BEFORE THE
NEW YORK STATE
PUBLIC SERVICE COMMISSION

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Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of New York State Electric & Gas Corporation for Electric Service	Case 15-E- ____
Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of New York State Electric & Gas Corporation for Gas Service	Case 15-G- ____
Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Rochester Gas and Electric Corporation for Electric Service	Case 15-E- ____
Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Rochester Gas and Electric Corporation for Gas Service	Case 15-G- ____

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DIRECT TESTIMONY OF ANN E. BULKLEY

(VICE PRESIDENT OF CONCENTRIC ENERGY ADVISORS, INC.)

May 20, 2015

TABLE OF CONTENTS

I. INTRODUCTION AND QUALIFICATIONS

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

A. My name is Ann E. Bulkley. I am a Vice President of Concentric Energy Advisors, Inc. ("Concentric"), located at 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am submitting this Direct Testimony on behalf of New York State Electric & Gas Corporation ("NYSEG") and Rochester Gas and Electric Corporation ("RG&E"), collectively referred to as "the Companies," wholly-owned subsidiaries of Iberdrola USA, Inc. ("Iberdrola USA"). My Direct Testimony is part of the Companies' rate case filings before the New York State Public Service Commission ("PSC" or "Commission").

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

A. I have approximately 20 years of experience consulting to the energy industry. I have advised numerous energy and utility clients on a wide range of financial and economic issues with primary concentrations in valuation and utility rate matters. Many of these assignments have included the determination of the cost of capital for valuation purposes. I have included my resume and a summary of testimony that I have filed in other proceedings as Attachment A.

Q. PLEASE DESCRIBE CONCENTRIC'S ACTIVITIES IN ENERGY AND UTILITY ENGAGEMENTS.

A. Concentric provides regulatory, financial, and economic advisory services to a large number of energy and utility clients across North America. Our regulatory, economic, and market analysis services include: utility ratemaking and regulatory advisory services; energy market assessments; market entry and exit analysis; corporate and business unit

strategy development; and energy contract negotiations. Our financial advisory activities include: merger, acquisition, and divestiture assignments; due diligence and valuation assignments; project and corporate finance services; and transaction support services. In addition, we provide litigation support services on a wide range of financial and economic issues for clients throughout North America.

II. PURPOSE AND OVERVIEW OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my Direct Testimony in this proceeding is to present evidence and provide a recommended range for the Companies' Cost of Equity (sometimes referred to as the Return on Equity or "ROE" for rate-setting purposes) and capital structure for their electric and gas distribution utility operations. My analysis and recommendations are supported by the data presented in Exhibits __ (AEB-1) through (AEB-15).

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

A. As discussed in more detail in the remainder of my testimony, it is important to consider the results of several analytical approaches in determining a reasonable recommendation for the Companies' ROE. In order to develop my ROE recommendation, I first developed a proxy group that consists of companies who face risk generally comparable to that faced by the Companies and then applied the Discounted Cash Flow ("DCF") model and two forms of the Capital Asset Pricing Model ("CAPM"). I weighted the results of the two CAPM analyses equally, and then, for an overall recommendation, weighted the results of the averaged CAPM result and the DCF analyses equally.

The use of a Multi-Stage DCF model and two forms of the CAPM is consistent with the approach employed by both the Commission and the New York State Department of

Public Service Staff ("Staff"). While my equal weighting of the DCF and CAPM results does not conform to the weighting typically employed in the past, I explain in this testimony why it is reasonable under current economic conditions to place less reliance on the DCF results than may have been used in the past.

Q. PLEASE SUMMARIZE THE RESULTS OF THE ROE ESTIMATION MODELS THAT YOU CONSIDERED IN YOUR ANALYSES.

A. As noted above, I considered the results of the Multi-Stage form of the DCF model and two versions of the CAPM. The results of my analyses are summarized in Table 1 (below).

Table 1: Summary of Analytical Results

Multi-Stage DCF				
	Mean (Low Growth)	Mean		Mean (High Growth)
3-Month Average Price	9.07%	9.27%		9.46%
Capital Asset Pricing Model				
	Current Risk-Free Rate (2.77%)	**2015-2016 Projected Risk-Free Rate (3.58%)**	**2016-2020 Projected Risk-Free Rate (4.90%)**	**Mean**
Bloomberg Beta	10.17%	10.40%	10.77%	10.45%
Value Line Beta	10.35%	10.57%	10.92%	10.61%
Zero Beta CAPM				
	Current Risk-Free Rate (2.77%)	**2015-2016 Projected Risk-Free Rate (3.58%)**	**2016-2020 Projected Risk-Free Rate (4.90%)**	**Mean**
Bloomberg Beta	10.89%	11.07%	11.34%	11.10%
Value Line Beta	11.03%	11.19%	11.45%	11.23%
Mean CAPM	10.61%	10.81%	11.12%	10.85%
	Mean (Low Growth)	Mean		Mean (High Growth)
50%/50% DCF/CAPM	9.84%	10.06%		10.29%

Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE APPROPRIATE COST OF EQUITY FOR THE COMPANIES?

A. Based on the quantitative and qualitative analyses discussed throughout my Direct Testimony and the weighting of the DCF and CAPM results shown in Table 1, I conclude that the appropriate ROE for the Companies is within the range of 9.84 percent and 10.29 percent.

Q. PLEASE SUMMARIZE YOUR ANALYSIS OF THE APPROPRIATE RATEMAKING CAPITAL STRUCTURE FOR THE COMPANIES.

A. Based on the analysis presented in Section VII of my testimony, I conclude that a reasonable range for the Companies' equity ratio is between 50.00 percent and 53.00 percent. That range is consistent with the authorized ratemaking equity ratios and the actual equity ratios of the companies in my proxy group.

Q. HOW IS THE REMAINDER OF YOUR DIRECT TESTIMONY ORGANIZED?

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

Section III – Discusses the regulatory guidelines and financial considerations pertinent to the development of the Cost of Capital;

Section IV – Explains my selection of the proxy group of electric and gas distribution utilities used to develop my analytical results;

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

Section VI – Summarizes the specific regulatory and business risks that have a direct bearing on the Companies' Cost of Equity;

Section VII – Provides an assessment of the Companies' proposed capital structure; and

Section VIII – Briefly discusses the current capital market conditions and the effect of those conditions on the Companies' Cost of Equity;

Section IX – Provides an assessment of the effect of a Multi-Year Rate Plan on the ROE; and

Section X Summarizes my conclusions and recommendations.

III. REGULATORY GUIDELINES AND FINANCIAL CONSIDERATIONS

Q. PLEASE DESCRIBE THE GUIDING PRINCIPLES TO BE USED IN ESTABLISHING THE COST OF CAPITAL FOR A REGULATED UTILITY.

A. The United States Supreme Court's precedent-setting *Hope* and *Bluefield* cases established the standards for determining the reasonableness of a utility's allowed ROE. Among the standards established by the Court in those cases are: (1) consistency with the returns on equity investments in other businesses having similar or comparable risks; (2) adequacy of the return to support credit quality and access to capital; and (3) an understanding that the means of arriving at a fair return are not controlling, only that the end result leads to just and reasonable rates.[1]

Based on those standards, the Commission's order in this case should provide the Companies with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms, thereby enabling them to continue to provide safe, reliable service; (2) sufficient to support the financial soundness of the Companies' operations; and (3) commensurate with returns on equity investments in enterprises having comparable risks. The authorized ROE should enable the Companies' to finance capital expenditures at reasonable rates and maintain their financial flexibility over the period during which rates are expected to remain in effect.

[1] *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944); *Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923).

IV. PROXY GROUP SELECTION

Q. PLEASE EXPLAIN WHY YOU HAVE USED A GROUP OF PROXY COMPANIES TO DETERMINE THE COST OF EQUITY FOR THE COMPANIES.

A. In this proceeding, we are focused on estimating the Cost of Equity for the Companies' rate-regulated, electric and natural gas distribution utility operations in New York. Since ROE is a market-based concept and the Companies are not publicly traded, it is necessary to establish a group of companies that are both publicly traded and comparable to the Companies in certain fundamental business and financial respects to serve as their "proxy" in the ROE determination process. As discussed later in my Direct Testimony, the proxy companies used in my analyses all possess a set of operating and risk characteristics that are substantially comparable to the Companies and thus provide a reasonable basis for the derivation and assessment of the Companies' ROE.

In utility rate proceedings before the Commission over the past 20 years (since the Recommended Decision ("RD") in the Generic Finance Proceeding ("GFP")),[2] the Commission has endorsed the use of proxy groups for the purpose of determining utility ROEs. Because proxy companies are now commonly used as the basis for estimating the utility Cost of Equity, the primary objective of the screening process is to establish a group of companies that are as comparable as possible to the Companies with respect to fundamental financial and business risks. As a practical matter, while the determination of an appropriate ROE necessarily requires a degree of informed judgment, the careful selection of a risk-appropriate comparison group serves to mitigate the extent to which subjective assessments must be applied.

[2] Case 91-M-0509, *Proceeding on Motion of the Commission to Consider Financial and Regulatory Policies for New York State Utilities*, Recommended Decision, (issued July 19, 1994) ("Generic Finance RD"), at 133-134.

Q. PLEASE PROVIDE A SUMMARY PROFILE OF THE COMPANIES.

A. NYSEG's principal business consists of its regulated electricity transmission, distribution and limited generation operations and regulated natural gas transportation and distribution operations in New York State. NYSEG serves approximately 884,000 electricity and 265,000 natural gas customers in it approximately 20,000 square mile service territory in the central, eastern and western portions of the state of New York. NYSEG's long-term issuer ratings are A3 (Moody's), BBB+ (Standard and Poor's or "S&P") and BBB+ (Fitch Ratings, or "Fitch").[3]

RG&E's principal business consists of its regulated electricity transmission, distribution and generation operations and regulated natural gas transportation and distribution operations in western New York. RG&E serves approximately 374,000 electricity and 309,000 natural gas customers in its service territory of approximately 2,700 square miles. The Commission-regulated service territory is located in the City of Rochester, New York and the surrounding counties. RG&E's long-term issuer ratings are Baa1 (Moody's), BBB+ (S&P) and BBB (Fitch).[4]

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

A. Since it has historically been the practice of the Commission to rely on proxy groups generally composed of electric utilities, I began with the companies that Value Line classifies as "Electric Utilities." That group is currently comprised of 46 domestic U.S. utilities. I simultaneously applied the following screening criteria:

- To ensure that information regarding the proxy group companies is consensus-based, I eliminated the companies that are not covered by at least two utility industry equity analysts;

[3] Source: SNL Financial, accessed February 2, 2015.
[4] Source: SNL Financial, accessed February 2, 2015.

- I eliminated companies that do not have investment grade corporate credit ratings and/or senior unsecured bond ratings according to S&P and Moody's because such companies do not have a similar financial risk profile to that of the Companies;
- I eliminated companies that have not paid regular dividends or do not have positive earnings growth projections from at least one source because such characteristics are incompatible with the DCF model;
- To ensure that the proxy group consists of entities that are predominantly electric utilities, I eliminated companies that derive less than 80.00 percent of total net operating income from regulated electric utility operations; and
- I eliminated companies known to be party to a merger, acquisition, or other transformational transaction as such activities may have a temporary effect on such companies' stock prices and projections unrelated to the overall cost of capital.

Q. WHY DO YOU BELIEVE THAT NET OPERATING INCOME IS AN APPROPRIATE SCREENING CRITERION?

A. In establishing my proxy group, I relied on the percentage of net operating income derived from regulated operations instead of the percentage of total revenue derived from regulated operations because net operating income is more representative of the contribution of that business segment to earnings and the corporation's overall financial position. Specifically, a significant portion of gas and electric utility company revenue is derived from the costs of purchased gas, purchased fuel, and purchased power, which, in most cases, are recoverable through tracking mechanisms and do not, therefore, contribute to earnings. Furthermore, this portion of total revenue can fluctuate

considerably based on the weighted average cost of gas and other inputs. Therefore, relying exclusively on a revenue screen does not provide a clear or necessarily consistent indicator of the contribution of the regulated utility operations to a company's earnings. Net operating income excludes the cost of purchased commodity and therefore more closely represents the contribution of the business segment to earnings.

Q. WHAT IS THE COMPOSITION OF YOUR PROXY GROUP?

A. My proxy group consists of the 22 companies presented in Table 2.

Table 2: Proxy Group

Company	Ticker
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Avista Corporation	AVA
Duke Energy Corporation	DUK
El Paso Electric Company	EE
Empire District Electric Company	EDE
Entergy Corporation	ETR
Eversource Energy	ES
Great Plains Energy Inc.	GXP
IDACORP, Inc.	IDA
NorthWestern Corporation	NWE
PG&E Corporation	PCG
Pinnacle West Capital Corporation	PNW
PNM Resources, Inc.	PNM
Portland General Electric Company	POR
SCANA Corporation	SCG
Southern Company	SO
TECO Energy, Inc.	TE
Westar Energy, Inc.	WR
Xcel Energy Inc.	XEL

Q. DO YOU BELIEVE THAT A TOTAL OF 22 COMPANIES CONSTITUTES A SUFFICIENTLY LARGE PROXY GROUP?

A. Yes, I do. The analyses performed in estimating the ROE are more likely to be representative of the subject utility's Cost of Equity to the extent that the chosen proxy companies are fundamentally comparable to the subject utility. Because all analysts use some form of screening process to arrive at a proxy group, the group, by definition, is not randomly drawn from a larger population. Consequently, there is no reason to place more reliance on the quantitative results of a larger and more dissimilar proxy group simply by virtue of the resulting larger number of observations.

Q. DOES STAFF TYPICALLY EMPLOY SIMILAR SCREENING CRITERIA WHEN DEVELOPING THE PROXY GROUP IT EMPLOYS TO ESTIMATE THE ROE?

A. Staff uses some, but not all, of the screening criteria that I have used to develop its proxy group. Staff's proxy group is typically composed of a large group of dividend paying companies with investment grade bond ratings and regulated revenues of at least 70 that are not subject to merger-related or corporate restructuring activities percent.[5] For the reasons noted above and discussed throughout my testimony, a proxy group based on Staff's less selective criteria may be less comparable to the Companies than my proxy group and therefore may not produce appropriate estimates of the Companies' required ROE.

[5] *See, e.g.,* Case 13-E-0030, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, Testimony of Craig E. Henry, at 14-16.

Q. WHY DO YOU BELIEVE THAT YOUR OPERATING INCOME SCREEN IS BETTER THAN STAFF'S USE OF A 70% OF REGULATED REVENUE AS A PROXY GROUP SCREENING CRITERION?

A. As discussed previously, I believe that net operating income is a more relevant screen than regulated revenue because net income excludes commodity costs, which can distort the contribution of a business segment to earnings and the corporation's overall financial position. Regarding the percentage that is used as the threshold, since NYSEG and RG&E are both nearly completely regulated companies, I relied on a screening threshold that balances the overall size of the proxy group with the need to maintain the comparability of the proxy companies to the subject companies. The 80 percent threshold achieves that goal. Increasing the percentage of net operating income derived from electric utility operations to a threshold higher than 80 percent results in a much smaller proxy group.

V. COST OF EQUITY ESTIMATION

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

A. The rate of return ("ROR") for a regulated utility is based on its weighted average cost of capital, in which the costs of the individual sources of capital are weighted by their respective percentages of total capitalization of the regulated utility. The ROE is weighted by the percentage of common equity in the regulated utility's capital structure.

Q. HOW IS THE REQUIRED ROE DETERMINED?

A. While the cost of debt can be directly observed, the Cost of Equity and the required ROE are market-based and, therefore, must be estimated based on observable market information. The required ROE is determined by using one or more analytical

techniques that rely on market data to quantify investor expectations regarding the range of required equity returns. Informed judgment is applied, based on the results of those analyses, to determine where within the range of results the Cost of Equity for a company falls. The resulting adjusted Cost of Equity serves as the recommended ROE for ratemaking purposes. As a general proposition, the key consideration in determining the Cost of Equity is to ensure that the methodologies employed reasonably reflect investors' views of the financial markets, the proxy group companies, and the subject company's risk profile.

Q. WHAT METHODS DID YOU USE TO DETERMINE THE COMPANIES' COST OF EQUITY?

A. Consistent with Commission precedent, I used the DCF model and CAPM as the primary approaches. In establishing my recommended ROE, I relied on a Multi-Stage form of the DCF model and consistent with the Commission's stated preference, I used both the traditional form of the CAPM as well as the "Zero-Beta" form of that model. In both forms of the CAPM, I incorporated an *ex-ante* measure of the Market Risk Premium.

Q. WHY DO YOU BELIEVE IT IS IMPORTANT TO USE MORE THAN ONE ANALYTICAL APPROACH?

A. Because the Cost of Equity is not directly observable, it must be estimated based on both quantitative and qualitative information. 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. As a result, a number of models have been developed to estimate the Cost of Equity. For that reason, Concentric uses multiple approaches to estimate the Cost of Equity used in performing valuations in the context of our financial advisory and transaction practices. 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. For example, Copeland, Koller and Murrin[6] suggest using the CAPM and Arbitrage Pricing Theory model, while Brigham and Gapenski[7] recommend the CAPM, DCF, and "bond yield plus risk premium" approaches.[8]

A. DISCOUNTED CASH FLOW MODEL

Q. ARE DCF MODELS WIDELY USED TO DETERMINE THE ROE FOR REGULATED UTILITIES?

A. Yes. DCF models are widely used in regulatory proceedings and have sound theoretical bases, although neither the DCF model nor any other model can be applied without considerable judgment in the selection of data and the interpretation of results. The Commission has used the results of the DCF model as one of the measures of the Cost of Equity in prior cases.

Q. PLEASE DESCRIBE THE DCF APPROACH.

A. The DCF approach is based on the theory that a stock's current market price represents the present value of all expected future cash flows. In its most general form, the DCF model is expressed as follows:

$$P_0 = \frac{D_1}{(1+r)^1} + \frac{D_2}{(1+r)^2} + \cdots + \frac{D_n}{(1+r)^n} \qquad [1]$$

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6 Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd Ed. (New York: McKinsey & Company, Inc., 2000), at 214.

7 Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed. (Orlando: Dryden Press, 1994), at 341.

8 While it has historically been my practice to present the results of a bond yield plus risk premium approach in the context of estimating a reasonable ROE, I have not done so in this case to limit the number of contested issues. The result of such an analysis, however, would support my CAPM ROE determinations.

Where P_0 represents the current market stock price, D_1 … D_n are all expected future dividends, and r is the discount rate, or required ROE. As discussed in more detail below, I have not included the Constant Growth form of the DCF model, but instead have focused on a Multi-Stage form of the DCF model.

1) Stock Prices used in the DCF Model

Q. WHAT MARKET DATA DID YOU USE TO CALCULATE THE CURRENT STOCK PRICE IN YOUR DCF MODELS?

A. The stock prices that I relied on in my DCF models are based on the average market closing prices for the proxy companies' shares over the three months ended January 30, 2015.

2) Multi-Stage DCF Model

Q. PLEASE GENERALLY DESCRIBE THE DCF MODEL YOU RELIED ON.

A. The Multi-Stage DCF model is an extension of the Constant Growth form that enables the analyst to specify growth rates over multiple stages. As with the Constant Growth form of the DCF model, the Multi-Stage form defines the Cost of Equity as the discount rate that sets the current price equal to the discounted value of future cash flows. A Multi-Stage DCF model addresses the possibility that mean five-year growth rates may not be reasonable in perpetuity for some companies.

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

A. The Multi-Stage DCF model that I have used sets the subject company's current stock price equal to the present value of future cash flows received over three time periods. In all three periods, cash flows are equal to the annual dividend payments that stockholders receive. The first period is a short-term growth period that consists of the first five years; the second period is a transition period from the short-term growth rate to the long-term

growth rate which occurs over five years (*i.e.*, years six through 10); and the third period is a long-term growth period that begins in year 11 and continues in perpetuity. The ROE is then calculated as the rate of return that results from the initial stock investment and the dividend payments over the analytical period.

Q. HAS THE COMMISSION RELIED ON A MULTI-STAGE DCF MODEL IN PRIOR CASES?

A. Yes, the Commission has relied on a Two-Stage form of the DCF model presented by Staff in prior cases.[9] Staff's Two-Stage model and the Multi-Stage Model that I rely on define the Cost of Equity as the discount rate that sets the current stock price equal to the discounted value of future cash flows that are expressed as projected dividends. Both models project dividends using growth rates over multiple periods.

Q. DO YOU BELIEVE THAT THE MULTI-STAGE FORM OF THE DCF MODEL IS CONSISTENT WITH THE INTENT OF THE TWO-STAGE MODEL RELIED UPON BY THE COMMISSION?

A. Yes, I do. In my view, both the construction of the model and the underlying assumptions are consistent with, and enhance the estimation resulting from, a Two-Stage model. The general form of the Two-Stage model relied upon by the Commission involves a near-term growth stage based on projected dividends and a long-term growth stage employing an estimated long-term growth rate in dividends.[10] The Commission's application of a Two-Stage DCF assumes that a company's growth abruptly shifts to a long-run growth state after the initial five year period. In contrast, the three-stage model relies on growth rates over three periods. In Stage I (years one through five) dividends

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[9] *See* Case 10-E-0362, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc. for Electric Service,* Order Establishing Rates for Electric Service, (issued June 17, 2011) ("2011 O&R Rate Order"), at 68-69.

[10] *See generally* Case 10-E-0362, Case 06-E-1433, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc., for Electric Service*, Case 08-E-0539, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service.*

are increased based on analysts' estimates of earnings growth rates. Stage II is a transitional stage where the earnings growth rates are transitioned over a five-year period (years six through ten) to the long-run sustainable growth rate that is used in the third stage. Stage III relies on a long-term GDP growth rate beginning in year 11 through year 200. I believe this specification of the DCF model is a more realistic estimate of the transition to a company's expected long-term growth than the Two-Stage DCF model.

Q. PLEASE SUMMARIZE THE GROWTH RATES THAT YOU RELIED ON IN THE MULTI-STAGE DCF MODEL.

A. As shown in Exhibit __ (AEB-1), I began with the current annualized dividend as of January 30, 2015 for each proxy group company. In the first stage of the model, the current annualized dividend is escalated based on the average of the three- to five-year earnings growth estimates reported by First Call, Zacks, and Value Line. For the third stage of the model, I relied on long-term projected growth in Gross Domestic Product ("GDP"). As noted above, the second stage growth rate is a transition from the first stage growth rate to the long-term growth rate on a geometric average basis.

Q. WHY DO YOU BELIEVE THAT EARNINGS GROWTH RATES ARE THE APPROPRIATE GROWTH RATES TO BE RELIED ON IN THE DCF MODEL?

A. Earnings are the fundamental driver of a company's ability to pay dividends; therefore, earnings growth is the appropriate measure of a company's long-term growth. In contrast, changes in a company's dividend payment are based on management decisions related to cash management and other factors. For example, a company may determine to retain certain earnings rather than to include those earnings in a dividend issuance. Therefore, dividend growth rates are less likely than earnings growth rates to reflect accurately investor perceptions of a company's growth prospects.

Q. IS THERE SUPPORT FOR THE USE OF ANALYSTS' EARNINGS GROWTH ESTIMATES IN THE DCF MODEL?

A. Yes, there is significant academic support for the use of analyst growth rates. In addition, the majority of the data that is publicly available to investors sets forth analysts' projections of earnings growth rates.

Q. PLEASE SUMMARIZE THE ACADEMIC RESEARCH ON GROWTH RATES AND STOCK VALUATION.

A. The relationship between various growth rates and stock valuation metrics has been the subject of much academic research. Many published articles specifically support the use of analysts' earnings growth projections in the DCF model in general, as well as for a method of calculating the expected market risk premium in particular. Dr. Robert Harris, for example, demonstrated that financial analysts' earnings forecasts (referred to in the article as "FAF") in a Constant Growth DCF formula are an appropriate method of calculating the expected market risk premium.[11] Dr. Harris made the following observations:

> […] a growing body of knowledge shows that analysts' earnings forecasts are indeed reflected in stock prices. Such studies typically employ a consensus measure of FAF calculated as a simple average of forecasts by individual analysts.[12]
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> *****
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> Given the demonstrated relationship of FAF to equity prices and the direct theoretical appeal of expectational data, it is no surprise that FAF have been used in conjunction with DCF models to estimate equity return requirements.[13]

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11 Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return*, Financial Management, Spring 1986 at p. 66.

12 *Ibid.,* at p. 59.

13 *Ibid.,* at p. 60.

Professors Carleton and Vander Weide also performed a study to determine whether projected earnings growth rates are superior to historical measures of growth in the implementation of the DCF model.[14] Although the purpose of that study was to "investigate what growth expectation is embodied in the firm's current stock price,"[15] the authors clearly indicate the importance of earnings projections in the context of the DCF model. Professors Carleton and Vander Weide concluded that:

> […] our studies affirm the superiority of analysts' forecasts over simple historical growth extrapolations in the stock price formation process. Indirectly, this finding lends support to the use of valuation models whose input includes expected growth rates.[16]

Similarly, Harris and Marston presented "estimates of shareholder required rates of return and risk premia which are derived using forward-looking analysts' growth forecasts."[17] In addition to other findings, Harris and Marston reported that,

> […] in addition to fitting the theoretical requirement of being forward-looking, the utilization of analysts' forecasts in estimating return requirements provides reasonable empirical results that can be useful in practical applications.[18]

More recently, the Carleton and Vander Weide study was updated to determine whether the finding that analysts' earnings growth forecasts are relevant in the stock valuation process still holds. The results of that updated study continued to demonstrate the importance of analysts' earnings forecasts, including the application of those forecasts to utility companies.[19] Similarly, Brigham, Shome and Vinson noted that "evidence in the

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14 James H. Vander Weide, Willard T. Carleton, *Investor growth expectations: Analysts vs. history,* The Journal of Portfolio Management, Spring 1988.

15 *Ibid.*, at p. 78.

16 *Ibid.,* at p. 82.

17 Robert S. Harris, Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, Summer 1992.

18 *Ibid.*, at p. 63.

19 Advanced Research Center, *Investor Growth Expectations*, Summer, 2004.

current literature indicates that (1) analysts' forecasts are superior to forecasts based solely on time series data; and (2) investors do rely on analysts' forecasts."[20]

Q. WHAT IS YOUR OPINION OF THE COMMISSION'S HISTORICAL RELIANCE ON DIVIDEND PER SHARE GROWTH RATES DURING THE INITIAL FIVE-YEAR TERM OF ITS TWO STAGE DCF?

A. There are several reasons why sole reliance on Value Line projections of dividend per share growth may not be appropriate. First, as discussed above, the use of only dividend growth rates ignores the academic research that demonstrates that earnings growth rates are relevant in stock price valuation.[21] Second, projections of dividend growth, which would not include growth in retained earnings, only measure a portion of the growth experienced by the company. Therefore, projections of earnings growth are more complete estimates of total company growth than projected dividend growth rates. Finally, Value Line's 3-5 year projections are not consensus estimates, but rather reflect the viewpoint of a single analyst. Therefore, Staff's models, which have historically relied only on projected dividend per share growth rates from Value Line, reflect the growth expectations of a single analyst in the first stage of the model. In contrast, there are several consensus estimates of projected earnings per share growth rates that are publicly available and widely used by investors, including Zacks' Investment Research and Thompson Financial (published on Yahoo Finance). Each of these consensus forecasts considers the growth expectations for each company based on the expectations of multiple analysts.

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[20] *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985.

[21] The Recommended Decision ("RD") in the GFP indicates that the Telecommunications Group, which included Staff, supported the use of earnings per share growth in the DCF models employed to estimate the ROE (RD at 9).

Q. ARE THERE OTHER REASONS TO USE A CONSENSUS ESTIMATE?

A. Yes. In recent cases, Staff has raised concerns regarding "biased and inaccurate growth rate estimates."[22] However, Staff's response to this concern has been to rely on larger and less comparable proxy groups to resolve any potential bias. Instead of expanding the proxy group to include companies that are increasingly dissimilar to the Companies, using consensus estimates of earnings growth rates instead of the projections of dividend growth offered by a single analyst would resolve such concerns about growth rate bias.

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

A. As shown in Exhibit __ (AEB-2), the long-term growth rate of 5.51 percent is based on the real GDP growth rate of 3.26 percent from 1929 through third quarter of 2014,[23] and a projected inflation rate of 2.19 percent. The rate of inflation of 2.19 percent is based on three measures: (1) the average long-term projected growth rate in the Consumer Price Index ("CPI") of 2.30 percent, as reported by Blue Chip Financial Forecasts;[24] (2) the compound annual growth rate of the CPI for all urban consumers for 2025-2040 of 2.26 percent as projected by the Energy Information Administration ("EIA") in the Annual Energy Outlook 2014; and (3) the compound annual growth rate of the GDP chain-type price index for 2025-2040 of 2.0 percent, also reported by the EIA in the Annual Energy Outlook 2014.[25]

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22 Case 13-E-0030, Testimony of Craig E. Henry at 11.

23 U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Tables, Table 1.1.6, January 30, 2015.

24 Blue Chip Financial Forecasts, Vol. 33, No. 12, December 1, 2014, at 14.

25 U.S. Energy Information Administration, Annual Energy Outlook 2014, Table 20, Macroeconomic Indicators.

Q. WHY IS THE LONG-TERM GDP GROWTH RATE A REASONABLE ESTIMATE OF LONG-TERM GROWTH IN YOUR MULTI-STAGE DCF MODELS?

A. In regulatory proceedings, long-term estimates of GDP growth are commonly used as a proxy for the long-term growth in proxy group company dividends in Multi-Stage DCF analyses. That application is based on the common theoretical assumption that, over the long-run, all the companies in the economy will tend to grow at the same constant rate. That assumption is designed to address the uncertainty associated with estimating individual company growth rates over very long time horizons and is not meant to act as a prediction that company growth rates in the economy will indeed converge in practice over any given period.

Q. HOW DOES YOUR ESTIMATE OF LONG-TERM GDP GROWTH COMPARE WITH INVESTOR EXPECTATIONS OF GDP GROWTH?

A. Staff has traditionally relied on Bank of America Merrill Lynch's ("BAML") market return calculations in estimating a company's ROE using the CAPM. Exhibit __ (AEB-3) includes the BAML *Quantitative Profiles* reports for November and December 2014 and January 2015. BAML derives the Implied Return through the use of a Multi-Stage Dividend Discount Model ("DDM").[26] As shown in Exhibit __ (AEB-3), the November, December and January Implied Returns for the utility industry were 9.80 percent, 9.70 percent and 9.70 percent, respectively, which produces an average Implied Return of approximately 9.73 percent.[27] For those same months, the yield for the utility industry was 3.4 percent.[28] Since the total return consists of capital appreciation (*i.e.*, growth) and

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[26] Bank of America Merrill Lynch, *Quantitative Profiles,* November 11, 2014 at 9.

[27] Bank of America Merrill Lynch, *Quantitative Profiles,* November 11, 2014 at 56. Bank of America Merrill Lynch, *Quantitative Profiles,* December 9, 2014 at 56. Bank of America Merrill Lynch, *Quantitative Profiles,* January 14, 2015 at 56.

[28] *Ibid.*

yield, that data suggests an expected utility growth rate of approximately 6.33 percent, which, as discussed below, is considerably higher than the long-term growth estimate of 5.51 percent used in my Multi-Stage DCF analysis.

Q. HOW DOES YOUR ESTIMATE OF LONG-TERM GROWTH DIFFER FROM THE ESTIMATE THAT STAFF HAS TRADITIONALLY RELIED ON?

A. The final stages of Staff's Two-Stage DCF model and my Multi-Stage DCF model extend into the future indefinitely. My long-term growth estimate reflects investors' long-term growth expectations for the period from 2025 through 2040. Therefore, the third stage of my Multi-Stage DCF model reflects investor growth expectations beginning in the first year of that stage of the model. In contrast, Staff's growth estimate for the Two-Stage model is based on short-term growth rate forecasts. Staff's Two-Stage DCF model relies on an estimate of Sustainable Growth, calculated using Value Line's published projections for a three to five-year period. As a result, the growth rate employed in perpetuity in the second state of Staff's Two-Stage DCF model is not a long-run estimate of growth but rather a short-term estimate of the sustainable growth rate for the period three to five-years from the report date.

In contrast, the long-term growth rate included in my DCF analyses reflects both economic forecasts and market-derived projections of inflation over the longest available time period (30 or more years). Those estimates of long-term inflation expectations are combined with the long-term average historical real GDP growth rate to calculate an expected nominal GDP growth rate. Consequently, the long-term growth estimate used in my Multi-Stage DCF models represents investor and economist views of nominal long-term GDP growth well beyond the time horizon reflected in the three- to five-year Value Line Sustainable Growth estimate relied on by Staff. In essence, Staff's application of the

Two-Stage DCF model makes the untested assumption that the Value Line projections of conditions 4-6 years into the future reflect the investors' expectations in perpetuity.

Q. DOES STAFF'S USE OF VALUE LINE DATA TO DEVELOP THE SUSTAINABLE GROWTH ESTIMATE RESOLVE STAFF'S CONCERNS ABOUT GROWTH RATE BIAS?

A. No. Staff's sustainable growth rate is the sum of retention growth plus an SV factor,[29] calculated using Value Line data. As such, the sustainable growth rate estimate that Staff uses in the second stage of the model is based on a single analyst's viewpoint of the company's long-term growth prospects that is projected for a 4- to 6- year period.

Q. ARE THERE OTHER PROBLEMS WITH THE USE OF THE SUSTAINABLE GROWTH RATE AS AN ESTIMATE OF LONG-TERM GROWTH?

A. Yes. The sustainable growth rate used to estimate the long-term growth of the company uses a very narrowly defined set of short-term projections. Staff's estimate of the sustainable growth rate relies on Value Line's short-term projections for six company-specific assumptions. Specifically, Staff's sustainable growth assumption relies on: (1) projected dividends for year 2; (2) projected dividends for years 4-6; (3) projected earnings for years 4-6; (4) projected shares of outstanding stock for years 4-6; (5) projected book value for years 4-6; and (6) Value Line's current estimate of actual outstanding shares of stock to develop a long-term dividend growth rate. Each of these assumptions is based on a single data source, which projects the growth of the company based only on those company-specific factors. The result of Staff's approach is that the sustainable growth rate, which is applied over the long-term in Staff's Two-Stage model,

[29] Retention growth is the product of the expected earned ROE and the retention ratio (one minus the dividend payout ratio). The SV factor employs an estimate of the market-to-book ratio and the expected expansion rate of outstanding shares of common stock in the future.

does not consider any long-term forecasts for the specific company or the economy as a whole.

Q. WHAT IS YOUR CONCLUSION REGARDING THE METHODOLOGY USED BY STAFF TO ESTIMATE THE SUSTAINABLE GROWTH RATE?

A. There are several reasons why Staff's sustainable growth rate should not be relied on in the Two-Stage DCF model. First, the sustainable growth rate, as estimated by Staff, is not a long-term measure of growth and as such should not be applied in perpetuity in the second stage of the model. Second, as discussed previously, the exclusive use of Value Line data, which is a single analyst's viewpoint, to establish the sustainable growth rate assumes that investors do not consider any of the other financial information that is widely available when establishing future dividend expectations. That viewpoint is inconsistent with academic research given the substantial amount of financial information readily available to investors. Finally, Staff's sustainable growth rate methodology implicitly assumes that investors establish long-term growth expectations based entirely on short-term company-specific projections. It is unreasonable to conclude that investors would not consider the expectations of long-term macroeconomic growth as one factor in establishing the long-term growth estimates for a combination electric and natural gas distribution utility.

Q. WHAT ARE THE RESULTS OF YOUR DCF ANALYSES?

A. As shown in Exhibit __ (AEB-1), the Multi-Stage DCF analysis produces an ROE range of 9.07 percent to 9.46 percent with a mean ROE of 9.27 percent based on a three-month average stock price and a range of near-term growth rate assumptions.

B. CAPITAL ASSET PRICING MODEL ANALYSIS

Q. PLEASE BRIEFLY DESCRIBE THE CAPITAL ASSET PRICING MODEL.

A. The CAPM is a risk premium approach that estimates the market 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 [4], the CAPM is defined by four components, each of which must be a forward-looking estimate:

$$k_e = r_f + \beta(r_m - r_f) \qquad [4]$$

where:

k_e = the required market ROE

β = Beta coefficient of an individual security

r_f = the risk-free rate of return

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

In this specification, the term $(r_m - r_f)$ represents the market risk premium. According to the theory underlying the CAPM, investors should be concerned only with systematic or non-diversifiable risk because unsystematic risk can be diversified away. Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

$$\beta = \frac{Covariance(r_e, r_m)}{Variance(r_m)} \qquad [5]$$

The variance of the market return, noted in Equation [5], is a measure of the uncertainty of the general market, and the covariance between the return on a specific security and the market reflects the extent to which the return on that security will respond to a given change in the market return.

Q. WHAT RISK-FREE RATE DID YOU USE IN YOUR CAPM MODEL?

A. I used three estimates of the yield on Treasury Bonds: (1) the current three-month average yield on 30-year Treasury Bonds (2.77 percent);[30] (2) the projected 30-year Treasury yield for 2015-2016 (3.58 percent);[31] and (3) the projected 30-year Treasury yield for the period 2016-2020 (4.90 percent).[32] In determining the security most relevant to the application of the CAPM, it is important to select the term (or maturity) that best matches the life of the underlying investment. As noted by Morningstar:

> [T]he time horizon of the chosen Treasury security is that it should match the time horizon of whatever is being valued… Note that the horizon is a function of the investment, not the investor. If an investor plans to hold stock in a company for only five years, the yield on a five-year Treasury note would not be appropriate since the company will continue to exist beyond those five years.[33]

Because utility companies represent long-duration investments, it is appropriate to use yields on long-term Treasury Bonds as the risk-free rate component of the CAPM. In my view, the 30-year Treasury bond is the appropriate security for that purpose. Because interest rates are at historically low levels and are projected to increase in the near future, it is important to factor forward-looking estimates of the risk-free rate and the market risk premium into the CAPM analysis.

Q. PLEASE DESCRIBE YOUR ESTIMATE OF THE MARKET RISK PREMIUM USED IN YOUR CAPM.

A. The estimated market risk premium is based on the expected return on the S&P 500 Index, less the 30-year Treasury bond yield. The expected return on the S&P 500 Index is calculated using a DCF model for all companies in the index based on market

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30 Bloomberg Professional.
31 Aspen Publishers, Blue Chip Financial Forecasts, Vol. 34, No. 1 January 1, 2015, p. 2.
32 Aspen Publishers, Blue Chip Financial Forecasts, Vol. 33, No. 12 December 1, 2014, p. 14.
33 Morningstar Inc., Ibbotson SBBI 2013 Valuation Yearbook, at 44.

capitalization-weighted growth rates and dividend yields. The market risk premium implied by each of the three Treasury yields discussed above is used in the CAPM analysis.

Q. IS YOUR CALCULATION OF THE MARKET RISK PREMIUM CONSISTENT WITH THE METHODOLOGY RELIED UPON IN PREVIOUS CASES BEFORE THE COMMISSION?

A. Yes, it is. The Commission previously has relied upon the calculation of a projected market risk premium, based on the difference between the estimated *ex-ante* required market return for the S&P 500, as provided by BAML, and the risk-free rate. As a practical matter, that approach is consistent with the Market DCF-derived *ex-ante* market risk premium estimate discussed above (*see also* Exhibit __ (AEB-4).[34]

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

A. I considered the Beta coefficients reported by Bloomberg and Value Line for each of the proxy group companies.

Q. WHY DO YOU BELIEVE THAT IT IS APPROPRIATE TO RELY ON TWO SOURCES OF BETA COEFFICIENTS?

A. While both Bloomberg and Value Line adjust their calculated (or "raw") Beta coefficients to reflect the tendency of the Beta coefficient to regress to the market mean of 1.00, Value Line calculates the Beta coefficient over a five-year period while Bloomberg's calculation is based on a two-year period. While a larger data set is generally preferred from a statistical perspective, the Bloomberg Beta coefficient is widely employed and more representative of the current market environment. Therefore, there are benefits to including both measures of Beta in my analysis.

[34] *See e.g.,* 2011 O&R Rate Order, at 77.

Q. DID YOU CONSIDER ANOTHER FORM OF THE CAPM IN YOUR ANALYSIS?

A. Yes. In prior proceedings, the Commission has relied upon the "Zero-Beta" CAPM (the form of which is sometimes referred to as the "Empirical CAPM"[35]) in estimating the Cost of Equity. The Zero-Beta CAPM calculates the product of the adjusted Beta coefficient and the market risk premium and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the market risk premium, without any effect from the Beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the Zero-Beta CAPM result, as noted in Equation [6] below:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \quad [6]$$

where:

k_e = the required market ROE

β = Adjusted Beta coefficient of an individual security

r_f = the risk-free rate of return

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

In essence, the Zero-Beta form of the CAPM addresses the tendency of the "traditional" CAPM to underestimate the Cost of Equity for companies with low Beta coefficients such as regulated utilities. In that regard, the Zero-Beta CAPM is not redundant to the use of adjusted Betas; rather, it recognizes the results of academic research indicating that the risk-return relationship is different (in essence, flatter) than estimated by the CAPM, and that the CAPM underestimates the "alpha," or the constant return term.[36]

As with the CAPM, my application of the Zero-Beta CAPM uses the forward-looking market risk premium estimates, the three yields on 30-year Treasury securities noted

35 *See e.g.,* Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 189.
36 *Ibid.*, at 191.

earlier as the risk-free rate, and the Bloomberg and Value Line Beta coefficients. Exhibit __ (AEB-4) shows the results of the CAPM models. The traditional CAPM model results range from 10.17 percent to 10.92 percent. The Zero-Beta CAPM model results range from 10.89 percent to 11.45. The range established by the traditional CAPM model and the Zero-Beta CAPM model results is 10.17 percent to 11.45 percent with a mean of 10.85 percent.

C. Weighted Average Results

Q. Please summarize the results of your analysis and your recommended ROE.

A. As shown in Table 3 (below), I have weighted the DCF and CAPM results equally, resulting in an ROE range of 9.84 percent to 10.29 percent.

Table 3: Weighted Average Analytical Results

	Low	Mean	High
DCF	9.07%	9.27%	9.46%
Mean CAPM	10.61%	10.85%	11.12%
Mean ROE	9.84%	10.06%	10.29%

Q. Why have you chosen to weight the DCF and CAPM results equally instead of placing 2/3 weight on the DCF model as decided in the GFP?

A. My decision to weight the results of the two methodologies equally is based on my understanding of the RD in the GFP, the Commission's long-standing experience including results of the CAPM as part of its ROE calculation, and the effect of current market conditions on the CAPM and DCF results.

Q. Why is the RD in the GFP a relevant consideration today?

A. The RD recognized that the DCF methodology was especially sensitive to fluctuations in interest rates and that the Commission had asked parties to address the desirability of

continuing to rely on that methodology. The RD also acknowledged that there was nothing sacrosanct about the DCF analysis and that all methods had benefits and shortcomings.[37] Finally, at the time of the GFP, the Commission was concerned about consistency from company to company in the rate of return calculation, noting that differences in return should be based on "discernible and explanatory differences among utilities."[38] It was also observed that using a generic determination methodology would have the benefit of enhancing consistency by eliminating variations in results due to noise in the data or random measurement errors.[39] Staff also supported the use of multiple methodologies in a generic ROE estimation methodology, noting that DCF-based results are in no way superior to those obtained using other methods.[40] Therefore, while the GFP is what is used today as the foundation for the current weighting, the discussion in the RD provides a basis for changing the weighting of the two methodologies based on relevant considerations.

Q. PLEASE EXPLAIN HOW THE COMMISSION'S USE OF THE CAPM FOR THE PAST 20 YEARS FACTORS INTO YOUR RECOMMENDATION TO EQUALLY WEIGHT THE TWO METHODOLOGIES.

A. At the time of the RD, it does not appear that the Commission had a significant amount of experience with CAPM results. To the extent that this was a consideration in the RD's weighting determination, the Commission's many years of experience with the CAPM since that time provides a sound basis for altering the weighting of the two ROE methodologies.

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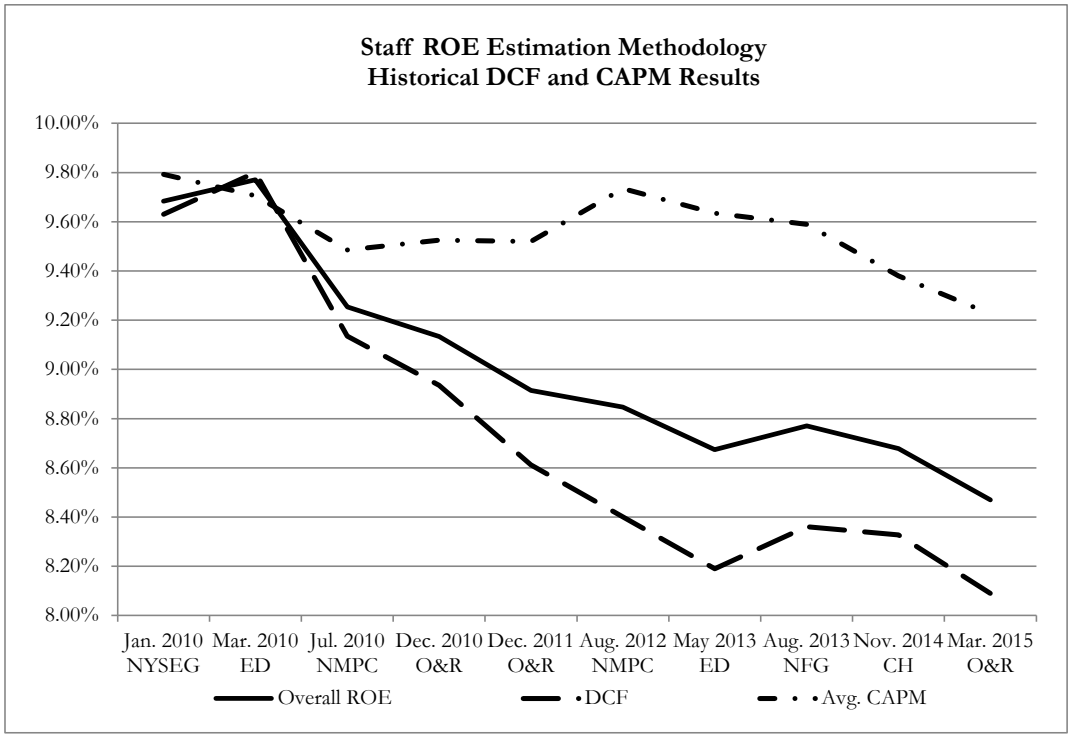
37 1994 N.Y. PUC Lexis 141, 39.
38 *Ibid* at 38.
39 *Ibid* at 39.
40 1994 N.Y. PUC Lexis 141, 74.

Q. HOW HAVE CURRENT MARKET CONDITIONS INFLUENCED YOUR RECOMMENDATION TO MOVE TO EQUAL WEIGHTING FOR THE CAPM AND THE DCF RESULTS?

A. The RD in the GFP indicates that DCF results at the time the Commission initiated its inquiry were approximately 100 basis points less than the ROE obtained with other approaches. The situation today is more severe, with the DCF ROE estimate more than 150 basis points below the CAPM ROE estimate. Thus, current market conditions demonstrate that the results of the DCF model are again significantly below the results derived from other methodologies and are susceptible to volatility in the market data over the three-month averaging period on which the Commission has traditionally relied. As shown in Chart 1 below, using the Staff analyses prepared over the past five years, the DCF results have ranged from 8.09 percent to 9.80 percent, while the average CAPM results have been in the range of 9.23 percent to 9.79 percent. The results of the CAPM and Zero-Beta CAPM have been more stable during market conditions over the past five years.

Chart 1: Staff Estimation for NY utilities 2010-2014



Q. HAVE ANALYSTS COMMENTED ON THE EFFECT OF CURRENT MARKET CONDITIONS ON THE VALUE OF UTILITY STOCK?

A. Yes. In December 2014, Value Line indicated that utility stock prices may be trading at the high end of the three-year target range and noted the market risks associated with the purchase of dividend paying stocks.

> Every Stock price has risen in 2014. In fact, most have soared more than 20% and some (including *Entergy* and *Integrys Energy*) are up more than 30%. Following this move, many share prices are near the upper end of their 2017-2019 Target Price Range. A few stocks, including *Empire District Electric*, are trading *above* this range. Lately, the group's average dividend yield has been 3.5%.
>
> All of this means that electric utility equities are expensively priced. Investors should note that our long-term interest rate projection is for a yield of 4.3% on the 10-year U.S. Treasury note. That's about two percentage points higher than the yield today. Such a significant rise in interest rates would most likely not be good for electric utility equities.[41]

[41] Value Line Investor Survey, December 19, 2014, p. 901.

The combination of high prices for utility stocks today and the effect of rising interest rates on utility stock prices likely result in an underestimation of the Cost of Equity using the DCF model.

Q. PLEASE SUMMARIZE YOUR CONCLUSION REGARDING THE RELATIVE WEIGHTING OF THE CAPM AND DCF RESULTS.

A. The Commission and the RD in the GFP showed no clear preference for the DCF methodology given its volatile history. Since then, the Commission has employed the CAPM as one component of the formula used to develop ROE estimates. There does not appear to be any reason to infer that the Commission has less confidence in the results of the CAPM than those of the DCF. The conditions that warranted the Commission's GFP inquiry and the subsequent RD in the early 1990s exist again today with volatile DCF results that are considerably below the results of other methodologies, the CAPM in particular. Finally, to the extent that dividend-paying stocks are "expensively priced" today and could correct to lower levels in the period that rates would be in effect, the DCF model is likely to underestimate the Cost of Equity. As a result, it is reasonable to apply equal weighting to the CAPM methodology when determining the ROE for the Companies.

VI. REGULATORY AND BUSINESS RISKS

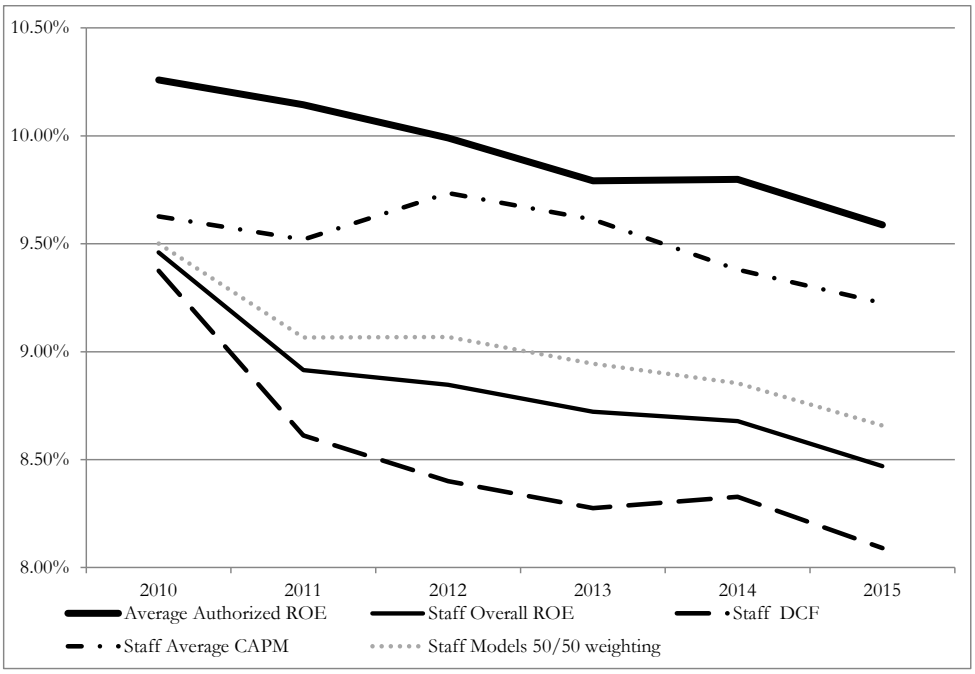
A. NEW YORK ALLOWED ROES AND WEIGHTED ROES

Q. HOW DO THE RETURNS THAT RESULT FROM STAFF'S MODEL COMPARE WITH AUTHORIZED RETURNS IN OTHER JURISDICTIONS?

A. Over time, volatility in the Staff DCF model results has significantly reduced the overall recommended ROE for utility operations in New York. Chart 2 below shows the relationship between the average authorized return for utilities in other United States

jurisdictions[42] since January 2010, the results of Staff's DCF and CAPM models, and the overall ROE that resulted from those models. As shown in Chart 2, while the result of Staff's DCF/CAPM weighting methodology resulted in overall returns that were 80 basis points lower than the average authorized returns in the remaining state jurisdictions in 2010, the Staff model results are now 112 basis points below the average authorized ROE in the rest of the state jurisdictions in 2015.

Chart 2: Comparison of Staff ROE model results and Authorized Returns



Q. WHAT DOES THIS INFORMATION INDICATE REGARDING THE LEVEL OF ALLOWED ROEs IN NEW YORK VERSUS THE RETURNS AUTHORIZED IN OTHER JURISDICTIONS?

A. Over the past several years, the Commission's authorized ROEs are well below the national average authorized return on equity. While an equal weighting of DCF and CAPM results improves the results of the Staff model, the Staff model would still underestimate the return on equity as compared with the national average authorized

[42] The average authorized returns exclude the returns authorized by the Commission.

return. Furthermore, as discussed in Section VII of my testimony, combining the below average authorized ROE resulting from the Staff models with the Commission's policy to cap ratemaking equity ratios at 48 percent results in a weighted average return on equity for New York utilities that is well below the national average over the last ten years.

B. REGULATORY FRAMEWORK

Q. PLEASE EXPLAIN HOW THE REGULATORY FRAMEWORK AFFECTS INVESTORS' RISK ASSESSMENTS.

A. The ratemaking process is premised on the principle that, in order for investors and companies to commit the capital needed to provide safe and reliable utility services, the subject utility must have the opportunity to recover invested capital and the market-required return on such capital. Regulatory commissions recognize that because utility operations are capital intensive, regulatory decisions should enable the utility to attract capital at reasonable terms, which balances the long-term interests of investors and customers. In that respect, the regulatory framework in which a utility operates is one of the most important factors considered in both debt and equity investors' risk assessments.

Because investors have many investment alternatives, even within a given market sector, the Companies' authorized returns must be adequate on a relative basis to ensure their ability to attract capital under a variety of economic and financial market conditions. From the perspective of debt investors, the authorized return should enable the Companies to generate the cash flow needed to meet their near-term financial obligations, make the capital investments needed to maintain and expand their systems, and maintain sufficient levels of liquidity to fund unexpected events. This financial liquidity must be

derived not only from internally-generated funds, but also by efficient access to capital markets.

From the perspective of equity investors, the authorized return must be adequate to provide a risk-comparable return on the equity portion of the Companies' capital investments. Because equity investors are the residual claimants on the Companies' cash flows (that is, debt interest must be repaid prior to any equity dividends), equity investors are particularly concerned with the regulatory framework in which a utility operates and its effect on future earnings and cash flows.

Q. PLEASE EXPLAIN HOW CREDIT RATING AGENCIES CONSIDER THE REGULATORY FRAMEWORK IN ESTABLISHING A COMPANY'S CREDIT RATING.

A. S&P and Moody's both consider the overall regulatory framework in establishing credit ratings. Moody's establishes credit ratings based on four key factors:

Table 4: Moody's Rating Factors

Factor	Weighting
Regulatory Framework	25%
Ability to Recover Costs and Earn Returns	25%
Diversification	10%
Financial Strength	40%
Total	100%

Two of these factors (*i.e.*, regulatory framework and the ability to recover costs and earn returns) are based on the regulatory environment such that, half of Moody's overall assessment of business and financial risk for regulated utilities is based upon the regulatory environment.[43] Moody's further subdivides the first two factors, regulatory framework and the ability to recover costs and earn authorized returns, into sub-factors

[43] Moody's Investor Service, Rating Methodology, Regulated Electric and Gas Utilities, December 23, 2013, at 6.

to help "provide more granularity and transparency on the overall regulatory environment, which is the most important consideration for this sector."[44]

With respect to the regulatory framework, Moody's looks for transparency, predictability, and supportiveness of regulatory commissions.[45] For the second factor, ability to recover costs and earn returns, Moody's evaluates the regulatory elements that directly affect the ability of the utility to generate cash flow and service its debt over time.[46] Moody's views the ability to recover costs on a timely basis and to attract debt and equity capital as crucial credit considerations noting that, "[t]he inability to recover costs…has been one of the greatest drivers of financial stress in this sector."[47] This is particularly true as utilities are often cash flow negative due to large capital expenditures, so any lack of timely recovery or sufficiency of rates can strain access to capital markets.

S&P has also identified the regulatory environment as an important factor, stating, "we believe the fundamental regulatory environment in the jurisdictions in which a utility operates often influence credit quality the most."[48]

Q. HOW DOES THE REGULATORY ENVIRONMENT IN WHICH A UTILITY OPERATES AFFECT ITS ACCESS TO AND COST OF CAPITAL?

A. The proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. Moody's has highlighted the relevance of a stable and predictable regulatory environment to a utility's credit quality, stating that "[b]roadly speaking, the Regulatory Framework is the foundation for

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44 *Ibid* at 3.
45 *Ibid.* at 9-10.
46 *Ibid.* at 15.
47 *Ibid.*
48 Standard & Poor's, *Assessing U.S. Utility Regulatory Environments*, March 11, 2010, at 2.

how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation."[49]

Q. HAVE YOU CONDUCTED ANY ANALYSIS OF INVESTORS' PERCEPTIONS OF THE REGULATORY FRAMEWORK IN WHICH THE COMPANIES OPERATE RELATIVE TO THE PROXY GROUP COMPANIES?

A. Yes. In order to assess investors' view of the Companies' regulatory framework, I considered three different rankings: (1) the S&P business and financial rankings; (2) the Regulatory Research Associates ("RRA") ranking of regulatory jurisdictions; and (3) S&P's ranking of the credit supportiveness of regulatory jurisdictions.

S&P ranks the business profile on a six-tier scale from excellent ("1") to vulnerable ("6"). In addition, S&P ranks financial profile on a similar scale, from minimal ("1") to highly leveraged ("6"). I applied that numeric ranking system to the proxy group companies. As shown in Exhibit __ (AEB-5), both NYSEG's and RG&E's business profile rankings were excellent ("1"), which is in line with the proxy group average ranking that was also excellent ("1.38"). Regarding the financial profile rankings, NYSEG's and RG&E's rankings were significant ("4"), again similar to the proxy group average ranking which was also significant ("3.91").

Q. PLEASE EXPLAIN HOW YOU USED THE RRA RATINGS TO COMPARE THE REGULATORY JURISDICTIONS OF THE PROXY COMPANIES WITH THE COMPANIES' REGULATORY JURISDICTION.

A. RRA assigns a ranking for each regulatory jurisdiction between "Above Average/1" to "Below Average/3", with nine total rankings between these categories. I applied a similar numeric ranking system to the RRA rankings with "Above Average/1" assigned the

[49] *Ibid.*

highest ranking ("9") and "Below Average/3" assigned the lowest ranking ("1"). As shown on Exhibit __ (AEB-6), the New York jurisdictional ranking ("5.0") was generally consistent with the proxy group average numeric ranking ("5.13") from RRA.

Q. HOW DID YOU CONDUCT YOUR ANALYSIS OF THE S&P CREDIT SUPPORTIVENESS?

A. For credit supportiveness, S&P classifies each regulatory jurisdiction into five categories which range from "Strong" to "Weak." Within each category, regulatory jurisdictions are ranked according to their credit supportiveness from most credit supportive to least credit supportive. My analysis of the credit supportiveness of the regulatory jurisdictions that the proxy companies operate in, as compared with the Companies' regulatory jurisdiction, was similar to the analyses of the S&P business and financial ranking and RRA overall regulatory ranking discussed above. I assigned a numerical ranking to each jurisdiction ranked by S&P, from most credit supportive ("1") to least credit supportive ("53"). As shown in Exhibit __ (AEB-7), the proxy group average ranking was 25.73, which would be classified as Strong/Adequate and rank slightly above average for credit supportiveness, while the New York jurisdictional ranking was 34, which is below average in credit supportiveness.

C. CAPITAL EXPENDITURES

Q. DID YOU CONSIDER ANY OTHER INFORMATION REGARDING THE COMPANIES' RISKS RELATIVE TO THE PROXY GROUP?

A. Yes, I also considered the risk related to the Companies' future capital expenditures as compared with the proxy group's capital spending plans.

Q. PLEASE SUMMARIZE THE PROJECTED CAPITAL EXPENDITURE REQUIREMENTS FOR NYSEG AND RG&E.

A. The current capital expenditure projections for NYSEG and RG&E are approximately $2,749 million for the period from 2015 through 2019. These investments are primarily related to maintaining the safety of the system.

Q. HOW IS A UTILITY'S RISK PROFILE AFFECTED BY ITS PLANNED CAPITAL EXPENDITURES?

A. As with any utility faced with substantial capital expenditure requirements, the risk profile is adversely affected in two significant and related ways: (1) the heightened level of investment increases the risk of under recovery, or delayed recovery, of the invested capital; and (2) an inadequate return on the capital supporting these investments would put downward pressure on key credit metrics.

Q. DO CREDIT RATING AGENCIES RECOGNIZE THE RISKS ASSOCIATED WITH INCREASED CAPITAL EXPENDITURES?

A. Yes, they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. To that point, a July 2014 report from S&P explains:

> [T]here is little doubt that the U.S. electric industry needs to make record capital expenditures to comply with the proposed carbon pollution rules over the next several years, while maintaining safety standards and grid stability. We believe the higher capital spending and subsequent rise in debt levels could strain these companies' financial measures, resulting in an almost consistent negative discretionary cash flow throughout this higher construction period. To meet the higher capital spending requirements, companies will require ongoing and steady access to the capital markets, necessitating that the industry maintains its high credit quality. We expect that utilities will continue to effectively manage their regulatory risk by

> using various creative means to recover their costs and to finance their necessary higher spending.[50]

S&P recognizes that the timely recovery of capital expenditures is an important consideration for all regulated utilities.

> To retain critical access to the debt markets, utilities will need to continue to seek and receive supportive cost recovery from regulators.
>
> ***
>
> As companies spend on investments, a significant consideration for regulated utilities will be how quickly regulators allow them to fully recover these costs. If the costs are significant, any delays or denials in the recovery could hurt a utility's credit quality. Thus, regulatory support is necessary to successfully implement such projects. Cost recovery through base rates and rate mechanisms that provide for predictable and timely cash flow could offset the costs of a company's capital spending. These mechanisms help provide timely and consistent recovery of costs and bolster financial measures by limiting cash-flow drains and reducing the amount of debt needed during construction. Ultimately, the dollar amount of the costs and the timeliness in recovering them will be important factors affecting our view of a utility's credit quality.[51]

Q. HAVE YOU CONDUCTED ANY ANALYSIS OF THE COMPANIES' PROJECTED CAPITAL EXPENDITURES RELATIVE TO THE PROXY COMPANIES?

A. Yes. I compared the ratio of projected capital expenditures from 2015 through 2019 to net utility plant as of December 31, 2013, for NYSEG and RG&E with each of the proxy group companies. Exhibit __ (AEB-8) shows the ratio of five years of projected capital expenditures to net plant for the proxy group based on data reported by Value Line.[52] Chart 3 demonstrates that the Companies' ratio of projected capital expenditures

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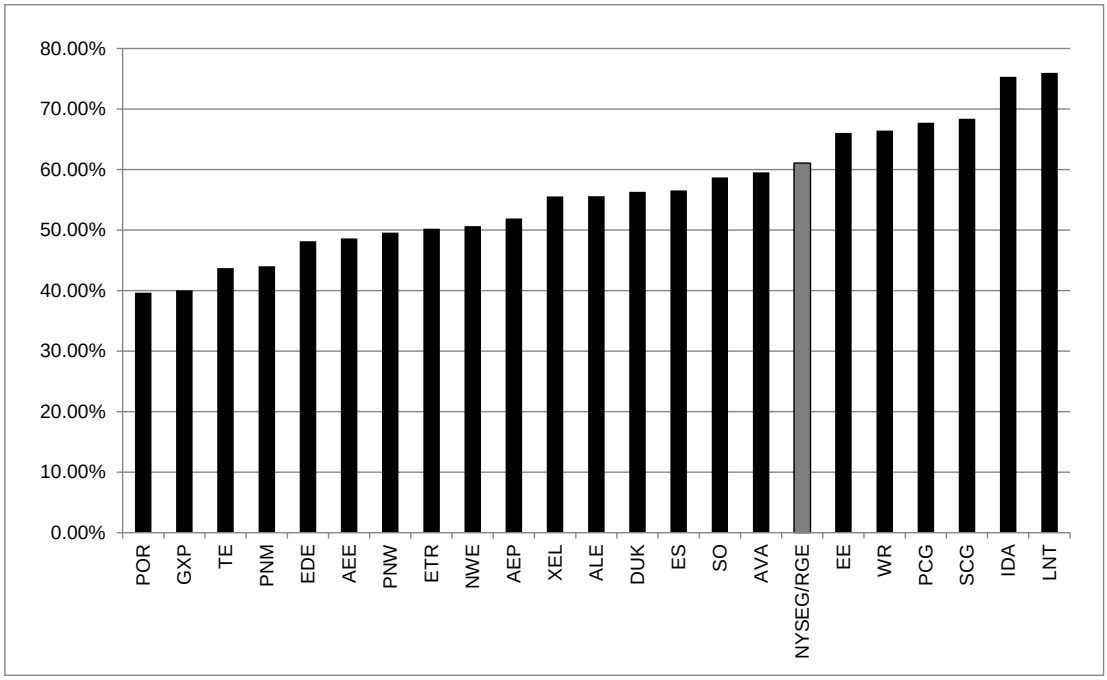
50 Standard and Poor's, Ratings Direct, "U.S. Regulated Electric Utilities' Annual Capital Spending Is Poised to Eclipse $100 Billion," July 2014.

51 Standard & Poor's, "U.S. Utilities' Capital Spending Is Rising, And Cost-Recovery Is Vital," May 14, 2012, at 6-7.

52 At the time that this analysis is being prepared, the Value Line reports did not report actual year end 2014 data for all companies. Therefore, for those companies where the 2014 actual data was not available, we relied on the actual year end data for 2013.

to net plant is higher than 16 of the proxy group members. Furthermore, as shown in Exhibit __ (AEB-8), the Companies planned investment ratio of 61.06 percent is more than the median of the proxy group, which suggests that that the Companies face greater risk from their construction programs than the typical proxy group member.

Chart 3: Capital Expenditures/Net Plant



Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE PERCEIVED RISKS RELATED TO THE NEW YORK REGULATORY FRAMEWORK?

A. As discussed throughout this section of my testimony, both Moody's and S&P have identified the supportiveness of the regulatory framework as an important consideration in developing their overall credit ratings for regulated utilities such as the Companies. While the S&P business and financial rankings and the RRA regulatory rankings demonstrate that investors would perceive the regulatory frameworks for the proxy group companies as similar to the New York regulatory framework, the S&P credit supportiveness ranking for New York indicates greater risk than that faced by the proxy

companies. Coupling this with the Companies' significant capital expenditure program relative to the proxy group, I conclude that it would be reasonable to consider an equity ratio that is at the higher end of the range established by the proxy group.

VII. CAPITAL STRUCTURE

Q. WHAT CAPITAL STRUCTURE ARE NYSEG AND RG&E PROPOSING FOR THE RATE YEAR?

A. NYSEG and RG&E propose stand-alone capital structures that reflect the Companies' intents to maintain a 50 percent common equity ratio during the rate year, as described below.

Q. WHAT IS YOUR BASIS FOR USING A STAND-ALONE CAPITAL STRUCTURE FOR NYSEG AND RG&E?

A. The use of a stand-alone capital structure reflects requirements established by the Commission when approving a recent Iberdrola USA internal reorganization and is consistent with Staff testimony on this subject in the ongoing Central Hudson rate case.[53]

Q. WHAT STATEMENTS HAS THE COMMISSION MADE REGARDING THE USE OF A STAND-ALONE CAPITAL STRUCTURE FOR NYSEG AND RG&E?

A. Iberdrola USA, the domestic holding company parent of NYSEG and RG&E, requested Commission authority to implement an internal reorganization in 2012.[54] The Commission approved the reorganization in October 2013, subject to certain conditions,

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53 Cases 14-E-0318 et al., *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Central Hudson Gas & Electric Corporation for Electric Service*, Prepared Direct Testimony of Kwaku Duah (issued Nov. 11, 2014) ("Duah Direct Testimony") at 9.

54 Case 12-M-0066, *Petition of New York State Electric & Gas Corporation, Rochester Gas and Electric Corporation, RGS Energy Group, Inc., Iberdrola USA Networks, Iberdrola USA, Inc., and Iberdrola Finance UK Limited for Approval of an Internal Reorganization Pursuant to Section 70 of the Public Service Law*, Petition (Feb. 23, 2012).

including the adoption of "Financial and Corporate Protections."[55] Among other things, the Commission required that NYSEG and RG&E maintain a minimum stand-alone common equity ratio (exclusive of goodwill) that is, on average, at least equal to the allowed equity ratio used to set rates. The requirement to maintain a per books equity ratio that is consistent with the ratemaking equity ratio suggests the intention to employ a stand-alone capital structure when establishing the rate of return on rate base for NYSEG and RG&E in future cases. The Commission included the requirement that "NYSEG and RG&E shall be treated on a stand-alone basis for rate purposes, including tax issues."[56]

Q. PLEASE EXPLAIN WHY YOU BELIEVE THAT THE USE OF A STAND-ALONE CAPITAL STRUCTURE IS CONSISTENT WITH RECENT STATEMENTS MADE BY STAFF IN THE CENTRAL HUDSON RATE CASE.

A. In Case 14-E-0318, Staff witness Duah explained that the use of a stand-alone capital structure requires a demonstration that a utility's ring-fencing provisions are sufficient to enable the credit rating agencies to view that utility's credit on a stand-alone basis independent of its parent.[57]

Q. DO NYSEG AND RG&E HAVE RING-FENCING PROVISIONS IN PLACE?

A. Yes. The Commission established ring-fencing requirements when approving Iberdrola, S.A.'s ("Iberdrola") acquisition of Iberdrola USA (f/k/a Energy East Corporation

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55 Case 12-M-0066, Order Adopting Staff Report and Approving Reorganization, Subject to Conditions as Modified and Clarified and Making Findings on Management Audit Compliance (issued Nov. 5, 2013) ("Reorganization Order"), at Appendix I, pp.2-3.

56 *Ibid.,* at 14.

57 Duah Direct Testimony at 9.

("Energy East"))[58] including the establishment of a special class of preferred stock in order to prevent a bankruptcy, liquidation, receivership, or similar proceeding of NYSEG or RG&E from being caused by the bankruptcy of Iberdrola, Iberdrola USA, Energy East, or any other affiliate. The Commission subsequently expanded the NYSEG and RG&E ring-fencing requirements when approving the internal reorganization of Iberdrola USA to include the use of a minimum equity ratio to determine when NYSEG and RG&E can issue dividends to further protect ratepayers from adverse impacts that could attend impairments if, for example, credit ratings of the utilities' upstream parents suffer as a result of an impairment.[59]

Q. DO THE CREDIT RATING AGENCIES VIEW NYSEG'S AND RG&E'S CREDIT ON A STAND-ALONE BASIS?

A. Yes, they do. Statements by both Standard & Poor's and Moody's indicate that they view NYSEG's and RG&E's credit on a stand-alone basis. Exhibit __ (AEB-9) contains S&P's latest reports for the Companies, while Exhibit __ (AEB-10) contains Moody's latest reports for the Companies.

Q. PLEASE DESCRIBE HOW S&P'S REPORTS FOR NYSEG AND RG&E DEMONSTRATE THAT S&P CONSIDERS THE COMPANIES' CREDIT QUALITY ON A STAND-ALONE BASIS.

A. The S&P reports for the Companies are quite similar. When explaining why it upgraded both Companies' outlooks to "positive," S&P states, "The positive outlook reflects the company's stand-alone credit profile along with the enhancement of the regulatory

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58 Case 07-M-0906, *Joint Petition of Iberdrola, S.A., Energy East Corporation, RGS Energy Group, Inc., Green Acquisition Capital, Inc., New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation for Approval of the Acquisition of Energy East Corporation by Iberdrola, S.A.*, Order Authorizing Acquisition Subject to Conditions (issued Jan. 6, 2009), at Appendix 1, p. 9.

59 Reorganization Order at 35.

protection measures put in place to restrict dividends between the company and its parent, Iberdrola S.A." S&P adds that "The positive outlook on RG&E reflects our assessment of the company's enhancement of its insulation from its parent company Iberdrola S.A. through greater regulatory restrictions, a minimum equity ratio tied to the ratemaking capital structure that restricts dividends to the parent in some situations…" Finally, S&P's notes:

> The positive outlook reflects our assessment of the enhancements to the protection measures the company put in place as part of its internal reorganization it filed with the NYPSC. The company filed with the NYPSC a supplement to its internal reorganization petition, including the establishment of a minimum equity ratio tied to the ratemaking capital structure that restricts dividends to its parent company in some situations. This provision, along with other measures currently in place, including a special class of preferred stock issued to an independent entity to help protect RG&E from voluntary bankruptcy initiated by the parent, could enable us to differentiate the ratings of RG&E from its ultimate parent company Iberdrola S.A. by up to two notches.[60]

Q. PLEASE DESCRIBE HOW THE MOODY'S REPORTS FOR NYSEG AND RG&E DEMONSTRATE THAT MOODY'S CONSIDERS THE COMPANIES' CREDIT QUALITY ON A STAND-ALONE BASIS.

A. The Moody's reports for the Companies are similar to the S&P reports. Moody's notes that a "Rating Driver" for both Companies is "Ring-fencing type provisions and standalone liquidity provide insulation from riskier parent ownership by Iberdrola S.A." Moody's also recognized the internal reorganization conducted by Iberdrola USA in 2013 and noted that while the establishment of Iberdrola Renewables Holdings, Inc. ("IRHI") as a subsidiary of Iberdrola USA increased Iberdrola USA's overall business risk, both NYSEG and RG&E were "expected to maintain independent operations and freedom

[60] Standard and Poor's Ratings Services, Ratings Direct, Research Update, May 1, 2014 at 2.

from potential contagion risks of any and all unregulated businesses, given ring-fencing concessions made by Iberdrola to various regulatory bodies overseeing the US operations." Finally Moody's includes a specific section in its analysis for each Company titled "Ring-Fencing Provisions Are a Material Credit Benefit" which states:

> NYSEG/RG&E benefits from strong suite of ring-fence type structures which help insulate the company from contagion risks associated with IRHI and [Iberdrola]. Despite the negative outlook at [Iberdrola], currently, we believe that the stable outlook of NYSEG/RG&E is appropriate at this time, based on our interpretation of the ring fence type provisions currently in place. Some of the more impactful ring fencing provisions that NYSEG/RG&E enjoys include: dividend, money pooling and credit support restrictions with unregulated affiliates, standalone liquidity sources, maintenance of investment grade ratings and, most importantly, a "Special Preferred Share" provision, which adds a significant impediment to NYSEG/RG&E being part of a parent-based bankruptcy proceeding. More recently, as part of the [Iberdrola USA] re-org, the NYPSC also implemented a minimum equity ratio, equal to that approved in rates.[61]

Q. WHAT DO YOU CONCLUDE REGARDING THE CREDIT RATING AGENCIES' VIEW OF THE CREDIT QUALITY OF NYSEG AND RG&E?

A. S&P and Moody's are very cognizant of the protective ring-fencing measures that the Commission has established for NYSEG and RG&E and cite them as the reason why they assess both Companies' credit quality on a stand-alone basis. Because there is factual evidence indicating NYSEG and RG&E's ring-fencing features are sufficient to enable the two major credit rating agencies to view each of the Companies' credit quality on a stand-alone basis, the stand-alone capital structures proposed in this proceeding are appropriate for the purpose of establishing the ROR on rate base.

[61] Moody's Investors Service, Credit Opinion: New York State Electric and Gas Corporation, Global Credit Research, May 29, 2014.

Q. IS A 50 PERCENT EQUITY RATIO REASONABLE FOR NYSEG AND RG&E AT THIS TIME?

A. Yes, it is. I base this conclusion upon a review of: (1) the authorized ratemaking capital structures and the book capital structures of the utility operating subsidiaries of the holding companies in my proxy group; (2) a review of Staff positions on the common equity ratio in recent cases; and (3) a review of the financial implications of adopting a 50 percent equity ratio versus the 48 percent equity ratio the Commission previously approved for the Companies.

Q. HOW DOES THE PROPOSED 50 PERCENT EQUITY RATIO COMPARE TO THE AUTHORIZED AND BOOK EQUITY RATIOS FOR THE OPERATING SUBSIDIARIES OF THE HOLDING COMPANIES IN YOUR PROPOSED PROXY GROUP?

A. As discussed in the remainder of this section, the mean ratemaking equity ratio for the operating subsidiaries is about 50.9 percent while the mean book equity ratio for these companies is about 52.4 percent. Considering the risks and uncertainties that NYSEG and RG&E face relative to the proxy group members (*see* Section VI of my testimony) and the need for the Companies to maintain access to the capital markets at reasonable terms and conditions as the Reforming the Energy Vision initiative is introduced, it is possible to argue that a ratemaking equity ratio greater than 50.9 percent is required to assure that NYSEG and RG&E have an allowed Weighted Return on Equity (allowed ROE times the equity ratio) ("WROE") that is commensurate with that established for the proxy group operating subsidiaries. As a result, the 50% equity ratio requested by NYSEG and RG&E is eminently reasonable and should be adopted.

Q. PLEASE DISCUSS YOUR ANALYSIS OF THE CAPITAL STRUCTURES OF THE PROXY GROUP COMPANIES.

A. In order to assess the reasonableness of the Companies' proposed capital structure, I reviewed the reported capitalization ratios of the individual electric utility operating companies owned and operated by the proxy companies for the past two years. As shown in Exhibit __ (AEB-11), the mean equity ratio of the utility subsidiaries of the proxy group companies ranged from 52.10 percent to 52.74 percent over the last two years. Moreover, a review of the average common equity ratios for the proxy group members as of the final quarter of my analysis indicates that 17 of the 22 members of my proxy group have operating subsidiaries with an average common equity ratio of at least 51.00 percent.

Q. WHAT DO YOU CONCLUDE FROM THIS ANALYSIS?

A. This information indicates that the utility operating subsidiaries owned by holding companies with similar business characteristics to NYSEG and RG&E have for the last two years maintained average common equity ratios more than 4 percent above the 48.0 percent equity ratio that the Commission approved when establishing rates for NYSEG and RG&E in their last rate proceeding. These higher proxy equity ratios reflect a level of financial risk that is lower than the financial risk implied by the 48% equity ratio employed for NYSEG and RG&E. Given the greater risks and uncertainties of NYSEG and RG&E relative to the proxy group (*see* Section VI), the continued use of a 48% ratemaking equity ratio implies not only greater business risk but also greater financial risk for NYSEG and RG&E as they proceed to implement major changes in New York's electric utility business and regulatory frameworks. Given these challenges, it is

reasonable for the Commission to support NYSEG and RG&E's maintenance of equity ratios close to those of the proxy group operating companies.

Q. YOU HAVE SHOWN THAT BOOK EQUITY RATIOS FOR THE OPERATING SUBSIDIARIES OF THE PROXY GROUP HOLDING COMPANIES ARE GREATER THAN 48 PERCENT. ARE THE ACTUAL ALLOWED EQUITY RATIOS FOR THESE ENTITIES ALSO GREATER THAN 48 PERCENT?

A. Yes, they are. In fact allowed equity ratios for the electric utility industry are greater than 48 percent. Exhibit __ (AEB-12) shows that the average equity ratio most recently allowed for these companies is 50.92 percent.

Q. EXHIBIT __ (AEB-12) INDICATES THAT THE 50.92 PERCENT EQUITY RATIO IS AN "ADJUSTED" EQUITY RATIO. PLEASE EXPLAIN WHY IT IS NECESSARY TO EMPLOY ADJUSTED EQUITY RATIOS IN YOUR ANALYSIS.

A. Unlike most utility commissions that reflect cash flows produced by deferred taxes and other credits as a reduction to rate base, the utility commissions in Arkansas, Florida, Indiana, and Michigan do not reduce rate base but rather includes these tax related items as zero or very low cost items in the allowed capital structure. Inclusion of these additional low or no cost capital items will have the impact of reducing both the equity and debt ratios used to establish the rate of return which, in turn, produces results that are not comparable to allowed equity ratios in other states. As such it is necessary to remove the zero cost items to put the debt and equity ratio components of the allowed capital structure on a common basis with all other utilities. Exhibit __ (AEB-12) shows how I performed this calculation to adjust equity ratios for the utilities operating in these four states.

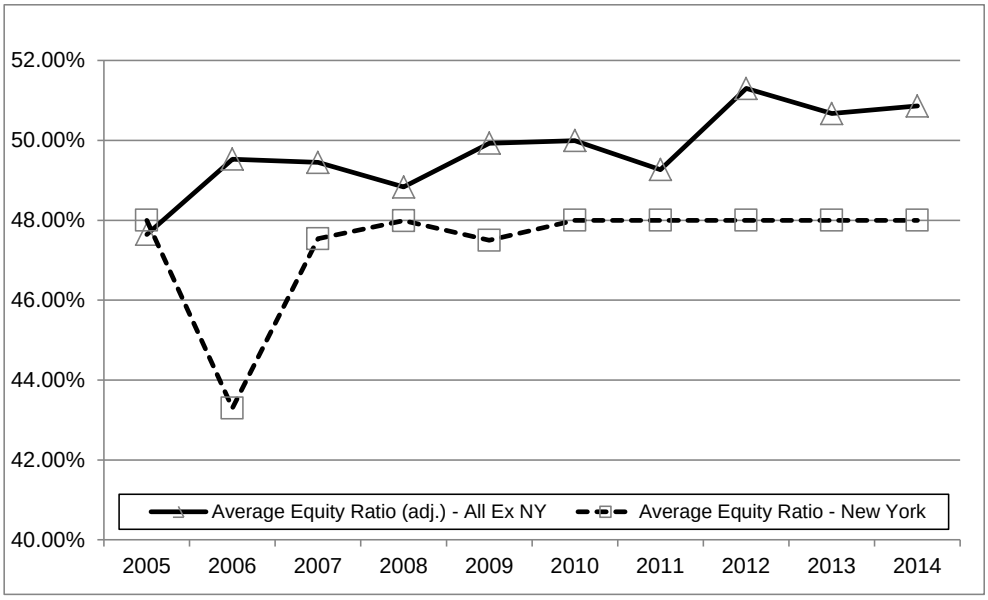
Q. HAVE YOU CONDUCTED ANY ANALYSIS OF THE ALLOWED EQUITY RATIOS FOR THE ELECTRIC UTILITY INDUSTRY?

A. Yes, I have. Exhibit __ (AEB-13) compares allowed equity ratios in New York to the average allowed equity ratio (adjusted) in other electric utility rate cases since 2005. Chart 4, below shows that: (1) 2005 and 2008 were the only years where the industry average[62] allowed equity ratio was less than 49.00 percent; (2) the general trend in allowed equity ratios for the industry has been upward; and (3) the gap between allowed equity ratios in New York and the industry average has increased over time.

[62] The industry average is an average of the adjusted allowed equity ratios in all jurisdictions excluding New York. As discussed in this testimony, the allowed equity ratios for rate in cases in Arkansas, Florida, Indiana, and Michigan were adjusted to reflect the exclusion of zero or low cost capital items from the capital structure.

Chart 4: Allowed Equity Ratios New York v. Industry

2005-2014



Q. IS THE LEVEL OF THE EQUITY RATIO ALLOWED IN OTHER JURISDICTIONS A RELEVANT CONSIDERATION WHEN CONSIDERING THE APPROPRIATE EQUITY RATIO FOR THE COMPANIES?

A. Yes, it is. While the ROE is an important factor in a utility's financial health, an equally important factor is its allowed equity ratio. A fundamental aspect of the financial regulation of utilities is assuring that the subject utility has a reasonable opportunity to earn a return on capital consistent with the return available on investments of similar risk. While this tenet is most often discussed in terms of the allowed ROE, it is equally applicable to the equity ratio employed to develop the capital structure and overall return on rate base because the product of the ROE and the equity ratio, (i.e., the WROE), ultimately defines the overall dollars of return that are allocated to investors as part of the ratemaking process. The critical importance of the WROE is demonstrated by considering an example involving a subject utility with business risks that are comparable

to a utility proxy group. The average allowed return for the utility and the proxy group is 10 percent. The average allowed equity ratio for the proxy group is 52 percent while the average allowed equity ratio for the subject utility is 48 percent. The resulting WROE for the average of the proxy group is 5.20 percent whereas the WROE of the subject utility would be 4.80 percent, 40 basis points lower than the average of proxy companies.

Q. WHAT IS THE EFFECT OF APPLYING STAFF'S METHODOLOGY USED IN THE CENTRAL HUDSON GAS & ELECTRIC CORPORATION ("CENTRAL HUDSON") RATE CASE TO YOUR PROXY GROUP?

A. In the Central Hudson case, Staff is proposing a Cost of Equity for a single year case of 8.75 percent with an equity ratio of 48 percent, resulting in a WROE of 4.20 percent. Exhibit __ (AEB-12) shows that the mean allowed ROEs and equity ratios for the proxy group are 10.09 percent and 50.92 percent, respectively, resulting in a WROE of 5.14 percent—almost 100 basis points higher than the WROE that Staff proposes in the Central Hudson rate case. Furthermore, Staff is proposing a Cost of Equity for Orange and Rockland Utilities, Inc. of 8.50 percent with an equity ratio of 48 percent for a single year case. This produces a WROE of 4.08, an amount that is more than 100 basis points below the WROE of the proxy group companies.[63]

Q. WILL THE CAPITAL STRUCTURE AND ROE AUTHORIZED IN THIS PROCEEDING AFFECT THE COMPANIES' ACCESS TO CAPITAL AT REASONABLE RATES?

A. Yes. The level of earnings authorized by the Commission directly affects the Companies' ability to fund their operations with internally generated funds; both bond investors and rating agencies expect a significant portion of ongoing capital investments to be financed with internally generated funds.

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[63] Cases 14-E-0493 et al., Prepared Testimony of Staff Finance Panel (issued Mar. 20 2015), at 88.

It also is important to realize that because a utility's investment horizon is very long, investors require the assurance of a sufficiently high return to satisfy the long-run financing requirements of the assets placed into service. Those assurances, which often are measured by the relationship between internally generated cash flows and debt (or interest expense), depend quite heavily on the capital structure. As a consequence, both the ROE and capital structure are very important to debt and equity investors. Furthermore, considering the capital market conditions discussed in Section VIII, the authorized ROE and capital structure take on even greater significance.

Q. WHAT IS THE AVERAGE CONSOLIDATED EQUITY RATIO OF YOUR PROXY GROUP?

A. As shown in Exhibit __ (AEB-14), over the last two years the consolidated average equity ratio for my proxy group companies was 48.74 percent; however, the equity ratio has been increasing over that time. Most recently the consolidated equity ratio for the proxy group was 49.20 percent.

Q. HOW WOULD THE USE OF THE COMMISSION'S 48 PERCENT EQUITY RATIO AFFECT THE OVERALL RISK PROFILE OF NYSEG AND RG&E AS COMPARED WITH THE PROXY COMPANIES?

A. The average equity ratio of the proxy companies is higher than 48 percent, which means that all else equal, the proxy companies have lower financial risk than is implied by the Commission's capped equity ratio. To adjust for that risk differential it would be necessary to increase some combination of the allowed ROE and the allowed equity ratio.

VIII. CAPITAL MARKET CONDITIONS

Q. WHAT FACTORS ARE AFFECTING THE COST OF EQUITY FOR REGULATED UTILITIES IN THE CURRENT AND PROJECTED CAPITAL MARKETS?

A. The Cost of Equity for regulated utility companies is being affected by several factors in the current and projected capital markets. These factors include: (1) the market's expectation for substantially higher interest rates; (2) current low yields on utility stocks; (3) current high valuations on utility shares relative to historical levels and relative to the broader market; and (4) increasing credit spreads between yields on Treasury bonds and utility bonds. In this section of my testimony, I will discuss each of these factors and how it affects the Cost of Equity for regulated utilities.

Q. PLEASE DISCUSS THE CURRENT INTEREST RATE ENVIRONMENT.

A. In October 2014, the Federal Open Market Committee ("FOMC") ended its Quantitative Easing program, which provided extraordinary monetary stimulus for the U.S. economy over the last few years through asset purchases of mortgage-backed securities and Treasury bonds. In December 2014, the FOMC's policy statement indicated that future changes in short-term interest rates would depend on maintaining a reasonable balance between the level of unemployment and inflation. In February 2015, the FOMC Chair indicated that the U.S. unemployment rate has decreased to 5.7 percent since July, job gains had increased during the second half of 2014 and continued to increase in January 2015 and long-term unemployment had declined substantially.[64] In addition, real Gross Domestic Product is estimated to have increased at a rate of 3.75 percent, while consumer price inflation remains in check.

[64] Statement by Janet L. Yellen, Chair, Board of Governors of the Federal Reserve System before the Committee on Banking, Housing and Urban Affairs, U.S. Senate, February 24, 2015.

Q. WHAT EVIDENCE IS THERE THAT LONG-TERM INTEREST RATES ARE EXPECTED TO INCREASE?

A. While the FOMC did not increase interest rates in January, the Chair noted in her recent speech that the Committee is reasonably confident that inflation will increase over the medium-term. In addition to the stated expectations of the FOMC, market analysts are expecting increases in interest rates in the short and medium-term. The 3-month average yield on the 30-year U.S. Treasury bond as of January 30, 2015 was 2.77 percent. By contrast, the Blue Chip consensus estimate projects that the average yield on the 30-year U.S. Treasury bond will increase to 4.90 percent for the period from 2016 through 2020.[65] Thus, the consensus estimate from leading economists is for an increase of 213 basis points in U.S. Treasury bond yields over the next several years.

Q. WHAT EFFECT DO RISING INTEREST RATES HAVE ON THE COST OF EQUITY FOR REGULATED UTILITIES?

A. Rising interest rates have historically had a negative effect on utility stock prices. Dividend yields are the largest component of the return on utility stocks. A dividend yield of 4.00 percent to 5.00 percent with moderate growth can be more attractive to investors when the 10-year U.S. Treasury bond yield is at 2.00 percent or lower. When interest rates begin to rise, the return on utility stocks may be less attractive to investors as compared with other investments of comparable risk. The market's expectation for rising interest rates suggests that the calculated Cost of Equity for the proxy companies using current market data is likely to be a conservative estimate of investors' required return during the period that the Companies' rates will be in effect. Consequently, rising

[65] Blue Chip Financial Forecasts, Vol. 33, No. 12, December 1, 2014, at 14.

interest rates would support selection of a return toward the upper end of a reasonable range of Cost of Equity.

Q. WHAT IS THE FINANCIAL MARKET'S EXPECTATION REGARDING THE FEDERAL RESERVE'S PLANS TO START RAISING SHORT-TERM INTEREST RATES?

A. The February 2015 issue of Blue Chip Financial Forecast surveyed market participants concerning their views regarding the timing of possible future rate increases by the Federal Reserve. Blue Chip reports that 100 percent of the 48 market participants surveyed expect that the Federal Reserve will start raising the target for short-term interest rates at some point during 2015, with the most likely date being at the June 2015 FOMC meeting.[66]

Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE EFFECT OF HIGHER INTEREST RATES FOR ELECTRIC UTILITIES SUCH AS THE COMPANIES?

A. Many income-oriented investors hold utility stocks for their dividend yields. During periods in which interest rates are expected to increase, the dividend yields of utility stocks become less attractive for income-oriented investors relative to bond yields, placing pressure on utility share prices relative to the broader market, as measured by the S&P 500 Index. The potential for rising interest rates indicates that the calculated Cost of Equity for the proxy companies using any Cost of Equity estimation technique relying on discounted cash flows is likely to lag investors' required return during the period that the Companies' rates will be in effect. Consequently, a consensus expectation of rising interest rates supports selection of a return for the Companies based not only on the Multi-Stage DCF model, but also a forward-looking CAPM analysis.

[66] Blue Chip Financial Forecasts, Volume 34, No. 2, February 1, 2015, at 14.

Q. PLEASE DISCUSS HOW THE PERIOD OF ABNORMALLY LOW INTEREST RATES HAS AFFECTED THE VALUATION AND DIVIDEND YIELDS OF UTILITY SHARES.

A. The Federal Reserve's Quantitative Easing program resulted in higher asset prices for many common stocks, including shares of public utility companies, as investors sought higher returns and more attractive yields than were being offered by Treasury bonds. Consequently, the current share price of many utility stocks has increased to levels above Value Line's target price for the 2017-2019 time period, while the dividend yield of those same utility stocks has declined to unusually low levels. As shown in Chart 5, below, the average price-to-earnings ("P/E") ratio for the proxy companies was higher at the end of 2014 than the average projected P/E ratio for the group for the period from 2017-2019. Furthermore, Chart 6 shows that the average P/E for the S&P Utility Index is currently well above the long-term average, which indicates that investors are willing to pay more for a dollar of earnings than they have been in the past. Higher current P/E ratios also suggest that future returns for this sector will be muted, because current share prices already reflect investors' expectations for future earnings growth.

Chart 5: Average Historical P/E Ratios for Proxy Companies

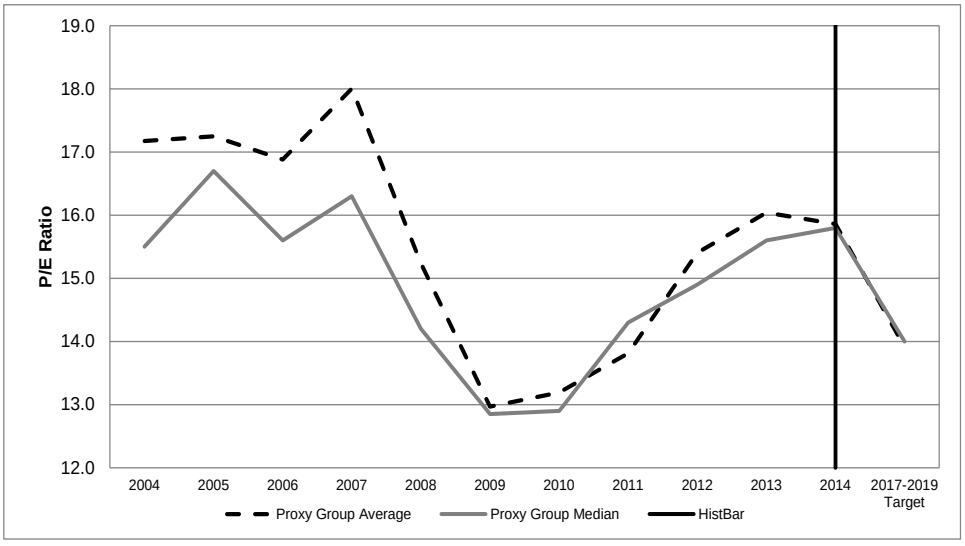


Chart 6: S&P Utilities Index P/E Ratio

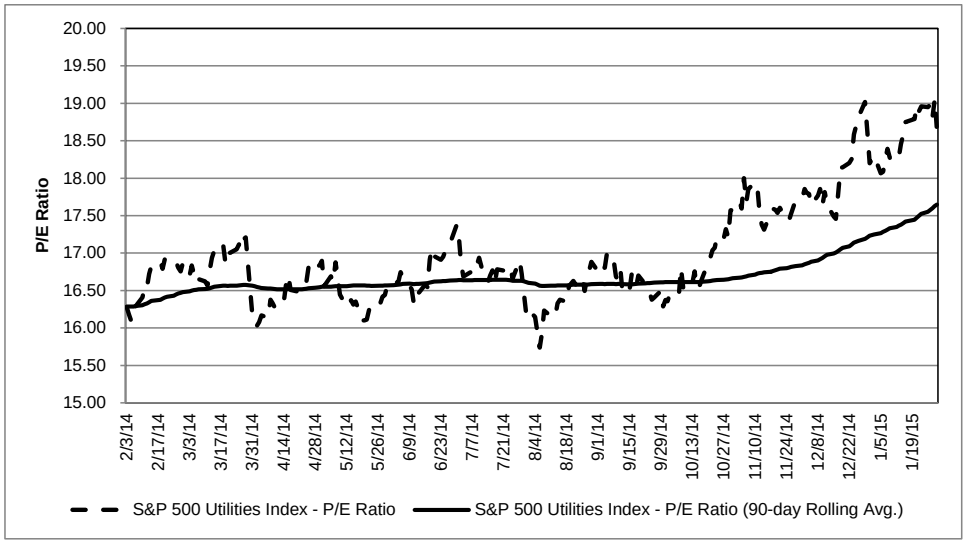
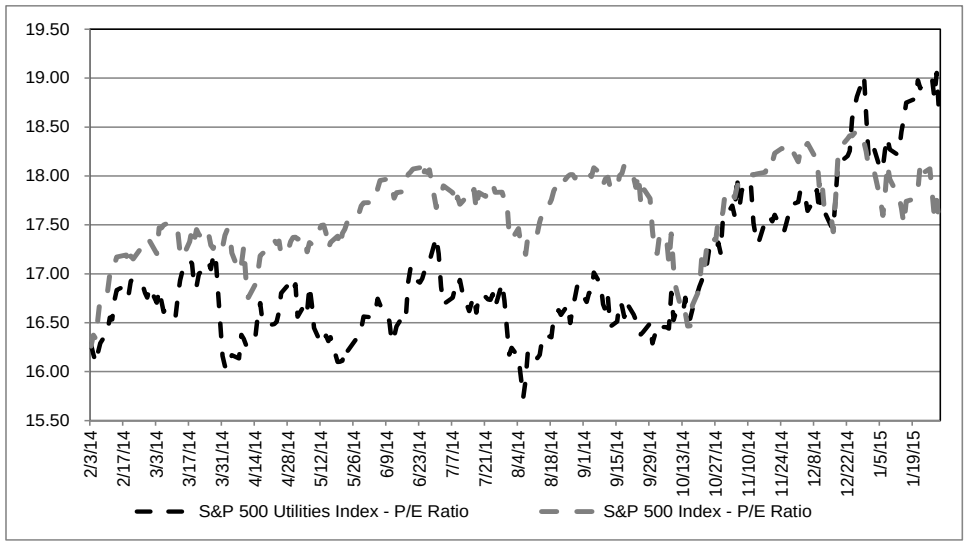


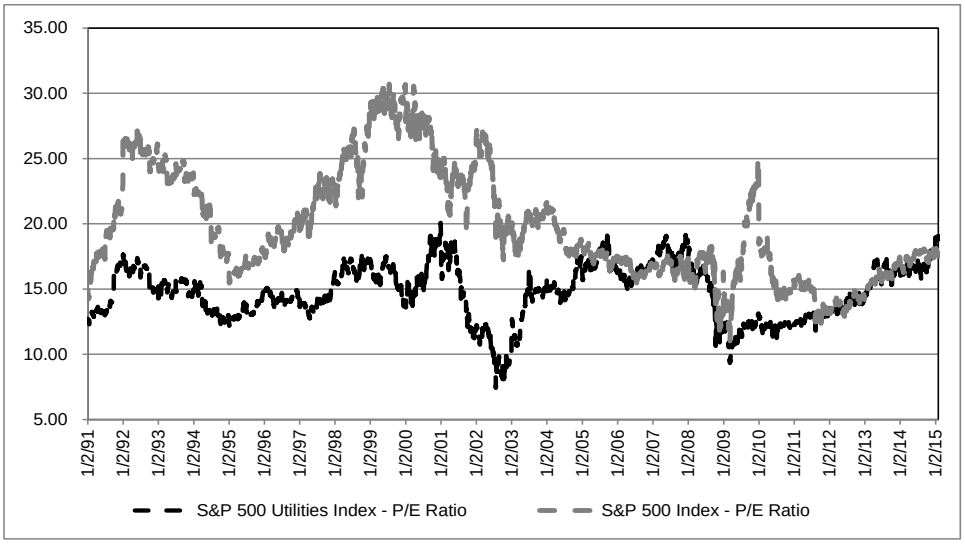
Chart 7: S&P Utilities Index vs. S&P 500 Index P/E Ratio



Similarly, the average P/E ratio for the S&P Utility Index has recently been either higher than or on par with the P/E ratio for the S&P 500. As shown in Chart 7, the opposite was generally true prior to the financial market dislocation. This is further evidence that utility share valuations are high relative to the broader market. It is reasonable to expect those valuations for utility stocks will decline as economic growth accelerates and

investors rotate out of the utility sector into more economically-sensitive and growth-oriented sectors.

Chart 8: S&P Utilities Index vs. S&P 500 Index P/E Ratio - 1991-2015



Q. WHAT CONCLUSIONS DO YOU DRAW FROM YOUR ANALYSIS OF CAPITAL MARKET CONDITIONS?

A. My primary conclusion is that it is important to consider the effect of capital market conditions on the inputs and assumptions used in the ROE estimation models and to consider whether or not those market conditions are sustainable over the period that the recommended ROE would be in effect. For example, because the utility sector has traded at a P/E multiple that is considerably higher than the historical range and, in recent periods, higher than the broader market index, it is important to consider whether or not those multiples and relationships will remain constant over time, as is assumed in the DCF model. Furthermore, since interest rates are projected to be increasing, it is important to reflect that expectation in the specification of the CAPM and other risk premium models.

IX. MULTI-YEAR RATE PLAN

Q. WOULD A MULTI-YEAR RATE PLAN IMPACT YOUR ROE RECOMMENDATION?

A. Yes, it would. As noted earlier in this testimony, Treasury yields and allowed ROEs are at or near all-time lows largely as the result of the combined effects of the Federal Reserve's monetary policy and a relatively slow economic recovery. Analysts' consensus forecasts expect that interest rates will be increasing in the short term. While the current three month average yield on the 30-year U.S. Treasury bond as of January 30, 2015 was 2.77 percent, the latest Blue Chip Consensus Forecast for the period 2016 to 2020 is 4.90 percent, an increase of approximately 213 basis points. If interest rates were to increase as predicted, an ROE established based on economic conditions in early 2015 will not reflect economic conditions during the term of a multi-year rate plan.

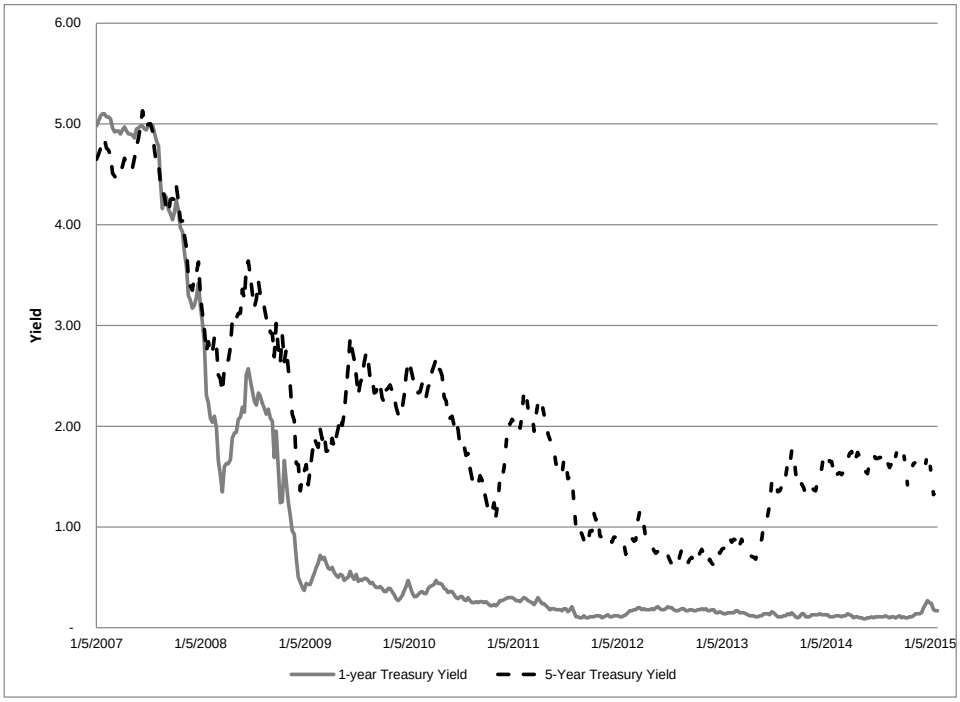
Q. HOW MIGHT THE RISKS OF A MULTI-YEAR RATE PLAN BE ADDRESSED?

A. One approach to addressing the risk associated with a multi-year rate plan is to establish an adjustment mechanism to reflect changes in the ROE that result from changes in future market conditions as compared with the rate year.

Q. WHAT WOULD BE THE MAGNITUDE OF A STAY-OUT PREMIUM ON THE ROE FOR A FIVE-YEAR RATE PLAN BASED ON CURRENT MARKET CONDITIONS?

A. A good measure of the risk and return trade-off between a one-year and five-year period in today's market is the yield spread between one-year and five-year treasury securities. Exhibit __ (AEB-15) provides Federal Reserve data showing weekly yields on both securities over the last six months. On average, the yield on five-year Treasury bonds was 146 basis points above the yield on one year debt. As shown on Chart 9, the yield spread between the one-year and five-year Treasuries expanded significantly beginning in the Great Recession and has remained very wide as compared with pre-recessionary periods.

Chart 9: Yield Spread 1-Year and 5-Year Constant Maturity Treasury Securities



Thus, investors require a 146 basis point premium over a twelve-month yield in order to lock in a yield for an additional four years. Because Treasury securities, unlike common stock, are free of bankruptcy risk, this 146 basis point premium understates the size of any stay-out premium that would be required by equity investors based on current market conditions.

X. CONCLUSION AND RECOMMENDATION

Q. WHAT IS YOUR CONCLUSION REGARDING A FAIR RETURN ON BOOK EQUITY FOR NYSEG AND RG&E?

A. My recommended return on book equity considers the results of the DCF and CAPM models, summarized in Table 5 (below), and the specific risks to which the Companies are exposed. In my view, a reasonable range for the authorized ROE is between 9.84 percent and 10.29 percent.

Table 5: Summary of Analytical Results

Multi-Stage DCF				
	Mean (Low Growth)	Mean		Mean (High Growth)
3-Month Average Price	9.07%	9.27%		9.46%
Capital Asset Pricing Model				
	Current Risk-Free Rate (2.77%)	**2015-2016 Projected Risk-Free Rate (3.58%)**	**2016-2020 Projected Risk-Free Rate (4.90%)**	**Mean**
Bloomberg Beta	10.17%	10.40%	10.77%	10.45%
Value Line Beta	10.35%	10.57%	10.92%	10.61%
Zero Beta CAPM				
	Current Risk-Free Rate (2.77%)	**2015-2016 Projected Risk-Free Rate (3.58%)**	**2016-2020 Projected Risk-Free Rate (4.90%)**	**Mean**
Bloomberg Beta	10.89%	11.07%	11.34%	11.10%
Value Line Beta	11.03%	11.19%	11.45%	11.23%
Mean CAPM	10.61%	10.81%	11.12%	10.85%
	Mean (Low Growth)	Mean		Mean (High Growth)
50%/50% DCF/CAPM	9.84%	10.06%		10.29%

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

APPENDIX B

ANN E. BULKLEY
VICE PRESIDENT

Ms. Bulkley has nearly two decades of management and economic consulting experience in the energy industry. Ms. Bulkley has extensive state and federal regulatory experience on both electric and natural gas issues including rate of return, cost of equity and capital structure issues. Ms. Bulkley has advised clients seeking to acquire utility assets, providing valuation services including an understanding of regulation, market expected returns, and the assessment of utility risk factors. Ms. Bulkley has assisted clients with valuations of public utility and industrial properties for ratemaking, purchase and sale considerations, ad valorem tax assessments, and accounting and financial purposes. In addition, Ms. Bulkley has experience in the areas of contract and business unit valuation, strategic alliances, market restructuring and regulatory and litigation support.

REPRESENTATIVE PROJECT EXPERIENCE

Regulatory Analysis and Ratemaking

Ms. Bulkley has provided a range of advisory services relating to regulatory policy analysis and many aspects of utility ratemaking. Specific services have included: cost of capital and return on equity testimony, cost of service and rate design analysis and testimony, development of ratemaking strategies; development of merchant function exit strategies; analysis and program development to address residual energy supply and/or provider of last resort obligations; stranded costs assessment and recovery; performance-based ratemaking analysis and design; and many aspects of traditional utility ratemaking (e.g., rate design, rate base valuation).

Cost of Capital

Ms. Bulkley has provided expert testimony on the cost of capital testimony before several state regulatory commissions. In addition, Ms. Bulkley has prepared and provided supporting analysis for at least forty Federal and State regulatory proceedings over the past seven years. Ms. Bulkley's expert testimony experience includes:

- Northern States Power Company: Before the North Dakota Public Service Commission, provided expert testimony on the cost of capital for the company's North Dakota electric utility operations.
- WE Energies: Before the Michigan Public Service Commission, provided expert testimony in support of the company's cost of capital for its electric utility operations.
- Atmos Energy: Provided expert testimony in support of the company's return on equity and capital structure before the Public Utilities Commission for the State of Colorado.
- UNS Electric: Provided expert testimony in support of the company's return on equity and capital structure before the Arizona Corporation Commission.
- Portland Natural Gas Transmission: Provided testimony strategy as well as analytical support for cost of capital testimony before the Federal Energy Regulatory Commission.

- In addition to the specific cases listed above, Ms. Bulkley has provided testimony strategy as well as analytical support on cost of capital in several cases in the following states: Arizona, Colorado, Connecticut, Massachusetts, Minnesota, New Mexico, New York, North Carolina, South Carolina, South Dakota, Virginia, and Utah.

Valuation

Ms. Bulkley has provided valuation services to utility clients, unregulated generators and private equity clients for a variety of purposes including ratemaking, fair value, ad valorem tax, litigation and damages, and acquisition. Ms. Bulkley's appraisal practices are consistent with the national standards established by the Uniform Standards of Professional Appraisal practice. In addition, Ms. Bulkley has relied on other simulation based valuation methodologies.

Representative projects/clients have included:

- Northern Indiana Fuel and Light: Provided expert testimony regarding the fair value of the company's natural gas distribution system assets. Valuation relied on cost approach.
- Kokomo Gas: Provided expert testimony regarding the fair value of the company's natural gas distribution system assets. Valuation relied on cost approach.
- Prepared fair value rate base analyses for Northern Indiana Public Service Company for several electric rate proceedings. Valuation approaches used in this project included income, cost and comparable sales approaches.
- Confidential Utility Client: Prepared valuation of fossil and nuclear generation assets for financing purposes for regulated utility client.
- Prepared a valuation of a portfolio of generation assets for a large energy utility to be used for strategic planning purposes. Valuation approach included an income approach, a real options analysis and a risk analysis.
- Assisted clients in the restructuring of NUG contracts through the valuation of the underlying assets. Performed analysis to determine the option value of a plant in a competitively priced electricity market following the settlement of the NUG contract. .
- Prepared market valuations of several purchase power contracts for large electric utilities in the sale of purchase power contracts. Assignment included an assessment of the regional power market, analysis of the underlying purchase power contracts, a traditional discounted cash flow valuation approach, as well as a risk analysis. Analyzed bids from potential acquirers using income and risk analysis approached. Prepared an assessment of the credit issues and value at risk for the selling utility.
- Prepared appraisal of a portfolio of generating facilities for a large electric utility to be used for financing purposes.
- Prepared an appraisal of a fleet of fossil generating assets for a large electric utility to establish the value of assets transferred from utility property.
- Conducted due diligence on an electric transmission and distribution system as part of a buy-side due diligence team.
- Provided analytical support for and prepared appraisal reports of generation assets to be used in ad valorem tax disputes.
- Provided analytical support and prepared testimony regarding the valuation of electric distribution system assets in five communities in a condemnation proceeding.

- Valued purchase power agreements in the transfer of assets to a deregulated electric market.

Ratemaking

Ms. Bulkley has assisted several clients with analysis to support investor-owned and municipal utility clients in the preparation of rate cases. Sample engagements include:

- Assisted several investor-owned and municipal clients on cost allocation and rate design issues including the development of expert testimony supporting recommended rate alternatives.
- Worked with Canadian regulatory staff to establish filing requirements for a rate review of a newly regulated electric utility. Analyzed and evaluated rate application. Attended hearings and conducted investigation of rate application for regulatory staff. Prepared, supported and defended recommendations for revenue requirements and rates for the company. Developed rates for gas utility for transportation program and ancillary services.

Strategic and Financial Advisory Services

Ms. Bulkley has assisted several clients across North America with analytically based strategic planning, due diligence and financial advisory services.

Representative projects include:

- Preparation of feasibility studies for bond issuances for municipal and district steam clients.
- Assisted in the development of a generation strategy for an electric utility. Analyzed various NERC regions to identify potential market entry points. Evaluated potential competitors and alliance partners. Assisted in the development of gas and electric price forecasts. Developed a framework for the implementation of a risk management program.
- Assisted clients in identifying potential joint venture opportunities and alliance partners. Contacted interviewed, and evaluated potential alliance candidates based on company-established criteria for several LDCs and marketing companies. Worked with several LDCs and unregulated marketing companies to establish alliances to enter into the retail energy market. Prepared testimony in support of several merger cases and participated in the regulatory process to obtain approval for these mergers.
- Assisted clients in several buy-side due diligence efforts, providing regulatory insight and developing valuation recommendations for acquisitions of both electric and gas properties.

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present)
Vice President
Assistant Vice President
Project Manager

Navigant Consulting, Inc. (1995 – 2002)
Project Manager

Cahners Publishing Company (1995)
Economist

APPENDIX B

EDUCATION

M.A., Economics, Boston University, 1995
B.A., Economics and Finance, Simmons College, 1991
Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of Michigan

EXPERT TESTIMONY OF ANN E. BULKLEY

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arizona Corporation Commission				
UNS Electric	12/12	UNS Electric	D-E-04204A-12-0504	Return on Equity
UNS Electric	05/15	UNS Electric	D-E-___	Return on Equity
Arkansas Corporation Commission				
Arkansas Oklahoma Gas Corporation	10/13	Arkansas Oklahoma Gas Corporation	Docket No. 13-078-U	Return on Equity
Colorado Public Service Commission				
Atmos Energy Corporation	05/13	Atmos Energy Corporation	Docket No. 13AL-0496G	Return on Equity
Atmos Energy Corporation	04/14	Atmos Energy Corporation	Docket No. 14AL-0300G	Return on Equity
Atmos Energy Corporation	05/15	Atmos Energy Corporation	Docket No. 15AL-____G	Return on Equity
Indiana Utility Regulatory Commission				
Kokomo Gas And Fuel Company	09/10	Kokomo Gas And Fuel Company	Docket No. 43942	Fair Value
Northern Indiana Fuel And Light Company, Inc.	09/10	Northern Indiana Fuel And Light Company, Inc.	Docket No. 43943	Fair Value

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Massachusetts Department of Public Utilities				
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Michigan Public Service Commission				
Wisconsin Electric Power Company	12/11	Wisconsin Electric Power Company	Case No. U-16830	Return on Equity
Michigan Tax Tribunal				
Covert Township	7/14	New Covert Generating Co., LLC.	Docket No. 399578	Valuation of Electric Generation Assets
North Dakota Public Service Commission				
Northern States Power Company	12/10	Northern States Power Company	C-PU-10-657	Return on Equity
Northern States Power Company	12/12	Northern States Power Company	C-PU-12-813	Return on Equity
Oklahoma Corporation Commission				
Arkansas Oklahoma Gas Corporation	01/13	Arkansas Oklahoma Gas Corporation	Cause No. PUD 201200236	Return on Equity
Public Utility Commission of Texas				
Southwestern Public Service Company	01/14	Southwestern Public Service Company	Docket No. 42004	Return on Equity
South Dakota Public Utilities Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Northern States Power Company	06/14	Northern States Power Company	Docket No. EL14-058	Return on Equity

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