$2.61	$2.76	$2.91	$3.07	$3.23	$3.41
Ameren Corporation	AEE	$2.68	$2.84	$3.01	$3.19	$3.38	$3.59	$3.80	$4.02	$4.25	$4.48	$4.73	$4.98	$5.25	$5.53
American Electric Power Company, Inc.	AEP	$4.23	$4.35	$4.47	$4.59	$4.72	$4.85	$5.00	$5.19	$5.40	$5.64	$5.92	$6.24	$6.57	$6.92
Black Hills Corporation	BKH	$2.63	$2.78	$2.93	$3.10	$3.27	$3.45	$3.65	$3.85	$4.06	$4.28	$4.51	$4.75	$5.01	$5.28
CMS Energy Corporation	CMS	$1.98	$2.11	$2.25	$2.39	$2.55	$2.71	$2.88	$3.06	$3.24	$3.43	$3.62	$3.81	$4.02	$4.23
Dominion Resources, Inc.	D	$3.44	$3.58	$3.72	$3.87	$4.02	$4.19	$4.36	$4.56	$4.77	$5.00	$5.26	$5.54	$5.84	$6.15
DTE Energy Company	DTE	$4.83	$5.07	$5.32	$5.58	$5.85	$6.14	$6.44	$6.77	$7.12	$7.49	$7.89	$8.31	$8.75	$9.22
Duke Energy Corporation	DUK	$3.71	$3.83	$3.95	$4.08	$4.21	$4.35	$4.51	$4.69	$4.89	$5.11	$5.37	$5.66	$5.96	$6.28
IDACORP, Inc.	IDA	$3.94	$4.08	$4.22	$4.37	$4.52	$4.68	$4.86	$5.06	$5.28	$5.53	$5.81	$6.12	$6.45	$6.80
NorthWestern Corporation	NWE	$3.39	$3.44	$3.49	$3.54	$3.60	$3.65	$3.73	$3.83	$3.97	$4.13	$4.32	$4.55	$4.80	$5.06
OGE Energy Corp.	OGE	$1.69	$1.77	$1.86	$1.95	$2.05	$2.15	$2.25	$2.37	$2.49	$2.62	$2.76	$2.91	$3.06	$3.23
Otter Tail Corporation	OTTR	$1.60	$1.68	$1.77	$1.86	$1.96	$2.06	$2.17	$2.28	$2.40	$2.53	$2.67	$2.81	$2.96	$3.12
Pinnacle West Capital Corporation	PNW	$3.95	$4.15	$4.35	$4.57	$4.80	$5.04	$5.30	$5.57	$5.86	$6.16	$6.49	$6.84	$7.21	$7.59
PNM Resources, Inc.	PNM	$1.65	$1.74	$1.83	$1.93	$2.04	$2.15	$2.26	$2.38	$2.51	$2.65	$2.79	$2.94	$3.10	$3.26
Portland General Electric Company	POR	$2.16	$2.24	$2.32	$2.41	$2.50	$2.59	$2.69	$2.81	$2.94	$3.08	$3.23	$3.41	$3.59	$3.78
Southern Company	SO	$2.83	$2.90	$2.98	$3.06	$3.14	$3.22	$3.32	$3.44	$3.58	$3.74	$3.92	$4.13	$4.35	$4.59
WEC Energy Group, Inc.	WEC	$2.96	$3.11	$3.27	$3.44	$3.61	$3.80	$3.99	$4.20	$4.42	$4.65	$4.90	$5.16	$5.44	$5.73
Xcel Energy Inc.	XEL	$2.21	$2.31	$2.41	$2.52	$2.64	$2.75	$2.88	$3.02	$3.17	$3.33	$3.50	$3.69	$3.89	$4.10

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 135 of 182

Projected Annual
Dividend Payout Ratio

Company	Ticker	[31] 2017	[32] 2018	[33] 2019	[34] 2020	[35] 2021	[36] 2022	[37] 2023	[38] 2024	[39] 2025	[40] 2026	[41] 2027	[42] 2028	[43] 2029
ALLETE, Inc.	ALE	64.00%	62.50%	61.00%	59.50%	58.00%	59.32%	60.64%	61.95%	63.27%	64.59%	65.91%	65.91%	65.91%
Alliant Energy Corporation	LNT	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Ameren Corporation	AEE	64.00%	63.00%	62.00%	61.00%	60.00%	60.98%	61.97%	62.95%	63.94%	64.92%	65.91%	65.91%	65.91%
American Electric Power Company, Inc.	AEP	68.00%	66.75%	65.50%	64.25%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
Black Hills Corporation	BKH	51.00%	51.00%	51.00%	51.00%	51.00%	53.48%	55.97%	58.45%	60.94%	63.42%	65.91%	65.91%	65.91%
CMS Energy Corporation	CMS	61.00%	61.00%	61.00%	61.00%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Dominion Resources, Inc.	D	85.00%	85.75%	86.50%	87.25%	88.00%	84.32%	80.64%	76.95%	73.27%	69.59%	65.91%	65.91%	65.91%
DTE Energy Company	DTE	58.00%	59.50%	61.00%	62.50%	64.00%	64.32%	64.64%	64.95%	65.27%	65.59%	65.91%	65.91%	65.91%
Duke Energy Corporation	DUK	76.00%	76.75%	77.50%	78.25%	79.00%	76.82%	74.64%	72.45%	70.27%	68.09%	65.91%	65.91%	65.91%
IDACORP, Inc.	IDA	54.00%	55.75%	57.50%	59.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
NorthWestern Corporation	NWE	62.00%	62.00%	62.00%	62.00%	62.00%	62.65%	63.30%	63.95%	64.60%	65.25%	65.91%	65.91%	65.91%
OGE Energy Corp.	OGE	65.00%	66.75%	68.50%	70.25%	72.00%	70.98%	69.97%	68.95%	67.94%	66.92%	65.91%	65.91%	65.91%
Otter Tail Corporation	OTTR	74.00%	70.75%	67.50%	64.25%	61.00%	61.82%	62.64%	63.45%	64.27%	65.09%	65.91%	65.91%	65.91%
Pinnacle West Capital Corporation	PNW	63.00%	63.00%	63.00%	63.00%	63.00%	63.48%	63.97%	64.45%	64.94%	65.42%	65.91%	65.91%	65.91%
PNM Resources, Inc.	PNM	48.00%	50.25%	52.50%	54.75%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Portland General Electric Company	POR	59.00%	58.50%	58.00%	57.50%	57.00%	58.48%	59.97%	61.45%	62.94%	64.42%	65.91%	65.91%	65.91%
Southern Company	SO	77.00%	76.75%	76.50%	76.25%	76.00%	74.32%	72.64%	70.95%	69.27%	67.59%	65.91%	65.91%	65.91%
WEC Energy Group, Inc.	WEC	67.00%	67.00%	67.00%	67.00%	67.00%	66.82%	66.64%	66.45%	66.27%	66.09%	65.91%	65.91%	65.91%
Xcel Energy Inc.	XEL	62.00%	63.00%	64.00%	65.00%	66.00%	65.98%	65.97%	65.95%	65.94%	65.92%	65.91%	65.91%	65.91%

Projected Annual
Cash Flows

Company	Ticker	[47] 2017	[48] 2018	[49] 2019	[50] 2020	[51] 2021	[52] 2022	[53] 2023	[54] 2024	[55] 2025	[56] 2026	[57] 2027	[58] 2028	[59] 2029
ALLETE, Inc.	ALE	$2.11	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78	$3.98
Alliant Energy Corporation	LNT	$1.10	$1.17	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13	$2.24
Ameren Corporation	AEE	$1.82	$1.90	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46	$3.65
American Electric Power Company, Inc.	AEP	$2.96	$2.98	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33	$4.56
Black Hills Corporation	BKH	$1.42	$1.50	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30	$3.48
CMS Energy Corporation	CMS	$1.29	$1.37	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65	$2.79
Dominion Resources, Inc.	D	$3.04	$3.19	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85	$4.06
DTE Energy Company	DTE	$2.94	$3.16	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77	$6.08
Duke Energy Corporation	DUK	$2.91	$3.03	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93	$4.14
IDACORP, Inc.	IDA	$2.20	$2.35	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25	$4.48
NorthWestern Corporation	NWE	$2.13	$2.17	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16	$3.33
OGE Energy Corp.	OGE	$1.15	$1.24	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02	$2.13
Otter Tail Corporation	OTTR	$1.25	$1.25	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95	$2.06
Pinnacle West Capital Corporation	PNW	$2.61	$2.74	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75	$5.00
PNM Resources, Inc.	PNM	$0.83	$0.92	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04	$2.15
Portland General Electric Company	POR	$1.32	$1.36	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37	$2.49
Southern Company	SO	$2.24	$2.29	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87	$3.02
WEC Energy Group, Inc.	WEC	$2.08	$2.19	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58	$3.78
Xcel Energy Inc.	XEL	$1.43	$1.52	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56	$2.70

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 136 of 182

Projected Annual Data
Investor Cash Flows

Company	Ticker	[64] Initial Outflow	[65] 10/31/17	[66] 12/31/17	[67] 6/30/18	[68] 6/30/19	[69] 6/30/20	[70] 6/30/21	[71] 6/30/22	[72] 6/30/23	[73] 6/30/24	[74] 6/30/25	[75] 6/30/26	[76] 6/30/27	[77] 6/30/28
ALLETE, Inc.	ALE	($72.53)	$0.00	$0.35	$2.16	$2.22	$2.27	$2.32	$2.50	$2.68	$2.88	$3.10	$3.33	$3.58	$3.78
Alliant Energy Corporation	LNT	($40.93)	$0.00	$0.18	$1.13	$1.24	$1.31	$1.39	$1.48	$1.58	$1.68	$1.79	$1.90	$2.02	$2.13
Ameren Corporation	AEE	($56.76)	$0.00	$0.30	$1.87	$1.98	$2.06	$2.15	$2.32	$2.49	$2.67	$2.87	$3.07	$3.28	$3.46
American Electric Power Company, Inc.	AEP	($68.15)	$0.00	$0.49	$3.00	$3.01	$3.03	$3.06	$3.18	$3.32	$3.48	$3.66	$3.87	$4.11	$4.33
Black Hills Corporation	BKH	($68.15)	$0.00	$0.24	$1.46	$1.58	$1.67	$1.76	$1.95	$2.15	$2.37	$2.61	$2.86	$3.13	$3.30
CMS Energy Corporation	CMS	($46.38)	$0.00	$0.21	$1.33	$1.46	$1.55	$1.65	$1.78	$1.92	$2.06	$2.20	$2.36	$2.51	$2.65
Dominion Resources, Inc.	D	($77.96)	$0.00	$0.51	$3.10	$3.35	$3.51	$3.68	$3.68	$3.67	$3.67	$3.67	$3.66	$3.65	$3.85
DTE Energy Company	DTE	($106.70)	$0.00	$0.49	$3.01	$3.40	$3.66	$3.93	$4.14	$4.38	$4.62	$4.89	$5.17	$5.48	$5.77
Duke Energy Corporation	DUK	($84.43)	$0.00	$0.49	$2.96	$3.16	$3.30	$3.44	$3.46	$3.50	$3.54	$3.59	$3.66	$3.73	$3.93
IDACORP, Inc.	IDA	($86.24)	$0.00	$0.37	$2.24	$2.51	$2.68	$2.85	$3.00	$3.17	$3.35	$3.56	$3.78	$4.04	$4.25
NorthWestern Corporation	NWE	($59.66)	$0.00	$0.36	$2.15	$2.20	$2.23	$2.26	$2.34	$2.43	$2.54	$2.67	$2.82	$3.00	$3.16
OGE Energy Corp.	OGE	($35.58)	$0.00	$0.19	$1.18	$1.34	$1.44	$1.55	$1.60	$1.66	$1.72	$1.78	$1.85	$1.91	$2.02
Otter Tail Corporation	OTTR	($40.44)	$0.00	$0.21	$1.28	$1.26	$1.26	$1.26	$1.34	$1.43	$1.53	$1.63	$1.74	$1.85	$1.95
Pinnacle West Capital Corporation	PNW	($86.07)	$0.00	$0.44	$2.68	$2.88	$3.02	$3.18	$3.36	$3.56	$3.77	$4.00	$4.25	$4.51	$4.75
PNM Resources, Inc.	PNM	($39.09)	$0.00	$0.14	$0.86	$1.01	$1.11	$1.22	$1.32	$1.43	$1.54	$1.67	$1.80	$1.94	$2.04
Portland General Electric Company	POR	($45.80)	$0.00	$0.22	$1.35	$1.40	$1.44	$1.48	$1.58	$1.68	$1.80	$1.94	$2.08	$2.25	$2.37
Southern Company	SO	($49.61)	$0.00	$0.37	$2.27	$2.34	$2.39	$2.45	$2.47	$2.50	$2.54	$2.59	$2.65	$2.72	$2.87
WEC Energy Group, Inc.	WEC	($62.56)	$0.00	$0.35	$2.14	$2.30	$2.42	$2.54	$2.67	$2.80	$2.94	$3.08	$3.24	$3.40	$3.58
Xcel Energy Inc.	XEL	($46.59)	$0.00	$0.24	$1.46	$1.61	$1.71	$1.82	$1.90	$1.99	$2.09	$2.20	$2.31	$2.43	$2.56

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 137 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 138 of 182

Multi-Stage DCF Notes - P/E Ratio of 26.81:

[1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of October 31, 2017
[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 [64]
[11] Equals result of Excel Solver function; goal: Column [10] equals $0.00
[12] Equals Proxy Group 30-day average PE ratio. Source: SNL Financial
[13] Equals Column [12] / (Column [6] x 100)
[14] Source: Value Line
[15] Equals Column [14] x (1 + Column [5])
[16] Equals Column [15] x (1 + Column [5])
[17] Equals Column [16] x (1 + Column [5])
[18] Equals Column [17] x (1 + Column [5])
[19] Equals Column [18] x (1 + Column [5])
[20] Equals (1 + (Column [5] + (((Column [6]− Column [5]) / (2027 − 2022 + 1)) x (2022 − 2021)))) x Column [19]
[21] Equals (1 + (Column [5] + (((Column [6]− Column [5]) / (2027 − 2022 + 1)) x (2023 − 2021)))) x Column [20]
[22] Equals (1 + (Column [5] + (((Column [6]− Column [5]) / (2027 − 2022 + 1)) x (2024 − 2021)))) x Column [21]
[23] Equals (1 + (Column [5] + (((Column [6]− Column [5]) / (2027 − 2022 + 1)) x (2025 − 2021)))) x Column [22]
[24] Equals (1 + (Column [5] + (((Column [6]− Column [5]) / (2027 − 2022 + 1)) x (2026 − 2021)))) x Column [23]
[25] Equals Column [24] x (1 + Column [6])
[26] Equals Column [25] x (1 + Column [6])
[27] Equals Column [26] x (1 + Column [6])
[28] Equals Column [27] x (1 + Column [6])
[29] Equals Column [28] x (1 + Column [6])
[30] Equals Column [29] x (1 + Column [6])
[31] Equals Column [7]
[32] Equals Column [31] + ((Column [35]− Column [31]) / 4)
[33] Equals Column [32] + ((Column [35]− Column [31]) / 4)
[34] Equals Column [33] + ((Column [35]− Column [31]) / 4)
[35] Equals Column [8]
[36] Equals Column [35] + ((Column [41]− Column [35]) / 6)
[37] Equals Column [36] + ((Column [41]− Column [35]) / 6)
[38] Equals Column [37] + ((Column [41]− Column [35]) / 6)
[39] Equals Column [38] + ((Column [41]− Column [35]) / 6)
[40] Equals Column [39] + ((Column [41]− Column [35]) / 6)
[41] Equals Column [9]
[42] Equals Column [9]
[43] Equals Column [9]
[44] Equals Column [9]
[45] Equals Column [9]
[46] Equals Column [9]
[47] Equals Column [15] x Column [31]
[48] Equals Column [16] x Column [32]
[49] Equals Column [17] x Column [33]
[50] Equals Column [18] x Column [34]
[51] Equals Column [19] x Column [35]
[52] Equals Column [20] x Column [36]
[53] Equals Column [21] x Column [37]
[54] Equals Column [22] x Column [38]
[55] Equals Column [23] x Column [39]
[56] Equals Column [24] x Column [40]
[57] Equals Column [25] x Column [41]
[58] Equals Column [26] x Column [42]
[59] Equals Column [27] x Column [43]
[60] Equals Column [28] x Column [44]
[61] Equals Column [29] x Column [45]
[62] Equals Column [30] x Column [46]
[63] Equals Column [12] x Column [30]
[64] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [65] through Column [81]
[65] Equals $0.00
[66] Equals Column [47] x (12/31/2017 - 10/31/2017) / 365
[67] Equals Column [47] x (1 + (0.5 x Column [5]))
[68] Equals Column [49]
[69] Equals Column [50]
[70] Equals Column [51]
[71] Equals Column [52]
[72] Equals Column [53]
[73] Equals Column [54]
[74] Equals Column [55]
[75] Equals Column [56]
[76] Equals Column [57]
[77] Equals Column [58]
[78] Equals Column [59]
[79] Equals Column [60]
[80] Equals Column [61]
[81] Equals Column [62] + [63]

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 139 of 182

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

[1] S&P 500 Est. Required Market Return	[2] Current 30-Year Treasury (30-day average)	[3] Implied Market Risk Premium
14.07%	2.86%	11.21%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] DCF Result
AGILENT TECHNOLOGIES INC	A	$ 21,893.96	0.10%	0.77%	9.53%	10.34%	0.0099%
AMERICAN AIRLINES GROUP INC	AAL	$ 22,403.33	0.10%	0.89%	-1.14%	-0.25%	-0.0002%
ADVANCE AUTO PARTS INC	AAP	$ 6,037.53	0.03%	0.31%	8.96%	9.29%	0.0025%
APPLE INC	AAPL	$ 873,130.14	3.83%	1.42%	10.05%	11.54%	0.4417%
ABBVIE INC	ABBV	$ 143,867.05	0.63%	2.86%	9.40%	12.39%	0.0782%
AMERISOURCEBERGEN CORP	ABC	$ 16,860.63	N/A	1.90%	N/A	N/A	N/A
ABBOTT LABORATORIES	ABT	$ 94,221.55	0.41%	1.97%	11.42%	13.51%	0.0558%
ACCENTURE PLC-CL A	ACN	$ 94,985.19	0.42%	1.87%	10.63%	12.60%	0.0525%
ADOBE SYSTEMS INC	ADBE	$ 86,343.90	0.38%	0.00%	19.82%	19.82%	0.0750%
ANALOG DEVICES INC	ADI	$ 33,568.07	0.15%	1.94%	11.55%	13.60%	0.0200%
ARCHER-DANIELS-MIDLAND CO	ADM	$ 22,990.41	0.10%	3.14%	9.80%	13.10%	0.0132%
AUTOMATIC DATA PROCESSING	ADP	$ 51,670.91	0.23%	2.02%	11.48%	13.62%	0.0308%
ALLIANCE DATA SYSTEMS CORP	ADS	$ 12,413.31	0.05%	0.93%	14.00%	14.99%	0.0082%
AUTODESK INC	ADSK	$ 27,390.26	0.12%	0.00%	26.00%	26.00%	0.0312%
AMEREN CORPORATION	AEE	$ 15,040.93	0.07%	2.89%	7.01%	10.00%	0.0066%
AMERICAN ELECTRIC POWER	AEP	$ 36,601.08	0.16%	3.21%	4.34%	7.62%	0.0122%
AES CORP	AES	$ 7,018.53	0.03%	4.31%	9.77%	14.29%	0.0044%
AETNA INC	AET	$ 56,466.96	0.25%	1.18%	11.46%	12.71%	0.0315%
AFLAC INC	AFL	$ 33,042.17	0.14%	2.07%	2.85%	4.95%	0.0072%
ALLERGAN PLC	AGN	$ 59,249.09	0.26%	1.58%	11.93%	13.61%	0.0353%
AMERICAN INTERNATIONAL GROUP	AIG	$ 58,369.04	0.26%	1.98%	11.00%	13.09%	0.0335%
APARTMENT INVT & MGMT CO -A	AIV	$ 6,905.86	0.03%	3.29%	19.05%	22.65%	0.0069%
ASSURANT INC	AIZ	$ 5,423.70	N/A	2.14%	N/A	N/A	N/A
ARTHUR J GALLAGHER & CO	AJG	$ 11,450.00	0.05%	2.46%	10.83%	13.43%	0.0067%
AKAMAI TECHNOLOGIES INC	AKAM	$ 8,956.86	0.04%	0.00%	12.53%	12.53%	0.0049%
ALBEMARLE CORP	ALB	$ 15,564.50	0.07%	0.91%	12.95%	13.92%	0.0095%
ALIGN TECHNOLOGY INC	ALGN	$ 19,154.39	0.08%	0.00%	30.00%	30.00%	0.0252%
ALASKA AIR GROUP INC	ALK	$ 8,147.24	N/A	1.82%	N/A	N/A	N/A
ALLSTATE CORP	ALL	$ 33,917.21	0.15%	1.58%	16.27%	17.97%	0.0267%
ALLEGION PLC	ALLE	$ 7,925.61	0.03%	0.72%	12.99%	13.75%	0.0048%
ALEXION PHARMACEUTICALS INC	ALXN	$ 26,733.20	0.12%	0.00%	18.81%	18.81%	0.0220%
APPLIED MATERIALS INC	AMAT	$ 60,181.87	0.26%	0.72%	16.71%	17.49%	0.0461%
ADVANCED MICRO DEVICES	AMD	$ 10,400.37	0.05%	0.00%	8.00%	8.00%	0.0036%
AMETEK INC	AME	$ 15,576.38	0.07%	0.56%	11.62%	12.22%	0.0083%
AFFILIATED MANAGERS GROUP	AMG	$ 10,436.61	0.05%	0.43%	15.06%	15.52%	0.0071%
AMGEN INC	AMGN	$ 127,194.05	0.56%	2.57%	5.39%	8.03%	0.0448%
AMERIPRISE FINANCIAL INC	AMP	$ 23,472.11	0.10%	2.08%	10.40%	12.59%	0.0130%
AMERICAN TOWER CORP	AMT	$ 61,659.92	0.27%	1.83%	19.54%	21.54%	0.0582%
AMAZON.COM INC	AMZN	$ 532,603.68	2.33%	0.00%	26.37%	26.37%	0.6156%
ANDEAVOR	ANDV	$ 16,669.22	0.07%	2.14%	19.43%	21.77%	0.0159%
ANSYS INC	ANSS	$ 11,587.63	0.05%	0.00%	10.93%	10.93%	0.0056%
ANTHEM INC	ANTM	$ 53,716.87	0.24%	1.28%	9.78%	11.12%	0.0262%
AON PLC	AON	$ 35,842.83	0.16%	0.98%	11.93%	12.97%	0.0204%
SMITH (A.O.) CORP	AOS	$ 10,214.30	0.04%	0.95%	15.00%	16.02%	0.0072%
APACHE CORP	APA	$ 15,759.24	0.07%	2.42%	-19.79%	-17.61%	-0.0122%
ANADARKO PETROLEUM CORP	APC	$ 27,664.88	0.12%	0.41%	-2.78%	-2.38%	-0.0029%
AIR PRODUCTS & CHEMICALS INC	APD	$ 34,748.94	0.15%	2.43%	10.50%	13.06%	0.0199%
AMPHENOL CORP-CL A	APH	$ 26,573.71	0.12%	0.78%	12.33%	13.16%	0.0153%
ALEXANDRIA REAL ESTATE EQUIT	ARE	$ 11,605.90	0.05%	2.74%	6.77%	9.60%	0.0049%
ARCONIC INC	ARNC	$ 12,090.07	0.05%	1.27%	17.50%	18.89%	0.0100%
ACTIVISION BLIZZARD INC	ATVI	$ 49,439.79	0.22%	0.46%	13.63%	14.12%	0.0306%
AVALONBAY COMMUNITIES INC	AVB	$ 25,038.62	0.11%	3.13%	6.42%	9.65%	0.0106%
BROADCOM LTD	AVGO	$ 107,669.83	0.47%	1.54%	16.39%	18.06%	0.0852%
AVERY DENNISON CORP	AVY	$ 9,346.82	0.04%	1.68%	7.80%	9.54%	0.0039%
AMERICAN WATER WORKS CO INC	AWK	$ 15,646.06	0.07%	1.85%	8.02%	9.95%	0.0068%
AMERICAN EXPRESS CO	AXP	$ 82,911.00	0.36%	1.40%	10.17%	11.64%	0.0423%
ACUITY BRANDS INC	AYI	$ 7,035.91	0.03%	0.31%	16.67%	17.01%	0.0052%
AUTOZONE INC	AZO	$ 16,206.84	0.07%	0.00%	13.31%	13.31%	0.0095%
BOEING CO/THE	BA	$ 153,647.35	0.67%	2.22%	15.37%	17.76%	0.1196%
BANK OF AMERICA CORP	BAC	$ 285,694.51	1.25%	1.42%	12.65%	14.16%	0.1774%
BAXTER INTERNATIONAL INC	BAX	$ 35,127.83	0.15%	0.93%	13.45%	14.45%	0.0222%
BB&T CORP	BBT	$ 38,846.47	0.17%	2.56%	8.65%	11.32%	0.0193%
BEST BUY CO INC	BBY	$ 16,748.35	0.07%	2.42%	12.68%	15.25%	0.0112%
CR BARD INC	BCR	$ 23,840.91	0.10%	0.31%	8.73%	9.06%	0.0095%
BECTON DICKINSON AND CO	BDX	$ 47,485.98	0.21%	1.38%	12.34%	13.80%	0.0287%
FRANKLIN RESOURCES INC	BEN	$ 23,377.94	0.10%	2.05%	10.00%	12.15%	0.0125%
BROWN-FORMAN CORP-CLASS B	BF/B	$ 21,963.54	0.10%	1.34%	9.72%	11.12%	0.0107%
BRIGHTHOUSE FINANCIAL INC	BHF	$ 7,447.49	0.03%	0.00%	8.00%	8.00%	0.0026%
BAKER HUGHES A GE CO	BHGE	$ 35,996.36	0.16%	1.71%	7.57%	9.35%	0.0147%
BIOGEN INC	BIIB	$ 65,908.90	0.29%	0.00%	4.65%	4.65%	0.0134%
BANK OF NEW YORK MELLON CORP	BK	$ 53,155.89	0.23%	1.67%	8.93%	10.68%	0.0249%
BLACKROCK INC	BLK	$ 76,540.50	0.34%	2.13%	14.03%	16.31%	0.0547%
BALL CORP	BLL	$ 15,102.16	0.07%	0.75%	1.30%	2.06%	0.0014%
BRISTOL-MYERS SQUIBB CO	BMY	$ 100,918.90	0.44%	2.55%	8.00%	10.65%	0.0471%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	$ 461,212.79	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	$ 38,628.78	0.17%	0.00%	10.33%	10.33%	0.0175%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 140 of 182

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	DCF Result
BORGWARNER INC	BWA	$ 11,115.41	0.05%	1.07%	6.54%	7.64%	0.0037%
BOSTON PROPERTIES INC	BXP	$ 18,700.22	0.08%	2.49%	4.77%	7.32%	0.0060%
CITIGROUP INC	C	$ 194,334.00	0.85%	1.31%	11.75%	13.13%	0.1119%
CA INC	CA	$ 13,552.44	0.06%	3.17%	2.97%	6.19%	0.0037%
CONAGRA BRANDS INC	CAG	$ 13,954.30	0.06%	2.44%	7.00%	9.52%	0.0058%
CARDINAL HEALTH INC	CAH	$ 19,511.86	0.09%	2.99%	14.55%	17.76%	0.0152%
CATERPILLAR INC	CAT	$ 80,254.11	0.35%	2.33%	10.00%	12.45%	0.0438%
CHUBB LTD	CB	$ 70,004.39	0.31%	1.87%	8.80%	10.75%	0.0330%
CBRE GROUP INC - A	CBG	$ 13,287.61	0.06%	0.00%	13.00%	13.00%	0.0076%
CBOE GLOBAL MARKETS INC	CBOE	$ 12,750.61	0.06%	0.92%	22.39%	23.41%	0.0131%
CBS CORP-CLASS B NON VOTING	CBS	$ 22,570.64	0.10%	1.30%	13.37%	14.75%	0.0146%
CROWN CASTLE INTL CORP	CCI	$ 43,503.09	0.19%	3.64%	21.03%	25.05%	0.0478%
CARNIVAL CORP	CCL	$ 47,704.13	0.21%	2.33%	13.22%	15.70%	0.0328%
CADENCE DESIGN SYS INC	CDNS	$ 12,186.66	0.05%	0.00%	12.00%	12.00%	0.0064%
CELGENE CORP	CELG	$ 79,495.39	0.35%	0.00%	18.95%	18.95%	0.0660%
CERNER CORP	CERN	$ 22,444.65	0.10%	0.00%	12.00%	12.00%	0.0118%
CF INDUSTRIES HOLDINGS INC	CF	$ 8,858.73	0.04%	3.16%	6.00%	9.25%	0.0036%
CITIZENS FINANCIAL GROUP	CFG	$ 19,030.51	0.08%	1.68%	15.14%	16.95%	0.0141%
CHURCH & DWIGHT CO INC	CHD	$ 11,270.32	0.05%	1.68%	9.14%	10.90%	0.0054%
CHESAPEAKE ENERGY CORP	CHK	$ 3,542.52	0.02%	0.00%	-13.20%	-13.20%	-0.0020%
C.H. ROBINSON WORLDWIDE INC	CHRW	$ 11,024.52	0.05%	2.31%	9.20%	11.61%	0.0056%
CHARTER COMMUNICATIONS INC-A	CHTR	$ 93,289.11	0.41%	0.00%	22.44%	22.44%	0.0918%
CIGNA CORP	CI	$ 49,655.68	0.22%	0.02%	12.91%	12.94%	0.0282%
CINCINNATI FINANCIAL CORP	CINF	$ 11,512.92	N/A	2.85%	N/A	N/A	N/A
COLGATE-PALMOLIVE CO	CL	$ 61,862.51	0.27%	2.26%	7.53%	9.87%	0.0268%
CLOROX COMPANY	CLX	$ 16,310.12	0.07%	2.63%	6.27%	8.98%	0.0064%
COMERICA INC	CMA	$ 13,664.50	0.06%	1.39%	18.50%	20.02%	0.0120%
COMCAST CORP-CLASS A	CMCSA	$ 168,396.00	0.74%	1.74%	9.00%	10.83%	0.0799%
CME GROUP INC	CME	$ 46,625.75	0.20%	4.29%	12.29%	16.85%	0.0344%
CHIPOTLE MEXICAN GRILL INC	CMG	$ 7,676.53	0.03%	0.00%	46.98%	46.98%	0.0158%
CUMMINS INC	CMI	$ 29,356.34	0.13%	2.34%	10.81%	13.27%	0.0171%
CMS ENERGY CORP	CMS	$ 13,644.38	0.06%	2.74%	6.28%	9.10%	0.0054%
CENTENE CORP	CNC	$ 16,164.31	0.07%	0.00%	12.48%	12.48%	0.0088%
CENTERPOINT ENERGY INC	CNP	$ 12,749.70	0.06%	3.63%	6.27%	10.02%	0.0056%
CAPITAL ONE FINANCIAL CORP	COF	$ 44,586.79	0.20%	1.74%	7.25%	9.05%	0.0177%
CABOT OIL & GAS CORP	COG	$ 12,811.48	0.06%	0.61%	37.92%	38.65%	0.0217%
ROCKWELL COLLINS INC	COL	$ 22,031.73	0.10%	1.07%	9.75%	10.87%	0.0105%
COOPER COS INC/THE	COO	$ 11,760.54	0.05%	0.02%	9.75%	9.78%	0.0050%
CONOCOPHILLIPS	COP	$ 61,150.63	0.27%	2.07%	7.00%	9.14%	0.0245%
COSTCO WHOLESALE CORP	COST	$ 70,390.29	0.31%	1.29%	10.27%	11.62%	0.0359%
COTY INC-CL A	COTY	$ 11,534.76	0.05%	3.38%	17.00%	20.66%	0.0104%
CAMPBELL SOUP CO	CPB	$ 14,236.04	0.06%	3.09%	4.23%	7.39%	0.0046%
SALESFORCE.COM INC	CRM	$ 73,551.76	0.32%	0.00%	28.05%	28.05%	0.0904%
CISCO SYSTEMS INC	CSCO	$ 169,103.37	0.74%	3.58%	6.28%	9.98%	0.0740%
CSRA INC	CSRA	$ 5,229.56	0.02%	1.25%	7.55%	8.85%	0.0020%
CSX CORP	CSX	$ 45,070.46	0.20%	1.55%	13.16%	14.81%	0.0293%
CINTAS CORP	CTAS	$ 15,843.61	0.07%	0.99%	11.98%	13.03%	0.0090%
CENTURYLINK INC	CTL	$ 10,437.08	0.05%	11.37%	-5.30%	5.77%	0.0026%
COGNIZANT TECH SOLUTIONS-A	CTSH	$ 44,692.42	0.20%	0.66%	14.35%	15.06%	0.0295%
CITRIX SYSTEMS INC	CTXS	$ 12,516.35	0.05%	0.00%	9.53%	9.53%	0.0052%
CVS HEALTH CORP	CVS	$ 69,665.18	0.31%	2.89%	13.15%	16.23%	0.0496%
CHEVRON CORP	CVX	$ 219,611.86	0.96%	3.74%	42.62%	47.16%	0.4540%
CONCHO RESOURCES INC	CXO	$ 19,958.66	0.09%	0.00%	3.29%	3.29%	0.0029%
DOMINION ENERGY INC	D	$ 52,139.42	0.23%	3.74%	6.12%	9.97%	0.0228%
DELTA AIR LINES INC	DAL	$ 35,670.05	0.16%	2.02%	5.00%	7.06%	0.0110%
DEERE & CO	DE	$ 42,693.93	0.19%	1.80%	4.50%	6.34%	0.0119%
DISCOVER FINANCIAL SERVICES	DFS	$ 24,349.98	0.11%	1.93%	4.55%	6.53%	0.0070%
DOLLAR GENERAL CORP	DG	$ 22,090.26	0.10%	1.28%	8.55%	9.89%	0.0096%
QUEST DIAGNOSTICS INC	DGX	$ 12,782.16	0.06%	1.92%	7.97%	9.96%	0.0056%
DR HORTON INC	DHI	$ 16,547.05	0.07%	0.90%	14.86%	15.84%	0.0115%
DANAHER CORP	DHR	$ 64,183.50	0.28%	0.60%	9.05%	9.67%	0.0272%
WALT DISNEY CO/THE	DIS	$ 150,967.87	0.66%	1.66%	7.19%	8.91%	0.0590%
DISCOVERY COMMUNICATIONS-A	DISCA	$ 10,877.16	0.05%	0.00%	9.70%	9.70%	0.0046%
DISH NETWORK CORP-A	DISH	$ 22,625.10	0.10%	0.00%	-11.90%	-11.90%	-0.0118%
DELPHI AUTOMOTIVE PLC	DLPH	$ 26,419.09	0.12%	1.19%	12.18%	13.44%	0.0156%
DIGITAL REALTY TRUST INC	DLR	$ 24,616.20	0.11%	3.15%	5.58%	8.82%	0.0095%
DOLLAR TREE INC	DLTR	$ 21,612.08	0.09%	0.00%	12.88%	12.88%	0.0122%
DOVER CORP	DOV	$ 14,876.49	0.07%	1.92%	15.53%	17.60%	0.0115%
DR PEPPER SNAPPLE GROUP INC	DPS	$ 15,465.18	0.07%	2.71%	8.58%	11.41%	0.0077%
DUKE REALTY CORP	DRE	$ 10,142.89	0.04%	5.99%	4.52%	10.65%	0.0047%
DARDEN RESTAURANTS INC	DRI	$ 10,174.60	0.04%	3.07%	9.57%	12.78%	0.0057%
DTE ENERGY COMPANY	DTE	$ 19,815.45	0.09%	3.00%	5.43%	8.51%	0.0074%
DUKE ENERGY CORP	DUK	$ 61,806.69	0.27%	3.99%	5.05%	9.14%	0.0248%
DAVITA INC	DVA	$ 11,613.49	0.05%	0.00%	3.75%	3.75%	0.0019%
DEVON ENERGY CORP	DVN	$ 19,391.51	0.09%	0.65%	17.27%	17.97%	0.0153%
DOWDUPONT INC	DWDP	$ 168,914.15	0.74%	2.35%	7.83%	10.27%	0.0760%
DXC TECHNOLOGY CO	DXC	$ 26,054.78	0.11%	0.78%	15.25%	16.09%	0.0184%
ELECTRONIC ARTS INC	EA	$ 36,923.84	0.16%	0.00%	13.63%	13.63%	0.0221%
EBAY INC	EBAY	$ 39,317.66	0.17%	0.00%	9.08%	9.08%	0.0156%
ECOLAB INC	ECL	$ 37,810.56	0.17%	1.15%	13.08%	14.30%	0.0237%
CONSOLIDATED EDISON INC	ED	$ 26,660.10	0.12%	3.21%	2.00%	5.24%	0.0061%
EQUIFAX INC	EFX	$ 13,064.03	0.06%	1.44%	10.55%	12.06%	0.0069%
EDISON INTERNATIONAL	EIX	$ 26,048.61	0.11%	2.74%	6.12%	8.95%	0.0102%
ESTEE LAUDER COMPANIES-CL A	EL	$ 41,205.88	0.18%	1.32%	11.46%	12.86%	0.0232%
EASTMAN CHEMICAL CO	EMN	$ 13,156.47	0.06%	2.26%	7.43%	9.78%	0.0056%
EMERSON ELECTRIC CO	EMR	$ 41,255.66	0.18%	2.98%	7.45%	10.54%	0.0191%
EOG RESOURCES INC	EOG	$ 57,669.74	0.25%	0.67%	-14.76%	-14.14%	-0.0357%
EQUINIX INC	EQIX	$ 36,127.56	0.16%	1.73%	30.35%	32.35%	0.0512%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 141 of 182

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	DCF Result
EQUITY RESIDENTIAL	EQR	$ 24,705.49	0.11%	2.99%	6.25%	9.34%	0.0101%
EQT CORP	EQT	$ 10,840.87	0.05%	0.19%	17.50%	17.71%	0.0084%
EVERSOURCE ENERGY	ES	$ 19,849.73	0.09%	3.03%	5.94%	9.06%	0.0079%
EXPRESS SCRIPTS HOLDING CO	ESRX	$ 34,714.66	0.15%	0.00%	12.78%	12.78%	0.0194%
ESSEX PROPERTY TRUST INC	ESS	$ 17,317.69	0.08%	2.66%	6.32%	9.06%	0.0069%
E*TRADE FINANCIAL CORP	ETFC	$ 11,799.33	0.05%	0.00%	17.57%	17.57%	0.0091%
EATON CORP PLC	ETN	$ 35,256.81	0.15%	2.99%	10.22%	13.37%	0.0207%
ENTERGY CORP	ETR	$ 15,485.40	0.07%	4.08%	-3.29%	0.72%	0.0005%
ENVISION HEALTHCARE CORP	EVHC	$ 5,147.21	0.02%	0.00%	8.03%	8.03%	0.0018%
EDWARDS LIFESCIENCES CORP	EW	$ 21,633.90	0.09%	0.00%	16.68%	16.68%	0.0158%
EXELON CORP	EXC	$ 38,605.13	0.17%	3.27%	2.86%	6.18%	0.0104%
EXPEDITORS INTL WASH INC	EXPD	$ 10,551.49	0.05%	1.44%	8.60%	10.10%	0.0047%
EXPEDIA INC	EXPE	$ 18,979.73	0.08%	0.92%	14.60%	15.58%	0.0130%
EXTRA SPACE STORAGE INC	EXR	$ 10,280.35	0.05%	3.93%	6.71%	10.78%	0.0049%
FORD MOTOR CO	F	$ 48,740.15	0.21%	5.03%	-7.57%	-2.73%	-0.0058%
FASTENAL CO	FAST	$ 13,498.73	0.06%	2.74%	15.75%	18.70%	0.0111%
FACEBOOK INC-A	FB	$ 522,887.08	2.29%	0.00%	28.54%	28.54%	0.6542%
FORTUNE BRANDS HOME & SECURI	FBHS	$ 10,027.96	0.04%	1.09%	11.61%	12.76%	0.0056%
FREEPORT-MCMORAN INC	FCX	$ 20,233.36	0.09%	0.00%	28.09%	28.09%	0.0249%
FEDEX CORP	FDX	$ 60,550.42	0.27%	0.89%	12.72%	13.66%	0.0363%
FIRSTENERGY CORP	FE	$ 14,658.07	0.06%	4.37%	-0.62%	3.74%	0.0024%
F5 NETWORKS INC	FFIV	$ 7,590.77	0.03%	0.00%	9.33%	9.33%	0.0031%
FIDELITY NATIONAL INFO SERV	FIS	$ 30,834.62	0.14%	1.24%	12.00%	13.31%	0.0180%
FISERV INC	FISV	$ 27,240.55	0.12%	0.00%	10.80%	10.80%	0.0129%
FIFTH THIRD BANCORP	FITB	$ 20,388.20	0.09%	2.08%	4.80%	6.93%	0.0062%
FOOT LOCKER INC	FL	$ 3,729.85	0.02%	4.10%	3.40%	7.56%	0.0012%
FLIR SYSTEMS INC	FLIR	$ 6,488.05	N/A	1.20%	N/A	N/A	N/A
FLUOR CORP	FLR	$ 6,028.23	0.03%	1.98%	11.89%	13.99%	0.0037%
FLOWSERVE CORP	FLS	$ 5,757.19	0.03%	1.74%	12.68%	14.53%	0.0037%
FMC CORP	FMC	$ 12,455.16	0.05%	0.72%	12.60%	13.37%	0.0073%
TWENTY-FIRST CENTURY FOX-A	FOXA	$ 47,846.20	0.21%	1.53%	8.49%	10.09%	0.0212%
FEDERAL REALTY INVS TRUST	FRT	$ 8,742.87	0.04%	3.29%	5.80%	9.19%	0.0035%
TECHNIPFMC PLC	FTI	$ 12,797.20	0.06%	0.90%	4.56%	5.48%	0.0031%
FORTIVE CORP	FTV	$ 25,114.61	0.11%	0.34%	10.20%	10.55%	0.0116%
GENERAL DYNAMICS CORP	GD	$ 60,606.35	0.27%	1.63%	8.48%	10.18%	0.0270%
GENERAL ELECTRIC CO	GE	$ 174,829.23	0.77%	4.69%	9.37%	14.28%	0.1094%
GGP INC	GGP	$ 17,163.79	0.08%	4.79%	4.65%	9.55%	0.0072%
GILEAD SCIENCES INC	GILD	$ 97,972.72	0.43%	2.86%	3.62%	6.53%	0.0280%
GENERAL MILLS INC	GIS	$ 29,508.13	0.13%	3.84%	9.57%	13.59%	0.0176%
CORNING INC	GLW	$ 27,210.19	0.12%	1.98%	9.65%	11.73%	0.0140%
GENERAL MOTORS CO	GM	$ 61,049.12	0.27%	3.56%	8.94%	12.66%	0.0339%
ALPHABET INC-CL A	GOOGL	$ 711,641.15	3.12%	0.00%	17.97%	17.97%	0.5606%
GENUINE PARTS CO	GPC	$ 12,935.71	0.06%	3.06%	8.52%	11.71%	0.0066%
GLOBAL PAYMENTS INC	GPN	$ 15,851.21	0.07%	0.04%	14.50%	14.55%	0.0101%
GAP INC/THE	GPS	$ 10,192.21	0.04%	3.50%	6.34%	9.96%	0.0044%
GARMIN LTD	GRMN	$ 10,625.87	0.05%	3.60%	5.68%	9.38%	0.0044%
GOLDMAN SACHS GROUP INC	GS	$ 97,695.19	0.43%	1.21%	8.08%	9.34%	0.0400%
GOODYEAR TIRE & RUBBER CO	GT	$ 7,535.15	N/A	1.36%	N/A	N/A	N/A
WW GRAINGER INC	GWW	$ 11,265.58	0.05%	2.56%	10.28%	12.97%	0.0064%
HALLIBURTON CO	HAL	$ 37,292.40	0.16%	1.68%	74.00%	76.30%	0.1247%
HASBRO INC	HAS	$ 11,581.26	0.05%	2.46%	9.70%	12.28%	0.0062%
HUNTINGTON BANCSHARES INC	HBAN	$ 14,917.06	0.07%	2.54%	10.27%	12.94%	0.0085%
HANESBRANDS INC	HBI	$ 8,200.77	0.04%	2.67%	9.20%	11.99%	0.0043%
HCA HEALTHCARE INC	HCA	$ 27,328.54	0.12%	0.00%	12.07%	12.07%	0.0145%
WELLTOWER INC	HCN	$ 24,700.12	0.11%	5.21%	2.61%	7.89%	0.0085%
HCP INC	HCP	$ 12,118.01	0.05%	5.74%	2.90%	8.72%	0.0046%
HOME DEPOT INC	HD	$ 195,424.38	0.86%	2.15%	13.69%	15.99%	0.1370%
HESS CORP	HES	$ 14,035.98	0.06%	2.31%	-14.67%	-12.53%	-0.0077%
HARTFORD FINANCIAL SVCS GRP	HIG	$ 19,637.36	0.09%	1.73%	9.50%	11.32%	0.0097%
HILTON WORLDWIDE HOLDINGS IN	HLT	$ 23,126.09	0.10%	0.83%	16.66%	17.56%	0.0178%
HARLEY-DAVIDSON INC	HOG	$ 8,075.95	0.04%	3.11%	8.97%	12.22%	0.0043%
HOLOGIC INC	HOLX	$ 10,615.92	0.05%	0.00%	8.50%	8.50%	0.0040%
HONEYWELL INTERNATIONAL INC	HON	$ 109,824.37	0.48%	1.92%	8.93%	10.94%	0.0527%
HELMERICH & PAYNE	HP	$ 5,897.06	N/A	5.15%	N/A	N/A	N/A
HEWLETT PACKARD ENTERPRISE	HPE	$ 22,542.94	0.10%	1.87%	-3.56%	-1.73%	-0.0017%
HP INC	HPQ	$ 35,993.98	0.16%	2.46%	5.20%	7.73%	0.0122%
H&R BLOCK INC	HRB	$ 5,172.14	0.02%	3.89%	11.00%	15.10%	0.0034%
HORMEL FOODS CORP	HRL	$ 16,447.13	0.07%	2.18%	6.15%	8.40%	0.0061%
HARRIS CORP	HRS	$ 16,607.02	N/A	1.63%	N/A	N/A	N/A
HENRY SCHEIN INC	HSIC	$ 12,427.60	0.05%	0.00%	6.00%	6.00%	0.0033%
HOST HOTELS & RESORTS INC	HST	$ 14,475.42	0.06%	4.16%	4.10%	8.35%	0.0053%
HERSHEY CO/THE	HSY	$ 22,371.64	0.10%	2.40%	9.53%	12.05%	0.0118%
HUMANA INC	HUM	$ 36,902.47	0.16%	0.63%	12.93%	13.60%	0.0220%
INTL BUSINESS MACHINES CORP	IBM	$ 142,627.42	0.63%	3.80%	1.86%	5.70%	0.0356%
INTERCONTINENTAL EXCHANGE IN	ICE	$ 38,899.36	0.17%	1.25%	10.98%	12.29%	0.0210%
IDEXX LABORATORIES INC	IDXX	$ 14,493.13	0.06%	0.00%	11.01%	11.01%	0.0070%
INTL FLAVORS & FRAGRANCES	IFF	$ 11,642.60	0.05%	1.80%	4.00%	5.83%	0.0030%
ILLUMINA INC	ILMN	$ 29,957.74	0.13%	0.00%	15.02%	15.02%	0.0197%
INCYTE CORP	INCY	$ 23,856.08	0.10%	0.00%	44.05%	44.05%	0.0461%
IHS MARKIT LTD	INFO	$ 16,996.84	0.07%	0.00%	13.89%	13.89%	0.0103%
INTEL CORP	INTC	$ 212,893.20	0.93%	2.58%	8.56%	11.25%	0.1050%
INTUIT INC	INTU	$ 38,506.10	0.17%	1.02%	14.88%	15.97%	0.0270%
INTERNATIONAL PAPER CO	IP	$ 23,647.65	0.10%	3.23%	7.18%	10.52%	0.0109%
INTERPUBLIC GROUP OF COS INC	IPG	$ 7,480.72	0.03%	3.74%	4.57%	8.39%	0.0028%
INGERSOLL-RAND PLC	IR	$ 22,138.29	0.10%	1.90%	9.90%	11.89%	0.0115%
IRON MOUNTAIN INC	IRM	$ 10,677.48	0.05%	5.22%	14.60%	20.20%	0.0095%
INTUITIVE SURGICAL INC	ISRG	$ 42,058.28	0.18%	0.00%	10.47%	10.47%	0.0193%
GARTNER INC	IT	$ 11,352.75	0.05%	0.00%	17.50%	17.50%	0.0087%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 142 of 182

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	DCF Result
ILLINOIS TOOL WORKS	ITW	$ 53,623.59	0.24%	1.79%	10.45%	12.33%	0.0290%
INVESCO LTD	IVZ	$ 14,569.34	0.06%	3.23%	13.39%	16.84%	0.0108%
HUNT (JB) TRANSPRT SVCS INC	JBHT	$ 11,676.50	0.05%	0.86%	13.93%	14.85%	0.0076%
JOHNSON CONTROLS INTERNATION	JCI	$ 38,591.98	0.17%	2.43%	8.47%	11.00%	0.0186%
JACOBS ENGINEERING GROUP INC	JEC	$ 7,003.54	0.03%	0.97%	10.12%	11.13%	0.0034%
JOHNSON & JOHNSON	JNJ	$ 374,176.40	1.64%	2.41%	7.10%	9.59%	0.1573%
JUNIPER NETWORKS INC	JNPR	$ 9,443.06	0.04%	1.63%	6.98%	8.67%	0.0036%
JPMORGAN CHASE & CO	JPM	$ 354,043.01	1.55%	2.10%	6.50%	8.67%	0.1346%
NORDSTROM INC	JWN	$ 6,591.41	0.03%	3.79%	8.75%	12.71%	0.0037%
KELLOGG CO	K	$ 21,581.27	0.09%	3.41%	6.23%	9.75%	0.0092%
KEYCORP	KEY	$ 19,847.70	0.09%	2.08%	12.32%	14.53%	0.0126%
KRAFT HEINZ CO/THE	KHC	$ 94,207.36	0.41%	3.19%	7.71%	11.02%	0.0455%
KIMCO REALTY CORP	KIM	$ 7,729.87	0.03%	6.02%	19.92%	26.54%	0.0090%
KLA-TENCOR CORP	KLAC	$ 17,063.92	0.07%	2.13%	8.05%	10.26%	0.0077%
KIMBERLY-CLARK CORP	KMB	$ 39,576.21	0.17%	3.43%	6.03%	9.55%	0.0166%
KINDER MORGAN INC	KMI	$ 40,443.97	0.18%	2.76%	15.75%	18.73%	0.0332%
CARMAX INC	KMX	$ 13,692.99	0.06%	0.00%	13.27%	13.27%	0.0080%
COCA-COLA CO/THE	KO	$ 195,905.48	0.86%	3.21%	5.58%	8.88%	0.0763%
MICHAEL KORS HOLDINGS LTD	KORS	$ 7,400.14	0.03%	0.00%	7.00%	7.00%	0.0023%
KROGER CO	KR	$ 18,413.11	0.08%	2.44%	5.79%	8.30%	0.0067%
KOHLS CORP	KSS	$ 7,039.90	0.03%	5.35%	5.45%	10.95%	0.0034%
KANSAS CITY SOUTHERN	KSU	$ 10,791.26	0.05%	1.34%	14.55%	15.99%	0.0076%
LOEWS CORP	L	$ 16,666.61	N/A	0.50%	N/A	N/A	N/A
L BRANDS INC	LB	$ 12,216.75	0.05%	5.58%	8.28%	14.09%	0.0075%
LEGGETT & PLATT INC	LEG	$ 6,228.87	N/A	2.98%	N/A	N/A	N/A
LENNAR CORP-A	LEN	$ 12,887.75	0.06%	0.29%	12.48%	12.78%	0.0072%
LABORATORY CRP OF AMER HLDGS	LH	$ 15,647.68	0.07%	0.00%	10.50%	10.50%	0.0072%
LKQ CORP	LKQ	$ 11,647.87	0.05%	0.00%	12.75%	12.75%	0.0065%
L3 TECHNOLOGIES INC	LLL	$ 14,626.65	0.06%	1.63%	5.77%	7.45%	0.0048%
ELI LILLY & CO	LLY	$ 90,223.70	0.40%	2.54%	9.35%	12.00%	0.0475%
LOCKHEED MARTIN CORP	LMT	$ 88,360.01	0.39%	2.40%	11.18%	13.71%	0.0531%
LINCOLN NATIONAL CORP	LNC	$ 16,787.37	0.07%	1.55%	9.25%	10.87%	0.0080%
ALLIANT ENERGY CORP	LNT	$ 9,995.76	0.04%	2.91%	6.32%	9.32%	0.0041%
LOWE'S COS INC	LOW	$ 66,583.33	0.29%	1.96%	14.38%	16.48%	0.0481%
LAM RESEARCH CORP	LRCX	$ 33,777.13	0.15%	0.85%	11.33%	12.23%	0.0181%
LEUCADIA NATIONAL CORP	LUK	$ 9,073.48	0.04%	1.42%	18.00%	19.55%	0.0078%
SOUTHWEST AIRLINES CO	LUV	$ 32,238.73	0.14%	0.84%	6.98%	7.86%	0.0111%
LYONDELLBASELL INDU-CL A	LYB	$ 40,838.47	0.18%	3.43%	8.00%	11.57%	0.0207%
MACY'S INC	M	$ 5,713.53	0.03%	8.21%	-0.48%	7.71%	0.0019%
MASTERCARD INC - A	MA	$ 157,497.39	0.69%	0.59%	17.55%	18.19%	0.1256%
MID-AMERICA APARTMENT COMM	MAA	$ 11,629.72	N/A	3.42%	N/A	N/A	N/A
MACERICH CO/THE	MAC	$ 7,694.13	0.03%	5.52%	7.61%	13.34%	0.0045%
MARRIOTT INTERNATIONAL -CL A	MAR	$ 44,496.76	0.20%	1.08%	15.12%	16.28%	0.0318%
MASCO CORP	MAS	$ 12,525.99	0.05%	1.05%	15.44%	16.57%	0.0091%
MATTEL INC	MAT	$ 4,853.46	0.02%	6.44%	10.37%	17.15%	0.0036%
MCDONALD'S CORP	MCD	$ 135,196.53	0.59%	2.29%	10.02%	12.43%	0.0737%
MICROCHIP TECHNOLOGY INC	MCHP	$ 22,062.66	0.10%	1.53%	17.06%	18.72%	0.0181%
MCKESSON CORP	MCK	$ 28,744.46	0.13%	0.94%	10.50%	11.49%	0.0145%
MOODY'S CORP	MCO	$ 27,205.51	N/A	1.07%	N/A	N/A	N/A
MONDELEZ INTERNATIONAL INC-A	MDLZ	$ 61,912.52	0.27%	1.94%	11.64%	13.69%	0.0371%
MEDTRONIC PLC	MDT	$ 109,071.70	0.48%	2.32%	6.44%	8.83%	0.0422%
METLIFE INC	MET	$ 56,851.22	0.25%	2.99%	35.90%	39.42%	0.0982%
MGM RESORTS INTERNATIONAL	MGM	$ 18,032.27	0.08%	1.40%	10.34%	11.81%	0.0093%
MOHAWK INDUSTRIES INC	MHK	$ 19,458.76	0.09%	0.00%	8.35%	8.35%	0.0071%
MCCORMICK & CO-NON VTG SHRS	MKC	$ 13,036.34	0.06%	1.88%	9.60%	11.57%	0.0066%
MARTIN MARIETTA MATERIALS	MLM	$ 13,626.79	0.06%	0.78%	20.04%	20.90%	0.0125%
MARSH & MCLENNAN COS	MMC	$ 41,303.18	0.18%	1.78%	12.86%	14.75%	0.0267%
3M CO	MMM	$ 137,369.83	0.60%	2.04%	9.55%	11.69%	0.0704%
MONSTER BEVERAGE CORP	MNST	$ 32,914.04	0.14%	0.00%	20.30%	20.30%	0.0293%
ALTRIA GROUP INC	MO	$ 122,543.94	0.54%	3.99%	0.71%	4.71%	0.0253%
MONSANTO CO	MON	$ 53,308.22	0.23%	1.98%	6.23%	8.28%	0.0193%
MOSAIC CO/THE	MOS	$ 7,842.45	0.03%	3.27%	11.70%	15.16%	0.0052%
MARATHON PETROLEUM CORP	MPC	$ 29,177.74	0.13%	2.56%	12.47%	15.19%	0.0194%
MERCK & CO. INC.	MRK	$ 150,249.95	0.66%	3.43%	5.77%	9.29%	0.0612%
MARATHON OIL CORP	MRO	$ 12,084.65	0.05%	1.41%	5.00%	6.44%	0.0034%
MORGAN STANLEY	MS	$ 91,829.03	0.40%	1.79%	15.84%	17.77%	0.0715%
MICROSOFT CORP	MSFT	$ 641,699.61	2.81%	2.01%	10.32%	12.43%	0.3497%
MOTOROLA SOLUTIONS INC	MSI	$ 14,726.65	0.06%	2.08%	4.10%	6.22%	0.0040%
M & T BANK CORP	MTB	$ 25,337.69	0.11%	1.80%	9.15%	11.03%	0.0123%
METTLER-TOLEDO INTERNATIONAL	MTD	$ 17,521.78	0.08%	0.00%	12.06%	12.06%	0.0093%
MICRON TECHNOLOGY INC	MU	$ 51,100.74	0.22%	0.32%	0.83%	1.16%	0.0026%
MYLAN NV	MYL	$ 19,150.59	0.08%	0.00%	3.60%	3.60%	0.0030%
NAVIENT CORP	NAVI	$ 3,277.13	N/A	5.14%	N/A	N/A	N/A
NOBLE ENERGY INC	NBL	$ 13,561.75	0.06%	1.44%	3.72%	5.18%	0.0031%
NORWEGIAN CRUISE LINE HOLDIN	NCLH	$ 12,720.04	0.06%	0.06%	21.37%	21.43%	0.0119%
NASDAQ INC	NDAQ	$ 12,117.75	0.05%	2.01%	9.08%	11.18%	0.0059%
NEXTERA ENERGY INC	NEE	$ 72,944.55	0.32%	2.53%	7.30%	9.93%	0.0318%
NEWMONT MINING CORP	NEM	$ 19,285.45	0.08%	0.75%	-11.20%	-10.50%	-0.0089%
NETFLIX INC	NFLX	$ 85,001.38	0.37%	0.00%	41.62%	41.62%	0.1551%
NEWFIELD EXPLORATION CO	NFX	$ 6,137.04	0.03%	0.00%	12.13%	12.13%	0.0033%
NISOURCE INC	NI	$ 8,593.20	0.04%	2.66%	6.10%	8.84%	0.0033%
NIKE INC -CL B	NKE	$ 89,717.20	0.39%	1.39%	8.50%	9.94%	0.0391%
NIELSEN HOLDINGS PLC	NLSN	$ 13,203.15	0.06%	3.69%	8.00%	11.84%	0.0068%
NORTHROP GRUMMAN CORP	NOC	$ 51,445.43	0.23%	1.31%	7.81%	9.17%	0.0207%
NATIONAL OILWELL VARCO INC	NOV	$ 12,993.30	N/A	0.58%	N/A	N/A	N/A
NRG ENERGY INC	NRG	$ 7,911.52	0.03%	0.48%	57.73%	58.35%	0.0202%
NORFOLK SOUTHERN CORP	NSC	$ 37,605.67	0.16%	1.87%	13.70%	15.70%	0.0259%
NETAPP INC	NTAP	$ 11,982.63	0.05%	1.82%	9.90%	11.81%	0.0062%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 143 of 182

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	DCF Result
NORTHERN TRUST CORP	NTRS	$ 21,268.42	0.09%	1.71%	12.01%	13.83%	0.0129%
NUCOR CORP	NUE	$ 18,472.40	0.08%	2.61%	12.00%	14.77%	0.0120%
NVIDIA CORP	NVDA	$ 124,086.00	0.54%	0.28%	12.52%	12.81%	0.0697%
NEWELL BRANDS INC	NWL	$ 19,986.28	0.09%	2.16%	11.29%	13.57%	0.0119%
NEWS CORP - CLASS A	NWSA	$ 8,006.30	0.04%	1.68%	19.57%	21.41%	0.0075%
REALTY INCOME CORP	O	$ 15,123.42	0.07%	4.73%	4.18%	9.01%	0.0060%
ONEOK INC	OKE	$ 20,623.05	0.09%	5.28%	13.25%	18.87%	0.0171%
OMNICOM GROUP	OMC	$ 15,489.49	0.07%	3.36%	6.87%	10.35%	0.0070%
ORACLE CORP	ORCL	$ 212,408.40	0.93%	1.39%	8.45%	9.90%	0.0922%
O'REILLY AUTOMOTIVE INC	ORLY	$ 18,002.11	0.08%	0.00%	15.33%	15.33%	0.0121%
OCCIDENTAL PETROLEUM CORP	OXY	$ 49,368.48	0.22%	4.75%	-3.33%	1.34%	0.0029%
PAYCHEX INC	PAYX	$ 22,900.27	0.10%	3.11%	8.28%	11.51%	0.0116%
PEOPLE'S UNITED FINANCIAL	PBCT	$ 6,429.67	0.03%	3.69%	2.00%	5.73%	0.0016%
PACCAR INC	PCAR	$ 25,213.10	0.11%	2.51%	7.50%	10.11%	0.0112%
P G & E CORP	PCG	$ 29,625.71	0.13%	3.58%	5.43%	9.12%	0.0118%
PRICELINE GROUP INC/THE	PCLN	$ 93,798.88	0.41%	0.00%	17.26%	17.26%	0.0710%
PATTERSON COS INC	PDCO	$ 3,541.01	0.02%	2.91%	9.10%	12.14%	0.0019%
PUBLIC SERVICE ENTERPRISE GP	PEG	$ 24,889.79	0.11%	3.50%	2.68%	6.22%	0.0068%
PEPSICO INC	PEP	$ 156,762.86	0.69%	2.86%	6.21%	9.16%	0.0630%
PFIZER INC	PFE	$ 208,514.06	0.91%	3.65%	8.77%	12.58%	0.1150%
PRINCIPAL FINANCIAL GROUP	PFG	$ 19,028.06	0.08%	2.83%	10.40%	13.38%	0.0112%
PROCTER & GAMBLE CO/THE	PG	$ 219,040.96	0.96%	3.27%	7.31%	10.70%	0.1028%
PROGRESSIVE CORP	PGR	$ 28,268.00	0.12%	1.67%	11.93%	13.70%	0.0170%
PARKER HANNIFIN CORP	PH	$ 24,323.66	0.11%	1.47%	11.25%	12.81%	0.0137%
PULTEGROUP INC	PHM	$ 8,886.64	0.04%	1.09%	20.04%	21.24%	0.0083%
PACKAGING CORP OF AMERICA	PKG	$ 10,970.25	0.05%	2.13%	8.50%	10.72%	0.0052%
PERKINELMER INC	PKI	$ 7,970.72	0.03%	0.39%	10.42%	10.83%	0.0038%
PROLOGIS INC	PLD	$ 34,198.97	0.15%	2.71%	6.84%	9.64%	0.0145%
PHILIP MORRIS INTERNATIONAL	PM	$ 162,527.12	0.71%	4.03%	9.59%	13.81%	0.0984%
PNC FINANCIAL SERVICES GROUP	PNC	$ 65,550.66	0.29%	1.90%	10.09%	12.09%	0.0347%
PENTAIR PLC	PNR	$ 12,795.35	0.06%	1.96%	8.18%	10.22%	0.0057%
PINNACLE WEST CAPITAL	PNW	$ 9,790.59	0.04%	3.03%	5.31%	8.42%	0.0036%
PPG INDUSTRIES INC	PPG	$ 29,580.28	0.13%	1.45%	7.65%	9.15%	0.0119%
PPL CORP	PPL	$ 25,570.52	0.11%	4.20%	-0.10%	4.10%	0.0046%
PERRIGO CO PLC	PRGO	$ 11,550.07	0.05%	0.79%	5.97%	6.78%	0.0034%
PRUDENTIAL FINANCIAL INC	PRU	$ 47,166.42	0.21%	2.75%	8.00%	10.86%	0.0224%
PUBLIC STORAGE	PSA	$ 36,007.37	0.16%	3.88%	5.14%	9.12%	0.0144%
PHILLIPS 66	PSX	$ 46,153.92	0.20%	2.99%	-3.74%	-0.81%	-0.0016%
PVH CORP	PVH	$ 9,818.19	0.04%	0.13%	10.96%	11.09%	0.0048%
QUANTA SERVICES INC	PWR	$ 5,854.57	0.03%	0.00%	8.00%	8.00%	0.0021%
PRAXAIR INC	PX	$ 41,834.94	0.18%	2.15%	10.35%	12.62%	0.0231%
PIONEER NATURAL RESOURCES CO	PXD	$ 25,458.50	0.11%	0.05%	20.00%	20.06%	0.0224%
PAYPAL HOLDINGS INC	PYPL	$ 87,210.61	0.38%	0.00%	20.37%	20.37%	0.0779%
QUINTILES IMS HOLDINGS INC	Q	$ 22,842.99	0.10%	0.00%	14.50%	14.50%	0.0145%
QUALCOMM INC	QCOM	$ 75,294.17	0.33%	4.31%	6.66%	11.12%	0.0367%
QORVO INC	QRVO	$ 9,648.17	0.04%	0.00%	13.18%	13.18%	0.0056%
ROYAL CARIBBEAN CRUISES LTD	RCL	$ 26,624.29	0.12%	1.72%	20.16%	22.05%	0.0257%
EVEREST RE GROUP LTD	RE	$ 9,751.60	0.04%	2.14%	10.00%	12.24%	0.0052%
REGENCY CENTERS CORP	REG	$ 10,480.13	0.05%	3.43%	9.26%	12.85%	0.0059%
REGENERON PHARMACEUTICALS	REGN	$ 43,141.63	0.19%	0.00%	18.00%	18.00%	0.0340%
REGIONS FINANCIAL CORP	RF	$ 18,499.84	0.08%	2.05%	11.88%	14.06%	0.0114%
ROBERT HALF INTL INC	RHI	$ 6,532.56	0.03%	1.85%	8.30%	10.23%	0.0029%
RED HAT INC	RHT	$ 21,380.53	0.09%	0.00%	17.00%	17.00%	0.0159%
RAYMOND JAMES FINANCIAL INC	RJF	$ 12,224.23	0.05%	1.18%	15.45%	16.72%	0.0090%
RALPH LAUREN CORP	RL	$ 7,267.30	0.03%	2.28%	0.29%	2.57%	0.0008%
RESMED INC	RMD	$ 11,945.47	0.05%	1.78%	13.40%	15.30%	0.0080%
ROCKWELL AUTOMATION INC	ROK	$ 25,777.09	0.11%	1.52%	11.47%	13.08%	0.0148%
ROPER TECHNOLOGIES INC	ROP	$ 26,390.05	0.12%	0.54%	12.83%	13.41%	0.0155%
ROSS STORES INC	ROST	$ 24,481.24	0.11%	1.00%	13.00%	14.07%	0.0151%
RANGE RESOURCES CORP	RRC	$ 4,493.80	0.02%	0.44%	-23.63%	-23.24%	-0.0046%
REPUBLIC SERVICES INC	RSG	$ 21,913.13	0.10%	2.05%	11.21%	13.38%	0.0128%
RAYTHEON COMPANY	RTN	$ 52,093.48	0.23%	1.74%	8.41%	10.22%	0.0233%
SBA COMMUNICATIONS CORP	SBAC	$ 18,614.51	0.08%	0.00%	22.70%	22.70%	0.0185%
STARBUCKS CORP	SBUX	$ 79,183.48	0.35%	1.85%	16.68%	18.69%	0.0649%
SCANA CORP	SCG	$ 6,165.44	0.03%	5.68%	1.90%	7.63%	0.0021%
SCHWAB (CHARLES) CORP	SCHW	$ 60,046.12	0.26%	0.71%	18.82%	19.60%	0.0516%
SEALED AIR CORP	SEE	$ 8,405.09	0.04%	1.45%	8.48%	9.98%	0.0037%
SHERWIN-WILLIAMS CO/THE	SHW	$ 36,952.02	0.16%	0.86%	11.24%	12.15%	0.0197%
SIGNET JEWELERS LTD	SIG	$ 3,964.41	0.02%	1.86%	3.40%	5.30%	0.0009%
JM SMUCKER CO/THE	SJM	$ 12,045.65	0.05%	2.96%	3.96%	6.99%	0.0037%
SCHLUMBERGER LTD	SLB	$ 88,656.75	0.39%	3.12%	44.17%	47.98%	0.1865%
SL GREEN REALTY CORP	SLG	$ 9,567.83	0.04%	3.27%	0.64%	3.92%	0.0016%
SNAP-ON INC	SNA	$ 8,994.59	0.04%	2.07%	10.75%	12.93%	0.0051%
SCRIPPS NETWORKS INTER-CL A	SNI	$ 10,818.07	0.05%	1.39%	5.00%	6.42%	0.0030%
SYNOPSYS INC	SNPS	$ 12,999.43	0.06%	0.00%	9.12%	9.12%	0.0052%
SOUTHERN CO/THE	SO	$ 52,172.54	0.23%	4.42%	3.17%	7.65%	0.0175%
SIMON PROPERTY GROUP INC	SPG	$ 48,285.94	0.21%	4.58%	7.03%	11.77%	0.0249%
S&P GLOBAL INC	SPGI	$ 39,899.85	0.17%	1.05%	10.00%	11.10%	0.0194%
STERICYCLE INC	SRCL	$ 6,046.25	0.03%	0.15%	7.68%	7.83%	0.0021%
SEMPRA ENERGY	SRE	$ 29,501.62	0.13%	2.80%	12.41%	15.38%	0.0199%
SUNTRUST BANKS INC	STI	$ 28,896.94	0.13%	2.20%	9.38%	11.69%	0.0148%
STATE STREET CORP	STT	$ 34,403.90	0.15%	1.74%	13.07%	14.92%	0.0225%
SEAGATE TECHNOLOGY	STX	$ 10,696.11	0.05%	6.91%	8.65%	15.86%	0.0074%
CONSTELLATION BRANDS INC-A	STZ	$ 42,844.25	0.19%	0.95%	16.51%	17.54%	0.0329%
STANLEY BLACK & DECKER INC	SWK	$ 24,773.97	0.11%	1.48%	11.00%	12.57%	0.0136%
SKYWORKS SOLUTIONS INC	SWKS	$ 20,920.65	0.09%	1.02%	13.59%	14.68%	0.0135%
SYNCHRONY FINANCIAL	SYF	$ 25,528.14	0.11%	1.72%	8.40%	10.19%	0.0114%
STRYKER CORP	SYK	$ 57,958.18	0.25%	1.11%	8.77%	9.92%	0.0252%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 144 of 182

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	DCF Result
SYMANTEC CORP	SYMC	$ 19,972.55	0.09%	0.94%	13.14%	14.15%	0.0124%
SYSCO CORP	SYY	$ 29,076.12	0.13%	2.41%	10.04%	12.57%	0.0160%
AT&T INC	T	$ 206,611.00	0.91%	5.85%	5.15%	11.15%	0.1010%
MOLSON COORS BREWING CO -B	TAP	$ 17,452.83	0.08%	2.03%	1.82%	3.86%	0.0030%
TRANSDIGM GROUP INC	TDG	$ 14,405.17	0.06%	0.00%	9.89%	9.89%	0.0062%
TE CONNECTIVITY LTD	TEL	$ 32,147.35	0.14%	1.68%	6.87%	8.60%	0.0121%
TARGET CORP	TGT	$ 32,249.53	0.14%	4.20%	-0.78%	3.41%	0.0048%
TIFFANY & CO	TIF	$ 11,656.83	0.05%	2.03%	10.10%	12.23%	0.0063%
TJX COMPANIES INC	TJX	$ 44,411.94	0.19%	1.76%	12.12%	13.99%	0.0272%
TORCHMARK CORP	TMK	$ 9,786.03	0.04%	0.70%	8.00%	8.73%	0.0037%
THERMO FISHER SCIENTIFIC INC	TMO	$ 77,572.17	0.34%	0.31%	12.50%	12.83%	0.0436%
TAPESTRY INC	TPR	$ 11,635.26	0.05%	3.37%	11.29%	14.84%	0.0076%
TRIPADVISOR INC	TRIP	$ 5,203.22	0.02%	0.00%	14.50%	14.50%	0.0033%
T ROWE PRICE GROUP INC	TROW	$ 22,510.60	0.10%	2.45%	12.94%	15.55%	0.0153%
TRAVELERS COS INC/THE	TRV	$ 36,251.02	0.16%	2.14%	6.95%	9.16%	0.0146%
TRACTOR SUPPLY COMPANY	TSCO	$ 7,634.70	0.03%	1.76%	12.52%	14.39%	0.0048%
TYSON FOODS INC-CL A	TSN	$ 28,520.79	0.13%	1.25%	8.60%	9.91%	0.0124%
TOTAL SYSTEM SERVICES INC	TSS	$ 13,274.35	0.06%	0.64%	11.56%	12.24%	0.0071%
TIME WARNER INC	TWX	$ 76,527.90	0.34%	1.67%	8.30%	10.04%	0.0337%
TEXAS INSTRUMENTS INC	TXN	$ 95,726.84	0.42%	2.19%	10.74%	13.05%	0.0548%
TEXTRON INC	TXT	$ 13,892.79	0.06%	0.16%	8.81%	8.98%	0.0055%
UNDER ARMOUR INC-CLASS A	UAA	$ 5,284.75	0.02%	0.00%	13.01%	13.01%	0.0030%
UNITED CONTINENTAL HOLDINGS	UAL	$ 17,791.10	0.08%	0.00%	-0.37%	-0.37%	-0.0003%
UDR INC	UDR	$ 10,386.26	0.05%	3.19%	6.13%	9.42%	0.0043%
UNIVERSAL HEALTH SERVICES-B	UHS	$ 9,811.41	0.04%	0.27%	7.97%	8.25%	0.0035%
ULTA BEAUTY INC	ULTA	$ 12,396.08	0.05%	0.00%	21.00%	21.00%	0.0114%
UNITEDHEALTH GROUP INC	UNH	$ 203,253.29	0.89%	1.37%	12.24%	13.69%	0.1220%
UNUM GROUP	UNM	$ 11,677.21	0.05%	1.65%	5.00%	6.69%	0.0034%
UNION PACIFIC CORP	UNP	$ 91,146.28	0.40%	2.11%	11.80%	14.04%	0.0561%
UNITED PARCEL SERVICE-CL B	UPS	$ 101,310.86	0.44%	2.82%	11.94%	14.93%	0.0663%
UNITED RENTALS INC	URI	$ 11,965.61	0.05%	0.00%	14.17%	14.17%	0.0074%
US BANCORP	USB	$ 90,965.24	0.40%	2.13%	7.93%	10.15%	0.0405%
UNITED TECHNOLOGIES CORP	UTX	$ 95,636.73	0.42%	2.32%	8.82%	11.25%	0.0472%
VISA INC-CLASS A SHARES	V	$ 250,076.21	1.10%	0.70%	16.77%	17.53%	0.1922%
VARIAN MEDICAL SYSTEMS INC	VAR	$ 9,564.74	0.04%	0.00%	7.20%	7.20%	0.0030%
VF CORP	VFC	$ 27,415.73	0.12%	2.47%	8.50%	11.07%	0.0133%
VIACOM INC-CLASS B	VIAB	$ 9,961.23	0.04%	3.34%	2.96%	6.35%	0.0028%
VALERO ENERGY CORP	VLO	$ 34,842.87	0.15%	3.55%	10.94%	14.68%	0.0224%
VULCAN MATERIALS CO	VMC	$ 16,104.48	0.07%	0.82%	21.63%	22.54%	0.0159%
VORNADO REALTY TRUST	VNO	$ 14,214.26	0.06%	3.39%	-1.19%	2.18%	0.0014%
VERISK ANALYTICS INC	VRSK	$ 13,995.47	0.06%	0.00%	6.94%	6.94%	0.0043%
VERISIGN INC	VRSN	$ 10,598.26	0.05%	0.00%	10.50%	10.50%	0.0049%
VERTEX PHARMACEUTICALS INC	VRTX	$ 36,981.98	0.16%	0.00%	70.84%	70.84%	0.1148%
VENTAS INC	VTR	$ 22,349.28	0.10%	5.03%	3.01%	8.12%	0.0080%
VERIZON COMMUNICATIONS INC	VZ	$ 195,282.83	0.86%	4.88%	2.21%	7.14%	0.0612%
WATERS CORP	WAT	$ 15,649.41	0.07%	0.00%	8.21%	8.21%	0.0056%
WALGREENS BOOTS ALLIANCE INC	WBA	$ 66,902.83	0.29%	2.49%	10.70%	13.32%	0.0391%
WESTERN DIGITAL CORP	WDC	$ 26,350.55	0.12%	2.26%	1.60%	3.88%	0.0045%
WEC ENERGY GROUP INC	WEC	$ 21,266.64	0.09%	3.09%	5.56%	8.73%	0.0081%
WELLS FARGO & CO	WFC	$ 276,652.31	1.21%	2.74%	22.22%	25.27%	0.3064%
WHIRLPOOL CORP	WHR	$ 11,780.47	0.05%	2.59%	7.23%	9.91%	0.0051%
WILLIS TOWERS WATSON PLC	WLTW	$ 21,631.25	0.09%	1.32%	13.10%	14.50%	0.0138%
WASTE MANAGEMENT INC	WM	$ 35,679.54	0.16%	2.07%	10.35%	12.53%	0.0196%
WILLIAMS COS INC	WMB	$ 23,559.55	0.10%	4.21%	2.90%	7.17%	0.0074%
WAL-MART STORES INC	WMT	$ 260,812.58	1.14%	2.35%	5.29%	7.69%	0.0880%
WESTROCK CO	WRK	$ 15,577.85	0.07%	2.61%	9.67%	12.40%	0.0085%
WESTERN UNION CO	WU	$ 9,214.94	0.04%	3.52%	8.00%	11.67%	0.0047%
WEYERHAEUSER CO	WY	$ 27,105.92	0.12%	3.46%	7.40%	10.99%	0.0131%
WYNDHAM WORLDWIDE CORP	WYN	$ 10,826.71	0.05%	2.18%	13.65%	15.98%	0.0076%
WYNN RESORTS LTD	WYNN	$ 15,127.47	0.07%	1.38%	32.40%	34.00%	0.0225%
CIMAREX ENERGY CO	XEC	$ 11,140.86	0.05%	0.27%	63.76%	64.12%	0.0313%
XCEL ENERGY INC	XEL	$ 25,144.42	0.11%	2.91%	6.01%	9.01%	0.0099%
XL GROUP LTD	XL	$ 10,359.54	0.05%	2.14%	20.45%	22.81%	0.0104%
XILINX INC	XLNX	$ 18,492.72	0.08%	1.90%	8.30%	10.28%	0.0083%
EXXON MOBIL CORP	XOM	$ 353,162.77	1.55%	3.67%	19.39%	23.41%	0.3624%
DENTSPLY SIRONA INC	XRAY	$ 14,015.68	0.06%	0.56%	9.80%	10.39%	0.0064%
XEROX CORP	XRX	$ 7,716.50	0.03%	3.30%	2.90%	6.25%	0.0021%
XYLEM INC	XYL	$ 11,948.79	0.05%	1.08%	15.00%	16.16%	0.0085%
YUM! BRANDS INC	YUM	$ 25,668.37	0.11%	1.72%	12.74%	14.57%	0.0164%
ZIMMER BIOMET HOLDINGS INC	ZBH	$ 24,591.07	0.11%	0.80%	8.38%	9.21%	0.0099%
ZIONS BANCORPORATION	ZION	$ 9,278.62	0.04%	0.94%	9.00%	9.99%	0.0041%
ZOETIS INC	ZTS	$ 31,215.11	0.14%	0.66%	14.32%	15.02%	0.0206%
Total Market Capitalization:		$ 22,813,125					14.07%

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]

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 145 of 182

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

[1] S&P 500 Est. Required Market Return	[2] Current 30-Year Treasury (30-day average)	[3] Implied Market Risk Premium
14.24%	2.86%	11.38%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
AGILENT TECHNOLOGIES INC	A	$ 21,802.62	0.11%	0.78%	7.00%	7.81%	0.0082%
AMERICAN AIRLINES GROUP INC	AAL	$ 23,332.80	0.11%	0.82%	1.50%	2.33%	0.0026%
ADVANCE AUTO PARTS INC	AAP	$ 6,326.37	0.03%	0.28%	9.50%	9.79%	0.0030%
APPLE INC	AAPL	$ 813,775.40	3.93%	1.68%	11.00%	12.77%	0.5025%
ABBVIE INC	ABBV	$ 142,733.70	0.69%	2.86%	11.50%	14.52%	0.1002%
AMERISOURCEBERGEN CORP	ABC	$ 17,253.47	0.08%	1.85%	8.00%	9.92%	0.0083%
ABBOTT LABORATORIES	ABT	$ 96,393.34	0.47%	1.91%	8.50%	10.49%	0.0489%
ACCENTURE PLC-CL A	ACN	$ 90,676.66	0.44%	1.87%	9.00%	10.95%	0.0480%
ADOBE SYSTEMS INC	ADBE	$ 85,636.86	0.41%	0.00%	29.50%	29.50%	0.1221%
ANALOG DEVICES INC	ADI	$ 33,296.01	0.16%	1.99%	16.00%	18.15%	0.0292%
ARCHER-DANIELS-MIDLAND CO	ADM	$ 24,214.63	0.12%	2.98%	3.50%	6.53%	0.0076%
AUTOMATIC DATA PROCESSING	ADP	$ 52,198.50	0.25%	2.05%	9.00%	11.14%	0.0281%
ALLIANCE DATA SYSTEMS CORP	ADS	$ 12,908.75	0.06%	0.89%	11.00%	11.94%	0.0075%
AUTODESK INC	ADSK	$ 26,598.95	N/A	0.00%	N/A	N/A	N/A
AMEREN CORPORATION	AEE	$ 14,890.79	0.07%	2.98%	6.00%	9.07%	0.0065%
AMERICAN ELECTRIC POWER	AEP	$ 36,277.89	0.18%	3.36%	4.00%	7.43%	0.0130%
AES CORP	AES	$ 7,169.69	N/A	4.42%	N/A	N/A	N/A
AETNA INC	AET	$ 59,313.06	0.29%	1.12%	9.00%	10.17%	0.0292%
AFLAC INC	AFL	$ 33,117.40	0.16%	2.13%	4.00%	6.17%	0.0099%
ALLERGAN PLC	AGN	$ 58,911.85	0.28%	1.59%	10.00%	11.67%	0.0332%
AMERICAN INTERNATIONAL GROUP	AIG	$ 58,585.04	0.28%	1.97%	27.00%	29.24%	0.0828%
APARTMENT INVT & MGMT CO -A	AIV	$ -	N/A	3.32%	N/A	N/A	N/A
ASSURANT INC	AIZ	$ 5,429.75	0.03%	2.11%	4.00%	6.15%	0.0016%
ARTHUR J GALLAGHER & CO	AJG	$ 11,217.45	0.05%	2.51%	15.50%	18.20%	0.0099%
AKAMAI TECHNOLOGIES INC	AKAM	$ 9,175.92	0.04%	0.00%	11.00%	11.00%	0.0049%
ALBEMARLE CORP	ALB	$ 15,348.77	0.07%	0.92%	9.50%	10.46%	0.0078%
ALIGN TECHNOLOGY INC	ALGN	$ 16,267.63	0.08%	0.00%	21.50%	21.50%	0.0169%
ALASKA AIR GROUP INC	ALK	$ 8,075.80	0.04%	1.84%	10.00%	11.93%	0.0047%
ALLSTATE CORP	ALL	$ 33,919.56	0.16%	1.58%	7.50%	9.14%	0.0150%
ALLEGION PLC	ALLE	$ 7,668.60	0.04%	0.79%	10.00%	10.83%	0.0040%
ALEXION PHARMACEUTICALS INC	ALXN	$ 28,239.68	0.14%	0.00%	23.50%	23.50%	0.0321%
APPLIED MATERIALS INC	AMAT	$ 59,621.38	0.29%	0.82%	21.00%	21.91%	0.0631%
ADVANCED MICRO DEVICES	AMD	$ 11,373.47	N/A	0.00%	N/A	N/A	N/A
AMETEK INC	AME	$ 15,977.94	0.08%	0.52%	5.50%	6.03%	0.0047%
AFFILIATED MANAGERS GROUP	AMG	$ 11,172.91	0.05%	0.42%	7.00%	7.43%	0.0040%
AMGEN INC	AMGN	$ 128,259.40	0.62%	2.78%	8.00%	10.89%	0.0675%
AMERIPRISE FINANCIAL INC	AMP	$ 24,470.30	0.12%	2.04%	11.50%	13.66%	0.0162%
AMERICAN TOWER CORP	AMT	$ 59,419.29	0.29%	2.05%	10.50%	12.66%	0.0364%
AMAZON.COM INC	AMZN	$ 466,766.40	2.26%	0.00%	56.00%	56.00%	1.2636%
ANDEAVOR	ANDV	$ 16,608.95	0.08%	2.25%	5.50%	7.81%	0.0063%
ANSYS INC	ANSS	$ 11,337.99	0.05%	0.00%	7.00%	7.00%	0.0038%
ANTHEM INC	ANTM	$ 53,259.67	0.26%	1.35%	11.00%	12.42%	0.0320%
AON PLC	AON	$ 38,664.39	0.19%	0.95%	9.50%	10.50%	0.0196%
SMITH (A.O.) CORP	AOS	$ 10,295.40	0.05%	0.94%	11.50%	12.49%	0.0062%
APACHE CORP	APA	$ 15,080.94	0.07%	2.53%	20.00%	22.78%	0.0166%
ANADARKO PETROLEUM CORP	APC	$ 26,348.73	N/A	0.42%	N/A	N/A	N/A
AIR PRODUCTS & CHEMICALS INC	APD	$ 35,176.08	0.17%	2.36%	9.00%	11.47%	0.0195%
AMPHENOL CORP-CL A	APH	$ 26,115.55	0.13%	0.89%	8.50%	9.43%	0.0119%
ALEXANDRIA REAL ESTATE EQUIT	ARE	N/A	N/A	0.00%	N/A	N/A	N/A
ARCONIC INC	ARNC	$ 10,844.95	N/A	0.98%	N/A	N/A	N/A
ACTIVISION BLIZZARD INC	ATVI	$ 46,844.13	0.23%	0.55%	9.00%	9.57%	0.0217%
AVALONBAY COMMUNITIES INC	AVB	$ -	N/A	3.33%	N/A	N/A	N/A
BROADCOM LTD	AVGO	$ 99,345.13	0.48%	1.67%	44.00%	46.04%	0.2211%
AVERY DENNISON CORP	AVY	$ 9,268.58	0.04%	1.79%	8.50%	10.37%	0.0046%
AMERICAN WATER WORKS CO INC	AWK	$ 15,597.63	0.08%	1.98%	8.50%	10.56%	0.0080%
AMERICAN EXPRESS CO	AXP	$ 83,345.99	0.40%	1.46%	6.00%	7.50%	0.0302%
ACUITY BRANDS INC	AYI	$ 6,662.46	0.03%	0.33%	16.50%	16.86%	0.0054%
AUTOZONE INC	AZO	$ 16,636.51	0.08%	0.00%	11.50%	11.50%	0.0092%
BOEING CO/THE	BA	$ 154,875.20	0.75%	2.43%	11.00%	13.56%	0.1016%
BANK OF AMERICA CORP	BAC	$ 274,019.00	1.32%	1.73%	16.00%	17.87%	0.2367%
BAXTER INTERNATIONAL INC	BAX	$ 35,359.64	0.17%	0.99%	4.00%	5.01%	0.0086%
BB&T CORP	BBT	$ 39,289.48	0.19%	2.72%	5.50%	8.29%	0.0158%
BEST BUY CO INC	BBY	$ 16,785.00	0.08%	2.65%	9.00%	11.77%	0.0095%
CR BARD INC	BCR	$ 23,842.23	0.12%	0.33%	9.50%	9.85%	0.0113%
BECTON DICKINSON AND CO	BDX	$ 47,752.24	0.23%	1.47%	9.00%	10.54%	0.0243%
FRANKLIN RESOURCES INC	BEN	$ 24,522.34	0.12%	1.96%	5.00%	7.01%	0.0083%
BROWN-FORMAN CORP-CLASS B	BF/B	$ 21,645.99	0.10%	1.31%	10.00%	11.38%	0.0119%
BRIGHTHOUSE FINANCIAL INC	BHF	N/A	N/A	0.00%	N/A	N/A	N/A
BAKER HUGHES A GE CO	BHGE	$ 12,754.44	N/A	2.27%	N/A	N/A	N/A
BIOGEN INC	BIIB	$ 65,058.79	0.31%	0.00%	7.00%	7.00%	0.0220%
BANK OF NEW YORK MELLON CORP	BK	$ 53,951.41	0.26%	1.84%	8.50%	10.42%	0.0272%
BLACKROCK INC	BLK	$ 76,295.62	0.37%	2.11%	8.50%	10.70%	0.0395%
BALL CORP	BLL	$ 14,961.87	0.07%	0.94%	15.00%	16.01%	0.0116%
BRISTOL-MYERS SQUIBB CO	BMY	$ 99,953.48	0.48%	2.56%	14.50%	17.25%	0.0833%
BERKSHIRE HATHAWAY INC-CL B	BRK/B	$ -	N/A	0.00%	N/A	N/A	N/A
BOSTON SCIENTIFIC CORP	BSX	$ 39,496.80	0.19%	0.00%	18.50%	18.50%	0.0353%
BORGWARNER INC	BWA	$ 11,252.42	0.05%	1.05%	8.00%	9.09%	0.0049%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
BOSTON PROPERTIES INC	BXP	$ -	N/A	2.47%	N/A	N/A	N/A
CITIGROUP INC	C	$ 201,045.00	0.97%	1.74%	11.00%	12.84%	0.1248%
CA INC	CA	$ 13,499.58	0.07%	3.19%	7.00%	10.30%	0.0067%
CONAGRA BRANDS INC	CAG	$ 13,635.66	0.07%	2.55%	3.00%	5.59%	0.0037%
CARDINAL HEALTH INC	CAH	$ 20,461.00	0.10%	2.90%	13.00%	16.09%	0.0159%
CATERPILLAR INC	CAT	$ 80,927.84	0.39%	2.28%	10.00%	12.39%	0.0485%
CHUBB LTD	CB	$ 72,016.78	0.35%	1.84%	8.00%	9.91%	0.0345%
CBRE GROUP INC - A	CBG	$ 13,378.65	0.06%	0.00%	8.50%	8.50%	0.0055%
CBOE HOLDINGS INC	CBOE	$ 12,573.51	0.06%	0.97%	13.00%	14.03%	0.0085%
CBS CORP-CLASS B NON VOTING	CBS	$ 22,987.12	0.11%	1.26%	13.50%	14.85%	0.0165%
CROWN CASTLE INTL CORP	CCI	$ 37,775.85	0.18%	4.07%	6.00%	10.19%	0.0186%
CARNIVAL CORP	CCL	$ 48,018.61	0.23%	2.70%	12.50%	15.37%	0.0357%
CADENCE DESIGN SYS INC	CDNS	$ 11,970.19	0.06%	0.00%	10.00%	10.00%	0.0058%
CELGENE CORP	CELG	$ 78,202.18	0.38%	0.00%	25.00%	25.00%	0.0945%
CERNER CORP	CERN	$ 23,646.29	0.11%	0.00%	9.50%	9.50%	0.0109%
CF INDUSTRIES HOLDINGS INC	CF	$ 8,734.54	0.04%	3.39%	9.50%	13.05%	0.0055%
CITIZENS FINANCIAL GROUP	CFG	$ 21,743.94	0.11%	1.87%	10.50%	12.47%	0.0131%
CHURCH & DWIGHT CO INC	CHD	$ 11,407.24	0.06%	1.66%	7.00%	8.72%	0.0048%
CHESAPEAKE ENERGY CORP	CHK	$ 3,196.91	N/A	0.00%	N/A	N/A	N/A
C.H. ROBINSON WORLDWIDE INC	CHRW	$ 11,196.64	0.05%	2.26%	6.00%	8.33%	0.0045%
CHARTER COMMUNICATIONS INC-A	CHTR	$ 78,632.85	0.38%	0.00%	26.00%	26.00%	0.0988%
CIGNA CORP	CI	$ 50,040.88	0.24%	0.02%	12.00%	12.02%	0.0291%
CINCINNATI FINANCIAL CORP	CINF	$ 12,459.68	0.06%	2.63%	6.50%	9.22%	0.0056%
COLGATE-PALMOLIVE CO	CL	$ 62,724.77	0.30%	2.25%	11.00%	13.37%	0.0406%
CLOROX COMPANY	CLX	$ 16,495.73	0.08%	2.63%	7.50%	10.23%	0.0082%
COMERICA INC	CMA	$ 14,022.03	0.07%	1.51%	13.50%	15.11%	0.0102%
COMCAST CORP-CLASS A	CMCSA	$ 170,954.00	0.83%	1.74%	11.00%	12.84%	0.1061%
CME GROUP INC	CME	$ 46,263.14	0.22%	1.93%	8.50%	10.51%	0.0235%
CHIPOTLE MEXICAN GRILL INC	CMG	$ 7,963.36	0.04%	0.00%	15.50%	15.50%	0.0060%
CUMMINS INC	CMI	$ 29,940.07	0.14%	2.42%	7.50%	10.01%	0.0145%
CMS ENERGY CORP	CMS	$ 13,499.91	0.07%	2.92%	6.50%	9.51%	0.0062%
CENTENE CORP	CNC	$ 15,725.94	0.08%	0.00%	14.00%	14.00%	0.0106%
CENTERPOINT ENERGY INC	CNP	$ 12,710.81	0.06%	3.73%	6.00%	9.84%	0.0060%
CAPITAL ONE FINANCIAL CORP	COF	$ 44,751.28	0.22%	1.73%	4.00%	5.76%	0.0125%
CABOT OIL & GAS CORP	COG	$ 11,400.45	N/A	0.81%	N/A	N/A	N/A
COACH INC	COH	$ 11,353.63	0.05%	3.34%	8.00%	11.47%	0.0063%
ROCKWELL COLLINS INC	COL	$ 21,942.25	0.11%	1.01%	8.00%	9.05%	0.0096%
COOPER COS INC/THE	COO	$ 11,780.09	0.06%	0.03%	16.50%	16.53%	0.0094%
CONOCOPHILLIPS	COP	$ 62,624.20	0.30%	2.10%	59.00%	61.72%	0.1869%
COSTCO WHOLESALE CORP	COST	$ 71,267.79	0.34%	1.23%	10.00%	11.29%	0.0389%
COTY INC-CL A	COTY	$ 11,394.00	0.06%	3.28%	6.00%	9.38%	0.0052%
CAMPBELL SOUP CO	CPB	$ 14,303.52	0.07%	2.95%	4.00%	7.01%	0.0048%
SALESFORCE.COM INC	CRM	$ 71,905.94	N/A	0.00%	N/A	N/A	N/A
CISCO SYSTEMS INC	CSCO	$ 171,281.40	0.83%	3.39%	7.00%	10.51%	0.0870%
CSRA INC	CSRA	$ 5,201.61	N/A	1.26%	N/A	N/A	N/A
CSX CORP	CSX	$ 46,786.40	0.23%	1.53%	10.00%	11.61%	0.0263%
CINTAS CORP	CTAS	$ 16,091.58	0.08%	1.07%	11.00%	12.13%	0.0094%
CENTURYLINK INC	CTL	$ 10,175.74	0.05%	11.67%	6.50%	18.55%	0.0091%
COGNIZANT TECH SOLUTIONS-A	CTSH	$ 44,002.20	0.21%	0.81%	12.00%	12.86%	0.0274%
CITRIX SYSTEMS INC	CTXS	$ 12,277.76	0.06%	0.00%	5.50%	5.50%	0.0033%
CVS HEALTH CORP	CVS	$ 74,409.65	0.36%	2.73%	9.00%	11.85%	0.0426%
CHEVRON CORP	CVX	$ 224,444.20	1.09%	3.66%	15.00%	18.93%	0.2054%
CONCHO RESOURCES INC	CXO	$ 19,351.84	0.09%	0.00%	24.50%	24.50%	0.0229%
DOMINION ENERGY INC	D	$ 50,658.30	0.24%	3.98%	5.50%	9.59%	0.0235%
DELTA AIR LINES INC	DAL	$ 36,311.71	0.18%	2.40%	10.50%	13.03%	0.0229%
DEERE & CO	DE	$ 42,456.19	0.21%	1.82%	6.00%	7.87%	0.0162%
DISCOVER FINANCIAL SERVICES	DFS	$ 25,019.62	0.12%	2.10%	5.00%	7.15%	0.0087%
DOLLAR GENERAL CORP	DG	$ 23,054.86	0.11%	1.23%	9.50%	10.79%	0.0120%
QUEST DIAGNOSTICS INC	DGX	$ 12,892.80	0.06%	1.90%	9.50%	11.49%	0.0072%
DR HORTON INC	DHI	$ 16,465.86	0.08%	0.98%	12.00%	13.04%	0.0104%
DANAHER CORP	DHR	$ 63,610.43	0.31%	0.61%	9.00%	9.64%	0.0296%
WALT DISNEY CO/THE	DIS	$ 157,696.00	0.76%	1.58%	8.00%	9.64%	0.0735%
DISCOVERY COMMUNICATIONS-A	DISCA	$ 7,329.22	0.04%	0.00%	13.50%	13.50%	0.0048%
DISH NETWORK CORP-A	DISH	$ 22,336.04	0.11%	0.00%	2.50%	2.50%	0.0027%
DELPHI AUTOMOTIVE PLC	DLPH	$ 26,436.24	0.13%	1.25%	13.50%	14.83%	0.0190%
DIGITAL REALTY TRUST INC	DLR	$ -	N/A	3.45%	N/A	N/A	N/A
DOLLAR TREE INC	DLTR	$ 22,076.86	0.11%	0.00%	17.00%	17.00%	0.0181%
DOVER CORP	DOV	$ 15,029.16	0.07%	1.95%	8.00%	10.03%	0.0073%
DR PEPPER SNAPPLE GROUP INC	DPS	$ 15,618.14	0.08%	2.75%	7.50%	10.35%	0.0078%
DUKE REALTY CORP	DRE	$ -	0.00%	2.80%	33.50%	36.77%	0.0000%
DARDEN RESTAURANTS INC	DRI	$ 10,238.89	0.05%	3.04%	11.00%	14.21%	0.0070%
DTE ENERGY COMPANY	DTE	$ 19,754.43	0.10%	3.21%	6.00%	9.31%	0.0089%
DUKE ENERGY CORP	DUK	$ 61,152.00	0.30%	4.12%	4.50%	8.71%	0.0258%
DAVITA INC	DVA	$ 11,764.54	0.06%	0.00%	10.00%	10.00%	0.0057%
DEVON ENERGY CORP	DVN	$ 18,362.66	0.09%	0.69%	15.00%	15.74%	0.0140%
DOWDUPONT INC	DWDP	$ -	N/A	2.33%	N/A	N/A	N/A
DXC TECHNOLOGY CO	DXC	$ 12,835.68	0.06%	0.79%	18.00%	18.86%	0.0117%
ELECTRONIC ARTS INC	EA	$ 35,791.47	0.17%	0.00%	13.00%	13.00%	0.0225%
EBAY INC	EBAY	$ 38,708.10	0.19%	0.00%	9.50%	9.50%	0.0178%
ECOLAB INC	ECL	$ 38,394.70	0.19%	1.12%	8.50%	9.67%	0.0179%
CONSOLIDATED EDISON INC	ED	$ 26,163.00	0.13%	3.30%	2.50%	5.84%	0.0074%
EQUIFAX INC	EFX	$ 13,117.58	0.06%	1.43%	10.50%	12.01%	0.0076%
EDISON INTERNATIONAL	EIX	$ 25,651.10	0.12%	2.95%	4.00%	7.01%	0.0087%
ESTEE LAUDER COMPANIES-CL A	EL	$ 41,575.93	0.20%	1.22%	11.50%	12.79%	0.0257%
EASTMAN CHEMICAL CO	EMN	$ 13,185.14	0.06%	2.24%	10.00%	12.35%	0.0079%
EMERSON ELECTRIC CO	EMR	$ 42,769.00	0.21%	2.89%	5.00%	7.96%	0.0165%
EOG RESOURCES INC	EOG	$ 55,961.12	0.27%	0.74%	29.00%	29.85%	0.0807%
EQUINIX INC	EQIX	$ 35,402.62	0.17%	1.76%	23.00%	24.96%	0.0427%
EQUITY RESIDENTIAL	EQR	$ -	N/A	3.07%	N/A	N/A	N/A

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 146 of 182

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
EQT CORP	EQT	$ 10,412.71	0.05%	0.20%	20.50%	20.72%	0.0104%
EVERSOURCE ENERGY	ES	$ 19,722.98	0.10%	3.18%	6.50%	9.78%	0.0093%
EXPRESS SCRIPTS HOLDING CO	ESRX	$ 33,377.95	0.16%	0.00%	14.50%	14.50%	0.0234%
ESSEX PROPERTY TRUST INC	ESS	$ -	N/A	2.73%	N/A	N/A	N/A
E*TRADE FINANCIAL CORP	ETFC	$ 12,003.36	0.06%	0.00%	15.50%	15.50%	0.0090%
EATON CORP PLC	ETN	$ 35,361.60	0.17%	3.02%	7.00%	10.13%	0.0173%
ENTERGY CORP	ETR	$ 15,470.95	0.07%	4.13%	-3.50%	0.56%	0.0004%
ENVISION HEALTHCARE CORP	EVHC	$ 5,130.09	N/A	0.00%	N/A	N/A	N/A
EDWARDS LIFESCIENCES CORP	EW	$ 21,821.41	0.11%	0.00%	17.00%	17.00%	0.0179%
EXELON CORP	EXC	$ 38,288.31	0.19%	3.34%	7.00%	10.46%	0.0194%
EXPEDITORS INTL WASH INC	EXPD	$ 10,639.90	0.05%	1.42%	8.00%	9.48%	0.0049%
EXPEDIA INC	EXPE	$ 22,360.22	0.11%	0.81%	23.00%	23.90%	0.0258%
EXTRA SPACE STORAGE INC	EXR	$ -	N/A	4.27%	N/A	N/A	N/A
FORD MOTOR CO	F	$ 48,740.15	0.24%	4.89%	2.50%	7.45%	0.0176%
FASTENAL CO	FAST	$ 13,647.82	0.07%	2.70%	4.00%	6.75%	0.0045%
FACEBOOK INC-A	FB	$ 495,338.90	2.39%	0.00%	31.50%	31.50%	0.7543%
FORTUNE BRANDS HOME & SECURI	FBHS	$ 10,526.65	0.05%	1.05%	12.00%	13.11%	0.0067%
FREEPORT-MCMORAN INC	FCX	$ 23,166.13	N/A	0.00%	N/A	N/A	N/A
FEDEX CORP	FDX	$ 61,416.62	0.30%	0.87%	12.50%	13.42%	0.0399%
FIRSTENERGY CORP	FE	$ 14,264.71	0.07%	4.53%	9.00%	13.73%	0.0095%
F5 NETWORKS INC	FFIV	$ 7,882.63	0.04%	0.00%	10.00%	10.00%	0.0038%
FIDELITY NATIONAL INFO SERV	FIS	$ 31,852.08	0.15%	1.21%	10.00%	11.27%	0.0174%
FISERV INC	FISV	$ 27,180.55	0.13%	0.00%	9.00%	9.00%	0.0118%
FIFTH THIRD BANCORP	FITB	$ 21,316.48	0.10%	2.25%	5.00%	7.31%	0.0075%
FOOT LOCKER INC	FL	$ 4,335.48	0.02%	3.75%	6.50%	10.37%	0.0022%
FLIR SYSTEMS INC	FLIR	$ 6,544.42	0.03%	1.45%	7.50%	9.00%	0.0028%
FLUOR CORP	FLR	$ 5,971.35	0.03%	1.97%	2.00%	3.99%	0.0012%
FLOWSERVE CORP	FLS	$ 5,829.22	0.03%	1.70%	2.50%	4.22%	0.0012%
FMC CORP	FMC	$ 12,492.68	0.06%	0.74%	8.00%	8.77%	0.0053%
TWENTY-FIRST CENTURY FOX-A	FOXA	$ 48,701.29	0.24%	1.37%	11.50%	12.95%	0.0305%
FEDERAL REALTY INVS TRUST	FRT	$ -	N/A	3.29%	N/A	N/A	N/A
TECHNIPFMC PLC	FTI	N/A	N/A	0.00%	N/A	N/A	N/A
FORTIVE CORP	FTV	$ 25,530.82	N/A	0.38%	N/A	N/A	N/A
GENERAL DYNAMICS CORP	GD	$ 60,884.06	0.29%	1.65%	5.50%	7.20%	0.0212%
GENERAL ELECTRIC CO	GE	$ 184,587.40	0.89%	4.50%	13.50%	18.30%	0.1633%
GGP INC	GGP	$ -	N/A	4.69%	N/A	N/A	N/A
GILEAD SCIENCES INC	GILD	$ 101,711.30	0.49%	2.67%	-1.00%	1.66%	0.0081%
GENERAL MILLS INC	GIS	$ 29,410.03	0.14%	3.83%	3.50%	7.40%	0.0105%
CORNING INC	GLW	$ 28,593.40	0.14%	2.02%	11.50%	13.64%	0.0188%
GENERAL MOTORS CO	GM	$ 63,350.00	0.31%	3.45%	5.50%	9.04%	0.0277%
ALPHABET INC-CL A	GOOGL	N/A	N/A	0.00%	N/A	N/A	N/A
GENUINE PARTS CO	GPC	$ 13,107.20	0.06%	3.02%	7.00%	10.13%	0.0064%
GLOBAL PAYMENTS INC	GPN	$ 15,316.72	0.07%	0.04%	12.00%	12.04%	0.0089%
GAP INC/THE	GPS	$ 10,693.76	0.05%	3.37%	0.50%	3.88%	0.0020%
GARMIN LTD	GRMN	$ 10,599.59	0.05%	3.67%	5.00%	8.76%	0.0045%
GOLDMAN SACHS GROUP INC	GS	$ 93,838.84	0.45%	1.24%	9.50%	10.80%	0.0490%
GOODYEAR TIRE & RUBBER CO	GT	$ 8,484.84	0.04%	1.66%	10.00%	11.74%	0.0048%
WW GRAINGER INC	GWW	$ 11,463.84	0.06%	2.55%	4.50%	7.11%	0.0039%
HALLIBURTON CO	HAL	$ 35,878.80	0.17%	1.75%	21.50%	23.44%	0.0407%
HASBRO INC	HAS	$ 11,873.75	0.06%	2.40%	10.50%	13.03%	0.0075%
HUNTINGTON BANCSHARES INC	HBAN	$ 15,162.12	0.07%	3.16%	10.00%	13.32%	0.0098%
HANESBRANDS INC	HBI	$ 8,316.41	0.04%	2.81%	9.00%	11.94%	0.0048%
HCA HEALTHCARE INC	HCA	$ 27,903.00	0.13%	0.00%	10.50%	10.50%	0.0142%
WELLTOWER INC	HCN	$ -	N/A	5.43%	N/A	N/A	N/A
HCP INC	HCP	$ -	N/A	5.99%	N/A	N/A	N/A
HOME DEPOT INC	HD	$ 197,994.60	0.96%	2.39%	10.50%	13.02%	0.1246%
HESS CORP	HES	$ 13,120.60	N/A	2.42%	N/A	N/A	N/A
HARTFORD FINANCIAL SVCS GRP	HIG	$ 20,158.28	0.10%	1.80%	12.50%	14.41%	0.0140%
HILTON WORLDWIDE HOLDINGS IN	HLT	$ 23,260.28	0.11%	0.83%	7.00%	7.86%	0.0088%
HARLEY-DAVIDSON INC	HOG	$ 8,325.04	0.04%	2.99%	8.00%	11.11%	0.0045%
HOLOGIC INC	HOLX	$ 10,404.87	0.05%	0.00%	27.00%	27.00%	0.0136%
HONEYWELL INTERNATIONAL INC	HON	$ 111,104.30	0.54%	2.04%	8.50%	10.63%	0.0571%
HELMERICH & PAYNE	HP	$ 5,638.66	0.03%	5.39%	4.50%	10.01%	0.0027%
HEWLETT PACKARD ENTERPRIS	HPE	$ 23,142.00	0.11%	1.83%	1.50%	3.34%	0.0037%
HP INC	HPQ	$ 35,938.40	N/A	2.60%	N/A	N/A	N/A
H&R BLOCK INC	HRB	$ 5,542.10	0.03%	3.62%	8.00%	11.76%	0.0032%
HORMEL FOODS CORP	HRL	$ 16,027.46	0.08%	2.34%	10.50%	12.96%	0.0100%
HARRIS CORP	HRS	$ 16,252.79	0.08%	1.70%	10.50%	12.29%	0.0097%
HENRY SCHEIN INC	HSIC	$ 12,904.03	0.06%	0.00%	8.50%	8.50%	0.0053%
HOST HOTELS & RESORTS INC	HST	$ -	N/A	4.23%	N/A	N/A	N/A
HERSHEY CO/THE	HSY	$ 21,851.13	0.11%	2.55%	6.50%	9.13%	0.0096%
HUMANA INC	HUM	$ 36,348.91	0.18%	0.64%	10.00%	10.67%	0.0188%
INTL BUSINESS MACHINES CORP	IBM	$ 143,146.00	N/A	4.04%	N/A	N/A	N/A
INTERCONTINENTAL EXCHANGE IN	ICE	$ 38,644.29	0.19%	1.22%	12.00%	13.29%	0.0248%
IDEXX LABORATORIES INC	IDXX	$ 14,363.17	0.07%	0.00%	15.00%	15.00%	0.0104%
INTL FLAVORS & FRAGRANCES	IFF	$ 11,846.40	0.06%	1.89%	7.50%	9.46%	0.0054%
ILLUMINA INC	ILMN	$ 30,413.26	0.15%	0.00%	17.00%	17.00%	0.0250%
INCYTE CORP	INCY	$ 23,762.72	0.11%	0.00%	69.50%	69.50%	0.0798%
IHS MARKIT LTD	INFO	$ 17,148.71	0.08%	0.00%	17.50%	17.50%	0.0145%
INTEL CORP	INTC	$ 194,303.60	0.94%	2.64%	7.50%	10.24%	0.0962%
INTUIT INC	INTU	$ 38,690.23	0.19%	1.03%	13.00%	14.10%	0.0264%
INTERNATIONAL PAPER CO	IP	$ 23,948.20	0.12%	3.28%	18.50%	22.08%	0.0256%
INTERPUBLIC GROUP OF COS INC	IPG	$ 8,055.90	0.04%	3.57%	10.00%	13.75%	0.0054%
INGERSOLL-RAND PLC	IR	$ 22,710.33	0.11%	1.99%	11.00%	13.10%	0.0144%
IRON MOUNTAIN INC	IRM	$ 10,485.31	0.05%	5.93%	11.00%	17.26%	0.0087%
INTUITIVE SURGICAL INC	ISRG	$ 41,704.32	0.20%	0.00%	14.00%	14.00%	0.0282%
GARTNER INC	IT	$ 11,304.10	0.05%	0.00%	17.00%	17.00%	0.0093%
ILLINOIS TOOL WORKS	ITW	$ 54,195.75	0.26%	1.98%	10.00%	12.08%	0.0316%
INVESCO LTD	IVZ	$ 15,116.04	0.07%	3.12%	5.50%	8.71%	0.0064%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 147 of 182

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
HUNT (JB) TRANSPRT SVCS INC	JBHT	$ 11,915.28	0.06%	0.89%	9.00%	9.93%	0.0057%
JOHNSON CONTROLS INTERNATION	JCI	$ 39,319.27	0.19%	2.37%	0.50%	2.88%	0.0055%
JACOBS ENGINEERING GROUP INC	JEC	$ 7,063.28	0.03%	1.06%	8.00%	9.10%	0.0031%
JOHNSON & JOHNSON	JNJ	$ 380,786.80	1.84%	2.43%	9.50%	12.05%	0.2217%
JUNIPER NETWORKS INC	JNPR	$ 9,459.23	0.05%	1.77%	8.00%	9.84%	0.0045%
JPMORGAN CHASE & CO	JPM	$ 358,019.40	1.73%	2.22%	5.50%	7.78%	0.1347%
NORDSTROM INC	JWN	$ 7,015.30	0.03%	3.51%	2.00%	5.55%	0.0019%
KELLOGG CO	K	$ 20,950.30	0.10%	3.60%	7.00%	10.73%	0.0109%
KEYCORP	KEY	$ 20,237.53	0.10%	2.32%	11.50%	13.95%	0.0137%
KRAFT HEINZ CO/THE	KHC	$ 94,165.55	N/A	3.27%	N/A	N/A	N/A
KIMCO REALTY CORP	KIM	$ -	N/A	6.22%	N/A	N/A	N/A
KLA-TENCOR CORP	KLAC	$ 17,072.04	0.08%	2.17%	13.50%	15.82%	0.0131%
KIMBERLY-CLARK CORP	KMB	$ 39,956.07	0.19%	3.42%	10.50%	14.10%	0.0272%
KINDER MORGAN INC	KMI	$ 40,160.66	0.19%	2.78%	24.00%	27.11%	0.0526%
CARMAX INC	KMX	$ 13,617.33	0.07%	0.00%	10.00%	10.00%	0.0066%
COCA-COLA CO/THE	KO	$ 197,309.70	0.95%	3.33%	4.50%	7.90%	0.0754%
MICHAEL KORS HOLDINGS LTD	KORS	$ 7,543.27	0.04%	0.00%	3.00%	3.00%	0.0011%
KROGER CO	KR	$ 18,592.26	0.09%	2.50%	3.50%	6.04%	0.0054%
KOHLS CORP	KSS	$ 7,525.41	0.04%	5.26%	7.00%	12.44%	0.0045%
KANSAS CITY SOUTHERN	KSU	$ 11,031.39	0.05%	1.38%	9.50%	10.95%	0.0058%
LOEWS CORP	L	$ 16,281.39	0.08%	0.52%	14.50%	15.06%	0.0119%
L BRANDS INC	LB	$ 12,649.78	0.06%	5.43%	0.50%	5.94%	0.0036%
LEGGETT & PLATT INC	LEG	$ 6,380.11	0.03%	2.99%	7.50%	10.60%	0.0033%
LENNAR CORP-A	LEN	$ 13,753.53	0.07%	0.27%	10.50%	10.78%	0.0072%
LABORATORY CRP OF AMER HLDGS	LH	$ 15,645.78	0.08%	0.00%	9.00%	9.00%	0.0068%
LKQ CORP	LKQ	$ 11,449.80	0.06%	0.00%	11.50%	11.50%	0.0064%
L3 TECHNOLOGIES INC	LLL	$ 14,479.20	0.07%	1.62%	10.00%	11.70%	0.0082%
ELI LILLY & CO	LLY	$ 92,659.23	0.45%	2.47%	11.00%	13.61%	0.0609%
LOCKHEED MARTIN CORP	LMT	$ 88,282.53	0.43%	2.60%	10.00%	12.73%	0.0543%
LINCOLN NATIONAL CORP	LNC	$ 17,110.03	0.08%	1.66%	7.00%	8.72%	0.0072%
ALLIANT ENERGY CORP	LNT	$ 10,023.47	0.05%	2.91%	6.50%	9.50%	0.0046%
LOWE'S COS INC	LOW	$ 68,240.61	0.33%	2.01%	13.50%	15.65%	0.0516%
LAM RESEARCH CORP	LRCX	$ 33,905.51	0.16%	0.94%	20.50%	21.54%	0.0353%
LEUCADIA NATIONAL CORP	LUK	$ 9,156.21	0.04%	1.57%	30.00%	31.81%	0.0141%
SOUTHWEST AIRLINES CO	LUV	$ 32,986.92	0.16%	1.09%	12.00%	13.16%	0.0210%
LYONDELLBASELL INDU-CL A	LYB	$ 40,234.57	0.19%	3.56%	4.00%	7.63%	0.0148%
MACY'S INC	M	$ 6,499.29	0.03%	7.08%	2.00%	9.15%	0.0029%
MASTERCARD INC - A	MA	$ 156,411.50	0.76%	0.60%	12.50%	13.14%	0.0993%
MID-AMERICA APARTMENT COMM	MAA	N/A	N/A	0.00%	N/A	N/A	N/A
MACERICH CO/THE	MAC	$ -	N/A	5.19%	N/A	N/A	N/A
MARRIOTT INTERNATIONAL -CL A	MAR	$ 44,247.22	0.21%	1.11%	15.00%	16.19%	0.0346%
MASCO CORP	MAS	$ 12,494.26	0.06%	1.05%	14.00%	15.12%	0.0091%
MATTEL INC	MAT	$ 5,282.67	0.03%	3.90%	8.00%	12.06%	0.0031%
MCDONALD'S CORP	MCD	$ 132,848.10	0.64%	2.46%	9.50%	12.08%	0.0776%
MICROCHIP TECHNOLOGY INC	MCHP	$ 21,671.44	0.10%	1.59%	13.00%	14.69%	0.0154%
MCKESSON CORP	MCK	$ 30,143.40	0.15%	0.95%	11.00%	12.00%	0.0175%
MOODY'S CORP	MCO	$ 28,154.89	0.14%	1.03%	8.50%	9.57%	0.0130%
MONDELEZ INTERNATIONAL INC-A	MDLZ	$ 61,806.79	0.30%	2.20%	10.00%	12.31%	0.0368%
MEDTRONIC PLC	MDT	$ 108,963.30	0.53%	2.29%	5.50%	7.85%	0.0414%
METLIFE INC	MET	$ 57,650.49	0.28%	3.12%	7.00%	10.23%	0.0285%
MGM RESORTS INTERNATIONAL	MGM	$ 17,727.53	0.09%	1.43%	41.50%	43.23%	0.0370%
MOHAWK INDUSTRIES INC	MHK	$ 19,549.41	0.09%	0.00%	8.50%	8.50%	0.0080%
MCCORMICK & CO-NON VTG SHRS	MKC	$ 12,974.04	0.06%	1.93%	9.00%	11.02%	0.0069%
MARTIN MARIETTA MATERIALS	MLM	$ 13,631.25	0.07%	0.81%	17.50%	18.38%	0.0121%
MARSH & MCLENNAN COS	MMC	$ 41,721.73	0.20%	1.84%	10.00%	11.93%	0.0241%
3M CO	MMM	$ 139,010.90	0.67%	2.02%	8.00%	10.10%	0.0679%
MONSTER BEVERAGE CORP	MNST	$ 32,240.87	0.16%	0.00%	12.00%	12.00%	0.0187%
ALTRIA GROUP INC	MO	$ 125,634.00	0.61%	4.01%	10.00%	14.21%	0.0863%
MONSANTO CO	MON	$ 53,345.70	0.26%	1.78%	6.00%	7.83%	0.0202%
MOSAIC CO/THE	MOS	$ 7,428.22	0.04%	3.03%	3.00%	6.08%	0.0022%
MARATHON PETROLEUM CORP	MPC	$ 28,978.62	0.14%	2.86%	5.50%	8.44%	0.0118%
MERCK & CO. INC.	MRK	$ 169,054.70	0.82%	3.03%	5.50%	8.61%	0.0704%
MARATHON OIL CORP	MRO	$ 11,526.00	N/A	1.48%	N/A	N/A	N/A
MORGAN STANLEY	MS	$ 93,395.37	0.45%	1.97%	10.50%	12.57%	0.0568%
MICROSOFT CORP	MSFT	$ 608,027.20	2.94%	2.13%	8.00%	10.22%	0.3003%
MOTOROLA SOLUTIONS INC	MSI	$ 14,688.56	0.07%	2.27%	10.50%	12.89%	0.0092%
M & T BANK CORP	MTB	$ 25,565.54	0.12%	1.79%	8.00%	9.86%	0.0122%
METTLER-TOLEDO INTERNATIONAL	MTD	$ 17,139.55	0.08%	0.00%	11.00%	11.00%	0.0091%
MICRON TECHNOLOGY INC	MU	$ 45,066.00	0.22%	0.00%	25.50%	25.50%	0.0556%
MYLAN NV	MYL	$ 20,678.22	0.10%	0.00%	10.00%	10.00%	0.0100%
NAVIENT CORP	NAVI	$ 3,274.30	0.02%	5.36%	6.00%	11.52%	0.0018%
NOBLE ENERGY INC	NBL	$ 13,073.46	N/A	1.49%	N/A	N/A	N/A
NORWEGIAN CRUISE LINE HOLDIN	NCLH	$ 12,525.55	0.06%	0.00%	21.50%	21.50%	0.0130%
NASDAQ INC	NDAQ	$ 12,028.55	0.06%	2.10%	9.50%	11.70%	0.0068%
NEXTERA ENERGY INC	NEE	$ 72,154.36	0.35%	2.73%	7.00%	9.83%	0.0343%
NEWMONT MINING CORP	NEM	$ 19,098.76	0.09%	0.84%	9.00%	9.88%	0.0091%
NETFLIX INC	NFLX	$ 84,473.41	0.41%	0.00%	44.50%	44.50%	0.1817%
NEWFIELD EXPLORATION CO	NFX	$ 5,794.58	0.03%	0.00%	18.00%	18.00%	0.0050%
NISOURCE INC	NI	$ 8,622.79	0.04%	2.65%	5.50%	8.22%	0.0034%
NIKE INC -CL B	NKE	$ 92,686.53	0.45%	1.27%	14.00%	15.36%	0.0688%
NIELSEN HOLDINGS PLC	NLSN	$ 13,986.72	N/A	3.46%	N/A	N/A	N/A
NORTHROP GRUMMAN CORP	NOC	$ 51,873.50	0.25%	1.34%	8.00%	9.39%	0.0236%
NATIONAL OILWELL VARCO INC	NOV	$ 12,868.56	0.06%	0.59%	3.00%	3.60%	0.0022%
NRG ENERGY INC	NRG	$ 7,830.37	N/A	0.48%	N/A	N/A	N/A
NORFOLK SOUTHERN CORP	NSC	$ 38,129.36	0.18%	1.83%	8.00%	9.90%	0.0183%
NETAPP INC	NTAP	$ 11,993.40	0.06%	1.85%	12.50%	14.47%	0.0084%
NORTHERN TRUST CORP	NTRS	$ 21,723.26	0.11%	1.76%	7.50%	9.33%	0.0098%
NUCOR CORP	NUE	$ 19,079.32	0.09%	2.53%	20.50%	23.29%	0.0215%
NVIDIA CORP	NVDA	$ 117,414.00	0.57%	0.29%	19.50%	19.82%	0.1125%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 148 of 182

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
NEWELL BRANDS INC	NWL	$ 19,529.36	0.09%	2.28%	23.50%	26.05%	0.0246%
NEWS CORP - CLASS A	NWSA	$ 7,936.06	N/A	1.46%	N/A	N/A	N/A
REALTY INCOME CORP	O	$ -	N/A	4.92%	N/A	N/A	N/A
ONEOK INC	OKE	$ 20,303.67	0.10%	5.58%	22.00%	28.19%	0.0277%
OMNICOM GROUP	OMC	$ 16,220.30	0.08%	3.27%	7.50%	10.89%	0.0085%
ORACLE CORP	ORCL	$ 209,175.70	1.01%	1.52%	8.00%	9.58%	0.0969%
O'REILLY AUTOMOTIVE INC	ORLY	$ 18,831.79	0.09%	0.00%	11.00%	11.00%	0.0100%
OCCIDENTAL PETROLEUM CORP	OXY	$ 49,406.70	0.24%	4.80%	25.00%	30.40%	0.0726%
PAYCHEX INC	PAYX	$ 23,181.35	0.11%	3.16%	8.50%	11.79%	0.0132%
PEOPLE'S UNITED FINANCIAL	PBCT	$ 6,490.05	0.03%	3.66%	10.50%	14.35%	0.0045%
PACCAR INC	PCAR	$ 25,321.71	0.12%	2.29%	6.50%	8.86%	0.0109%
P G & E CORP	PCG	$ 29,063.42	0.14%	3.91%	9.50%	13.60%	0.0191%
PRICELINE GROUP INC/THE	PCLN	$ 95,135.75	0.46%	0.00%	15.50%	15.50%	0.0713%
PATTERSON COS INC	PDCO	$ 3,780.27	0.02%	2.73%	13.00%	15.91%	0.0029%
PUBLIC SERVICE ENTERPRISE GP	PEG	$ 24,926.80	0.12%	3.57%	1.00%	4.59%	0.0055%
PEPSICO INC	PEP	$ 157,568.80	0.76%	2.95%	7.50%	10.56%	0.0804%
PFIZER INC	PFE	$ 212,558.20	1.03%	3.58%	11.00%	14.78%	0.1518%
PRINCIPAL FINANCIAL GROUP	PFG	$ 19,682.52	0.10%	2.76%	4.50%	7.32%	0.0070%
PROCTER & GAMBLE CO/THE	PG	$ 223,413.50	1.08%	3.15%	10.00%	13.31%	0.1437%
PROGRESSIVE CORP	PGR	$ 28,556.15	0.14%	1.95%	8.00%	10.03%	0.0138%
PARKER HANNIFIN CORP	PH	$ 24,617.88	0.12%	1.43%	7.50%	8.98%	0.0107%
PULTEGROUP INC	PHM	$ 8,747.54	0.04%	1.28%	16.50%	17.89%	0.0076%
PACKAGING CORP OF AMERICA	PKG	$ 11,193.95	0.05%	2.13%	8.50%	10.72%	0.0058%
PERKINELMER INC	PKI	$ 7,945.13	0.04%	0.39%	8.00%	8.41%	0.0032%
PROLOGIS INC	PLD	$ -	N/A	2.74%	N/A	N/A	N/A
PHILIP MORRIS INTERNATIONAL	PM	$ 166,083.10	0.80%	4.00%	7.50%	11.65%	0.0935%
PNC FINANCIAL SERVICES GROUP	PNC	$ 66,168.00	0.32%	2.18%	5.50%	7.74%	0.0248%
PENTAIR PLC	PNR	$ 12,922.44	0.06%	1.94%	11.50%	13.55%	0.0085%
PINNACLE WEST CAPITAL	PNW	$ 9,838.45	0.05%	3.15%	5.50%	8.74%	0.0042%
PPG INDUSTRIES INC	PPG	$ 30,198.67	0.15%	1.52%	10.50%	12.10%	0.0177%
PPL CORP	PPL	$ 25,835.48	N/A	4.33%	N/A	N/A	N/A
PERRIGO CO PLC	PRGO	$ 11,913.72	0.06%	0.83%	-0.50%	0.33%	0.0002%
PRUDENTIAL FINANCIAL INC	PRU	$ 47,781.95	0.23%	2.68%	5.50%	8.25%	0.0191%
PUBLIC STORAGE	PSA	$ -	N/A	4.14%	N/A	N/A	N/A
PHILLIPS 66	PSX	$ 46,639.57	0.23%	3.22%	5.00%	8.30%	0.0187%
PVH CORP	PVH	$ 10,010.15	0.05%	0.12%	7.50%	7.62%	0.0037%
QUANTA SERVICES INC	PWR	$ 5,768.21	0.03%	0.00%	15.00%	15.00%	0.0042%
PRAXAIR INC	PX	$ 42,831.23	0.21%	2.23%	8.00%	10.32%	0.0214%
PIONEER NATURAL RESOURCES CO	PXD	$ 24,206.50	0.12%	0.06%	37.50%	37.57%	0.0440%
PAYPAL HOLDINGS INC	PYPL	$ 85,750.68	N/A	0.00%	N/A	N/A	N/A
QUINTILES IMS HOLDINGS INC	Q	$ 22,830.20	0.11%	0.00%	12.00%	12.00%	0.0132%
QUALCOMM INC	QCOM	$ 79,408.80	0.38%	4.24%	3.00%	7.30%	0.0280%
QORVO INC	QRVO	$ 9,104.22	0.04%	0.00%	28.00%	28.00%	0.0123%
ROYAL CARIBBEAN CRUISES LTD	RCL	$ 26,469.84	0.13%	1.95%	12.50%	14.57%	0.0186%
EVEREST RE GROUP LTD	RE	$ 9,648.22	0.05%	2.29%	3.50%	5.83%	0.0027%
REGENCY CENTERS CORP	REG	N/A	N/A	0.00%	N/A	N/A	N/A
REGENERON PHARMACEUTICALS	REGN	$ 43,771.98	0.21%	0.00%	23.00%	23.00%	0.0487%
REGIONS FINANCIAL CORP	RF	$ 18,960.41	0.09%	2.47%	9.50%	12.09%	0.0111%
ROBERT HALF INTL INC	RHI	$ 6,720.56	0.03%	1.92%	4.50%	6.46%	0.0021%
RED HAT INC	RHT	$ 21,284.47	0.10%	0.00%	17.50%	17.50%	0.0180%
RAYMOND JAMES FINANCIAL INC	RJF	$ 12,167.09	0.06%	1.11%	11.50%	12.67%	0.0075%
RALPH LAUREN CORP	RL	$ 7,419.44	0.04%	2.19%	1.50%	3.71%	0.0013%
RESMED INC	RMD	$ 11,145.64	0.05%	1.78%	8.50%	10.36%	0.0056%
ROCKWELL AUTOMATION INC	ROK	$ 24,143.05	0.12%	1.70%	5.50%	7.25%	0.0085%
ROPER TECHNOLOGIES INC	ROP	$ 26,323.70	0.13%	0.54%	7.50%	8.06%	0.0103%
ROSS STORES INC	ROST	$ 24,782.00	0.12%	1.07%	9.00%	10.12%	0.0121%
RANGE RESOURCES CORP	RRC	$ 4,396.62	0.02%	0.45%	23.50%	24.00%	0.0051%
REPUBLIC SERVICES INC	RSG	$ 22,029.69	0.11%	2.11%	8.50%	10.70%	0.0114%
RAYTHEON COMPANY	RTN	$ 52,557.54	0.25%	1.75%	8.00%	9.82%	0.0250%
SBA COMMUNICATIONS CORP	SBAC	$ 17,729.76	0.09%	0.00%	87.50%	87.50%	0.0750%
STARBUCKS CORP	SBUX	$ 79,383.39	0.38%	2.19%	15.00%	17.35%	0.0666%
SCANA CORP	SCG	$ 6,834.91	0.03%	5.12%	4.00%	9.22%	0.0030%
SCHWAB (CHARLES) CORP	SCHW	$ 60,687.55	0.29%	0.77%	14.00%	14.82%	0.0435%
SEALED AIR CORP	SEE	$ 8,502.30	0.04%	1.43%	12.00%	13.52%	0.0056%
SHERWIN-WILLIAMS CO/THE	SHW	$ 37,078.30	0.18%	0.87%	13.50%	14.43%	0.0259%
SIGNET JEWELERS LTD	SIG	$ 4,496.87	0.02%	2.01%	2.00%	4.03%	0.0009%
JM SMUCKER CO/THE	SJM	$ 11,830.30	0.06%	3.01%	6.00%	9.10%	0.0052%
SCHLUMBERGER LTD	SLB	$ 87,784.05	0.42%	3.16%	17.50%	20.94%	0.0888%
SL GREEN REALTY CORP	SLG	$ -	N/A	3.39%	N/A	N/A	N/A
SNAP-ON INC	SNA	$ 9,182.92	0.04%	1.78%	9.00%	10.86%	0.0048%
SCRIPPS NETWORKS INTER-CL A	SNI	$ 10,854.09	0.05%	1.44%	6.50%	7.99%	0.0042%
SYNOPSYS INC	SNPS	$ 13,042.16	0.06%	0.00%	9.50%	9.50%	0.0060%
SOUTHERN CO/THE	SO	$ 52,013.14	0.25%	4.53%	3.50%	8.11%	0.0204%
SIMON PROPERTY GROUP INC	SPG	$ -	N/A	4.52%	N/A	N/A	N/A
S&P GLOBAL INC	SPGI	$ 42,405.00	0.20%	0.99%	11.50%	12.55%	0.0257%
STERICYCLE INC	SRCL	$ 6,125.49	0.03%	0.00%	5.50%	5.50%	0.0016%
SEMPRA ENERGY	SRE	$ 28,892.61	0.14%	3.03%	7.50%	10.64%	0.0149%
SUNTRUST BANKS INC	STI	$ 29,192.44	0.14%	2.64%	7.00%	9.73%	0.0137%
STATE STREET CORP	STT	$ 35,442.90	0.17%	1.82%	7.50%	9.39%	0.0161%
SEAGATE TECHNOLOGY	STX	$ 11,140.92	0.05%	6.71%	4.50%	11.36%	0.0061%
CONSTELLATION BRANDS INC-A	STZ	$ 41,411.47	0.20%	1.03%	13.50%	14.60%	0.0292%
STANLEY BLACK & DECKER INC	SWK	$ 25,257.08	0.12%	1.53%	9.50%	11.10%	0.0136%
SKYWORKS SOLUTIONS INC	SWKS	$ 19,384.03	0.09%	1.21%	14.50%	15.80%	0.0148%
SYNCHRONY FINANCIAL	SYF	$ 25,723.54	0.12%	1.83%	7.50%	9.40%	0.0117%
STRYKER CORP	SYK	$ 55,658.68	0.27%	1.14%	14.00%	15.22%	0.0410%
SYMANTEC CORP	SYMC	$ 19,466.17	0.09%	0.94%	10.50%	11.49%	0.0108%
SYSCO CORP	SYY	$ 29,077.94	0.14%	2.52%	10.50%	13.15%	0.0185%
AT&T INC	T	$ 206,787.90	1.00%	5.91%	5.50%	11.57%	0.1157%
MOLSON COORS BREWING CO -B	TAP	$ 17,303.66	0.08%	2.18%	14.00%	16.33%	0.0137%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 149 of 182

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
TRANSDIGM GROUP INC	TDG	$ 14,165.15	0.07%	0.00%	12.00%	12.00%	0.0082%
TE CONNECTIVITY LTD	TEL	$ 31,333.31	0.15%	1.81%	8.50%	10.39%	0.0157%
TARGET CORP	TGT	$ 33,868.81	0.16%	4.00%	4.50%	8.59%	0.0141%
TIFFANY & CO	TIF	$ 11,715.45	0.06%	2.23%	8.00%	10.32%	0.0058%
TJX COMPANIES INC	TJX	$ 45,474.50	0.22%	1.75%	10.50%	12.34%	0.0271%
TORCHMARK CORP	TMK	$ 9,891.32	0.05%	0.71%	7.50%	8.24%	0.0039%
THERMO FISHER SCIENTIFIC INC	TMO	$ 78,168.34	0.38%	0.30%	9.00%	9.31%	0.0352%
TRIPADVISOR INC	TRIP	$ 5,237.28	0.03%	0.00%	8.00%	8.00%	0.0020%
T ROWE PRICE GROUP INC	TROW	$ 23,027.29	0.11%	2.46%	8.00%	10.56%	0.0118%
TRAVELERS COS INC/THE	TRV	$ 36,402.25	0.18%	2.18%	1.00%	3.19%	0.0056%
TRACTOR SUPPLY COMPANY	TSCO	$ 7,296.70	0.04%	1.88%	10.00%	11.97%	0.0042%
TYSON FOODS INC-CL A	TSN	$ 25,596.70	0.12%	1.43%	10.50%	12.01%	0.0149%
TOTAL SYSTEM SERVICES INC	TSS	$ 13,025.99	0.06%	0.74%	10.50%	11.28%	0.0071%
TIME WARNER INC	TWX	$ 77,097.63	0.37%	1.63%	9.50%	11.21%	0.0418%
TEXAS INSTRUMENTS INC	TXN	$ 95,353.59	0.46%	2.58%	9.50%	12.20%	0.0562%
TEXTRON INC	TXT	$ 14,252.47	0.07%	0.15%	12.00%	12.16%	0.0084%
UNDER ARMOUR INC-CLASS A	UAA	$ 7,222.32	0.03%	0.00%	10.00%	10.00%	0.0035%
UNITED CONTINENTAL HOLDINGS	UAL	$ 18,285.35	0.09%	0.00%	4.50%	4.50%	0.0040%
UDR INC	UDR	$ -	N/A	3.24%	N/A	N/A	N/A
UNIVERSAL HEALTH SERVICES-B	UHS	$ 9,934.94	0.05%	0.39%	9.50%	9.91%	0.0048%
ULTA BEAUTY INC	ULTA	$ 12,360.44	0.06%	0.00%	20.00%	20.00%	0.0120%
UNITEDHEALTH GROUP INC	UNH	$ 201,829.80	0.98%	1.43%	13.00%	14.52%	0.1417%
UNUM GROUP	UNM	$ 11,967.58	0.06%	1.74%	11.00%	12.84%	0.0074%
UNION PACIFIC CORP	UNP	$ 91,992.09	0.44%	2.08%	8.00%	10.16%	0.0452%
UNITED PARCEL SERVICE-CL B	UPS	$ 103,220.50	0.50%	2.78%	10.00%	12.92%	0.0645%
UNITED RENTALS INC	URI	$ 11,944.95	0.06%	0.00%	8.50%	8.50%	0.0049%
US BANCORP	USB	$ 91,166.28	0.44%	2.21%	5.00%	7.27%	0.0320%
UNITED TECHNOLOGIES CORP	UTX	$ 95,796.84	0.46%	2.34%	7.50%	9.93%	0.0460%
VISA INC-CLASS A SHARES	V	$ 229,482.00	1.11%	0.71%	11.50%	12.25%	0.1359%
VARIAN MEDICAL SYSTEMS INC	VAR	$ 9,574.40	0.05%	0.00%	7.00%	7.00%	0.0032%
VF CORP	VFC	$ 27,728.29	0.13%	2.61%	8.50%	11.22%	0.0150%
VIACOM INC-CLASS B	VIAB	$ 10,180.72	0.05%	3.16%	2.00%	5.19%	0.0026%
VALERO ENERGY CORP	VLO	$ 33,720.41	0.16%	3.75%	5.00%	8.84%	0.0144%
VULCAN MATERIALS CO	VMC	$ 16,259.58	0.08%	0.81%	20.50%	21.39%	0.0168%
VORNADO REALTY TRUST	VNO	$ 13,827.16	0.07%	3.29%	-0.50%	2.78%	0.0019%
VERISK ANALYTICS INC	VRSK	$ 13,956.32	0.07%	0.00%	10.50%	10.50%	0.0071%
VERISIGN INC	VRSN	$ 10,942.93	0.05%	0.00%	10.50%	10.50%	0.0056%
VERTEX PHARMACEUTICALS INC	VRTX	$ 36,050.70	N/A	0.00%	N/A	N/A	N/A
VENTAS INC	VTR	$ -	N/A	5.43%	N/A	N/A	N/A
VERIZON COMMUNICATIONS INC	VZ	$ 199,443.90	0.96%	4.83%	2.00%	6.88%	0.0663%
WATERS CORP	WAT	$ 15,533.62	0.08%	0.00%	8.50%	8.50%	0.0064%
WALGREENS BOOTS ALLIANCE INC	WBA	$ 71,814.14	0.35%	2.38%	11.00%	13.51%	0.0469%
WESTERN DIGITAL CORP	WDC	$ 26,277.72	0.13%	2.41%	13.50%	16.07%	0.0204%
WEC ENERGY GROUP INC	WEC	$ 21,232.02	0.10%	3.21%	6.00%	9.31%	0.0096%
WELLS FARGO & CO	WFC	$ 276,251.80	1.34%	2.82%	5.00%	7.89%	0.1054%
WHIRLPOOL CORP	WHR	$ 11,628.72	0.06%	2.72%	9.50%	12.35%	0.0069%
WILLIS TOWERS WATSON PLC	WLTW	$ 21,924.20	N/A	1.30%	N/A	N/A	N/A
WASTE MANAGEMENT INC	WM	$ 35,752.90	0.17%	2.09%	8.50%	10.68%	0.0185%
WILLIAMS COS INC	WMB	$ 23,466.66	0.11%	4.22%	18.50%	23.11%	0.0262%
WAL-MART STORES INC	WMT	$ 265,239.70	1.28%	2.33%	5.50%	7.89%	0.1012%
WESTROCK CO	WRK	$ 15,353.33	N/A	2.65%	N/A	N/A	N/A
WESTERN UNION CO	WU	$ 9,402.08	0.05%	3.46%	5.50%	9.06%	0.0041%
WEYERHAEUSER CO	WY	$ 26,254.56	0.13%	3.56%	14.50%	18.32%	0.0232%
WYNDHAM WORLDWIDE CORP	WYN	$ 10,778.07	0.05%	2.38%	7.50%	9.97%	0.0052%
WYNN RESORTS LTD	WYNN	$ 14,906.51	0.07%	1.38%	14.00%	15.48%	0.0112%
CIMAREX ENERGY CO	XEC	$ 10,807.97	0.05%	0.28%	31.00%	31.32%	0.0164%
XCEL ENERGY INC	XEL	$ 24,905.78	0.12%	3.06%	4.50%	7.63%	0.0092%
XL GROUP LTD	XL	$ 10,902.41	0.05%	2.15%	13.00%	15.29%	0.0081%
XILINX INC	XLNX	$ 17,724.81	0.09%	1.98%	8.00%	10.06%	0.0086%
EXXON MOBIL CORP	XOM	$ 353,662.40	1.71%	3.69%	10.50%	14.38%	0.2459%
DENTSPLY SIRONA INC	XRAY	$ 14,072.14	0.07%	0.57%	8.50%	9.09%	0.0062%
XEROX CORP	XRX	$ 7,790.31	0.04%	3.26%	4.00%	7.33%	0.0028%
XYLEM INC	XYL	$ 11,633.39	0.06%	1.11%	14.00%	15.19%	0.0085%
YUM! BRANDS INC	YUM	$ 26,175.15	0.13%	1.70%	6.50%	8.26%	0.0104%
ZIMMER BIOMET HOLDINGS INC	ZBH	$ 24,454.10	0.12%	0.89%	11.00%	11.94%	0.0141%
ZIONS BANCORPORATION	ZION	$ 9,486.01	0.05%	1.53%	14.50%	16.14%	0.0074%
ZOETIS INC	ZTS	$ 31,210.93	0.15%	0.66%	12.00%	12.70%	0.0192%
	Total Market Capitalization:	$ 20,685,567.03					14.24%

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]

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 150 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 151 of 182

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1] Bloomberg	[2] Value Line
ALLETE, Inc.	ALE	0.720	0.750
Alliant Energy Corporation	LNT	0.486	0.700
Ameren Corporation	AEE	0.489	0.650
American Electric Power Company, Inc.	AEP	0.522	0.650
Black Hills Corporation	BKH	0.504	0.900
CMS Energy Corporation	CMS	0.480	0.650
Dominion Resources, Inc.	D	0.503	0.650
DTE Energy Company	DTE	0.546	0.650
Duke Energy Corporation	DUK	0.496	0.600
IDACORP, Inc.	IDA	0.709	0.700
NorthWestern Corporation	NWE	0.608	0.700
OGE Energy Corp.	OGE	0.648	0.950
Otter Tail Corporation	OTTR	0.847	0.900
Pinnacle West Capital Corporation	PNW	0.576	0.700
PNM Resources, Inc.	PNM	0.616	0.750
Portland General Electric Company	POR	0.548	0.700
Southern Company	SO	0.529	0.550
WEC Energy Group, Inc.	WEC	0.491	0.600
Xcel Energy Inc.	XEL	0.412	0.600
Mean		0.565	0.703

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]
			Ex-Ante Market Risk Premium	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived
PROXY GROUP AVERAGE BLOOMBERG BETA COEFFICIENT				
Current 30-Year Treasury (30-day average) [7]	2.86%	0.565	11.21%	11.38%
Near-Term Projected 30-Year Treasury [8]	3.32%	0.565	11.21%	11.38%
Mean				

			Ex-Ante Market Risk Premium	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived
PROXY GROUP AVERAGE VALUE LINE AVERAGE BETA COEFFICIENT				
Current 30-Year Treasury (30-day average) [7]	2.86%	0.703	11.21%	11.38%
Near-Term Projected 30-Year Treasury [8]	3.32%	0.703	11.21%	11.38%
Mean				

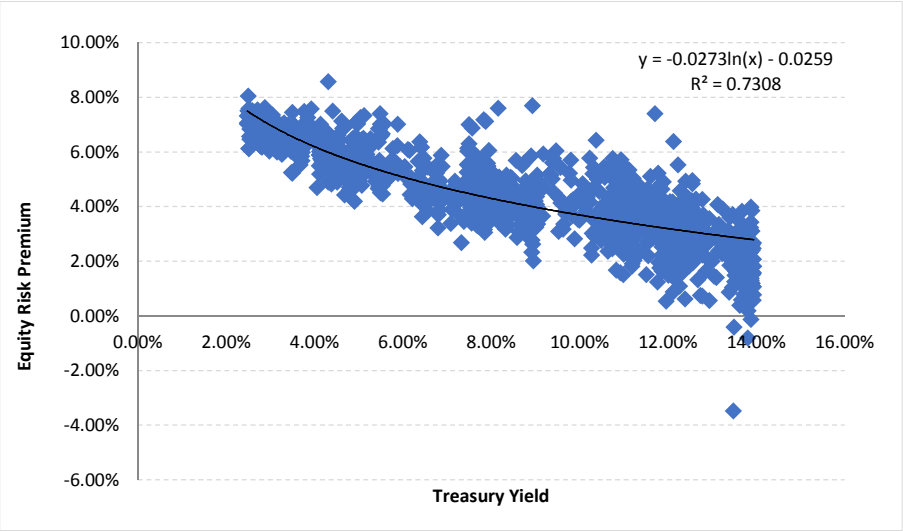
Notes:
[1] See Notes [7], [8]
[2] Source: RBH-5
[3] Source: RBH-4
[4] Source: RBH-4
[5] Equals Col. [1] + (Col. [2] x Col. [3])
[6] Equals Col. [1] + (Col. [2] x Col. [4])
[7] Source: Bloomberg Professional
[8] Source: Blue Chip Financial Forecasts, Vol. 36, No. 11, November 1, 2017, at 2.

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 152 of 182

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 153 of 182

Bond Yield Plus Risk Premium

[1]	[2]	[3]	[4]	[5]
Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
-2.59%	-2.73%			
Current 30-Year Treasury		2.86%	7.11%	9.97%
Near-Term Projected 30-Year Treasury		3.32%	6.70%	10.02%
Long-Term Projected 30-Year Treasury		4.40%	5.93%	10.33%



Notes:
[1] Constant of regression equation
[2] Slope of regression equation
[3] Source: Current = Bloomberg Professional,
Near Term Projected = Blue Chip Financial Forecasts, Vol. 36, No. 11, November 1, 2017, at 2.
Long Term Projected = Blue Chip Financial Forecasts, Vol. 36, No. 6, June 1, 2017, at 14.
[4] Equals [1] + ln([3]) x [2]
[5] Equals [3] + [4]
[6] Source: SNL Financial
[7] Source: SNL Financial
[8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)
[9] Equals [7] - [8]

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 154 of 182

Bond Yield Plus Risk Premium

[6] Date of Electric Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/1/1980	14.50%	9.36%	5.14%
1/7/1980	14.39%	9.38%	5.01%
1/9/1980	15.00%	9.40%	5.60%
1/14/1980	15.17%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980	15.50%	9.47%	6.03%
1/30/1980	13.86%	9.52%	4.34%
1/31/1980	12.61%	9.53%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980	12.80%	9.63%	3.17%
2/14/1980	13.00%	9.65%	3.35%
2/19/1980	13.50%	9.68%	3.82%
2/27/1980	13.75%	9.78%	3.97%
2/29/1980	13.75%	9.81%	3.94%
2/29/1980	14.00%	9.81%	4.19%
2/29/1980	14.77%	9.81%	4.96%
3/7/1980	12.70%	9.89%	2.81%
3/14/1980	13.50%	9.97%	3.53%
3/26/1980	14.16%	10.10%	4.06%
3/27/1980	14.24%	10.12%	4.12%
3/28/1980	14.50%	10.13%	4.37%
4/11/1980	12.75%	10.27%	2.48%
4/14/1980	13.85%	10.29%	3.56%
4/16/1980	15.50%	10.31%	5.19%
4/22/1980	13.25%	10.35%	2.90%
4/22/1980	13.90%	10.35%	3.55%
4/24/1980	16.80%	10.38%	6.43%
4/29/1980	15.50%	10.41%	5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980	15.00%	10.45%	4.55%
5/8/1980	13.75%	10.46%	3.29%
5/9/1980	14.35%	10.47%	3.88%
5/13/1980	13.60%	10.48%	3.12%
5/15/1980	13.25%	10.49%	2.76%
5/19/1980	13.75%	10.51%	3.24%
5/27/1980	13.62%	10.54%	3.08%
5/27/1980	14.60%	10.54%	4.06%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980	13.80%	10.56%	3.24%
6/2/1980	15.63%	10.57%	5.06%
6/9/1980	15.90%	10.60%	5.30%
6/10/1980	13.78%	10.60%	3.18%
6/12/1980	14.25%	10.61%	3.64%
6/19/1980	13.40%	10.62%	2.78%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980	14.75%	10.67%	4.08%
7/10/1980	15.00%	10.68%	4.32%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.71%	3.09%
7/22/1980	14.10%	10.72%	3.38%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 155 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/24/1980	15.00%	10.73%	4.27%
7/25/1980	13.48%	10.73%	2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980	13.50%	10.88%	2.62%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.94%	2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.98%	4.52%
10/7/1980	12.50%	10.99%	1.51%
10/9/1980	13.25%	11.00%	2.25%
10/9/1980	14.50%	11.00%	3.50%
10/9/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	13.75%	11.12%	2.63%
11/5/1980	14.00%	11.12%	2.88%
11/8/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/8/1980	14.15%	11.22%	2.93%
12/8/1980	15.10%	11.22%	3.88%
12/9/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 156 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/2/1981	15.25%	11.22%	4.03%
1/7/1981	14.30%	11.21%	3.09%
1/19/1981	15.25%	11.20%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.21%	3.79%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.33%	3.92%
3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981	16.00%	11.50%	4.50%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.60%	3.70%
4/1/1981	14.53%	11.68%	2.85%
4/3/1981	19.10%	11.71%	7.39%
4/9/1981	15.00%	11.78%	3.22%
4/9/1981	15.30%	11.78%	3.52%
4/9/1981	16.50%	11.78%	4.72%
4/9/1981	17.00%	11.78%	5.22%
4/10/1981	13.75%	11.80%	1.95%
4/13/1981	13.57%	11.82%	1.75%
4/15/1981	15.30%	11.85%	3.45%
4/16/1981	13.50%	11.87%	1.63%
4/17/1981	14.10%	11.87%	2.23%
4/21/1981	14.00%	11.90%	2.10%
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%
5/15/1981	15.75%	12.22%	3.53%
5/18/1981	14.88%	12.23%	2.65%
5/20/1981	16.00%	12.26%	3.74%
5/21/1981	14.00%	12.27%	1.73%
5/26/1981	14.90%	12.30%	2.60%
5/27/1981	15.00%	12.31%	2.69%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 157 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/3/1981	14.67%	12.37%	2.30%
6/5/1981	13.00%	12.39%	0.61%
6/10/1981	16.75%	12.42%	4.33%
6/17/1981	14.40%	12.46%	1.94%
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.51%	2.24%
6/26/1981	16.00%	12.52%	3.48%
6/30/1981	15.25%	12.54%	2.71%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.74%	0.74%
7/31/1981	13.50%	12.78%	0.72%
7/31/1981	15.00%	12.78%	2.22%
7/31/1981	16.00%	12.78%	3.22%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981	13.50%	12.95%	0.55%
8/20/1981	16.50%	12.95%	3.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.05%	1.45%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 158 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%
3/12/1982	16.25%	13.88%	2.37%
3/17/1982	17.30%	13.88%	3.42%
3/22/1982	15.10%	13.89%	1.21%
3/27/1982	15.40%	13.89%	1.51%
3/30/1982	15.50%	13.90%	1.60%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982	15.50%	13.91%	1.59%
4/5/1982	15.50%	13.92%	1.58%
4/8/1982	16.40%	13.93%	2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%
4/27/1982	15.00%	13.94%	1.06%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 159 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/28/1982	15.75%	13.94%	1.81%
4/30/1982	14.70%	13.94%	0.76%
4/30/1982	15.50%	13.94%	1.56%
5/3/1982	16.60%	13.94%	2.66%
5/4/1982	16.00%	13.94%	2.06%
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982	15.00%	13.91%	1.09%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 160 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%
11/1/1982	15.50%	13.15%	2.35%
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	14.63%	12.33%	2.30%
1/12/1983	15.50%	12.33%	3.17%
1/20/1983	17.75%	12.24%	5.51%
1/21/1983	15.00%	12.22%	2.78%
1/24/1983	14.50%	12.21%	2.29%
1/24/1983	15.50%	12.21%	3.29%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.17%	3.97%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.10%	1.90%
2/10/1983	15.00%	12.06%	2.94%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.97%	3.53%
2/23/1983	15.10%	11.96%	3.14%
2/23/1983	16.00%	11.96%	4.04%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.77%	1.23%
3/18/1983	15.25%	11.73%	3.52%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 161 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/23/1983	15.40%	11.69%	3.71%
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983	16.71%	11.61%	5.10%
3/31/1983	15.00%	11.59%	3.41%
4/4/1983	15.20%	11.58%	3.62%
4/8/1983	15.50%	11.51%	3.99%
4/11/1983	14.81%	11.49%	3.32%
4/19/1983	14.50%	11.38%	3.12%
4/20/1983	16.00%	11.36%	4.64%
4/29/1983	16.00%	11.24%	4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983	16.46%	11.12%	5.34%
5/12/1983	14.14%	11.11%	3.03%
5/18/1983	15.00%	11.05%	3.95%
5/23/1983	14.90%	11.01%	3.89%
5/23/1983	15.50%	11.01%	4.49%
5/25/1983	15.50%	10.98%	4.52%
5/27/1983	15.00%	10.96%	4.04%
5/31/1983	14.00%	10.95%	3.05%
5/31/1983	15.50%	10.95%	4.55%
6/2/1983	14.50%	10.93%	3.57%
6/17/1983	15.03%	10.84%	4.19%
7/1/1983	14.80%	10.78%	4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.00%	10.74%	4.26%
7/19/1983	15.10%	10.74%	4.36%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%
9/7/1983	15.00%	10.86%	4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983	16.15%	10.95%	5.20%
10/4/1983	14.80%	10.96%	3.84%
10/7/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.25%	11.01%	5.24%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 162 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/1/1983	16.00%	11.06%	4.94%
11/9/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	14.69%	11.22%	3.47%
12/20/1983	16.00%	11.22%	4.78%
12/20/1983	16.25%	11.22%	5.03%
12/22/1983	14.75%	11.23%	3.52%
12/22/1983	15.75%	11.23%	4.52%
1/3/1984	14.75%	11.27%	3.48%
1/10/1984	15.90%	11.30%	4.60%
1/12/1984	15.60%	11.31%	4.29%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984	15.90%	11.33%	4.57%
1/30/1984	16.10%	11.37%	4.73%
1/31/1984	15.25%	11.37%	3.88%
2/1/1984	14.80%	11.38%	3.42%
2/6/1984	13.75%	11.40%	2.35%
2/6/1984	14.75%	11.40%	3.35%
2/9/1984	15.25%	11.42%	3.83%
2/15/1984	15.70%	11.44%	4.26%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984	14.75%	11.47%	3.28%
2/28/1984	14.50%	11.51%	2.99%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.64%	4.36%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
4/2/1984	15.50%	11.71%	3.79%
4/6/1984	14.74%	11.75%	2.99%
4/11/1984	15.72%	11.78%	3.94%
4/17/1984	15.00%	11.81%	3.19%
4/18/1984	16.20%	11.82%	4.38%
4/25/1984	14.64%	11.85%	2.79%
4/30/1984	14.40%	11.87%	2.53%
5/16/1984	14.69%	11.98%	2.71%
5/16/1984	15.00%	11.98%	3.02%
5/22/1984	14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.15%	3.10%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 163 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984	16.00%	12.31%	3.69%
7/12/1984	16.50%	12.32%	4.18%
7/13/1984	16.25%	12.33%	3.92%
7/17/1984	14.14%	12.35%	1.79%
7/18/1984	15.30%	12.36%	2.94%
7/18/1984	15.50%	12.36%	3.14%
7/19/1984	14.30%	12.37%	1.93%
7/24/1984	16.79%	12.39%	4.40%
7/31/1984	16.00%	12.43%	3.57%
8/3/1984	14.25%	12.44%	1.81%
8/17/1984	14.30%	12.49%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984	16.30%	12.51%	3.79%
8/31/1984	15.55%	12.52%	3.03%
9/6/1984	16.00%	12.53%	3.47%
9/10/1984	14.75%	12.54%	2.21%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984	14.50%	12.57%	1.93%
9/28/1984	15.00%	12.57%	2.43%
9/28/1984	16.25%	12.57%	3.68%
10/9/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.58%	3.82%
10/31/1984	16.25%	12.58%	3.67%
11/7/1984	15.60%	12.58%	3.02%
11/9/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.58%	3.17%
11/20/1984	15.25%	12.58%	2.67%
11/20/1984	15.92%	12.58%	3.34%
11/23/1984	15.00%	12.58%	2.42%
11/28/1984	16.15%	12.57%	3.58%
12/3/1984	15.80%	12.56%	3.24%
12/4/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.53%	2.22%
12/19/1984	15.00%	12.53%	2.47%
12/20/1984	16.00%	12.53%	3.47%
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985	15.75%	12.47%	3.28%
1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.35%	2.12%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 164 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/1/1985	13.84%	12.31%	1.53%
3/8/1985	16.85%	12.28%	4.57%
3/14/1985	15.50%	12.25%	3.25%
3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.17%	3.45%
4/3/1985	14.60%	12.14%	2.46%
4/9/1985	15.50%	12.11%	3.39%
4/16/1985	15.70%	12.06%	3.64%
4/22/1985	14.00%	12.02%	1.98%
4/26/1985	15.50%	11.98%	3.52%
4/29/1985	15.00%	11.97%	3.03%
5/2/1985	14.68%	11.94%	2.74%
5/8/1985	15.62%	11.89%	3.73%
5/10/1985	16.50%	11.87%	4.63%
5/29/1985	14.61%	11.73%	2.88%
5/31/1985	16.00%	11.71%	4.29%
6/14/1985	15.50%	11.61%	3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.33%	3.17%
8/2/1985	14.80%	11.29%	3.51%
8/7/1985	15.00%	11.27%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.15%	3.35%
9/9/1985	14.60%	11.11%	3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.50%	11.05%	4.45%
9/27/1985	15.80%	11.05%	4.75%
10/2/1985	14.00%	11.03%	2.97%
10/2/1985	14.75%	11.03%	3.72%
10/3/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985	15.50%	10.90%	4.60%
11/8/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 165 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.23%	5.77%
2/24/1986	14.50%	10.18%	4.32%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986	13.40%	9.69%	3.71%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.32%	5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986	15.10%	9.18%	5.92%
6/2/1986	12.81%	9.17%	3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986	12.00%	8.91%	3.09%
6/26/1986	14.75%	8.91%	5.84%
6/30/1986	13.00%	8.87%	4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.66%	3.74%
7/25/1986	14.25%	8.57%	5.68%
8/6/1986	13.50%	8.44%	5.06%
8/14/1986	13.50%	8.35%	5.15%
9/16/1986	12.75%	8.06%	4.69%
9/19/1986	13.25%	8.03%	5.22%
10/1/1986	14.00%	7.95%	6.05%
10/3/1986	13.40%	7.93%	5.47%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986	13.00%	7.75%	5.25%
12/3/1986	12.90%	7.58%	5.32%
12/4/1986	14.44%	7.58%	6.86%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.51%	6.29%
12/30/1986	13.00%	7.49%	5.51%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.47%	4.93%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 166 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.54%	4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987	13.50%	7.70%	5.80%
6/15/1987	13.20%	7.78%	5.42%
6/29/1987	15.00%	7.83%	7.17%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987	12.90%	7.86%	5.04%
7/15/1987	13.50%	7.88%	5.62%
7/16/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%
7/27/1987	13.00%	7.92%	5.08%
7/27/1987	13.40%	7.92%	5.48%
7/27/1987	13.50%	7.92%	5.58%
7/31/1987	12.98%	7.95%	5.03%
8/26/1987	12.63%	8.06%	4.57%
8/26/1987	12.75%	8.06%	4.69%
8/27/1987	13.25%	8.06%	5.19%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	12.75%	8.31%	4.44%
9/30/1987	13.00%	8.31%	4.69%
10/2/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.43%	4.57%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.68%	3.32%
12/3/1987	14.20%	8.70%	5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%
12/16/1987	13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987	13.00%	8.81%	4.19%
1/20/1988	13.80%	8.94%	4.86%
1/26/1988	13.90%	8.95%	4.95%
1/29/1988	13.20%	8.96%	4.24%
2/4/1988	12.60%	8.96%	3.64%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%
3/24/1988	11.24%	8.92%	2.32%
3/30/1988	12.72%	8.92%	3.80%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.93%	4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.99%	4.51%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 167 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/16/1988	13.00%	8.99%	4.01%
6/30/1988	12.75%	9.00%	3.75%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.92%	3.83%
8/23/1988	11.70%	8.93%	2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%
12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989	13.00%	9.05%	3.95%
3/30/1989	14.00%	9.05%	4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.00%	4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
1/10/1990	12.80%	8.24%	4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.20%	3.80%
2/9/1990	12.10%	8.17%	3.93%
2/24/1990	12.86%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%
4/12/1990	12.52%	8.18%	4.34%
4/19/1990	12.75%	8.20%	4.55%
5/21/1990	12.10%	8.28%	3.82%
5/29/1990	12.40%	8.30%	4.10%
5/31/1990	12.00%	8.30%	3.70%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 168 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/4/1990	12.90%	8.30%	4.60%
6/6/1990	12.25%	8.31%	3.94%
6/15/1990	13.20%	8.32%	4.88%
6/20/1990	12.92%	8.32%	4.60%
6/27/1990	12.90%	8.33%	4.57%
6/29/1990	12.50%	8.33%	4.17%
7/6/1990	12.10%	8.34%	3.76%
7/6/1990	12.35%	8.34%	4.01%
8/10/1990	12.55%	8.41%	4.14%
8/16/1990	13.21%	8.43%	4.78%
8/22/1990	13.10%	8.45%	4.65%
8/24/1990	13.00%	8.46%	4.54%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%
10/5/1990	12.84%	8.62%	4.22%
10/19/1990	13.00%	8.67%	4.33%
10/25/1990	12.30%	8.68%	3.62%
11/21/1990	12.70%	8.69%	4.01%
12/13/1990	12.30%	8.67%	3.63%
12/17/1990	12.87%	8.67%	4.20%
12/18/1990	13.10%	8.67%	4.43%
12/19/1990	12.00%	8.66%	3.34%
12/20/1990	12.75%	8.66%	4.09%
12/21/1990	12.50%	8.66%	3.84%
12/27/1990	12.79%	8.66%	4.13%
1/2/1991	13.10%	8.65%	4.45%
1/4/1991	12.50%	8.65%	3.85%
1/15/1991	12.75%	8.64%	4.11%
1/25/1991	11.70%	8.63%	3.07%
2/4/1991	12.50%	8.60%	3.90%
2/7/1991	12.50%	8.59%	3.91%
2/12/1991	13.00%	8.58%	4.43%
2/14/1991	12.72%	8.57%	4.15%
2/22/1991	12.80%	8.55%	4.25%
3/6/1991	13.10%	8.53%	4.57%
3/8/1991	12.30%	8.52%	3.78%
3/8/1991	13.00%	8.52%	4.48%
4/22/1991	13.00%	8.49%	4.51%
5/7/1991	13.50%	8.47%	5.03%
5/13/1991	13.25%	8.47%	4.78%
5/30/1991	12.75%	8.44%	4.31%
6/12/1991	12.00%	8.41%	3.59%
6/25/1991	11.70%	8.39%	3.31%
6/28/1991	12.50%	8.38%	4.12%
7/1/1991	12.00%	8.38%	3.62%
7/3/1991	12.50%	8.37%	4.13%
7/19/1991	12.10%	8.34%	3.76%
8/1/1991	12.90%	8.32%	4.58%
8/16/1991	13.20%	8.29%	4.91%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.25%	8.23%	4.02%
10/17/1991	13.00%	8.20%	4.80%
10/23/1991	12.50%	8.20%	4.30%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 169 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/23/1991	12.55%	8.20%	4.35%
10/31/1991	11.80%	8.19%	3.61%
11/1/1991	12.00%	8.19%	3.81%
11/5/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.50%	8.18%	4.32%
11/27/1991	12.10%	8.18%	3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
1/9/1992	12.80%	8.09%	4.71%
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.06%	4.94%
1/27/1992	12.65%	8.05%	4.60%
1/31/1992	12.00%	8.04%	3.96%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.01%	4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.94%	3.51%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.93%	3.57%
5/5/1992	11.50%	7.89%	3.61%
5/12/1992	11.87%	7.88%	3.99%
5/12/1992	12.46%	7.88%	4.58%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/13/1992	13.50%	7.84%	5.66%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992	11.40%	7.71%	3.69%
9/30/1992	11.75%	7.70%	4.05%
10/2/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992	11.85%	7.68%	4.17%
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992	12.40%	7.66%	4.74%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 170 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.63%	4.27%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993	11.90%	7.49%	4.41%
2/26/1993	11.80%	7.48%	4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.25%	4.50%
5/14/1993	11.50%	7.24%	4.26%
5/25/1993	11.50%	7.23%	4.27%
5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.10%	4.28%
7/23/1993	10.46%	7.09%	3.37%
8/24/1993	11.50%	6.96%	4.54%
9/21/1993	10.50%	6.81%	3.69%
9/29/1993	11.47%	6.77%	4.70%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.57%	5.43%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993	10.55%	6.48%	4.07%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.47%	4.83%
1/4/1994	10.07%	6.44%	3.63%
1/13/1994	11.00%	6.42%	4.58%
1/21/1994	11.00%	6.40%	4.60%
1/28/1994	11.35%	6.39%	4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.39%	3.46%
11/9/1994	10.85%	7.39%	3.46%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 171 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.49%	3.57%
12/8/1994	11.50%	7.54%	3.96%
12/8/1994	11.70%	7.54%	4.16%
12/14/1994	10.95%	7.56%	3.39%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%
1/9/1995	12.28%	7.64%	4.64%
1/31/1995	11.00%	7.69%	3.31%
2/10/1995	12.60%	7.70%	4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.71%	3.79%
3/20/1995	12.00%	7.72%	4.28%
3/23/1995	12.81%	7.72%	5.09%
3/29/1995	11.60%	7.72%	3.88%
4/6/1995	11.10%	7.71%	3.39%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995	11.63%	7.68%	3.95%
5/25/1995	11.20%	7.65%	3.55%
6/9/1995	11.25%	7.60%	3.65%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.52%	3.58%
9/11/1995	11.30%	7.20%	4.10%
9/27/1995	11.30%	7.12%	4.18%
9/27/1995	11.50%	7.12%	4.38%
9/27/1995	11.75%	7.12%	4.63%
9/29/1995	11.00%	7.11%	3.89%
11/9/1995	11.38%	6.90%	4.48%
11/9/1995	12.36%	6.90%	5.46%
11/17/1995	11.00%	6.86%	4.14%
12/4/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.70%	4.90%
12/27/1995	12.00%	6.66%	5.34%
2/5/1996	12.25%	6.48%	5.77%
3/29/1996	10.67%	6.42%	4.25%
4/8/1996	11.00%	6.42%	4.58%
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
4/24/1996	11.25%	6.43%	4.82%
4/30/1996	11.00%	6.43%	4.57%
5/13/1996	11.00%	6.44%	4.56%
5/23/1996	11.25%	6.43%	4.82%
6/25/1996	11.25%	6.48%	4.77%
6/27/1996	11.20%	6.48%	4.72%
8/12/1996	10.40%	6.57%	3.83%
9/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 172 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/18/1996	11.75%	6.83%	4.92%
12/31/1996	11.50%	6.83%	4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.80%	3.22%
4/2/1997	11.65%	6.80%	4.85%
4/28/1997	11.50%	6.81%	4.69%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
2/2/1998	12.75%	6.39%	6.36%
3/2/1998	11.25%	6.29%	4.96%
3/6/1998	10.75%	6.27%	4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998	11.40%	5.94%	5.46%
9/15/1998	11.90%	5.78%	6.12%
11/30/1998	12.60%	5.58%	7.02%
12/10/1998	12.20%	5.54%	6.66%
12/17/1998	12.10%	5.52%	6.58%
2/5/1999	10.30%	5.38%	4.92%
3/4/1999	10.50%	5.34%	5.16%
4/6/1999	10.94%	5.32%	5.62%
7/29/1999	10.75%	5.52%	5.23%
9/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
1/7/2000	11.50%	6.05%	5.45%
1/7/2000	11.50%	6.05%	5.45%
2/17/2000	10.60%	6.17%	4.43%
3/28/2000	11.25%	6.20%	5.05%
5/24/2000	11.00%	6.18%	4.82%
7/18/2000	12.20%	6.16%	6.04%
9/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
1/23/2001	11.25%	5.79%	5.46%
2/8/2001	11.50%	5.77%	5.73%
5/8/2001	10.75%	5.62%	5.13%
6/26/2001	11.00%	5.62%	5.38%
7/25/2001	11.02%	5.60%	5.42%
7/25/2001	11.02%	5.60%	5.42%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001	10.50%	5.56%	4.94%
9/7/2001	10.75%	5.55%	5.20%
9/10/2001	11.00%	5.55%	5.45%
9/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/3/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
1/22/2002	10.00%	5.50%	4.50%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 173 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002	10.17%	5.46%	4.71%
6/10/2002	12.00%	5.47%	6.53%
6/18/2002	11.16%	5.48%	5.68%
6/20/2002	11.00%	5.48%	5.52%
6/20/2002	12.30%	5.48%	6.82%
7/15/2002	11.00%	5.48%	5.52%
9/12/2002	12.30%	5.45%	6.85%
9/26/2002	10.45%	5.41%	5.04%
12/4/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
1/8/2003	11.10%	5.19%	5.91%
1/31/2003	12.45%	5.13%	7.32%
2/28/2003	12.30%	5.05%	7.25%
3/6/2003	10.75%	5.03%	5.72%
3/7/2003	9.96%	5.02%	4.94%
3/20/2003	12.00%	4.98%	7.02%
4/3/2003	12.00%	4.96%	7.04%
4/15/2003	11.15%	4.94%	6.21%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003	9.75%	4.79%	4.96%
7/16/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.80%	4.70%
8/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
1/13/2004	12.00%	4.95%	7.05%
3/2/2004	10.75%	4.99%	5.76%
3/26/2004	10.25%	5.02%	5.23%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.08%	5.17%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
7/16/2004	11.60%	5.11%	6.49%
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 174 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/29/2004	9.85%	5.07%	4.78%
1/6/2005	10.70%	5.08%	5.62%
2/18/2005	10.30%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005	10.25%	4.87%	5.38%
5/18/2005	10.25%	4.78%	5.47%
5/25/2005	10.75%	4.76%	5.99%
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005	11.50%	4.64%	6.86%
8/5/2005	11.75%	4.62%	7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%
12/22/2005	11.15%	4.54%	6.61%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.53%	6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006	10.20%	4.83%	5.37%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.89%	4.66%
9/1/2006	10.54%	4.90%	5.64%
9/14/2006	10.00%	4.91%	5.09%
10/6/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/1/2006	10.25%	4.95%	5.30%
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
1/5/2007	10.00%	4.95%	5.05%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 175 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/11/2007	10.90%	4.95%	5.95%
1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.87%	6.48%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007	9.67%	4.80%	4.87%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/22/2007	10.50%	4.83%	5.67%
6/28/2007	10.75%	4.84%	5.91%
7/12/2007	9.67%	4.86%	4.81%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
8/15/2007	10.40%	4.88%	5.52%
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/28/2008	9.40%	4.80%	4.60%
1/30/2008	10.00%	4.79%	5.21%
1/31/2008	10.71%	4.79%	5.92%
2/29/2008	10.25%	4.75%	5.50%
3/12/2008	10.25%	4.73%	5.52%
3/25/2008	9.10%	4.68%	4.42%
4/22/2008	10.25%	4.60%	5.65%
4/24/2008	10.10%	4.60%	5.50%
5/1/2008	10.70%	4.59%	6.11%
5/19/2008	11.00%	4.56%	6.44%
5/27/2008	10.00%	4.55%	5.45%
6/10/2008	10.70%	4.54%	6.16%
6/27/2008	10.50%	4.54%	5.96%
6/27/2008	11.04%	4.54%	6.50%
7/10/2008	10.43%	4.52%	5.91%
7/16/2008	9.40%	4.52%	4.88%
7/30/2008	10.80%	4.51%	6.29%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 176 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/31/2008	10.70%	4.51%	6.19%
8/11/2008	10.25%	4.51%	5.74%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008	10.30%	4.50%	5.80%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.48%	5.72%
10/8/2008	10.15%	4.46%	5.69%
11/13/2008	10.55%	4.45%	6.10%
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.79%	6.21%
4/30/2009	11.25%	3.78%	7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%
7/17/2009	10.50%	3.78%	6.72%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 177 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/30/2009	10.00%	4.26%	5.74%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.30%	6.70%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.70%	4.35%	6.35%
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41%	5.77%
3/2/2010	9.63%	4.41%	5.22%
3/4/2010	10.50%	4.41%	6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%
5/28/2010	10.10%	4.44%	5.66%
5/28/2010	10.20%	4.44%	5.76%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010	9.67%	4.43%	5.24%
6/28/2010	10.50%	4.43%	6.07%
6/30/2010	9.40%	4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.53%	4.43%	6.10%
7/15/2010	10.70%	4.43%	6.27%
7/30/2010	10.70%	4.41%	6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010	9.90%	4.37%	5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.33%	5.67%
9/16/2010	10.00%	4.33%	5.67%
9/30/2010	9.75%	4.29%	5.46%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010	10.70%	4.20%	6.50%
11/19/2010	10.20%	4.18%	6.02%
11/22/2010	10.00%	4.18%	5.82%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010	10.25%	4.15%	6.10%
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 178 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.15%	5.85%
12/20/2010	10.60%	4.15%	6.45%
12/21/2010	10.30%	4.14%	6.16%
12/27/2010	9.90%	4.14%	5.76%
12/29/2010	11.15%	4.14%	7.01%
1/5/2011	10.15%	4.13%	6.02%
1/12/2011	10.30%	4.12%	6.18%
1/13/2011	10.30%	4.12%	6.18%
1/18/2011	10.00%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.12%	5.48%
2/3/2011	10.00%	4.12%	5.88%
2/25/2011	10.00%	4.14%	5.86%
3/25/2011	9.80%	4.18%	5.62%
3/30/2011	10.00%	4.18%	5.82%
4/12/2011	10.00%	4.21%	5.79%
4/25/2011	10.74%	4.23%	6.51%
4/26/2011	9.67%	4.23%	5.44%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.24%	5.76%
5/4/2011	10.00%	4.24%	5.76%
5/24/2011	10.50%	4.27%	6.23%
6/8/2011	10.75%	4.30%	6.45%
6/16/2011	9.20%	4.32%	4.88%
6/17/2011	9.95%	4.32%	5.63%
7/13/2011	10.20%	4.36%	5.84%
8/1/2011	9.20%	4.39%	4.81%
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011	10.35%	4.37%	5.98%
8/19/2011	10.25%	4.36%	5.89%
9/2/2011	12.88%	4.32%	8.56%
9/22/2011	10.00%	4.24%	5.76%
10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%
12/14/2011	10.00%	3.80%	6.20%
12/14/2011	10.30%	3.80%	6.50%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.76%	6.44%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%
12/23/2011	10.19%	3.74%	6.45%
1/25/2012	10.50%	3.57%	6.93%
1/27/2012	10.50%	3.56%	6.94%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.44%	6.46%
2/27/2012	10.25%	3.43%	6.82%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012	10.37%	3.32%	7.05%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 179 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/4/2012	10.00%	3.30%	6.70%
4/26/2012	10.00%	3.21%	6.79%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.17%	6.63%
5/15/2012	10.00%	3.14%	6.86%
5/29/2012	10.05%	3.11%	6.94%
6/7/2012	10.30%	3.08%	7.22%
6/14/2012	9.40%	3.06%	6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.06%	6.54%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.02%	6.78%
7/20/2012	9.31%	3.01%	6.30%
7/20/2012	9.81%	3.01%	6.80%
9/13/2012	9.80%	2.94%	6.86%
9/19/2012	9.80%	2.94%	6.86%
9/19/2012	10.05%	2.94%	7.11%
9/26/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.75%	2.89%	6.86%
11/29/2012	9.88%	2.89%	6.99%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.87%	6.84%
12/19/2012	10.25%	2.87%	7.38%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 180 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
7/12/2013	9.36%	3.07%	6.29%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013	10.20%	3.31%	6.89%
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.48%	5.24%
12/9/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%
12/17/2013	10.95%	3.51%	7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%
12/30/2013	9.50%	3.54%	5.96%
2/20/2014	9.20%	3.68%	5.52%
2/26/2014	9.75%	3.69%	6.06%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
6/30/2014	9.55%	3.64%	5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%
7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.57%	6.18%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%
9/11/2014	9.60%	3.51%	6.09%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 181 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/15/2014	10.25%	3.51%	6.74%
10/9/2014	9.80%	3.45%	6.35%
11/6/2014	9.56%	3.37%	6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.33%	6.37%
11/26/2014	10.20%	3.33%	6.87%
12/4/2014	9.68%	3.31%	6.37%
12/10/2014	9.25%	3.29%	5.96%
12/10/2014	9.25%	3.29%	5.96%
12/11/2014	10.07%	3.29%	6.78%
12/12/2014	10.20%	3.28%	6.92%
12/17/2014	9.17%	3.27%	5.90%
12/18/2014	9.83%	3.26%	6.57%
1/23/2015	9.50%	3.14%	6.36%
2/24/2015	9.83%	3.04%	6.79%
3/18/2015	9.75%	2.98%	6.77%
3/25/2015	9.50%	2.96%	6.54%
3/26/2015	9.72%	2.95%	6.77%
4/23/2015	10.20%	2.87%	7.33%
4/29/2015	9.53%	2.86%	6.67%
5/1/2015	9.60%	2.85%	6.75%
5/26/2015	9.75%	2.83%	6.92%
6/17/2015	9.00%	2.82%	6.18%
6/17/2015	9.00%	2.82%	6.18%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.00%	2.88%	7.12%
11/19/2015	10.30%	2.88%	7.42%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/15/2015	9.60%	2.91%	6.69%
12/17/2015	9.70%	2.91%	6.79%
12/18/2015	9.50%	2.91%	6.59%
12/30/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.94%	6.56%
2/23/2016	9.75%	2.94%	6.81%
3/16/2016	9.85%	2.91%	6.94%
4/29/2016	9.80%	2.83%	6.97%
6/3/2016	9.75%	2.80%	6.95%
6/8/2016	9.48%	2.80%	6.68%
6/15/2016	9.00%	2.78%	6.22%
6/15/2016	9.00%	2.78%	6.22%
7/18/2016	9.98%	2.71%	7.27%
8/9/2016	9.85%	2.66%	7.19%
8/18/2016	9.50%	2.63%	6.87%
8/24/2016	9.75%	2.62%	7.13%
9/1/2016	9.50%	2.59%	6.91%
9/8/2016	10.00%	2.58%	7.42%
9/28/2016	9.58%	2.54%	7.04%

ACCEPTED FOR PROCESSING - 2017 December 8 3:38 PM - SCPSC - 2017-305-E - Page 182 of 182

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
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11/10/2016	9.50%	2.48%	7.02%
11/15/2016	9.55%	2.49%	7.06%
11/18/2016	10.00%	2.50%	7.50%
11/29/2016	10.55%	2.51%	8.04%
12/1/2016	10.00%	2.51%	7.49%
12/6/2016	8.64%	2.52%	6.12%
12/6/2016	8.64%	2.52%	6.12%
12/7/2016	10.10%	2.52%	7.58%
12/12/2016	9.60%	2.53%	7.07%
12/14/2016	9.10%	2.53%	6.57%
12/19/2016	9.00%	2.54%	6.46%
12/19/2016	9.37%	2.54%	6.83%
12/22/2016	9.60%	2.55%	7.05%
12/22/2016	9.90%	2.55%	7.35%
12/28/2016	9.50%	2.55%	6.95%
1/18/2017	9.45%	2.58%	6.87%
1/24/2017	9.00%	2.59%	6.41%
1/31/2017	10.10%	2.60%	7.50%
2/15/2017	9.60%	2.62%	6.98%
2/22/2017	9.60%	2.64%	6.96%
2/24/2017	9.75%	2.64%	7.11%
2/28/2017	10.10%	2.64%	7.46%
3/2/2017	9.41%	2.65%	6.76%
3/20/2017	9.50%	2.68%	6.82%
4/4/2017	10.25%	2.71%	7.54%
4/12/2017	9.40%	2.74%	6.66%
4/20/2017	9.50%	2.76%	6.74%
5/3/2017	9.50%	2.79%	6.71%
5/11/2017	9.20%	2.81%	6.39%
5/18/2017	9.50%	2.83%	6.67%
5/23/2017	9.70%	2.84%	6.86%
6/16/2017	9.65%	2.89%	6.76%
6/22/2017	9.70%	2.90%	6.80%
6/22/2017	9.70%	2.90%	6.80%
7/24/2017	9.50%	2.95%	6.55%
8/15/2017	10.00%	2.97%	7.03%
9/22/2017	9.60%	2.93%	6.67%
9/28/2017	9.80%	2.92%	6.88%
10/20/2017	9.50%	2.91%	6.59%
10/26/2017	10.20%	2.91%	7.29%
10/26/2017	10.25%	2.91%	7.34%
10/26/2017	10.30%	2.91%	7.39%

# of Cases:	1526
Average:	4.59%