Appendix F

Exhibit No. NYT-24

UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

New York Transco, LLC)	
)	
Central Hudson Gas & Electric Corp.)	
Consolidated Edison Company of)	
New York, Inc.)	Docket No. ER15000
Niagara Mohawk Power Corporation d/b/a)	
National Grid)	
New York State Electric & Gas Corp.)	
Orange & Rockland Utilities, Inc.)	
Rochester Gas and Electric Corp.)	

DIRECT TESTIMONY AND EXHIBITS OF WILLIAM E. AVERA <u>AND</u> ADRIEN M. MCKENZIE

December 4, 2014

TABLE OF CONTENTS

INTRODUCTION	1
RETURN ON EQUITY FOR NEW YORK TRANSCO, LLC	4
A. Importance of Regulatory Standards	4
B. Relative Risk of New York Transco LLC	8
C. Recommended Base ROE	10
D. Consistency with Commission Policy Goals	18
E. Incentive ROE is Reasonable	24
CAPITAL MARKET CONDITIONS REMAIN ANOMALOUS	
CAPITAL MARKET ESTIMATES	33
A. Economic Standards	33
B. Development and Selection of a Proxy Group	
C. DCF Model	42
D. Evaluation of DCF Results	50
E. Risk Premium Approach – FERC ROEs	54
F. Capital Asset Pricing Model	58
G. Expected Earnings Approach	62
OTHER ROE BENCHMARKS	64
A. Risk Premium – State ROEs	66
B. Empirical Capital Asset Pricing Model	67
C. Gas Pipeline ROEs	69
D. Projected Bond Yields	71
E. Low-Risk Non-Utility DCF Model	73
F. Flotation Costs	77
	INTRODUCTION RETURN ON EQUITY FOR NEW YORK TRANSCO, LLC A. Importance of Regulatory Standards B. Relative Risk of New York Transco LLC C. Recommended Base ROE D. Consistency with Commission Policy Goals E. Incentive ROE is Reasonable CAPITAL MARKET CONDITIONS REMAIN ANOMALOUS CAPITAL MARKET ESTIMATES A. Economic Standards B. Development and Selection of a Proxy Group C. DCF Model D. Evaluation of DCF Results E. Risk Premium Approach – FERC ROES F. Capital Asset Pricing Model G. Expected Earnings Approach OTHER ROE BENCHMARKS A. Risk Premium – State ROEs B. Empirical Capital Asset Pricing Model C. Gas Pipeline ROES D. Projected Bond Yields E. Low-Risk Non-Utility DCF Model F. Flotation Costs

EXHIBITS TO DIRECT TESTIMONY

<u>Exhibit No.</u>	Description
NYT-25	Qualifications of William E. Avera and Adrien M. McKenzie
NYT-26	Summary of Results
NYT-27	Allowed ROEs – National Group
NYT-28	Risk Measures – National Group
NYT-29	FERC Two-Step DCF Model
NYT-30	Electric Utility Risk Premium – FERC ROE
NYT-31	Capital Asset Pricing Model
NYT-32	Expected Earnings Approach
NYT-33	Electric Utility Risk Premium – State ROE
NYT-34	Empirical Capital Asset Pricing Model
NYT-35	Risk Premium – Natural Gas Pipelines
NYT-36	DCF Model – Non-Utility Group

UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

DIRECT TESTIMONY OF WILLIAM E. AVERA AND ADRIEN M. MCKENZIE

1		I. INTRODUCTION
2	Q 1.	PLEASE STATE YOUR NAMES AND BUSINESS ADDRESS.
3	A 1.	Our names are William E. Avera and Adrien M. McKenzie. Our business address
4		is 3907 Red River, Austin, Texas.
5	Q 2.	IN WHAT CAPACITY ARE YOU EMPLOYED?
6	A 2.	We are financial, economic, and policy consultants to business and government.
7	Q 3.	PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND
8		PROFESSIONAL EXPERIENCE.
9	A 3.	A description of our background and qualifications, including resumes containing
10		the details of our experience, is attached as Exhibit No. NYT-25.
11	Q 4.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
12	A 4.	The purpose of our testimony is to present to the Federal Energy Regulatory
13		Commission ("FERC" or "the Commission") our independent evaluation of a fair
14		base rate of return on equity ("ROE") for New York Transco LLC ("NY Transco"
15		or the "the Company").

1

Q 5. PLEASE BRIEFLY DESCRIBE NY TRANSCO.

2 A 5. NY Transco is a partnership formed by a consortium of investor-owned electric utilities operating transmission facilities in state of New York.¹ NY Transco 3 proposes to build, own, and operate a portfolio of new high voltage transmission 4 projects under the functional control of the New York Independent System 5 Operator, Inc. ("NYISO"). Consistent with established Commission policy, these 6 7 projects are specifically tailored to reduce transmission congestion, improve long-8 term grid reliability, and address other public policy goals established in the Governor of New York's Energy Highway Blueprint.² 9

10 Q 6. WHERE WILL NY TRANSCO OBTAIN THE CAPITAL TO FINANCE 11 CONSTRUCTION OF THESE PROPOSED TRANSMISSION 12 PROJECTS?

13 A 6. NY Transco plans to finance its investment in the proposed transmission projects 14 through a combination of equity contributions from the Members, as well as debt 15 financing arranged by or on behalf of NY Transco. NY Transco does not 16 currently issue long-term bonds in its own name, but it will likely negotiate 17 interim project debt financing through a consortium of lenders during the 18 construction phase, and traditional long-term debt financing will likely supersede 19 this credit facility once the proposed projects are placed in service. As discussed 20 in the testimony of Ms. Ellen Lapson, NY Transco's overall rate of return will be 21 calculated using a hypothetical capital structure for the first five years consisting 22 of 60% long-term debt and 40% common equity and its actual capital structure

¹ NY Transco's owners are affiliates of: Central Hudson Gas and Electric Corporation ("Central Hudson"), Consolidated Edison Company of New York, Inc. ("Con Edison")/Orange & Rockland Utilities, Inc. ("O&R"), Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid"), New York State Electric & Gas Corporation ("NYSEG")/Rochester Gas and Electric Corporation ("RG&E") (collectively, the "Members").

² http://www.nyenergyhighway.com/PDFs/BluePrint/EHBPPT/.

thereafter. This hypothetical capitalization is in line with what the NY Transco
 would expect to maintain.

3 Q 7. HOW IS YOUR TESTIMONY ORGANIZED?

4 A 7. After summarizing our conclusions and recommendations, we review current conditions in the capital markets and discuss their implications in evaluating a fair 5 ROE for NY Transco under the standards adopted by the Commission in Opinion 6 With this background, we applied the Commission's two-step No. $531.^3$ 7 discounted cash flow ("DCF") model to estimate the current cost of equity for a 8 9 comparable-risk group of other electric utilities. We refer to these 30 utilities as the "National Group." Consistent with Opinion No. 531, our analyses also 10 examine the cost of equity utilizing a risk premium approach based on 11 Commission-authorized ROEs for electric utilities, the Capital Asset Pricing 12 13 Model ("CAPM"), and the expected earnings approach. These three alternative 14 benchmark methodologies were relied on by the Commission in Opinion No. 531 15 in evaluating the placement of the base ROE from within the zone of 16 reasonableness implied by the two-step DCF model, and our recommended ROE relies on these same factors as well.⁴ 17

In addition, we evaluate our results by reference to additional benchmarks based on a risk premium approach using ROEs authorized by state regulators, the empirical CAPM ("ECAPM"), which is a derivative of the traditional CAPM model, Commission-approved ROEs for natural gas pipelines, and a DCF analysis based on a select group of low risk non-utility firms. Finally, we discuss the implications of flotation costs, which are properly considered in evaluating a fair ROE for NY Transco.

³ Martha Coakley et al., v. Bangor Hydro-Electric Company, et al., Opinion No. 531, 147 FERC ¶ 61,234 at P 144 (2014) ("Opinion No. 531").

⁴ *Id.* at P 146.

1 II. RETURN ON EQUITY FOR NEW YORK TRANSCO, LLC

2 Q 8. WHAT IS THE PURPOSE OF THIS SECTION?

3 A 8. This section presents our conclusions regarding a fair base ROE for NY Transco. 4 In this regard, we discuss the relationship between ROE and the preservation of a 5 utility's ability to attract capital. Next, we summarize our analyses and our 6 recommendation that the base ROE for NY Transco be set at 10.6%. We then address how an ROE at this level meets the Commission's policy goal of 7 promoting investment in electric transmission infrastructure. In addition, we 8 9 explain that including a 50 basis point incentive adder associated with NY 10 Transco's membership in an independent system operator ("ISO") is consistent 11 with Commission policy and precedent. Finally, we confirm that the incentivebased ROE requested by NY Transco, in addition to the 50 basis point adder 12 13 associated with membership in an ISO, is consistent with Commission policy and 14 precedent.

15

A. Importance of Regulatory Standards

16 Q 9. WHAT IS THE ROLE OF THE ROE IN SETTING A UTILITY'S RATES?

17 A 9. The ROE compensates shareholders for the use of their capital to finance the investment necessary to provide utility service. Investors commit capital only if 18 19 they expect to earn a return on their investment commensurate with returns 20 available from alternative investments with comparable risks. To be consistent 21 with sound regulatory economics and the standards set forth by the Supreme Court in the *Bluefield*⁵ and *Hope*⁶ cases, a utility's allowed return on common 22 23 equity should be sufficient to: (1) fairly compensate investors for capital invested 24 in the utility; (2) enable the utility to offer a return adequate to attract new capital 25 on reasonable terms; and (3) maintain the utility's financial integrity.

⁵ Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of the State of West Virginia, 262 U.S. 679 (1923).

^o FPC v. Hope Natural Gas Co., 320 U.S. 591 (1944).

1 Q 10. WHAT ULTIMATELY GOVERNS THE SELECTION OF A FAIR ROE?

- A 10. The Commission has recognized that a reasonable point-estimate ROE should be
 determined based on the facts specific to each proceeding.⁷ That point estimate
 must also meet the standards mandated by the Supreme Court.⁸ As the
 Commission recently reaffirmed in Opinion No. 531:
- 6 The Commission's ultimate task is to ensure that the resulting ROE 7 satisfies the requirements of *Hope* and *Bluefield*.⁹
- 8 This determination requires the Commission to consider all of the available 9 evidence and identify an ROE that is just, reasonable, and sufficient to support 10 NY Transco's need to attract capital and earn a competitive return, and at the 11 same time, promote the Commission's goal of encouraging investment in electric 12 utility transmission infrastructure.

13 Q 11. DOES IT MAKE SENSE TO RELY SOLELY ON A SINGLE METHOD

14 OR MECHANICAL FORMULA IN EVALUATING A FAIR ROE FOR NY 15 TRANSCO?

16 A 11. No. While the Commission does look initially to the DCF methodology when 17 evaluating a fair ROE, it has also made clear that it is the result reached, not the 18 method used, that determines whether an ROE is just and reasonable.¹⁰ A 19 mechanical policy of referencing a single method or a rote application of a 20 particular formula leaves the Commission with little flexibility when the result 21 fails to reflect a fair and reasonable ROE. The Commission reached this exact

See, e.g., Midwest Independent Transmission System Operator, Inc., 106 FERC ¶ 61,302 at P 8 (2004).
 See, e.g., Midwest Independent Transmission System Operator, Inc., 106 FERC ¶ 61,302 at PP 13-14 (2004). The Commission observed that, "we are guided by the principle, enunciated by the Supreme Court, that an approved ROE should be 'reasonably sufficient to assure confidence in the financial soundness of the utility [or, in this case, utilities] and should be adequate under efficient and economical management, to maintain and support its credit, and enable it to raise the money necessary for the proper discharge of its public duties."

⁹ Opinion No. 531 at P 144.

See, e.g., Opinion No. 531 at P 142.

conclusion in Opinion No. 531 when it determined that "a mechanical application
 of the DCF methodology with the use of the midpoint here would result in an
 ROE that does not satisfy the requirements of *Hope* and *Bluefield*."¹¹

4 Investors are also far more concerned with the end-result and the 5 implications for the utility's finances than with adherence to specific rules or 6 precedent. As Standard & Poor's Corporation ("S&P") noted:

7 As much as possible, regulators should, in our opinion, have the flexibility to react quickly and prudently to new situations as they 8 9 develop. This is the sort of flexibility that we believe comes under principles-based regulation rather than rules-based regulation. In the 10 latter, a regulator may attempt to set down every possible rule that 11 12 can apply to a given situation that may arise in an industry. In the former, the regulator generally has the authority to achieve certain 13 ends and some flexibility in how to achieve them.¹ 14

Any benefit of consistency is more than overwhelmed by the risks that an unresponsive, mechanical policy will lead to inadequate returns. Investors react swiftly and negatively to evidence of waning regulatory support, and such an outcome would severely undermine investor confidence and the Commission's policy goals.

20 Q 12. HAS THE COMMISSION RECOGNIZED THE IMPORTANCE OF

21 CONSIDERING ALTERNATIVE APPROACHES AND EVIDENCE IN

22 ESTABLISHING AN ROE THAT MEETS REGULATORY STANDARDS?

A 12. Yes. Over time, the Commission has relied upon a variety of approaches to
 determine ROEs that are consistent with the standards prescribed by *Bluefield* and
 Hope. These evolving methods have each acknowledged that reasonableness and
 stability are essential elements of the Commission's regulatory policy. It is
 important to consider a broad array of evidence, including the ROE range of

¹¹ *Id.*, at P 142.

¹² Standard & Poor's Corporation, "Executive Comment: What Characterizes Effective Regulation? Understanding, Manageability, And Consistency," *RatingsDirect* (May 5, 2010).

reasonableness, the results of alternative ROE benchmarks, and well-established policy considerations supporting an ROE that is sufficient to attract capital.¹³

3 The Commission endorsed the use of alternative benchmarks in Opinion No. 531, concluding that a mechanical application of the DCF model would result 4 in an ROE that was insufficient to meet regulatory standards, and that "it is 5 necessary and reasonable to consider additional record evidence, including 6 7 evidence of alternative benchmark methodologies and state commission-approved ROEs," to determine a just and reasonable ROE.¹⁴ In Opinion No. 531, the 8 9 Commission found the risk premium, CAPM, and expected earnings methodologies to be informative and relied on these analyses to determine the just 10 and reasonable point ROE within the DCF zone of reasonableness. 11

Q 13. DO CUSTOMERS BENEFIT WHEN INVESTORS HAVE CONFIDENCE THAT THE REGULATORY ENVIRONMENT IS STABLE AND CONSTRUCTIVE?

15 A 13. Yes. Past challenges for the economy and the capital market environment 16 highlight the benefits of a fair and balanced ROE, and changing course from the 17 path of financial strength would be extremely shortsighted. Uncertainty and 18 volatility undermine investor confidence, and regulatory signals are the primary 19 driver of investors' risk assessment for utilities. Security analysts study FERC 20 and state commission orders and regulatory policy statements to gauge the

1

2

¹³ The Commission has long recognized the importance of preserving its flexibility to evaluate a fair ROE based on the case-specific evidence:

The Commission has concluded that requiring the ROE to be set at one of only three possible positions in the range established by reference to the proxy companies does not give the Commission the necessary flexibility required to evaluate the specific circumstances of each case. Thus, the Commission has determined that the parties to a rate proceeding may present evidence they believe is warranted to support any ROE that is within the DCF-derived zone of reasonableness.

Transcontinental Gas Pipe Line Corp., Opinion No. 414-A, 84 FERC ¶ 61,084 at 61,427-3 (1998), *denying reh'g*, Opinion No. 414-B, 85 FERC ¶ 61,323 (1998).

¹⁴ Opinion No. 531 at P 145.

1 financial impact of regulatory actions and advise investors where to put their 2 money. If regulatory actions instill confidence that the regulatory environment is supportive, investors will provide the capital necessary to support needed 3 investment, such as the robust transmission grid envisioned by our national 4 energy policy goals and the Commission. When investors are confident that a 5 utility has supportive regulation, they will make funds available even in times of 6 7 turmoil in the financial markets. On the other hand, the lack of a stable regulatory 8 environment can create difficulties in raising the necessary capital to address 9 transmission infrastructure needs, which will ultimately lead to increased costs or other adverse consequences for customers. 10

11

12

B. Relative Risk of New York Transco LLC Q 14. IN EVALUATING A FAIR ROE, IS IT APPROPRIATE TO CONSIDER

13 THE SPECIFIC EXPOSURES FACED BY NY TRANSCO?

14 A 14. Yes. The challenges posed by an increasingly complex marketplace heighten the 15 uncertainties associated with transmission operations while requiring the 16 commitment of significant new capital investment to maintain and enhance 17 service capabilities. NY Transco's mission is to support the operation and 18 development of a broad-based transmission system, strengthen the network and enhance flexibility, and thereby facilitate reduced congestion costs, improved 19 reliability, access to renewable resources, and an effective wholesale power 20 21 market. But as discussed in the testimony of NY Transco's witnesses, the 22 Company will face complexities and risks that distinguish it and the proposed 23 projects from routine transmission investments undertaken by incumbent utilities. 24 In fact, the NY Transco was formed to meet the challenge of constructing 25 multiple new transmission projects affecting all of the transmission systems of its 26 owners that are designed to address statewide reliability, congestion, and public 27 policy needs. As Messrs. Haering and Allen explain, these projects involve

1 complex permitting and construction challenges together with aggressive in-2 service schedules. The construction will be occurring in one of the most densely 3 populated areas of the country. In Opinion No. 531, the Commission recognized 4 that the enhanced risks associated with new transmission investment warranted an 5 ROE above those allowed for state-jurisdictional utility operations and from the 6 upper end of the DCF zone.¹⁵

While new transmission infrastructure can act as a catalyst for effective
power markets, utilities must be provided adequate return to overcome obstacles
to investment and compete for capital with other opportunities of similar risk.
Given the benefits to customers of effective grid operations, and the specific risks
and uncertainties associated with the Company and the proposed projects, an ROE
for NY Transco from the upper end of the zone of reasonableness is warranted.

Q 15. DO THE EXPOSURES UNIQUE TO NY TRANSCO HIGHLIGHT THE NEED FOR SUPPORT OF THE COMPANY'S FINANCIAL STRENGTH AND ABILITY TO ATTRACT CAPITAL?

16 A 15. Most definitely. As discussed in the testimony of the Company's other witnesses, 17 NY Transco faces numerous challenges associated with financing and 18 constructing the proposed projects. The scope, complexity, and magnitude of the 19 investment required to support construction of the major new high voltage 20 transmission projects proposed by NY Transco far exceeds what is customarily 21 involved in more routine transmission additions. Transmission utilities bear a 22 significant risk at the permitting and initial project development stage and in the 23 start-up investment, and such higher risks merit enhanced rate treatment. The 24 capital commitments necessary for construction of NY Transco's proposed 25 projects, and subsequent financing for the in-service period, are predicated on the

¹⁵ Opinion No. 531 at P 149.

expectation that the Company will have the opportunity to earn a return that is
 commensurate with the significant risks entailed. Given the potential for
 significant volatility in capital markets and the Company's lack of control over
 the timing of such events, it is crucial that NY Transco receive a base ROE and
 incentive adders that provide the necessary support for its financial standing.

6

21 22 23

24

25

26 27

C. Recommended Base ROE

7 Q 16. WHAT IS YOUR CONCLUSION REGARDING A FAIR BASE ROE FOR 8 NY TRANSCO?

9 A 16. Based on the results of our analyses using recent Commission precedent, we
10 recommend a base ROE for NY Transco of 10.60%.

Q 17. PLEASE SUMMARIZE THE RESULTS OF THE COMMISSION'S TWO STEP DCF ANALYSIS.

A 17. The results of our analyses are summarized in Exhibit No. NYT-26. Page 1 of
Exhibit No. NYT-26 displays the results of the primary methods relied on by the
Commission in Opinion No. 531. In addition to referencing the published 5-year
earnings per share ("EPS") growth forecast from IBES,¹⁶ we also applied the
Commission's two-step method using projected EPS growth rates from The Value
Line Investment Survey ("Value Line"). With respect to the DCF method, we
conclude that:
Application of the two-step DCF methodology based on EPS

•	Application of the two-step DCF methodology based on EPS
	growth estimates from IBES results in an adjusted ROE zone of
	reasonableness of 6.25% to 11.63%:
	The median of the DCE estimates based on IBES growth

- The median of the DCF estimates based on IBES growth rates is 8.78%;
- An ROE of 10.21% falls halfway between the 8.78% median of the IBES DCF estimates and the 11.63% value at the top of the range.

¹⁶ Formerly I/B/E/S International, Inc., IBES growth rates are now compiled and published by Thomson Reuters. We obtained these IBES growth rates from http://finance.yahoo.com, which is the recognized source of IBES data used to apply the Commission's DCF approach.

1 2	
2	 Application of the two-step DCF methodology based on EPS growth rates from Value Line results in an adjusted ROE zone of
3	reasonableness of 0.45% to 13.59%.
4 5	 The median of the DCF estimates based on Value Line growth rates is 8.82%;
6	An ROE of 11.21% falls halfway between the 8.82%
7	median of the Value Line DCF estimates and the 13.59%
8	value at the top of the range.
9	• The Commission has recognized that determining a point estimate
10	ROE from within the DCF zone is not a mechanical, arithmetic
11	exercise; but instead requires critical evaluation of DCF estimates
12	in light of current capital market conditions and against the results
13	of other methods;
14	• An ROE within the top end of the DCF range is consistent with the
15	Commission's recent findings and is warranted in light of
16	continued anomalous capital market conditions;
17	• Considering current capital market conditions, values at the low
18	end of the DCF range impart a downward bias to the results.
19	Q 18. DOES YOUR APPLICATION OF THIS METHOD CONSTITUTE AN
20	ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN
20 21	ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN OPINION NO. 531 AND ITS RELATED ASSUMPTIONS?
20 21 22	ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN OPINION NO. 531 AND ITS RELATED ASSUMPTIONS?A 18. No. One of the principal elements of Opinion No. 531 was the change to the two-
20 21 22 23	ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN OPINION NO. 531 AND ITS RELATED ASSUMPTIONS?A 18.No. One of the principal elements of Opinion No. 531 was the change to the two- step DCF methodology, which incorporates long-term growth projections (based
20 21 22 23 24	 ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN OPINION NO. 531 AND ITS RELATED ASSUMPTIONS? A 18. No. One of the principal elements of Opinion No. 531 was the change to the two-step DCF methodology, which incorporates long-term growth projections (based on projected GDP growth rates) in estimating a company's cost of equity.
20 21 22 23 24 25	 ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN OPINION NO. 531 AND ITS RELATED ASSUMPTIONS? A 18. No. One of the principal elements of Opinion No. 531 was the change to the two-step DCF methodology, which incorporates long-term growth projections (based on projected GDP growth rates) in estimating a company's cost of equity. However, there is no demonstrable evidence that investors look to GDP growth
20 21 22 23 24 25 26	 ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN OPINION NO. 531 AND ITS RELATED ASSUMPTIONS? A 18. No. One of the principal elements of Opinion No. 531 was the change to the two-step DCF methodology, which incorporates long-term growth projections (based on projected GDP growth rates) in estimating a company's cost of equity. However, there is no demonstrable evidence that investors look to GDP growth rates in the far distant future in assessing their expectations for utility common
20 21 22 23 24 25 26 27	 ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN OPINION NO. 531 AND ITS RELATED ASSUMPTIONS? A 18. No. One of the principal elements of Opinion No. 531 was the change to the two-step DCF methodology, which incorporates long-term growth projections (based on projected GDP growth rates) in estimating a company's cost of equity. However, there is no demonstrable evidence that investors look to GDP growth rates in the far distant future in assessing their expectations for utility common stocks.¹⁷ And while the theoretical assumptions underlying this method
20 21 22 23 24 25 26 27 28	 ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN OPINION NO. 531 AND ITS RELATED ASSUMPTIONS? A 18. No. One of the principal elements of Opinion No. 531 was the change to the two-step DCF methodology, which incorporates long-term growth projections (based on projected GDP growth rates) in estimating a company's cost of equity. However, there is no demonstrable evidence that investors look to GDP growth rates in the far distant future in assessing their expectations for utility common stocks.¹⁷ And while the theoretical assumptions underlying this method contemplate an infinite stream of cash flows, this is simply at odds with the
20 21 22 23 24 25 26 27 28 29	 ENDORSEMENT OF THE TWO-STEP APPROACH ADOPTED IN OPINION NO. 531 AND ITS RELATED ASSUMPTIONS? A 18. No. One of the principal elements of Opinion No. 531 was the change to the two-step DCF methodology, which incorporates long-term growth projections (based on projected GDP growth rates) in estimating a company's cost of equity. However, there is no demonstrable evidence that investors look to GDP growth rates in the far distant future in assessing their expectations for utility common stocks.¹⁷ And while the theoretical assumptions underlying this method contemplate an infinite stream of cash flows, this is simply at odds with the practical circumstances in which real-world investors operate. While we have

¹⁷ As demonstrated in Dr. William E. Avera's supplemental testimony in Docket No. EL11-66, evidence suggests that the 4.39% GDP growth rate used to apply the Commission's two-step DCF model understates investors' long-term growth expectations for the electric utility industry. *Supplemental Testimony of William E. Avera*, Exhibit Nos. NET-900 and NET-1000, Docket No. EL11-66-000 (Aug. 4, 2014).

Opinion No. 531, there is very clear evidence that GDP growth understates 1 investors' expectations for electric utilities.¹⁸ As a result, this two-step DCF 2 3 model produced cost of equity estimates that fall far below investors' expectations and violate regulatory standards of fairness. This is particularly concerning in 4 terms of its impact on the Commission's incentive rate policy, since a utility's 5 total ROE, including any ROE incentive adders that are needed, will be limited by 6 7 the high end of the zone of reasonableness, which the Commission has recognized 8 will be lower due to its change in methodology.

9 The Commission in Opinion No. 531 recognized that the mechanical application of the two-step DCF model could undermine a utility's ability to 10 attract capital for new investment, noting that in that case an ROE based on the 11 measure of central tendency from the two-step DCF results would violate the 12 *Hope* and *Bluefield* standards.¹⁹ As the Commission observed: 13

14 [W]e also understand that any DCF analysis may be affected by 15 potentially unrepresentative financial inputs to the DCF formula, including those produced by historically anomalous capital market 16 17 conditions. Therefore, while the DCF model remains the 18 Commission's preferred approach to determining allowed rate of 19 return, the Commission may consider the extent to which economic 20 anomalies may have affected the reliability of DCF analyses in determining where to set a public utility's ROE within the range of 21 reasonable returns established by the two-step constant growth DCF 22 methodology.²⁰ 23

24

The Commission recognized that DCF results must be evaluated in light of other

25

capital market evidence.²¹ While the Commission's willingness to consider

¹⁸ This evidence is discussed in Dr. William E. Avera's testimony filed in Docket No. EL11-66-000, regarding the long-term growth rate to be used in the two-step DCF model. See Supplemental Testimony of William E. Avera, Exhibit No. NET-900, Docket No. EL11-66-000 (Aug. 4, 2014).

¹⁹ Opinion No. 531 at P 142.

²⁰ Id. at P 41. Application of the two-step DCF method without the "mid-point of the upper half of the range" adjustment would have resulted in an ROE for the ISO New England Transmission Owners of only 9.39%, a value the Commission found unreasonable. Id at P 142.

²¹ Opinion No. 531 at PP 144 & 145.

capital market conditions, the results of alternative methods, and state commission approved ROEs in evaluating where to place the just and reasonable
 ROE within the DCF-determined zone of reasonableness may ultimately result in
 a conclusion that satisfies the *Hope* and *Bluefield* standards, this approach does
 not eliminate the fundamental flaws of the two-step DCF model.

6 Q 19. IS THIS CONCLUSION REINFORCED BY YOUR EVALUATION OF 7 ALTERNATIVE ROE METHODS?

A 19. Yes. Our applications of the risk premium, CAPM, and expected earnings
methods demonstrate that the median value resulting from the Commission's twostep DCF method is far below investors' required return. An ROE from the upper
half of the DCF zone of reasonableness is warranted. As summarized on page 1
of Exhibit No. NYT-26:

13

14 15

16

17

18

19 20

21 22

23

24 25

- The utility risk premium approach based on Commission-approved ROEs for electric utilities implies an ROE point estimate of 10.61%;
 - The forward-looking CAPM estimates produce an ROE range of 8.85% to 14.36%, with a median of 11.45%;
- Earned returns for the electric utility industry are expected to average 10.58%, and fall in a range of 7.62% to 14.67% for the proxy group of comparable-risk electric utilities;
 - The overall average of the median cost of equity estimates resulting from these alternative ROE benchmarks is 10.61%;
- Midpoint cost of equity estimates associated with these quantitative methods ranged from 10.58% to 11.61%, with the average of the individual midpoint estimates being 10.98%.
- All of these results demonstrate that the median value resulting from the
- 27 Commission's two-step DCF method is far too low to be considered reasonable.
- In Opinion No. 531, which was issued on June 19, 2014, the Commission recognized that the results of its two-step DCF model were impacted by unrepresentative financial inputs related to capital market condition that were

anomalous when compared with the historical record.²² As our testimony and that 1 2 of Ellen Lapson explain, the anomalous capital market conditions that prompted 3 the Commission to approve an ROE at the middle of the top end of the DCF zone in Opinion No. 531 have continued. Notably, while the Commission adopted the 4 midpoint of the upper half of the DCF zone, it stated that "[n]othing in this order 5 precludes participants from developing a record in [other] cases supporting a 6 7 different point in the range of reasonable returns than the midpoint of the upper half of the range."²³ 8

9 Under these circumstances, and in order to ensure that the Hope and 10 Bluefield standards are met, the Commission has recognized that it is appropriate and prudent to consider the results of other ROE models and benchmarks, which 11 are widely employed in regulatory proceedings and utilized in the financial 12 13 community. The need to consider the impact of these anomalous conditions in evaluating a fair ROE is equally relevant in proceedings involving a single utility 14 15 as for cases addressing a single, ISO-wide ROE determination. Apart from the 16 results of alternative methods, an ROE from the top half of the DCF range of 17 reasonableness is also justified by the fact that bond yields are uncharacteristically 18 low and widely expected to increase significantly over the near-term. The 19 expected increase in bond yields documented in our testimony indicates that 20 current cost of capital estimates are likely to understate investors' requirements 21 over the time when rates are in effect.

²² Opinion No. 531 at P 145.

²³ *Id.* at P 151 n.306.

Q 20. WHAT DID YOU CONCLUDE AS TO A FAIR AND REASONABLE BASE ROE FOR NY TRANSCO?

3 A 20. Evaluating a point-estimate ROE for NY Transco from within the top end of the 4 DCF range, as the Commission found in Opinion No. 531, is justified in this proceeding given the continued anomalous capital market conditions and results 5 of alternative ROE benchmarks documented in our testimony. Based on the 6 7 results of our analyses, we recommend a base ROE of 10.60% for NY Transco. 8 Our recommendation falls well within the 8.78% to 11.63% upper end of the ROE 9 zone of reasonableness resulting from the Commission's two-step DCF method 10 applied using IBES growth rates. A 10.60% ROE falls roughly midway between 11 the 10.21% and 11.21% values representing the middle of the upper end of the 12 DCF ranges based on IBES and Value Line EPS growth rates, respectively. Our 13 10.60% ROE recommendation is also consistent with the results of the risk premium, CAPM, and expected earnings approaches that were explicitly 14 15 considered by the Commission in establishing a fair and reasonable ROE from 16 within the DCF zone of reasonableness in Opinion No 531.

17 Q 21. IS A 10.60% BASE ROE FOR NY TRANSCO SUPPORTED BY OTHER

- 18 **BENCHMARKS**?
- A 21. Yes. Alternative tests not applied by the Commission in Opinion No. 531
 consistently support an ROE in the upper half of the DCF zone, and confirm the
 reasonableness of a 10.60% base ROE for NY Transco. The results of these
 analyses are summarized below, and on page 2 of Exhibit No. NYT-26:
- 23 24

25

26

- The utility risk premium approach based on state-approved ROEs for electric utilities implies an ROE point estimate of 10.08%;
- The ECAPM approach results in a zone of reasonableness of 9.83% to 14.48%, with a median of 12.06%;
- Reference to the ROEs approved by the Commission for natural gas pipelines implies a current base cost of equity for an electric utility of approximately 10.40%;

15

1 2 3		 After incorporating projected bond yields, the risk premium, CAPM, and ECAPM methods resulted in cost of equity estimates above 10.60%;
4 5 6		• DCF estimates for a low-risk group of non-utility firms suggest a cost of equity in the range of 8.20% to 12.72%, with a median of 10.73%;
7 8		• Taken together, the overall average of the median ROEs resulting from these alternative benchmarks equals 11.16%.
9	Q 22.	DO STATE APPROVED ROES ALSO SUPPORT AN ROE FOR NY
10		TRANSCO WELL ABOVE THE MEDIAN VALUE IMPLIED BY THE
11		TWO-STEP DCF MODEL?
12	A 22.	Yes. As shown on Exhibit No. NYT-27, the approved ROEs currently reported
13		for the utilities in the National Group by AUS Utility Reports fell in a range of
14		9.38% to 11.48%, with a median of 10.38%. Meanwhile, as shown on page 1 of
15		Exhibit No. NYT-29, the median result of the Commission's two-step DCF model
16		using IBES growth rates is 8.78%. This result falls 61 basis points below the
17		9.39% value rejected by the Commission as inadequate to meet regulatory
18		standards for wholesale electric transmission operations in Opinion No. 531. ²⁴
19		Just as in Opinion No. 531, the significant discrepancy between state-approved
20		ROEs for the proxy group and the 8.78% DCF median "serves as an indicator that
21		an upward adjustment is necessary to satisfy Hope and Bluefield." ²⁵ This
22		conclusion is reinforced by the Commission's determination that investors in
23		electric transmission infrastructure face increased risks that distinguish these
24		investments from state-regulated distribution. ²⁶

²⁴ Opinion No. 531 at P 148.

²⁵ Id.

²⁶ Id. at P 149.

1Q 23. DO PRIOR COMMISSION DECISIONS SUPPORT ESTABLISHING AN2ROE FOR NY TRANSCO WITHIN THE TOP HALF OF THE DCF ZONE

OF REASONABLENESS?

3

4 A 23. Yes. The Supreme Court has recognized the Commission's broad latitude in
5 evaluating a reasonable ROE from within the DCF range:

6 Statutory reasonableness is an abstract quality represented by an 7 area rather than a pinpoint. *It allows a substantial spread between* 8 *what is unreasonable because too low and what is unreasonable* 9 *because too high.* To reduce the abstract concept of reasonableness 10 to concrete expression in dollars and cents is the function of the 11 Commission.²⁷

12 In applying this standard, the Commission has recognized that the ROE does not 13 have to equal the central tendency of the DCF zone to be considered reasonable. 14 In prior cases the Commission has approved a base ROE at the middle of the upper half of the zone.²⁸ This approach was recently employed again in Opinion 15 No. 531.²⁹ Based on the evidence presented in our testimony and the close 16 parallels with the circumstances considered by the Commission in Opinion No. 17 531, an ROE from the top end of the DCF zone of reasonableness is warranted in 18 19 this proceeding.

20Taken together, these considerations support our recommendation to21authorize a base ROE for NY Transco of 10.60%.

²⁷ Montana-Dakota Utilities Co. v. Northwestern Pub. Serv. Co., 341 U.S. 246, 251 (1951) (emphasis added).

Southern California Edison, Opinion No. 445, 92 FERC at 61,266 (2000); Consumers Energy Co.,
 Opinion No. 429, 85 FERC at 61,363-64 (1998).

²⁹ Opinion No. 531 at P 152.

D. Consistency with Commission Policy Goals Q 24. WHY IS IT IMPORTANT TO ALLOW AN INCENTIVE RETURN FOR NEW TRANSMISSION INVESTMENTS, SUCH AS THOSE PROPOSED BY NY TRANSCO?

5 A 24. To fulfill the Commission's goal of promoting effective wholesale markets 6 competition and other policy objectives, transmission owners must do more than 7 simply maintain their existing systems to perform the function for which they 8 were designed; rather, they are being directed to make major modifications to 9 their systems in coordination with changes to the systems of other neighboring 10 utilities. Thus, the NY Transco expects to spend approximately \$1.7 billion in 11 2013 dollars on the first five projects to upgrade and expand the existing 12 transmission grid in New York.

13 As discussed above and as documented in the testimony of the Company's 14 other witnesses, the projects proposed by NY Transco are anything but routine 15 and will involve substantial risks and challenges. They also provide significant 16 reliability and economic benefits to customers in New York, while supporting 17 environmental and public policy objectives and enhancing competitive regional 18 electric markets. These projects address longstanding transmission congestion 19 issues and significant reliability problems. They will also allow existing and new 20 generation in the northern and western regions of New York to reach the load 21 centers in the southern and eastern portions of the state. These are exactly the 22 type of projects that the Commission has identified in its policy statement as 23 warranting ROE adders.

Under the competitive market paradigm that serves as the foundation for investment choices, investors' expected ROE is the key economic signal that allocates scarce capital among competing opportunities. In contrast to planning and investment decisions over wholesale generation facilities, which are

18

1 determined for the most part by competitive market forces, electric transmission 2 remains regulated by the Commission. The allowed ROE is the primary lynchpin 3 in determining the flow of investment capital to new transmission facilities. Apart from the impact that economic and market turmoil can have on the 4 availability of capital, transmission facilities must compete with alternative uses, 5 and the additional funding necessary to expand the grid will only be allocated if 6 7 investors anticipate an opportunity to earn a return that is sufficient to compensate 8 for the associated risks.

9 Q 25. IS A 10.60% BASE ROE FOR NY TRANSCO CONSISTENT WITH
 10 ESTABLISHED COMMISSION POLICY TO SUPPORT INVESTMENT
 11 IN ELECTRIC TRANSMISSION INFRASTRUCTURE?

12 A 25. Yes. The Commission's supportive regulatory actions have been successful in 13 promoting much needed investment in the transmission grid. Unresponsive, 14 mechanical decision-making that leads to inadequate returns would undermine the 15 Commission's goal and the legislative mandate to promote capital investment in 16 new transmission projects. This potential adverse outcome was highlighted by the 17 investment community with respect to the transmission segment of the power 18 industry:

19 The degree to which a utility revises its transmission capital plan 20 will depend on expected returns. ... Material reductions in the base ROE could lower the quality of and divert capital away from the 21 22 transmission business, given its generally riskier profile than that of 23 state-regulated utility businesses, such as distribution and 24 generation. Moreover, investors could deploy capital to 25 infrastructure projects with higher allowed returns, such as FERCregulated natural gas pipelines, or to other industries generally.³⁰ 26

³⁰ Wolfe Research, "FERConomics: Risk to transmission base ROEs in focus," Utilities & Power (Jun. 11, 2013).

1 The Commission has recognized the need to support wholesale markets by 2 adjusting its methods and instituting reforms in response to changed 3 circumstances, as exemplified by Order No. 1000. Considering the ongoing 4 implications of anomalous capital market conditions and the results of well-5 accepted ROE benchmarks provides the Commission with the flexibility to ensure 6 a reasonable end result that does not undermine its policy objectives.

7 Q 26. WILL ROES THAT ARE BELOW THE LEVEL INDICATED BY 8 APPROPRIATE BENCHMARKS UNDERMINE TRANSMISSION 9 INVESTMENT?

A 26. Yes. That risk is very real. As the investment community has recognized, setting
 the ROE for FERC-jurisdictional transmission operations below the level allowed
 by state commissions would undermine the ability of interstate operations to
 compete for capital. The global financial firm UBS observed that:

14We believe companies will redeploy capital elsewhere if15transmission returns are materially reduced. In our view, the cost of16capital could actually increase, because as returns are set lower,17valuation multiples will also be reset much lower than current levels.18Additionally, the second order effects on other state and Federal19government policy objectives, i.e., renewables development, could20be significant, in our view.

21 Our 10.60% base ROE recommendation is appropriate in light of NY 22 Transco's need to attract capital to interstate transmission infrastructure and the 23 significant risks and challenges associated with these investments.

³¹ UBS Investment Research, "Transmission: CTRL + Z?," US Electric Utilities & IPPs (May 3, 2012).

Q 27. HAS THE COMMISSION EXPLICITLY RECOGNIZED THE NEED FOR AN ROE THAT SUPPORTS INVESTMENT IN TRANSMISSION INFRASTRUCTURE?

4 A 27. Yes. To address the requirements of Section 219 of the Energy Policy Act of 5 2005, in which Congress recognized the linkage between ROE and transmission 6 investment, the Commission established policies designed to achieve greater grid 7 reliability and lower-cost electric power for customers by encouraging increased transmission infrastructure investment.³² FERC's Order Nos. 679 and 679-A 8 9 specifically recognized the legislative mandate to promote capital investment in light of the substantial challenges faced by utilities in constructing new 10 11 transmission projects. The Commission has noted that transmission projects must 12 compete for capital, and that the ROE provides an effective tool to foster new 13 investments and advance policy objectives.

14 Q 28. HAVE THE COMMISSION'S POLICIES SUPPORTING GRID 15 INVESTMENT PROVEN SUCCESSFUL?

A 28. Yes. S&P has observed that "more than \$75 billion of electric transmission
 projects are in various stages of planning as companies gravitate toward the
 [Commission's] constructive regulatory policies, including incentive returns on
 equity."³³ More recently, S&P noted:

20The Federal Energy Regulatory Commission's (FERC) supportive21framework for approving transmission projects is continuing to22attract new investments. Some of the enticements are authorized23returns on equity of up to 14%, use of projected test periods, capital24structures with more than 50% equity, and return on construction

Promoting Transmission Investment through Pricing Reform, Order No. 679, FERC Stats. & Regs. ¶ 31,222, order on reh'g, Order No. 679-A, FERC Stats & Regs. ¶ 31,236 (2006), order on reh'g, 119 FERC ¶ 61,062 (2007).

Standard & Poor's Corporation, "Industry Report Card," *RatingsDirect* (Sep. 29, 2010). In May 2011, S&P reaffirmed that transmission providers "plan to spend more than \$75 billion over the next several years." Standard & Poor's Corporation, "Federal Policies Are Buoying Transmission Spending For U.S. Electric Utilities," *RatingsXpress* (May 10, 2011).

work in progress. Over the past five years, the transmission sector's
 compound annual growth rate for capital investment has exceeded
 10%, and we expect transmission capital investments for 2012 to
 exceed \$13 billion.³⁴

5 Similarly, Value Line confirmed this view:

6 At one time, electric transmission was ignored by most utility 7 investors. It often lacked attention even from utility managements, 8 most of which underinvested in this sector of the business while 9 their focus was on generation and distribution. This has changed 10 within the past decade. Reliability concerns, the need to connect 11 mandated renewable-energy projects to the grid, and the desire to 12 import or export power all contributed to increased investment in The [Commission] helped by granting 13 electric transmission. incentive returns on equity that were higher than utilities were 14 typically allowed on state-regulated capital investments.³⁵ 15

A report by the Edison Electric Institute regarding its members' new transmission investments concluded that "EEI members plan to invest at least \$60.6 billion (nominal \$) in transmission through 2024."³⁶ The corollary is that, absent a commitment to follow through on expectations for meaningful ROEs that are competitive with other alternatives, the flow of capital will diminish.

Q 29. HAS THE COMMISSION RECOGNIZED THE IMPORTANCE OF REGULATORY CERTAINTY AND CONSISTENCY IN FOSTERING TRANSMISSION DEVELOPMENT?

A 29. Yes. Transparency and stability are important tenets of utility ratemaking and as the Commission has stated, it "strives to provide regulatory certainty through consistent approaches and actions."³⁷ With respect to ROE in particular, the Commission has recognized the potential disincentive to investment stemming

Standard & Poor's Corporation, "U.S. Utilities' Capital Spending in Rising, And Cost Recovery Is Vital," *RatingsDirect* (May 14, 2012).

The Value Line Investment Survey at 901 (Jun. 22, 2012).

⁷ Transmission Projects: At A Glance, Edison Electric Institute, at p. i (Mar. 2014),

www.eei.org/issuesandpolicy/transmission/Documents/Trans_Project_lowres_bookmarked.pdf.

³⁷ http://www.ferc.gov/about.asp

1	from uncertainties over the administrative process leading to a determination of a
2	fair ROE. In Opinion No. 679-A the Commission concluded that "our hearing
3	procedures for determining ROE can create uncertainty for investors," and noted
4	that:

5 Although our processes are designed to provide a just and 6 reasonable return, we recognize that there can be significant 7 uncertainty as to the ultimate return because of the uncertainties 8 associated with administrative determinations (e.g., selection of the 9 proxy group, changes in growth rates, etc.) This can itself constitute 10 a substantial disincentive to new investment.

11 Q 30. WHAT IMPLICATIONS DO THESE FINDINGS HAVE WITH RESPECT

12

TO A FAIR ROE IN THIS PROCEEDING?

13 A 30. On June 19, 2014 the Commission moved to provide greater clarity and 14 consistency in its ROE methodology and approved a base ROE of 10.57% for the New England Transmission Owners in Docket No. EL11-66-001. As we explain 15 16 subsequently, there have been no fundamental shifts in economic or capital market conditions since the end of the record period in that proceeding. As a 17 18 result, barring any dramatic distinctions in investment risk, which certainly do not 19 apply to NY Transco, investors would logically anticipate that the ROE in this 20 proceeding should be reasonably comparable to the Commission's earlier 21 determination under its revised ROE approach. On the other hand, any 22 reconsideration of the principles outlined by the Commission in Opinion No. 531 23 that produce a significantly lower ROE would dramatically heighten regulatory 24 uncertainty and significantly undermine investors' confidence and willingness to 25 supply capital.

³⁸ *Order No. 679-A*, 117 FERC ¶ 61,327 at P 69 (2006).

1		E. Incentive ROE is Reasonable
2	Q 31.	WHAT ROE INCENTIVE ADDERS IS NY TRANSCO REQUESTING IN
3		THIS PROCEEDING?
4	A 31.	As Ms. Lapson discusses in her testimony, in addition to a 50 basis point adder to
5		recognize NY Transco's participation in NYISO, the company is requesting a 50
6		basis point adder for the formation of an independent, transmission-only company
7		and a 50 basis point adder for the risks and benefits of these specific projects.
8	Q 32.	WHAT ROE IS IMPLIED BY THESE REQUESTED INCENTIVES?
9	A 32.	Combining the 150 basis-points in incentive adders requested by NY Transco
10		with our recommended base ROE of 10.60% implies a total ROE of 12.10%.
11		However, under the Commission's policies governing incentive-based ROEs, the
12		total ROE of a utility including the impact of an incentive must fall within the
13		zone of reasonableness. ³⁹ Accordingly, for present purposes NY Transco is
14		requesting a total ROE equal to the upper end of the zone of reasonableness based
15		on the Commission's two-step DCF methodology applied using IBES EPS
16		growth rates, or 11.63%. ⁴⁰
17	Q 33.	WHAT IS YOUR CONCLUSION REGARDING THE 11.63% ROE
18		REQUESTED FOR NY TRANSCO?
19	A 33.	It is our conclusion that the 11.63% incentive-based ROE requested by NY
20		Transco is reasonable and should be approved.
21 22 23 24 25 26 27		 In accordance with <i>Order Nos.</i> 679 and 679-A, the 11.63% ROE requested for NY Transco does not exceed the upper end of the zone of reasonableness implied by the Commission's two-step DCF method applied using IBES EPS growth rates; An 11.63% ROE falls below the 13.59% upper bound of the zone of reasonableness indicated by applying the Commission's two-step DCF method using Value Line EPS growth rates;

³⁹ See, e.g., Order No. 679, 116 FERC ¶ 61,057 at P 93 (2006).

⁴⁰ The upper end of the zone is subject to being updated during the course of this proceeding consistent with Commission precedent.

1 2 3			• The retuined	e allow urns th couragi	ved ROE for nat are suffi	NY Transce cient to me ation in ap	o must reflect et the establis proved ISOs.	the need hed poli promoti	to provide cy goal of ing capital	
4 5 6 7			inv goa ass	vestmen als, w ociated	nt in transm hile recognized risks, inclu	ission, and nizing inve iding the sig	meeting acce stors' renew nificant obsta	pted ene ed focu cles spec	ergy policy s on the ific to new	
8 9 10 11 12 13			As pro fro inc Co sta	the (bjects j m the centive mmiss nding	Company's present subs upper end adders is co ion precedent for NY Tran	witnesses h stantial risks of the rang onsistent with the name of the name onsistent with	ave documents and challengue of reasonath these speciated to establis	nted, the ges. A bleness a al risks, o sh reason	e proposed base ROE along with established able credit	
14 15 16			• Mo fin the	oreover ancial risks f	r, the poten markets and faced by util	tial for turn continued e ities and the	noil in the de conomic unce ir investors;	omestic a rtainties	and global exacerbate	
17 18			• Ou cos	r conc sts.	lusions are	reinforced b	by the need to) conside	er flotation	
19		Take	n togethe	r, these	e considerati	ons support	an ROE for N	Y Transo	co at the up	per
20		end	of the zo	ne of a	reasonablen	ess and cont	firm our conc	lusion th	at the 11.63	3%
21		reque	ested total	l ROE	including in	centives is r	easonable.			
22		III.	CAPI	TAL M	IARKET C	ONDITION	IS REMAIN	ANOMA	LOUS	
23	Q 34.	DO	CURRI	ENT	CAPITAL	MARKET	CONDITI	ONS P	PROVIDE	A
24		REP	RESENT	ΓΑΤΙν	E BASIS C	N WHICH	TO EVALUA	ATE A F	AIR ROE?	?
25	A 34.	No.	As disc	ussed	in greater d	etail in the	testimony of	Ellen L	apson, curr	ent
26		capit	al market	t condi	itions contin	ue to reflec	t the legacy of	of the Gr	eat Recession	on,
27		and a	are not re	presen	tative of wh	at investors	expect in the	future.	Investors ha	ave
28		had t	o conten	d with	a level of e	conomic unc	ertainty and c	apital m	arket volatil	lity
29		that	nas been	unprec	edented in r	ecent history	. The ongoin	g potenti	al for renew	ved
30		turm	oil in the	capital	markets has	s been seen 1	repeatedly, wit	th commo	on stock prie	ces
31		exhil	oiting the	dram	atic volatilit	y that is in	dicative of he	eightened	sensitivity	to
32		risk.	In respo	onse to	heightened	uncertaintie	s, investors ha	ive repea	tedly sough	it a
33		safe	haven in	U.S.	government	bonds. A	s a result of	this "flig	ght to safet	y,"

Treasury bond yields have been pushed significantly lower in the face of political,
 economic, and capital market risks. In addition, the Federal Reserve has
 implemented measures designed to push interest rates to historically low levels in
 an effort to stimulate the economy and bolster employment.

Q 35. HOW DO CURRENT YIELDS ON PUBLIC UTILITY BONDS COMPARE WITH WHAT INVESTORS HAVE EXPERIENCED IN THE PAST?

A 35. The yields on utility bonds remain near their lowest levels in modern history.
Figure 1, below, compares the October 2014 yield on long-term, triple-B rated
utility bonds with those prevailing since 1968:

FIGURE 1 BBB UTILITY BOND YIELDS – CURRENT VS. HISTORICAL



As illustrated above, prevailing capital market conditions, as reflected in the yields on triple-B utility bonds, are an anomaly when compared with historical experience. Similarly, while 10-year Treasury bond yields may reflect a modest increase from all-time lows of less than 2.0%, they are hardly comparable to historical levels.⁴¹ Federal Reserve President Charles Plosser recently observed
 that U.S. interest rates are unprecedentedly low, and "outside historical norms."⁴²

3 Q 36. HAS THE COMMISSION ADDRESSED THE NATURE OF THESE 4 HISTORICALLY LOW INTEREST RATES?

5 In Opinion No. 531, the Commission determined that capital market A 36. Yes. 6 conditions were anomalous and that the current atypically low interest rates 7 impacted the results of the DCF analysis and led to results that were too low to be 8 just and reasonable. As SNL Financial reported to investors, Commissioner 9 LaFleur "stressed that FERC detailed in previous orders the many factors that led the Commission to conclude anomalous economic conditions exist, and she 10 suggested that it would take something more than just a small change in interest 11 rates to change that conclusion."43 There has been no fundamental shift in 12 13 economic or capital market conditions since April 2013, when the updated data 14 considered as the basis for the Commission's findings in Opinion No. 531 was 15 submitted, and no sudden alteration to these anomalous conditions since Opinion 16 No. 531 was issued.

17 Q 37. ARE THESE VERY LOW INTEREST RATES EXPECTED TO 18 CONTINUE?

A 37. No. Investors do not anticipate that these low interest rates will continue. It is
 widely anticipated that as the economy continues to stabilize and resumes a more
 robust pattern of growth, long-term capital costs will increase from present levels.
 Figure 2 below compares current interest rates on 30-year Treasury bonds, triple A rated corporate bonds, and double-A rated utility bonds with near-term

 ⁴¹ The average yield on 10-year Treasury bonds for the six-months ended October 2014 was 2.46%. Over the 1968-2014 period illustrated on Figure 2, 10-year Treasury bond yields averaged 6.76%.
 ⁴²

⁴² Barnato, Katy, "Fed's Plosser: Low rates 'should make us nervous'," *CNBC* (Nov. 11, 2014).

 ⁴³ Boshart, Glen, "FERC asked to lower ROE for Duke's Fla. Subsidiary; are more ROE challenges in the offing?, *SNL Financial* (Aug. 13, 2014).

projections from the Value Line Investment Survey ("Value Line"), IHS Global
 Insight, Blue Chip Financial Forecasts ("Blue Chip"), and the Energy Information
 Administration ("EIA"):



FIGURE 2 INTEREST RATE TRENDS

Source:

Value Line Investment Survey, Forecast for the U.S. Economy (Aug. 22, 2014) IHS Global Insight, U.S. Economic Outlook at 79 (May 2014) Energy Information Administration, Annual Energy Outlook 2014 (May 7, 2014) Blue Chip Financial Forecasts, Vol. 33, No. 6 (Jun. 1, 2014)

These forecasting services are highly regarded and widely referenced, with the Commission incorporating forecasts from IHS Global Insight and the EIA in its two-step DCF model. As evidenced above, there is a clear consensus in the investment community that the cost of long-term capital will be significantly higher over the 2015-2019 period than it is currently.

9 Q 38. DO RECENT ACTIONS OF THE FEDERAL RESERVE SUPPORT THE 10 CONTENTION THAT CURRENT LOW INTEREST RATES WILL

11 CONTINUE INDEFINITELY, OR THAT CAPITAL

12 CONDITIONS ARE NO LONGER ANOMALOUS?

A 38. No. While the Federal Reserve continues to express support for maintaining a
 highly accommodative monetary policy and an exceptionally low target range for

MARKET

the federal funds rate, it has also acted to steadily pare back its monthly bondbuying program. Citing improvement in the outlook for the labor market and increasing strength in the broader economy, the Federal Reserve elected to discontinue further purchases under its bond-buying program at its October 2014 meeting. Elimination of the Federal Reserve's bond buying program should ultimately exert upward pressure on long-term interest rates, with *The Wall Street Journal* observing that:

8 The Fed's decision to begin trimming its \$85 billion monthly bond-9 buying program is widely expected to result in higher medium-term 10 and long-term market interest rates. That means many borrowers, 11 from home buyers to businesses, will be paying higher rates in the 12 near future.⁴⁴

While the Federal Reserve's tapering announcements and subsequent conclusion of its asset purchases have moderated uncertainties over just when, and to what degree, the stimulus program would be altered, investors continue to face ongoing uncertainties over future modifications that could ultimately affect how quickly and how much interest rates are affected.

18 Q 39. DOES THE CESSATION OF FURTHER ASSET PURCHASES MARK A 19 RETURN TO "NORMAL?"

A 39. No. The Federal Reserve continues to exert considerable influence over capital
 market conditions through its massive holdings of Treasuries and mortgage backed securities. Prior to the initiation of the stimulus program in 2009, the
 Federal Reserve's holdings of U.S. Treasury bonds and notes amounted to
 approximately \$400 - \$500 billion. With the implementation of its asset purchase
 program, balances of Treasury securities and mortgage backed instruments
 climbed steadily, and their effect on capital market conditions became more

⁴⁴ Hilsenrath, Jon, "Fed Dials Back Bond Buying, Keeps a Wary Eye on Growth," *The Wall Street Journal* at A1 (Dec. 19, 2013).

pronounced. Table 1 below charts the course of the Federal Reserve's asset
 purchase program:

TABLE 1 FEDERAL RESERVE BALANCES OF TREASURY BONDS AND MORTGAGE-BACKED SECURITIES (BILLIONS)

2008	\$ 410
2009	\$ 1,618
2010	\$ 1,939
2011	\$ 2,423
2012	\$ 2,512
2013	\$ 3,597
2014	\$ 4,065

4	As illustrated above, far from representing a return to normal, the Federal
5	Reserve's holdings of Treasury bonds and mortgage-backed securities now
6	amount to more than \$4 trillion, ⁴⁵ which is an all-time high.

3

For now, the Federal Reserve is maintaining its policy of reinvesting
principal payments from these securities – about \$16 billion a month – and rolling
over maturing Treasuries at auction. As the Federal Reserve recently noted:

10The Committee is maintaining its existing policy of reinvesting11principal payments from its holdings of agency debt and agency12mortgage-backed securities in agency mortgage-backed securities13and of rolling over maturing Treasury securities at auction. This14policy, by keeping the Committee's holdings of longer-term15securities at sizable levels, should help maintain accommodative16financial conditions.

17 This continued investment maintains the downward pressure on interest rates that 18 is the hallmark of the stimulus program and the anomalous capital market 19 conditions recognized by the Commission in Opinion No. 531.

 ⁴⁵ Appelbaum, Binyamin, "Federal Reserve's Bond-Buying Fades, but Stimulus Doesn't End There," *The New York Times* (Jun. 19, 2014).
 ⁴⁶

⁴⁰ Federal Open Market Committee, *Press Release* (Oct. 29, 2014).

1 Of course, the corollary to these observations is that ending this policy of 2 reinvestment could place significant upward pressure on bond yields, especially 3 considering the unprecedented magnitude of the Federal Reserve's holdings of Treasury bonds and mortgage-backed securities. Changes to this policy of 4 reinvestment would further reduce stimulus measures and could place additional 5 upward pressure on bond yields. The International Monetary Fund noted, "A lack 6 7 of Fed clarity could cause a major spike in borrowing costs that could cause 8 severe damage to the U.S. recovery and send destructive shockwaves around the 9 global economy," adding that, "[a] smooth and gradual upward shift in the yield curve might be difficult to engineer, and there could be periods of higher volatility 10 when longer yields jump sharply—as recent events suggest."47 Similarly, The 11 Wall Street Journal noted investors' "hypersensitivity to Fed interest rate 12 13 decisions," and expectations that higher interest rates "may come a bit sooner and be a touch more aggressive than expected."48 As a Financial Analysts Journal 14 15 article noted:

16 Because no precedent exists for the massive monetary easing that 17 has been practiced over the past five years in the United States and 18 Europe, the uncertainty surrounding the outcome of central bank 19 policy is so vast. . . . Total assets on the balance sheets of most 20 developed nations' central banks have grown massively since 2008, 21 and the timing of when the banks will unwind those positions is 22 uncertain.⁴⁹

These developments highlight continued concerns for investors and support expectations for higher interest rates as the economy and labor markets continue to recover. With the Federal Reserve curtailing the expansion of its

 ⁴⁷ Talley, Ian, "IMF Urges 'Improved' U.S. Fed Policy Transparency as It Mulls Easy Money Exit," *The Wall Street Journal* (July 26, 2013).

Jon Hilsenrath and Victoria McGrane, "Yellen Debut Rattles Markets," Wall Street Journal (Mar. 19, 2014).

⁴⁹ Poole, William, "Prospects for and Ramifications of the Great Central Banking Unwind," *Financial Analysts Journal* (November/December 2013).

enormous portfolio of Treasuries and mortgage bonds, ongoing concerns over political stalemate in Washington, the threat of renewed recession in the Eurozone, and political and economic unrest in Ukraine, the Middle East, and emerging markets, the potential for significant volatility and higher capital costs is clearly evident to investors.

6 Q 40. DO THE CURRENT UNPRECEDENTED LOW INTEREST RATES YOU 7 HAVE DISCUSSED AFFECT THE RESULTS OF THE COMMISSION'S 8 DCF MODEL?

9 A 40. Yes. The Commission's policy is to eliminate low-end DCF estimates that do not 10 exceed average public utility bond yields by approximately 100 basis points or more.⁵⁰ As discussed above, current low interest rates are unprecedented and 11 12 reflect the legacy of the recession and the Federal Reserve's stimulus policies. As 13 illustrated in Figures 1 and 2, these current low interest rates are anomalous and 14 do not reflect expectations for the future, which is the only relevant consideration 15 when evaluating investors' required return. As a result, adding a margin of 16 approximately 100 basis points to a six-month historical bond yield average 17 produces a threshold that is too low to reflect investors' required returns going 18 forward. This conclusion is further supported by economic studies that show that 19 risk premiums are higher when interest rates are at very low levels. Under these 20 conditions, this static test of low-end outliers based on historical public utility 21 bond yields retains low-end DCF estimates that are far below what investors 22 require to accept the risks of an equity investment in electric utilities, including 23 NY Transco.

24 25 To address the reality of current capital markets, it is imperative that the Commission consider current capital market anomalies and near-term forecasts

⁵⁰ *See, e.g., SoCal Edison,* 131 FERC ¶ 61,020 at P 55.
1		for public utility bond yields when testing low-end DCF estimates and when
2		evaluating a fair ROE for NY Transco from within the zone of reasonableness.
3		IV. CAPITAL MARKET ESTIMATES
4	Q 41.	WHAT IS THE PURPOSE OF THIS SECTION?
5	A 41.	This section presents capital market estimates of the cost of equity. First, we
6		address the concept of the cost of common equity, along with the risk-return
7		tradeoff principle fundamental to capital markets. Next, we describe the results of
8		the Commission's two-step DCF model applied to a benchmark group of
9		comparable risk firms. We conclude this section with the results of our analyses
10		utilizing the risk premium, CAPM, and expected rate of return methodologies,
11		consistent with Opinion No. 531's reliance on these benchmarks.
12		While our recommended base ROE is within the range based on the results
13		of the two-step DCF model approved by the Commission in Opinion No. 531, the
14		alternative benchmarks presented in our testimony provide critical guidance in
15		determining whether an existing or proposed ROE is just and reasonable, and in
16		evaluating a point estimate from within the zone of reasonableness. No single
17		approach provides a fail-safe means to estimate investors' required ROE and it is
18		important to consider the results of alternative methods.
19		A. Economic Standards
20	Q 42.	WHAT ROLE DOES THE ROE PLAY IN A UTILITY'S RATES?
21	A 42.	The ROE is the cost of inducing and retaining investment in the utility's physical
22		plant and assets. This investment is necessary to finance the asset base needed to
23		provide utility service. Competition for investor funds is intense and investors are
24		free to invest their funds wherever they choose. They will commit money to a
25		particular investment only if they expect it to produce a return commensurate with
26		those from other investments with comparable risks.

Q 43. WHAT FUNDAMENTAL ECONOMIC PRINCIPLE UNDERLIES THIS COST OF EQUITY CONCEPT?

A 43. The fundamental economic principle underlying the cost of equity concept is the notion that investors are risk averse. In capital markets where relatively risk-free assets are available (*e.g.*, U.S. Treasury securities), investors can be induced to hold riskier assets only if they are offered a premium, or additional return, above the rate of return on a risk-free asset. Since all assets compete with each other for investor funds, riskier assets must yield a higher expected rate of return than safer assets to induce investors to hold them.

Given this risk-return tradeoff, the required rate of return (*k*) from an asset (i)
can generally be expressed as:

12		$k_{\rm i} = R_{\rm f} + RP_{\rm i}$
13	where:	$R_{\rm f}$ = Risk-free rate of return, and
14		RP_i = Risk premium required to hold riskier asset i.

Thus, the required rate of return for a particular asset at any time is a function
of: (1) the yield on risk-free assets; and (2) its relative risk, with investors
demanding correspondingly larger risk premiums for assets bearing greater risk.

18 Q 44. IS THERE EVIDENCE THAT THE RISK-RETURN TRADEOFF 19 PRINCIPLE ACTUALLY OPERATES IN THE CAPITAL MARKETS?

20 A 44. Yes. The risk-return tradeoff can be readily documented in segments of the 21 capital markets where required rates of return can be directly inferred from market 22 data and where generally accepted measures of risk exist. Bond yields, for 23 example, reflect investors' expected rates of return, and bond ratings measure the 24 risk of individual bond issues. The observed yields on government securities, 25 which are considered free of default risk, and bonds of the various ratings 26 categories demonstrate that the risk-return tradeoff does, in fact, exist in the 27 capital markets.

Q 45. DOES THE RISK-RETURN TRADEOFF OBSERVED WITH FIXED INCOME SECURITIES EXTEND TO COMMON STOCKS AND OTHER ASSETS?

4 A 45. It is generally accepted that the risk-return tradeoff evidenced with long-term debt 5 extends to all assets. Documenting the risk-return tradeoff for assets other than 6 fixed income securities, however, is complicated by two factors. First, there is no 7 standard measure of risk applicable to all assets. Second, for most assets-8 including common stock—required rates of return cannot be directly observed. 9 Yet there is every reason to believe that investors exhibit risk aversion in deciding 10 whether or not to hold common stocks and other assets, just as when choosing 11 among fixed-income securities.

12 Q 46. IS THIS RISK-RETURN TRADEOFF LIMITED TO DIFFERENCES 13 BETWEEN FIRMS?

14 A 46. No. The risk-return tradeoff principle applies not only to investments in different 15 firms, but also to different securities issued by the same firm. The securities 16 issued by a utility vary considerably in risk because they have different 17 characteristics and priorities. Long-term debt secured by a mortgage on property 18 is senior among all capital in its claim on a utility's net revenues and is, therefore, 19 the least risky. Following first mortgage bonds are other debt instruments also 20 holding contractual claims on the utility's net revenues, such as subordinated 21 debentures. The last investors in line are common shareholders. They receive 22 only the net revenues, if any that remain after all other claimants have been paid. 23 As a result, the rate of return that investors require from a utility's common stock, 24 the most junior and riskiest of its securities, must be considerably higher than the 25 yield offered by the utility's senior, long-term debt.

1 2

Q 47. WHAT DOES THE ABOVE DISCUSSION IMPLY WITH RESPECT TO **ESTIMATING THE COST OF EQUITY?**

3 A 47. Although the cost of equity cannot be observed directly, it is a function of the 4 returns available from other investment alternatives and the risks to which the equity capital is exposed. Because it is unobservable, the cost of equity for a 5 particular utility must be estimated by analyzing information about capital market 6 7 conditions generally, assessing the relative risks of the company specifically, and 8 employing various quantitative methods that focus on investors' required rates of 9 return. These various quantitative methods typically attempt to infer investors' required rates of return from stock prices, interest rates, or other capital market 10 11 data.

12

B. Development and Selection of a Proxy Group

13 **Q 48. HOW DID YOU IMPLEMENT THE DCF METHOD TO ESTIMATE THE** 14

COST OF COMMON EQUITY FOR NY TRANSCO?

15 A 48. Application of the DCF method, as well as the risk premium and CAPM 16 approaches, to estimate the cost of equity requires observable capital market data, 17 such as stock prices and beta values. Because NY Transco has no publicly traded 18 stock, its cost of common equity cannot be measured directly. Moreover, even for 19 a firm with publicly traded stock, the cost of equity can only be estimated. 20 Applying quantitative models using observable market data only produces an 21 estimate that inherently includes some degree of observation error.

22 As a result, the accepted approach to increase confidence in the results is to 23 apply the DCF model to a proxy group of publicly traded companies that 24 investors regard as risk comparable. The results of the analysis on the sample of 25 companies are relied upon to establish a range of reasonableness for the cost of 26 equity for the specific company at issue.

1	Q 49.	WHAT SPECIFIC PROXY GROUP DID YOU RELY ON FOR YOUR
2		ANALYSIS?
3	A 49.	Consistent with the approach adopted by the Commission in Opinion No. 531, the
4		National Group is composed of utilities that meet the following criteria:
5 6		 Companies that are included in the Electric Utility Industry groups compiled by Value Line;
7 8		2. Electric utilities that paid common dividends over the last six months and have not announced a dividend cut since that time;
9 10		3. Electric utilities with no ongoing involvement in a major merger or acquisition that would distort quantitative results;
11 12		 Electric utilities that have been assigned a corporate credit rating between "BBB" and "A-" by S&P
13 14		 Electric utilities that have been assigned a long-term issuer rating between "Baa2" to "A3" by Moody's Investors Service ("Moody's").
15		As shown on Exhibit No. NYT-28, the National Group is composed of
16		30 comparable-risk utilities.
17	Q 50.	WHAT WAS THE BASIS FOR THE RANGE OF CREDIT RATINGS
18		USED TO IDENTIFY THE NATIONAL GROUP?
19	A 50.	In Opinion No. 531, the Commission determined that credit ratings from both
20		major agencies - S&P and Moody's - should be considered independently as
21		screening criteria when evaluating comparable risk. ⁵¹ In evaluating credit ratings
22		to identify a proxy group of utilities with comparable risks, the Commission has
23		adopted a "comparable risk band," interpreted as one "notch" higher or lower than
24		the corporate credit ratings of the utility at issue and within the investment grade
25		ratings scale. ⁵²

⁵¹ Opinion No. 531 at P 107. 52

⁵² See, e.g., Southern California Edison Co., 131 FERC ¶ 61,020 at P 53 (2010); Tallgrass Transmission LLC, 125 FERC ¶ 61,248 at P 77 (2008).

1 NY Transco has not issued debt in its own name and does not yet have an 2 overall corporate or issuer credit rating. The criteria used to identify our risk-3 comparable proxy group assumes that NY Transco would qualify for ratings that are equivalent to the average BBB+ S&P corporate rating and Baa1 Moody's 4 issuer rating maintained by the firms in Value Line's Electric Utility industry 5 groups. These ratings benchmarks are consistent with the target credit profile for 6 7 NY Transco discussed in Ms. Lapson's testimony. Consistent with the 8 Commission's determination that a triple-B rating is a "minimum investment rating for an electric utility,"⁵³ other new entrant, stand-alone transmission 9 companies have also adopted a similar approach based on industry credit 10 metrics.⁵⁴ 11

12 The BBB to A- range of S&P credit ratings used to identify the National 13 Group is consistent with the one notch higher or lower band under the 14 Commission's guidelines. Applying the one notch higher or lower band to the 15 average Moody's issuer rating for the electric utility industry results in a 16 screening criterion based on Moody's long-term issuer ratings of Baa2 to A3.

17 **Q 51. WHAT OTHER RISK MEASURES DID YOU EXAMINE?**

A 51. Apart from the broad assessment of investment risk provided by credit ratings,
other quality rankings published by investment advisory services also provide
relative assessments of risk that are considered by investors in forming their
expectations. Accordingly, our evaluation also included a comparison of three
other objective measures of the investment risks associated with common
stocks—Value Line's Safety Rank, Financial Strength Rating, and beta. Given
that Value Line is perhaps the most widely available source of investment

⁵³ *Duquesne Power & Light Co.*, 118 FERC ¶ 61,087 at P 53 (2007).

See, e.g., Northern Pass Transmission Co, Docket No. ER11-2377 at Exh. NPT-600 (Dec. 15, 2010), and Trans-Allegheny Interstate Line Co., Docket No. ER07-562 at Exh. TRC-100 (Feb. 21, 2007).

advisory information, its rankings provide useful guidance regarding the risk
 perceptions of investors.

3 The Safety Rank is Value Line's primary risk indicator and ranges from "1" (Safest) to "5" (Most Risky). This overall risk measure is intended to capture the 4 total risk of a stock, and incorporates elements of stock price stability and 5 financial strength.⁵⁵ The Financial Strength Rating is designed as a guide to 6 overall financial strength and creditworthiness, with the key inputs including 7 8 financial leverage, business volatility measures, and company size. Value Line's Financial Strength Ratings range from "A++" (strongest) down to "C" (weakest) 9 in nine steps. Finally, Value Line's beta measures the volatility of a security's 10 11 price relative to the market as a whole. A stock that tends to respond less to 12 market movements has a beta less than 1.00, while stocks that tend to move more 13 than the market have betas greater than 1.00. Beta is the only relevant measure of 14 investment risk under modern capital market theory, and is widely cited in 15 academics and in the investment industry as a guide to investors' risk perceptions. 16 Q 52. WHAT ARE THE AVERAGE RISK MEASURES ASSIGNED TO YOUR **PROXY GROUP?** 17

18 A 52. Risk measures for the National Group are shown on Exhibit No. NYT-28, and
19 summarized in Table 2, below:

TABLE 2 COMPARATIVE RISK INDICATORS

			_	Value Line	
Proxy Group	S&P	Moody's	Safety Rank	Financial Strength	Beta
National Group	BBB+	Baa1	2	B++	0.75

⁵⁵ The Commission has previously considered Value Line's Safety Rank in evaluating relative risks. *Potomac-Appalachian Transmission Highline, LLC*, 133 FERC ¶ 61,152 at n. 90.

1 2

Q 53. ARE INVESTORS LIKELY TO VIEW THE FIRMS IN THE NATIONAL GROUP AS RISK-COMPARABLE TO NY TRANSCO?

3 A 53. No. In contrast to the utilities in the proxy group – which consists of relatively 4 large, established companies in the electric utility sector with diversified activities 5 and markets – NY Transco is a newly-formed transmission-only company that lacks any operating history and has no established capital base or cash flows. 6 7 Large, established companies enjoy many advantages in accessing capital 8 markets. Investors take comfort in their familiarity with such companies and their 9 histories of meeting interest and principal payment obligations while declaring 10 stable or gradually increasing dividends over the decades. Large, diversified 11 companies can more easily weather unpleasant surprises in one or more markets 12 because bad news in one business can be offset by good news elsewhere. In 13 addition, NY Transco will be required to raise substantial amounts of capital to 14 fund its projected capital expenditures. As a result, the investment risks 15 associated with NY Transco exceed those of the utilities in the proxy group, 16 which all have long track records and well-defined risk profiles.

As discussed above, the comparable risk band used to identify the National Group was based on credit ratings indicative of average risks in the electric utility industry. Given the absence of any debt repayment or earnings history for the Company, it almost certainly produces a proxy group with less risk than what investors would associate with NY Transco.

Q 54. WHAT ARE THE IMPLICATIONS OF THE COMPANY'S GREATER RISKS IN EVALUATING A FAIR ROE?

A 54. As noted above and in the testimony of the Company's other witnesses, NY
 Transco lacks any operating history or established capital base and will bear
 significant risks associated with permitting and initial project development and in
 the start-up investment. An ROE from the upper end of the zone of

reasonableness is consistent with the need for financial support as NY Transco 2 seeks to establish an investment grade credit standing while committing the 3 capital investment necessary to undertake important enhancements to the transmission infrastructure within the NYISO.⁵⁶ 4

1

Similarly, the Commission has previously recognized that the ROE should 5 be selected from the upper end of the zone of reasonableness when the utility's 6 7 risks exceed those of the average firm in the proxy group. For example, in 8 Consumers Energy Co., the Commission concluded that, "In consideration of 9 Trial Staff's testimony that Consumers is more risky than the average of the comparable group, we shall set the ROE at the midpoint of the upper-end of the 10 range."⁵⁷ Similarly, the Commission concluded in *SoCal Edison* that: 11

12 We will next consider where, within this zone of reasonable returns, SoCal Edison's ROE should be set. In making this determination, it 13 14 is necessary to measure the business and financial risks faced by SoCal Edison relative to the overall risks attributable to the 15 appropriate proxy group of companies. ... [B]ased on the higher 16 17 bond ratings of the comparable companies, we find that SoCal 18 Edison is more risky than the comparison group. Therefore, the 19 appropriate ROE for SoCal Edison should be above the midpoint of 20 returns indicated for the comparison group. Therefore, we will establish SoCal Edison's ROE at the midpoint of the upper half of 21 the zone of reasonableness.⁵⁸ 22

23 Considering the higher risk associated with NY Transco's status as a new entrant transmission utility, the significant capital needs and long lead times 24 25 associated with transmission projects, and the likelihood that a stand-alone credit rating for NY Transco would fall below that of the proxy group, the cost of equity 26 estimates produced by our analyses provide a conservative basis on which to 27 28 evaluate a fair ROE for NY Transco.

⁵⁶ These considerations also support NY Transco's requested capital structure.

⁵⁷ Consumers Energy Co., 85 FERC ¶ 61,100 (1998). 58

Southern California Edison Co., 92 FERC ¶ 61,070 at 61,266 (2000).

1		C. DCF Model
2	Q 55.	HOW IS THE DCF MODEL USED TO ESTIMATE THE COST OF
3		EQUITY?
4	A 55.	DCF models attempt to replicate the market valuation process that sets the price
5		investors are willing to pay for a share of a company's stock. The model rests on
6		the assumption that investors evaluate the risks and expected rates of return from
7		all securities in the capital markets. Given these expectations, the price of each
8		stock is adjusted by the market until investors are adequately compensated for the
9		risks they bear. Therefore, we can look to the market to determine what investors
10		believe a share of common stock is worth. By estimating the cash flows investors
11		expect to receive from the stock in the way of future dividends and capital gains,
12		we can calculate their required rate of return. Thus, the cash flows that investors
13		expect from a stock are estimated, and given its current market price, we can back
14		into the discount rate, or cost of equity, that investors implicitly used in bidding
15		the stock to that price.
17	050	

16 Q 56. WHAT MARKET VALUATION PROCESS UNDERLIES DCF MODELS?

A 56. DCF models assume that the price of a share of common stock is equal to the present value of the expected cash flows (*i.e.*, future dividends and stock price) that will be received while holding the stock, discounted at investors' required rate of return. Thus, the cost of equity is the discount rate that equates the current price of a share of stock with the present value of all expected cash flows from the stock.

1 2

5

Q 57. WHAT FORM OF THE DCF MODEL IS CUSTOMARILY USED TO ESTIMATE THE COST OF EQUITY IN RATE CASES?

A 57. Rather than developing annual estimates of cash flows into perpetuity, the DCF
 model can be simplified to a "constant growth" form:⁵⁹

$$P_0 = \frac{D_1}{k_e - g}$$

6		where: $P_0 =$ Current price per share;
7		D_1 = Expected dividend per share in the coming year;
8		$k_e = Cost of equity;$
9		g = Investors' long-term growth expectations.
10		This constant growth form of the DCF model recognizes that the rate of
11		return to stockholders consists of two parts: (1) dividend yield (D_1/P_0) ; and
12		(2) growth (g) . In other words, investors expect to receive a portion of their total
13		return in the form of current dividends and the remainder through price
14		appreciation.
15	Q 58.	HOW IS THE CONSTANT GROWTH FORM OF THE DCF MODEL
16		TYPICALLY USED TO ESTIMATE THE COST OF COMMON EQUITY?
17	A 58.	The first step in implementing the constant growth DCF model is to determine the
18		expected dividend yield (D_1/P_0) for the firm in question. This is usually
19		calculated based on an estimate of dividends to be paid in the coming year divided

by the current price of the stock. The second step is to estimate investors' longterm growth expectations (g) for the firm. The final step is to sum the firm's

⁵⁹ The constant growth DCF model is dependent on a number of strict assumptions, which in practice are never strictly met. These include a constant growth rate for both dividends and earnings; a stable dividend payout ratio; the discount rate exceeds the growth rate; a constant growth rate for book value and price; a constant earned rate of return on book value; no sales of stock at a price above or below book value; a constant price-earnings ratio; a constant discount rate (*i.e.*, no changes in risk or interest rate levels and a flat yield curve); and all of the above extend to infinity. Nevertheless, the DCF method provides a workable and practical approach to estimate investors' required return that is widely referenced in utility ratemaking.

1 dividend yield and estimated growth rate to arrive at an estimate of its cost of 2 common equity.

3 Q 59. WHAT IS THE DISTINCTION BETWEEN THE COMMISSION'S TWO-4 STEP DCF METHOD FOR ELECTRIC UTILITIES AND THE **CONSTANT GROWTH MODEL OUTLINED ABOVE?** 5

6 A 59. The two-step DCF method for electric utilities recently adopted by the 7 Commission for electric utilities assumes that investors differentiate between 8 near-term growth forecasts, such as the earnings growth rates published by securities analysts, and some notion of longer-term growth into the far distant 9 10 future. Based on this assumption of disparate growth expectations, the two-step 11 DCF method employs two separate growth rates for each firm, which are then weighted to arrive at a single value for the "g" component. 12

13 O 60. HOW WAS THE DIVIDEND YIELD FOR THE NATIONAL GROUP

14

DETERMINED?

15 A 60. Following the most recent statement of Commission policy in Opinion No. 531, 16 an average dividend yield was calculated for each electric utility during the six months from May through October 2014.⁶⁰ As indicated on page 1 of Exhibit No. 17 18 NYT-29, these six-month average historical dividend yields were also increased 19 by one-half of the IBES growth rates discussed subsequently (1 + 0.5g) to convert 20 them to adjusted dividend yields.

21 0 61. WHAT GROWTH RATES ARE USED IN THE COMMISSION'S TWO-22 **STEP DCF METHOD FOR ELECTRIC UTILITIES?**

23 A 61. The first growth rate, which is intended to represent expectations over the short-24 term, is the IBES consensus 5-year earnings growth forecast. The second growth

⁶⁰ Opinion No. 531 at P 77.

rate is based on long-term forecasts of growth in nominal Gross Domestic Product
 ("GDP").

3 Q 62. WHAT WAS THE SOURCE OF THE IBES GROWTH RATES USED IN 4 YOUR APPLICATION OF THE COMMISSION'S TWO-STEP DCF 5 METHOD?

A 62. We obtained the IBES earnings growth rates from *Yahoo! Finance*, which has
long been accepted and relied on by the Commission in applying the DCF
approach. As noted in Opinion No. 531, "the Commission has consistently used
IBES estimates published by *Yahoo! Finance* as the source of analysts' consensus
growth rates."⁶¹

11 Q 63. HOW DID YOU ARRIVE AT YOUR PROJECTED GROWTH RATE IN

12 NOMINAL GDP, REPRESENTING THE SECOND STAGE OF THE 13 COMMISSION'S DCF MODEL?

A 63. The Commission has a long history of relying on three independent sources for
GDP growth projections in applying the two-step DCF approach.⁶² More
recently, the Commission has relied on the long-term projections of nominal GDP
published by IHS Global Insight, EIA, and the Social Security Administration
("SSA"). The Commission affirmed the use of these sources in Opinion No.
531-A.⁶³

The calculation of the long-term growth rate in nominal GDP used in our application of the Commission's two-step DCF model is presented on page 3 of Exhibit No. NYT-29. Consistent with the Commission's guidance, we relied on the most recent long-term projections published by IHS Global Insight and EIA,

 $^{^{61}}_{62}$ *Id.* at P 89.

² See, e.g., Kern River Gas Transmission Co., 126 FERC ¶ 61,034 at P 130 (2009).

⁶³ Opinion No. 531-A, 149 FERC ¶ 61,032 (2014).

1		as well as the SSA forecast over the next 50 years. As shown there, this resulted
2		in an average GDP growth rate of 4.37%.
3	Q 64.	WHAT WEIGHTING DID YOU ASSIGN THESE RESPECTIVE
4		GROWTH RATES TO ARRIVE AT THE SINGLE "G" COMPONENT OF
5		THE TWO-STEP DCF MODEL?
6	A 64.	Following the Commission's long-standing practice in the natural gas and oil
7		pipeline industry, we weighted the individual IBES growth rates by two-thirds
8		and the GDP growth projection by one-third to compute a single two-step growth
9		rate for each utility in the proxy group.
10	Q 65.	WHAT WERE THE RESULTS OF APPLYING THE TWO-STEP DCF
11		MODEL TO THE NATIONAL GROUP USING IBES EPS GROWTH
12		RATES?
13	A 65.	After combining the dividend yields and the weighted average of the IBES and
14		GDP growth projections for each utility, the resulting cost of common equity
15		estimates are shown on page 1 of Exhibit No. NYT-29. As shown there, these
16		individual DCF estimates ranged from 6.25% to 11.63%.
17	Q 66.	HOW ELSE DID YOU APPLY THE COMMISSION'S TWO-STEP DCF
18		MODEL?
19	A 66.	As shown on page 2 of Exhibit NYT-29, we also applied the Commission's two-
20		step DCF model using the projected EPS growth rates published by Value Line.
21	Q 67.	HAS THE COMMISSION PREVIOUSLY RELIED ON VALUE LINE
22		PROJECTIONS IN APPLYING THE DCF MODEL?
23	A 67.	Yes. The Commission has long recognized the importance of incorporating
24		alternative growth rates in estimating the cost of equity using the DCF model. In
25		fact, it was the recognition that estimates can and do vary that prompted the
26		Commission to consider alternative growth measures in applying the DCF model.
27		In Orange & Rockland Utilities, Inc., for example, the Presiding Judge reiterated

1 the Commission's goal of providing "thoughtful and well-supported estimates of 2 the growth rate factor."⁶⁴ In that same case, Commissioner Trabandt 3 acknowledged the inherent uncertainties associated with estimating the cost of 4 equity, concluding that reliance on a single source of growth rates "makes the 5 process even more subjective, if not arbitrary." As Commissioner Trabandt 6 explained:

7 Instead of taking the range of dividend yields over a six-month 8 period and adding a single growth rate, we now admit that the 9 growth rate itself has a range (as with any other projections experts 10 perform) and we add the range of growth rates to the range of 11 dividend yields to arrive at the zone of reasonableness. I concur 12 with this refinement because it represents a more realistic approach 13 to ratemaking.

- 14 The Commission refined its one-step DCF policy in *Southern California Edison*,
- by expressly relying on projections from both IBES and Value Line to "frame the
 zone of reasonableness."⁶⁵

17 Q 68. DOES REFERENCE TO VALUE LINE EPS GROWTH PROJECTIONS

GUIDE

TO

INVESTORS'

MEANINGFUL

18

19

EXPECTATIONS?

A

PROVIDE

- A 68. Yes. Value Line is recognized as being the most widely available source of
 investment information to investors and there are many citations to textbooks and
 other sources supporting its usefulness as a guide to investors' expectations. For
 example, *Cost of Capital A Practitioners' Guide*, published by the Society of
 Utility and Financial Analysts, noted that:
- [A] number of studies have commented on the relative accuracy of
 various analysts' forecasts. Brown and Rozeff (1978) found that
 Value Line was superior to other forecasts. Chatfield, Hein and
 Moyer (1990, 438) found, further "Value Line to be more accurate

⁶⁴ Orange & Rockland Utilities, 44 FERC ¶ 61,253, 1988 WL 391149 (F.E.R.C.).

⁶⁵ Southern California Edison at 19.

1 2		than alternative forecasting methods" and that "investors place the greatest weight on the forecasts provided by Value Line". ⁶⁶
3		Similarly, New Regulatory Finance, which the Commission Trial Staff has cited
4		as an authoritative source, ⁶⁷ concluded that:
5 6 7		Value Line is the largest and most widely circulated independent investment advisory service, and influences the expectations of a large number of institutional and individual investors. ⁶⁸
8		Given the fact that Value Line is perhaps the most widely available source
9		of information on common stocks, the projections of Value Line analysts provide
10		an important guide to investors' expectations. ⁶⁹ Consistent with the
11		Commission's past findings, reference to Value Line's EPS growth projections
12		provides an important reference in framing the range of results, as well as
13		insulating against the potential see-saw in DCF estimates that can be associated
14		with dependence on a single source of analysts' estimates.
15	Q 69.	ARE THERE OTHER ADVANTAGES ASSOCIATED WITH
16		REFERENCING VALUE LINE AS A SOURCE FOR PROJECTED EPS
17		GROWTH RATES?
18	A 69.	Yes. Unlike the consensus IBES values gathered and published by Thomson
19		Reuters, Value Line estimates are entirely transparent. The detailed quarterly
20		reports published by Value Line for each of the firms in its electric utility industry
21		groups provide an extensive analysis underpinning the analysts' assessment of
22		individual EPS growth rate projections. As a result, Value Line EPS growth rates

Parcell, David C., "The Cost of Capital – A Practitioner's Guide," *Society of Utility and Regulatory Financial Analysts* (1997) at 8-28.

See, e.g., Direct and Answering Testimony of Trial Staff Witness Sabina U. Joe, Docket Noe EL11-66-001, Exh. No. S-1 at 12 (Jan. 18, 2013).

⁶⁸ Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 71 (2006).

 ⁶⁹ The Commission had noted that Value Line is widely available and relied on by investors. *See, e.g.*, Opinion No. 531 at P 102; *Kern River Gas Transmission Company*, Opinion No. 486-C, 129 FERC ¶ 61,240 at P 50.

1 are immune from any potential errors involved in the compilation of survey data 2 and avoid uncertainties as to the veracity of the assumptions underlying the 3 projected values. In addition to this unique depth of support, the analyses and reports supporting Value Line's projected EPS growth rates are updated on a 4 scheduled basis, which removes any debate about the potential "staleness" of the 5 underlying data.⁷⁰ Moreover, Value Line's singleness of purpose is to provide 6 independent and unbiased investment guidance to its subscribers. Because Value 7 8 Line does not engage in securities trading or investment banking activities, there 9 is no potential for conflicts of interest that could arguably influence analysts' growth estimates. 10

11 In addition, Value Line's practice is to assign specific analysts to cover its utility industry groups, and to individual electric utility stocks. As a result, the 12 13 individual analysts are specialists in the industry and the specific stocks that they follow. While Value Line projections are sometimes portrayed as reflecting only 14 15 the opinions of a single analyst, this is not an accurate characterization. 16 Individual Value Line analysts also interact through a committee that reviews and 17 monitors their analyses and conclusions, and the resulting projections are 18 supported by a team and reflect more than the views of one individual.

Q 70. WHAT WERE THE RESULTS OF APPLYING THE TWO-STEP DCF MODEL TO THE NATIONAL GROUP USING PROJECTED EPS GROWTH RATES FROM VALUE LINE?

A 70. After combining the dividend yields and the weighted average of the Value Line
 and GDP growth projections for each utility, the resulting cost of common equity

⁷⁰ Commission Trial Staff has previously objected to published IBES growth rates from *Yahoo! Finance* based on their contention that certain values were "stale." *See, e.g., Direct and Answering Testimony of Trial Staff Witness Sabina U. Joe,* Docket Noe EL11-66-001, Exh. No. S-1 at 37, 77 (Jan. 18, 2013)

1		estimates are shown on page 2 of Exhibit No. NYT-29. As shown there, these
2		individual DCF estimates ranged from 5.56% to 13.59%.
3		D. Evaluation of DCF Results
4	Q 71.	IN EVALUATING THE RESULTS OF THE CONSTANT GROWTH DCF
5		MODEL, IS IT APPROPRIATE TO ELIMINATE COST OF EQUITY
6		ESTIMATES THAT ARE EXTREME OUTLIERS?
7	A 71.	Yes. In applying quantitative methods to estimate the cost of equity, it is essential
8		that the resulting values pass fundamental tests of reasonableness and economic
9		logic. Accordingly, DCF estimates that are implausibly low or high should be

Q 72. HOW DID YOU EVALUATE DCF ESTIMATES AT THE LOW END OF
 THE RANGE?

eliminated when evaluating the results of this method.

10

A 72. It is a basic economic principle that investors can be induced to hold more risky 13 14 assets only if they expect to earn a return to compensate them for the additional 15 risk they assume. As a result, the rate of return that investors require from a 16 utility's common stock, the most junior and riskiest of its securities, must be considerably higher than the yield offered by senior, long-term debt. Consistent 17 18 with this principle, the DCF range must be adjusted to eliminate cost of equity estimates that are determined to be extreme low outliers when compared against 19 the yields available to investors from less risky utility bonds. 20

The practice of eliminating low-end outliers has been affirmed in numerous proceedings,⁷¹ and in Opinion No. 531, FERC concluded that, "The purpose of the low-end outlier test is to exclude from the proxy group those companies whose ROE estimates are below the average bond yield or are above the average bond yield but are sufficiently low that an investor would consider the

⁷¹ See, e.g., Virginia Electric Power Co., 123 FERC ¶ 61,098 at P 64 (2008).

stock to yield essentially the same return as debt."⁷² The Commission has used
 100 basis points above the six-month average public utility bond yield as an
 approximation of this threshold, but has also recognized that this is a flexible
 test.⁷³

Q 73. WHAT ELSE SHOULD BE CONSIDERED IN EVALUATING DCF

5

6

ESTIMATES AT THE LOW END OF THE RANGE?

A 73. As indicated earlier, while utility bond yields have declined substantially as the
financial crisis has abated, it is generally expected that long-term interest rates
will rise as the economy returns to a more normal pattern of growth. As shown in
Table 3 below, the most recent forecasts of IHS Global Insight and the EIA imply
an average triple-B bond yield of 6.77% over the period 2015-2019:

TABLE 3IMPLIED UTILITY BOND YIELDS

	2015-19
Projected AA Utility Yield	
IHS Global Insight (a)	6.32%
EIA (b)	6.08%
Average	6.20%
Current BBB - AA Yield Spread (c)	0.57%
Implied Triple-B Utility Yield	6.77%

(a) IHS Global Insight, U.S. Economic Outlook at 79 (May 2014)

(b) Energy Information Administration, Annual Energy Outlook 2014 (May 7, 2014)

(c) Based on monthly average bond yields from Moody's Investors Service for the six-month period May 2014 - Oct. 2014

The increase in debt yields anticipated by IHS Global Insight and EIA is

also supported by the widely referenced Blue Chip Financial Forecasts, which

 73 Id.

12

13

⁷² Opinion No. 531 at P 122.

projects that yields on corporate bonds will climb on the order of 200 basis points
 through 2019.⁷⁴

3

4

Q 74. WHAT DOES THIS TEST OF LOGIC IMPLY WITH RESPECT TO THE DCF RESULTS FOR THE NATIONAL GROUP?

5 A 74. As indicated on page 1 of Exhibit No. NYT-29, the low end of the DCF range was set by a cost of equity estimate of 6.25%. While we retained this low-end DCF 6 7 estimate in deference to the methodology applied by the Commission in Opinion 8 No. 531, this value falls below the implied 6.77% bond yield for the 2015-2019 9 period. In light of the risk-return tradeoff principle and the test of economic logic 10 applied by the Commission, it is inconceivable that investors are not requiring a 11 substantially higher rate of return for holding common stock, which is the riskiest of a utility's securities. As a result, considering that current capital market 12 13 conditions are not representative, and consistent with the upward trend expected for utility bond yields, the 6.25% estimate imparts a downward bias to the DCF 14 15 results. Retaining implausibly low estimates in the range makes our analysis 16 conservative as a measure of the cost of equity for NY Transco, which supports 17 adopting an ROE for the Company from within the upper end of the zone of 18 reasonableness that includes this low-end value.

Meanwhile, as highlighted on page 2 of Exhibit No. NYT-29, we eliminated low-end DCF estimates based on Value Line EPS growth rates of 5.56% and 5.65%. Monthly yields on triple-B bonds reported by Moody's averaged approximately 4.7% over the six months ended October 2014.⁷⁵ Accordingly, because these low-end DCF estimates are less than 100 basis points above the prevailing yield on long-term debt, they are properly eliminated under

⁷⁴ Blue Chip Financial Forecasts, Vol. 33, No. 6 (Jun. 1, 2014).

Moody's Investors Service, http://credittrends.moodys.com/chartroom.asp?c=3.

the Commission's test of reasonableness. As with DCF estimates based on IBES
 growth rates, remaining low-end values in the 6% range continue to impart a
 downward bias to the DCF results on page 2 of Exhibit No. NYT-29.

4 Q 75. DID YOU EXCLUDE DCF VALUES AT THE HIGH END OF THE 5 RANGE?

- A 75. No. Under the Commission's two-step DCF model, long-term growth for all of
 the utilities in the proxy group is assumed to converge to that of the underlying
 economy. Because this assumption has the effect of significantly moderating the
 composite growth rate, the Commission noted that "it is unnecessary to screen the
 proxy group for unsustainable growth rates." As a result, the Commission
 concluded that the high-end outlier issue is now moot.
- 12 Moreover, the upper end of the DCF ranges for the National Group was 13 set by cost of equity estimates of 11.63% (IBES) and 13.59% (Value Line). These high-end DCF estimates fall far below the 17.7% threshold formerly 14 referenced by the Commission.⁷⁶ Similarly, the weighted 7.39% (based on IBES) 15 16 and 11.79% (based on Value Line) growth rates underlying these respective cost 17 of equity estimates are also well below the 13.3% growth rate benchmark that has 18 been used by the Commission to evaluate values at the high end of the DCF range.⁷⁷ Accordingly, the 11.63% and 13.59% DCF cost of equity estimates 19 20 shown on pages 1 and 2 of Exhibit No. NYT-29, respectively, provide a 21 reasonable basis on which to evaluate investors' required rate of return for NY 22 Transco, and are properly included.

 ⁷⁶ See, e.g., ISO New England, 109 FERC ¶ 61,147 at P 205 (2004); Southern Calif. Edison Co., 131 FERC ¶ 61,020 at P 57 (2010).

⁷⁷ Id.

1		E. Risk Premium Approach – FERC ROEs
2	Q 76.	BRIEFLY DESCRIBE THE RISK PREMIUM APPROACH.
3	A 76.	The risk premium approach extends the risk-return tradeoff observed with bonds
4		to estimate investors' required rate of return on common stocks. The cost of
5		equity is estimated by first determining the additional return investors require to
6		forgo the relative safety of bonds and to bear the greater risks associated with
7		common stock, and by then adding this equity risk premium to the current yield
8		on bonds. Like the DCF model, the risk premium method is capital market
9		oriented. However, unlike DCF models, which indirectly impute the cost of
10		equity, risk premium methods directly estimate investors' required rate of return
11		by adding an equity risk premium to observable bond yields.
12	Q 77.	IS THE RISK PREMIUM APPROACH A WIDELY ACCEPTED
13		METHOD FOR ESTIMATING THE COST OF EQUITY?
14	A 77.	Yes. The risk premium approach is based on the fundamental risk-return
15		principle that is central to finance, which holds that investors will require a
16		
		premium in the form of a higher return in order to assume additional risk. This
17		premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and
17 18		premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and regulatory proceedings, and provides an important tool in estimating a fair ROE
17 18 19		premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and regulatory proceedings, and provides an important tool in estimating a fair ROE for NY Transco.
17 18 19 20	Q 78.	premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and regulatory proceedings, and provides an important tool in estimating a fair ROE for NY Transco. HAS THE COMMISSION PREVIOUSLY RECOGNIZED THE MERITS
17 18 19 20 21	Q 78.	premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and regulatory proceedings, and provides an important tool in estimating a fair ROE for NY Transco. HAS THE COMMISSION PREVIOUSLY RECOGNIZED THE MERITS OF THIS RISK PREMIUM APPROACH?
17 18 19 20 21 22	Q 78. A 78.	 premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and regulatory proceedings, and provides an important tool in estimating a fair ROE for NY Transco. HAS THE COMMISSION PREVIOUSLY RECOGNIZED THE MERITS OF THIS RISK PREMIUM APPROACH? Yes. The Commission has previously considered evidence of alternative ROE
 17 18 19 20 21 22 23 	Q 78. A 78.	 premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and regulatory proceedings, and provides an important tool in estimating a fair ROE for NY Transco. HAS THE COMMISSION PREVIOUSLY RECOGNIZED THE MERITS OF THIS RISK PREMIUM APPROACH? Yes. The Commission has previously considered evidence of alternative ROE benchmarks in evaluating a fair ROE, including the risk premium approach.⁷⁸

⁷⁸ See, e.g., Distrigas of Mass. Corp., 41 FERC ¶ 61,205 at 61,550 (1987) ("The DCF methodology, which we endorse, is but one analytical tool. A risk premium analysis, . . . will also be considered. The weight to be given the results of each such methodology rests on the accuracy and sensibleness of the judgmental imputs [*sic*] and factors that the respective witnesses employed.")

application of the risk premium approach as an informative indicator of investors'
 required rate of return.⁷⁹ We are recommending the same approach in this
 proceeding.

4 Q 79. HOW DID YOU IMPLEMENT THE RISK PREMIUM APPROACH?

5 A 79. We based our estimates of equity risk premiums for utilities on surveys of 6 previously authorized ROEs. Authorized ROEs presumably reflect regulatory 7 commissions' best estimates of the cost of equity, however determined, at the 8 time they issued their final order. Such ROEs should represent a balanced and 9 impartial outcome that considers the need to maintain a utility's financial integrity Moreover, allowed returns are an important 10 and ability to attract capital. 11 consideration for investors and have the potential to influence other observable investment parameters, including credit ratings and borrowing costs. 12 The 13 Commission has also recognized the importance of considering state authorized returns in evaluating a fair ROE for transmission operations.⁸⁰ Thus, these data 14 15 provide a logical and frequently referenced basis for estimating equity risk 16 premiums for regulated utilities.

Q 80. IS IT CIRCULAR TO CONSIDER RISK PREMIUMS BASED ON
 AUTHORIZED RETURNS IN ASSESSING A FAIR ROE FOR NY
 TRANSCO?

A 80. No. In establishing authorized ROEs, regulators typically consider the results of
 alternative market-based approaches, including the DCF model. Because allowed
 risk premiums consider objective market data (*e.g.*, stock prices dividends, beta,
 and interest rates), and are not based strictly on past actions of other regulators,
 this mitigates concerns over any potential for circularity.

⁷⁹ Opinion No. 531 at P 146 (noting the risk premium analysis of Dr. William E. Avera).

⁸⁰ Opinion No. 531 at PP 145 & 150.

Q 81. HOW DID YOU CALCULATE THE EQUITY RISK PREMIUMS BASED ON ALLOWED ROES?

3 A 81. We applied the risk premium approach directly using ROEs approved by the 4 Commission for electric utilities since 2006, after the Energy Policy Act of 2005 was enacted. This is the same approach that our firm presented in Docket No. 5 EL11-66-001, and which was relied on by the Commission in its evaluation of a 6 fair ROE in that case.⁸¹ On page 3 of Exhibit No. NYT-30, the average yield on 7 8 public utility bonds is subtracted from the average allowed ROE for electric 9 utilities to calculate equity risk premiums for each year between 2006 and 2013. As shown there, these equity risk premiums for electric utilities averaged 4.73%, 10 11 and the yield on public utility bonds averaged 6.04%.

12 Q 82. IS THERE ANY CAPITAL MARKET RELATIONSHIP THAT MUST BE 13 CONSIDERED WHEN IMPLEMENTING THE RISK PREMIUM 14 METHOD?

Yes. As previously mentioned, there is considerable evidence that the magnitude 15 A 82. 16 of equity risk premiums is not constant and that equity risk premiums tend to move inversely with interest rates.⁸² In other words, when interest rate levels are 17 18 relatively high, equity risk premiums narrow, and when interest rates are 19 relatively low, equity risk premiums widen. The implication of this inverse relationship is that the cost of equity does not move as much as, or in lockstep 20 21 with, interest rates. Therefore, when implementing the risk premium method, 22 adjustments may be required to incorporate this inverse relationship if current

⁸¹ Opinion No. 531 at PP 146-47.

See, e.g., Brigham, E.F., Shome, D.K., and Vinson, S.R., "The Risk Premium Approach to Measuring a Utility's Cost of Equity," *Financial Management* (Spring 1985); Harris, R.S., and Marston, F.C., "Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts," *Financial Management* (Summer 1992).

interest rate levels have diverged from the average interest rate level represented
 in the data set.

Q 83. HAS THIS INVERSE RELATIONSHIP BEEN DOCUMENTED IN THE FINANCIAL RESEARCH?

A 83. Yes. There is considerable empirical evidence that when interest rates are
relatively high, equity risk premiums narrow, and when interest rates are
relatively low, equity risk premiums are greater.⁸³ This inverse relationship
between equity risk premiums and interest rates has been widely reported in the
financial literature. For example, *New Regulatory Finance* documented this
inverse relationship:

11Published studies by Brigham, Shome, and Vinson (1985), Harris12(1986), Harris and Marston (1992, 1993), Carelton, Chambers, and13Lakonishok (1983), Morin (2005), and McShane (2005), and others14demonstrate that, beginning in 1980, risk premiums varied inversely15with the level of interest rates – rising when rates fell and declining16when rates rose.

17 Other regulators have also recognized that the cost of equity does not move in 18 tandem with interest rates.⁸⁵ As the Commission has concluded, "The link 19 between interest rates and risk premiums provides a helpful indicator of how 20 investors' required returns on equity have been impacted by the interest rate 21 environment."⁸⁶

 ⁸³ See, e.g., Brigham, E.F., Shome, D.K., and Vinson, S.R., "The Risk Premium Approach to Measuring a Utility's Cost of Equity," *Financial Management* (Spring 1985); Harris, R.S., and Marston, F.C., "Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts," *Financial Management* (Summer 1992).

⁶⁴ Morin, Roger A., "New Regulatory Finance," Public Utilities Reports, Inc. (2006) at 128.

⁸⁵ See, e.g., California Public Utilities Commission, Decision 08-05-035 (May 29, 2008); Entergy Mississippi Formula Rate Plan FRP-5, http://www.entergy-mississippi.com/content/price/tariffs/emi frp.pdf.

⁸⁶ Opinion No. 531 at P 147.

Q 84. WHAT ARE THE IMPLICATIONS OF THIS RELATIONSHIP UNDER CURRENT CAPITAL MARKET CONDITIONS?

A 84. As noted earlier, bond yields are at unprecedented lows. Given that equity risk
premiums move inversely with interest rates, these uncharacteristically low bond
yields also imply a sharp increase in the equity risk premium that investors
require to accept the higher uncertainties associated with an investment in utility
common stocks versus bonds. In other words, higher required equity risk
premiums offset the impact of declining interest rates on the ROE.

9 Q 85. WHAT COST OF EQUITY IS IMPLIED BY THE RISK PREMIUM 10 METHOD USING ROES AUTHORIZED BY THE COMMISSION?

A 85. Based on the regression output between the interest rates and equity risk 11 premiums displayed on page 6 of Exhibit No. NYT-30, the equity risk premium 12 13 for electric utilities increased approximately 88 basis points for each percentage point drop in the yield on average public utility bonds. As illustrated on page 1 of 14 15 Exhibit No. NYT-30, with an average six-month historical yield on triple-B 16 public utility bonds at October 2014 of 4.70%, this implied a current equity risk premium of 5.91% for electric utilities. Adding this equity risk premium to the 17 18 average six-month historical yield on triple-B utility bonds implies a current cost of equity of 10.61%.⁸⁷ 19

20

F. Capital Asset Pricing Model

21

Q 86. PLEASE DESCRIBE THE CAPM.

A 86. The CAPM approach generally is considered to be the most widely referenced
 method for estimating the cost of equity among academicians and professional
 practitioners, with the pioneering researchers of this method receiving the Nobel
 Prize in 1990. The CAPM is a theory of market equilibrium that measures risk

⁸⁷ Because the average S&P and Moody's ratings for the National Group fall in the triple-B category, our risk premium analysis was based on the average yield for triple-B utility bonds.

using the beta coefficient. Assuming investors are fully diversified, the relevant
risk of an individual asset (*e.g.*, common stock) is its volatility relative to the
market as a whole, with beta reflecting the tendency of a stock's price to follow
changes in the market. A stock that tends to respond less to market movements
has a beta less than 1.00, while stocks that tend to move more than the market
have betas greater than 1.00. The CAPM is mathematically expressed as:

7
$$\mathbf{R}_{j} = \mathbf{R}_{f} + \beta_{j}(\mathbf{R}_{m} - \mathbf{R}_{f})$$

8 where: R_j = required rate of return for stock j; R_f = risk-free rate; R_m = expected return on the market portfolio; and, β_j = beta, or systematic risk, for stock j.

12 Like the DCF model, the CAPM is an *ex-ante*, or forward-looking model 13 based on expectations of the future. As a result, in order to produce a meaningful 14 estimate of investors' required rate of return, the CAPM must be applied using 15 estimates that reflect the expectations of actual investors in the market, not with 16 backward-looking, historical data. In contrast to applications of the CAPM using 17 historical, realized rates of return, which have been largely rejected by the 18 Commission in the past, our CAPM analysis specifically incorporates forward-19 looking expectations that are consistent with the assumptions of this approach.

20 Q 87. HOW DID YOU APPLY THE CAPM TO ESTIMATE THE COST OF 21 COMMON EQUITY?

A 87. We used the exact same approach considered by the Commission in establishing a fair ROE in Opinion No. 531.⁸⁸ This application of the CAPM to the National Group, based on a forward-looking estimate for investors' required rate of return from common stocks, is presented on Exhibit No. NYT-30. In order to capture the expectations of today's investors in current capital markets, the expected

⁸⁸ Opinion No. 531 at P 146.

market rate of return was estimated by conducting a DCF analysis on the dividend
 paying firms in the S&P 500.

3 The dividend yield for each firm was obtained from Value Line, and the growth rate was equal to the average of the EPS growth projections for each firm 4 5 published by IBES, with each firm's dividend yield and growth rate being weighted by its proportionate share of total market value. Based on the weighted 6 7 average of the projections for the 408 individual firms, current estimates imply an 8 average growth rate over the next five years of 10.8%. Combining this average 9 growth rate with a year-ahead dividend yield of 2.3% results in a current cost of 10 common equity estimate for the market as a whole (R_m) of approximately 13.1%. 11 Subtracting a 3.3% risk-free rate based on the six-month average yield on 30-year 12 Treasury bonds at October 2014 produced a market equity risk premium of 9.8%.

13 Q 88. WHAT WAS THE SOURCE OF THE BETA VALUES YOU USED TO

14

APPLY THE CAPM?

A 88. We relied on the beta values reported by Value Line, which in our experience is
the most widely referenced source for beta in regulatory proceedings. While the
Commission has expressed reservations in the past due to the fact that beta is
measured based on historical stock prices, the long track record of published
values supports the conclusion that Value Line's beta provides a good predictor of
future stock price behavior relative to the market. As noted in *New Regulatory Finance*:

Value Line is the largest and most widely circulated independent
investment advisory service, and influences the expectations of a
large number of institutional and individual investors. ... Value Line
betas are computed on a theoretically sound basis using a broadly
based market index, and they are adjusted for the regression
tendency of betas to converge to 1.00.⁸⁹

⁸⁹ Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports* at 71 (2006).

1		The fact that investors rely on Value Line betas in evaluating expected returns for
2		utility common stocks provides strong support for this approach.
3	Q 89.	WHAT ELSE SHOULD BE CONSIDERED IN APPLYING THE CAPM?
4	A 89.	As explained by Morningstar:
5 6 7 8 9		One of the most remarkable discoveries of modern finance is the finding of a relationship between firm size and return. On Average, small companies have higher returns than large ones The relationship between firm size and return cuts across the entire size spectrum; it is not restricted to the smallest stocks. ⁹⁰
10		Because financial research indicates that the CAPM does not fully account for
11		observed differences in rates of return attributable to firm size, a modification is
12		required to account for this size effect.
13		According to the CAPM, the expected return on a security should consist
14		of the riskless rate, plus a premium to compensate for the systematic risk of the
15		particular security. The degree of systematic risk is represented by the beta
16		coefficient. The need for the size adjustment arises because differences in
17		investors' required rates of return that are related to firm size are not fully
18		captured by beta. To account for this, Morningstar has developed size premiums
19		that need to be added to the theoretical CAPM cost of equity estimates to account
20		for the level of a firm's market capitalization in determining the cost of equity. ⁹¹
21		These premiums correspond to the size deciles of publicly traded common stocks,
22		and range from a premium of approximately 6.0% for a company in the first
23		decile (market capitalization less than \$339.5 million), to a reduction of 33 basis
24		points for firms in the tenth decile (market capitalization greater than \$21.8
25		billion). Accordingly, our CAPM analyses also incorporated an adjustment to

91

Morningstar, "2014 Ibbotson SBBI Classic Yearbook," at p. 99. Morningstar, "2014 Ibbotson SBBI Market Report," at Table 10.

1		recognize the impact of size distinctions, as measured by the market capitalization
2		for the firms in the National Group.
3	Q 90.	WHAT IS THE IMPLIED ROE FOR THE NATIONAL GROUP USING
4		THE CAPM APPROACH?
5	A 90.	As shown on page 1 of Exhibit No. NYT-30, a forward-looking application of the
6		CAPM approach resulted in a median unadjusted ROE estimate of 10.65%, with
7		average and midpoint results of 10.60% and 10.90%, respectively. After
8		adjusting for the impact of firm size, the CAPM approach implied a median cost
9		of equity of 11.45% for the National Group, with the average and midpoint being
10		11.50% and 11.61%, respectively.
11		G. Expected Earnings Approach
12	Q 91.	WHAT OTHER BENCHMARKS DID YOU DEVELOP TO EVALUATE
13		THE ROE FOR NY TRANSCO?
14	A 91.	Consistent with Opinion No. 531, we also evaluated the ROE by reference to
15		expected rates of return for electric utilities. Reference to rates of return available
16		from alternative investments of comparable risk can provide an important
17		benchmark in assessing the return necessary to assure confidence in the financial
18		integrity of a firm and its ability to attract capital. This approach is consistent
19		with the economic underpinnings for a fair rate of return, as reflected in the
20		comparable earnings test established by the Supreme Court in <i>Hope</i> and <i>Bluefield</i> .
21		Moreover, it avoids the complexities and limitations of capital market methods
22		and instead focuses on the returns earned on book equity, which are readily
23		available to investors. As the Commission recognized in Opinion No. 531:
24 25 26		[T]he expected earnings analysis, given its close relationship to the comparable earnings standard that originated in <i>Hope</i> , and the fact that it is used by investors to estimate the ROE that a utility will

1 2

earn in the future can be useful in validating our ROE recommendation.⁹²

3 Moreover, regulators do not set the returns that investors earn in the 4 capital markets-they can only establish the allowed return on the value of a 5 utility's investment, as reflected on its accounting records. As a result, the 6 expected earnings approach provides a direct guide to ensure that the allowed 7 ROE is similar to what other utilities of comparable risk will earn on invested 8 This opportunity cost test does not require theoretical models to capital. 9 indirectly infer investors' perceptions from stock prices or other market data. As 10 long as the proxy companies are similar in risk, their expected earned returns on 11 invested capital provide a direct benchmark for investors' opportunity costs that is 12 independent of fluctuating stock prices, market-to-book ratios, debates over DCF 13 growth rates, or the limitations inherent in any theoretical model of investor 14 behavior.

Q 92. HOW IS THE COMPARISON OF OPPORTUNITY COSTS TYPICALLY

16

15

IMPLEMENTED?

17 A 92. The traditional comparable earnings test identifies a group of companies that are 18 believed to be comparable in risk to the utility. The actual earnings of those 19 companies on the book value of their investment are then compared to the 20 allowed return of the utility. While the traditional comparable earnings test is 21 implemented using historical data taken from the accounting records, it is also 22 common to use projections of returns on book investment, such as those published 23 by recognized investment advisory publications (e.g., Value Line). Because these 24 returns on book value equity are analogous to the allowed return on a utility's rate 25 base, this measure of opportunity costs results in a direct, "apples to apples"

⁹² Opinion No. 531 at P 147.

comparison. Our application of the expected earnings approach was focused
 exclusively on forward-looking projections, not historical data.

3 Q 93. WHAT RATES OF RETURN ON EQUITY ARE INDICATED FOR 4 ELECTRIC UTILITIES BASED ON THE EXPECTED EARNINGS 5 APPROACH?

A 93. Value Line reports that its analysts anticipate an average rate of return on 6 common equity for the electric utility industry of 10.58% over its 2017-2019 7 forecast horizon.⁹³ Meanwhile, for the firms in the National Group specifically, 8 9 the year-end returns on common equity projected by Value Line over its forecast horizon are shown on Exhibit No. NYT-32. In Southern California Edison, the 10 11 Commission correctly recognized that if the rate of return were based on end-of-year book values, such as those reported by Value Line, it would 12 understate actual returns because of growth in common equity over the year.⁹⁴ 13 Accordingly, consistent with the Commission's findings and the theory 14 15 underlying this approach, we made an adjustment to compute an average rate of return.⁹⁵ As shown on Exhibit No. NYT-32, Value Line's projections for the 16 National Group resulted in an adjusted range of expected rates of return from 17 7.62% to 14.67%.⁹⁶ 18

19

V. OTHER ROE BENCHMARKS

20 Q 94. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A 94. This section presents alternative tests to demonstrate that the end-results of the
 ROE analyses discussed earlier are reasonable and do not exceed a fair ROE

⁹³ The Value Line Investment Survey (Aug. 22, Sep. 19, & Oct. 31, 2014).

⁵⁴ Southern California Edison, 92 FERC ¶ 61,070 at 61,263 and n.38 (2000).

 ⁹⁵ Use of an average return in developing the rate of return is well supported. *See*, *e.g.*, Morin, Roger A., "New Regulatory Finance," Public Utilities Reports, Inc. (2006) at 305-306, which discusses the need to adjust Value Line's end-of-year data, consistent with the Commission's prior findings.

The midpoint, median, and average values were 11.14%, 9.82%, and 10.82%, respectively.

1 given the facts and circumstances that apply to NY Transco. Specifically, we test 2 our ROE findings for NY Transco based on: (a) a risk premium approach using 3 ROEs approved by state regulators; (b) the empirical CAPM; (c) Commissionapproved ROEs for natural gas pipelines; and (d) a DCF analysis based on a select 4 group of low risk non-utility firms.⁹⁷ We also considered the potential role for 5 flotation costs in evaluating a just and reasonable ROE. These other benchmarks 6 7 provide additional guidance that is relevant in corroborating the end-result of the 8 primary methods discussed previously.

9 Q 95. THE COMMISSION DECLINED TO CONSIDER THE IMPLICATIONS 10 OF ROE RESULTS FOR GAS PIPELINES OR NON-UTILITY FIRMS IN 11 OPINION NO. 531. WHY HAVE YOU INCLUDED THEM IN YOUR 12 EVALUATION IN THIS PROCEEDING?

13 A 95. The Commission stated that it would not consider the risk premium analysis based on allowed ROEs for gas pipelines or the non-utility DCF analysis "because those 14 methodologies are not based on electric utilities."⁹⁸ While this observation is true, 15 16 in our opinion it does not provide a sufficient basis to ignore these findings. Given the Commission's observations regarding the evolution of the electric 17 utility industry and its willingness to adopt the same two-step DCF approach used 18 to establish ROEs for natural gas pipelines,⁹⁹ risk premiums for natural gas 19 20 pipelines provide a very logical benchmark to evaluate corresponding DCF results 21 for electric utilities. Moreover, our risk premium application does not assume that 22 the gas pipeline and electric utility industries have equivalent risks or expected

⁹⁷ For the CAPM, ECAPM and risk premium analyses, we performed additional analyses utilizing projected bond yields.

²⁶ Opinion No. 531 at P 126 n.288.

⁹⁹ *Id.* at P 32.

returns. Rather, we specifically consider and adjust for industry differences in
 arriving at an implied ROE using this method.

In addition, the fact that natural gas pipelines and non-utility firms do not operate in the same industry as electric utilities does not render them irrelevant. Investors have many opportunities for their capital and electric utilities must compete for funds with firms outside their own industry. The investment community has recognized the interrelationship between ROEs for pipelines and electric transmission companies in the allocation of capital. As Wolfe Research noted:

10 Investors are concerned that a cut [in base ROEs for electric 11 transmission] would cause an imbalance in the risk/reward trade-off 12 of investing in transmission. In turn, the electric utility industry 13 fears that investors could divert capital to other infrastructure 14 investments with a more favorable risk/reward balance, such as 15 natural gas pipelines, which are also regulated by FERC.¹⁰⁰

For these same reasons, if electric transmission investments are unable to offer a return that is commensurate with what investors expect to earn from a nonregulated company of comparable risk, then capital will flow away from electric transmission to other competing investment opportunities. As the Commission noted in Opinion No. 531, utilities "must compete for capital with other utilities (*and companies in other sectors*) throughout the nation."¹⁰¹

22

A. Risk Premium – State ROEs

23 Q 96. HOW ELSE DID YOU USE THE RISK PREMIUM APPROACH IN YOUR

- 24 ANALYSIS?
- A 96. We also applied the risk premium approach using ROEs authorized for electric
 utilities by state regulatory commissions across the U.S., which are compiled by

¹⁰⁰ Wolfe Research, "FERConomics: Risk to transmission base ROE in focus," *Utilities & Power* (Jun. 11, 2013).

¹⁰¹ Opinion No. 531 at P 96 (emphasis supplied).

1 Regulatory Research Associates and published in its *Regulatory Focus* report. On 2 page 3 of Exhibit No. NYT-33, the average yield on public utility bonds is 3 subtracted from the average allowed ROE for electric utilities to calculate equity risk premiums for each year between 1974 and 2013.¹⁰² As shown there, over this 4 5 period these equity risk premiums for electric utilities averaged 3.53%, and the yield on public utility bonds averaged 8.69%. 6 Q 97. WHAT COST OF EQUITY IS IMPLIED BY THE RISK PREMIUM 7 **APPROACH BASED ON ROES APPROVED BY STATE REGULATORS?** 8 9 A 97. As shown on page 1 of Exhibit No. NYT-33, adding an equity risk premium 10 corresponding to current interest rate levels to the average yield on triple-B utility 11 bonds for the six-months ending October 2014 of 4.70% implies a current cost of 12 equity for electric utilities of 10.08%. 13 B. **Empirical Capital Asset Pricing Model** 14 Q 98. HOW DOES THE ECAPM APPROACH DIFFER FROM TRADITIONAL 15 **APPLICATIONS OF THE CAPM?** 16 A 98. The ECAPM is a variant of the traditional CAPM approach that is designed to 17 correct for an observed bias in the CAPM results. Specifically, empirical tests of 18 the CAPM have shown that low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn somewhat less than 19 20 predicted. In other words, the CAPM tends to overstate the actual sensitivity 21 of the cost of capital to beta, with low-beta stocks tending to have higher 22 returns and high-beta stocks tending to have lower risk returns than predicted 23 by the CAPM. This empirical finding is widely reported in the finance literature, 24 as summarized in New Regulatory Finance: 25 As discussed in the previous section, several finance scholars have 26 developed refined and expanded versions of the standard CAPM by

Our analysis encompasses the entire period for which published data is available.

1 relaxing the constraints imposed on the CAPM, such as dividend yield, size, and skewness effects. These enhanced CAPMs typically 2 3 produce a risk-return relationship that is flatter than the CAPM 4 prediction in keeping with the actual observed risk-return relationship. 5 The ECAPM makes use of these empirical relationships. 6 As discussed in New Regulatory Finance, empirical evidence suggests that 7 8 the expected return on a security is related to its risk by the ECAPM, which is 9 represented by the following formula: 10 $R_{j} = Rf + 0.25(Rm - Rf) + 0.75[\beta_{j}(Rm - Rf)]$ 11 This ECAPM equation, and the associated weighting factors, recognizes the 12 observed relationship between standard CAPM estimates and the cost of capital 13 documented in the financial research, and corrects for the understated returns that 14 would otherwise be produced for low beta stocks. Q 99. WHAT COST OF EQUITY ESTIMATES WERE INDICATED BY THE 15 16 ECAPM? 17 A 99. Our application of the ECAPM approach was based on the same forward-looking 18 market rate of return, risk-free rates, and beta values discussed earlier in 19 connections with the traditional CAPM. As shown on page 1 of Exhibit No. 20 NYT-34, applying the forward-looking ECAPM approach to the firms in the 21 National Group results in a theoretical cost of equity range of 10.16% to 12.73%, 22 or 9.83% to 14.48% after incorporating the size adjustment corresponding to the market capitalization of the individual utilities.¹⁰⁴ 23

 ¹⁰³ Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports* at 189 (2006). The Commission has recognized this as an authoritative source. *See, e.g.*, Opinion No. 531 at PP 145 n.287, 147 nn.289 & 294.

¹⁴ The midpoint, median, and average ECAPM results based on historical bond yields were 11.45%, 11.26%, and 11.23%, respectively, or 12.16%, 12.06%, and 12.13%, respectively, after adjusting for firm size.
1	C. Gas Pipeline ROEs
2	Q 100. HOW DOES YOUR RECOMMENDED ROE FOR NY TRANSCO
3	COMPARE WITH AN ROE BENCHMARK BASED ON NATURAL GAS
4	PIPELINE RETURNS?
5	A 100. As explained previously, while we recognize that in Opinion No. 531 the
6	Commission elected not to compare electric utilities directly to natural gas
7	pipelines when determining ROE, we believe the comparison is relevant. For
8	example in <i>Williston Basin</i> FERC staff proposed expanding the proxy group
9	used to estimate the cost of equity for gas ninelines to include utilities with
10	alestric utility energiance noting that investors "see a linkage between the risk
10	electric utility operations, noting that investors see a mixage between the fisk
11	profile of different types of utilities," and concluding that:
12 13 14 15 16 17 18 19	[G]as pipelines and transmission facilities for electricity have characteristics in common in that both transmit a product with time end weather sensitive demand profiles over rights-of-way that are capital intensive and relatively inflexible. Expanding the gas pipeline proxy group to include publicly-owned companies engaged in other regulated lines of energy-related business will, in my opinion, increase the level of confidence in the reasonableness of the results of my DCF analysis ¹⁰⁵
20	Staff's arguments were ultimately persuasive, as the Commission subsequently
21	adopted a proxy group of natural gas pipeline companies that also included firms
22	with substantial electric utility operations. This is consistent with the
23	Commission's recent findings that distinctions between the gas pipeline and
24	electric utility industries have moderated significantly due to changes to the
25	electric utility industry. ¹⁰⁶
26	At the same time, the Commission previously has also rejected using DCF
27	analyses for natural gas pipelines in establishing a fair ROE for electric utility

¹⁰⁵ Williston Basis Interstate Pipeline Company, Docket No. RP00-107-000, Prepared Direct and Answering Testimony of Commission Staff Witness George M Shriver, III, P 17 (Jun. 7, 2000).
 ¹⁰⁶ Opinion No. 531 at P 8.

1 operations because of differences between the two industries. In Southern 2 *California Edison*, the Commission stated that it was not appropriate to consider 3 returns in the natural gas industry when evaluating electric utilities because "the electric industry is just beginning a significant new phase of its restructuring."¹⁰⁷ 4 Thirteen years have passed since this statement was made, however, and as noted 5 above, the Commission recognized in Opinion No. 531 that the electric industry 6 7 and its restructuring have matured, which confirms that reference to gas company ROEs is relevant. 8

Q 101. HOW DID YOU USE THE INFORMATION CONTAINED IN ROE

10

9

11

AN ROE BENCHMARK FOR ELECTRIC UTILITIES? 12 A 101. We first applied the risk premium approach discussed above to develop a current 13 implied ROE for gas pipelines based on the Commission's historical allowed 14 returns. Our analysis then examined the historical ROE differential between the 15 natural gas pipeline and electric utility industries, and then applied it to the current 16 allowed ROE for natural gas pipelines to infer a corresponding ROE for electric 17 utilities. As a result, this approach relies directly on the Commission's own

DETERMINATIONS FOR NATURAL GAS PIPELINES TO DEVELOP

18 determination as to the impact of relative industry risks and current returns.

19 Allowed ROEs approved by the Commission for natural gas pipelines for 20 the years 2006 through 2013 are presented on pages 4 and 5 of Exhibit No. 21 NYT-35. The average annual ROE, the corresponding average bond yields, and 22 implied risk premiums are summarized on page 3 of Exhibit No. NYT-35. 23 Consistent with state and Commission-approved ROEs for electric utilities, the implied equity risk premiums for gas pipelines increase as interest rates decline, 24 25 and vice versa.

Southern California Edison Co., Opinion No. 445, 92 FERC ¶ 61,070 at 61,261 (2000).

1 2

13

Q 102. WHAT CURRENT COST OF EQUITY IS IMPLIED FOR AN ELECTRIC UTILITY BASED ON THESE ALLOWED GAS PIPELINE ROES?

3 A 102. As shown on page 1 of Exhibit No. NYT-35, adding an equity risk premium 4 corresponding to current interest rate levels to the average yield triple-B utility bonds for the six-months ending October 2014 of 4.70% implies a current cost of 5 equity for natural gas pipelines of 12.41%. As shown in the lower portion of page 6 7 3 of Exhibit No. NYT-35, the average ROE for natural gas pipelines has exceeded 8 the ROE approved by the Commission for electric utilities by 2.02% between 9 2006 and 2013. Subtracting this spread from the 12.41% current risk premium 10 estimate for natural gas pipelines results in a current implied ROE for an electric 11 utility of 10.40%, if one were to assume that the risk spread between electric utilities and natural gas pipeline companies should remain constant. 12

D.

14 Q 103. IS IT APPROPRIATE TO CONSIDER ANTICIPATED CAPITAL 15 MARKET CHANGES IN APPLYING THE RISK PREMIUM, CAPM, AND 16 ECAPM APPROACHES?

Projected Bond Yields

A 103. Yes. As discussed earlier, there is widespread consensus that interest rates are
currently anomalous, and will increase materially as the economy continues to
strengthen. As a result, current bond yields are likely to understate capital market
requirements at the time the outcome of this proceeding becomes effective (and
beyond). Accordingly, in addition to the use of current bond yields, we also
applied the risk premium, CAPM, and ECAPM methods based on projections for
utility bond yields published by IHS Global Insight and EIA.

24 Q 104. WHAT RISK PREMIUM COST OF EQUITY ESTIMATES ARE

PRODUCED AFTER INCORPORATING FORECASTED BOND YIELDS? A 104. As shown on page 2 of Exhibit No. NYT-30, incorporating a forecasted yield for 2015-2019 and adjusting for changes in interest rates since the study period

implied an equity risk premium based on Commission-authorized ROEs of 4.08%
 for electric utilities. Adding this equity risk premium to the implied average yield
 on triple-B public utility bonds for 2015-2019 of 6.77% resulted in an implied
 cost of equity of 10.85%.

5 As shown on page 2 of Exhibit No. NYT-33, applying the risk premium 6 approach based on ROEs for electric utilities authorized by state regulators and 7 incorporating average forecasted yields for 2015-2019 implied a cost of equity of 8 approximately 11.27%.

9 Meanwhile, our risk premium analysis based on the Commission's
10 findings for natural gas pipelines implied a cost of equity estimate of 10.97%
11 based on forecasted yield for utility bonds (Exhibit No. NYT-35, page 2).

12 Q 105. DID YOU ALSO APPLY THE CAPM AND ECAPM USING 13 FORECASTED BOND YIELDS?

A 105. Yes. As shown on page 2 of Exhibit No. NYT-31, applying the CAPM using a
forecasted Treasury bond yield for 2015-2019 implied an ROE range of 9.74% to
12.68% for the National Group, or 9.41% to 14.43% after adjusting for the impact
of relative size.¹⁰⁸

As shown on page 2 of Exhibit No. NYT-34, incorporating a forecasted Treasury bond yield for 2015-2019 implied a ECAPM range of 10.58% to 12.79% for the National Group, or 10.25% to 14.54% after adjusting for the impact of relative size.¹⁰⁹

The midpoint of the unadjusted estimates was 11.21%, while the median was 11.00% and the average was 10.96%. The midpoint, median, and average values of the adjusted estimates were 11.92%, 11.80%, and 11.86%, respectively.

⁰⁹ The midpoint of the unadjusted CAPM results based on projected bond yields was 11.68%, with a median of 11.53% and an average of 11.49%. For the adjusted estimates, the midpoint was 12.39%, with a median of 12.33% and an average of 12.40%.

2 Q 106. WHAT OTHER PROXY GROUP DID YOU CONSIDER IN 3 EVALUATING A FAIR ROE FOR NY TRANSCO?

Low-Risk Non-Utility DCF Model

E.

A 106. Consistent with underlying economic and regulatory standards, we also applied
the DCF model to a select group of low-risk companies in the non-utility sectors
of the economy. We refer to this group as the "Non-Utility Group."

7 Q 107. DO UTILITIES NEED TO COMPETE WITH NON-REGULATED FIRMS 8 FOR CAPITAL?

9 A 107. Yes. The cost of capital is an opportunity cost based on the returns that investors 10 could realize by putting their money in other alternatives. Clearly the total capital 11 invested in utility stocks is only the tip of the iceberg of total common stock investment and there is a wide range of other enterprises available to investors 12 13 beyond those in the utility industry. Utilities must compete for capital, not just 14 against firms in their own industry, but with other investment opportunities of comparable risk.¹¹⁰ Indeed, modern portfolio theory is built on the assumption 15 16 that rational investors will hold a diverse portfolio of stocks, not just companies in 17 a single industry.

18 Q 108. IS IT CONSISTENT WITH THE BLUEFIELD AND HOPE CASES TO

19

1

CONSIDER REQUIRED RETURNS FOR NON-UTILITY COMPANIES?

A 108. Yes. Returns in the competitive sector of the economy form the very underpinning for utility ROEs because regulation purports to serve as a substitute for the actions of competitive markets. The Supreme Court has recognized that it is the degree of risk, not the nature of the business, which is relevant in evaluating an allowed ROE for a utility. The *Bluefield* case refers to "business undertakings

¹¹⁰ Even for a single utility, capital will be allocated between competing uses in part based on opportunity costs. Where the utility has no regulatory obligation to undertake a particular project, an anemic return may foreclose investment altogether.

which are attended by corresponding risks and uncertainties[.]"¹¹¹ It does not 1 2 restrict consideration to other utilities. Indeed, if the requirement is business in 3 the same part of the country and the utility has the exclusive franchise, then the Court could only be referring to non-utility businesses and any nearby utilities. 4 5 Similarly, the *Hope* case states: 6 By that standard the return to the equity owner should be 7

- commensurate with returns on investments in other enterprises having corresponding risks.¹¹²
- 9 As in the *Bluefield* decision, there is nothing to restrict "other enterprises" solely 10 to the utility industry.

11 Q 109. DOES CONSIDERATION OF THE RESULTS FOR THE NON-UTILITY **GROUP MAKE THE ESTIMATION OF THE COST OF EQUITY USING** 12 13 THE DCF MODEL MORE RELIABLE?

- 14 A 109. Yes. The estimates of growth from the DCF model depend on analysts' forecasts.
- 15 It is possible for utility growth rates to be distorted by short-term trends in the 16 industry, or by the industry falling into favor or disfavor by analysts. The result
- 17 of such distortions would be to bias the DCF estimates for utilities relative to 18 estimates for firms in other industries. Because the Non-Utility Group includes 19 low risk companies from many industries, it diversifies away any distortion that
- 20 may be caused by the ebb and flow of enthusiasm for a particular sector.

21 Q 110. WHAT CRITERIA DID YOU APPLY TO DEVELOP THE NON-UTILITY

22

8

PROXY GROUP?

- 23 A 110. Our comparable risk proxy group was composed of those U.S. companies 24 followed by Value Line that: (1) pay common dividends; (2) have a Safety Rank
 - 111 Bluefield at 692.

¹¹² *Hope* at 603.



five indicators of investment risk discussed earlier:

TABLE 4 **COMPARISON OF RISK INDICATORS**

Proxy Group	S&P	Moody's	Safety Rank	Financial Strength	Beta
Non-Utility	А	A2	1	A+	0.64
National Group	BBB+	Baa1	2	B++	0.75

7 As shown above, the average risk indicators for the Non-Utility Proxy Group suggest less risk than for the proxy group of electric utilities. 8 Α 9 comparison of these objective measures, which consider a broad spectrum of 10 risks, including financial and business position, relative size, and exposure to 11 company-specific factors, indicates that investors would likely conclude that the overall investment risks for the National Group – and NY Transco – are greater 12 13 than those of the firms in the Non-Utility Group.

14 The 16 companies that make up the Non-Utility Group are representative 15 of the pinnacle of corporate America. These firms, which include household 16 names such as Coca-Cola, General Mills, McDonalds, and Wal-Mart, have long 17 corporate histories, well-established track records, and exceedingly conservative 18 risk profiles. Many of these companies pay dividends on a par with utilities, with 19 the average dividend yield for the group approaching 3%. Moreover, because of their significance and name recognition, these companies receive intense scrutiny 20

by the investment community, which increases confidence that published growth
 estimates are representative of the consensus expectations reflected in common
 stock prices.

4 Q 112. WHAT WERE THE RESULTS OF YOUR DCF ANALYSIS FOR THE 5 NON-UTILITY GROUP?

6 A 112. As shown on Exhibit No. NYT-36, we calculated the dividend yield component of 7 the DCF model in exactly the same manner described earlier for the National 8 Group. With respect to growth, our application of the DCF model to the Non-9 Utility Group relied on an average earnings growth rate based on projections from 10 IBES and Value Line. As shown there, our DCF analysis for the Non-Utility 11 Group resulted in an ROE range of 8.20% to 12.72%, with a midpoint of 10.46%, 12 a median of 10.73%, and an average of 10.57%. As discussed above, considering 13 expected returns for the Non-Utility Group is consistent with established 14 regulatory principles. Required returns for utilities should be in line with those of 15 non-utility firms of comparable risk operating under the constraints of free 16 competition.

Q 113. HOW CAN YOU RECONCILE THESE DCF RESULTS FOR THE NON-UTILITY GROUP AGAINST THE LOWER ESTIMATES PRODUCED FOR YOUR PROXY GROUP OF UTILITIES?

20 A 113. First, it is important to be clear that the higher DCF results for the Non-Utility 21 Group cannot be attributed to risk differences. As we documented earlier, the 22 risks that investors associate with the group of non-utility firms – as measured by 23 S&P and Moody's credit ratings and Value Line's Safety Rank, Financial Strength, and Beta – are lower than the risks investors associate with the National 24 Group. The objective evidence provided by these observable risk measures rules 25 26 out a conclusion that the higher non-utility DCF estimates are associated with 27 higher investment risk.

76

1 Rather, the divergence between the DCF results for these groups of utility 2 and non-utility firms can be attributed to the fact that DCF estimates invariably 3 depart from the returns that investors actually require because their expectations may not be captured by the inputs to the model, particularly the assumed growth 4 Because the actual cost of equity is unobservable, and DCF results 5 rate. 6 inherently incorporate a degree of error, the cost of equity estimates for the 7 Non-Utility Group provide an important benchmark in evaluating a fair ROE for 8 NY Transco. There is no basis to conclude that DCF results for a group of 9 utilities would be inherently more reliable than those for firms in the competitive 10 sector. In fact, considering the prominence of the 16 non-utility companies, the 11 diversification afforded by considering multiple industries, and the scrutiny that 12 analysts' afford to these paragons of American industry, the divergence between 13 the DCF estimates for the group of utilities and the Non-Utility Group suggests 14 that both should be considered to ensure a balanced end-result.

15 Q 114. PLEASE SUMMARIZE THE RESULTS OF YOUR ALTERNATIVE ROE

16

BENCHMARKS.

A 114. The cost of common equity estimates produced by the various tests of
reasonableness discussed above are shown on page 2 of Exhibit No. NYT-26.
The results of these alternative benchmarks confirm our conclusion that a base
ROE of 10.60% for NY Transco is reasonable.

21

F. Flotation Costs

22 Q 115. WHAT OTHER CONSIDERATIONS ARE RELEVANT IN SETTING THE

- 23 **RETURN ON EQUITY FOR A UTILITY?**
- A 115. The common equity used to finance the investment in utility assets is provided from either the sale of stock in the capital markets or from retained earnings not paid out as dividends. When equity is raised through the sale of common stock, there are costs associated with "floating" the new equity securities. These

flotation costs include services such as legal, accounting, and printing, as well as the fees and discounts paid to compensate brokers for selling the stock to the public. Also, some argue that the "market pressure" from the additional supply of common stock and other market factors may further reduce the amount of funds a utility nets when it issues common equity.

6 Q 116. IS THERE AN ESTABLISHED MECHANISM FOR A UTILITY TO 7 RECOGNIZE EQUITY ISSUANCE COSTS?

8 A 116. No. While debt flotation costs are recorded on the books of the utility, amortized 9 over the life of the issue, and thus increase the effective cost of debt capital, there is no similar accounting treatment to ensure that equity flotation costs are 10 recorded and ultimately recognized. No rate of return is authorized on flotation 11 12 costs necessarily incurred to obtain a portion of the equity capital used to finance 13 plant. In other words, equity flotation costs are not included in a utility's rate base 14 because neither that portion of the gross proceeds from the sale of common stock 15 used to pay flotation costs is available to invest in plant and equipment, nor are 16 flotation costs capitalized as an intangible asset. Unless some provision is made to recognize these issuance costs, a utility's revenue requirements will not fully reflect 17 18 all of the costs incurred for the use of investors' funds. Because there is no 19 accounting convention to accumulate the flotation costs associated with equity 20 issues, they must be accounted for indirectly, with an upward adjustment to the 21 cost of equity being the most appropriate mechanism.

22 Q 117. WHAT IS THE MAGNITUDE OF THE ADJUSTMENT TO THE "BARE

23

3 BONES" COST OF EQUITY TO ACCOUNT FOR ISSUANCE COSTS?

A 117. There are a number of ways in which a flotation cost adjustment can be calculated, but the most common methods used to account for flotation costs in regulatory proceedings is to apply an average flotation-cost percentage to a

78

1	utility's dividend yield. Based on a review of the finance literature, Regulatory
2	Finance: Utilities' Cost of Capital concluded:
3 4 5	The flotation cost allowance requires an estimated adjustment to the return on equity of approximately 5% to 10%, depending on the size and risk of the issue. ¹¹³
6	Alternatively, a study of data from Morgan Stanley regarding issuance costs
7	associated with utility common stock issuances suggests an average flotation cost
8	percentage of 3.6%. ¹¹⁴
9	Issuance costs are a legitimate consideration in setting the return on equity
10	for a utility, and applying these expense percentages to an average dividend yield
11	of 4.0% implies a flotation cost adjustment on the order of 14 to 40 basis points.
12	While we did not make an explicit adjustment to the results of our quantitative
13	methods to include an adjustment for flotation costs, this is a legitimate
14	consideration that supports the reasonableness of our recommended base ROE for
15	NY Transco in this case. ¹¹⁵
16	O 118. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

17 A 118. Yes.

¹¹³ Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports* at 323 (2006).

Application of Yankee Gas Services Company for a Rate Increase, DPUC Docket No. 04-06-01, Direct Testimony of George J. Eckenroth at Exhibit GJE-11.1 (Jul. 2, 2004). Updating the results presented by Mr. Eckenroth through April 2005 also resulted in an average flotation cost percentage of 3.6%.

¹⁵ FERC Staff has previously recommended, and the Commission has approved, a flotation cost allowance in establishing the base ROE for an electric transmission utility. *See Golden Spread Electric Cooperative, Inc. v. Southwestern Public Service Co.*, 115 FERC ¶ 63,043 at PP 96, 104 (2006), *affirmed in relevant part*, Opinion No. 501, 123 FERC ¶ 61,047 at PP 57, 62-65 (2008), on reh'g, Opinion No. 501-A, 144 FERC ¶ 61,132 (2013), reh'g granted for further consideration, EL05-19-015 and ER05-168-014 (Oct. 10, 2013).

COUNTY OF HAYS

I, WILLIAM E. AVERA, being first duly sworn on oath depose and say as follows:

) ss)

The foregoing "Direct Testimony and Exhibits of William E. Avera and Adrien M. McKenzie" was prepared by me and the other witnesses listed therein, or under the supervision of one or more of such witnesses, and the factual statements contained in such testimony are true and correct to the best of my knowledge, information and belief.

Further affiant saith not.

William E. Avera

On this <u>day of December, 2014</u>, before me, the undersigned notary public, personally appeared William E. Avera and acknowledged to me that he signed the forgoing document voluntarily for its stated purposes. I identified William E. Avera to be the person whose name is signed on the forgoing document by means of the following satisfactory evidence of identity (check one):

Identification based on my personal knowledge of his/her identity, or
Current government-issued identification bearing his/her photographic image and signature.
Notary Public
Notary Public
SEAL
SEAL



DECLARATION

I, Adrien M. McKenzie, identified in the foregoing prepared direct testimony, do hereby declare under penalty of perjury under the laws of the United States of America, that I prepared or caused such testimony to be prepared; that the answers appearing therein are true to the best of my knowledge and belief; and that if asked the questions appearing therein, my answers would, under oath, be the same.

Executed on December 1, 2014.

/s/ Adrien M. McKenzie

Adrien M. McKenzie

Exhibit No. NYT-25

EXHIBIT No. NYT-25

QUALIFICATIONS OF WILLIAM E. AVERA AND ADRIEN M. MCKENZIE

Q. WHAT IS THE PURPOSE OF THIS EXHIBIT?

A. This exhibit describes our background and experience and contains the details of our qualifications.

Q. DR. AVERA, PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I received a B.A. degree with a major in economics from Emory University. After serving in the U.S. Navy, I entered the doctoral program in economics at the University of North Carolina at Chapel Hill. Upon receiving my Ph.D., I joined the faculty at the University of North Carolina and taught finance in the Graduate School of Business. I subsequently accepted a position at the University of Texas at Austin where I taught courses in financial management and investment analysis. I then went to work for International Paper Company in New York City as Manager of Financial Education, a position in which I had responsibility for all corporate education programs in finance, accounting, and economics.

In 1977, I joined the staff of the Public Utility Commission of Texas ("PUCT") as Director of the Economic Research Division. During my tenure at the PUCT, I managed a division responsible for financial analysis, cost allocation and rate design, economic and financial research, and data processing systems, and I testified in cases on a variety of financial and economic issues. Since leaving the PUCT, I have been engaged as a consultant. I have participated in a wide range of assignments involving utility-related matters on behalf of utilities, industrial customers, municipalities, and regulatory commissions. I have previously testified before the Federal Energy Regulatory Commission ("FERC"), as well as the Federal Communications Commission, the Surface Transportation Board (and its predecessor, the Interstate Commerce Commission), the Canadian Radio-Television and Telecommunications Commission, and regulatory agencies, courts, and legislative committees in over 40 states.

In 1995, I was appointed by the PUCT to the Synchronous Interconnection Committee to advise the Texas legislature on the costs and benefits of connecting Texas to the national electric transmission grid. In addition, I served as an outside director of Georgia System Operations Corporation, the system operator for electric cooperatives in Georgia.

I have served as Lecturer in the Finance Department at the University of Texas at Austin and taught in the evening graduate program at St. Edward's University for twenty years. In addition, I have lectured on economic and regulatory topics in programs sponsored by universities and industry groups. I have taught in hundreds of educational programs for financial analysts in programs sponsored by the Association for Investment Management and Research, the Financial Analysts Review, and local financial analysts societies. These programs have been presented in Asia, Europe, and North America, including the Financial Analysts Seminar at Northwestern University. I hold the Chartered Financial Analyst (CFA®) designation and have served as Vice President for Membership of the Financial Management Association. I have also served on the Board of Directors of the North Carolina Society of Financial Analysts. I was elected Vice Chairman of the National Association of Regulatory Commissioners ("NARUC") Subcommittee on Economics and appointed to NARUC's Technical Subcommittee on the National Energy Act. I have also served as an officer of various other professional organizations and societies. A resume containing the details of my experience and qualifications is attached.

Q. MR. MCKENZIE, PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. Since joining FINCAP in 1984, I have participated in consulting assignments involving a broad range of economic and financial issues, including cost of capital, cost of service, rate design, economic damages, and business valuation. I have extensive experience in economic and financial analysis for regulated industries, and in preparing and supporting expert witness testimony before courts, regulatory agencies, and legislative committees throughout the U.S. and Canada. I have personally sponsored direct and rebuttal testimony concerning the rate of return on equity ("ROE") in ten proceedings filed with FERC, the Kansas State Corporation Commission, the Montana Public Service Commission, the Washington Utilities and Transportation Commission, and the Wyoming Public Service Commission. My testimony addressed the establishment of risk-comparable proxy groups, the application of alternative quantitative methods, and the consideration of regulatory standards and policy objectives in establishing a fair ROE for regulated electric and gas utility operations. In addition, I have previously prepared prefiled direct and rebuttal testimony in over 250 regulatory proceedings (including Docket No. EL11-66-001, which established FERC's current policies with respect to ROE for electric utilities), the Canadian Radio-Television and Telecommunications Commission, and regulatory agencies in over 30 states. This testimony was sponsored by Dr. William Avera, who is President of FINCAP, Inc. In connection with these assignments, my responsibilities have included performing analytical methods to estimate investors' required rate of return and critically evaluating the results of alternative approaches, preparing direct testimony, responding to data requests, evaluating the positions of other parties and preparing responsive testimony, representing clients in settlement negotiations and hearings, and assisting in the preparation of legal briefs. Prior to joining FINCAP, I was employed by an oil and gas firm and was responsible for operations and accounting. I earned B.A. and M.B.A. degrees with a major in finance from The University of Texas at Austin, and hold the Chartered Financial Analyst (CFA®) designation.

WILLIAM E. AVERA

FINCAP, INC. Financial Concepts and Applications *Economic and Financial Counsel* 3907 Red River Austin, Texas 78751 (512) 458–4644 FAX (512) 458–4768 fincap@texas.net

Summary of Qualifications

Ph.D. in economics and finance; Chartered Financial Analyst (CFA[®]) designation; extensive expert witness testimony before courts, alternative dispute resolution panels, regulatory agencies and legislative committees; lectured in executive education programs around the world on ethics, investment analysis, and regulation; undergraduate and graduate teaching in business and economics; appointed to leadership positions in government, industry, academia, and the military.

Employment

Principal, FINCAP, Inc. (Sep. 1979 to present)	Financial, economic and policy consulting to business and government. Perform business and public policy research, cost/benefit analyses and financial modeling, valuation of businesses (almost 200 entities valued), estimation of damages, statistical and industry studies. Provide strategy advice and educational services in public and private sectors, and serve as expert witness before regulatory agencies, legislative committees, arbitration panels, and courts.
Director, Economic Research Division, Public Utility Commission of Texas (Dec. 1977 to Aug. 1979)	Responsible for research and testimony preparation on rate of return, rate structure, and econometric analysis dealing with energy, telecommunications, water and sewer utilities. Testified in major rate cases and appeared before legislative committees and served as Chief Economist for agency. Administered state and federal grant funds. Communicated frequently with political leaders and representatives from consumer groups, media, and investment community.
Manager, Financial Education, International Paper Company New York City (Feb. 1977 to Nov. 1977)	Directed corporate education programs in accounting, finance, and economics. Developed course materials, recruited and trained instructors, liaison within the company and with academic institutions. Prepared operating budget and designed financial controls for corporate professional development program.

Lecturer in Finance,

The University of Texas at Austin (Sep. 1979 to May 1981) Assistant Professor of Finance, (Sep. 1975 to May 1977)

Assistant Professor of Business, University of North Carolina at Chapel Hill (Sep. 1972 to Jul. 1975)

Education

*Ph.D., Economics and Finance,*University of North Carolina at Chapel Hill(Jan. 1969 to Aug. 1972)

B.A., Economics, Emory University, Atlanta, Georgia (Sep. 1961 to Jun. 1965) Taught graduate and undergraduate courses in financial management and investment theory. Conducted research in business and public policy. Named Outstanding Graduate Business Professor and received various administrative appointments.

Taught in BBA, MBA, and Ph.D. programs. Created project course in finance, Financial Management for Women, and participated in developing Small Business Management sequence. Organized the North Carolina Institute for Investment Research, a group of financial institutions that supported academic research. Faculty advisor to the Media Board, which funds student publications and broadcast stations.

Elective courses included financial management, public finance, monetary theory, and econometrics. Awarded the Stonier Fellowship by the American Bankers' Association and University Teaching Fellowship. Taught statistics, macroeconomics, and microeconomics.

Dissertation: The Geometric Mean Strategy as a Theory of Multiperiod Portfolio Choice

Active in extracurricular activities, president of the Barkley Forum (debate team), Emory Religious Association, and Delta Tau Delta chapter. Individual awards and team championships at national collegiate debate tournaments.

Professional Associations

Received Chartered Financial Analyst (CFA) designation in 1977; Vice President for Membership, Financial Management Association; President, Austin Chapter of Planning Executives Institute; Board of Directors, North Carolina Society of Financial Analysts; Candidate Curriculum Committee, Association for Investment Management and Research; Executive Committee of Southern Finance Association; Vice Chair, Staff Subcommittee on Economics and National Association of Regulatory Utility Commissioners (NARUC); Appointed to NARUC Technical Subcommittee on the National Energy Act.

Teaching in Executive Education Programs

<u>University-Sponsored Programs</u>: Central Michigan University, Duke University, Louisiana State University, National Defense University, National University of Singapore, Texas A&M University, University of Kansas, University of North Carolina, University of Texas.

<u>Business and Government-Sponsored Programs:</u> Advanced Seminar on Earnings Regulation, American Public Welfare Association, Association for Investment Management and Research, Congressional Fellows Program, Cost of Capital Workshop, Electricity Consumers Resource Council, Financial Analysts Association of Indonesia, Financial Analysts Review, Financial Analysts Seminar at Northwestern University, Governor's Executive Development Program of Texas, Louisiana Association of Business and Industry, National Association of Purchasing Management, National Association of Tire Dealers, Planning Executives Institute, School of Banking of the South, State of Wisconsin Investment Board, Stock Exchange of Thailand, Texas Association of State Sponsored Computer Centers, Texas Bankers' Association, Texas Bar Association, Texas Savings and Loan League, Texas Society of CPAs, Tokyo Association of Foreign Banks, Union Bank of Switzerland, U.S. Department of State, U.S. Navy, U.S. Veterans Administration, in addition to Texas state agencies and major corporations.

Presented papers for Mills B. Lane Lecture Series at the University of Georgia and Heubner Lectures at the University of Pennsylvania. Taught graduate courses in finance and economics for evening program at St. Edward's University in Austin from January 1979 through 1998.

Expert Witness Testimony

Testified in almost 300 cases before regulatory agencies addressing cost of capital, regulatory policy, rate design, and other economic and financial issues.

<u>Federal Agencies</u>: Federal Communications Commission, Federal Energy Regulatory Commission, Surface Transportation Board, Interstate Commerce Commission, and the Canadian Radio-Television and Telecommunications Commission.

<u>State Regulatory Agencies</u>: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Missouri, Nevada, New Mexico, Montana, Nebraska, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Testified in 42 cases before federal and state courts, arbitration panels, and alternative dispute tribunals (89 depositions given) regarding damages, valuation, antitrust liability, fiduciary duties, and other economic and financial issues.

Board Positions and Other Professional Activities

Co-chair, Synchronous Interconnection Committee established by Texas Legislature to study interconnection of Texas with national grid; Audit Committee and Outside Director, Georgia System Operations Corporation (electric system operator for member-owned electric cooperatives in Georgia); Chairman, Board of Print Depot, Inc. and FINCAP, Inc.; Appointed by Hays County Commission to Citizens Advisory Committee of Habitat Conservation Plan, Operator of AAA Ranch, a certified organic producer of agricultural products; Appointed to Organic Livestock Advisory Committee by Texas Agricultural Commissioner; Appointed by Texas Railroad Commissioners to study group for *The UP/SP Merger: An Assessment of the Impacts on the State of Texas; Appointed by Hawaii Public Utilities Commission to team reviewing affiliate relationships of* Hawaiian Electric Industries; Chairman, Energy Task Force, Greater Austin-San Antonio Corridor Council; Consultant to Public Utility Commission of Texas on cogeneration policy and other matters; Consultant to Public Service Commission of New Mexico on cogeneration policy; Evaluator of Energy Research Grant Proposals for Texas Higher Education Coordinating Board.

Community Activities

Treasurer, Dripping Springs Presbyterian Church; Board of Directors, Sustainable Food Center; Chair, Board of Deacons, Finance Committee, and Elder, Central Presbyterian Church of Austin; Founding Member, Orange-Chatham County (N.C.) Legal Aid Screening Committee.

<u>Military</u>

Captain, U.S. Naval Reserve (retired after 28 years service); Commanding Officer, Naval Special Warfare Engineering (SEAL) Support Unit; Officer-in-Charge of SWIFT patrol boat in Vietnam; Enlisted service as weather analyst (advanced to second class petty officer).

Bibliography

Monographs

- "Economic Perspectives on Texas Water Resources," with Robert M. Avera and Felipe Chacon in *Essentials of Texas Water Resources*, Mary K. Sahs, ed. State Bar of Texas (2012).
- *Ethics and the Investment Professional* (video, workbook, and instructor's guide) and *Ethics Challenge Today* (video), Association for Investment Management and Research (1995)
- "Definition of Industry Ethics and Development of a Code" and "Applying Ethics in the Real World," in *Good Ethics: The Essential Element of a Firm's Success*, Association for Investment Management and Research (1994)
- "On the Use of Security Analysts' Growth Projections in the DCF Model," with Bruce H. Fairchild in *Earnings Regulation Under Inflation*, J. R. Foster and S. R. Holmberg, eds. Institute for Study of Regulation (1982)
- An Examination of the Concept of Using Relative Customer Class Risk to Set Target Rates of Return in Electric Cost-of-Service Studies, with Bruce H. Fairchild, Electricity Consumers Resource Council (ELCON) (1981); portions reprinted in Public Utilities Fortnightly (Nov. 11, 1982)
- "Usefulness of Current Values to Investors and Creditors," *Research Study on Current-Value Accounting Measurements and Utility*, George M. Scott, ed., Touche Ross Foundation (1978)
- "The Geometric Mean Strategy and Common Stock Investment Management," with Henry A. Latané in *Life Insurance Investment Policies*, David Cummins, ed. (1977)
- Investment Companies: Analysis of Current Operations and Future Prospects, with J. Finley Lee and Glenn L. Wood, American College of Life Underwriters (1975)

Articles

"Should Analysts Own the Stocks they Cover?" *The Financial Journalist*, (March 2002)

- "Liquidity, Exchange Listing, and Common Stock Performance," with John C. Groth and Kerry Cooper, *Journal of Economics and Business* (Spring 1985); reprinted by National Association of Security Dealers
- "The Energy Crisis and the Homeowner: The Grief Process," *Texas Business Review* (Jan.–Feb. 1980); reprinted in *The Energy Picture: Problems and Prospects*, J. E. Pluta, ed., Bureau of Business Research (1980)
- "Use of IFPS at the Public Utility Commission of Texas," *Proceedings of the IFPS Users Group* Annual Meeting (1979)
- "Production Capacity Allocation: Conversion, CWIP, and One-Armed Economics," *Proceedings of the NARUC Biennial Regulatory Information Conference* (1978)
- "Some Thoughts on the Rate of Return to Public Utility Companies," with Bruce H. Fairchild in *Proceedings of the NARUC Biennial Regulatory Information Conference* (1978)
- "A New Capital Budgeting Measure: The Integration of Time, Liquidity, and Uncertainty," with David Cordell in *Proceedings of the Southwestern Finance Association* (1977)
- "Usefulness of Current Values to Investors and Creditors," in *Inflation Accounting/Indexing and Stock Behavior* (1977)
- "Consumer Expectations and the Economy," Texas Business Review (Nov. 1976)
- "Portfolio Performance Evaluation and Long-run Capital Growth," with Henry A. Latané in *Proceedings of the Eastern Finance Association* (1973)
- Book reviews in *Journal of Finance* and *Financial Review*. Abstracts for *CFA Digest*. Articles in *Carolina Financial Times*.

Selected Papers and Presentations

- "Economic Perspective on Water Marketing in Texas," 2009 Water Law Institute, The University of Texas School of Law, Austin, TX (Dec. 2009).
- "Estimating Utility Cost of Equity in Financial Turmoil," SNL EXNET 15th Annual FERC Briefing, Washington, D.C. (Mar. 2009)
- "The Who, What, When, How, and Why of Ethics," San Antonio Financial Analysts Society (Jan. 16, 2002). Similar presentation given to the Austin Society of Financial Analysts (Jan. 17, 2002)
- "Ethics for Financial Analysts," Sponsored by Canadian Council of Financial Analysts: delivered in Calgary, Edmonton, Regina, and Winnipeg, June 1997. Similar presentations given to Austin Society of Financial Analysts (Mar. 1994), San Antonio Society of Financial Analysts (Nov. 1985), and St. Louis Society of Financial Analysts (Feb. 1986)
- "Cost of Capital for Multi-Divisional Corporations," Financial Management Association, New Orleans, Louisiana (Oct. 1996)
- "Ethics and the Treasury Function," Government Treasurers Organization of Texas, Corpus Christi, Texas (Jun. 1996)
- "A Cooperative Future," Iowa Association of Electric Cooperatives, Des Moines (December 1995). Similar presentations given to National G & T Conference, Irving, Texas (June 1995), Kentucky

Association of Electric Cooperatives Annual Meeting, Louisville (Nov. 1994), Virginia, Maryland, and Delaware Association of Electric Cooperatives Annual Meeting, Richmond (July 1994), and Carolina Electric Cooperatives Annual Meeting, Raleigh (Mar. 1994)

- "Information Superhighway Warnings: Speed Bumps on Wall Street and Detours from the Economy," Texas Society of Certified Public Accountants Natural Gas, Telecommunications and Electric Industries Conference, Austin (Apr. 1995)
- "Economic/Wall Street Outlook," Carolinas Council of the Institute of Management Accountants, Myrtle Beach, South Carolina (May 1994). Similar presentation given to Bell Operating Company Accounting Witness Conference, Santa Fe, New Mexico (Apr. 1993)
- "Regulatory Developments in Telecommunications," Regional Holding Company Financial and Accounting Conference, San Antonio (Sep. 1993)
- "Estimating the Cost of Capital During the 1990s: Issues and Directions," The National Society of Rate of Return Analysts, Washington, D.C. (May 1992)
- "Making Utility Regulation Work at the Public Utility Commission of Texas," Center for Legal and Regulatory Studies, University of Texas, Austin (June 1991)
- "Can Regulation Compete for the Hearts and Minds of Industrial Customers," Emerging Issues of Competition in the Electric Utility Industry Conference, Austin (May 1988)
- "The Role of Utilities in Fostering New Energy Technologies," Emerging Energy Technologies in Texas Conference, Austin (Mar. 1988)
- "The Regulators' Perspective," Bellcore Economic Analysis Conference, San Antonio (Nov. 1987)
- "Public Utility Commissions and the Nuclear Plant Contractor," Construction Litigation Superconference, Laguna Beach, California (Dec. 1986)
- "Development of Cogeneration Policies in Texas," University of Georgia Fifth Annual Public Utilities Conference, Atlanta (Sep. 1985)
- "Wheeling for Power Sales," Energy Bureau Cogeneration Conference, Houston (Nov. 1985).
- "Asymmetric Discounting of Information and Relative Liquidity: Some Empirical Evidence for Common Stocks" (with John Groth and Kerry Cooper), Southern Finance Association, New Orleans (Nov. 1982)
- "Used and Useful Planning Models," Planning Executive Institute, 27th Corporate Planning Conference, Los Angeles (Nov. 1979)
- "Staff Input to Commission Rate of Return Decisions," The National Society of Rate of Return Analysts, New York (Oct. 1979)
- ""Discounted Cash Life: A New Measure of the Time Dimension in Capital Budgeting," with David Cordell, Southern Finance Association, New Orleans (Nov. 1978)
- "The Relative Value of Statistics of Ex Post Common Stock Distributions to Explain Variance," with Charles G. Martin, Southern Finance Association, Atlanta (Nov. 1977)
- "An ANOVA Representation of Common Stock Returns as a Framework for the Allocation of Portfolio Management Effort," with Charles G. Martin, Financial Management Association, Montreal (Oct. 1976)
- "A Growth-Optimal Portfolio Selection Model with Finite Horizon," with Henry A. Latané, American Finance Association, San Francisco (Dec. 1974)

- "An Optimal Approach to the Finance Decision," with Henry A. Latané, Southern Finance Association, Atlanta (Nov. 1974)
- "A Pragmatic Approach to the Capital Structure Decision Based on Long-Run Growth," with Henry A. Latané, Financial Management Association, San Diego (Oct. 1974)
- "Growth Rates, Expected Returns, and Variance in Portfolio Selection and Performance Evaluation," with Henry A. Latané, Econometric Society, Oslo, Norway (Aug. 1973)

ADRIEN M. McKENZIE

FINCAP, INC. Financial Concepts and Applications *Economic and Financial Counsel* 3907 Red River Austin, Texas 78751 (512) 458–4644 FAX (512) 458–4768 fincap3@texas.net

Summary of Qualifications

Adrien McKenzie has an MBA in finance from the University of Texas at Austin and holds the Chartered Financial Analyst (CFA) designation. He has over 25 years experience in economic and financial analysis for regulated industries, and in preparing and supporting expert witness testimony before courts, regulatory agencies, and legislative committees throughout the U.S. and Canada. Assignments have included a broad range of economic and financial issues, including cost of capital, cost of service, rate design, economic damages, and business valuation.

Employment

Consultant, FINCAP, Inc. (June 1984 to June 1987) (April 1988 to present) Economic consulting firm specializing in regulated industries and valuation of closely-held businesses. Assignments have involved electric. gas, telecommunication, and water/sewer utilities, with clients including utilities, consumer groups, municipalities, regulatory agencies, and cogenerators. Areas of participation have included rate of return, revenue requirements, rate design, tariff analysis, avoided cost, forecasting, and negotiations. Develop cost of capital analyses using alternative market models for electric, gas, and telephone utilities. Prepare pre-filed direct and rebuttal testimony, participate in settlement negotiations, respond to interrogatories, evaluate opposition testimony, and assist in the areas of cross-examination and the preparations of legal briefs. Other assignments have involved preparation of technical reports, valuations, estimation of damages, industry studies, and various economic analyses in support of litigation.

Manager, McKenzie Energy Company (Jan. 1981 to May. 1984) Responsible for operations and accounting for firm engaged in the management of working interests in oil and gas properties.

Education

<i>M.B.A., Finance,</i> University of Texas at Austin (Sep. 1982 to May. 1984)	 Program included coursework in corporate finance, accounting, financial modeling, and statistics. Received Dean's Award for Academic Excellence and Good Neighbor Scholarship. Professional Report: <i>The Impact of Construction Expanditures on Investor Owned Electric Utilities</i> 			
B.B.A., Finance, University of Texas at Austin (Jan. 1981 to May 1982)	Electives included capital market theory, portfolio management, and international economics and finance. Elected to Beta Gamma Sigma business honor society. Dean's List 1981-1982.			
Simon Fraser University, Vancouver, Canada and University of Hawaii at Manoa, Honolulu, Hawaii	Coursework in accounting, finance, economics, and liberal arts.			
(Jan. 1979 to Dec 1980)				

Professional Associations

Received Chartered Financial Analyst (CFA) designation in 1990.

Member – CFA Institute.

Bibliography

- "A Profile of State Regulatory Commissions," A Special Report by the Electricity Consumers Resource Council (ELCON), Summer 1991.
- "The Impact of Regulatory Climate on Utility Capital Costs: An Alternative Test," with Bruce H. Fairchild, *Public Utilities Fortnightly* (May 25, 1989).

Presentations

- "ROE at FERC: Issues and Methods," *Expert Briefing on Parallels in ROE Issues between AER, ERA, and FERC*, Jones Day (Sydney, Melbourne, and Perth, Australia) (April 15, 2014)
- Cost of Capital Working Group eforum, Edison Electric Institute (April 24, 2012)
- "Cost-of-Service Studies and Rate Design," General Management of Electric Utilities (A Training Program for Electric Utility Managers from Developing Countries), Austin, Texas (October 1989 and November 1990 and 1991).

Representative Assignments

Mr. McKenzie has prepared and supported prefiled testimony submitted in over 250 regulatory proceedings. In addition to filings before regulators in 33 states, Mr. McKenzie has considerable expertise in preparing expert analyses and testimony before the Federal Energy Regulatory Commission ("FERC") on the issue of ROE. Many of these proceedings have been influential in addressing key aspects of FERC's policies with respect to ROE determinations. Broad experience in applying and evaluating the results of quantitative methods to estimate a fair ROE, including discounted cash flow approaches, the Capital Asset Pricing Model, risk premium methods, and other quantitative benchmarks. Other representative assignments have included the application of econometric models to analyze the impact of anti-competitive behavior and estimate lost profits; development of explanatory models for nuclear plant capital costs in connection with prudency reviews; and the analysis of avoided cost pricing for cogenerated power.

Exhibit No. NYT-26

SUMMARY OF RESULTS

Exhibit No. NYT-26 Page 1 of 2

PRIMARY METHODS

			Middle
Range	Med	lian	<u>Top Half</u>
6.25% 11.63%	8.78	3%	10.21%
6.45% 13.59%	8.82%		11.21%
Range	<u>Midpoint</u>	<u>Median</u>	<u>Average</u>
	10.61%	10.61%	10.61%
8.85% 14.36%	11.61%	11.45%	11.50%
	10.58%	10.58%	10.58%
7.62% 14.67%	11.14%	9.82%	10.82%
8.23% 14.51%	10.98%	10.61%	10.88%
8.23% 14.51%	10.88%	10.59%	10.72%
	Range 6.25% 11.63% 6.45% 13.59% Range 8.85% 14.36% 7.62% 14.67% 8.23% 14.51% 8.23% 14.51%	RangeMed $6.25\% 11.63\%$ 8.78 $6.45\% 13.59\%$ 8.87 RangeMidpoint 10.61% 10.61% $8.85\% 14.36\%$ 11.61% $7.62\% 14.67\%$ 10.58% 11.14% 10.98% $8.23\% 14.51\%$ 10.88%	Range $6.25\% 11.63\%$ $6.45\% 13.59\%$ Median 8.78% 8.82% RangeMidpoint 10.61% Median 10.61% $8.85\% 14.36\%$ 11.61% 11.45% $7.62\% 14.67\%$ 10.58% 11.14% 9.82% $8.23\% 14.51\%$ 10.98% 10.61% $8.23\% 14.51\%$ 10.88% 10.59%

(a) Point estimate value.

(b) Average for Value Line Electric Utility industry group.

SUMMARY OF RESULTS

CHECKS OF REASONABLENESS

	Range	<u>Midpoint</u>	<u>Median</u>	<u>Average</u>
<u>Risk Premium</u>				
State ROE (a)		10.08%	10.08%	10.08%
FERC Gas Pipelines (a)		10.40%	10.40%	10.40%
Empirical CAPM	9.83% 14.48%	12.16%	12.06%	12.13%
Projected Bond Yields				
<u>Risk Premium</u>				
FERC ROE (a)		10.85%	10.85%	10.85%
State ROE (a)	10.85% 11.27%	11.27%	11.27%	11.27%
FERC Gas Pipelines (a)		10.97%	10.97%	10.97%
<u>CAPM</u>	9.41% 14.43%	11.92%	11.80%	11.86%
Empirical CAPM	10.25% 14.54%	12.39%	12.33%	12.40%
Non-Utility DCF	8.20% 12.72%	10.46%	10.73%	10.57%
<u>Summary - All Methods</u>				
Average		11.17%	11.16%	11.17%
Median		10.97%	10.97%	10.97%

(a) Point estimate value.

Exhibit No. NYT-27

ALLOWED ROEs

NATIONAL GROUP

Exhibit No. NYT-27 Page 1 of 1

		(a)
		Allowed
	Company	ROE
1	ALLETE	10.38%
2	Alliant Energy	10.34%
3	Ameren Corp.	9.49%
4	American Elec Pwr	10.50%
5	Avista Corp.	9.86%
6	Black Hills Corp.	10.72%
7	CenterPoint Energy	9.96%
8	CMS Energy Corp.	10.30%
9	Consolidated Edison	9.93%
10	Dominion Resources	10.38%
11	DTE Energy Co.	10.75%
12	Duke Energy Corp.	10.46%
13	Edison International	10.50%
14	El Paso Electric	11.25%
15	Empire District Elec	NA
16	Great Plains Energy	10.12%
17	IDACORP, Inc.	10.18%
18	ITC Holdings Corp.	NA
19	NextEra Energy, Inc.	10.50%
20	Northeast Utilities	9.38%
21	NorthWestern Corp.	10.83%
22	OGE Energy Corp.	9.98%
23	Otter Tail Corp.	10.75%
24	PG&E Corp.	10.40%
25	Pinnacle West Capital	11.00%
26	Portland General Elec.	9.75%
27	Pub Sv Enterprise Grp	10.30%
28	Sempra Energy	11.48%
29	Westar Energy	10.20%
30	Xcel Energy, Inc.	10.48%
	Range of Reasonableness	9.38% 11.48%
	Midpoint	10.43%
	Median	10.38%
	Average	10.36%

Exhibit No. NYT-28

NATIONAL GROUP

RISK MEASURES

			(a)	(b)		(c)		(d)
			S&P	Moody's	Value Line			
			Corporate	Long-term	Safety	Financial		Market
	Company	SYM	Rating	Rating	Rank	Strength	Beta	Cap
1	ALLETE	ALE	BBB+	A3	2	А	0.80	\$2,197
2	Alliant Energy	LNT	A-	A3	2	А	0.80	\$6,868
3	Ameren Corp.	AEE	BBB+	Baa2	2	B++	0.75	\$10,330
4	American Elec Pwr	AEP	BBB	Baa1	2	А	0.70	\$28,507
5	Avista Corp.	AVA	BBB	Baa1	2	А	0.80	\$2,147
6	Black Hills Corp.	BKH	BBB	Baa1	3	B+	0.90	\$2,437
7	CenterPoint Energy	CNP	A-	Baa1	2	B++	0.75	\$10,491
8	CMS Energy Corp.	CMS	BBB	Baa2	2	B++	0.75	\$9,015
9	Consolidated Edison	ED	A-	A3	1	A+	0.60	\$18,609
10	Dominion Resources	D	A-	Baa2	2	B++	0.70	\$41,707
11	DTE Energy Co.	DTE	BBB+	A3	2	B++	0.75	\$14,511
12	Duke Energy Corp.	DUK	BBB+	A3	2	А	0.60	\$58,179
13	Edison International	EIX	BBB+	A3	2	А	0.75	\$20,383
14	El Paso Electric	EE	BBB	Baa1	2	B++	0.70	\$1,527
15	Empire District Elec	EDE	BBB	Baa1	2	B++	0.65	\$1,227
16	Great Plains Energy	GXP	BBB+	Baa2	3	B+	0.85	\$4,135
17	IDACORP, Inc.	IDA	BBB	Baa1	2	B++	0.80	\$3,176
18	ITC Holdings Corp.	ITC	A-	Baa2	2	B++	0.65	\$6,179
19	NextEra Energy, Inc.	NEE	A-	Baa1	2	А	0.70	\$43,596
20	Northeast Utilities	NU	A-	Baa1	2	B++	0.75	\$15,605
21	NorthWestern Corp.	NWE	BBB	A3	3	B+	0.70	\$2,065
22	OGE Energy Corp.	OGE	A-	A3	1	A+	0.85	\$7,415
23	Otter Tail Corp.	OTTR	BBB	Baa2	3	B+	0.95	\$1,129
24	PG&E Corp.	PCG	BBB	Baa1	3	B+	0.65	\$23,656
25	Pinnacle West Capital	PNW	A-	Baa1	1	A+	0.70	\$6,682
26	Portland General Elec.	POR	BBB	A3	2	B++	0.80	\$2,848
27	Pub Sv Enterprise Grp	PEG	BBB+	Baa2	1	A++	0.75	\$20,603
28	Sempra Energy	SRE	BBB+	Baa1	2	А	0.75	\$27,146
29	Westar Energy	WR	BBB+	Baa1	2	B++	0.75	\$4,870
30	Xcel Energy, Inc.	XEL	A-	A3	2	B++	0.70	\$16,931
			BBB+	Baa1	2	B++	0.75	\$13,806

(a) Corporate credit rating from www.standardandpoors.com (retrieved Oct. 3, 2014).

(b) Long-term rating from www.moodys.com (retrieved Oct. 1, 2014)

(c) The Value Line Investment Survey (Aug. 22, Sep. 19, & Oct. 31, 2014).

(d) www.valueline.com (retrieved Nov. 5, 2014).

Exhibit No. NYT-29
DCF MODEL - NATIONAL GROUP

COST OF EQUITY ESTIMATES - IBES GROWTH

		(a)	(b)	(c)	(d)	(e)	(f)	(g)	
	Commons	Di	vidend Yield	Adjusted	IDEC	Growth R	Mainhead	Cost of Fauit	
1		<u>6-1010. Average</u>	1 0200	<u>Adjusted</u>	<u>1DE5</u>	<u>GDF</u> 4 279/	E 160/	<u>Cost of Equity</u>	<u>y</u>
1	Alliant Enorgy	4.04 /0	1.0300	4.10%	4.40%	4.37 /0	0.40 /0 1 200/	7 08%	
2	Amana Com	3.32%	1.0220	3.39%	4.40%	4.37 %	4.39%	7.90%	
3	Ameren Corp.	4.06%	1.0445	4.24%	8.90% 4.07%	4.37%	1.39%	11.63%	
4	American Elec Pwr	3.76%	1.0249	3.85%	4.97%	4.37%	4.77%	8.62%	
5	Avista Corp.	3.97%	1.0250	4.06%	5.00%	4.37%	4.79%	8.85%	
6	Black Hills Corp.	2.86%	1.0350	2.96%	7.00%	4.37%	6.12%	9.08%	
7	CenterPoint Energy	3.92%	1.0194	4.00%	3.87%	4.37%	4.04%	8.04%	
8	CMS Energy Corp.	3.60%	1.0340	3.72%	6.80%	4.37%	5.99%	9.71%	
9	Consolidated Edison	4.42%	1.0130	4.48%	2.60%	4.37%	3.19%	7.67%	
10	Dominion Resources	3.47%	1.0309	3.57%	6.17%	4.37%	5.57%	9.14%	
11	DTE Energy Co.	3.49%	1.0294	3.59%	5.87%	4.37%	5.37%	8.96%	
12	Duke Energy Corp.	4.28%	1.0235	4.38%	4.70%	4.37%	4.59%	8.97%	
13	Edison International	2.50%	1.0169	2.54%	3.38%	4.37%	3.71%	6.25%	
14	El Paso Electric	2.95%	1.0350	3.05%	7.00%	4.37%	6.12%	9.17%	
15	Empire District Elec	4.08%	1.0150	4.14%	3.00%	4.37%	3.46%	7.60%	
16	Great Plains Energy	3.60%	1.0250	3.69%	5.00%	4.37%	4.79%	8.48%	
17	IDACORP, Inc.	3.09%	1.0200	3.15%	4.00%	4.37%	4.12%	7.27%	
18	ITC Holdings Corp.	1.67%	1.0588	1.77%	11.75%	4.37%	9.29%	11.06%	
19	NextEra Energy, Inc.	3.00%	1.0324	3.10%	6.47%	4.37%	5.77%	8.87%	
20	Northeast Utilities	3.45%	1.0316	3.55%	6.31%	4.37%	5.66%	9.22%	
21	NorthWestern Corp.	3.31%	1.0200	3.38%	4.00%	4.37%	4.12%	7.50%	
22	OGE Energy Corp.	2.47%	1.0353	2.55%	7.05%	4.37%	6.16%	8.71%	
23	Otter Tail Corp.	1.32%	1.0300	1.36%	6.00%	4.37%	5.46%	6.82%	
24	PG&E Corp.	3.96%	1.0348	4.10%	6.95%	4.37%	6.09%	10.19%	
25	Pinnacle West Capital	4.10%	1.0184	4.17%	3.67%	4.37%	3.90%	8.08%	
26	Portland General Elec.	3.35%	1.0390	3.48%	7.80%	4.37%	6.66%	10.13%	
27	Pub Sv Enterprise Grp	3.90%	1.0088	3.93%	1.75%	4.37%	2.62%	6.56%	
28	Sempra Energy	2.58%	1.0374	2.68%	7.47%	4.37%	6.44%	9.11%	
29	Westar Energy	3.88%	1.0160	3.95%	3.20%	4.37%	3.59%	7.54%	
30	Xcel Energy, Inc.	3.83%	1.0226	3.92%	4.51%	4.37%	4.46%	8.38%	
	Range of Reasonableness							6.25% 11	1.63

Median

Middle - Top Half of DCF Zone

8.78% 10.21%

- (a) Six-month average dividend yield for May Oct. 2014.
- (b) 1 + 0.5 x (d).
- (c) (a) x (b).
- (d) www.finance.yahoo.com (retrieved Oct. 31, 2014).
- (e) See Exhibit No. NYT- , page 2.
- (f) (d) $x \frac{2}{3} + (e) x \frac{1}{3}$.
- (g) (c) + (f).

DCF MODEL - NATIONAL GROUP

Exhibit No. NYT-29 Page 2 of 3

COST OF EQUITY ESTIMATES - VALUE LINE GROWTH

		(a)	(b)	(c)	(d)	(e)	(f)		(g)	
		Dividend Yield			Growth Rate			_		
	Company	6-Mo. Average	<u>Adjustment</u>	Adjusted	V Line	GDP	Weighted	Cos	t of Equ	uit <u>y</u>
1	ALLETE	4.04%	1.0300	4.16%	6.00%	4.37%	5.46%		9.62%	
2	Alliant Energy	3.52%	1.0300	3.62%	6.00%	4.37%	5.46%		9.08%	
3	Ameren Corp.	4.06%	1.0225	4.15%	4.50%	4.37%	4.46%		8.61%	
4	American Elec Pwr	3.76%	1.0225	3.84%	4.50%	4.37%	4.46%		8.30%	
5	Avista Corp.	3.97%	1.0275	4.07%	5.50%	4.37%	5.12%		9.20%	
6	Black Hills Corp.	2.86%	1.0475	3.00%	9.50%	4.37%	7.79%		10.78%	
7	CenterPoint Energy	3.92%	1.0175	3.99%	3.50%	4.37%	3.79%		7.78%	
8	CMS Energy Corp.	3.60%	1.0325	3.72%	6.50%	4.37%	5.79%		9.50%	
9	Consolidated Edison	4.42%	1.0100	4.47%	2.00%	4.37%	2.79%		7.26%	
10	Dominion Resources	3.47%	1.0275	3.56%	5.50%	4.37%	5.12%		8.69%	
11	DTE Energy Co.	3.49%	1.0325	3.60%	6.50%	4.37%	5.79%		9.39%	
12	Duke Energy Corp.	4.28%	1.0250	4.38%	5.00%	4.37%	4.79%		9.17%	
13	Edison International	2.50%	1.0125	2.53%	2.50%	4.37%	3.12%		5.65%]
14	El Paso Electric	2.95%	1.0150	2.99%	3.00%	4.37%	3.46%	_	6.45%	-
15	Empire District Elec	4.08%	1.0200	4.16%	4.00%	4.37%	4.12%		8.28%	
16	Great Plains Energy	3.60%	1.0300	3.71%	6.00%	4.37%	5.46%		9.17%	
17	IDACORP, Inc.	3.09%	1.0075	3.11%	1.50%	4.37%	2.46%		5.56%]
18	ITC Holdings Corp.	1.67%	1.0775	1.80%	15.50%	4.37%	11.79%	_	13.59%	-
19	NextEra Energy, Inc.	3.00%	1.0300	3.09%	6.00%	4.37%	5.46%		8.55%	
20	Northeast Utilities	3.45%	1.0400	3.58%	8.00%	4.37%	6.79%		10.37%	
21	NorthWestern Corp.	3.31%	1.0175	3.37%	3.50%	4.37%	3.79%		7.16%	
22	OGE Energy Corp.	2.47%	1.0275	2.53%	5.50%	4.37%	5.12%		7.66%	
23	Otter Tail Corp.	1.32%	1.0775	1.42%	15.50%	4.37%	11.79%		13.21%	
24	PG&E Corp.	3.96%	1.0250	4.06%	5.00%	4.37%	4.79%		8.85%	
25	Pinnacle West Capital	4.10%	1.0200	4.18%	4.00%	4.37%	4.12%		8.30%	
26	Portland General Elec.	3.35%	1.0250	3.43%	5.00%	4.37%	4.79%		8.22%	
27	Pub Sv Enterprise Grp	3.90%	1.0100	3.94%	2.00%	4.37%	2.79%		6.73%	
28	Sempra Energy	2.58%	1.0350	2.67%	7.00%	4.37%	6.12%		8.80%	
29	Westar Energy	3.88%	1.0300	4.00%	6.00%	4.37%	5.46%		9.46%	
30	Xcel Energy, Inc.	3.83%	1.0275	3.94%	5.50%	4.37%	5.12%		9.06%	
	Range of Reasonableness					5.56%		13.59%		
	Adjusted Range of Reasona	bleness (h)						6.45%		13.59%
	Median								8.82%	
	Middle - Top Half of D	CF Zone	Middle - Top Half of DCF Zone 11.21%							

- (a) Six-month average dividend yield for May Oct. 2014.
- (b) 1 + 0.5 x (d).
- (c) (a) x (b).
- (d) The Value Line Investment Survey (Aug. 22, Sep. 19, & Oct. 31, 2014).
- (e) See Exhibit No. NYT- , page 2.
- (f) (d) $x \frac{2}{3} + (e) x \frac{1}{3}$.
- (g) (c) + (f).
- (h) Excludes highlighted values.

DCF MODEL - NATIONAL GROUP

GDP GROWTH RATE

		No				
	Source	<u>2019</u>	<u>2040</u>	<u>2044</u>	<u>2069</u>	Compound Annual Growth Rate
(a)	IHS Global Insight	22,094.55		62,839.95		4.30%
(b)	Energy Information Administration					
	Real GDP	16,378	26,670			
	GDP Deflator	1.286	1.913			
		21,062	51,023			4.30%
(c)	SSA Trustees Report	22,578			202,037	<u>4.50%</u>
	Average GDP Growth Rate					4.37%

(a) IHS Global Insight, The U.S. Economy, The 30-Year Focus (First Quarter 2014)

(b) Energy Information Administration, Annual Energy Outlook 2014 (May 7, 2014).

(c) Social Security Administration, 2014 OASDI Trustees Report, Table VI.G6.-Selected Economic Variables.

HISTORICAL BOND YIELDS

Current Equity Risk Premium

(a)	Average Yield Over Study Period	6.04%
(b)	BBB Utility Bond Yield - Historical	4.70%
	Change in Bond Yield	-1.34%
(c)	Risk Premium/Interest Rate Relationship	<u>-0.8816</u>
	Adjustment to Average Risk Premium	1.18%
(a)	Average Risk Premium over Study Period	<u>4.73%</u>
	Adjusted Risk Premium	5.91%
Im	<u>plied Cost of Equity</u>	
(b)	BBB Utility Bond Yield - Historical	4.70%
	Adjusted Equity Risk Premium	<u>5.91%</u>

` '	5	
	Adjusted Equity Risk Premium	<u>5.91%</u>
	Risk Premium Cost of Equity	10.61%

(a) See Exhibit No. NYT-30, p. 3.

- (b) Six-month average yield for May 2014 Oct. 2014 based on data from Moody's Investors Service, www.moodys.credittrends.com.
- (c) See Exhibit No. NYT-30, p. 6.

Exhibit No.	NYT-30
Ра	ge 2 of 6

PROJECTED BOND YIELDS

Current Equity Risk Premium	
(a) Average Yield Over Study Period	6.04%
(b) BBB Utility Bond Yield 2015-2019	6.77%
Change in Bond Yield	0.73%
(c) Risk Premium/Interest Rate Relationship	<u>-0.8816</u>
Adjustment to Average Risk Premium	-0.64%
(a) Average Risk Premium over Study Period	<u>4.73%</u>
Adjusted Risk Premium	4.08%
Implied Cost of Equity	
(h) BBB Litility Bond Viold 2015 2019	6 77%
(0) DDD Ounty Dona Heia 2013-2019	0.77 /0

A diusted Equity Risk Premium	0.77 /o 4.08%
Risk Premium Cost of Equity	<u>4.00%</u> 10.85%

(a) See Exhibit No. NYT-30, p. 3.

- (b) Based on data from IHS Global Insight, U.S. Economic Outlook at 79 (May 2014); Energy Information Administration, Annual Energy Outlook 2014 (May 7, 2014); & Moody's Investors Service at www.credittrends.com.
- (c) See Exhibit No. NYT-30, p. 6.

IMPLIED RISK PREMIUM

	(a)	(b)	
	Average		
	Base	BBB Utility	Risk
Year	ROE	Bond Yield	<u>Premium</u>
2006	11.01%	6.32%	4.69%
2007	10.96%	6.33%	4.63%
2008	10.82%	7.25%	3.57%
2009	10.84%	7.06%	3.78%
2010	10.64%	5.98%	4.67%
2011	10.67%	5.57%	5.11%
2012	10.96%	4.86%	6.11%
2013	10.24%	<u>4.98%</u>	<u>5.26%</u>
		6.04%	4.73%

(a) Exhibit No. NYT-30, pp. 4-5.

(b) Moody's Investors Service, www.credittrends.com.

ALLOWED ROE

			Base
<u>Date</u>	Docket No.	<u>Utility</u>	ROE
Apr-06	ER05-515	Baltimore Gas & Elec.	10.80%
Apr-06	ER05-515	Baltimore Gas & Elec.	11.30%
Aug-06	ER05-925	Westar Energy Inc.	10.80%
Oct-06	ER04-157	Bangor Hydro-Elec. Co.	11.14%
Apr-07	ER07-284	San Diego Gas & Elec.	11.35%
Jul-07	ER06-787	Idaho Power Co.	10.70%
Jul-07	ER06-1320	Wisconsin Elec. Pwr. Co.	11.00%
Oct-07	ER07-583	Commonwealth Edison Co.	11.00%
Nov-07	EL06-109	Duquesne Light Co.	10.90%
Nov-07	ER08-10	Pepco Holdings, Inc.	10.80%
Feb-08	ER08-374	Atlantic Path 15	10.65%
Mar-08	ER08-396	Westar Energy Inc.	10.80%
Mar-08	ER08-413	Startrans IO, LLC	10.65%
Apr-08	ER07-549	NSTAR Elec. Co.	10.90%
Apr-08	EL05-19	Southwestern Public Service	9.33%
Apr-08	ER07-562	Trans-Allegheny	11.20%
Apr-08	ER08-92	Virginia Elec. & Power Co.	10.90%
Jul-08	ER07-1142	Arizona Public Service Co.	10.75%
Jul-08	ER08-375	So. Cal Edison (a)	9.54%
Aug-08	ER08-1207	Virginia Elec. & Power Co.	10.90%
Aug-08	ER08-686	Pepco Holdings, Inc.	11.30%
Aug-08	ER07-694	New England Pwr. Co.	11.14%
Sep-08	ER08-1233	Public Service Elec. & Gas	11.18%
Oct-08	ER08-1423	Pepco Holdings, Inc.	10.80%
Oct-08	EL08-74	Central Maine Power Co.	11.14%
Oct-08	ER08-1402	Duquesne Light Co.	10.90%
Nov-08	ER08-1548	Northeast Utils Service Co.	11.14%
Nov-08	EL08-77	Central Maine Power Co.	11.14%
Dec-08	ER09-14	NSTAR Elec. Co.	11.14%
Dec-08	ER09-35/36	Tallgrass / Prairie Wind	10.80%
Feb-09	ER08-1584	Black Hills Power Co.	10.80%
Mar-09	ER07-1069	AEP - SPP Zone	10.70%
Mar-09	ER09-75	Pioneer Transmission	10.54%
Mar-09	ER09-548	ITC Great Plains	10.66%
Mar-09	ER09-249	Public Service Elec. & Gas	11.18%
Apr-09	ER09-681	Green Power Express	10.78%
May-09	ER08-1457	PPL Elec. Utilities Corp.	11.10%
May-09	ER08-1457	PPL Elec. Utilities Corp.	11.14%
May-09	ER08-1457	PPL Elec. Utilities Corp.	11.18%
May-09	ER09-745	Baltimore Gas & Elec.	11.30%
May-09	ER08-552	Niagara Mohawk Pwr. Co.	11.00%

ALLOWED ROE

			Base
Date	Docket No.	Utility	ROE
May-09	ER08-281	Oklahoma Gas & Elec.	10.60%
Jun-09	ER08-1588	Kentucky Utilities Co.	11.00%
Aug-09	ER07-1344	Westar Energy Inc.	10.80%
Aug-09	ER09-187	So. Cal Edison (b)	10.04%
Oct-09	ER08-313	Xcel Energy	10.77%
Nov-09	ER09-628	National Grid Generation LLC	10.75%
Nov-09	ER09-1762	Westar Energy Inc.	10.80%
May-10	ER08-1329	AEP - PJM Zone	10.99%
Sep-10	ER10-160	So. Cal Edison (c)	10.33%
Oct-10	ER10-355	AEP Transco	10.99%
Oct-10	ER10-230	KCPL	10.60%
Dec-10	ER11-1952	So. Cal Edison	10.30%
Feb-11	ER11-2377	Northern Pass Transmission	10.40%
May-11	EL10-80	Ameren	12.38%
May-11	EL11-13	Atlantic Grid Operations	10.09%
Jun-11	ER10-1377	Xcel Energy	10.40%
Jun-11	ER11-3352	PJM & PSE&G	11.18%
Jun-11	ER10-516	South Carolina Elec. & Gas	10.55%
Oct-11	ER11-2895	Duke Energy Carolinas	10.20%
Oct-11	ER11-4069	RITELine	9.93%
Nov-11	ER08-386	PATH	10.40%
Dec-11	ER12-296	PJM & PSE&G	11.18%
May-12	ER11-2853	Public Service Colorado	10.10%
May-12	ER11-2853	Public Service Colorado	10.40%
Jun-12	ER12-1593	DATC Midwest Holdings	12.38%
Mar-13	ER12-91	Duke Energy Ohio	10.88%
May-13	ER12-778	Puget Sound Energy	9.80%
May-13	ER11-3643	PacifiCorp	9.80%
May-13	ER11-2560	Entergy Arkansas	10.20%
May-13	ER12-1593	Transource Missouri	9.80%
Jun-13	ER12-2681	ITC Holdings	12.38%
Aug-13	ER12-1650	Maine Public Service Co.	9.75%
Nov-13	ER11-3697	So. Cal Edison	9.30%

(a) Order issued April 15, 2010, with ROE applied for March 1, 2008 through December 31, 2008.

(b) Order issued April 19, 2012, with ROE applied for January 1, 2009 through May 31, 2010.

(c) Order issued April 19, 2012, with ROE applied for June 1, 2010 through December 31, 2010.

REGRESSION RESULTS

Upper 95.0%

0.084596757

-1.142822421

0.116443686

-0.620470882

Regression Statistics							
Multiple R	0.958732302						
R Square	0.919167627						
Adjusted R Square	0.905695565						
Standard Error	0.002479855						
Observations	8						
ANOVA							
	df	SS	MS	F	Significance F		
Regression	1	0.000419579	0.000419579	68.22768596	0.000170306		
Residual	6	3.68981E-05	6.14968E-06				
Total	7	0.000456477					
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%
Intercept	0.100520221	0.006507571	15.44665738	4.65559E-06	0.084596757	0.116443686	0.08459675
X Variable 1	-0.881646652	0.106736816	-8.260005203	0.000170306	-1.142822421	-0.620470882	-1.14282242

CAPM - HISTORICAL BOND YIELD

NATIONAL GROUP

Market Return (Rm) Div Proj. Cost of Risk-Free Risk Unadjusted Market Size 1 ALLETE 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$2,197 1.75% 2 Alliant Energy 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$6,868 0.93% 3 Ameren Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$10,330 0.80% 4 American Elec Pwr 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$28,507 -0.33%	Implied Cost of Equity 12.89% 12.07% 11.45% 9.83% 12.89% 13.84% 11.45% 11.58% 9.98% 0.92%
Div Proj. Cost of Risk-Free Risk Unadjusted Market Size 1 ALLETE 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$2,197 1.75% 2 Alliant Energy 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$2,197 1.75% 3 Ameren Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$6,868 0.93% 4 American Elec Pwr 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.65% \$10,330 0.80%	Implied Cost of Equity 12.89% 12.07% 11.45% 9.83% 12.89% 13.84% 11.45% 11.58% 9.98% 0.82%
Company Yield Growth Equity Rate Premium Beta Ke Cap Adjustment 1 ALLETE 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$2,197 1.75% 2 Alliant Energy 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$6,868 0.93% 3 Ameren Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$10,330 0.80% 4 American Elec Pwr 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$28,507 -0.33%	Cost of Equity 12.89% 12.07% 11.45% 9.83% 12.89% 13.84% 11.45% 11.58% 9.98% 0.82%
1 ALLETE 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$2,197 1.75% 2 Alliant Energy 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$6,868 0.93% 3 Ameren Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$10,330 0.80% 4 American Elec Pwr 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$28,507 -0.33%	12.89% 12.07% 11.45% 9.83% 12.89% 13.84% 11.45% 11.45% 11.58% 9.98%
2 Alliant Energy 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$6,868 0.93% 3 Ameren Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$10,330 0.80% 4 American Elec Pwr 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$28,507 -0.33%	12.07% 11.45% 9.83% 12.89% 13.84% 11.45% 11.58% 9.98%
3 Ameren Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$10,330 0.80% 4 American Elec Pwr 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$28,507 -0.33%	11.45% 9.83% 12.89% 13.84% 11.45% 11.58% 9.98%
4 American Elec Pwr 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$28,507 -0.33%	9.83% 12.89% 13.84% 11.45% 11.58% 9.98%
	12.89% 13.84% 11.45% 11.58% 9.98%
5 Avista Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$2,147 1.75%	13.84% 11.45% 11.58% 9.98%
6 Black Hills Corp 2.3% 10.8% 13.1% 3.3% 9.8% 0.90 12.12% \$2,437 1.72%	11.45% 11.58% 9.98%
7 CenterPoint Energy 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$10,491 0.80%	11.58% 9.98%
8 CMS Energy Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$9,015 0.93%	9.98%
9 Consolidated Edison 2.3% 10.8% 13.1% 3.3% 9.8% 0.60 9.18% \$18,609 0.80%	0.929/
10 Dominion Resources 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$41,707 -0.33%	9.83%
11 DTE Energy Co. 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$14,511 0.80%	11.45%
12 Duke Energy Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.60 9.18% \$58,179 -0.33%	8.85%
13 Edison International 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$20,383 0.80%	11.45%
14 El Paso Electric 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$1,527 1.75%	11.91%
15 Empire District Elec 2.3% 10.8% 13.1% 3.3% 9.8% 0.65 9.67% \$1,227 1.75%	11.42%
16 Great Plains Energy 2.3% 10.8% 13.1% 3.3% 9.8% 0.85 11.63% \$4,135 1.19%	12.82%
17 IDACORP, Inc. 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$3,176 1.72%	12.86%
18 ITC Holdings Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.65 9.67% \$6,179 0.93%	10.60%
19 NextEra Energy, Inc. 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$43,596 -0.33%	9.83%
20 Northeast Utilities 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$15,605 0.80%	11.45%
21 NorthWestern Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$2,065 1.75%	11.91%
22 OGE Energy Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.85 11.63% \$7,415 0.93%	12.56%
23 Otter Tail Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.95 12.61% \$1,129 1.75%	14.36%
24 PG&E Corp. 2.3% 10.8% 13.1% 3.3% 9.8% 0.65 9.67% \$23,656 -0.33%	9.34%
25 Pinnacle West Capital 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$6,682 0.93%	11.09%
26 Portland General Elec. 2.3% 10.8% 13.1% 3.3% 9.8% 0.80 11.14% \$2,848 1.72%	12.86%
27 Pub Sv Enterprise Grp 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$20,603 0.80%	11.45%
28 Sempra Energy 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$27,146 -0.33%	10.32%
29 Westar Energy 2.3% 10.8% 13.1% 3.3% 9.8% 0.75 10.65% \$4,870 1.19%	11.84%
30 Xcel Energy, Inc. 2.3% 10.8% 13.1% 3.3% 9.8% 0.70 10.16% \$16,931 0.80%	10.96%
Range of Reasonableness 9.18% 12.61%	.85% 14.36%
Midpoint 10.90%	11.61%
Median 10.65%	11.45%
Average 10.60%	11.50%

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retreived Sep. 19, 2014).

(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Sep. 22, 2014).

(c) Six-month average yield on 30-year Treasury bonds for May 2014 - Oct. 2014 from the Federal Reserve Board at http://www.federalreserve.gov/releases/h15/data/htm

(d) See Exhibit No. NYT-28.

(e) www.valueline.com (retrieved Nov. 5, 2014).

(f) Morningstar, "2014 Ibbotson SBBI Market Report," at Table 10 (2014).

CAPM - PROJECTED BOND YIELD

NATIONAL GROUP

		(a)	(b)		(c)		(d)		(e)	(f)			
		Marl	ket Returr	1 (R _m)	2015-19								
		Div	Proj.	Cost of	Risk-Free	Risk		Unadjusted	Market	Size	Implied		
	Company	Yield	Growth	Equity	Rate	Premium	Beta	K _e	Cap	Adjustment	Cost of Equity		
1	ALLETE	2.3%	10.8%	13.1%	4.7%	8.4%	0.80	11.42%	\$2,197	1.75%	13.17%		
2	Alliant Energy	2.3%	10.8%	13.1%	4.7%	8.4%	0.80	11.42%	\$6,868	0.93%	12.35%		
3	Ameren Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.75	11.00%	\$10,330	0.80%	11.80%		
4	American Elec Pwr	2.3%	10.8%	13.1%	4.7%	8.4%	0.70	10.58%	\$28,507	-0.33%	10.25%		
5	Avista Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.80	11.42%	\$2,147	1.75%	13.17%		
6	Black Hills Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.90	12.26%	\$2,437	1.72%	13.98%		
7	CenterPoint Energy	2.3%	10.8%	13.1%	4.7%	8.4%	0.75	11.00%	\$10,491	0.80%	11.80%		
8	CMS Energy Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.75	11.00%	\$9,015	0.93%	11.93%		
9	Consolidated Edison	2.3%	10.8%	13.1%	4.7%	8.4%	0.60	9.74%	\$18,609	0.80%	10.54%		
10	Dominion Resources	2.3%	10.8%	13.1%	4.7%	8.4%	0.70	10.58%	\$41,707	-0.33%	10.25%		
11	DTE Energy Co.	2.3%	10.8%	13.1%	4.7%	8.4%	0.75	11.00%	\$14,511	0.80%	11.80%		
12	Duke Energy Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.60	9.74%	\$58,179	-0.33%	9.41%		
13	Edison International	2.3%	10.8%	13.1%	4.7%	8.4%	0.75	11.00%	\$20,383	0.80%	11.80%		
14	El Paso Electric	2.3%	10.8%	13.1%	4.7%	8.4%	0.70	10.58%	\$1,527	1.75%	12.33%		
15	Empire District Elec	2.3%	10.8%	13.1%	4.7%	8.4%	0.65	10.16%	\$1,227	1.75%	11.91%		
16	Great Plains Energy	2.3%	10.8%	13.1%	4.7%	8.4%	0.85	11.84%	\$4,135	1.19%	13.03%		
17	IDACORP, Inc.	2.3%	10.8%	13.1%	4.7%	8.4%	0.80	11.42%	\$3,176	1.72%	13.14%		
18	ITC Holdings Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.65	10.16%	\$6,179	0.93%	11.09%		
19	NextEra Energy, Inc.	2.3%	10.8%	13.1%	4.7%	8.4%	0.70	10.58%	\$43,596	-0.33%	10.25%		
20	Northeast Utilities	2.3%	10.8%	13.1%	4.7%	8.4%	0.75	11.00%	\$15,605	0.80%	11.80%		
21	NorthWestern Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.70	10.58%	\$2,065	1.75%	12.33%		
22	OGE Energy Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.85	11.84%	\$7,415	0.93%	12.77%		
23	Otter Tail Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.95	12.68%	\$1,129	1.75%	14.43%		
24	PG&E Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	0.65	10.16%	\$23,656	-0.33%	9.83%		
25	Pinnacle West Capital	2.3%	10.8%	13.1%	4.7%	8.4%	0.70	10.58%	\$6,682	0.93%	11.51%		
26	Portland General Elec.	2.3%	10.8%	13.1%	4.7%	8.4%	0.80	11.42%	\$2,848	1.72%	13.14%		
27	Pub Sv Enterprise Grp	2.3%	10.8%	13.1%	4.7%	8.4%	0.75	11.00%	\$20,603	0.80%	11.80%		
28	Sempra Energy	2.3%	10.8%	13.1%	4.7%	8.4%	0.75	11.00%	\$27,146	-0.33%	10.67%		
29	Westar Energy	2.3%	10.8%	13.1%	4.7%	8.4%	0.75	11.00%	\$4,870	1.19%	12.19%		
30	Xcel Energy, Inc.	2.3%	10.8%	13.1%	4.7%	8.4%	0.70	10.58%	\$16,931	0.80%	11.38%		
	Range of Reasonableness							9.74% 12.68%			9.41% 14.43%		
	Midpoint							11.21%			11.92%		
	Median							11.00%			11.80%		
	Average							10.96%			11.86%		

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retreived Sep. 19, 2014)

(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Sep. 22, 2014).

(c) Average yield on 30-year Treasury bonds for 2015-2019 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Aug. 22, 2014); IHS Global Insight, U.S. Economic Outlook at 79 (May 2014); & Blue Chip Financial Forecasts, Vol. 33, No. 6 (Jun. 1, 2014).

(d) See Exhibit No. NYT-28

(e) The Value Line Investment Survey (Aug. 22, Sep. 19, & Oct. 31, 2014).

(f) Morningstar, "2014 Ibbotson SBBI Market Report," at Table 10 (2014).

EXPECTED EARNINGS APPROACH

NATIONAL GROUP

		(a)	(b)	(c)
		Expected Return	Adjustment	Adjusted Return
	Company	on Common Equity	Factor	on Common Equity
1	ALLETE	9.50%	1.0338	9.82%
2	Alliant Energy	12.00%	1.0202	12.24%
3	Ameren Corp.	9.50%	1.0210	9.70%
4	American Elec Pwr	10.00%	1.0223	10.22%
5	Avista Corp.	8.50%	1.0244	8.71%
6	Black Hills Corp.	9.00%	1.0218	9.20%
7	CenterPoint Energy	14.50%	1.0117	14.67%
8	CMS Energy Corp.	13.50%	1.0338	13.96%
9	Consolidated Edison	9.00%	1.0160	9.14%
10	Dominion Resources	14.00%	1.0427	14.60%
11	DTE Energy Co.	10.00%	1.0296	10.30%
12	Duke Energy Corp.	8.00%	1.0115	8.09%
13	Edison International	11.00%	1.0336	11.37%
14	El Paso Electric	10.00%	1.0198	10.20%
15	Empire District Elec	9.00%	1.0237	9.21%
16	Great Plains Energy	7.50%	1.0160	7.62%
17	IDACORP, Inc.	8.50%	1.0206	8.67%
18	ITC Holdings Corp.	17.50%	1.0521	18.41%
19	NextEra Energy, Inc.	12.00%	1.0404	12.48%
20	Northeast Utilities	9.50%	1.0193	9.68%
21	NorthWestern Corp.	9.50%	1.0225	9.71%
22	OGE Energy Corp.	12.00%	1.0332	12.40%
23	Otter Tail Corp.	12.50%	1.0306	12.88%
24	PG&E Corp.	8.50%	1.0242	8.71%
25	Pinnacle West Capital	9.50%	1.0238	9.73%
26	Portland General Elec.	9.00%	1.0360	9.32%
27	Pub Sv Enterprise Grp	10.50%	1.0237	10.75%
28	Sempra Energy	11.50%	1.0248	11.79%
29	Westar Energy	9.50%	1.0266	9.75%
30	Xcel Energy, Inc.	10.00%	1.0262	10.26%
	Range of Reasonableness			7.62% 18.41%
	Adjusted Range of Reasona Midpoint Median Average	bleness (d)		7.62% 14.67% 11.14% 9.82% 10.82%

(a) The Value Line Investment Survey (Aug. 22, Sep. 19, & Oct. 31, 2014).

(b) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).

(c) (a) x (b).

(d) Eliminates highlighted values.

HISTORICAL BOND YIELDS

Current Equity Risk Premium	
(a) Avg. Yield over Study Period	8.69%
(b) Average Utility Bond Yield - Historical	<u>4.34%</u>
Change in Bond Yield	-4.35%
(c) Risk Premium/Interest Rate Relationship	<u>-0.4246</u>
Adjustment to Average Risk Premium	1.85%
(a) Average Risk Premium over Study Period	<u>3.53%</u>
Adjusted Risk Premium	5.38%
Implied Cost of Equity	
(b) BBB Utility Bond Viold Historical	4 70%
	4.70%
Adjusted Equity Kisk Premium	5.38%
Risk Premium Cost of Equity	10.08%

(a) Exhibit No. NYT-33, page 3.

- (b) Six-month average yield for May 2014 Oct. 2014 based on data from Moody's Investors Service, www.moodys.credittrends.com.
- (c) Exhibit No. NYT-33, page 4.

PROJECTED BOND YIELDS

Current Equity Risk Premium	
(a) Avg. Yield over Study Period	8.69%
(b) Average Utility Bond Yield 2015-2019	<u>6.41%</u>
Change in Bond Yield	-2.28%
(c) Risk Premium/Interest Rate Relationship	<u>-0.4246</u>
Adjustment to Average Risk Premium	0.97%
(a) Average Risk Premium over Study Period	<u>3.53%</u>
Adjusted Risk Premium	4.50%
Implied Cost of Equity	
(b) BBB Utility Bond Viold 2015 2019	6 779/
A directed E surity Dista Dista Dremainers	0.77/0
Adjusted Equity Kisk Premium	4.50%
Risk Premium Cost of Equity	11.27%

(a) Exhibit No. NYT-33, page 3.

- (b) Based on data from IHS Global Insight, U.S. Economic Outlook at 79 (May 2014); Energy Information Administration, Annual Energy Outlook 2014 (May 7, 2014); & Moody's Investors Service at www.credittrends.com.
- (c) Exhibit No. NYT-33, page 4.

IMPLIED RISK PREMIUM

	(a)	(b)	
	Allowed	Average Utility	Risk
Year	ROE	Bond Yield	Premium
1974	13.10%	9.27%	3.83%
1975	13.20%	9.88%	3.32%
1976	13.10%	9.17%	3.93%
1977	13.30%	8.58%	4.72%
1978	13.20%	9.22%	3.98%
1979	13.50%	10.39%	3.11%
1980	14.23%	13.15%	1.08%
1981	15.22%	15.62%	-0.40%
1982	15.78%	15.33%	0.45%
1983	15.36%	13.31%	2.05%
1984	15.32%	14.03%	1.29%
1985	15.20%	12.29%	2.91%
1986	13.93%	9.46%	4.47%
1987	12.99%	9.98%	3.01%
1988	12.79%	10.45%	2.34%
1989	12.97%	9.66%	3.31%
1990	12.70%	9.76%	2.94%
1991	12.55%	9.21%	3.34%
1992	12.09%	8.57%	3.52%
1993	11.41%	7.56%	3.85%
1994	11.34%	8.30%	3.04%
1995	11.55%	7.91%	3.64%
1996	11.39%	7.74%	3.65%
1997	11.40%	7.63%	3.77%
1998	11.66%	7.00%	4.66%
1999	10.77%	7.55%	3.22%
2000	11.43%	8.09%	3.34%
2001	11.09%	7.72%	3.37%
2002	11.16%	7.53%	3.63%
2003	10.97%	6.61%	4.36%
2004	10.75%	6.20%	4.55%
2005	10.54%	5.67%	4.87%
2006	10.36%	6.08%	4.28%
2007	10.36%	6.11%	4.25%
2008	10.46%	6.65%	3.81%
2009	10.48%	6.28%	4.20%
2010	10.34%	5.56%	4.78%
2011	10.29%	5.13%	5.16%
2012	10.17%	4 26%	5 91%
2013	10.02%	4.55%	5.47%
Average	<u>12 21%</u>	8 69%	3 53%

(a) Major Rate Case Decisions, Regulatory Focus, Regulatory Research Associates;*UtilityScope Regulatory Service*, Argus.

(b) Moody's Investors Service.

REGRESSION RESULTS

SUMMARY OUTPUT

Regression Statistics								
Multiple R	0.918651654							
R Square	0.843920861							
Adjusted R Square	0.839813516							
Standard Error	0.00513785							
Observations	40							

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.005423795	0.005423795	205.4662334	6.57062E-17
Residual	38	0.001003105	2.63975E-05		
Total	39	0.0064269			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.072131874	0.002698047	26.73484383	3.01556E-26	0.066669963	0.077593786	0.066669963	0.077593786
X Variable 1	-0.424559652	0.02961887	-14.33409339	6.57062E-17	-0.484519922	-0.364599382	-0.484519922	-0.364599382

NATIONAL GROUP

		(a)	(b)		(c)		(d)		(e)	(d)				(f)	(g)		
		Marl	ket Return	1 (R _m)		Market										Size	
		Div	Proj.	Cost of	Risk-Free	Risk	Unadjus	ted RP	Beta	Adjusted	l RP	Total	Empirical	Market	Size	Adjusted	
	Company	Yield	Growth	Equity	Rate	Premium	Weight	RP ¹	Beta	Weight	RP^2	RP	Ke	Cap	Adjustment	K _e	
1	ALLETE	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.80	75%	5.9%	8.3%	11.63%	\$2,197	1.75%	13.38%	_
2	Alliant Energy	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.80	75%	5.9%	8.3%	11.63%	\$6,868	0.93%	12.56%	
3	Ameren Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.75	75%	5.5%	8.0%	11.26%	\$10,330	0.80%	12.06%	
4	American Elec Pwr	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.70	75%	5.1%	7.6%	10.90%	\$28,507	-0.33%	10.57%	
5	Avista Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.80	75%	5.9%	8.3%	11.63%	\$2,147	1.75%	13.38%	
6	Black Hills Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.90	75%	6.6%	9.1%	12.37%	\$2,437	1.72%	14.09%	
7	CenterPoint Energy	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.75	75%	5.5%	8.0%	11.26%	\$10,491	0.80%	12.06%	
8	CMS Energy Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.75	75%	5.5%	8.0%	11.26%	\$9,015	0.93%	12.19%	
9	Consolidated Edison	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.60	75%	4.4%	6.9%	10.16%	\$18,609	0.80%	10.96%	
10	Dominion Resources	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.70	75%	5.1%	7.6%	10.90%	\$41,707	-0.33%	10.57%	
11	DTE Energy Co.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.75	75%	5.5%	8.0%	11.26%	\$14,511	0.80%	12.06%	
12	Duke Energy Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.60	75%	4.4%	6.9%	10.16%	\$58,179	-0.33%	9.83%	
13	Edison International	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.75	75%	5.5%	8.0%	11.26%	\$20,383	0.80%	12.06%	
14	El Paso Electric	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.70	75%	5.1%	7.6%	10.90%	\$1,527	1.75%	12.65%	
15	Empire District Elec	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.65	75%	4.8%	7.2%	10.53%	\$1,227	1.75%	12.28%	
16	Great Plains Energy	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.85	75%	6.2%	8.7%	12.00%	\$4,135	1.19%	13.19%	
17	IDACORP, Inc.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.80	75%	5.9%	8.3%	11.63%	\$3,176	1.72%	13.35%	
18	ITC Holdings Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.65	75%	4.8%	7.2%	10.53%	\$6,179	0.93%	11.46%	
19	NextEra Energy, Inc.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.70	75%	5.1%	7.6%	10.90%	\$43,596	-0.33%	10.57%	
20	Northeast Utilities	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.75	75%	5.5%	8.0%	11.26%	\$15,605	0.80%	12.06%	
21	NorthWestern Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.70	75%	5.1%	7.6%	10.90%	\$2,065	1.75%	12.65%	
22	OGE Energy Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.85	75%	6.2%	8.7%	12.00%	\$7,415	0.93%	12.93%	
23	Otter Tail Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.95	75%	7.0%	9.4%	12.73%	\$1,129	1.75%	14.48%	
24	PG&E Corp.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.65	75%	4.8%	7.2%	10.53%	\$23,656	-0.33%	10.20%	
25	Pinnacle West Capital	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.70	75%	5.1%	7.6%	10.90%	\$6,682	0.93%	11.83%	
26	Portland General Elec.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.80	75%	5.9%	8.3%	11.63%	\$2,848	1.72%	13.35%	
27	Pub Sv Enterprise Grp	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.75	75%	5.5%	8.0%	11.26%	\$20,603	0.80%	12.06%	
28	Sempra Energy	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.75	75%	5.5%	8.0%	11.26%	\$27,146	-0.33%	10.93%	
29	Westar Energy	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.75	75%	5.5%	8.0%	11.26%	\$4,870	1.19%	12.45%	
30	Xcel Energy, Inc.	2.3%	10.8%	13.1%	3.3%	9.8%	25%	2.5%	0.70	75%	5.1%	7.6%	10.90%	\$16,931	0.80%	11.70%	
	Range of Reasonablen	ess										10.16	6 1	2.73%	9.83	% 1	14.48%
	Midpoint												11.45%			12.16%	
	Median												11.26%			12.06%	
	Average												11.23%			12.13%	

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retreived Sep. 19, 2014)

(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Sep. 22, 2014).

(c) Six-month average yield on 30-year Treasury bonds for May 2014 - Oct. 2014 from the Federal Reserve Board at http://www.federalreserve.gov/releases/h15/data/htm.

(d) Morin, Roger A., "New Regulatory Finance," Public Utilities Reports, Inc. at 190 (2006).

(e) See Exhibit No. NYT-28.

(f) www.valueline.com (retrieved Nov. 5, 2014).

(g) Morningstar, "2014 Ibbotson SBBI Market Report," at Table 10 (2014).

NATIONAL GROUP

		(a)	(b)		(c)		(d)		(e)	(d)				(f)	(g)		
		Mar	ket Returr	(R _m)	2015-19	Market										Size	
		Div	Proj.	Cost of	Risk-Free	Risk	Unadjus	ted RP	Beta	Adjusted	l RP	Total	Empirical	Market	Size	Adjusted	
	Company	Yield	Growth	Equity	Rate	Premium	Weight	RP^{1}	Beta	Weight	RP^{2}	RP	Ke	Cap	Adjustment	Ke	
1	ALLETE	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.80	75%	5.0%	7.1%	11.84%	\$2,197	1.75%	13.59%	_
2	Alliant Energy	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.80	75%	5.0%	7.1%	11.84%	\$6,868	0.93%	12.77%	
3	Ameren Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.75	75%	4.7%	6.8%	11.53%	\$10,330	0.80%	12.33%	
4	American Elec Pwr	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.70	75%	4.4%	6.5%	11.21%	\$28,507	-0.33%	10.88%	
5	Avista Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.80	75%	5.0%	7.1%	11.84%	\$2,147	1.75%	13.59%	
6	Black Hills Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.90	75%	5.7%	7.8%	12.47%	\$2,437	1.72%	14.19%	
7	CenterPoint Energy	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.75	75%	4.7%	6.8%	11.53%	\$10,491	0.80%	12.33%	
8	CMS Energy Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.75	75%	4.7%	6.8%	11.53%	\$9,015	0.93%	12.46%	
9	Consolidated Edison	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.60	75%	3.8%	5.9%	10.58%	\$18,609	0.80%	11.38%	
10	Dominion Resources	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.70	75%	4.4%	6.5%	11.21%	\$41,707	-0.33%	10.88%	
11	DTE Energy Co.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.75	75%	4.7%	6.8%	11.53%	\$14,511	0.80%	12.33%	
12	Duke Energy Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.60	75%	3.8%	5.9%	10.58%	\$58,179	-0.33%	10.25%	
13	Edison International	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.75	75%	4.7%	6.8%	11.53%	\$20,383	0.80%	12.33%	
14	El Paso Electric	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.70	75%	4.4%	6.5%	11.21%	\$1,527	1.75%	12.96%	
15	Empire District Elec	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.65	75%	4.1%	6.2%	10.90%	\$1,227	1.75%	12.65%	
16	Great Plains Energy	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.85	75%	5.4%	7.5%	12.16%	\$4,135	1.19%	13.35%	
17	IDACORP, Inc.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.80	75%	5.0%	7.1%	11.84%	\$3,176	1.72%	13.56%	
18	ITC Holdings Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.65	75%	4.1%	6.2%	10.90%	\$6,179	0.93%	11.83%	
19	NextEra Energy, Inc.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.70	75%	4.4%	6.5%	11.21%	\$43,596	-0.33%	10.88%	
20	Northeast Utilities	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.75	75%	4.7%	6.8%	11.53%	\$15,605	0.80%	12.33%	
21	NorthWestern Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.70	75%	4.4%	6.5%	11.21%	\$2,065	1.75%	12.96%	
22	OGE Energy Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.85	75%	5.4%	7.5%	12.16%	\$7,415	0.93%	13.09%	
23	Otter Tail Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.95	75%	6.0%	8.1%	12.79%	\$1,129	1.75%	14.54%	
24	PG&E Corp.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.65	75%	4.1%	6.2%	10.90%	\$23,656	-0.33%	10.57%	
25	Pinnacle West Capital	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.70	75%	4.4%	6.5%	11.21%	\$6,682	0.93%	12.14%	
26	Portland General Elec.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.80	75%	5.0%	7.1%	11.84%	\$2,848	1.72%	13.56%	
27	Pub Sv Enterprise Grp	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.75	75%	4.7%	6.8%	11.53%	\$20,603	0.80%	12.33%	
28	Sempra Energy	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.75	75%	4.7%	6.8%	11.53%	\$27,146	-0.33%	11.20%	
29	Westar Energy	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.75	75%	4.7%	6.8%	11.53%	\$4,870	1.19%	12.72%	
30	Xcel Energy, Inc.	2.3%	10.8%	13.1%	4.7%	8.4%	25%	2.1%	0.70	75%	4.4%	6.5%	11.21%	\$16,931	0.80%	12.01%	
	Range of Reasonablen	ess										10.58	o 1	2.79%	10.25	% 1	14.54%
	Midpoint												11.68%			12.39%	
	Median												11.53%			12.33%	
	Average												11.49%			12.40%	

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retreived Sep. 19, 2014)

(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Sep. 22, 2014).

(c) Average yield on 30-year Treasury bonds for 2015-2019 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Aug. 22, 2014); IHS Global Insight, U.S. Economic Outlook at 79 (May 2014); & Blue Chip Financial Forecasts, Vol. 33, No. 6 (Jun. 1, 2014).

(d) Morin, Roger A., "New Regulatory Finance," Public Utilities Reports, Inc. at 190 (2006).

(e) See Exhibit No. NYT-28.

(f) www.valueline.com (retrieved Nov. 5, 2014).

(g) Morningstar, "2014 Ibbotson SBBI Market Report," at Table 10 (2014).

HISTORICAL BOND YIELDS

Cu	rrent Equity Risk Premium	
(a)	Avg. Yield Over Study Period	6.04%
(b)	Average BBB Utility Bond Yield - Historical	4.70%
	Change in Bond Yield	-1.34%
(c)	Risk Premium/Interest Rate Relationship	<u>-0.7244</u>
	Adjustment to Average Risk Premium	0.97%
(a)	Average Risk Premium over Study Period	6.74%
	Adjusted Risk Premium	7.71%
Im	plied Cost of Equity - Gas Pipelines	
(b)	Average BBB Utility Bond Yield - Historical	4.70%
	Adjusted Equity Risk Premium	<u>7.71%</u>
	Risk Premium Cost of Equity - Gas Pipeline	12.41%
	Less: Average Spread / Gas Pipeline - Electric Utility ROE	<u>2.02%</u>
	Implied Electric ROE	10.40%

- (a) See Exhibit No. NYT-35, p. 3.
- (b) Six-month average yield for May 2014 Oct. 2014 based on data from Moody's Investors Service, www.moodys.credittrends.com.
- (c) See Exhibit No. NYT-35, p. 6.

KISK PKEMIUM - GAS PIP

10.97%

PROJECTED BOND YIELDS

<u>Current Equity Risk Premium</u>		
(a) Avg. Yield Over Study Period		6.04%
(b) Average BBB Utility Bond Yield	- Projected 2015-2019	6.77%
Change in Bond Yield		0.73%
(c) Risk Premium/Interest Rate Rela	ationship	<u>-0.7244</u>
Adjustment to Average Risk	Premium	-0.53%
(a) Average Risk Premium over Stu	ıdy Period	<u>6.74%</u>
Adjusted Risk Premium		6.21%
Implied Cost of Equity		
(b) Average BBB Utility Bond Yield	- Projected 2015-2019	6.77%
Adjusted Equity Risk Premium		<u>6.21%</u>
Risk Premium Cost of Equity -	Gas Pipeline	12.98%
Less: Average Spread / Gas Pipelir	<u>2.02%</u>	

Implied Electric ROE

- (a) See Exhibit No. NYT-35, p. 3.
- (b) Based on data from IHS Global Insight, U.S. Economic Outlook at 79 (May 2014); Energy Information Administration, Annual Energy Outlook 2014 (May 7, 2014); & Moody's Investors Service at www.credittrends.com.
- (c) See Exhibit No. NYT-35, p. 6.

Exhibit No. NYT-35 Page 3 of 6

IMPLIED RISK PREMIUM

	(a)	(b)	
	Average		
	Pipeline	BBB Utility	Risk
Year	ROE	Bond Yield	<u>Premium</u>
2006	12.86%	6.32%	6.54%
2007	13.07%	6.33%	6.74%
2008	12.79%	7.25%	5.55%
2009	13.18%	7.06%	6.12%
2010	12.61%	5.98%	6.63%
2011	13.31%	5.57%	7.74%
2012	12.65%	4.86%	7.79%
2013	11.79%	<u>4.98%</u>	<u>6.81%</u>
		6.04%	6.74%
		(c)	
	Average	Average	
	Pipeline	Electric	
<u>Year</u>	ROE	Base ROE	<u>Spread</u>
2006	12.86%	11.01%	1.85%
2007	13.07%	10.96%	2.11%
2008	12.79%	10.82%	1.98%
2009	13.18%	10.84%	2.34%
2010	12.61%	10.64%	1.97%
2011	13.31%	10.67%	2.64%
2012	12.65%	10.96%	1.69%
2013	11.79%	10.24%	<u>1.55%</u>
			2.02%

(a) Exhibit No. NYT-35, pp. 4-5.

(b) Moody's Investors Service, www.credittrends.com.

(c) Exhibit No. NYT-30, p. 3.

ALLOWED ROE

			Allowed
<u>Date</u>	Docket No.	Company	<u>ROE</u>
Feb-06	RP06-63	Guardian Pipeline LLC.	14.00%
Mar-06	CP05-372	Midwestern Gas Transmission Co.	13.00%
Mar-06	RP04-274	Kern River Gas Transmission Co.	9.34%
May-06	CP02-378	Cameron Interstate Pipeline, LLC	14.00%
Jun-06	CP04-411	Crown Landing LLC; Texas Eastern Transmission, LP	12.75%
Jun-06	CP05-83	Port Arthur Pipeline, L.P.	14.00%
Jun-06	CP05-130	Dominion Cove Point LNG	13.00%
Jun-06	CP05-360	Creole Trail LNG, L.P.	14.00%
Jul-06	CP06-71	Carolina Gas Transmission Corp.; SCG Pipeline, Inc.	12.70%
Jul-06	CP06-5	Empire State Pipeline	12.50%
Sep-06	CP06-354	Rockies Express Pipeline LLC	13.00%
Sep-06	CP06-167	Questar Overthrust Pipeline Co.	11.75%
Oct-06	RP04-274	Kern River Gas Transmission Co.	11.20%
Oct-06	CP06-61	North Baja Pipeline, LLC	14.00%
Dec-06	CP06-5	Empire Pipeline, Inc.	12.50%
Dec-06	CP98-150	Millennium Pipeline Co.	14.00%
Feb-07	CP06-403	Northern Natural Gas Co.	13.42%
Mar-07	CP06-448	Kinder Morgan Louisiana Pipeline LLC	14.00%
Apr-07	CP07-25	Questar Pipeline Company	11.75%
Apr-07	CP06-407	Missouri Interstate Gas	11.20%
Apr-07	CP06-89	WTG Hugoton, LP and Northern Natural Gas Co.	11.20%
Apr-07	CP06-471	Elba Express Co.	14.00%
May-07	CP07-44	Southeast Supply Header, LLC	13.50%
Jun-07	CP06-115	Texas Eastern Transmission LP	12.75%
Jun-07	CP00-6	Gulfstream Natural Gas Supply, L.L.C.	14.00%
Jun-07	CP07-14	Wyoming Interstate Co., Ltd.	12.50%
Jul-07	CP06-454	Kinder Morgan Illinois Pipeline LLC	13.00%
Jul-07	CP07-76	Sonora Pipeline, LLC	14.00%
Sep-07	CP07-32	Gulf South Pipeline LP	12.25%
Sep-07	CP05-91	Calhoun LNG/Point Comfort Pipeline, LP	14.00%
Oct-07	RP07-38	Eastern Shore Natural Gas Co.	13.60%
Dec-07	CP07-8	Guardian Pipeline, L.L.C.	14.00%
Apr-08	CP07-398	Gulf Crossing Pipeline LLC	13.50%
May-08	CP07-208	Rockies Express Pipeline LLC	13.00%
May-08	CP07-417	Texas Gas Transmission. LLC	11.50%

ALLOWED ROE

			Allowed
Date	<u>Docket No.</u>	Company	ROE
Jul-08	CP08-65	Midcontinent Express Pipeline LLC	13.00%
Jul-08	CP08-17	Cimarron River Pipeline LLC	11.20%
Jul-08	CP08-5	Southern Natural Gas Co.	12.00%
Aug-08	CP08-65	Tennessee Gas Pipeline Co.	11.50%
Aug-08	CP08-398	White River Hub, LLC	13.00%
Sep-08	CP06-365	Bradwood Landing LLC/NorthernStar Energy LLC	14.00%
Sep-08	CP08-152	North Baja Pipeline LLC	14.00%
Nov-08	RP08-632	MarkWest Pioneer, L.L.C.	14.00%
Jan-09	CP07-62	AES Sparrows Point LNG/Mid-Atlantic Express L.L.C.	14.00%
Jan-09	RP08-350	Southern Star Central Pipeline, Inc.	11.25%
Jan-09	RP04-274	Kern River Gas Transmission Co.	11.55%
Feb-09	CP09-3	T.W. Phillips Pipeline Corp.	14.00%
Jun-09	CP08-429	Kern River Gas Transmission Co.	13.25%
Sep-09	CP09-54	Ruby Pipeline, L.L.C.	14.00%
Nov-09	CP09-17	Florida Gas Transmission Co.	13.00%
Nov-09	CP09-68	Texas Eastern Transmission, LP	12.75%
Dec-09	CP09-433	Fayetteville Express Pipeline LLC	14.00%
Dec-09	CP07-442	Pacific Connector Gas Pipeline, LP	14.00%
Apr-10	CP09-161	Bison Pipeline LLC	14.00%
Apr-10	CP09-460	ETC Tiger Pipeline	14.00%
May-10	CP09-444	Tennessee Gas Pipeline Co.	11.50%
Sep-10	CP10-14	Kern River Transmission Co.	11.55%
Nov-10	CP10-468	Northern Border Pipeline Co.	12.00%
Jan-11	CP10-194	Central New York Oil & Gas Co.	13.50%
Feb-11	RP08-306	Portland Natural Gas Transmission System	12.99%
Apr-11	CP11-19	Trunkline Gas Co., LLC	12.56%
Jul-11	CP09-54	Ruby Pipeline L.L.C.	14.00%
Nov-11	CP10-480	Central New York Oil & Gas Co.	13.50%
Jan-12	CP11-46	Kern River Gas Transmission Co.	11.55%
Feb-12	CP11-508	Texas Eastern Transmission, LP	12.75%
May-12	CP11-56	Texas Eastern Transmission, LP	12.75%
May-12	CP12-31	Southern LNG, L.L.C.	12.50%
Jun-12	CP12-4	Southern Natural Gas CoHigh Point Gas Trans.	12.99%
Jun-12	CP11-543	ANR Pipeline CoTC Offshore LLC	12.99%
Sep-12	CP13-21	Alliance Pipeline L.P.	12.99%
Mar-13	CP12-494	Gas Transmission Northwest	12.20%
Mar-13	RP10-729	Portland Natural Gas Transmission System	11.59%
May-13	CP12-490	Tennessee Gas Pipeline Co.	11.59%

REGRESSION RESULTS

Regression St	atistics							
Multiple R	0.844037338							
R Square	0.712399027							
Adjusted R Square	0.664465532							
Standard Error	0.004365541							
Observations	8							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	0.000283244	0.000283244	14.86223821	0.008409442			
Residual	6	0.000114348	1.90579E-05					
Total	7	0.000397591						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.111176559	0.011455938	9.704710618	6.86983E-05	0.083144869	0.139208249	0.083144869	0.139208249
X Variable 1	-0.724382695	0.187899644	-3.855157352	0.008409442	-1.184156897	-0.264608492	-1.184156897	-0.264608492

DCF MODEL

NON-UTILITY GROUP

			(a)	(b)	(c)	(d)	(e)	(f)	(g)	
			Di	Growth Rate						
	<u>Company</u>	<u>Industry Group</u>	6-Mo. Average	<u>Adjustment</u>	Adjusted	IBES	<u>V-Line</u>	<u>Average</u>	<u>Cost of Equ</u>	<u>uity</u>
1	Church & Dwight	Household Products	1.81%	1.0485	1.90%	9.88%	9.50%	9.69%	11.59%	
2	Coca-Cola	Beverage	2.95%	1.0258	3.03%	3.83%	6.50%	5.17%	8.20%	
3	Colgate-Palmolive	Household Products	2.18%	1.0475	2.29%	8.50%	10.50%	9.50%	11.79%	
4	ConAgra Foods	Food Processing	3.17%	1.0434	3.30%	9.35%	8.00%	8.68%	11.98%	
5	Gen'l Mills	Food Processing	3.14%	1.0338	3.25%	6.50%	7.00%	6.75%	10.00%	
6	Hormel Foods	Food Processing	1.63%	1.0550	1.72%	11.00%	11.00%	11.00%	12.72%	
7	Johnson & Johnson	Medical Supply	2.73%	1.0326	2.82%	6.55%	6.50%	6.53%	9.34%	
8	Kellogg	Food Processing	2.97%	1.0308	3.06%	5.80%	6.50%	6.15%	9.21%	
9	Kimberly-Clark	Household Products	2.95%	1.0393	3.07%	6.70%	9.00%	7.85%	10.92%	
10	McCormick & Co.	Food Processing	2.14%	1.0415	2.23%	8.60%	8.00%	8.30%	10.53%	
11	McDonald's Corp.	Restaurant	3.35%	1.0311	3.45%	5.43%	7.00%	6.22%	9.67%	
12	PepsiCo, Inc.	Beverage	2.84%	1.0407	2.95%	7.76%	8.50%	8.13%	11.08%	
13	Procter & Gamble	Household Products	3.16%	1.0395	3.28%	8.30%	7.50%	7.90%	11.18%	
14	Smucker (J.M.)	Food Processing	2.40%	1.0390	2.50%	7.60%	8.00%	7.80%	10.30%	
15	Verizon Com.	Telecommunications	4.32%	1.0380	4.49%	7.18%	8.00%	7.59%	12.08%	
16	Wal-Mart Stores	Retail Store	2.52%	1.0301	2.60%	5.54%	6.50%	6.02%	8.62%	
Range of Reasonableness									8.20%	12.72%
	Midpoint								10.46%	
	Median								10.73%	
	Average								10.57%	

Average

(a) Six-month average dividend yield for May - October 2014.

- (b) 1 + 0.5 x (f).
- (c) (a) x (b).

(d) www.finance.yahoo.com (retreived Nov. 5, 2014)

(e) The Value Line Investment Survey (Aug, 22, Aug. 29, Sep. 19. Sep. 26, Oct. 24 & Oct. 31, 2014)

(f) Average of (d) and (e).

(g) (c) + (f).