Attachment C

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Orange and Rockland Utilities, Inc.	**)**	**Docket No. ER24-___-000**

PREPARED DIRECT TESTIMONY OF ADRIEN M. MCKENZIE, CFA

Dated: March 25, 2024

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GLOSSARY OF ACRONYMS

CAPM	Capital Asset Pricing Model
CLCPA	Climate Leadership and Community Protection Act
Commission or FERC	Federal Energy Regulatory Commission
CPI	Consumer Price Index
D.C. Circuit	United States Court of Appeals for the District of Columbia Circuit
DCF	Discounted Cash Flow
EIA	Energy Information Administration
EPS	earnings per share
FPA	Federal Power Act
FOMC	Federal Open Market Committee
GDP	Gross Domestic Product
IBES	Institutional Brokers' Estimate System, now Refinitiv I/B/E/S Estimates
MISO TOs	Transmission-owning members of the Midcontinent Independent System Operator, Inc.
Moody's	Moody's Investors Service, Inc.
NETOs	Transmission-owning members of ISO New England
NYISO	New York Independent System Operator, Inc.
NYPSC	New York State Public Service Commission
NYSE	New York Stock Exchange
OATT	Open Access Transmission Tariff
O&R	Orange and Rockland Utilities, Inc.
PCE	Personal Consumption Expenditure Price Index
ROE	return on equity
RTFC	Regulated Transmission Facilities Charge
RTO	regional transmission organization
S&P	S&P Global Ratings
SPP	Southwest Power Pool, Inc.
Value Line	The Value Line Investment Survey

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Adrien M. McKenzie. My business address is 3907 Red River St., Austin, Texas 78751.

Q. In what capacity are you employed?

A. I am President of FINCAP, Inc., a firm providing financial, economic, and policy consulting services to business and government.

Q. Please describe your qualifications and experience.

A. The details of my qualifications and experience are included in Exhibit No. ORU-101 attached to my testimony.

A. Overview

Q. What is the purpose of your testimony?

A. My purpose is to present to the Commission my independent analysis of:

1. A just and reasonable ROE ceiling applicable to O&R local transmission projects approved by the NYPSC ("CLCPA Eligible Projects") under Rate Schedule 19 of the NYISO OATT.
2. A just and reasonable base ROE for O&R transmission projects that are eligible for cost recovery through the RTFC established under Rate Schedule 10 of the NYISO OATT.

Q. Please briefly describe Rate Schedule 19.

A. Rate Schedule 19 of NYISO's OATT provides a cost recovery mechanism for local transmission upgrades determined by the NYPSC to be necessary to meet New York State's climate and renewable energy goals, as required under New York State law.[1] To recover costs under Rate Schedule 19, transmission owners in New York that develop,

[1] These New York State laws include, but are not limited to, the CLCPA.

construct and own CLCPA Eligible Projects, including O&R,[2] must establish and have on file with the Commission a cost of service formula rate template for such local transmission projects. In this proceeding, O&R has proposed a formula rate template and associated implementation protocols for determination of annual revenue requirements for CLCPA Eligible Projects recoverable on a statewide basis under Rate Schedule 19.

Q. How is the ROE established under the formula rate template for CLCPA projects?

A. Under Rate Schedule 19, each transmission owner's revenue requirements will be calculated using the lower of the NYPSC-approved ROE or an ROE approved by the Commission. As a result, the ROE approved by the Commission for Rate Schedule 19 will constitute a ceiling ROE. This assures that the ROE for CLCPA Eligible Projects will not exceed a level that has been determined by the Commission to be just and reasonable and not unduly discriminatory or preferential.

Q. How do you evaluate the ceiling ROE for Rate Schedule 19?

A. As noted above, the ROE applicable to CLCPA Eligible Projects will be set by the NYPSC, so long as it does not exceed a just and reasonable range determined by FERC. Establishing the upper boundary for an ROE under Rate Schedule 19 is analogous to the evaluation of an existing ROE under Section 206 of the FPA, where the Commission's policy is to reference a "presumptively reasonable" range equal to the middle-third of the composite ROE zone for a utility of average risk.[3] Given the

[2] In addition to O&R, the other investor-owned transmission owners in New York presently responsible for local transmission districts include Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric and Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, and Rochester Gas and Electric Corporation. Each transmission owner in New York is responsible to secure Commission approval of annual revenue requirements for any CLCPA Eligible Projects before any statewide cost allocation and recovery may occur pursuant to Rate Schedule 19.

[3] *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569-A, 171 FERC ¶ 61,154 (2020) ("Opinion No. 569-A") at P 194, *vacated & remanded sub nom. MISO Transmission Owners v. FERC,* No. 16-1325 (D.C. Cir. 2022).

specific nature of the ROE ceiling under Rate Schedule 19 and in an effort to reduce controversy, I evaluate the ROE ceiling applicable to CLCPA Eligible Projects using the two-step DCF methodology and the CAPM, which are the two methods adopted in Opinion No. 569-A that produce an ROE range.

Q. Please briefly describe Rate Schedule 10.

A. The RTFC established under Rate Schedule 10 of the NYISO OATT recovers the costs of eligible regulated transmission projects selected under the Comprehensive System Planning Process requirements set forth in Attachment Y of the NYISO OATT. These projects include NYISO-selected Public Policy Transmission Projects, which O&R can recover as a developer, as well as related projects that O&R is eligible to recover as a transmission owner.[4]

Q. How do you evaluate the base ROE for Rate Schedule 10?

A. Consistent with the ROE methodology adopted in Opinion No. 569-A, my evaluation of a just and reasonable base ROE relies on the results of the two-step DCF model, the CAPM, and the Risk Premium method. In addition, my testimony supports supplementing these methods to include the results of the Expected Earnings approach.

Q. How is your testimony organized?

A. I first summarize my conclusions and recommendations regarding a just and reasonable ROE ceiling for O&R applicable to Rate Schedule 19 and a base ROE applicable to Rate Schedule 10. Next, I present the details of the technical studies I rely on in reaching my conclusions. Consistent with the Commission's use of multiple financial

[4] An example of such a latter project would include a Designated Public Policy Project that is part of a Public Policy Transmission Project that the NYISO Board of Directors has selected under Attachment Y or a Designated Network Upgrade Facility designated pursuant to Section 22.9.6 of Attachment P to the NYISO OATT and associated with a Public Policy Transmission Project selected by the NYSIO Board of Directors to address a Public Policy Transmission Need (as recently accepted by the Commission in *N.Y. Indep. Sys. Operator, Inc.*, 178 FERC ¶ 61,179 (2022) and by a letter order in Docket No. ER23-1151-000 (April 5, 2023)).

models,[5] my analysis includes applications of the DCF model, the CAPM, the Risk Premium method, and the Expected Earnings approach. Recognizing the D.C. Circuit's recent decision to vacate Opinion No. 569-A based on its determination that the Commission had not adequately addressed earlier criticisms of Risk Premium method,[6] my testimony also briefly responds to these issues. Similarly, I address the specific concerns raised in Opinion Nos. 569 and 569-A regarding the Expected Earnings approach. These analyses are well-supported and relied upon to evaluate investors' required returns, and, as I demonstrate below, the determination of a just and reasonable base ROE for O&R should rely on these methodologies. Finally, I also provide a DCF analysis based on a proxy group of low risk non-utility firms, which serves as an additional reference point in evaluating a just and reasonable base ROE.

Q. What ROE ceiling do you recommend for O&R applicable to Rate Schedule 19?

A. Based on the results of my analyses, I recommend an ROE ceiling of 11.20% for O&R applicable to CLCPA Eligible Projects recovered under Rate Schedule 19.

Q. What base ROE do you recommend for O&R applicable to Rate Schedule 10?

A. I recommend a base ROE of 10.7% for O&R applicable to transmission projects recovered under Rate Schedule 10.

B. Regulatory Standards

Q. What is the role of the ROE in setting a utility's rates?

A. The ROE compensates shareholders for the use of their capital to finance the investment necessary to provide utility service. Investors commit capital only if they expect to earn a return on their investment commensurate with returns available from

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[5] *Coakley v. Bangor Hydro-Elec. Co.*, Order Directing Briefs, 165 FERC ¶ 61,030 (2018) ("Coakley Briefing Order"); *Ass'n of Buss. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Order Directing Briefs, 165 FERC ¶ 61,118 (2018) ("MISO Briefing Order"); *Ass'n of Buss. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 (2019) ("Opinion No. 569").

[6] *MISO Transmission Owners v. FERC,* No. 16-1325 (D.C. Cir. 2022).

alternative investments with comparable risks. To be consistent with sound regulatory economics and the standards set forth by the U.S. Supreme Court in *Bluefield*[7] and *Hope*,[8] a utility's allowed ROE should be sufficient to: (1) fairly compensate capital invested in the utility; (2) enable the utility to offer a return adequate to attract new capital on reasonable terms; and (3) maintain the utility's financial integrity.

Q. What ultimately governs the selection of a fair ROE?

A. The Commission has recognized that a reasonable point estimate ROE should be determined based on the facts specific to each proceeding.[9] That point estimate must also meet the standards mandated by the U.S. Supreme Court.[10] As the Commission has reaffirmed, "[t]he Commission's ultimate task is to ensure that the resulting ROE satisfies the requirements of Hope and Bluefield."[11] This determination requires the Commission to consider all of the available evidence and identify an ROE that is just, reasonable, and sufficient to support O&R's need to attract capital and earn a competitive return and, at the same time, promote the Commission's goal of encouraging investment in electric utility infrastructure.

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[7] *Bluefield Waterworks & Improvement Co. v. Pub. Serv. Comm'n of W. Va*., 262 U.S. 679 (1923) ("*Bluefield*").

[8] *FPC v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*").

[9] *See, e.g., Midwest Indep. Transmission Sys. Operator, Inc.*, 106 FERC ¶ 61,302 at P 8 (2004) ("*Midwest ISO*"), *aff'd in relevant part sub. nom., Pub. Serv. Comm'n of Ky. v. FERC*, 397 F.3d 1004 (D.C. Cir. 2005).

[10] *See, e.g., id.,* 106 FERC ¶ 61,302 at PP 13-14. The Commission observed that:

> [W]e 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.

Id. at P 13 (quoting *Bluefield*, 262 U.S. at 693).

[11] *Coakley Mass. Attorney Gen. v. Bangor Hydro-Electric Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at P 144 (2014) ("Opinion No. 531"), *order on paper hearing*, Opinion No. 531-A, 149 FERC ¶ 61,032 (2014), *order on reh'g*, Opinion No. 531-B, 150 FERC ¶ 61,165 (2015), *vacated & remanded sub nom. Emera Me. v. FERC,* 854 F.3d 9 (D.C. Cir. 2017).

Q. How does the evaluation of a just and reasonable ROE relate to attracting private capital to utility infrastructure investment?

A. Under the competitive market paradigm that serves as the foundation for investment choices, investors' expected ROE is the key economic signal that allocates finite capital among competing opportunities. The allowed ROE and a reasonable opportunity to earn it are key to ensuring the flow of investment capital for new utility facilities. Apart from the impact that economic and market turmoil can have on the availability of capital, electric utility facilities compete with alternative investments. Utilities and their investors must commit huge sums to expand the transmission grid with new and upgraded facilities and additional funding will be provided only if investors anticipate an opportunity to earn a return that is sufficient to compensate for the associated risks and commensurate with returns available from alternative investments of comparable risk.

Q. Is O&R faced with financial pressures associated with planned capital expenditures?

A. Yes. O&R's plans call for significant incremental capital investment to address system needs. This may include transmission projects to achieve the CLCPA's goals eligible for cost recovery under Rate Schedule 19, and transmission projects eligible for cost recover under the NYISO's Comprehensive System Planning Process. In light of these capital requirements and financial pressures, support for O&R's financial integrity and flexibility will be instrumental in attracting the capital necessary to fund these requirements.

Q. Is it important that investors have confidence that the regulatory environment is stable and constructive?

A. Yes. Past challenges for the economy and capital markets highlight the benefits of a fair and balanced ROE, and any departure from the path of supporting utility financial strength through a sound and stable ROE policy would be extremely shortsighted.

Uncertainty and volatility undermine investor confidence, and regulatory signals are the primary driver of investors' risk assessments for utilities. Securities analysts study FERC and state commission orders and regulatory policy statements closely to gauge the financial impact of regulatory actions and to advise investors accordingly. Nevertheless, with respect to ROE, the Commission has recognized the potential disincentive to investment stemming from uncertainties in the administrative process for determining a just and reasonable ROE. In Order No. 679-A, the Commission concluded that "our hearing procedures for determining ROE can create uncertainty for investors," and noted that:

> Although our processes are designed to provide a just and reasonable return, we recognize that there can be significant uncertainty as to the ultimate return because of the uncertainties associated with administrative determinations (*e.g.*, selection of the proxy group, changes in growth rates, etc.) This can itself constitute a substantial disincentive to new investment.[12]

If regulatory actions instill confidence that the regulatory environment is supportive, investors will provide the capital necessary to support needed investment to expand transmission infrastructure, reduce congestion, improve reliability, and secure access to new generation, including wind and other renewable resources. Alternatively, absent a commitment by regulators to promote a sound and stable environment for utility investment and follow through on expectations for ROEs that are competitive with alternative investment opportunities, the flow of capital into utility infrastructure may not continue. As a result, the need for a stable and constructive regulatory environment, as well as regulatory certainty in supporting utility infrastructure investment, is as relevant today as ever.

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[12] *Promoting Transmission Investment Through Pricing Reform*, Order No. 679-A, 117 FERC ¶ 61,345 at P 69 (2006), *order on reh'g*, 119 FERC ¶ 61,062 (2007).

II. ROE CEILING AND BASE ROE FOR O&R

Q. What is the purpose of this section of your testimony?

A. This section of my testimony reviews ROE policies at the Commission and examines conditions in the capital markets and the general economy. I then summarize the results of my analysis and present my independent evaluation of a just and reasonable ROE ceiling for O&R applicable to Rate Schedule 19, as well as a base ROE for O&R applicable to Rate Schedule 10.

A. ROE Methodology

Q. Please describe the ROE framework established by Opinion No. 569-A.

A. In Opinion No. 569-A, the Commission relied on three financial models to establish a just and reasonable ROE for the MISO TOs: (1) a two-step DCF model, (2) the CAPM, and (3) the Risk Premium approach. Under the methodology adopted in Opinion No. 569-A, the composite zone of reasonableness is computed by averaging the low and high boundaries of each model.[13] To administer Section 206 of the FPA, the Commission stratified the composite zone of reasonableness into three equal parts, which it characterized as "below average risk," "average risk," and "above average risk" ranges.[14] For a utility of average risk, the existing ROE is presumptively just and reasonable if it falls within the middle third of the composite zone. With the exception of minor corrections to certain inputs to the Risk Premium approach, the Commission affirmed these findings in Opinion No. 569-B.[15]

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[13] Because the Risk Premium approach produces a single point estimate and not a range, the Commission imputed a range around the point estimate based on the average spread between the low and high boundaries of the two-step DCF and CAPM ranges.

[14] Opinion No. 569-A at P 194.

[15] *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569-B, 173 FERC ¶ 61,159 (2020) ("Opinion No. 569-B"), *vacated & remanded sub nom. MISO Transmission Owners v. FERC*, No. 16-1325 (D.C. Cir. 2022).

More recently, on August 9, 2022, the D.C. Circuit vacated the ROE framework established in Opinion No. 569-A.[16] Specifically, the court found that the Commission had failed to offer a reasoned explanation for its decision to reintroduce the Risk Premium model in Opinion No. 569-A after initially rejecting it in Opinion No. 569. Ruling that the Commission's reliance on the Risk Premium approach was arbitrary and capricious, the D.C. Circuit vacated the underlying orders.

Q. Did the D.C. Circuit take issue with any other aspects of the Commission's ROE framework?

A. No. While a variety of challenges were raised to the two-step DCF and CAPM methodologies adopted by the Commission in Opinion No. 569-A, the court concluded that these arguments were unpersuasive.[17] Similarly, the D.C. Circuit also rejected an array of complaints to the Commission's policy that establishes presumptively reasonable ranges for purposes of administering FPA Section 206 by dividing the overall composite ROE range of reasonableness into thirds.

Q. Is the use of multiple approaches to evaluate an ROE consistent with investor behavior and accepted regulatory practice?

A. Yes. The actual return that investors require is not directly observable. Different methodologies have been developed to estimate investors' required return on capital, but all such methodologies are simply theoretical tools and generally produce a range of estimates based on different assumptions and inputs. As the Commission has noted, "[t]he determination of rate of return on equity starts from the premise that there is no single approach or methodology for determining the correct rate of return."[18]

There is no failsafe method to estimate investors' required cost of equity and there is no basis to conclude that investors rely on any one single method in arriving at

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[16] *MISO Transmission Owners v. FERC*, No. 16-1325 (D.C. Cir. 2022).

[17] *Id.*

[18] *Nw. Pipeline Co.*, Opinion No. 396-C, 81 FERC ¶ 61,036 at 61,188 (1997).

the prices they are willing to pay for utility common stock. A publication authored for the Society of Utility and Regulatory Financial Analysts confirmed this view, concluding that:

> Each model requires the exercise of judgment as to the reasonableness of the underlying assumptions of the methodology and on the reasonableness of the proxies used to validate the theory. Each model has its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises, most of which cannot be validated empirically. Investors clearly do not subscribe to any singular method, nor does the stock price reflect the application of any one single method by investors.[19]

As this treatise succinctly observed, "no single model is so inherently precise that it can be relied on solely to the exclusion of other theoretically sound models."[20] Similarly, *New Regulatory Finance* concluded that:

> There is no single model that conclusively determines or estimates the expected return for an individual firm. Each methodology possesses its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises that cannot be validated empirically. Investors do not necessarily subscribe to any one method, nor does the stock price reflect the application of any one single method by the price-setting investor. There is no monopoly as to which method is used by investors. In the absence of any hard evidence as to which method outdoes the other, all relevant evidence should be used and weighted equally, in order to minimize judgmental error, measurement error, and conceptual infirmities.[21]

This is congruent with the advice of a recognized financial researcher and educator:

> Use more than one model when you can. Because estimating the opportunity cost of capital is difficult, only a fool throws away useful

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[19] David C. Parcell, *The Cost of Capital – A Practitioner's Guide*, Soc'y of Util. & Regulatory Fin. Analysts (2010) at 84.

[20] *Id*.

[21] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 429.

> information. That means you should not use any one model or measure mechanically and exclusively.[22]

Referencing the results of multiple approaches provides greater insight into the expectations and requirements of investors.

Q. Can a mechanical application of any specific ROE methodology be expected to produce reasonable outcomes in every case and under all circumstances?

A. No. The Commission has previously recognized that a just and reasonable ROE should be determined based on the facts specific to each proceeding, and noted, "[a]s an initial matter, we emphasize that the primary question to be considered here is not what constitutes the best overall method for determining ROE generically. . . ."[23] Rather, the question involves a determination of what ROE is most appropriate in each specific case.[24] As the Commission has recognized, this evaluation should not be based on the mechanical application of a single quantitative methodology (or for that matter a mechanical application of a series of models); nor should it depend on a single statistical measure of central tendency. No single financial model predicts the required ROE with absolute precision and all financial models are based on a series of assumptions that are affected differently by market conditions.

Q. Do you believe the Commission should continue to include the Risk Premium method in its ROE methodology?

A. Yes. While the D.C. Circuit concluded that Opinion No. 569-A did not offer adequate explanation for the Commission's decision to reinstate the Risk Premium method after rejecting it in Opinion No. 569, the Risk Premium method is a widely accepted and sound approach to estimating the cost of equity. It would be wholly appropriate for the

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[22] *Id.* at 430 (citing Stewart C. Myers, *On the Use of Modern Portfolio Theory in Public Utility Rate Cases: Comment*, Financial Management (Autumn, 1978) at 66-68).

[23] *Midwest ISO*, 106 FERC ¶ 61,302 at P 8.

[24] *Id.* This is consistent with *Emera Maine*, which noted that "[w]hether a rate . . . is unlawful depends on the particular circumstances of the case." *Emera Maine*, 854 F.3d at 19.

Commission to retain the Risk Premium model and simply provide the explanation the court believed was lacking, based on record evidence in that proceeding.

B. Outlook for Capital Costs

Q. Please summarize current economic and capital market conditions.

A. U.S. real GDP contracted 2.2% during 2020, but with the easing of lockdowns accompanying the COVID-19 vaccine rollout, the economic outlook improved significantly in 2021 with GDP growing at a pace of 5.8%, though growth was more subdued in 2022 at 1.9%.[25] More recently, increases in consumer spending and federal government spending led real GDP to grow by 2.2% and 2.1% in the first and second quarters of 2023, respectively.[26] Meanwhile, indicators of employment remained steady, with the national unemployment rate remaining unchanged from the previous month at 3.8% in September 2023.[27]

The underlying risk and price pressures associated with the COVID-19 pandemic were overshadowed by Russia's invasion of Ukraine on February 24, 2022 and the ongoing war. The dramatic increase in geopolitical risks has also been accompanied by heightened economic uncertainties as inflationary pressures due to COVID-19 supply chain disruptions were further stoked by sharp increases in global commodity prices. The substantial disruption in the energy economy and dramatic rise in inflation led to sharp declines in global equity markets as investors reacted to the related exposures.

Stimulative monetary and fiscal policies, coupled with supply-chain disruptions and rapid price rises in the energy and commodities markets, led to increasing concern that inflation would remain significantly above the Federal Reserve's longer-run

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[25] https://www.bea.gov/sites/default/files/2023-09/gdp2q23_3rd.pdf (last visited Oct. 24, 2023).

[26] *Id.*

[27] https://www.bls.gov/news.release/empsit.nr0.htm (last visited Oct. 24, 2023).

benchmark of 2%. In June 2022, CPI inflation peaked at its highest level since November 1981, at 9.1%. Since then, CPI inflation gradually moderated to 3.7% in September 2023.[28] The so-called "core" price index, which excludes more volatile energy and food costs, also rose at an annual rate of 3.7% in September 2023.[29] Similarly, PCE inflation rose 3.5% in August 2023, or 3.9% after excluding more volatile food and energy costs.[30] As Federal Reserve Chair Powell has noted:

> Inflation remains well above our longer-run goal of 2 percent. . . . Inflation has moderated somewhat since the middle of last year, and longer-term inflation expectations appear to remain well anchored, as reflected in a broad range of surveys of households, businesses, and forecasters, as well as measures from financial markets. Nevertheless, the process—process of getting inflation sustainably down to 2 percent has a long way to go.[31]

Investor confidence has also been tested by turmoil in the banking sector, which led to increased volatility in bond and equity markets. The Federal Reserve and U.S. Treasury took quick and dramatic action to shore up banks' liquidity needs and strengthen public confidence in the banking system, but as Moody's noted, "bank stress has added uncertainty to the outlook."[32] More recently, heightened geopolitical tensions in the Middle East have led to concerns over possible disruptions in crude oil supplies and attendant price volatility that could deliver another shock to the world economy.

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[28] https://www.bls.gov/news.release/cpi.nr0.htm (last visited Oct. 24, 2023).

[29] *Id.*

[30] https://www.bea.gov/news/2023/personal-income-and-outlays-august-2023 (last visited Oct. 12, 2023).

[31] Federal Reserve, *Transcript of Chair Powell's Press Conference* (Sep. 30, 2023), https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230930.pdf (last visited Oct. 24, 2023).

[32] Moody's Investors Service, *Baseline US macro forecasts unchanged but outlook more uncertain*, Sector Comment (Apr. 12, 2023).

Q. How have these developments impacted the Federal Reserve's monetary policies?

A. Beginning in March 2022, the FOMC has responded to concerns over accelerating inflation by steadily raising the benchmark range for the federal funds rate.[33] Chair Powell noted that:

> At today's meeting the Committee raised the target range for the federal funds rate by 1/4 percentage point, bringing the target range to 5-1/4 to 5-1/2 percent. We are also continuing the process of significantly reducing our securities holdings. With today's action, we have raised our policy rate by 5-1/4 percentage points since early last year. We have been seeing the effects of our policy tightening on demand in the most interest-rate-sensitive sectors of the economy, particularly housing and investment. It will take time, however, for the full effects of our ongoing monetary restraint to be realized, especially on inflation.[34]

In addition to these increases, Chair Powell has surmised that the significant draw-down of its balance sheet holdings that began in June 2022 could be the equivalent of another one quarter percent rate hike over the course of a year.[35]

Q. What impact do rising inflation expectations have on the return that equity investors require from electric utilities, including O&R?

A. Implicit in the required rate of return for long-term capital—whether debt or common equity—is compensation for expected inflation. This is highlighted in the textbook, Financial Management, Theory and Practice:

> The four most fundamental factors affecting the cost of money are (1) production opportunities, (2) time preferences for consumption, (3) risk, and (4) inflation.[36]

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[33] The FOMC is a committee composed of twelve members that serves as the monetary policymaking body of the Federal Reserve System.

[34] Federal Reserve, *Transcript of Chair Powell's Press Conference* (Jul. 26, 2023), https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230726.pdf (last visited Jul. 31, 2023).

[35] Federal Reserve, *Transcript of Chair Powell's Press Conference* (May 4, 2022), https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20220504.pdf.

[36] Eugene F. Brigham, Louis C. Gapenski, and Michael C. Ehrhardt, *Financial Management, Theory and Practice*, Ninth Edition (1999) at 126.

In other words, a part of investors' required return is intended to compensate for the erosion of purchasing power due to rising price levels. This inflation premium is added to the real rate of return (pure risk-free rate plus risk premium) to determine the nominal required return. As a result, higher inflation expectations lead to an increase in the cost of equity capital.

Q. Have these developments impacted the risks faced by utilities and their investors?

A. Yes. S&P reported that since 2020 credit ratings downgrades in the utility sector have outpaced upgrades by more than 3 to 1, with the median rating falling to the triple-B category for the first time.[37] S&P noted that, while inflation has moderated, it will continue to pressure credit quality in the utility industry, along with rising interest rates and higher capital spending.[38] Meanwhile, Fitch Ratings, Inc. noted that its deteriorating outlook for utilities "reflects continuing macroeconomic headwinds and elevated capex that are putting pressure on credit metrics in the high-cost funding environment."[39] Value Line echoed these sentiments for electric utilities, concluding that:

> **A Challenging Macroeconomic Backdrop Remains**
> Inflationary pressure, rising interest rates, and high energy and raw materials prices will likely remain a significant burden for most utilities. Inflationary headwinds are raising operating and maintenance costs as well as fuel prices. Meanwhile, the rising interest rate environment is leading income-oriented investors to the bond market, as well as increasing borrowing costs, which is especially significant for utilities as they usually have low returns on total capital and rely heavily on debt borrowings. We think many of these companies will continue to struggle with the higher costs related to the challenging macroeconomic climate in the near term.[40]

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[37] S&P Global Ratings, *The Outlook For North American Regulated Utilities Turns Stable*, RatingsDirect (May 18, 2023).

[38] *Id.*

[39] Fitch Ratings, Inc., *North American Utilities, Power & Gas Outlook 2024* (Dec. 6, 2023).

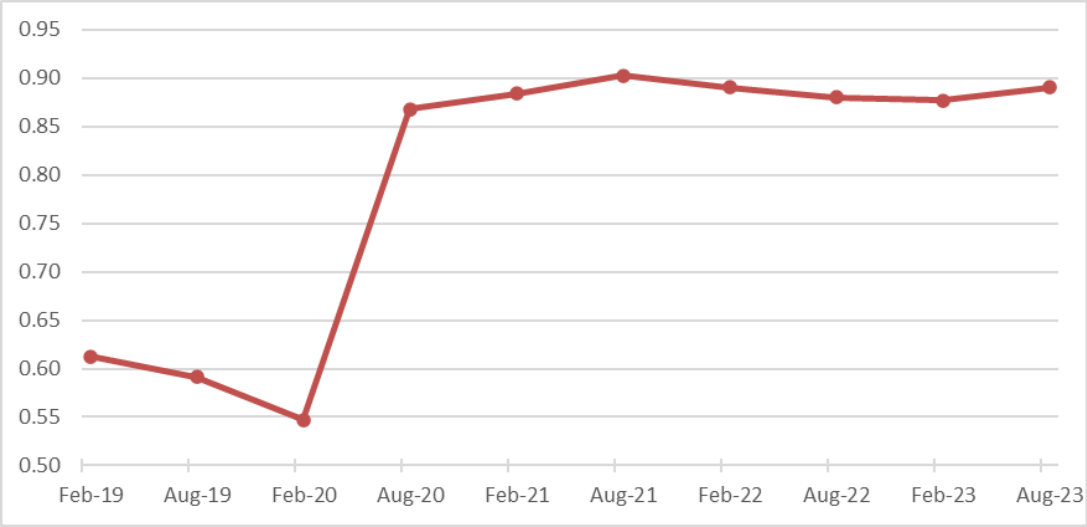
[40] The Value Line Investment Survey, *Electric Utility (Central) Industry* (Sep. 8, 2023) (emphasis original).

Q. Do changes in utility company beta values corroborate an increase in industry risk?

A. Yes. Beta measures a stock's price volatility relative to the overall market and reflects the tendency of a stock's price to follow changes in the market. The investment community relies on beta as an important guide to investors' risk perceptions. 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. Generally, a higher beta means the market perceives the stock to be riskier than a stock with a lower beta.

The significant shift in pre- and post-pandemic beta values for electric utilities is illustrated in Figure ORU-1 below. As illustrated there, the average beta value for the electric utilities covered by Value Line increased significantly with the beginning of the pandemic in March 2020, continued to increase during 2021, and has remained elevated. This dramatic increase in a primary gauge of investors' risk perceptions is further proof of the higher risk of electric utility common stocks.

FIGURE ORU-1
ELECTRIC UTILITY BETA VALUES



Q. Do these trends indicate that the cost of equity has increased?

A. Yes. While the cost of equity is unobservable, the Commission has noted that "prime interest rates and U.S. Treasury and public utility bond yields" may be considered as "indications of a change in capital market conditions."[41] Table ORU-1 below compares widely referenced capital market benchmarks during 2021 with those in October 2023.

TABLE ORU-1
CAPITAL MARKET BENCHMARKS

Series	October 2023[1]	2021	Change (bps)
10-Year Treasury Bonds	4.10%	1.44%	266
30-Year Treasury Bonds	4.23%	2.05%	218
Baa Utility Bonds	5.99%	3.35%	264
Prime Loan Rate	8.38%	3.25%	513
Federal Funds Rate	5.21%	0.13%	508

Source: https://fred.stlouisfed.org; Moody's Credit Trends.
[1] Six-month average yields.

As shown above, trends in bond yields since 2021 document a substantial increase in the returns on long-term capital demanded by investors. With respect to utility bond yields—which are the most relevant indicator in gauging the implications for the Company's common equity investors—average yields in October 2023 exceed 2021 levels by more than 260 basis points.

Q. Would it be reasonable to disregard the implications of current capital market conditions in evaluating a just and reasonable ROE ceiling or base ROE for O&R?

A. No. Current capital market conditions reflect the reality of the situation in which O&R must attract and retain capital. The standards underlying a fair rate of return require an authorized ROE for the Company that is competitive with other investments of

[41] *Coakley v. Bangor Hydro-Elec. Co.*, Order Directing Briefs, 165 FERC ¶ 61,030 at P 29 (2018).

comparable risk and sufficient to preserve its ability to maintain access to capital on reasonable terms. These standards can only be met by considering the requirements of investors over the time period when the rates established in this proceeding will be in effect. If the upward shift in investors' risk perceptions and required rates of return for long-term capital is not incorporated in the allowed ROE, the results will fail to meet the comparable earnings standard that is fundamental in determining the cost of capital. From a more practical perspective, failing to provide investors with the opportunity to earn a rate of return commensurate with O&R's risks will weaken its financial integrity, while hampering the Company's ability to attract necessary capital.

C. ROE Ceiling for Rate Schedule 19

Q. How do you evaluate an ROE ceiling applicable to Rate Schedule 19?

A. As noted earlier, under Rate Schedule 19 the ROE will be equal to the lower of the NYPSC-approved ROE for CLCPA Eligible Projects or an ROE approved by the Commission. My determination of the ROE ceiling relies on the same framework established by the Commission to evaluate the reasonableness of an existing ROE under Section 206 of the FPA. Specifically, the Commission has determined that the middle third of the composite zone of reasonableness constitutes a presumptively reasonable ROE range for a utility of average risk. I rely on O&R's credit ratings to establish the proxy group, and there are no extenuating circumstances that would otherwise distinguish the Company's investment risks.

Considering the specific nature of the ROE finding for purposes of implementing Rate Schedule 19, and in order to reduce the scope of potential controversy, I limit my evaluation of this ceiling ROE to include only the results of the two-step DCF and CAPM approaches, which are the two methodologies applied by the Commission in Opinion No. 569-A that produce an ROE range. Accordingly, I rely on the middle third of the ROE zone based on the composite results of the two-step DCF

and CAPM to evaluate a presumptively reasonable range for CLCPA Eligible Projects. The upper end of this range serves as my recommended ROE ceiling applicable to Rate Schedule 19.

Q. What is your recommended ROE ceiling for Rate Schedule 19?

A. The ROE estimates produced by the two-step DCF and CAPM approaches for the twenty-four risk-comparable electric utilities in the proxy group ("Electric Group") described subsequently in my testimony are presented on page 1 of Exhibit No. ORU-103 and summarized in Table ORU-2 below.[42]

TABLE ORU-2
ROE CEILING – SUMMARY OF RESULTS

		Middle Third	
Method	**Range**	**Lower**	**Upper**
Two-Step DCF	7.96% -- 11.42%	9.11% --	10.26%
CAPM			
IBES	9.78% -- 13.05%	10.87% --	11.96%
Value Line	10.02% -- 13.45%	11.16% --	12.31%
Average	9.90% -- 13.25%	11.02% --	12.13%
Composite ROE	**8.93% -- 12.33%**	**10.06% --**	**11.20%**

As explained above, I reference the middle third of the composite zone produced using the two-step DCF and CAPM approaches as the presumptively reasonable range for purposes of evaluating the ROE approved by the NYPSC for CLCPA Eligible Projects. I recommend an ROE ceiling for Rate Schedule 19 at the top of this presumptively reasonable range for a utility of average risk, or 11.20%.

[42] While I did not make an explicit adjustment to the results of my quantitative methods to include an adjustment for flotation costs, this is another legitimate consideration that supports the reasonableness of my evaluation of a just and reasonable ROE for O&R in this proceeding.

Q. Is this ceiling analogous to the ROE cap that the Commission has previously referenced in evaluating the reasonableness of ROE incentive adders?

A. No. The ROE ceiling that I am proposing for CLCPA Eligible Projects under Rate Schedule 19 considers only the middle one-third of the composite zone, which is the presumptively just and reasonable range for a utility of average risk. In evaluating a utility's total ROE inclusive of incentives, the Commission's established practice is to reference the top of the composite ROE zone of reasonableness.[43] In addition, given the specific circumstances of Rate Schedule 19 my analysis of a ceiling ROE is limited to the two-step DCF and CAPM, which are the two approaches used in Opinion No. 569-A that produce an ROE range. As discussed later in my testimony, the Risk Premium and Expected Earnings methods should also be considered in evaluating a just and reasonable base ROE for O&R and should be included in establishing the top of the composite zone for purposes of evaluating the reasonableness of ROE incentive adders.

D. Base ROE for Rate Schedule 10

Q. What financial models do you rely on to evaluate the base ROE for Rate Schedule 10?

A. Consistent with the ROE methodology adopted in Opinion No. 569-A, my evaluation of a just and reasonable base ROE relies on the results of the two-step DCF model, the CAPM, and the Risk Premium method.

In addition, my testimony supports supplementing these methods to include the results of the Expected Earnings approach. The Expected Earnings approach serves as a direct measure of the expected returns on equity that investors associate with companies of comparable risk and provides a meaningful guide to the return the utility should be expected to earn on its book equity investment. Given that rates are

[43] Order No. 679, 116 FERC ¶ 61,057 at PP 2, 91-93.

established on the basis of the book value of a utility's investment, this is a relevant measure of the ROE that is consistent with regulatory standards of comparable earnings and capital attraction established in *Hope* and *Bluefield*.

Q. What is the Commission's practice with respect to determining a point estimate from within the range of model results?

A. Beginning in approximately 2008, the Commission diverged from its former practice of relying exclusively on the midpoint to evaluate a just and reasonable ROE for electric utilities and began to distinguish between the measure of central tendency used in evaluating an ROE that applies to a group of utilities (midpoint) and the ROE for a single company (median).

Q. Do median values necessarily provide a superior basis to evaluate a just and reasonable base ROE for O&R in this case?

A. No. The cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives. When comparing the risks and prospects of O&R with other opportunities, there is no reason to believe that investors would distinguish between utilities where the ROE is established on a stand-alone basis and those that are subject to a single, RTO-wide ROE determination (e.g., the NETOs and the MISO TOs). Discriminating between single utilities and the NETOs or MISO TOs when evaluating a point estimate within the DCF range would violate the *Hope* and *Bluefield* standards governing the determination of a just and reasonable ROE in this case.

Capital markets are highly sophisticated and O&R must compete for capital with utilities across the nation, irrespective of any mechanical policies used by the Commission to establish a point estimate ROE from within a proxy group range. As a result, differentiating between a proceeding involving a single transmission utility and a joint filing of multiple RTO members ignores the requirements of investors, which are based on comparable-risk opportunities available in the capital markets. This is

consistent with the Commission's prior findings. In approving the use of a national proxy group over a regional proxy group, the Commission observed that the determination "is a question of capital attraction and comparability of risk." As the Commission concluded:

> We agree that "the NETOs must compete for capital with other utilities (and companies in other sectors) throughout the nation," and that investors are not limited to investments in geographically adjacent states but instead participate in national or international capital markets. If the NETOs' ROE is significantly less than the returns of utilities in other parts of the nation, capital will more readily flow to areas other than New England and the NETOs may not be able to attract sufficient capital consistent with the *Hope* and *Bluefield* standards.[44]

Similarly, there is no basis to arbitrarily categorize ROE policies based on an artificial distinction between utilities that are subject to a unified, RTO-wide ROE and single utilities, such as O&R. Rather, in order to meet the *Hope* and *Bluefield* standards, the Commission's evaluation must be premised on the risk perceptions and requirements of actual investors in the capital markets who do not determine their required returns for utilities based solely on whether the company's FERC-jurisdictional ROE happens to be fixed as the result of a single-company proceeding, or on an RTO-wide basis. As a result, a mechanical policy of referencing the median is not supported.

Q. Is considering midpoint results consistent with the principles underlying a just and reasonable base ROE for O&R?

A. Yes. As noted earlier, the Commission has recognized that a just and reasonable ROE should be determined based on the facts specific to each proceeding. The paramount consideration that must be reflected in the choice of a just and reasonable ROE is the need to ensure that the end result meets the standards mandated by the Supreme Court in *Hope* and *Bluefield* to ensure that a utility can attract capital. This determination is

[44] Opinion No. 531 at P 96 (footnotes omitted).

not a quest to ordain a single statistical measure of central tendency. Rather, the Commission must consider the available evidence to make an informed evaluation of an ROE that is just, reasonable, and sufficient to support investment.

Q. What are the implications for the Commission's policy of encouraging continued investment in transmission infrastructure?

A. Investors commit capital only if they expect to earn a return on their investment commensurate with returns available from alternative investments with comparable risks. If the utility is unable to offer a return similar to that available from other opportunities, investors will become unwilling to supply the capital on reasonable terms. In evaluating an investment in the transmission sector of the electric power industry, investors will naturally seek to maximize their expected rate of return for a given level of risk. Awarding a downward-biased ROE by mechanically applying a particular formula based on the median would put utilities such as O&R at a disadvantage, relative to the NETOs and MISO TOs.

Q. What are the results of the financial models discussed in your testimony for the proxy group of electric utilities?

A. The mean and midpoint values produced by the two-step DCF, CAPM, Risk Premium, and Expected Earnings approaches are presented on page 2 of Exhibit No. ORU-103 and summarized in Table ORU-3 below.

TABLE ORU-3
BASE ROE – SUMMARY OF RESULTS

Method	Range	Median	Midpoint
Two-Step DCF	7.96% -- 11.42%	9.48%	9.69%
CAPM			
IBES	9.78% -- 13.05%	11.23%	11.42%
Value Line	10.02% -- 13.45%	11.55%	11.74%
Average	9.90% -- 13.25%	11.39%	11.58%
Risk Premium	8.06% -- 12.82%	10.44%	10.44%
Expected Earnings	7.67% -- 15.15%	10.79%	11.41%
Composite ROE	**8.40% -- 13.16%**	**10.52%**	**10.78%**

As shown above, the results of my analysis produce a composite zone of reasonableness of 8.40% to 13.16%, with median and midpoint values averaging 10.52% and 10.78%, respectively.

Q. What conclusions do you reach regarding the median of the two-step DCF results?

A. As shown in Table ORU-3, application of the CAPM, Risk Premium, and Expected Earnings methodologies demonstrate that the 9.48% median value resulting from the Commission's two-step DCF method is far below investors' required return. Consistent with the Commission's prior determinations,[45] these methodologies show that the median of the DCF estimates would not produce a just and reasonable end result. And while weighing the results of other approaches equally with the two-step DCF model will improve the end result, diluting the downward bias of the two-step DCF model does not remove it.

[45] Opinion No. 531; Opinion No. 551.

Q. Do ROEs approved by the Commission in the past demonstrate that the two-step DCF median value is not a just and reasonable end result?

A. Yes. A review of the data presented on pages 2 through 4 of Exhibit No. ORU-109 reveals seventeen proceedings where the reference yield on Baa utility bonds was within 25 basis points of the 5.99% average for October 2023. Base ROEs approved by the Commission in these dockets ranged from 9.93% to 11.35% and averaged 10.62%. In other words, under comparable capital market conditions the Commission determined that a fair ROE was on the order of 10.6%.[46] Meanwhile, the two-step DCF analysis results in a median value of 9.48%. The significant discrepancy between the Commission's prior ROE findings and the median of the DCF results "serves as an indicator that an upward adjustment…is necessary to satisfy *Hope* and *Bluefield*."[47]

Q. What considerations might translate into downward-biased DCF estimates?

A. The DCF method is only one theoretical approach to gain insight into the return investors require, which is unobservable. The highly restrictive assumptions of the DCF methodology boil this determination down to the familiar dividend yield and growth rate components, but this masks the underlying complexities. There is no direct link between the DCF model and bond yields, Federal Reserve policies, relative risk perceptions, or any other data input from the capital markets or the economy, and growth estimates published by one service, such as IBES, can often differ markedly from estimates published by another service, such as Value Line.

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[46] Similarly, during 2005, when bond yields were comparable, the ROE approved by state regulators for electric utilities averaged 10.54%. Regulatory Research Associates, *Regulatory Focus* (Jul. 6, 2006). During 2005, Baa-rated utility bond yields averaged 5.93%, versus 5.99% for the six months ended October 2023. In light of the Commission's determination that investors in electric transmission infrastructure face increased risks that distinguish these investments from state-regulated companies (Opinion No. 531 at P 148; Opinion No. 531-B at P 84; Opinion No. 551 at P 250), this further demonstrates the downward bias of the two-step DCF median.

[47] Opinion No. 531 at PP 142, 148; Opinion No. 551 at PP 135, 250.

In addition, the Commission's two-step DCF model presumes that current share prices for utilities are driven to a substantial extent by long-horizon GDP growth projections. But there is no evidence that investors look to GDP growth rates in the far distant future in assessing their expectations for utility common stocks. Investors recognize that the electric utility industry is relatively stable and mature and the fact that analysts' EPS growth estimates are routinely referenced in the financial media and in investment advisory publications implies that investors use them as a primary basis for their expectations. Actual historical growth rates for individual firms in the utility industry refute the notion that long-term growth is constrained by GDP.[48] In addition, capital investment in the electric utility sector is expected to remain elevated. As S&P observed, "The considerable spending levels are expected to serve as the basis for solid profit expansion in the utility industry for the foreseeable future."[49] This contradicts the assumption that investors are likely to reference a generic long-term GDP growth rate when evaluating expectations for utility stocks.

The Commission has determined that "we must look to how investors analyze and compare their investment opportunities"[50] when evaluating a just and reasonable ROE. The two-step DCF model does not adhere to this guidance and my comprehensive analysis corroborates a continued downward bias in the results of this approach, with the 9.48% median value being comparable to thresholds that the Commission has determined to be unjust and unreasonable.[51] The weight of empirical

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[48] For example, Value Line reports that almost one-half of the firms included in its electric utility industry groups achieved ten-year historical EPS growth rates higher than the 4.11% GDP growth rate used in the Commission's two-step DCF model. www.valueline.com (retrieved Jan 19, 2024).

[49] S&P Capital IQ, *Seismic shift in capex plans reported by utilities for 2023 through 2025*, Financial Focus (Mar. 16, 2023).

[50] Coakley Briefing Order at P 33; MISO Briefing Order at P 35.

[51] In Opinion Nos. 531 and 551 the Commission rejected ROE values of 9.39% and 9.29% values as violating the *Hope* and *Bluefield* standards. Opinion No. 531 at PP 142, 148; Opinion No. 551 at PP 135, 250. Baa utility bond yields are now more than 140 basis points higher than during the study

(continued . . .)

evidence demonstrates that the two-step DCF median value is far below the level necessary for an electric utility to attract and retain equity capital in competition with other investments of comparable risk.

Q. What do you conclude with respect to a just and reasonable base ROE applicable to Rate Schedule 10?

A. Based on the results of my analyses, and considering the downward bias inherent in the two-step DCF model, I determined that an ROE of 10.7% is just and reasonable for O&R as it relates to transmission project cost recovery pursuant to Rate Schedule 10. An ROE of 10.7% is bracketed by the averages of the median and midpoint values produced by the four financial models supported in my testimony.

My ROE recommendation is also confirmed by the results of the DCF model applied to a group of low-risk, non-utility firms.[52] As shown in Exhibit No. ORU-112, the median and midpoint values produced by the non-utility DCF study range from 10.55% to 11.53%. These results support a finding that continued reliance on the two-step DCF model imparts a downward-bias to the results of the Commission's ROE methodology and confirm the reasonableness of a 10.7% base ROE for the Company.

Q. Is a 10.7% ROE consistent with established Commission policy to support investment in electric transmission infrastructure?

A. Yes. The Commission's regulatory actions have been successful in supporting much needed investment in wholesale transmission infrastructure. Unresponsive, mechanical decision-making that leads to inadequate returns would undermine the Commission's goal and the legislative mandate to promote capital investment in new transmission

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periods referenced in these orders, which confirms that the 9.48% two-step DCF median is unreasonable.

[52] While my examination of ROE benchmarks in this testimony is limited to a DCF study for low-risk firms in the non-regulated sector, alternative methodologies such as the constant growth DCF method and Empirical CAPM approach can also provide meaningful guidance in assessing investors' required cost of equity.

projects. This potential adverse outcome has been highlighted by the investment community with respect to the transmission segment of the power industry:

> The degree to which a utility revises its transmission capital plan will depend on expected returns…. Material reductions in the base ROE could lower the quality of and divert capital away from the transmission business, given its generally riskier profile than that for state-regulated utility businesses, such as distribution and generation. Moreover, investors could deploy capital to infrastructure projects with higher allowed returns, such as FERC-regulated natural gas pipelines, or to other industries generally.[53]

The need for regulatory certainty in supporting transmission infrastructure investment is as relevant today as ever, particularly in light of New York State's climate and renewable energy goals. An ROE of 10.7% for O&R as it relates to transmission project cost recovery pursuant to Rate Schedule 10 is appropriate in light of the continued need to attract capital to transmission infrastructure and the imperative of meeting the *Hope* and *Bluefield* standards.

III. APPLICATION OF FINANCIAL MODELS

Q. What is the purpose of this section of your testimony?

A. This section describes how I identify the proxy group of publicly traded electric utilities used to apply the financial models described in my testimony. I then explain my application of the two-step DCF, CAPM, Risk Premium, and Expected Earnings methods.

[53] Wolfe Research, Utils. & Power, *FERConomics: Risk to transmission base ROEs in focus* (June 11, 2013) at 11.

A. Development and Selection of the Proxy Group

Q. How do you implement quantitative methods to estimate the cost of common equity for O&R?

A. Application of quantitative methods to estimate the cost of common equity requires observable capital market data, such as stock prices and beta values, that is not available for O&R. Moreover, even for a firm with publicly traded stock, the cost of common equity can only be estimated. As a result, applying quantitative models using observable market data only produces an estimate that inherently includes some degree of observation error. Thus, the accepted approach to increase confidence in the results is to apply alternative quantitative methods to a proxy group of publicly traded companies that investors regard as risk comparable. The results of the analysis for the sample of companies are relied upon to establish a range of reasonableness for the cost of equity for the specific company at issue.

Q. What specific criteria do you initially examine to identify a proxy group of regulated electric utilities?

A. Consistent with the Commission's accepted approach, I begin with the following criteria to identify a proxy group of electric utilities:

1. Companies that are included in the Electric Utility Industry groups compiled by Value Line.[54]
2. Electric utilities that paid common dividends over the last six months and have not announced a dividend cut since that time.
3. Electric utilities with no ongoing involvement in a major merger or acquisition that would distort quantitative results.

In addition, the Commission has determined that credit ratings from both major agencies—Moody's and S&P—should be considered independently as screening

[54] In addition to the companies included in Value Line's electric utility industry groups, I also considered Algonquin Power & Utilities Company and Emera, Inc., which would both be regarded as comparable utility investment opportunities by investors. Neither of these companies met my required screening criteria.

criteria when evaluating comparable risk. In evaluating credit ratings to identify a proxy group of utilities with comparable risks, the Commission has adopted a "comparable risk band," interpreted as one "notch" higher or lower than the corporate credit ratings of the utility at issue and within the investment grade ratings scale.

Q. What corporate credit ratings have been assigned to O&R by Moody's and S&P?

A. O&R has been assigned an issuer credit rating of Baa2 by Moody's and a corporate credit rating of A- by S&P.

Q. What proxy group screening criteria are indicated by O&R's credit ratings?

A. Applying the one notch higher or lower band under the Commission's guidelines results in screening criteria of Baa1 to Baa3 based on Moody's credit ratings and A to BBB+ when referencing S&P's rating for O&R.

Q. Please identify the proxy group used in your analyses.

A. As shown on Exhibit No. ORU-102, applying the criteria outlined above results in a proxy group of twenty-four utilities, which I refer to as the "Electric Group."

B. Two-Step DCF Model

Q. What market valuation process underlies DCF models?

A. 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 appreciation) 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.

Q. What form of the DCF model is customarily used to estimate the cost of equity?

A. Rather than developing annual estimates of cash flows into perpetuity, the DCF model can be simplified to a "constant growth" form:[55]

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

where: P_0 = Current price per share;
D_1 = Expected dividend per share in the coming year;
k_e = Cost of equity; and
g = Investors' long-term growth expectations.

The cost of common equity (k_e) can be isolated by rearranging terms within the equation:

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

This constant growth form of the DCF model recognizes that the rate of return to stockholders consists of two parts: (1) dividend yield (D_1/P_0) and (2) growth (g). In other words, investors expect to receive a portion of their total return in the form of current dividends and the remainder through stock price appreciation.

[55] The constant growth DCF model is dependent on a number of strict assumptions, which in practice are never entirely 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. (As discussed in the text below, the Commission's two-stage DCF model also depends on these assumptions, with the sole exception of the constant earnings growth rate.) Nevertheless, the constant growth DCF method provides a workable and practical approach to estimate investors' required return that is widely referenced in utility ratemaking.

Q. What is the distinction between the two-step DCF method for electric utilities and the constant growth DCF model outlined above?

A. The Commission's two-step DCF method for electric utilities assumes that investors differentiate between near-term growth forecasts, such as the EPS growth rates published by securities analysts, and some notion of longer-term growth extending into the distant future. Under the Commission's two-step DCF method, the first growth rate is represented by analysts' consensus EPS growth projections specific to each individual utility in the proxy group, while the second growth rate is based on long-term forecasts of growth in nominal GDP. Based on this assumption of disparate growth expectations, the two-step DCF method employs two separate growth rates for each company, which are weighted to arrive at a single value for the "*g*" component.[56]

Q. How do you determine the dividend yield for the utilities in your proxy group?

A. An average dividend yield is developed for each utility in the Electric Group during the six months from May through October 2023. This calculation is made by dividing the indicated dividend in each month by the corresponding average of the monthly low and high stock prices. The resulting six-month average historical dividend yields are presented on page 1 of Exhibit No. ORU-104.

Q. What growth rate do you use to adjust this historical dividend yield?

A. Consistent with the Commission's guidance, I adjust the historical dividend yield using only the analysts' EPS growth estimate.[57]

Q. What is the source of the analysts' consensus EPS growth rates used in your application of the Commission's two-step DCF method?

A. I obtain IBES earnings growth rates for the utilities in the Electric Group from *Yahoo! Finance*.

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[56] While I apply the Commission's two-step DCF method, the assumptions about investor expectations and reliance on GDP growth that underly this approach are not substantiated by evidence.

[57] Opinion No. 569 at P 98.

Q. How do you arrive at your projected growth rate in nominal GDP, representing the second stage of the Commission's DCF model?

A. I rely on long-term projections published by IHS Markit and the EIA, as well as the Social Security Administration forecast over the next 50 years. This resulted in an average GDP growth rate of 4.17%. The calculation of the long-term growth rate in nominal GDP used in my application of the Commission's two-step DCF model is presented on page 2 of Exhibit No. ORU-104.

Q. What weighting do you assign these respective growth rates to arrive at the single *"g"* component of the two-step DCF model?

A. Following the practice adopted in Opinion No. 569-A, I weight the individual analysts' EPS growth rates by 80% and the GDP growth projection by 20% to compute a single, two-step growth rate for each of the utilities in the proxy group.

Q. Where do you present the results of your two-step DCF analyses?

A. After combining the dividend yields and the weighted average of the respective analysts' projections and GDP growth forecast for each utility, the resulting cost of common equity estimates for the Electric Group are shown on page 1 of Exhibit No. ORU-104.

Q. In evaluating the results of the DCF model, is it appropriate to eliminate illogical cost of equity estimates?

A. Yes. Consistent with Opinion No. 569-A, in applying quantitative methods to estimate the cost of equity, it is essential that the resulting values pass fundamental tests of reasonableness and economic logic. Accordingly, DCF estimates that are implausibly low or high should be eliminated when evaluating the results of this method.

Q. What low-end threshold has the Commission adopted?

A. Starting with the average yield on Baa-rated public utility bonds for the six-month study period, the Commission adds an increment equal to 20% of the market risk premium

used to apply the CAPM.[58] Combining an average yield on Baa utility bonds of 5.99% for the six months ending October 2023 with 20% of the 7.46% average CAPM market risk premium[59] results in a low-end threshold of 7.48%.

Q. Do you exclude any low-end DCF estimates from your analyses?

A. Yes. As shown on page 1 of Exhibit No. ORU-104, I exclude four DCF values ranging from -4.60% to 7.27%, which fall below the Commission's low-end threshold. In addition, I exclude a low-end DCF result of 7.51%, which exceeds the low-end cutoff by only 3 basis points and is far below any credible estimate of the cost of equity.[60] The continued retention of low-end values in the 8% range—which are far below any credible estimate of the cost of equity—continues to impart a downward bias to the two-step DCF results.

Q. What is the Commission's current position with respect to evaluating DCF values at the high end of the range?

A. With respect to the evaluation of individual cost of equity estimates, the Commission has established a high-end test based on 200% of the median value from each financial model before eliminating estimates at the low or high end of the range.[61]

Q. What is your conclusion with respect to an evaluation of two-step DCF values at the high end of the range?

A. As shown on page 1 of Exhibit No. ORU-104, the upper end of the two-step DCF results for the Electric Group is set by a cost of equity estimate of 18.64%. This value exceeds the Commission's high-end test of 18.17% and is excluded.

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[58] Opinion No. 569 at P 387; Opinion No. 569-A at P 161.

[59] Computed as the average of the 7.28% IBES-based CAPM market risk premium (Exhibit No. ORU-105) and 7.63% Value Line-based CAPM market risk premium (Exhibit No. ORU-107).

[60] The Commission has recognized that flexibility is warranted in evaluating low-end values. *See, e.g., So. Cal. Edison Co.*, 131 FERC ¶ 61,020 at P 55 (2010); *Martha Coakley, et al. v. Bangor Hydro Elec. Co., et al.*, 147 FERC 61,234 at P 123 (2014) (excluding a cost of equity estimate that was "an insignificant single basis point" above the low-end threshold.).

[61] Opinion No. 569-A at P 154.

Q. What other consideration has the Commission raised in evaluating cost of equity estimates?

A. The Commission has also suggested that cost of equity estimates should be subject to a "natural break" analysis, based on the difference between individual values and the next-lowest or next-highest estimate.[62]

Q. Do you agree that the difference between individual cost of equity estimates can be used as a gauge of reasonableness?

A. No. The dispersion between a particular cost of equity result and the next lowest value provides no relevant information in evaluating the reasonableness of estimates at the upper end of the range. The key fallacy underlying the natural break analysis is the implicit assumption that estimating the cost of equity involves a process of sampling. On the contrary, through application of proxy group criteria, the Commission has identified all of the utilities deemed to be of comparable risk. In other words, the array of cost of equity estimates produced by the ROE analyses represents the entire population, not a sample of the population. We are not drawing 20 colored marbles from an urn containing hundreds and seeking to make inferences regarding the makeup of the unobserved remainder. Rather, we are analyzing all of the marbles (or all of the relevant, comparable-risk companies). As a result, the dispersion of individual values is not a valid test of how well a specific cost of equity estimate reflects investors' expectations and required returns.

If there is any statistical observation to be made regarding the cost of equity estimates produced by any single financial model, it is that the relatively small size of the population (the proxy group) makes it more likely that there will be a "break" in the data set relative to an analysis for a larger population. That is not evidence of a flaw in the results. Rather, it is a predictable function of the size of the proxy group of

[62] Opinion No. 569 at P 395; Opinion No. 569-A at P 153.

comparable-risk utilities. Trimming so-called "outliers" on this basis has the unreasonable effect of arbitrarily making that small population even smaller and thereby skewing the results.

Moreover, the goal in evaluating the results of financial models, such as the DCF and CAPM approaches, is not to identify "outliers," it is to remove estimates that are clearly illogical for purposes of identifying the "broad range of potentially lawful ROEs" that constitutes the zone of reasonableness. The identification of clearly illogical results should be a case-specific determination relying on the specific evidence at hand. The notion of an "outlier" in the context of statistics and sampling theory is an entirely separate concept from the evaluation of cost of equity estimates for the population of comparable risk utilities. Apart from the fact that the arithmetic difference between two individual cost of equity estimates does not provide a sound basis to evaluate the economic validity of either value, the magnitude of the "break" that might be suggestive of an "outlier" is arbitrary and without empirical foundation.

Q. This notwithstanding, would there be any arguable basis to exclude the 11.42% high-end value from your two-step DCF analysis based on a natural break analysis?

A. No. The Commission has clarified that in applying a natural break analysis to evaluate results at the high end of the range, the purpose is "to screen out companies whose growth rates are unsustainably high and therefore fail a threshold test of economic logic."[63] As shown on page 1 of Exhibit No. ORU-104, the IBES growth rate underling the 11.42% DCF estimate is 7.50%. This falls significantly below other IBES growth rates that the Commission has previously accepted as reasonable.[64]

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[63] Opinion No. 569-B at P 79.

[64] For example, the Commission's DCF results in Docket No. EL14-12 incorporated an IBES growth rate of 11.66%. Opinion No. 569-A at p. 125 ("MISO I DCF Results").

Moreover, the "break" between the 11.42% value and the next lowest result is 71 basis points, which is not materially higher than the dispersion between other observations in the array of two-step DCF estimates. Thus, not only is a natural break analysis misguided and lacking any objective basis, a differential of 71 basis points provides no evidence that the 11.42% value at the top end of the two-step DCF range is "truly irrational or anomalously high."[65] Beyond this, as I noted earlier, remaining low-end values in the 8% range are assuredly far below investors' required rate of return.

Q. What is the range resulting from your two-step DCF analysis?

A. As shown on page 1 of Exhibit No. ORU-104, the two-step DCF analysis for the Electric Group results in a range of 7.96% to 11.42%.

C. Capital Asset Pricing Model

Q. Please describe the CAPM.

A. The CAPM approach is generally 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 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:

[65] Opinion No. 569-A at P 154.

$$R_j = R_f + \beta_j(R_m - R_f)$$

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

Like the DCF model, the CAPM is an *ex-ante*, or forward-looking, model based on expectations of the future. As a result, in order to produce a meaningful estimate of investors' required rate of return, the CAPM must be applied using estimates that reflect the expectations of actual investors in the market, not with backward-looking, historical data.

Q. What market rate of return was adopted by the Commission to apply the CAPM in Opinion No. 569-A?

A. Under the approach considered by the Commission in Opinion No. 569-A, the expected market rate of return was estimated by conducting a DCF analysis on the dividend paying firms in the S&P 500.[66]

Q. What beta values did the Commission adopt to apply the CAPM in Opinion No. 569-A?

A. The Commission relied on the beta values reported by Value Line, which, in my experience, is the most widely referenced source for beta in regulatory proceedings and is widely relied upon by investors. 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.[67]

The fact that investors rely on Value Line betas in evaluating expected returns for utility common stocks provides strong support for this approach.

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[66] Opinion No. 569-A at P 210.

[67] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 71.

Q. The Commission has suggested that it may be theoretically incorrect to apply the CAPM using Value Line betas and a market return based on the S&P 500.[68] What is the crux of this argument?

A. Opinion No. 569-A stated that there is an "imperfect correspondence" between a market risk premium based on the dividend-paying firms in the S&P 500 and Value Line betas, which are determined based on a comparison of each stock's volatility relative to the stocks in the NYSE, rather than the S&P 500. While observing that there is substantial evidence that investors rely on Value Line betas,[69] in its decision in *Mystic*, the Commission accepted FERC Trial Staff's proposal to use Bloomberg-based, alternative betas derived from the returns to the S&P 500 Index.[70]

Q. Do you agree that there is a lack of correspondence between a market return based on the S&P 500 and Value Line beta values?

A. No. Under the CAPM, the volatility at issue theoretically relates the market price of the stock with the market price of every other possible investment opportunity in the "market," including collectible cars and gold bullion. Just as it is not possible to precisely define investors' growth expectations when applying the DCF model, the forward-looking market return and beta values are unobservable and must be estimated. Application of the DCF approach to the dividend-paying firms in the S&P 500 provides a sound proxy for investors' expected return on the "market." Similarly, Value Line's published beta values offer an objective proxy for an unobservable, forward-looking beta. There is no "mismatch," as Opinion No. 569-A and *Mystic* seem to imply.

The contention that there is an "imperfect correspondence" between a market return that references the S&P 500 and beta values estimated against the NYSE is

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[68] Opinion No. 569-A at P 75.

[69] *See, e.g.,* Opinion No. 569-A at P 61.

[70] *Constellation Mystic Power, LLC,* 176 FERC ¶ 61,019 at PP 77, 85 (2021) ("*Mystic*"). *See also, DATC Path 15, LLC,* 177 FERC ¶ 61,115 at P 111 (2021) ("*DATC*").

further disproved by reference to studies in the financial research. *Marston & Harris* noted that it derived an estimate of the market rate of return for a sample of approximately 400 companies selected from the S&P 500, while the beta values used in the study were calculated "against . . . all NYSE securities."[71] This approach, used by recognized researchers in a peer-reviewed journal sponsored by the Eastern Finance Association, mirrors the CAPM approach adopted in Opinion No. 569-A. Similarly, in applying a market rate of return based on the dividend paying firms in the S&P 500, the Staff of the Illinois Commerce Commission also relied on published betas from Value Line.[72]

Q. Is there other evidence that undercuts the argument of a lack of correspondence between a market return for the S&P 500 and Value Line betas?

A. Yes. Beta measures the variability of the price of a common stock relative to the broader market. While it is possible to calculate this measure of relative price volatility using alternative market benchmarks (*i.e.*, NYSE or S&P 500), to the extent that movements in market indices are driven by the stock prices of very large capitalization companies and thus move in tandem, the beta values using similar time periods would be indistinguishable. If there is no systemic difference in the relative movements of the NYSE and the S&P 500, then there is no basis to suggest that a beta calculated against the NYSE would not apply equally to a market rate of return estimated by reference to the S&P 500.

The degree to which movements in the NYSE and S&P 500 are synchronized can be tested through correlation analysis. The correlation coefficient measures the degree that two variables move together. A correlation coefficient of 0.0 would

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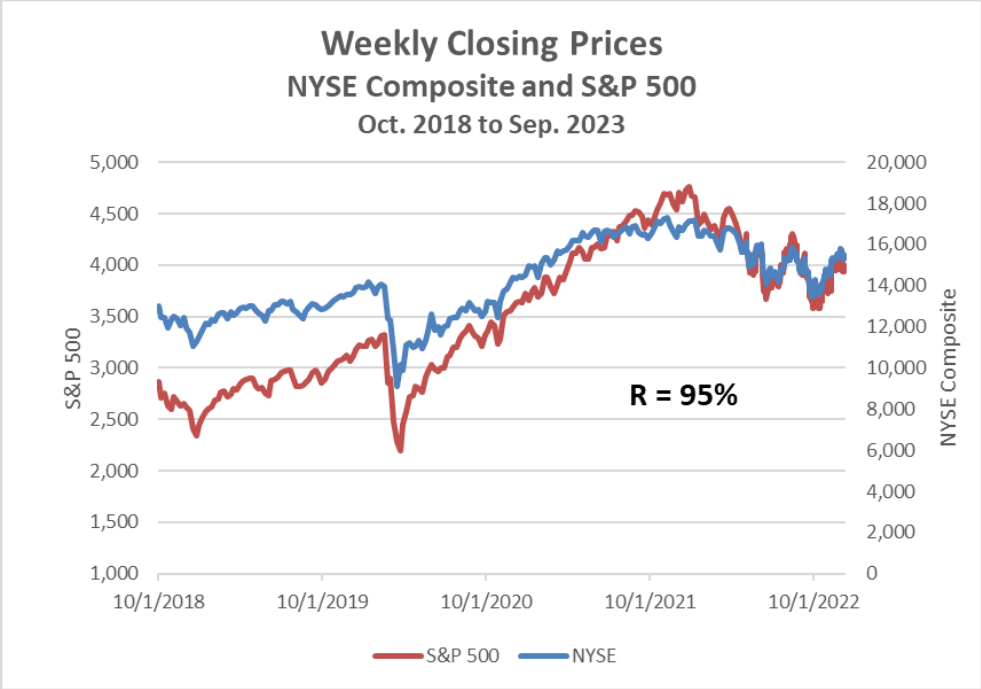
[71] Felicia Marston and Robert S. Harris, *Risk and Return: A Revisit Using Expected Returns*, Fin. Review (Feb. 1993) ("*Marston & Harris*"). Value Line betas are also derived based on weekly percentage changes in the New York Stock Exchange Average.

[72] *Direct Testimony of Rochelle Langfeldt*, Illinois Commerce Commission, Docket No. 01-0432 (2001) at 27 (citing "[t]he average Value Line adjusted beta for the Electric sample.").

indicate that there is no consistent co-movement between two variables, while a correlation coefficient of 1.0 would indicate perfect correlation, *i.e.*, that 100% of the change in one variable is reflected in the other variable.

Figure ORU-2 displays the weekly percentage changes in the NYSE and the S&P 500 over the five-year period ending September 30, 2023:

FIGURE ORU-2



As indicated on the chart, this analysis results in a correlation coefficient of 0.95, meaning that weekly changes for the NYSE are almost perfectly matched by similar movements in the S&P 500. The high degree of correlation between movements in the NYSE and movements in the S&P 500 undercuts any notion of a "mismatch" between Value Line betas and a market return predicated on a subset of the S&P 500.

Q. Are there other factors that also weigh in favor of continued reference to Value Line betas, versus those derived from Bloomberg?

A. Yes. Value Line is recognized as being the most widely available source of investment information to investors, and citations in many textbooks and other sources support its

usefulness as a guide to investors' expectations.[73] Value Line is available at nominal prices for paper subscription or internet access, as well as being freely available to investors in libraries and through many brokerage offices. Importantly, the beta values reported by Value Line are updated on a weekly basis and calculated using a consistent methodology.

This contrasts with Bloomberg-derived betas, which are dependent on criteria specified by each individual user and subject to the potential for subjective manipulation to produce a desired end-result. Meanwhile, Bloomberg is available only to a select subset of investors that can afford substantial annual subscription fees to obtain the proprietary terminal required to access Bloomberg data. The administrative benefits associated with reliance on beta values from Value Line, including a consistent methodology by an independent third-party and immunity to selective changes in assumptions, support continued reference to Value Line betas in applying the CAPM approach.

Q. How then do you calculate the market rate of return required to apply the CAPM?

A. I use the same approach considered by the Commission in Opinion No. 569-A.[74] In order to capture the expectations of today's investors in current capital markets, the expected market rate of return is estimated by conducting a DCF analysis on the dividend paying firms in the S&P 500.

I obtain the dividend yield for each company from Value Line and the IBES EPS growth projections for each firm published by *Yahoo! Finance.* As shown on Exhibit No. ORU-106, after removing companies with growth rates that were negative

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[73] *See, e.g.*, Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 71 ("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.").

[74] Opinion No. 569-A at P 210.

or greater than 20%,[75] the weighted average of the projections for the individual firms implies an average growth rate of 9.52%. Combining this average growth rate with a weighted average dividend yield of 1.99% results in a current cost of common equity estimate for the market as a whole (R_m) of 11.51%.

Q. Does the Commission also recognize that it is appropriate to consider Value Line growth rates in developing the market risk premium used to apply the CAPM?

A. Yes. The Commission has recognized that "diversifying data sources may better reflect the data sources that investors consider in making investment decisions."[76] Opinion No. 569-A concluded that Value Line growth rates "incorporate the input of multiple analysts" and that Value Line's growth rates "are updated on a more predictable basis," which "provides certainty about updates to key model inputs."[77]

Q. Do you agree with the Commission's proposal to consider Value Line's EPS growth projections in addition to data from IBES?

A. Yes. Value Line's growth projections provide a meaningful guide to investors' expectations. As noted earlier, Value Line is recognized as being the most widely available source of investment information that shapes the expectations of investors.[78]

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[75] My use of the growth rate screen adopted in Opinion No. 569-A should not be considered an endorsement of this approach, which is based on an incorrect notion that using the DCF model to estimate the market return requires an assumption of constant growth for each of the specific firms in the S&P 500. The S&P 500 includes a broad sample of companies at all stages of growth, and the use of all of those companies to estimate the required return on common stocks reasonably reflects investors' consensus expectations about the S&P 500 as a whole.

[76] Opinion No. 569-A at P 78.

[77] *Id.* at PP 80, 81.

[78] *See, e.g.*, Opinion No. 531 at P 102 ("We accept the *Value Line* industry classifications because *Value Line* is a widely-followed, independent investor service . . . ."); *Kern River Gas Transmission Co.*, Opinion No. 486-C, 129 FERC ¶ 61,240, at PP 50, 91 (2009) ("Because Value Line is a publication relied on by many investors, its statements concerning the relative risks of different energy-related investments is highly probative of the views of investors generally.") (prior and subsequent history omitted); *Sw. Pub. Serv. Co.*, 83 FERC ¶ 61,138, at 61,636 n.63 (1998) ("The Commission did not, however, intend to preclude consideration of contemporaneous growth estimates made by the various investor services companies (*e.g.*, Value Line, Zack's Investment Research, Inc.

(continued . . .)

Value Line's detailed quarterly reports provide extensive analyses that underpin its individual EPS growth rate projections. As a result, Value Line EPS growth rates are immune from any potential errors involved in the compilation of survey data and avoid uncertainties as to the veracity of the assumptions underlying the projected values.

As the Commission noted, the reports supporting Value Line's projected EPS growth rates are updated on a scheduled basis, which avoids the potential problem of "staleness" of the underlying data. Moreover, Value Line's sole business is to provide independent and unbiased investment guidance to its subscribers. Because Value Line does not engage in securities trading or investment banking activities, there is no risk of conflicts of interest that could arguably influence growth estimates.

Evaluating IBES growth rates alongside qualified alternatives acknowledges the importance of using multiple data sources to estimate investors' growth expectations. For example, *New Regulatory Finance* endorsed a similar approach, noting that one way to assess the concern that consensus analysts' forecasts such as IBES may be biased "is to incorporate into the analysis the growth forecasts of independent research firms, such as Value Line, in addition to the analyst consensus forecast."[79]

Value Line's growth rate projections provide a sound basis on which to evaluate investors' expectations when applying the DCF model and there are many citations to Value Line in 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 Regulatory 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,

(Zack's), Institutional Brokers Estimate System (IBES)), as investors rely on these estimates in their decision-making process.").

[79] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 300.

> 438) found, further "Value Line to be more accurate than alternative forecasting methods" and that "investors place the greatest weight on the forecasts provided by Value Line."[80]

Value Line is clearly a "widely-followed, independent investor service,"[81] and Value Line's EPS growth projections provide a credible guide to investors' expectations. The use of Value Line's EPS growth projections, in conjunction with IBES, enhances the reliability of the resulting CAPM cost of equity estimates.

Q. What is the implied market rate of return based on Value Line EPS growth rates?

A. As shown on Exhibit No. ORU-108, after removing companies with growth rates that were negative or greater than 20%, the weighted average of the Value Line EPS growth projections for the individual firms implies an average growth rate of 9.64%. Combining this average growth rate with a weighted average dividend yield of 2.22% results in a current cost of common equity estimate for the market as a whole (R_m) of 11.86%.

Q. Do you include a size adjustment in applying the CAPM?

A. Yes. Because financial research indicates that the CAPM does not fully account for observed differences in rates of return attributable to firm size, a modification is required to account for this size effect. As explained by Morningstar:

> 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.[82]

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[80] David C. Parcell, *The Cost of Capital – A Practitioner's Guide*, Soc'y of Util. & Regulatory Fin. Analysts (2010) at 143. *See also*, Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 71.

[81] Opinion No. 531 at P 102. *See also Kern River Gas Transmission Co.*, Opinion No. 486-C, 129 FERC ¶ 61,240 at P 50 (2009) (noting that "Value Line is a publication relied on by many investors. . . .").

[82] Morningstar, *2015 Ibbotson SBBI Classic Yearbook* at 99 (2015).

According to the CAPM, the expected return on a security should consist of the riskless rate, plus a premium to compensate for the systematic risk of the particular security. The degree of systematic risk is represented by the beta coefficient. The need for the size adjustment arises because differences in investors' required rates of return that are related to firm size are not fully captured by beta. To account for this, my CAPM analysis incorporates an adjustment to recognize the impact of size distinctions, as measured by the market capitalization for the companies in the Electric Group.

Q. What is the basis for the size adjustment?

A. The size adjustment required in applying the CAPM is based on the finding that *after controlling for risk differences reflected in beta*, the CAPM overstates returns to companies with larger market capitalizations and understates returns for relatively smaller firms. The size adjustments utilized in my analysis are sourced from Kroll, who now publish the well-known compilation of capital market series originally developed by Professor Roger G. Ibbotson of the Yale School of Management, and most recently published by Kroll. Calculation of the size adjustments involve the following steps:

1. Divide all stocks traded on the NYSE, NYSE MKT, and NASDAQ indices into deciles based on their market capitalization.
2. Using the average beta value for each decile, calculate the implied excess return over the risk-free rate using the CAPM.
3. Compare the calculated excess returns based on the CAPM to the actual excess returns for each decile, with the difference being the increment of return that is related to firm size, or "size adjustment."

New Regulatory Finance observed that "small market-cap stocks experience higher returns than large market-cap stocks with equivalent betas," and concluded that

"the CAPM understates the risk of smaller utilities, and a cost of equity based purely on a CAPM beta will therefore produce too low an estimate."[83]

Q. What ROE range implied for the Electric Group using the IBES-based CAPM approach?

A. As detailed on Exhibit No. ORU-105, referencing a 4.23% risk-free rate based on the six-month average yield on 30-year Treasury bonds in October 2023, the CAPM implies a cost of equity range of 9.78% to 13.05% for the Electric Group.

Q. What ROE range is implied for the Electric Group using the Value Line-based CAPM approach?

A. As shown on Exhibit No. ORU-107, the Value Line-based CAPM approach implies a cost of equity range of 10.02% to 13.45% for the Electric Group.

D. Risk Premium Approach

Q. Briefly describe the Risk Premium approach.

A. The Risk Premium approach extends the risk-return tradeoff observed with bonds to estimate investors' required rate of return on common stocks. The cost of equity is estimated by first determining the additional return investors require to forgo the relative safety of bonds and to bear the greater risks associated with common stock, and then adding this equity Risk Premium to the current yield on bonds.

Q. Is the Risk Premium approach a widely accepted method for estimating the cost of equity?

A. Yes. The Risk Premium approach is based on the fundamental risk-return principle that is central to finance. This method is routinely referenced by the investment community, by academics, and in regulatory proceedings, and provides an important tool in estimating a fair ROE.

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[83] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 187.

Q. The D.C. Circuit noted in its August 2022 decision that Opinion No. 569 was critical of the Risk Premium method. Do you agree with the Commission's decision to include the Risk Premium approach in the ROE methodology adopted in Opinion No. 569-A?

A. Yes. Despite finding that the Risk Premium approach is a "market-oriented methodology" and a "traditional method[] investors may use to estimate the expected return from an investment in a company,"[84] Opinion No. 569 advanced three primary criticisms of the Risk Premium method: 1) the Risk Premium approach is "largely redundant" with the CAPM methodology,[85] 2) that "circularity is particularly direct and acute with the Risk Premium model,"[86] and 3) that it "requires methodological decisions that would likely undermine transparency and predictability in Commission outcomes."[87] None of these rationales is justified.

Q. Are the Risk Premium and CAPM methodologies "redundant" of each other?

A. No. The Risk Premium approach is recognized as a distinct financial model that is separate and apart from the CAPM. In the recognized treatise, Principles of Public Utility Rates, Bonbright noted that "[t]he risk premium approach is probably the second most popular approach to estimating the cost of equity."[88] Similarly, the Risk Premium approach is cited as one of the preeminent cost of capital methodologies by the primary reference text prepared for the Society of Utility and Regulatory Financial Analysts,[89]

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[84] MISO Briefing Order at P 36 (2018).

[85] Opinion No. 569 at P 341.

[86] *Id.* at P 343.

[87] *Id.* at P 340.

[88] James C. Bonbright, Albert L. Danielsen, and David R. Kamerschen, Principles of Public Utility Rates, Pub. Utils. Reports, Inc. (1988) at 322.

[89] David C. Parcell, *The Cost of Capital – A Practitioner's Guide*, Society of Utility and Regulatory Financial Analysts (2010) at 164.

as well as by *New Regulatory Finance*,[90] which the Commission has cited as an authoritative source.

Apart from the fundamental notion that investors demand a higher return for bearing greater risk, there is no overlap whatsoever in the CAPM and Risk Premium methods, which approach the task of estimating investors' required rate of return from their own distinct premises. Not only do these methods evaluate the cost of equity from fundamentally different foundations, each approach also uses widely different inputs, none of which are congruent.

Q. Opinion No. 569 suggested that the Risk Premium approach is undermined by "circularity." Is this a valid concern?

A. No. The position taken in Opinion No. 569 regarding "circularity" is misplaced. In establishing authorized ROEs, regulators (including the Commission) typically consider a broad range of evidence, including the results of alternative market-based approaches, such as the DCF model. Because allowed ROEs consider market inputs and are not based strictly on past regulatory findings, this mitigates concerns over any potential for circularity. As *New Regulatory Finance* concluded:

> It is sometimes alleged that reliance on allowed risk premiums is circular. This is a dubious argument to the extent that allowed risk premiums are presumably based on objective market data (dividends, interest rates, beta, stock prices, etc.) and not strictly on the decisions of other regulators.[91]

Further, given that the Risk Premium approach is one method among others and is not being relied on solely to establish the ROE, there is no justification for the claim that consideration of the Risk Premium approach somehow results in circularity.

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[90] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 28, 107-130. Opinion No. 569 cited Professor Eugene Brigham, who also recognized that the Risk Premium method is typically used when estimating a company's cost of equity. Opinion No. 569 at P 218.

[91] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 124.

Moreover, given the importance of the ROE component of a utility's revenue requirements, virtually every measure of future financial performance—including cash flow measures, profitability, and dividend policies—is impacted by the ROE established by regulators. As a result, the Risk Premium approach is no more susceptible to concerns over circularity than the analysts' EPS growth rates reported by IBES. As one respected treatise observed, "[s]ince regulation establishes a level of authorized earnings, which in turn implicitly influences dividends per share, estimation of the growth rate from such data is an inherently circular process."[92] If analysts' growth estimates are rendered unusable because they are, in part, a function of expectations regarding future allowed ROEs, then, under the reasoning of Opinion No. 569, the DCF model must be rejected as well. This is misguided and the Commission was justified in reversing its stance in Opinion No. 569-A.

Q. Opinion No. 569 also stated that a need for "methodological decisions" justified disregarding the Risk Premium method.[93] Is this a reasonable assertion?

A. No. This observation is true of any financial model used to estimate the cost of equity (*e.g.*, source of growth rates, estimation of market risk premium) and provides no justification for ignoring an approach that has been classified among the key financial models in estimating the cost of equity. With respect to the DCF model, even after decades of use and Commission precedent, methodological issues are still commonly litigated, and the Commission continues to modify its approach. Similarly, the Commission is free to provide further guidance on the implementation of the Risk Premium method, which it undertook in Opinion No. 569-A. The Risk Premium approach is no "less predictable and transparent than other models"[94] in this respect.

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[92] Charles F. Phillips, Jr., *The Regulation of Public Utilities,* Pub. Utils. Reports, Inc. (1993) at 396.

[93] Opinion No. 569 at P 346.

[94] *Id.*

Q. What changes to the Risk Premium method did the Commission direct in Opinion No. 569-A?

A. To address specific concerns regarding the implementation of the Risk Premium approach, Opinion No. 569-A directed certain refinements in its application. Specifically, the Commission:

- developed a separate risk premium for each individual case, rather than using annual averages;[95]
- adopted the six-month period preceding the filing date of the offer of settlement as the basis for establishing the six-month average bond yield used to calculate risk premiums attributable to ROEs approved through settled proceedings;[96]
- adopted the six-month study period as the basis for establishing the six-month average bond yield used to calculate risk premiums attributable to ROEs approved through litigated proceedings;[97] and
- extended the sample period for the Risk Premium study through the conclusion of the study period, rather than the calendar year.[98]

As documented in Appendix I to Opinion No. 569-A, the Commission removed cases from the Risk Premium study where:

- the utility was merely adopting an existing ROE without consideration of whether that ROE would be determined to be just and reasonable under fresh analysis;
- the ROE was clearly not under consideration;
- there were duplicative findings from a previous case;
- the ROE was set for a definite future date, and the Commission could not have evaluated a risk premium for a future date; and
- the test period predated 2006.

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[95] Opinion No. 569-A at P 108.

[96] *Id.* at P 111.

[97] *Id.*

[98] *Id.*

More recently, in Opinion No. 569-B, the Commission corrected a limited number of typographical and other minor errors to the Risk Premium data set used in Opinion No. 569-A.[99] The Commission further refined this case set in *DATC*.[100]

Q. Do you add any observations to the Risk Premium case set relied on by the Commission in *DATC*?

A. Yes. Apart from updating the observations to reflect ROEs approved by the Commission through December 31, 2022, I also make several corrections to the model inputs listed in *DATC*. Specifically, I identified three cases the Commission either mistakenly omitted using the criteria listed above or failed to consider altogether. These cases are listed on page 7 of Exhibit No. ORU-109.

The first of these additions was to reflect the 11.18% ROE approved by the Commission in 2008 for Public Service Electric and Gas Company in connection with that company's proposed implementation of a formula rate for transmission service.[101] This 11.18% ROE was based on a contemporaneous DCF analysis employing a six-month study period ending May 2008.[102]

The second correction reflects the addition of the 11.18% going-forward ROE for PPL Electric Utilities Corporation specified in the May 1, 2009 settlement of Docket No. ER08-1457. The settlement provided for ROEs of 11.10% and 11.14% corresponding to the periods November 1, 2008 through May 31, 2008 and June 1, 2009 through May 31, 2010, respectively, while also providing that, "On June 1 2010 and thereafter, the Base ROE shall be 11.18 percent."[103] While *DATC* includes both

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[99] Opinion No. 569-B at PP 127-28, Appendix I.

[100] *DATC* at PP 126-131.

[101] *Public Service Electric and Gas Company*, Order on Formula Rate Proposal, 124 FERC ¶ 61,303 (2008).

[102] *See* Docket No. ER08-1233, Direct Testimony of Michael J. Vilbert, Exhibit No. PEG-6 at 19-20.

[103] *PPL Electric Utils. Corp.*, Order Approving Uncontested Settlement, 128 FERC ¶ 61,178 at P 4 (2009).

the 11.10% and 11.14% ROEs established in this settlement agreement, it excluded the going-forward ROE of 11.18%. As the Commission determined in Opinion No. 569-B, "Use of multiple ROEs may be appropriate where the ROEs apply to distinct periods."[104] The 11.18% ROE specificed in the settlement of Docket No. ER08-1457 is comparable to other ROEs routinely approved by the Commission for future application of formula rates, and there is no credible basis to exclude this observation.

The third addition to the *DATC* case set is necessary to include the ROE specified in the settlement approved for Xcel Energy Southwest Transmission Company, LLC ("XEST") in Docket No. ER14-2751 associated with Zone 11 under the SPP OATT. As the Commission specified in approving the settment, "XEST will have two ROEs. One for calculating XEST's revenue requirement associated with Zone 11 under the SPP OATT (Zone 11 ROE) and one for all other purposes (General ROE.)"[105] As the Commission noted, "The Zone 11 ROE shall equal the then-effective Commission-approved ROE used to calculate the Southwestern Public Service Company's (SPS) revenue requirement pursuant to the SPP OATT,"[106] which was 10.00%.[107] While *DATC* included the "General ROE" established under XEST's settlement, it failed to include the 10.00% base ROE applicable to Zone 11 service. There is no basis to ignore this data point.[108]

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[104] Opinion No. 569-B at P 131.

[105] *See, Xcel Energy Southwest Trans. Co.*, Certification of Uncontested Offer of Settlement, 153 FERC ¶ 63,019 (2015).

[106] *Id.* at P 13.

[107] *Golden Spread Elec. Coop., Inc., et al.*, Order Approving Uncontested Settlement, 153 FERC ¶ 61,103 at P 13 (2015).

[108] The Commission concluded in *Pacific Gas & Elec. Co.* that approval of separate ROEs in the same order involves "unique circumstances." *Pacific Gas & Elec. Co.*, 178 FERC ¶ 61,175 at P 227 (2022). In fact, however, the Risk Premium case set includes several instances where multiple ROEs were approved in the same proceeding based on distinguishing circumstances. *See, e.g.*, Docket Nos. ER08-1457, ER10-355, and ER11-2853.

Q. Do you remove any observations from the Risk Premium case set adopted in *DATC*?

A. Yes. As shown on page 8 of Exhibit No. ORU-109, I remove the 10.02% ROE established in Opinion No. 569-A as that decision was vacated by the D.C. Circuit. I also remove a 10.05% ROE attributed to Docket No. EL15-45, which was a pancaked FPA Section 206 complaint proceeding for the MISO TOs. The Commission dismissed that complaint, and no ROE was approved or established in that proceeding. In addition, I also remove a duplicative ROE observation corresponding to Docket No. ER19-1396.

In applying the Risk Premium approach in *DATC*, the Commission also incorporated ten ROEs stemming from settlements of cases involving publicly owned entities. Revenue requirements and underlying capital costs for publicly owned utilities are primarily driven by debt service requirements, and there is no relevant equivalent to the market cost of equity for an investor-owned utility. Accordingly, ROE determinations for municipals and cooperatives should not be included in applying the Risk Premium method to estimate the ROE for investor-owned electric utilities, such as O&R.

Q. Is this critical distinction recognized by the investment community?

A. Yes. For example, S&P observed that "[c]ash available from current operating revenues to pay debt service is the principal focus" of its financial analysis of cooperative utilities.[109] As S&P concluded:

> We believe that fixed costs and imputed charge coverage best gauges a retail utility's total financial capacity. It measures the ability of the retail

[109] S&P Global Ratings, *U.S. Public Finance: Applying Key Rating Factors to U.S. Cooperative Utilities*, Criteria | Governments (Nov. 21, 2007).

> utility to service both its total debt and debt-like obligations, which together we refer to as fixed costs and imputed charges.[110]

Moody's identified the "[l]ack of a profit motive or need to generate a return on equity" as key characteristics typifying public power utilities.[111] Meanwhile, Fitch concluded that:

> Public power systems are unique from their investor-owned counterparts. In nearly all cases, public power systems operate on a not-for-profit basis and with the fundamental mission of providing safe, reliable and affordable electric service. Excess cash flow is typically retained and used to build financial cushion, fund capital investment or reduce borrowings.[112]

Similarly, the Presiding Judge in *Missouri River Energy Services* noted that:

> Municipally-owned utilities do not answer to stockholders seeking a return on their investments. They pay no dividends . . . .The governing members of municipal-owned utilities are their own customers . . . Publicly-owned utilities pay no income taxes . . . . By contrast, investor-owned utilities are profit-making and profit-maximizing private entities that strive to attain the greatest possible ROE for their shareholders. They do so in order to attract investors to their stock in the stock market . . . . In short, unlike investor-owned utilities, it is not the purpose of a municipally-owned utility to earn a profit. Quite the opposite, it is a *non*-profit institution that is set up that way in order to achieve lower rates for ratepayers.[113]

Publicly owned (cooperative or municipal) utilities do not raise equity in the capital markets and do not seek to make a profit. Consequently, ROE determinations for publicly owned electric systems provide no information relevant to a determination of a just and reasonable ROE for an investor-owned electric utility, such as O&R.

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[110] S&P Global Ratings, *U.S. Municipal Retail Electric and Gas Utilities: Methodology and Assumptions* (Sep. 27, 2018).

[111] Moody's Investors Service, *U.S. Public Power Electric Utilities With Generation Ownership Exposure*, Rating Methodology (Nov. 28, 2017).

[112] Fitch Ratings, Inc., *Exposure Draft: U.S. Public Power Rating Criteria*, Public Finance (Jun. 14, 2018).

[113] *Missouri River Energy Services*, Initial Decision, 130 FERC ¶ 63,014 at PP 228-229, 231 (2010) (emphasis in original).

Similarly, the ROE witness in Docket Nos. ER17-426 and ER17-428 (identified as *Denison* and *Vermillion* on the Commission's Risk Premium case list in *DATC*) observed that the DCF method "is not the best method to determine ROE for non-jurisdictional utilities which . . . are municipally owned, have no stock price, and issue no dividends."[114] In fact, of the ten proceedings for publicly-owned entities included by the Commission, eight failed to include a DCF study or the results of any other financial model, with the ROE request being based solely on an average of previously allowed ROEs.[115]

Q. What other adjustment do you make to the *DATC* case set?

A. The bottom panel on page 8 of Exhibit No. ORU-109 identifies one other minor correction to remove the impact of a post-record period adjustment for changes in bond yields that is necessary to match the ROE to the study period interest rate.[116] The revised inputs to the Risk Premium approach are shown on pages 2-4 of Exhibit No. ORU-109.

Q. What cost of equity is implied by the Risk Premium method?

A. As illustrated on page 1 of Exhibit No. ORU-109, with an average six-month historical yield on Baa public utility bonds at October 2023 of 5.99%, the Risk Premium method implies a current equity risk premium of 4.45% for electric utilities. Adding this equity

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[114] *Southwest Power Pool, Inc.*, Docket No. ER17-426, Prepared Direct Testimony of James Pardikes at 11 (filed Nov. 29, 2016); *Southwest Power Pool, Inc.*, Docket No. ER17-428, Prepared Direct Testimony of James Pardikes at 11 (filed Nov. 30, 2016). In both instances, the requested ROE was based on an average of previously allowed ROEs by state regulatory commissions.

[115] This evidence contradicts the conclusion in *Pacific Gas & Elec. Co.* that there is nothing to distinguish the determination of an ROE in proceedings involving publicly owned entities and investor-owned utilities. *Pacific Gas & Elec. Co.*, 178 FERC ¶ 61,175 at P 221 (2022).

[116] The allowed ROE of 10.04% includes a 49 basis point downward adjustment that was made to reflect changes in interest rates between the study period and the date of the Commission's order. Because the Commission references the average bond yield for the six-month study period to compute the Risk Premium, this adjustment must be reversed.

risk premium to the average six-month historical yield on Baa utility bonds implies a current cost of equity of 10.44%.

Q. How do you impute a range around this Risk Premium cost of equity estimate?

A. I impute a range around the 10.44% Risk Premium result based on the average difference between the high and low boundaries of the two-step DCF, CAPM, and Expected Earnings ranges. As shown on page 1 of Exhibit No. ORU-109, this results in an implied cost of equity range of 8.06% to 12.82%.[117]

E. Expected Earnings Approach

Q. Please explain your Expected Earnings study.

A. Analysis of rates of return available from alternative investments of comparable risk can provide an important benchmark in assessing the return necessary for a firm to maintain financial integrity and attract capital. This approach is consistent with the economic underpinnings for a fair rate of return, as reflected in the comparable earnings test established by the Supreme Court in *Hope* and *Bluefield.* Moreover, it avoids the complexities and limitations of capital market methods and instead focuses on the returns earned on book equity, which are readily available to investors. As the Commission recognized in Opinion No. 531:

> [T]he . . . expected earnings analysis, given its close relationship to the comparable earnings standard that originated in *Hope*, and the fact that it is used by investors to estimate the ROE that a utility will earn in the future can be useful in validating our ROE Recommendation.[118]

[117] As shown on page 2 of Exhibit No. ORU-103, the upper end of the middle third of the composite zone produced by my four model approach is 11.57%.

[118] Opinion No. 531 at P 147.

Q. Did the Commission rely on the Expected Earnings approach in Opinion No. 569-A?

A. No. However, the Commission noted that "we do not necessarily foreclose its use in future proceedings," so long as concerns expressed in Opinion No. 569 and reiterated in Opinion No. 569-A are addressed.[119] Specifically, the Commission raised the following principal concerns in explaining its decision not to rely on this method:

- The Expected Earnings approach is not based on market values.
- Differences between market values and book values undermine the relevance of the Expected Earnings approach.
- There is a lack of data demonstrating that investors use the Expected Earnings approach directly to value utility common stocks.

My subsequent testimony briefly addresses the misguided nature of these concerns.

Q. Opinion No. 569-A concluded that, because investors cannot buy stock in the market at book value, the expected earnings approach should be rejected.[120] Does this finding undermine the relevance of the Expected Earnings approach?

A. No. I agree that the Expected Earnings method is not market-based in that it is not dependent directly or indirectly on stock prices or other data from the capital markets. But this does not discount its usefulness as a meaningful approach for investors and regulators to compare expected returns in one utility versus another. Specifically, it is reasonable to expect that investors compare stock investments based on securities analysts' projections of the expected return on common equity, which is analogous to the return on the equity component of a utility's rate base.

As detailed below, this comparison is relevant to investors because it directly measures the returns on book investment that the investment community expects from comparable-risk investments, without the need to make the subjective evaluations

[119] Opinion No. 569-A at P 132.

[120] *Id.* at PP 201, 204-205, 210, 216-217, 219, 221-222.

inherent in market-based models, such as how to best estimate investors' growth expectations or the market required return. Thus, it provides regulators with a meaningful guide to the return the utility should be expected to earn on its book equity investment. And given that rates are established on the basis of the book value of a utility's investment, this is a relevant measure of the ROE that is consistent with regulatory standards of comparable earnings and capital attraction established in *Hope* and *Bluefield*.

Q. Has the Expected Earnings approach been recognized as a meaningful methodology in evaluating a just and reasonable ROE?

A. Yes. The Expected Earnings approach is analogous to the comparable earnings method, which predominated before the advent of the DCF and other financial models. While the traditional comparable earnings test is often implemented using historical accounting data, it is also common to use projections of returns on book investment. Because these returns on book value equity are analogous to the allowed return on a utility's rate base, this measure of opportunity costs results in a direct, "apples-to-apples" comparison, and it has long been referenced and relied on in regulatory proceedings.[121] For example, in approving an ROE for electric utility operations, the North Carolina Utilities Commission recently concluded that:

> In prior cases, the Commission has given significant weight to the results of the Expected Earnings methodology, which stands separate and apart from the market-based methodologies (e.g., the DCF or

[121] *See, e.g.,* Nat'l Ass'n of Regulatory Util. Comm'rs, *Utility Regulatory Policy in the U.S. and Canada, 1995-1996* (Dec. 1996). The Virginia State Corporation Commission is required by statute to consider the earned returns on book value, which establish lower and upper boundaries for the allowed ROE. Virginia Code § 56-585.1.A.2.a. The Ohio Public Utilities Commission also considers prospective earned rates of return in evaluating the impact of electric security plans. Ohio R.C. 4928.143(E).

> CAPM) also used by ROE experts . . . The Commission chooses to do so again in this case.[122]

As S&P observed, "[h]istorically, there have been two approaches in calculating ROE in regulatory proceedings, a comparable earnings approach and a market analysis. In a comparable earnings approach, similar investments with similar risks are analyzed to determine an appropriate ROE."[123]

Q. Is reference to returns on book value consistent with how utility rates are evaluated?

A. Yes. Regulators do not set the returns that investors earn in the capital markets—they can only establish the allowed return on the book value of a utility's investment. The expected earnings approach provides a direct guide to ensure that the allowed ROE is similar to what other utilities of comparable risk are expected to earn on invested capital. This opportunity cost test does not require theoretical models to indirectly infer investors' perceptions from stock prices or other market data. As long as the proxy companies are similar in risk, their expected earned returns on invested capital provide a direct benchmark for investors' opportunity costs, independent of fluctuating stock prices, market-to-book ratios, debates over DCF growth rates, or theoretical assumptions about investor behavior.

A textbook prepared for the Society of Utility and Regulatory Financial Analysts concludes that the comparable earnings method is firmly anchored in the regulatory economics underlying the *Bluefield* and *Hope* cases.[124] It also notes that it requires less subjective judgment to implement than either the DCF or CAPM

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[122] North Carolina Utilities Commission, Docket No. E-7, SUB 1187, *et al.*, *Order Accepting Stipulations, Granting Partial Rate Increase, and Requiring Customer Notice* (Mar. 31, 2021) at 94.

[123] S&P Global Market Intelligence, *The rate case process: establishing a fair return for regulated utilities*, RRA Regulatory Focus (Jun. 29, 2020).

[124] *Id.*

methods.[125] *New Regulatory Finance* concluded that "because the investment base for ratemaking purposes is expressed in book value terms, a rate of return on book value, as is the case with Comparable Earnings, is highly meaningful."[126]

Q. Does the investment community reference earned returns on book value in their evaluation of electric utilities?

A. Yes. Book value accounting measures, including earned and expected returns on book equity, are instrumental to the financial analysis underpinning investors' evaluation of electric utilities, including credit ratings. S&P cited the relevance of earned returns on book value in highlighting the primary credit considerations in the utility industry, noting that "required rate of return on equity investment is closely linked to a utility company's profitability."[127] S&P indicated that "[f]or regulated utilities subject to full cost-of-service regulation and return-on-investment requirements, we normally measure profitability using ROE, the ratio of net income available for common stockholders to average common equity."[128] While recognizing that "the regulator ultimately bases its decision on an authorized ROE," S&P observed that "different factors such as variances in costs and usage may influence the return a utility is actually able to earn, and consequently our analysis of profitability for cost-of-service-based utilities centers on the utility's ability to consistently earn the authorized ROE."[129] In S&P's view, the earned return on book value may provide better insight into the financial health of the utility because it reflects the actual impact of regulation, not the theoretical outcome implied by an authorized ROE. Consistent with this paradigm, S&P examines trends in utility returns on book equity, as compared with authorized

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[125] *Id.*

[126] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 395.

[127] Standard & Poor's Corporation, *Utilities: Key Credit Factors For The Regulated Utilities Industry,* Criteria Corporates (Nov. 19, 2013).

[128] *Id.*

[129] *Id.*

ROEs, in evaluating financial performance for the electric utility industry.[130] Similarly, in a review of financial quality measures for utilities, S&P noted that "[t]he earned return on equity . . . is one of the most widely followed measures of the industry's financial performance."[131]

Moody's also recognizes the relevance of returns on book value in its assessment of a utility's prospects. While noting that "[t]he authorized ROE is a popular focal point in many regulatory rate case proceedings," Moody's recognized that "earned ROEs, as reported by utilities and adjusted by Moody's," are a key gauge of financial performance.[132] As Moody's concluded, "utilities are closer to earning their authorized equity returns, which is positive from an equity market valuation perspective."[133] In explaining its scorecard analysis for a Baa-rated utility, Moody's Investors' Service noted that regulatory outcomes should be "sufficient to attract capital without difficulty," and that this "will translate to returns (measured in relation to equity, total assets, rate base, or regulatory asset value, as applicable) that are average relative to global peers."[134]

Q. Do Opinion Nos. 569 or 569-A undermine the relevance of this evidence?

A. No. The Commission examined some of this evidence in Opinion No. 569 but, nevertheless, suggested that investors "may not" use the information from the Expected Earnings analysis to inform their investment decisions.[135] But these investment services would not provide this information if investors did not rely upon it to inform

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[130] *See, e.g.*, S&P, *Utility-earned ROEs exceeded authorized since 2016, but 2019 may not match 2018*, Financial Focus (Jun. 10, 2019).

[131] S&P Global Market Intelligence, *Utility operating company financials mixed: ROE slips*, Financial Focus (Dec. 11, 2019).

[132] Moody's, *Lower Authorized Equity Returns Will Not Hurt Near-Term Credit Profiles*, Sector In-Depth (Mar. 10, 2015).

[133] *Id*.

[134] Moody's, *Regulated Electric and Gas Utilities*, Rating Methodology (Jun. 23, 2017).

[135] Opinion No. 569 at P 212.

their decisions. The Commission also posited that investors may not use this information specifically to "determine the applicable cost of capital,"[136] but this again hinges on the notion that only market-based evidence is relevant in evaluating a just and reasonable ROE.

Q. What other evidence supports a finding that returns on book value influence investors' valuation decisions?

A. In addition to the materials cited above, a research paper by Dr. Aswath Damodaran emphasized the importance of considering returns on book value in evaluating performance and alternative investments.[137] Contradicting Opinion No. 569's conclusion that returns on book value are unrelated to an evaluation of investors' expected return on investment,[138] Dr. Damodaran noted that, "[w]hile returns on equity and capital are based upon accounting earnings and capital, and are designed to measure the quality of a firm's existing investments, they are correlated with returns you would make investing in the publicly traded equity of the firm."[139]

As Dr. Damodaran stated, "we can safely conclude that the key number in a valuation is not the cost of capital that we assign a firm but the return earned on capital that we attribute to it."[140] This is exactly what the Expected Earnings method seeks to measure. If the allowed ROE is insufficient to provide a return on the book value of a utility's investment as compared with what investors expect other utilities of comparable risk to earn, the utility's ability to compete for capital will be undermined.

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[136] *Id.* at P 217.

[137] Aswath Damodaran, *Return on Capital (ROC), Return on Invested Capital (ROIC) and Return on Equity (ROE): Measurement and Implications,* New York University, Stern School of Business (July 2007).

[138] Opinion No. 569 at PP 204-205.

[139] Damodaran, *supra* n.133 at 49.

[140] *Id.* at 6.

The Expected Earnings approach provides a measure of this necessary return as one component of the evaluation of a just and reasonable ROE.

Q. What other considerations support reference to returns on book value, as a complement to market-based methods?

A. Opinion No. 569 contends that because investors can only purchase common stocks at market value, expected returns on book value are irrelevant unless the market-to-book ratio is equal to 1.0.[141] However, this ignores the fact that existing shareholders are continuously investing in a firm's equity *at book value* every time earnings are retained for reinvestment, rather than being paid as dividends. Retained earnings are reflected on the balance sheet as an increase in the book value of shareholders' equity. When a firm retains that portion of earnings not paid out as common dividends, its shareholders effectively invest in the firm's equity, and those investments are made at book value.

Moreover, as the Commission has recognized, in most instances "the public utility companies for which the Commission sets rates are not publicly traded and thus do not have any market-determined stock values."[142] This was the case in the Supreme Court's *Hope* decision, where the financial integrity standards were directly related to the book value of a utility's equity and expected earnings. Similarly, one key gauge of a utility's financial integrity is credit metrics, which depend on the book value of equity and earnings on that book value of investment. The Expected Earnings method is directly related to ensuring that the standards underlying a just and reasonable ROE are met.

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[141] Opinion No. 569 at P 201.

[142] *Id.* at P 208.

Q. Does a difference between book and market values also raise concerns for market-based methods?

A. Yes. Differences between market realities and the theoretical constructs underlying market-based methods support the use, rather than rejection, of the Expected Earnings approach. As one researcher summarized in the early days before the DCF became a regulatory mainstay:

> We conclude that the [DCF] formula is logically incorrect for public utility regulation whenever stocks are selling at a price in excess of their book equity per share. . . . Although it purports to satisfy investor expectations, it is in fact designed to defeat the expectations of any investor who pays a market price in excess of book. It satisfies the expectations only of the investor who buys at book and expects market prices to remain at book.[143]

This is not to say that the DCF model is not a useful methodology when considered along with other methods. But as this discussion makes clear, arguments based on "truisms" inherent in the mathematical tautology of DCF theory do not support abandoning the Expected Earnings approach, which focuses on the projected earned returns on book equity supporting the investors' expectations underlying the market price of the stock.

Q. Opinion No. 569 presents a numerical example purporting to illustrate that expected book returns are not germane to the evaluation of a just and reasonable ROE.[144] Is that example persuasive?

A. No. Opinion No. 569 posits a comparison between two firms, both with a book value of $100 and an expected return on book value of 10%, but with the market price of the companies' stocks being $20 (Firm A) and $40 (Firm B), respectively. The problem with the example is that the assumptions are completely divorced from reality for

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[143] Walter A. Morton, *The Investor Capitalization Theory of the Cost of Equity Capital*, Land Econ. 248-63 (Aug. 1970).

[144] Opinion No. 569 at P 205.

electric utilities. For example, based on a stock price of $20, the illustration implies a market-to-book ratio of 0.25 times ($20/$100) and a price/earnings multiple of 2.0 ($20/$10), versus comparable averages for the electric utilities covered by Value Line on the order of 1.94 and 21.0, respectively.[145] Under an approach where assumptions are simply contrived to "demonstrate" a hypothesis, Opinion No. 569 could have just as easily "invalidated" the DCF model.

For example, extending the illustration to assume that each firm pays a dividend of $1.00 and both are expected to grow at 5%, the DCF cost of equity for Firm A would be 10%, versus only 5% for Firm B. Because the Opinion No. 569 example implicitly presumes that both stocks are of equal risk,[146] the differential between the implied DCF cost of equity estimates makes no sense. As with Opinion No. 569's contrived assumptions, the problem is with the example, not the underlying model.

Q. Opinion No. 569 also asserted that reliance on data from Value Line undermines the reliability of the Expected Earnings approach.[147] Is this consistent with the underlying facts?

A. No. The Commission reversed this finding in Opinion No. 569-A, concluding that Value Line's projections "incorporate the input of multiple analysts."[148] The Commission also concluded that considering Value Line projections "may better reflect the data sources that investors consider in making investor decisions."[149] This provides

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[145] www.valueline.com (Oct. 15, 2021).

[146] This is unstated in Opinion No. 569, but without this assumption, the difference in stock prices between Firm A and Firm B is easily explained. If the risks of Firm A are considerably higher than those of Firm B, the price investors are willing to pay to receive the same expected stream of cash flows will be significantly lower.

[147] Opinion No. 569 at P 225.

[148] Opinion No. 569-A at P 80.

[149] *Id.* at P 78.

additional support for the relevance of the Expected Earnings approach in evaluating investors' expectations and requirements.

Q. Opinion No. 569-A suggested that the relative amount of common equity or accumulated depreciation on a utility's balance sheet could distort the results of the Expected Earnings approach.[150] Is this accurate?

A. No. The absolute amount of equity in a utility's capital structure, or the fact that a utility may have a higher or lower equity ratio, does not lead to an "illogical result" under the Expected Earnings approach, as Opinion No. 569 posits. The Expected Earnings method is based on the ratio of earnings available to common stockholders to the outstanding balance of common equity investment. While a higher equity ratio would imply that the numerator would be higher relative to a utility with a lower equity ratio, the denominator would also increase. In other words, assuming a constant allowed ROE, differences in equity ratios between one utility and another would have no impact at all on the resulting earned return on book value.[151]

Opinion No. 569's contention that the degree to which a utility's plant in service is depreciated on its books would distort the Expected Earnings results is equally misguided. Consider the simple example in the table below, which assumes that the only difference between the two utilities is the relative age of their respective utility systems and the degree to which their plant investment is depreciated.

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[150] Opinion No. 569-A at P 131 (citing Opinion No. 569 at P 223).

[151] Consider two utilities, both with a rate base of $1,000 and an authorized ROE of 10%. If Utility A's common equity ratio were 60%, the Expected Earnings result would be calculated as ($1,000 x 60% x 10%) / ($1,000 x 60%) = 10%. For Utility B with a common equity ratio of 40%, the Expected Earnings result would be calculated as ($1,000 x 40% x 10%) / ($1,000 x 40%) = 10%. To the extent that the risk associated with Utility B's greater financial leverage were found to justify a ROE higher than that of Utility A, Utility B's Expected Earnings result would also be higher.

TABLE ORU-4
IMPACT OF DEPRECIATION

	Utility A	Utility B
Plant	$1,000	$1,000
Accumulated Depreciation	$ 800	$ 100
Net Plant	$ 200	$ 900
Equity Ratio	50%	50%
Common Equity	$ 100	$ 450
ROE	10%	10%
Equity Return	$ 10	$ 45

This example shows that, just as with the utility's equity ratio, the degree to which the utility's plant is depreciated affects the amount of common equity investment that earns at the allowed ROE. However, the ratio of equity return to book common equity is the same in both cases (i.e., $10/$100 = 10% = $45/$450 = 10%). There are no "illogical results" in either instance.[152]

Q. What other primary misconception underlies the rejection of the Expected Earnings approach in Opinion Nos. 569 and 569-A?

A. Opinion No. 569-A argues that the Expected Earnings method should be excluded because of a lack of evidence "that investors use such data to directly value equities, determine the cost of equity, or make investment decisions."[153] Similarly, Opinion No. 569 concluded that "there is insufficient record evidence to demonstrate that investors rely on the Expected Earnings model," or that investors "use the Expected Earnings model to determine their required returns on investments in public utilities."[154]

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[152] Further, Opinion No. 569's suggestion (P 224) that the relative age of a utility's plant alone can be viewed as a key determinant of its risk is incorrect. Risk is a function of numerous factors that might affect the investors' ability to earn a fair ROE. While the relative age of a utility's facilities might arguably be a consideration, it is just as likely that older facilities could be viewed as riskier due to the presumptively greater potential for unplanned outages or catastrophic failure.

[153] Opinion No. 569-A at P 126.

[154] Opinion No. 569 at PP 210, 213. Similarly, Opinion No. 569 also concluded that there is "insufficient evidence that investors rely on risk premium analyses utilizing historic Commission ROE determinations or settlement approvals to determine the cost of capital and make investment decisions." Opinion No. 569 at P 345. My discussion applies equally to the fallacy of this contention as well.

Q. Does this line of argument support excluding the Expected Earnings approach?

A. No. As my testimony demonstrates, returns on book value are a key consideration in evaluating investment alternatives, particularly in the regulated sector where book values play a fundamental role in establishing future earnings and cash flows. But in any event, the merit of any specific financial model is not premised on whether individual investors rely directly on that method to "determine their required returns" or "to inform their investment decisions."[155] In fact, it is precisely because it is impossible to know the valuation process that gives rise to investors' opportunity costs that such methods have been developed.

Consider the DCF model or the CAPM approach, for example. While each of these methodologies is premised on widely accepted theoretical concepts, there is no evidence to support a finding that either the DCF or the CAPM is used directly by investors in establishing observable stock prices or other "market-based" parameters. In fact, approximately 60% to 75% of all trading on U.S. stock exchanges is generated by automatic trading systems. Under the logic expounded by Opinion Nos. 569 and 569-A, the DCF or CAPM approaches could be rejected because of insufficient proof that the algorithms underlying such automated trading systems rely on these methods.

It is because we cannot determine the process by which investors arrive at their required return that theoretical models of investor behavior have been developed. Just as with the DCF and CAPM, the Expected Earnings approach provides a sound basis to consider and represent an unobservable artifact of investors' decision-making (*i.e.*, their required ROE). But the relevance of the model is not tied to the assumption that

[155] *See, e.g.,* Opinion No. 569 at PP 212, 213.

any individual investor actually depends on that specific approach, much less on the Commission's preferred application of each methodology.[156]

Product marketing provides a similar example of this principle. Companies invest heavily to develop models of consumer behavior as a means to guide product development, marketing, and promotional campaigns. The goal of these efforts is to better understand the process underlying consumer choice, including product attributes and pricing considerations that ultimately drive purchasing decisions. Just as with the marginal investor's willingness to provide capital through the purchase of common stock, the exact process by which consumers arrive at a decision to exchange their hard-earned money for a particular good is unobservable. The relevance of behavioral models is not contingent on the idea that consumers themselves use such models when making purchasing decisions. Similarly, the value of the Expected Earnings method—like the DCF and CAPM approaches—is not contingent on a demonstration that investors' behavior is premised on this analysis.

The purpose of all ROE models is to better understand investor return requirements, and those requirements cannot be directly observed. While real world investors might not apply the models in exactly the same way as theory dictates, the inputs to the models (*e.g.*, beta, growth rates, dividend yields, forecasted book returns) are widely published in investment advisory reports discussing utility stocks and industry prospects. Given the importance of both expected earnings and book value investment for utility investors, and the direct link to the *Hope* and *Bluefield* regulatory

[156] If such a requirement were governing, the Commission would be forced to jettison its continued reference to GDP growth in applying the DCF model. In contrast to the evidence I have presented to demonstrate the relevance of earned returns to investors' evaluation of electric utilities, there is no support for the notion that investors use GDP growth rates "to determine the cost of capital of utilities or to calculate return on an investment." Opinion No. 569 at P 216. Accordingly, by the Commission's reasoning, its own two-stage DCF model "does not reflect how an investor would make an investment decision." *Id.* at P 217.

standards, the Expected Earnings approach provides a useful perspective in evaluating a just and reasonable ROE.

Q. Do current conditions in the economy and capital markets provide additional support for alternatives to the DCF and CAPM approaches?

A. Yes. Since the onset of the COVID-19 pandemic and military conflict in Ukraine, investors have confronted heightened market volatility and uncertainty. At the same time, the Federal Reserve has undertaken a sharp reversal of its monetary policy stance to aggressively respond to levels of price inflation not seen in 40 years. Such tumultuous and highly aberrant conditions violate the general assumptions of market equilibrium and stability underlying market-based financial models. The Risk Premium and Expected Earnings approaches are largely insulated from such concerns and including them in the set of ROE models used by the Commission to determine ROEs helps to ensure that the *Hope* and *Bluefield* standards are met.

Q. What ROEs are indicated for electric utilities based on the Expected Earnings approach?

A. The year-end returns on common equity projected by Value Line over its forecast horizon for each of the utilities in the proxy group are shown on Exhibit No. ORU-110. In *Southern California Edison Co.*, the Commission correctly recognized that, if the rate of return were based on year-end book values, such as those reported by Value Line, it would understate actual returns because of growth in common equity over the year.[157] Accordingly, consistent with the Commission's findings and the theory underlying this approach, I made an adjustment to compute an average rate of return.[158]

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[157] *So. Cal. Edison Co.*, 92 FERC ¶ 61,070 at 61,263 & n. 38 (2000).

[158] Use of an average return in developing the rate of return is well supported. *See, e.g.*, Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 305-06, which discusses the need to adjust Value Line's end-of-year data, consistent with the Commission's prior findings.

As shown on Exhibit No. ORU-110, Value Line's projections for the Electric Group resulted in a range of expected rates of return from 7.67% to 15.15%, with a median of 10.79% and a midpoint of 11.41%.

IV. LOW-RISK NON-UTILITY DCF MODEL

Q. What other ROE benchmark do you consider in evaluating a just and reasonable base ROE for O&R?

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

Q. Has the Commission acknowledged the potential relevance of evidence beyond the results of any particular set of financial models?

A. Yes. The Commission has noted that the ultimate determination of a just and reasonable end result depends "on the particular circumstances of the case," and noted that a broad range of additional evidence may be pertinent in evaluating investors' required return.[159] Observing that "any methodology has the potential for errors or inaccuracies,"[160] the Commission has concluded that "[t]here is significant evidence indicating that combining estimates from different models is more accurate than relying on a single model."[161] There is no sound reason why such evidence would not be equally relevant in evaluating a just and reasonable ROE for O&R applicable to Rate Schedules19 and 10 of NYISO's OATT.

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[159] Opinion No. 569 at P 68 (footnote omitted); Opinion No. 569-A at P 175 (footnote omitted). For example, the Commission noted that evidence concerning "ROEs of non-utility companies, . . . non-utility stock prices, [and] investor expectations for non-utility stocks" may be relevant. Opinion No. 569 at P 522; Opinion No. 569-A at P 217.

[160] Opinion No. 569 at P 38.

[161] *Id.*

Q. Why do you include a DCF analysis for this non-utility group?

A. The primary reason I have examined DCF results for this Non-Utility Group is that utilities, such as O&R, need to compete with non-regulated firms for capital. The cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives. The total capital invested in utility stocks is only a small fraction of total common stock investment and there is a wide range of other alternatives available to investors. Utilities must compete for capital, not just against firms in their own industry, but with other investment opportunities of comparable risk.[162] This understanding is consistent with modern portfolio theory, which is built on the assumption that rational investors will hold a diverse portfolio of stocks and not just companies in a single industry.

Q. Is it consistent with the *Bluefield* and *Hope* cases to consider investors' required ROE for non-utility companies?

A. Yes. The cost of equity capital in the competitive sector of the economy forms 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 attended with comparable risks and uncertainties." It does not restrict consideration to other utilities. Similarly, the *Hope* case states that, "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks."[163] As in the *Bluefield* decision, there is nothing to restrict "other enterprises" solely to the utility industry.

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[162] 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.

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

Q. Has the Commission acknowledged the potential relevance of investors' required returns for firms in the competitive sector?

A. Yes. The Commission has noted that utilities "must compete for capital with other utilities (*and companies in other sectors*) throughout the nation."[164] Opinion No. 569-A noted that "evidence regarding non-utility stock prices . . . [and] investor expectations for non-utility stocks" could influence its evaluation of a just and reasonable ROE for electric utilities.[165] Similarly, the Commission noted that evidence concerning "ROEs of non-utility companies, . . . non-utility stock prices, [and] investor expectations for non-utility stocks" could be considered in tandem with results for a proxy group of electric utilities.[166] The Commission made this statement in the context of applying the first prong of Section 206 of the FPA, *i.e.*, whether a utility's existing ROE remains just and reasonable. There is no sound reason why expected returns on non-utility stocks would not be equally relevant to whether a utility's proposed ROE in a Section 205 rate change is just and reasonable.

Investors have many investment 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 FERC-jurisdictional utilities and other regulated utility sectors in the allocation of capital. For example, Wolfe Research has noted that lower ROEs at the Commission could cause investors to divert capital to "other industries generally."[167] This was affirmed by Bank

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[164] Opinion No. 531 at P 96 (emphasis added).

[165] Opinion No. 569-A at P 175.

[166] Opinion No. 569 at P 522.

[167] Wolfe Research, *FERConomics: Risk to transmission base ROEs in focus*, Utils. & Power (Jun. 11, 2013) at 11.

of America Merrill Lynch, which highlighted the fact that unsupportive ROE determinations could "result in a shift away of capital to other businesses."[168]

Q. Does consideration of the results for the Non-Utility Group improve the reliability of DCF results?

A. Yes. Growth estimates used in the DCF model depend on analysts' forecasts. It is possible for utility growth rates to be distorted by short-term trends in the industry, or by the industry falling into favor or disfavor by analysts. Such distortions could result in biased DCF estimates for utilities. Because the Non-Utility Group includes low risk companies from many industries, it diversifies away any distortion that may be caused by the ebb and flow of enthusiasm for a particular sector.

Q. What criteria do you apply to develop the Non-Utility Group?

A. My comparable risk proxy group was composed of those United States companies followed by Value Line that:

1) pay common dividends;

2) have a Safety Rank of "1";

3) have a Financial Strength Rating of "A" or greater;

4) have a beta of 0.95 or less; and

5) have investment grade credit ratings from S&P and Moody's.

Q. How do you evaluate the risks of the Non-Utility Group relative to your proxy group of electric utilities?

A. My evaluation of relative risk considers five published benchmarks that are widely relied on by investors—credit ratings from Moody's and S&P, along with Value Line's Safety Rank, Financial Strength Rating, and beta values. Value Line's primary risk

[168] Bank of America Merrill Lynch, *Where is FERC? ROE Transmission Challenges on First Street*, Industry Overview (Dec. 5, 2019), https://www.offshorewindadvisory.com/wp-content/uploads/2020/01/191205-BAML-MISO-ROE-Order.pdf.

indicator is its Safety Rank, which ranges from "1" (Safest) to "5" (Riskiest). This overall risk measure is intended to capture the total risk of a stock, and incorporates elements of stock price stability and financial strength. The Financial Strength Rating is designed as a guide to overall financial strength and creditworthiness, with the key inputs including financial leverage, business volatility measures, and company size. Value Line's Financial Strength Ratings range from "A++" (strongest) down to "C" (weakest) in nine steps. Value Line is one of the most widely available sources of investment advisory information and these objective, published indicators provide useful guidance regarding the risk perceptions of investors. As noted earlier, beta measures a utility's stock price volatility relative to the market as a whole, and reflects 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. Beta is the only relevant measure of investment risk under modern capital market theory, and is widely cited in academics and in the investment industry as a guide to investors' risk perceptions.

Q. How do the overall risks of this non-utility group compare with the Electric Group?

A. Table ORU-5 compares the Non-Utility Group with my electric utility proxy group across the five indicators of investment risk discussed above:

TABLE ORU-5
COMPARISON OF RISK INDICATORS

	Credit Rating		Value Line		
			Safety	Financial	
Proxy Group	**S&P**	**Moody's**	**Rank**	**Strength**	**Beta**
Non-Utility Group	A	A2	1	A+	0.80
Electric Group	BBB+	Baa2	2	A	0.92

As shown above, the risk indicators for the Non-Utility Group suggest less risk than for the Electric Group.

The companies that make up the Non-Utility Group are representative of the pinnacle of corporate America. These firms, which include household names such as General Mills, Procter & Gamble, and Walmart, have long corporate histories, well-established track records, and exceedingly conservative risk profiles. Many of these companies pay dividends on par with utilities, with the average dividend yield for the group being 2.2%. Moreover, because of their significance and name recognition, these companies receive intense scrutiny by the investment community, which increases confidence that published growth estimates are representative of the consensus expectations reflected in common stock prices.

Q. What are the results of your constant growth DCF analysis for the Non-Utility Group?

A. As shown on Exhibit No. ORU-112, I calculated the dividend yield component of the DCF model in exactly the same manner described earlier for the Electric Group. With respect to growth, my application of the DCF model to the Non-Utility Group relied on projected EPS growth rates from IBES, Value Line, and Zacks. As indicated on pages 1-3 of Exhibit No. ORU-112, my DCF analyses for the Non-Utility Group resulted in median cost of equity estimates ranging from 10.55% to 11.09%, with the midpoint values ranging from 11.38% to 11.53%. These results confirm the continued downward bias inherent in the results of the two-step DCF study for the Electric Group.

Q. Does this conclude your testimony?

A. Yes, it does.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Orange and Rockland Utilities, Inc.	**)**	**Docket No. ER24-___-000**

DECLARATION OF ADRIEN M. MCKENZIE

I depose and state under penalty of perjury that the foregoing testimony was prepared or assembled by me or under my direction, and that I have read the questions and answers labeled as my testimony: that if asked the same questions, my answers in response would be as shown; and that the facts contained in my answers are true to the best of my knowledge, information, and belief.

Executed on March 25, 2024

/s/ Adrien M. McKenzie
Adrien M. McKenzie

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Adrien M. McKenzie. My business address is 3907 Red River Street, Austin, Texas 78751.

Q. PLEASE STATE YOUR OCCUPATION.

A. I am a principal in FINCAP, Inc., a firm engaged primarily in financial, economic, and policy consulting in the field of public utility regulation.

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I received 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. 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 in more than 200 proceedings filed with the Federal Energy Regulatory Commission ("FERC") and regulatory agencies in Alaska, Arkansas, Colorado, District of Columbia, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Montana, Nebraska, New Mexico, Ohio, Oklahoma, Oregon, South Dakota, Texas, Virginia, Washington, West Virginia, and Wyoming. 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 rate of

return on equity for regulated electric, gas, and water utility operations. In connection with these assignments, my responsibilities have included critically evaluating the positions of other parties and preparation of rebuttal testimony, representing clients in settlement negotiations and hearings, and assisting in the preparation of legal briefs.

FINCAP was formed in 1979 as an economic and financial consulting firm serving clients in both the regulated and competitive sectors. FINCAP conducts assignments ranging from broad qualitative analyses and policy consulting to technical analyses and research. The firm's experience is in the areas of public utilities, valuation of closely-held businesses, and economic evaluations (e.g., damage and cost/benefit analyses). Prior to joining FINCAP, I was employed by an oil and gas firm and was responsible for operations and accounting. I am a member of the CFA Institute. A resume containing the details of my qualifications and experience is attached below.

ADRIEN M. McKENZIE

FINCAP, INC.
Financial Concepts and Applications
Economic and Financial Counsel

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Summary of Qualifications

Adrien McKenzie has over 35 years of experience in economic and financial analysis for regulated industries, and in preparing and supporting expert witness testimony before regulatory agencies, courts, 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. Mr. McKenzie holds the Chartered Financial Analyst (CFA®) designation and earned an MBA in finance from the University of Texas at Austin.

Employment

President 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

M.B.A., Finance, 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: *The Impact of Construction Expenditures on Investor-Owned Electric Utilities*
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 (Jan. 1979 to Dec 1980)	Coursework in accounting, finance, economics, and liberal arts.

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 sponsored prefiled testimony submitted in over 200 regulatory proceedings.
- In addition to filings before regulatory agencies in Alaska, Arkansas, Colorado, District of Columbia, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Montana, Nebraska, New Mexico, Ohio, Oklahoma, Oregon, South Dakota, Texas, Virginia, Washington, West Virginia, and Wyoming, Mr. McKenzie has considerable expertise in preparing expert analyses and testimony before the Federal Energy Regulatory Commission.
- Evaluation of fair rate of return on equity for electric, gas, water, sewer, and telephone utilities, as well as natural gas pipelines.
- Analysis of capital structure issues for regulated utilities.
- Developing cost of service, cost allocation, and rate design studies.
- Design and development of explanatory models for nuclear plant capital costs in connection with prudency reviews.
- Analysis of avoided cost pricing for cogenerated power.
- Application of econometric models to analyze the impact of anti-competitive behavior, theft of trade secrets, and estimate lost profits.
- Valuation of closely-held businesses.

ELECTRIC GROUP

	Company	SYM	(a) S&P Corporate Rating	(b) Moody's Issuer Rating	(c) Value Line Safety Rank	(c) Value Line Financial Strength	(c) Value Line Beta	(c) Market Cap ($M)
1	Alliant Energy	LNT	A-	Baa2	2	A	0.90	$12,800
2	Ameren Corp.	AEE	BBB+	Baa1	1	A	0.90	$21,100
3	American Elec Pwr	AEP	A-	Baa2	1	A+	0.80	$40,800
4	Black Hills Corp.	BKH	BBB+	Baa2	2	A	1.00	$3,300
5	CenterPoint Energy	CNP	BBB+	Baa2	3	B++	1.15	$17,800
6	CMS Energy Corp.	CMS	BBB+	Baa2	2	A	0.85	$16,600
7	Consolidated Edison	ED	A-	Baa2	1	A+	0.80	$35,200
8	Dominion Energy	D	BBB+	Baa2	2	B++	0.85	$47,700
9	DTE Energy Co.	DTE	BBB+	Baa2	2	A	0.95	$21,600
10	Duke Energy Corp.	DUK	BBB+	Baa2	2	A	0.90	$76,200
11	Entergy Corp.	ETR	BBB+	Baa2	2	B++	0.95	$20,200
12	Evergy Inc.	EVRG	A-	Baa2	2	B++	0.90	$13,000
13	Eversource Energy	ES	A-	Baa2	2	A	0.90	$27,100
14	Exelon Corp.	EXC	BBB+	Baa2	2	B++	n/a	$42,900
15	Fortis Inc.	FTS	A-	Baa3	2	B++	0.70	$25,900
16	NextEra Energy, Inc.	NEE	A-	Baa1	1	A+	1.00	$155,400
17	OGE Energy Corp.	OGE	BBB+	Baa1	2	A	1.05	$6,800
18	Pinnacle West Capital	PNW	BBB+	Baa1	2	A	0.95	$8,300
19	PPL Corp.	PPL	A-	Baa1	3	B++	1.10	$21,200
20	Pub Sv Enterprise Grp.	PEG	BBB+	Baa2	1	A++	0.95	$31,500
21	Sempra Energy	SRE	BBB+	Baa2	2	A	1.00	$43,100
22	Southern Company	SO	BBB+	Baa2	2	A	0.95	$80,800
23	WEC Energy Group	WEC	A-	Baa1	1	A+	0.85	$26,900
24	Xcel Energy Inc.	XEL	A-	Baa1	1	A+	0.85	$31,800
			BBB+	**Baa2**	**2**	**A**	**0.92**	**$34,500**

(a) www.standardandpoors.com (retrieved Nov. 7, 2023).
(b) www.moodys.com (retrieved Nov. 6, 2023).
(c) The Value Line Investment Survey (Aug. 11, Sep. 8 and Oct. 20, 2023).

RATE SCHEDULE 19 -- ROE CEILING

Method	Range			Middle Third Lower		Middle Third Upper
Two-Step DCF	7.96%	--	11.42%	9.11%	--	10.26%
CAPM						
IBES	9.78%	--	13.05%	10.87%	--	11.96%
Value Line	10.02%	--	13.45%	11.16%	--	12.31%
Average	9.90%	--	13.25%	11.02%	--	12.13%
Composite ROE	**8.93%**	--	**12.33%**	**10.06%**	--	**11.20%**

RATE SCHEDULE 10 -- BASE ROE

	Method	Range	Median	Midpoint	Middle Third Lower	Middle Third Upper
	Two-Step DCF	7.96% -- 11.42%	9.48%	9.69%	9.11%	10.26%
	CAPM					
	IBES	9.78% -- 13.05%	11.23%	11.42%	10.87%	11.96%
	Value Line	10.02% -- 13.45%	11.55%	11.74%	11.16%	12.31%
	Average	9.90% -- 13.25%	11.39%	11.58%	11.02%	12.13%
(a)	Risk Premium	8.06% -- 12.82%	10.44%	10.44%	9.65%	11.24%
	Expected Earnings	7.67% -- 15.15%	10.79%	11.41%	10.16%	12.66%
	Composite ROE	**8.40% -- 13.16%**	**10.52%**	**10.78%**	**9.98%**	**11.57%**

(a) Range imputed by adjusting the 10.44% Risk Premium result using the average spread between the low and high boundaries of the two-step DCF, CAPM, and Expected Earnings ranges.

ELECTRIC GROUP

		(a)	(b)	(c)	(d)	(e)	(f)	
	Company	**6-mo. Avg Dividend Yield**	**EPS Growth**	**GDP**	**Weighted**	**Adjusted Dividend Yield**	**DCF Result**	**Break (b Pts)**
1	PPL Corp.	3.72%	17.21%	4.17%	14.60%	4.04%	18.64%	722
2	Pinnacle West Capital	4.42%	7.50%	4.17%	6.83%	4.58%	11.42%	71
3	Duke Energy Corp.	4.48%	6.55%	4.17%	6.07%	4.63%	10.71%	1
4	Southern Company	4.04%	7.10%	4.17%	6.51%	4.18%	10.69%	6
5	Entergy Corp.	4.38%	6.60%	4.17%	6.11%	4.53%	10.64%	19
6	NextEra Energy, Inc.	2.78%	8.40%	4.17%	7.55%	2.90%	10.45%	54
7	Alliant Energy	3.52%	6.80%	4.17%	6.27%	3.63%	9.91%	16
8	Xcel Energy Inc.	3.40%	6.75%	4.17%	6.23%	3.51%	9.75%	8
9	Black Hills Corp.	4.39%	5.40%	4.17%	5.15%	4.51%	9.66%	10
10	Exelon Corp.	3.57%	6.30%	4.17%	5.87%	3.69%	9.56%	17
11	Consolidated Edison	3.55%	6.12%	4.17%	5.73%	3.66%	9.39%	30
12	WEC Energy Group	3.59%	5.70%	4.17%	5.39%	3.70%	9.09%	1
13	Pub Sv Enterprise Grp.	3.75%	5.50%	4.17%	5.23%	3.85%	9.08%	1
14	CMS Energy Corp.	3.39%	5.87%	4.17%	5.53%	3.49%	9.02%	7
15	Ameren Corp.	3.11%	6.20%	4.17%	5.79%	3.21%	9.00%	2
16	DTE Energy Co.	3.58%	5.10%	4.17%	4.91%	3.67%	8.59%	41
17	Fortis Inc.	4.10%	4.15%	4.17%	4.15%	4.18%	8.34%	25
18	Eversource Energy	4.09%	4.00%	4.17%	4.03%	4.17%	8.20%	13
19	American Elec Pwr	4.09%	3.70%	4.17%	3.79%	4.16%	7.96%	25
20	Sempra Energy	3.30%	4.14%	4.17%	4.15%	3.37%	7.51%	44
21	Evergy Inc.	4.38%	2.50%	4.17%	2.83%	4.43%	7.27%	25
22	Dominion Energy	5.44%	-3.44%	4.17%	-1.92%	5.35%	3.43%	384
23	CenterPoint Energy	2.66%	-1.07%	4.17%	-0.02%	2.64%	2.62%	81
24	OGE Energy Corp.	4.73%	-12.34%	4.17%	-9.04%	4.44%	-4.60%	722
	Lower End (g)						**7.96%**	
	Upper End (g)						**11.42%**	
	Median (g)						**9.48%**	
	Midpoint						**9.69%**	
	Median - All Values						**9.09%**	
	Low-End Test (h)						**7.48%**	
	High-End Test (i)						**18.17%**	

(a) Six-month average dividend yield for May 2023 - Oct. 2023.
(b) www.finance.yahoo.com (retreived Nov. 5, 2023).
(c) Exhibit No. ORU-104, page 2.
(d) EPS Growth x 80% + GDP Growth x 20%.
(e) Six-month average dividend yield x [1+ (EPS Growth Rate / 2)].
(f) (d) + (e).
(g) Excludes highlighted values.
(h) Average Baa utility bond yield for six-months ending Oct. 2023, plus 20% of average CAPM market risk premium.
(i) 200% of Median - All Values.

GDP GROWTH RATE

Source	Nominal GDP ($ Billions) 2028	2050	2052	2078	Compound Annual Growth Rate
(a) **IHS Markit**	32,027		83,803		4.09%
(b) **EIA**					
Real GDP	23,517	36,652			
GDP Deflator	1.387	2.273			
	32,627	83,299			4.35%
(c) **SSA Trustees Report**	32,212			235,202	4.06%
Average Projected GDP Growth					**4.17%**

(a) IHS Markit, Long-Term Macro Forecast - Baseline (Jan. 23, 2023).
(b) Energy Information Administration, *Annual Energy Outlook 2022* (Mar. 3, 2022).
(c) Social Security Administration, *2022 OASDI Trustees Report,* Table VI.G6.-Selected Economic Variables.

IBES

		(a)	(b)		(c)		(d)		(e)	(f)		
		Market Return (R_m)				Market						
	Company	Div Yield	Proj. Growth	Cost of Equity	Risk-Free Rate	Risk Premium	Beta	Unadjusted K_e	Market Cap	Size Adjustment	CAPM Result	Break (B Pts)
1	Exelon Corp.	1.99%	9.52%	11.51%	4.23%	7.28%	n/a	n/a	$42,900	-0.26%	n/a	--
2	CenterPoint Energy	1.99%	9.52%	11.51%	4.23%	7.28%	1.15	12.60%	$17,800	0.45%	13.05%	36
3	PPL Corp.	1.99%	9.52%	11.51%	4.23%	7.28%	1.10	12.24%	$21,200	0.45%	12.69%	25
4	Black Hills Corp.	1.99%	9.52%	11.51%	4.23%	7.28%	1.00	11.51%	$3,300	0.93%	12.44%	0
5	OGE Energy Corp.	1.99%	9.52%	11.51%	4.23%	7.28%	1.05	11.87%	$6,800	0.57%	12.44%	72
6	Pinnacle West Capital	1.99%	9.52%	11.51%	4.23%	7.28%	0.95	11.15%	$8,300	0.57%	11.72%	12
7	DTE Energy Co.	1.99%	9.52%	11.51%	4.23%	7.28%	0.95	11.15%	$21,600	0.45%	11.60%	0
8	Entergy Corp.	1.99%	9.52%	11.51%	4.23%	7.28%	0.95	11.15%	$20,200	0.45%	11.60%	0
9	Pub Sv Enterprise Grp.	1.99%	9.52%	11.51%	4.23%	7.28%	0.95	11.15%	$31,500	0.45%	11.60%	35
10	NextEra Energy, Inc.	1.99%	9.52%	11.51%	4.23%	7.28%	1.00	11.51%	$155,400	-0.26%	11.25%	0
11	Sempra Energy	1.99%	9.52%	11.51%	4.23%	7.28%	1.00	11.51%	$43,100	-0.26%	11.25%	2
12	Alliant Energy	1.99%	9.52%	11.51%	4.23%	7.28%	0.90	10.78%	$12,800	0.45%	11.23%	--
13	Ameren Corp.	1.99%	9.52%	11.51%	4.23%	7.28%	0.90	10.78%	$21,100	0.45%	11.23%	--
14	Evergy Inc.	1.99%	9.52%	11.51%	4.23%	7.28%	0.90	10.78%	$13,000	0.45%	11.23%	--
15	Eversource Energy	1.99%	9.52%	11.51%	4.23%	7.28%	0.90	10.78%	$27,100	0.45%	11.23%	--
16	Southern Company	1.99%	9.52%	11.51%	4.23%	7.28%	0.95	11.15%	$80,800	-0.26%	10.89%	34
17	CMS Energy Corp.	1.99%	9.52%	11.51%	4.23%	7.28%	0.85	10.42%	$16,600	0.45%	10.87%	2
18	WEC Energy Group	1.99%	9.52%	11.51%	4.23%	7.28%	0.85	10.42%	$26,900	0.45%	10.87%	0
19	Duke Energy Corp.	1.99%	9.52%	11.51%	4.23%	7.28%	0.90	10.78%	$76,200	-0.26%	10.52%	35
20	Dominion Energy	1.99%	9.52%	11.51%	4.23%	7.28%	0.85	10.42%	$47,700	-0.26%	10.16%	36
21	Xcel Energy Inc.	1.99%	9.52%	11.51%	4.23%	7.28%	0.85	10.42%	$31,800	-0.26%	10.16%	0
22	American Elec Pwr	1.99%	9.52%	11.51%	4.23%	7.28%	0.80	10.05%	$40,800	-0.26%	9.79%	37
23	Consolidated Edison	1.99%	9.52%	11.51%	4.23%	7.28%	0.80	10.05%	$35,200	-0.26%	9.79%	0
24	Fortis Inc.	1.99%	9.52%	11.51%	4.23%	7.28%	0.70	9.33%	$25,900	0.45%	9.78%	1
	Lower End										**9.78%**	
	Upper End										**13.05%**	
	Median										**11.23%**	
	Midpoint										**11.42%**	
	Median - All Values										**11.23%**	
	Low-End Test (g)										**7.45%**	
	High-End Test (h)										**22.46%**	

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from www.valueline.com (retrieved Oct. 31, 2023).
(b) IBES growth rates from Refinitiv as provided by fidelity.com (retrieved Oct. 31, 2023). Eliminated growth rates greater than 20%, as well as all negative values.
(c) Six-month average yield on 30-year Treasury bonds for Oct. 2023 from https://fred.stlouisfed.org/.
(d) The Value Line Investment Survey, Summary & Index (Nov. 3, 2023).
(e) The Value Line Investment Survey (Aug. 11, Sep. 8 and Oct. 20, 2023).
(f) Kroll, 2022 CRSP Deciles Size Premium, Cost of Capital Navigator (2023).
(g) Average Baa utility bond yield for six-months ending Oct. 2023, plus 20% of CAPM market risk premium.
(h) 200% of Median - All Values.

S&P 500 / IBES

	Company	Ticker	(a) Dividend Yield	(b) IBES Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
1	Agilent Technologies Inc	A	0.87%	7.95%	30.24	30.24	0.0015	0.000013	0.000122
2	Apple Inc	AAPL	0.56%	6.27%	2,669.86	2,669.86	0.1357	0.000763	0.008506
3	AbbVie Inc	ABBV	4.19%	-4.05%	249.19	--	--	--	--
4	Abbott Laboratories	ABT	2.16%	-2.00%	164.08	--	--	--	--
5	Accenture PLC	ACN	1.74%	8.81%	197.50	197.50	0.0100	0.000174	0.000884
6	Analog Devices Inc	ADI	2.19%	-0.58%	78.40	--	--	--	--
7	Archer-Daniels-Midland Co	ADM	2.52%	-5.30%	38.17	--	--	--	--
8	Automatic Data Processing Inc	ADP	2.47%	11.14%	89.84	89.84	0.0046	0.000113	0.000509
9	Ameren Corporation	AEE	3.33%	6.20%	19.89	19.89	0.0010	0.000034	0.000063
10	American Electric Power Co Inc	AEP	4.40%	3.70%	38.92	38.92	0.0020	0.000087	0.000073
11	AES Corp (The)	AES	4.43%	7.30%	9.98	9.98	0.0005	0.000022	0.000037
12	Aflac Incorporated	AFL	2.23%	n/a	46.40	--	--	--	--
13	American International Group Inc	AIG	2.35%	15.80%	43.65	43.65	0.0022	0.000052	0.000350
14	Assurant Inc.	AIZ	1.88%	14.00%	7.90	7.90	0.0004	0.000008	0.000056
15	Arthur J. Gallagher & Co.	AJG	0.94%	14.00%	50.84	50.84	0.0026	0.000024	0.000362
16	Albemarle Corp	ALB	1.26%	-7.46%	14.88	--	--	--	--
17	The Allstate Corporation	ALL	2.78%	n/a	33.52	--	--	--	--
18	Allegion PLC	ALLE	1.83%	10.60%	8.63	8.63	0.0004	0.000008	0.000047
19	Applied Materials Inc	AMAT	0.97%	12.93%	110.72	110.72	0.0056	0.000054	0.000727
20	Amcor Plc	AMCR	5.51%	4.90%	12.86	12.86	0.0007	0.000036	0.000032
21	AMETEK Inc	AME	0.71%	n/a	32.48	--	--	--	--
22	Amgen Inc	AMGN	3.47%	3.90%	136.77	136.77	0.0069	0.000241	0.000271
23	Ameriprise Financial Inc	AMP	1.72%	n/a	31.90	--	--	--	--
24	American Tower Corp	AMT	3.91%	7.44%	83.07	83.07	0.0042	0.000165	0.000314
25	Aon plc	AON	0.80%	11.20%	61.95	61.95	0.0031	0.000025	0.000353
26	A. O. Smith Corp	AOS	1.83%	n/a	10.37	--	--	--	--
27	APA Corporation	APA	2.90%	-1.00%	12.20	--	--	--	--
28	Air Products and Chemicals Inc.	APD	2.48%	10.27%	62.74	62.74	0.0032	0.000079	0.000327
29	Amphenol Corp	APH	1.12%	n/a	48.19	--	--	--	--
30	Alexandria Real Estate Equities Inc.	ARE	5.33%	n/a	16.18	--	--	--	--
31	Atmos Energy Corp	ATO	2.97%	7.50%	15.98	15.98	0.0008	0.000024	0.000061
32	AvalonBay Communities Inc.	AVB	4.10%	n/a	23.54	--	--	--	--
33	Broadcom Inc	AVGO	2.19%	10.80%	347.26	347.26	0.0176	0.000386	0.001906
34	Avery Dennison Corp	AVY	1.89%	n/a	14.03	--	--	--	--
35	American Water Works Company Inc	AWK	2.49%	8.07%	22.90	22.90	0.0012	0.000029	0.000094
36	American Express Co	AXP	1.75%	14.90%	106.42	106.42	0.0054	0.000094	0.000806
37	Bank of America Corp	BAC	3.72%	n/a	208.70	--	--	--	--
38	Ball Corporation	BALL	1.74%	n/a	15.17	--	--	--	--
39	Baxter International Inc	BAX	3.58%	4.64%	16.42	16.42	0.0008	0.000030	0.000039
40	Bath & Body Works Inc	BBWI	2.70%	7.03%	6.74	6.74	0.0003	0.000009	0.000024
41	Best Buy Co Inc	BBY	5.51%	3.40%	14.54	14.54	0.0007	0.000041	0.000025
42	Becton Dickinson and Co	BDX	1.49%	9.45%	73.33	73.33	0.0037	0.000055	0.000352
43	Franklin Resources Inc	BEN	5.27%	-5.94%	11.37	--	--	--	--
44	Brown-Forman Corp	BF/B	1.46%	13.50%	17.42	17.42	0.0009	0.000013	0.000119
45	Bunge Ltd	BG	2.54%	-8.60%	15.40	--	--	--	--
46	Bank of New York Mellon Corp (The)	BK	3.95%	9.98%	32.69	32.69	0.0017	0.000066	0.000166
47	Baker Hughes a GE Co	BKR	2.32%	43.70%	34.63	--	--	--	--
48	Blackrock Inc	BLK	3.51%	8.00%	91.17	91.17	0.0046	0.000163	0.000370
49	Bristol-Myers Squibb Co	BMY	4.42%	0.83%	104.85	104.85	0.0053	0.000236	0.000044
50	Broadridge Financial Solutions Inc	BR	1.88%	n/a	20.07	--	--	--	--
51	Brown & Brown Inc	BRO	0.75%	n/a	19.76	--	--	--	--
52	BorgWarner Inc	BWA	1.19%	11.00%	8.67	8.67	0.0004	0.000005	0.000048
53	Blackstone Inc	BX	3.47%	10.33%	113.57	113.57	0.0058	0.000200	0.000596

S&P 500 / IBES

			(a)	(b)	(a)				
					Market			Weighted	
			Dividend	IBES	Cap			Dividend	Growth
	Company	Ticker	Yield	Growth	($bil.)	Mkt. Cap.	Weight	Yield	Rate
54	Boston Properties Inc	BXP	7.32%	n/a	8.40	--	--	--	--
55	Citigroup Inc	C	5.37%	n/a	75.58	--	--	--	--
56	Conagra Brands Inc	CAG	5.12%	7.70%	13.08	13.08	0.0007	0.000034	0.000051
57	Cardinal Health Inc	CAH	2.20%	15.50%	22.42	22.42	0.0011	0.000025	0.000177
58	Carrier Global Corp	CARR	1.55%	9.91%	39.99	39.99	0.0020	0.000032	0.000201
59	Caterpillar Inc	CAT	2.30%	10.35%	115.32	115.32	0.0059	0.000135	0.000606
60	Chubb Ltd	CB	1.63%	17.70%	87.56	87.56	0.0044	0.000072	0.000788
61	Cboe Global Markets Inc	CBOE	1.34%	5.48%	17.29	17.29	0.0009	0.000012	0.000048
62	Crown Castle Inc	CCI	7.04%	-7.43%	40.35	--	--	--	--
63	CDW Corp	CDW	1.18%	6.40%	26.86	26.86	0.0014	0.000016	0.000087
64	Celanese Corp	CE	2.52%	1.92%	12.46	12.46	0.0006	0.000016	0.000012
65	Constellation Energy Corp	CEG	1.00%	n/a	36.31	--	--	--	--
66	CF Industries Holdings Inc	CF	2.19%	n/a	15.39	--	--	--	--
67	Citizens Financial Group Inc	CFG	7.17%	n/a	11.07	--	--	--	--
68	Church & Dwight Co Inc	CHD	1.20%	7.10%	22.38	22.38	0.0011	0.000014	0.000081
69	C.H. Robinson Worldwide Inc.	CHRW	2.98%	-13.10%	9.53	--	--	--	--
70	The Cigna Group	CI	1.60%	11.20%	91.52	91.52	0.0047	0.000075	0.000521
71	Cincinnati Financial Corp	CINF	3.13%	n/a	15.64	--	--	--	--
72	Colgate-Palmolive Co	CL	2.60%	7.49%	61.85	61.85	0.0031	0.000082	0.000235
73	Clorox Co (The)	CLX	4.08%	7.30%	14.59	14.59	0.0007	0.000030	0.000054
74	Comerica Incorporated	CMA	7.21%	n/a	5.19	--	--	--	--
75	Comcast Corp	CMCSA	2.81%	9.29%	166.20	166.20	0.0084	0.000237	0.000785
76	CME Group Inc	CME	2.06%	8.45%	76.79	76.79	0.0039	0.000080	0.000330
77	Cummins Inc.	CMI	3.11%	11.51%	30.64	30.64	0.0016	0.000048	0.000179
78	CMS Energy Corp	CMS	3.59%	7.70%	15.85	15.85	0.0008	0.000029	0.000062
79	CenterPoint Energy Inc.	CNP	2.98%	n/a	16.97	--	--	--	--
80	Capital One Financial Corp.	COF	2.37%	n/a	38.59	--	--	--	--
81	Cooper Cos Inc (The)	COO	0.02%	n/a	15.44	--	--	--	--
82	Conocophillips	COP	2.02%	n/a	142.26	--	--	--	--
83	Cencora Inc	COR	1.09%	8.70%	37.43	37.43	0.0019	0.000021	0.000165
84	Costco Wholesale Corp	COST	0.74%	8.10%	244.59	244.59	0.0124	0.000092	0.001007
85	Campbell Soup Co	CPB	3.86%	5.10%	12.03	12.03	0.0006	0.000024	0.000031
86	Camden Property Trust	CPT	4.90%	n/a	9.06	--	--	--	--
87	Cisco Systems Inc	CSCO	2.99%	6.41%	211.15	211.15	0.0107	0.000321	0.000688
88	CSX Corp	CSX	1.47%	6.59%	59.89	59.89	0.0030	0.000045	0.000200
89	Cintas Corp	CTAS	1.06%	12.17%	51.65	51.65	0.0026	0.000028	0.000319
90	Coterra Energy Inc	CTRA	2.91%	n/a	20.76	--	--	--	--
91	Cognizant Technology Solutions Corp	CTSH	1.80%	4.84%	32.56	32.56	0.0017	0.000030	0.000080
92	Corteva Inc	CTVA	1.35%	9.69%	34.17	34.17	0.0017	0.000023	0.000168
93	CVS Health Corp	CVS	3.72%	4.08%	88.64	88.64	0.0045	0.000168	0.000184
94	Chevron Corp	CVX	4.27%	n/a	274.27	--	--	--	--
95	Dominion Energy Inc	D	6.62%	-3.44%	33.74	--	--	--	--
96	Delta Air Lines Inc	DAL	1.28%	32.62%	20.11	--	--	--	--
97	DuPont De Nemours Inc	DD	2.06%	10.06%	33.46	33.46	0.0017	0.000035	0.000171
98	DEERE & COMPANY	DE	1.48%	12.80%	105.22	105.22	0.0053	0.000079	0.000684
99	Discover Financial Services	DFS	3.41%	n/a	20.52	--	--	--	--
100	Dollar General Corporation	DG	1.98%	-6.50%	26.13	--	--	--	--
101	Quest Diagnostics Inc	DGX	2.18%	-0.57%	14.63	--	--	--	--
102	D.R. Horton Inc.	DHI	0.99%	-6.32%	35.32	--	--	--	--
103	Danaher Corp	DHR	0.56%	-1.40%	141.89	--	--	--	--
104	Digital Realty Trust Inc	DLR	4.07%	14.76%	37.66	37.66	0.0019	0.000078	0.000282
105	Dover Corp	DOV	1.57%	8.81%	18.18	18.18	0.0009	0.000015	0.000081
106	Dow Inc	DOW	6.10%	-10.72%	33.91	--	--	--	--

S&P 500 / IBES

			(a)	(b)	(a)			Weighted	
	Company	Ticker	Dividend Yield	IBES Growth	Market Cap ($bil.)	Mkt. Cap.	Weight	Dividend Yield	Growth Rate
107	Domino's Pizza Inc	DPZ	1.48%	12.43%	11.82	11.82	0.0006	0.000009	0.000075
108	Darden Restaurants Inc	DRI	3.60%	9.86%	17.51	17.51	0.0009	0.000032	0.000088
109	DTE Energy Co	DTE	3.95%	5.10%	19.87	19.87	0.0010	0.000040	0.000051
110	Duke Energy Corp	DUK	4.61%	6.55%	68.51	68.51	0.0035	0.000161	0.000228
111	Devon Energy Corp	DVN	1.72%	n/a	29.84	--	--	--	--
112	Electronic Arts Inc	EA	0.66%	9.30%	33.54	33.54	0.0017	0.000011	0.000158
113	eBay Inc.	EBAY	2.78%	7.62%	20.88	20.88	0.0011	0.000029	0.000081
114	Ecolab Inc.	ECL	1.26%	14.36%	47.81	47.81	0.0024	0.000031	0.000349
115	Consolidated Edison Inc.	ED	3.75%	n/a	30.28	--	--	--	--
116	Equifax Inc.	EFX	0.92%	11.40%	20.89	20.89	0.0011	0.000010	0.000121
117	Everest Group Ltd	EG	1.77%	34.40%	17.17	--	--	--	--
118	Edison International	EIX	4.92%	5.50%	24.17	24.17	0.0012	0.000060	0.000068
119	Estee Lauder Cos Inc (The)	EL	2.05%	23.01%	46.11	--	--	--	--
120	Elevance Health Inc	ELV	1.32%	11.82%	105.75	105.75	0.0054	0.000071	0.000635
121	Eastman Chemical Co	EMN	4.23%	4.83%	8.86	8.86	0.0005	0.000019	0.000022
122	Emerson Electric Co.	EMR	2.37%	n/a	50.85	--	--	--	--
123	EOG Resources Inc.	EOG	2.77%	-1.00%	73.51	--	--	--	--
124	Equinix Inc	EQIX	1.87%	24.30%	68.50	--	--	--	--
125	Equity Residential	EQR	4.79%	n/a	20.97	--	--	--	--
126	EQT Corp	EQT	1.49%	27.00%	17.43	--	--	--	--
127	Eversource Energy	ES	5.17%	n/a	18.78	--	--	--	--
128	Essex Property Trust Inc.	ESS	4.32%	n/a	13.73	--	--	--	--
129	Eaton Corp Plc	ETN	1.65%	11.83%	82.96	82.96	0.0042	0.000070	0.000498
130	Entergy corporation	ETR	4.48%	n/a	20.21	--	--	--	--
131	Evergy Inc	EVRG	5.15%	2.50%	11.29	11.29	0.0006	0.000030	0.000014
132	Exelon Corp	EXC	3.70%	n/a	38.75	--	--	--	--
133	Expeditors International of Washington Inc.	EXPD	1.26%	-12.20%	16.16	--	--	--	--
134	Extra Space Storage Inc	EXR	6.55%	n/a	21.89	--	--	--	--
135	Ford Motor Co	F	6.15%	-9.47%	39.03	--	--	--	--
136	Diamondback Energy Inc	FANG	2.10%	n/a	28.67	--	--	--	--
137	Fastenal Co	FAST	2.40%	n/a	33.34	--	--	--	--
138	Freeport-McMoRan Inc	FCX	2.04%	n/a	48.43	--	--	--	--
139	FactSet Research Systems Inc.	FDS	0.91%	11.30%	16.41	16.41	0.0008	0.000008	0.000094
140	FedEx Corp.	FDX	2.10%	22.50%	60.37	--	--	--	--
141	FirstEnergy Corp.	FE	4.69%	6.53%	20.43	20.43	0.0010	0.000049	0.000068
142	Fidelity National Information Services Inc	FIS	4.54%	2.00%	29.10	29.10	0.0015	0.000067	0.000030
143	Fifth Third Bancorp	FITB	6.07%	n/a	16.15	--	--	--	--
144	FMC Corp.	FMC	4.64%	n/a	6.64	--	--	--	--
145	Fox Corp	FOXA	1.71%	n/a	7.60	--	--	--	--
146	Federal Realty Investment Trust	FRT	4.78%	n/a	7.43	--	--	--	--
147	Fortive Corp	FTV	0.43%	6.90%	22.94	22.94	0.0012	0.000005	0.000080
148	General Dynamics Corp	GD	2.29%	9.80%	65.85	65.85	0.0033	0.000077	0.000328
149	General Electric Co	GE	0.29%	31.39%	118.23	--	--	--	--
150	GE HealthCare Technologies Inc	GEHC	0.18%	n/a	30.28	--	--	--	--
151	Gen Digital Inc	GEN	3.00%	11.90%	10.65	10.65	0.0005	0.000016	0.000064
152	Gilead Sciences Inc	GILD	3.82%	4.33%	97.86	97.86	0.0050	0.000190	0.000215
153	General Mills Inc.	GIS	3.66%	7.67%	37.92	37.92	0.0019	0.000071	0.000148
154	Globe Life Inc	GL	0.77%	n/a	11.03	--	--	--	--
155	Corning Inc	GLW	4.19%	6.30%	21.94	21.94	0.0011	0.000047	0.000070
156	General Motors Co	GM	1.28%	3.75%	38.62	38.62	0.0020	0.000025	0.000074
157	Genuine Parts Co	GPC	2.95%	n/a	18.07	--	--	--	--
158	GLOBAL PAYMENTS INC	GPN	1.03%	14.94%	27.62	27.62	0.0014	0.000014	0.000210
159	Garmin Ltd	GRMN	2.91%	5.60%	19.63	19.63	0.0010	0.000029	0.000056

S&P 500 / IBES

			(a)	(b)	(a)			Weighted	
	Company	Ticker	Dividend Yield	IBES Growth	Market Cap ($bil.)	Mkt. Cap.	Weight	Dividend Yield	Growth Rate
160	Goldman Sachs Group Inc (The)	GS	3.62%	9.60%	100.09	100.09	0.0051	0.000184	0.000488
161	Grainger (W.W.) Inc	GWW	1.04%	n/a	36.22	--	--	--	--
162	Halliburton Co	HAL	2.01%	24.25%	35.21	--	--	--	--
163	Hasbro Inc.	HAS	6.20%	n/a	6.26	--	--	--	--
164	Huntington Bancshares Inc	HBAN	6.42%	n/a	13.97	--	--	--	--
165	HCA Healthcare Inc	HCA	1.06%	9.10%	60.53	60.53	0.0031	0.000033	0.000280
166	Home Depot Inc. (The)	HD	2.94%	3.30%	284.71	284.71	0.0145	0.000425	0.000477
167	Hess Corp	HES	1.29%	n/a	44.35	--	--	--	--
168	Hartford Financial Services Group Inc. (The)	HIG	2.56%	10.50%	22.09	22.09	0.0011	0.000029	0.000118
169	Huntington Ingalls Industries Inc	HII	2.26%	6.58%	8.76	8.76	0.0004	0.000010	0.000029
170	Hilton Worldwide Holdings Inc	HLT	0.40%	16.16%	38.86	38.86	0.0020	0.000008	0.000319
171	Honeywell International Inc	HON	2.36%	7.48%	120.81	120.81	0.0061	0.000145	0.000459
172	Hewlett Packard Enterprise Co	HPE	3.12%	3.23%	19.73	19.73	0.0010	0.000031	0.000032
173	HP Inc	HPQ	3.99%	-2.84%	26.02	--	--	--	--
174	Hormel Foods Corp	HRL	3.38%	-0.50%	17.79	--	--	--	--
175	Host Hotels & Resorts Inc	HST	4.65%	n/a	11.02	--	--	--	--
176	Hershey Co (The)	HSY	2.59%	8.36%	38.31	38.31	0.0019	0.000050	0.000163
177	Humana Inc.	HUM	0.71%	13.53%	64.89	64.89	0.0033	0.000023	0.000446
178	Howmet Aerospace Inc	HWM	0.45%	21.72%	18.18	--	--	--	--
179	International Business Machines Corp	IBM	4.59%	2.80%	131.77	131.77	0.0067	0.000307	0.000187
180	Intercontinental Exchange Inc	ICE	1.56%	6.99%	61.37	61.37	0.0031	0.000049	0.000218
181	IDEX Corp	IEX	1.34%	12.00%	14.48	14.48	0.0007	0.000010	0.000088
182	International Flavors & Fragrances Inc	IFF	4.74%	-0.58%	17.45	--	--	--	--
183	Intel Corp	INTC	1.37%	5.51%	153.88	153.88	0.0078	0.000107	0.000431
184	Intuit Inc.	INTU	0.74%	14.69%	138.71	138.71	0.0070	0.000052	0.001035
185	International Paper Co	IP	5.48%	n/a	11.67	--	--	--	--
186	Interpublic Group of Cos Inc (The)	IPG	4.65%	4.80%	10.88	10.88	0.0006	0.000026	0.000027
187	Ingersoll Rand Inc	IR	0.13%	12.19%	24.54	24.54	0.0012	0.000002	0.000152
188	Iron Mountain Inc	IRM	4.40%	5.70%	17.24	17.24	0.0009	0.000039	0.000050
189	Illinois Tool Works Inc.	ITW	2.50%	2.88%	67.43	67.43	0.0034	0.000086	0.000099
190	Invesco Ltd	IVZ	6.48%	8.52%	5.83	5.83	0.0003	0.000019	0.000025
191	Jacobs Solutions Inc	J	0.78%	9.10%	16.78	16.78	0.0009	0.000007	0.000078
192	J.B. Hunt Transport Services Inc.	JBHT	1.00%	4.50%	17.73	17.73	0.0009	0.000009	0.000041
193	Johnson Controls International Plc	JCI	3.02%	15.25%	33.35	33.35	0.0017	0.000051	0.000258
194	Henry (Jack) & Associates Inc	JKHY	1.48%	7.50%	10.26	10.26	0.0005	0.000008	0.000039
195	Johnson & Johnson	JNJ	3.25%	5.20%	357.10	357.10	0.0181	0.000590	0.000944
196	Juniper Networks Inc	JNPR	3.38%	11.00%	8.58	8.58	0.0004	0.000015	0.000048
197	JPMorgan Chase & Co	JPM	3.02%	n/a	404.12	--	--	--	--
198	Keurig Dr Pepper Inc	KDP	2.93%	7.01%	42.41	42.41	0.0022	0.000063	0.000151
199	KeyCorp	KEY	8.02%	n/a	9.57	--	--	--	--
200	The Kraft Heinz Co	KHC	5.09%	5.13%	38.64	38.64	0.0020	0.000100	0.000101
201	Kimco Realty Corp	KIM	5.35%	n/a	11.12	--	--	--	--
202	KLA Corp	KLAC	1.11%	6.02%	63.85	63.85	0.0032	0.000036	0.000195
203	Kimberly-Clark Corp	KMB	3.97%	9.84%	40.43	40.43	0.0021	0.000082	0.000202
204	Kinder Morgan Inc.	KMI	6.98%	0.30%	36.01	36.01	0.0018	0.000128	0.000005
205	Coca-Cola Co (The)	KO	3.36%	6.16%	244.23	244.23	0.0124	0.000417	0.000765
206	Kroger Co. (The)	KR	2.56%	8.00%	32.64	32.64	0.0017	0.000042	0.000133
207	Kenvue Inc	KVUE	4.30%	1.48%	35.62	35.62	0.0018	0.000078	0.000027
208	Loews Corp	L	0.39%	n/a	14.43	--	--	--	--
209	Leidos Holdings Inc	LDOS	1.46%	7.90%	13.61	13.61	0.0007	0.000010	0.000055
210	Lennar Corp	LEN	1.45%	0.60%	30.33	30.33	0.0015	0.000022	0.000009
211	Laboratory Corp of America Holdings	LH	1.44%	-3.18%	16.96	--	--	--	--
212	L3Harris Technologies Inc	LHX	2.56%	n/a	34.01	--	--	--	--

S&P 500 / IBES

	Company	Ticker	(a) Dividend Yield	(b) IBES Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
213	Linde Plc	LIN	1.33%	12.01%	185.31	185.31	0.0094	0.000126	0.001130
214	LKQ Corporation	LKQ	2.50%	n/a	11.75	--	--	--	--
215	Eli Lilly and Co	LLY	0.82%	26.75%	525.84	--	--	--	--
216	Lockheed Martin Corp	LMT	2.77%	11.33%	112.80	112.80	0.0057	0.000159	0.000649
217	Alliant Energy Corporation	LNT	3.71%	6.55%	12.33	12.33	0.0006	0.000023	0.000041
218	Lowe's Cos Inc	LOW	2.31%	5.50%	109.98	109.98	0.0056	0.000129	0.000307
219	Lam Research Corp	LRCX	1.36%	7.64%	77.52	77.52	0.0039	0.000054	0.000301
220	Southwest Airlines Co.	LUV	3.33%	29.00%	13.24	--	--	--	--
221	Lamb Weston Holdings Inc	LW	1.31%	13.80%	13.01	13.01	0.0007	0.000009	0.000091
222	LyondellBasell Industries NV	LYB	5.54%	-3.18%	29.27	--	--	--	--
223	Mastercard Inc	MA	0.65%	20.84%	352.93	--	--	--	--
224	Mid-America Apartment Communities Inc	MAA	4.74%	n/a	13.79	--	--	--	--
225	Marriott International Inc	MAR	1.10%	17.60%	56.24	56.24	0.0029	0.000032	0.000503
226	Masco Corporation	MAS	2.28%	4.49%	11.69	11.69	0.0006	0.000014	0.000027
227	McDonald's Corp	MCD	2.55%	9.51%	191.06	191.06	0.0097	0.000247	0.000924
228	Microchip Technology Inc	MCHP	2.55%	12.10%	38.81	38.81	0.0020	0.000050	0.000239
229	McKesson Corp	MCK	0.54%	9.97%	61.43	61.43	0.0031	0.000017	0.000311
230	Moody's Corp.	MCO	1.00%	13.01%	56.36	56.36	0.0029	0.000029	0.000373
231	Mondelez International Inc	MDLZ	2.57%	8.46%	90.07	90.07	0.0046	0.000118	0.000387
232	Medtronic PLC	MDT	4.01%	3.47%	93.88	93.88	0.0048	0.000191	0.000165
233	Metlife Inc.	MET	3.47%	n/a	45.13	--	--	--	--
234	MGM Resorts International	MGM	0.03%	n/a	12.25	--	--	--	--
235	McCormick & Co Inc	MKC	2.44%	8.10%	16.06	16.06	0.0008	0.000020	0.000066
236	MarketAxess Holdings Inc	MKTX	1.35%	10.50%	8.10	8.10	0.0004	0.000006	0.000043
237	Martin Marietta Materials Inc.	MLM	0.73%	21.40%	25.27	--	--	--	--
238	Marsh & McLennan Companies Inc	MMC	1.50%	11.00%	93.51	93.51	0.0048	0.000071	0.000523
239	3M Co	MMM	6.61%	1.77%	50.23	50.23	0.0026	0.000169	0.000045
240	Altria Group Inc	MO	9.76%	2.46%	71.05	71.05	0.0036	0.000352	0.000089
241	Mosaic Company (The)	MOS	2.46%	n/a	10.79	--	--	--	--
242	Marathon Petroleum Corp	MPC	1.98%	-17.90%	60.48	--	--	--	--
243	Monolithic Power Systems Inc	MPWR	0.91%	25.00%	21.11	--	--	--	--
244	Merck & Co Inc	MRK	2.84%	10.47%	260.60	260.60	0.0132	0.000376	0.001386
245	Marathon Oil Corp	MRO	1.76%	n/a	16.54	--	--	--	--
246	Morgan Stanley	MS	4.80%	8.00%	117.35	117.35	0.0060	0.000286	0.000477
247	MSCI Inc	MSCI	1.17%	14.59%	37.29	37.29	0.0019	0.000022	0.000276
248	Microsoft Corp	MSFT	0.91%	16.20%	2,512.92	2,512.92	0.1277	0.001163	0.020682
249	Motorola Solutions Inc	MSI	1.26%	7.20%	46.51	46.51	0.0024	0.000030	0.000170
250	M&T Bank Corp	MTB	4.75%	n/a	18.71	--	--	--	--
251	Micron Technology Inc.	MU	0.69%	-2.62%	73.43	--	--	--	--
252	Nasdaq Inc	NDAQ	1.77%	4.13%	24.37	24.37	0.0012	0.000022	0.000051
253	Nordson Corp	NDSN	1.28%	13.00%	12.12	12.12	0.0006	0.000008	0.000080
254	NextEra Energy Inc	NEE	3.38%	8.40%	117.98	117.98	0.0060	0.000203	0.000504
255	Newmont Corporation	NEM	4.27%	12.20%	29.78	29.78	0.0015	0.000065	0.000185
256	NiSource Inc	NI	4.05%	n/a	10.40	--	--	--	--
257	NIKE Inc	NKE	1.32%	14.62%	156.41	156.41	0.0079	0.000105	0.001162
258	Northrop Grumman Corp	NOC	1.63%	1.90%	71.09	71.09	0.0036	0.000059	0.000069
259	NRG Energy Inc	NRG	3.56%	4.00%	9.71	9.71	0.0005	0.000018	0.000020
260	Norfolk Southern Corp	NSC	2.83%	2.26%	43.14	43.14	0.0022	0.000062	0.000049
261	NetApp Inc	NTAP	2.89%	8.80%	15.20	15.20	0.0008	0.000022	0.000068
262	Northern Trust Corp	NTRS	4.55%	n/a	13.64	--	--	--	--
263	Nucor Corp	NUE	1.41%	n/a	36.76	--	--	--	--
264	NVIDIA Corporation	NVDA	0.04%	78.70%	1,007.27	--	--	--	--
265	News Corp	NWSA	0.97%	n/a	7.89	--	--	--	--

S&P 500 / IBES

			(a)	(b)	(a)				
					Market			Weighted	
			Dividend	IBES	Cap			Dividend	Growth
	Company	Ticker	Yield	Growth	($bil.)	Mkt. Cap.	Weight	Yield	Rate
266	NXP Semiconductors NV	NXPI	2.35%	7.85%	44.45	44.45	0.0023	0.000053	0.000177
267	Realty Income Corp.	O	6.56%	n/a	33.58	--	--	--	--
268	Old Dominion Freight Line Inc	ODFL	0.44%	9.18%	41.16	41.16	0.0021	0.000009	0.000192
269	ONEOK Inc	OKE	5.95%	n/a	37.98	--	--	--	--
270	Omnicom Group Inc	OMC	3.74%	4.70%	14.83	14.83	0.0008	0.000028	0.000035
271	Oracle Corp	ORCL	1.55%	10.85%	283.25	283.25	0.0144	0.000223	0.001561
272	Otis Worldwide Corp	OTIS	1.76%	9.80%	31.60	31.60	0.0016	0.000028	0.000157
273	Occidental Petroleum Corp	OXY	1.33%	-19.20%	54.68	--	--	--	--
274	Paramount Global	PARA	1.84%	-3.70%	6.64	--	--	--	--
275	Paycom Software Inc	PAYC	0.61%	21.95%	14.81	--	--	--	--
276	Paychex Inc.	PAYX	3.48%	8.53%	40.11	40.11	0.0020	0.000071	0.000174
277	PACCAR Inc	PCAR	3.57%	n/a	43.17	--	--	--	--
278	Healthpeak Properties Inc	PEAK	7.72%	n/a	8.51	--	--	--	--
279	Public Service Enterprise Group Inc	PEG	3.80%	5.50%	30.77	30.77	0.0016	0.000059	0.000086
280	PepsiCo Inc	PEP	3.18%	8.64%	224.49	224.49	0.0114	0.000363	0.000986
281	Pfizer Inc	PFE	5.37%	-9.45%	172.54	--	--	--	--
282	Principal Financial Group Inc	PFG	3.84%	9.10%	16.36	16.36	0.0008	0.000032	0.000076
283	Procter & Gamble Co (The)	PG	2.51%	7.81%	353.60	353.60	0.0180	0.000450	0.001402
284	Progressive Corp (The)	PGR	0.25%	25.70%	92.48	--	--	--	--
285	Parker-Hannifin Corp	PH	1.64%	11.15%	47.41	47.41	0.0024	0.000040	0.000269
286	PulteGroup Inc	PHM	0.90%	n/a	15.87	--	--	--	--
287	Packaging Corp Of America	PKG	3.27%	n/a	13.76	--	--	--	--
288	Prologis Inc	PLD	3.60%	n/a	93.09	--	--	--	--
289	Philip Morris International Inc	PM	5.83%	6.28%	138.41	138.41	0.0070	0.000410	0.000442
290	The PNC Financial Services Group Inc	PNC	5.42%	n/a	45.60	--	--	--	--
291	Pentair plc	PNR	1.51%	8.95%	9.61	9.61	0.0005	0.000007	0.000044
292	Pinnacle West Capital Corp	PNW	4.76%	7.50%	8.41	8.41	0.0004	0.000020	0.000032
293	Pool Corp	POOL	1.39%	-6.11%	12.21	--	--	--	--
294	PPG Industries Inc.	PPG	2.12%	15.80%	28.95	28.95	0.0015	0.000031	0.000232
295	PPL Corp	PPL	3.91%	n/a	18.11	--	--	--	--
296	Prudential Financial Inc	PRU	5.47%	10.60%	33.19	33.19	0.0017	0.000092	0.000179
297	Public Storage	PSA	5.03%	n/a	41.97	--	--	--	--
298	Phillips 66	PSX	3.81%	-7.50%	50.79	--	--	--	--
299	Quanta Services Inc.	PWR	0.19%	n/a	24.27	--	--	--	--
300	Pioneer Natural Resources Co	PXD	3.77%	-4.00%	55.76	--	--	--	--
301	QUALCOMM Inc.	QCOM	2.94%	-11.57%	121.63	--	--	--	--
302	Regency Centers Corp.	REG	4.31%	n/a	10.91	--	--	--	--
303	Regions Financial Corp	RF	6.88%	n/a	13.64	--	--	--	--
304	Robert Half Inc	RHI	2.77%	n/a	8.01	--	--	--	--
305	Raymond James Financial Inc.	RJF	1.76%	n/a	19.93	--	--	--	--
306	Ralph Lauren Corp	RL	2.67%	13.27%	7.34	7.34	0.0004	0.000010	0.000050
307	Resmed Inc	RMD	1.36%	n/a	20.77	--	--	--	--
308	Rockwell Automation Inc.	ROK	1.80%	15.32%	30.19	30.19	0.0015	0.000028	0.000235
309	ROLLINS INC	ROL	1.38%	14.70%	18.20	18.20	0.0009	0.000013	0.000136
310	Roper Technologies Inc	ROP	0.56%	10.50%	52.14	52.14	0.0026	0.000015	0.000278
311	Ross Stores Inc	ROST	1.22%	11.61%	39.27	39.27	0.0020	0.000024	0.000232
312	Republic Services Inc.	RSG	1.44%	n/a	46.72	--	--	--	--
313	RTX Corp	RTX	2.90%	11.17%	117.03	117.03	0.0059	0.000172	0.000664
314	Revvity Inc	RVTY	0.34%	n/a	10.28	--	--	--	--
315	SBA Communications Corp	SBAC	1.68%	12.00%	22.61	22.61	0.0011	0.000019	0.000138
316	Starbucks Corp	SBUX	2.47%	17.25%	105.65	105.65	0.0054	0.000133	0.000926
317	Schwab (Charles) Corp	SCHW	2.09%	7.33%	94.77	94.77	0.0048	0.000101	0.000353
318	Sealed Air Corp	SEE	2.60%	n/a	4.45	--	--	--	--

S&P 500 / IBES

			(a)	(b)	(a)			Weighted	
	Company	Ticker	Dividend Yield	IBES Growth	Market Cap ($bil.)	Mkt. Cap.	Weight	Dividend Yield	Growth Rate
319	Sherwin-Williams Co (The)	SHW	1.02%	12.68%	60.97	60.97	0.0031	0.000031	0.000393
320	The J M Smucker Company	SJM	3.76%	6.84%	11.63	11.63	0.0006	0.000022	0.000040
321	Schlumberger Ltd	SLB	1.92%	28.70%	79.51	--	--	--	--
322	Snap-On Inc	SNA	2.74%	4.60%	13.61	13.61	0.0007	0.000019	0.000032
323	Southern Co (The)	SO	4.16%	7.10%	73.39	73.39	0.0037	0.000155	0.000265
324	Simon Property Group Inc.	SPG	7.37%	n/a	35.96	--	--	--	--
325	S&P Global Inc	SPGI	1.03%	13.13%	111.15	111.15	0.0056	0.000058	0.000742
326	Sempra	SRE	3.53%	n/a	44.07	--	--	--	--
327	Steris Plc	STE	0.99%	n/a	20.71	--	--	--	--
328	Steel Dynamics Inc	STLD	1.61%	n/a	17.64	--	--	--	--
329	State Street Corporation	STT	4.32%	3.72%	19.94	19.94	0.0010	0.000044	0.000038
330	Seagate Technology Holdings plc	STX	4.10%	213.07%	14.28	--	--	--	--
331	Constellation Brands Inc	STZ	1.52%	11.03%	43.00	43.00	0.0022	0.000033	0.000241
332	Stanley Black & Decker Inc	SWK	3.82%	13.38%	13.03	13.03	0.0007	0.000025	0.000089
333	Skyworks Solutions Inc	SWKS	3.14%	15.00%	13.83	13.83	0.0007	0.000022	0.000105
334	Synchrony Financial	SYF	3.57%	n/a	11.61	--	--	--	--
335	Stryker Corp	SYK	1.16%	10.08%	102.62	102.62	0.0052	0.000060	0.000526
336	Sysco Corporation	SYY	3.01%	12.55%	33.53	33.53	0.0017	0.000051	0.000214
337	AT&T Inc	T	7.21%	0.49%	110.11	110.11	0.0056	0.000403	0.000027
338	Molson Coors Beverage Company	TAP	2.94%	10.69%	11.61	11.61	0.0006	0.000017	0.000063
339	Bio-Techne Corp	TECH	0.59%	13.99%	8.64	8.64	0.0004	0.000003	0.000061
340	TE Connectivity Ltd	TEL	2.00%	n/a	37.00	--	--	--	--
341	Teradyne Inc	TER	0.58%	10.67%	12.82	12.82	0.0007	0.000004	0.000070
342	Truist Financial Corp	TFC	7.48%	n/a	37.82	--	--	--	--
343	Teleflex Inc	TFX	0.74%	n/a	8.68	--	--	--	--
344	Target Corp	TGT	3.97%	18.28%	51.14	51.14	0.0026	0.000103	0.000475
345	TJX Companies Inc (The)	TJX	1.51%	12.93%	100.76	100.76	0.0051	0.000077	0.000662
346	Thermo Fisher Scientific Inc	TMO	0.31%	2.10%	171.66	171.66	0.0087	0.000027	0.000183
347	Tapestry Inc	TPR	5.08%	11.00%	6.31	6.31	0.0003	0.000016	0.000035
348	Targa Resources Corp	TRGP	2.39%	18.80%	18.70	18.70	0.0010	0.000023	0.000179
349	T. Rowe Price Group Inc	TROW	5.52%	-4.70%	20.22	--	--	--	--
350	Travelers Companies Inc (The)	TRV	2.39%	14.90%	38.24	38.24	0.0019	0.000046	0.000290
351	Tractor Supply Co	TSCO	2.14%	6.00%	20.95	20.95	0.0011	0.000023	0.000064
352	Tyson Foods Inc.	TSN	4.14%	n/a	16.48	--	--	--	--
353	Trane Technologies plc	TT	1.58%	12.91%	43.47	43.47	0.0022	0.000035	0.000285
354	Texas Instruments Inc	TXN	3.66%	10.00%	128.97	128.97	0.0066	0.000240	0.000655
355	Textron Inc	TXT	0.11%	17.50%	14.90	14.90	0.0008	0.000001	0.000132
356	UDR Inc	UDR	5.53%	n/a	10.46	--	--	--	--
357	Universal Health Services Inc.	UHS	0.64%	13.22%	8.74	8.74	0.0004	0.000003	0.000059
358	Unitedhealth Group Inc	UNH	1.40%	12.66%	496.09	496.09	0.0252	0.000354	0.003191
359	Union Pacific Corp	UNP	2.50%	6.17%	126.56	126.56	0.0064	0.000161	0.000397
360	United Parcel Service Inc	UPS	4.59%	-4.75%	120.69	--	--	--	--
361	United Rentals Inc.	URI	1.46%	16.25%	27.54	27.54	0.0014	0.000020	0.000227
362	U.S. Bancorp	USB	6.02%	6.00%	49.64	49.64	0.0025	0.000152	0.000151
363	Visa Inc	V	0.89%	14.37%	475.75	475.75	0.0242	0.000216	0.003474
364	V.F. Corp	VFC	8.15%	4.65%	5.73	5.73	0.0003	0.000024	0.000014
365	VICI Properties Inc	VICI	5.95%	n/a	28.86	--	--	--	--
366	Valero Energy Corp	VLO	3.21%	-21.25%	43.24	--	--	--	--
367	Vulcan Materials Co	VMC	0.88%	20.80%	26.11	--	--	--	--
368	VERISK ANALYTICS INC	VRSK	0.60%	11.35%	32.97	32.97	0.0017	0.000010	0.000190
369	Ventas Inc.	VTR	4.38%	n/a	17.08	--	--	--	--
370	Viatris Inc	VTRS	5.84%	-2.30%	10.68	--	--	--	--
371	Verizon Communications Inc	VZ	7.57%	0.53%	147.69	147.69	0.0075	0.000568	0.000040

S&P 500 / IBES

			(a) Dividend Yield	(b) IBES Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
	Company	**Ticker**							
372	Westinghouse Air Brake Technologies Corp	WAB	0.64%	14.70%	18.99	18.99	0.0010	0.000006	0.000142
373	Walgreens Boots Alliance Inc	WBA	9.16%	-8.27%	18.21	--	--	--	--
374	WEC Energy Group Inc	WEC	3.83%	5.70%	25.67	25.67	0.0013	0.000050	0.000074
375	Welltower Inc	WELL	3.06%	n/a	43.37	--	--	--	--
376	Wells Fargo & Co	WFC	3.52%	n/a	144.68	--	--	--	--
377	Whirlpool Corp	WHR	7.17%	n/a	5.74	--	--	--	--
378	Waste Management Inc.	WM	1.70%	10.00%	66.19	66.19	0.0034	0.000057	0.000336
379	Williams Cos Inc. (The)	WMB	5.20%	n/a	41.84	--	--	--	--
380	Walmart Inc	WMT	1.42%	7.37%	439.83	439.83	0.0223	0.000317	0.001646
381	Berkley (W.R.) Corp	WRB	0.65%	9.00%	17.40	17.40	0.0009	0.000006	0.000080
382	WestRock Company	WRK	3.06%	-18.40%	9.21	--	--	--	--
383	West Pharmaceutical Services Inc.	WST	0.24%	4.19%	23.55	23.55	0.0012	0.000003	0.000050
384	Willis Towers Watson plc	WTW	1.42%	n/a	24.36	--	--	--	--
385	Weyerhaeuser Co	WY	2.65%	n/a	20.94	--	--	--	--
386	Wynn Resorts Ltd	WYNN	1.14%	n/a	10.00	--	--	--	--
387	Xcel Energy Inc.	XEL	3.69%	6.80%	32.71	32.71	0.0017	0.000061	0.000113
388	Exxon Mobil Corp	XOM	3.44%	n/a	419.47	--	--	--	--
389	DENTSPLY SIRONA Inc	XRAY	1.84%	8.00%	6.44	6.44	0.0003	0.000006	0.000026
390	Xylem Inc	XYL	1.41%	n/a	22.53	--	--	--	--
391	YUM BRANDS INC	YUM	2.00%	14.55%	33.87	33.87	0.0017	0.000034	0.000250
392	Zimmer Biomet Holdings Inc	ZBH	0.92%	7.24%	21.82	21.82	0.0011	0.000010	0.000080
393	Zions Bancorporation National Association	ZION	5.51%	n/a	4.57	--	--	--	--
394	Zoetis Inc	ZTS	0.96%	10.53%	72.27	72.27	0.0037	0.000035	0.000387
						19,680.26	1.0000		
	Weighted Average							**1.99%**	**9.52%**

n/a Not Available

(a) www.valueline.com (retrieved Oct. 31, 2023).

(b) IBES growth rates from Refinitiv as provided by fidelity.com (retrieved Oct. 31, 2023). Eliminated growth rates greater than 20%, as well as all negative values.

VALUE LINE

		(a)	(b)		(c)		(d)		(e)	(f)		
		Market Return (R_m)				Market						
	Company	Div Yield	Proj. Growth	Cost of Equity	Risk-Free Rate	Risk Premium	Beta	Unadjusted K_e	Market Cap	Size Adjustment	CAPM Result	Break (B Pts)
1	Exelon Corp.	2.22%	9.64%	11.86%	4.23%	7.63%	n/a	n/a	$42,900	-0.26%	n/a	--
2	CenterPoint Energy	2.22%	9.64%	11.86%	4.23%	7.63%	1.15	13.00%	$17,800	0.45%	13.45%	38
3	PPL Corp.	2.22%	9.64%	11.86%	4.23%	7.63%	1.10	12.62%	$21,200	0.45%	13.07%	26
4	OGE Energy Corp.	2.22%	9.64%	11.86%	4.23%	7.63%	1.05	12.24%	$6,800	0.57%	12.81%	2
5	Black Hills Corp.	2.22%	9.64%	11.86%	4.23%	7.63%	1.00	11.86%	$3,300	0.93%	12.79%	74
6	Pinnacle West Capital	2.22%	9.64%	11.86%	4.23%	7.63%	0.95	11.48%	$8,300	0.57%	12.05%	12
7	DTE Energy Co.	2.22%	9.64%	11.86%	4.23%	7.63%	0.95	11.48%	$21,600	0.45%	11.93%	0
8	Entergy Corp.	2.22%	9.64%	11.86%	4.23%	7.63%	0.95	11.48%	$20,200	0.45%	11.93%	0
9	Pub Sv Enterprise Grp.	2.22%	9.64%	11.86%	4.23%	7.63%	0.95	11.48%	$31,500	0.45%	11.93%	33
10	NextEra Energy, Inc.	2.22%	9.64%	11.86%	4.23%	7.63%	1.00	11.86%	$155,400	-0.26%	11.60%	0
11	Sempra Energy	2.22%	9.64%	11.86%	4.23%	7.63%	1.00	11.86%	$43,100	-0.26%	11.60%	5
12	Alliant Energy	2.22%	9.64%	11.86%	4.23%	7.63%	0.90	11.10%	$12,800	0.45%	11.55%	--
13	Ameren Corp.	2.22%	9.64%	11.86%	4.23%	7.63%	0.90	11.10%	$21,100	0.45%	11.55%	--
14	Evergy Inc.	2.22%	9.64%	11.86%	4.23%	7.63%	0.90	11.10%	$13,000	0.45%	11.55%	--
15	Eversource Energy	2.22%	9.64%	11.86%	4.23%	7.63%	0.90	11.10%	$27,100	0.45%	11.55%	--
16	Southern Company	2.22%	9.64%	11.86%	4.23%	7.63%	0.95	11.48%	$80,800	-0.26%	11.22%	33
17	CMS Energy Corp.	2.22%	9.64%	11.86%	4.23%	7.63%	0.85	10.72%	$16,600	0.45%	11.17%	5
18	WEC Energy Group	2.22%	9.64%	11.86%	4.23%	7.63%	0.85	10.72%	$26,900	0.45%	11.17%	0
19	Duke Energy Corp.	2.22%	9.64%	11.86%	4.23%	7.63%	0.90	11.10%	$76,200	-0.26%	10.84%	33
20	Dominion Energy	2.22%	9.64%	11.86%	4.23%	7.63%	0.85	10.72%	$47,700	-0.26%	10.46%	38
21	Xcel Energy Inc.	2.22%	9.64%	11.86%	4.23%	7.63%	0.85	10.72%	$31,800	-0.26%	10.46%	0
22	American Elec Pwr	2.22%	9.64%	11.86%	4.23%	7.63%	0.80	10.33%	$40,800	-0.26%	10.07%	39
23	Consolidated Edison	2.22%	9.64%	11.86%	4.23%	7.63%	0.80	10.33%	$35,200	-0.26%	10.07%	0
24	Fortis Inc.	2.22%	9.64%	11.86%	4.23%	7.63%	0.70	9.57%	$25,900	0.45%	10.02%	5
	Lower End										**10.02%**	
	Upper End										**13.45%**	
	Median										**11.55%**	
	Midpoint										**11.74%**	
	Median - All Values										**11.55%**	
	Low-End Test (g)										**7.52%**	
	High-End Test (h)										**23.10%**	

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from www.valueline.com (retrieved Oct. 31, 2023).
(b) www.valueline.com (retrieved Oct. 31, 2023). Eliminated growth rates greater than 20%, as well as all negative values.
(c) Six-month average yield on 30-year Treasury bonds for Oct. 2023 from https://fred.stlouisfed.org/.
(d) The Value Line Investment Survey, Summary & Index (Nov. 3, 2023).
(e) The Value Line Investment Survey (Aug. 11, Sep. 8 and Oct. 20, 2023).
(f) Kroll, 2022 CRSP Deciles Size Premium, Cost of Capital Navigator (2023).
(g) Average Baa utility bond yield for six-months ending Oct. 2023, plus 20% of CAPM market risk premium.
(h) 200% of Median - All Values.

S&P 500 / VALUE LINE

	Company	Ticker	(a) Dividend Yield	(b) Value Line Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
1	Agilent Technologies Inc	A	0.87%	13.50%	30.24	30.24	0.0012	0.000010	0.000158
2	Apple Inc	AAPL	0.56%	10.50%	2,669.86	2,669.86	0.1031	0.000580	0.010826
3	AbbVie Inc	ABBV	4.19%	2.00%	249.19	249.19	0.0096	0.000404	0.000192
4	Abbott Laboratories	ABT	2.16%	4.50%	164.08	164.08	0.0063	0.000137	0.000285
5	Accenture PLC	ACN	1.74%	7.50%	197.50	197.50	0.0076	0.000132	0.000572
6	Analog Devices Inc	ADI	2.19%	11.50%	78.40	78.40	0.0030	0.000066	0.000348
7	Archer-Daniels-Midland Co	ADM	2.52%	7.50%	38.17	38.17	0.0015	0.000037	0.000111
8	Automatic Data Processing Inc	ADP	2.47%	10.50%	89.84	89.84	0.0035	0.000086	0.000364
9	Ameren Corporation	AEE	3.33%	6.00%	19.89	19.89	0.0008	0.000026	0.000046
10	American Electric Power Co Inc	AEP	4.40%	6.50%	38.92	38.92	0.0015	0.000066	0.000098
11	AES Corp (The)	AES	4.43%	n/a	9.98	--	--	--	--
12	Aflac Incorporated	AFL	2.23%	8.00%	46.40	46.40	0.0018	0.000040	0.000143
13	American International Group Inc	AIG	2.35%	8.50%	43.65	43.65	0.0017	0.000040	0.000143
14	Assurant Inc.	AIZ	1.88%	10.50%	7.90	7.90	0.0003	0.000006	0.000032
15	Arthur J. Gallagher & Co.	AJG	0.94%	22.00%	50.84	--	--	--	--
16	Albemarle Corp	ALB	1.26%	-4.50%	14.88	--	--	--	--
17	The Allstate Corporation	ALL	2.78%	10.50%	33.52	33.52	0.0013	0.000036	0.000136
18	Allegion PLC	ALLE	1.83%	10.00%	8.63	8.63	0.0003	0.000006	0.000033
19	Applied Materials Inc	AMAT	0.97%	5.50%	110.72	110.72	0.0043	0.000041	0.000235
20	Amcor Plc	AMCR	5.51%	11.50%	12.86	12.86	0.0005	0.000027	0.000057
21	AMETEK Inc	AME	0.71%	13.00%	32.48	32.48	0.0013	0.000009	0.000163
22	Amgen Inc	AMGN	3.47%	5.50%	136.77	136.77	0.0053	0.000183	0.000291
23	Ameriprise Financial Inc	AMP	1.72%	13.00%	31.90	31.90	0.0012	0.000021	0.000160
24	American Tower Corp	AMT	3.91%	5.00%	83.07	83.07	0.0032	0.000125	0.000160
25	Aon plc	AON	0.80%	8.50%	61.95	61.95	0.0024	0.000019	0.000203
26	A. O. Smith Corp	AOS	1.83%	11.00%	10.37	10.37	0.0004	0.000007	0.000044
27	APA Corporation	APA	2.90%	19.50%	12.20	12.20	0.0005	0.000014	0.000092
28	Air Products and Chemicals Inc.	APD	2.48%	10.50%	62.74	62.74	0.0024	0.000060	0.000254
29	Amphenol Corp	APH	1.12%	12.50%	48.19	48.19	0.0019	0.000021	0.000233
30	Alexandria Real Estate Equities Inc.	ARE	5.33%	11.00%	16.18	16.18	0.0006	0.000033	0.000069
31	Atmos Energy Corp	ATO	2.97%	7.50%	15.98	15.98	0.0006	0.000018	0.000046
32	AvalonBay Communities Inc.	AVB	4.10%	6.00%	23.54	23.54	0.0009	0.000037	0.000055
33	Broadcom Inc	AVGO	2.19%	19.50%	347.26	347.26	0.0134	0.000293	0.002615
34	Avery Dennison Corp	AVY	1.89%	9.50%	14.03	14.03	0.0005	0.000010	0.000051
35	American Water Works Company Inc	AWK	2.49%	3.00%	22.90	22.90	0.0009	0.000022	0.000027
36	American Express Co	AXP	1.75%	8.50%	106.42	106.42	0.0041	0.000072	0.000349
37	Bank of America Corp	BAC	3.72%	5.00%	208.70	208.70	0.0081	0.000300	0.000403
38	Ball Corporation	BALL	1.74%	13.00%	15.17	15.17	0.0006	0.000010	0.000076
39	Baxter International Inc	BAX	3.58%	6.00%	16.42	16.42	0.0006	0.000023	0.000038
40	Bath & Body Works Inc	BBWI	2.70%	16.50%	6.74	6.74	0.0003	0.000007	0.000043
41	Best Buy Co Inc	BBY	5.51%	0.50%	14.54	14.54	0.0006	0.000031	0.000003
42	Becton Dickinson and Co	BDX	1.49%	5.00%	73.33	73.33	0.0028	0.000042	0.000142
43	Franklin Resources Inc	BEN	5.27%	2.00%	11.37	11.37	0.0004	0.000023	0.000009
44	Brown-Forman Corp	BF/B	1.46%	16.50%	17.42	17.42	0.0007	0.000010	0.000111
45	Bunge Ltd	BG	2.54%	1.50%	15.40	15.40	0.0006	0.000015	0.000009
46	Bank of New York Mellon Corp (The)	BK	3.95%	7.00%	32.69	32.69	0.0013	0.000050	0.000088
47	Baker Hughes a GE Co	BKR	2.32%	n/a	34.63	--	--	--	--
48	Blackrock Inc	BLK	3.51%	7.50%	91.17	91.17	0.0035	0.000124	0.000264
49	Bristol-Myers Squibb Co	BMY	4.42%	30.50%	104.85	--	--	--	--
50	Broadridge Financial Solutions Inc	BR	1.88%	8.50%	20.07	20.07	0.0008	0.000015	0.000066
51	Brown & Brown Inc	BRO	0.75%	6.50%	19.76	19.76	0.0008	0.000006	0.000050
52	BorgWarner Inc	BWA	1.19%	7.00%	8.67	8.67	0.0003	0.000004	0.000023
53	Blackstone Inc	BX	3.47%	15.00%	113.57	113.57	0.0044	0.000152	0.000658

S&P 500 / VALUE LINE

	Company	Ticker	(a) Dividend Yield	(b) Value Line Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
54	Boston Properties Inc	BXP	7.32%	n/a	8.40	--	--	--	--
55	Citigroup Inc	C	5.37%	2.50%	75.58	75.58	0.0029	0.000157	0.000073
56	Conagra Brands Inc	CAG	5.12%	3.50%	13.08	13.08	0.0005	0.000026	0.000018
57	Cardinal Health Inc	CAH	2.20%	7.50%	22.42	22.42	0.0009	0.000019	0.000065
58	Carrier Global Corp	CARR	1.55%	13.00%	39.99	39.99	0.0015	0.000024	0.000201
59	Caterpillar Inc	CAT	2.30%	13.00%	115.32	115.32	0.0045	0.000102	0.000579
60	Chubb Ltd	CB	1.63%	15.50%	87.56	87.56	0.0034	0.000055	0.000524
61	Cboe Global Markets Inc	CBOE	1.34%	13.00%	17.29	17.29	0.0007	0.000009	0.000087
62	Crown Castle Inc	CCI	7.04%	7.00%	40.35	40.35	0.0016	0.000110	0.000109
63	CDW Corp	CDW	1.18%	7.00%	26.86	26.86	0.0010	0.000012	0.000073
64	Celanese Corp	CE	2.52%	4.50%	12.46	12.46	0.0005	0.000012	0.000022
65	Constellation Energy Corp	CEG	1.00%	n/a	36.31	--	--	--	--
66	CF Industries Holdings Inc	CF	2.19%	7.50%	15.39	15.39	0.0006	0.000013	0.000045
67	Citizens Financial Group Inc	CFG	7.17%	4.50%	11.07	11.07	0.0004	0.000031	0.000019
68	Church & Dwight Co Inc	CHD	1.20%	6.00%	22.38	22.38	0.0009	0.000010	0.000052
69	C.H. Robinson Worldwide Inc.	CHRW	2.98%	5.50%	9.53	9.53	0.0004	0.000011	0.000020
70	The Cigna Group	CI	1.60%	11.50%	91.52	91.52	0.0035	0.000057	0.000406
71	Cincinnati Financial Corp	CINF	3.13%	10.50%	15.64	15.64	0.0006	0.000019	0.000063
72	Colgate-Palmolive Co	CL	2.60%	8.50%	61.85	61.85	0.0024	0.000062	0.000203
73	Clorox Co (The)	CLX	4.08%	11.00%	14.59	14.59	0.0006	0.000023	0.000062
74	Comerica Incorporated	CMA	7.21%	4.00%	5.19	5.19	0.0002	0.000014	0.000008
75	Comcast Corp	CMCSA	2.81%	9.00%	166.20	166.20	0.0064	0.000180	0.000578
76	CME Group Inc	CME	2.06%	7.50%	76.79	76.79	0.0030	0.000061	0.000222
77	Cummins Inc.	CMI	3.11%	10.00%	30.64	30.64	0.0012	0.000037	0.000118
78	CMS Energy Corp	CMS	3.59%	5.50%	15.85	15.85	0.0006	0.000022	0.000034
79	CenterPoint Energy Inc.	CNP	2.98%	7.50%	16.97	16.97	0.0007	0.000020	0.000049
80	Capital One Financial Corp.	COF	2.37%	4.00%	38.59	38.59	0.0015	0.000035	0.000060
81	Cooper Cos Inc (The)	COO	0.02%	10.00%	15.44	15.44	0.0006	0.000000	0.000060
82	Conocophillips	COP	2.02%	9.00%	142.26	142.26	0.0055	0.000111	0.000494
83	Cencora Inc	COR	1.09%	9.00%	37.43	37.43	0.0014	0.000016	0.000130
84	Costco Wholesale Corp	COST	0.74%	10.50%	244.59	244.59	0.0094	0.000070	0.000992
85	Campbell Soup Co	CPB	3.86%	5.00%	12.03	12.03	0.0005	0.000018	0.000023
86	Camden Property Trust	CPT	4.90%	-3.00%	9.06	--	--	--	--
87	Cisco Systems Inc	CSCO	2.99%	8.50%	211.15	211.15	0.0082	0.000244	0.000693
88	CSX Corp	CSX	1.47%	8.50%	59.89	59.89	0.0023	0.000034	0.000197
89	Cintas Corp	CTAS	1.06%	14.00%	51.65	51.65	0.0020	0.000021	0.000279
90	Coterra Energy Inc	CTRA	2.91%	n/a	20.76	--	--	--	--
91	Cognizant Technology Solutions Corp	CTSH	1.80%	6.50%	32.56	32.56	0.0013	0.000023	0.000082
92	Corteva Inc	CTVA	1.35%	13.50%	34.17	34.17	0.0013	0.000018	0.000178
93	CVS Health Corp	CVS	3.72%	6.00%	88.64	88.64	0.0034	0.000127	0.000205
94	Chevron Corp	CVX	4.27%	19.50%	274.27	274.27	0.0106	0.000452	0.002065
95	Dominion Energy Inc	D	6.62%	2.50%	33.74	33.74	0.0013	0.000086	0.000033
96	Delta Air Lines Inc	DAL	1.28%	n/a	20.11	--	--	--	--
97	DuPont De Nemours Inc	DD	2.06%	9.50%	33.46	33.46	0.0013	0.000027	0.000123
98	DEERE & COMPANY	DE	1.48%	13.50%	105.22	105.22	0.0041	0.000060	0.000549
99	Discover Financial Services	DFS	3.41%	1.50%	20.52	20.52	0.0008	0.000027	0.000012
100	Dollar General Corporation	DG	1.98%	2.00%	26.13	26.13	0.0010	0.000020	0.000020
101	Quest Diagnostics Inc	DGX	2.18%	3.50%	14.63	14.63	0.0006	0.000012	0.000020
102	D.R. Horton Inc.	DHI	0.99%	5.00%	35.32	35.32	0.0014	0.000013	0.000068
103	Danaher Corp	DHR	0.56%	10.50%	141.89	141.89	0.0055	0.000031	0.000575
104	Digital Realty Trust Inc	DLR	4.07%	-3.00%	37.66	--	--	--	--
105	Dover Corp	DOV	1.57%	6.50%	18.18	18.18	0.0007	0.000011	0.000046
106	Dow Inc	DOW	6.10%	5.00%	33.91	33.91	0.0013	0.000080	0.000065

S&P 500 / VALUE LINE

	Company	Ticker	(a) Dividend Yield	(b) Value Line Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
107	Domino's Pizza Inc	DPZ	1.48%	12.00%	11.82	11.82	0.0005	0.000007	0.000055
108	Darden Restaurants Inc	DRI	3.60%	15.00%	17.51	17.51	0.0007	0.000024	0.000101
109	DTE Energy Co	DTE	3.95%	7.00%	19.87	19.87	0.0008	0.000030	0.000054
110	Duke Energy Corp	DUK	4.61%	5.00%	68.51	68.51	0.0026	0.000122	0.000132
111	Devon Energy Corp	DVN	1.72%	10.50%	29.84	29.84	0.0012	0.000020	0.000121
112	Electronic Arts Inc	EA	0.66%	17.50%	33.54	33.54	0.0013	0.000009	0.000227
113	eBay Inc.	EBAY	2.78%	8.50%	20.88	20.88	0.0008	0.000022	0.000069
114	Ecolab Inc.	ECL	1.26%	10.00%	47.81	47.81	0.0018	0.000023	0.000185
115	Consolidated Edison Inc.	ED	3.75%	6.00%	30.28	30.28	0.0012	0.000044	0.000070
116	Equifax Inc.	EFX	0.92%	4.50%	20.89	20.89	0.0008	0.000007	0.000036
117	Everest Group Ltd	EG	1.77%	10.00%	17.17	17.17	0.0007	0.000012	0.000066
118	Edison International	EIX	4.92%	4.50%	24.17	24.17	0.0009	0.000046	0.000042
119	Estee Lauder Cos Inc (The)	EL	2.05%	11.50%	46.11	46.11	0.0018	0.000036	0.000205
120	Elevance Health Inc	ELV	1.32%	11.50%	105.75	105.75	0.0041	0.000054	0.000470
121	Eastman Chemical Co	EMN	4.23%	6.00%	8.86	8.86	0.0003	0.000014	0.000021
122	Emerson Electric Co.	EMR	2.37%	6.50%	50.85	50.85	0.0020	0.000047	0.000128
123	EOG Resources Inc.	EOG	2.77%	15.00%	73.51	73.51	0.0028	0.000079	0.000426
124	Equinix Inc	EQIX	1.87%	13.00%	68.50	68.50	0.0026	0.000049	0.000344
125	Equity Residential	EQR	4.79%	-5.00%	20.97	--	--	--	--
126	EQT Corp	EQT	1.49%	n/a	17.43	--	--	--	--
127	Eversource Energy	ES	5.17%	6.50%	18.78	18.78	0.0007	0.000037	0.000047
128	Essex Property Trust Inc.	ESS	4.32%	2.00%	13.73	13.73	0.0005	0.000023	0.000011
129	Eaton Corp Plc	ETN	1.65%	12.50%	82.96	82.96	0.0032	0.000053	0.000400
130	Entergy corporation	ETR	4.48%	0.50%	20.21	20.21	0.0008	0.000035	0.000004
131	Evergy Inc	EVRG	5.15%	7.00%	11.29	11.29	0.0004	0.000022	0.000031
132	Exelon Corp	EXC	3.70%	1.50%	38.75	38.75	0.0015	0.000055	0.000022
133	Expeditors International of Washington Inc.	EXPD	1.26%	-1.00%	16.16	--	--	--	--
134	Extra Space Storage Inc	EXR	6.55%	5.00%	21.89	21.89	0.0008	0.000055	0.000042
135	Ford Motor Co	F	6.15%	45.50%	39.03	--	--	--	--
136	Diamondback Energy Inc	FANG	2.10%	34.00%	28.67	--	--	--	--
137	Fastenal Co	FAST	2.40%	6.50%	33.34	33.34	0.0013	0.000031	0.000084
138	Freeport-McMoRan Inc	FCX	2.04%	12.50%	48.43	48.43	0.0019	0.000038	0.000234
139	FactSet Research Systems Inc.	FDS	0.91%	10.50%	16.41	16.41	0.0006	0.000006	0.000067
140	FedEx Corp.	FDX	2.10%	7.00%	60.37	60.37	0.0023	0.000049	0.000163
141	FirstEnergy Corp.	FE	4.69%	4.00%	20.43	20.43	0.0008	0.000037	0.000032
142	Fidelity National Information Services Inc	FIS	4.54%	23.00%	29.10	--	--	--	--
143	Fifth Third Bancorp	FITB	6.07%	4.50%	16.15	16.15	0.0006	0.000038	0.000028
144	FMC Corp.	FMC	4.64%	10.00%	6.64	6.64	0.0003	0.000012	0.000026
145	Fox Corp	FOXA	1.71%	8.00%	7.60	7.60	0.0003	0.000005	0.000023
146	Federal Realty Investment Trust	FRT	4.78%	n/a	7.43	--	--	--	--
147	Fortive Corp	FTV	0.43%	16.00%	22.94	22.94	0.0009	0.000004	0.000142
148	General Dynamics Corp	GD	2.29%	9.50%	65.85	65.85	0.0025	0.000058	0.000242
149	General Electric Co	GE	0.29%	28.00%	118.23	--	--	--	--
150	GE HealthCare Technologies Inc	GEHC	0.18%	n/a	30.28	--	--	--	--
151	Gen Digital Inc	GEN	3.00%	11.50%	10.65	10.65	0.0004	0.000012	0.000047
152	Gilead Sciences Inc	GILD	3.82%	13.50%	97.86	97.86	0.0038	0.000144	0.000510
153	General Mills Inc.	GIS	3.66%	5.00%	37.92	37.92	0.0015	0.000054	0.000073
154	Globe Life Inc	GL	0.77%	9.00%	11.03	11.03	0.0004	0.000003	0.000038
155	Corning Inc	GLW	4.19%	15.00%	21.94	21.94	0.0008	0.000035	0.000127
156	General Motors Co	GM	1.28%	8.50%	38.62	38.62	0.0015	0.000019	0.000127
157	Genuine Parts Co	GPC	2.95%	10.00%	18.07	18.07	0.0007	0.000021	0.000070
158	GLOBAL PAYMENTS INC	GPN	1.03%	13.50%	27.62	27.62	0.0011	0.000011	0.000144
159	Garmin Ltd	GRMN	2.91%	5.50%	19.63	19.63	0.0008	0.000022	0.000042

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	Company	Ticker	(a) Dividend Yield	(b) Value Line Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
160	Goldman Sachs Group Inc (The)	GS	3.62%	1.50%	100.09	100.09	0.0039	0.000140	0.000058
161	Grainger (W.W.) Inc	GWW	1.04%	11.00%	36.22	36.22	0.0014	0.000015	0.000154
162	Halliburton Co	HAL	2.01%	28.50%	35.21	--	--	--	--
163	Hasbro Inc.	HAS	6.20%	8.50%	6.26	6.26	0.0002	0.000015	0.000021
164	Huntington Bancshares Inc	HBAN	6.42%	10.50%	13.97	13.97	0.0005	0.000035	0.000057
165	HCA Healthcare Inc	HCA	1.06%	9.50%	60.53	60.53	0.0023	0.000025	0.000222
166	Home Depot Inc. (The)	HD	2.94%	6.50%	284.71	284.71	0.0110	0.000323	0.000715
167	Hess Corp	HES	1.29%	23.50%	44.35	--	--	--	--
168	Hartford Financial Services Group Inc. (The)	HIG	2.56%	8.00%	22.09	22.09	0.0009	0.000022	0.000068
169	Huntington Ingalls Industries Inc	HII	2.26%	8.50%	8.76	8.76	0.0003	0.000008	0.000029
170	Hilton Worldwide Holdings Inc	HLT	0.40%	37.00%	38.86	--	--	--	--
171	Honeywell International Inc	HON	2.36%	11.00%	120.81	120.81	0.0047	0.000110	0.000513
172	Hewlett Packard Enterprise Co	HPE	3.12%	8.00%	19.73	19.73	0.0008	0.000024	0.000061
173	HP Inc	HPQ	3.99%	9.00%	26.02	26.02	0.0010	0.000040	0.000090
174	Hormel Foods Corp	HRL	3.38%	4.50%	17.79	17.79	0.0007	0.000023	0.000031
175	Host Hotels & Resorts Inc	HST	4.65%	n/a	11.02	--	--	--	--
176	Hershey Co (The)	HSY	2.59%	9.50%	38.31	38.31	0.0015	0.000038	0.000141
177	Humana Inc.	HUM	0.71%	12.50%	64.89	64.89	0.0025	0.000018	0.000313
178	Howmet Aerospace Inc	HWM	0.45%	22.50%	18.18	--	--	--	--
179	International Business Machines Corp	IBM	4.59%	4.00%	131.77	131.77	0.0051	0.000234	0.000204
180	Intercontinental Exchange Inc	ICE	1.56%	7.00%	61.37	61.37	0.0024	0.000037	0.000166
181	IDEX Corp	IEX	1.34%	6.00%	14.48	14.48	0.0006	0.000007	0.000034
182	International Flavors & Fragrances Inc	IFF	4.74%	5.50%	17.45	17.45	0.0007	0.000032	0.000037
183	Intel Corp	INTC	1.37%	-1.00%	153.88	--	--	--	--
184	Intuit Inc.	INTU	0.74%	13.50%	138.71	138.71	0.0054	0.000039	0.000723
185	International Paper Co	IP	5.48%	6.00%	11.67	11.67	0.0005	0.000025	0.000027
186	Interpublic Group of Cos Inc (The)	IPG	4.65%	8.50%	10.88	10.88	0.0004	0.000020	0.000036
187	Ingersoll Rand Inc	IR	0.13%	12.50%	24.54	24.54	0.0009	0.000001	0.000118
188	Iron Mountain Inc	IRM	4.40%	6.50%	17.24	17.24	0.0007	0.000029	0.000043
189	Illinois Tool Works Inc.	ITW	2.50%	11.00%	67.43	67.43	0.0026	0.000065	0.000286
190	Invesco Ltd	IVZ	6.48%	4.00%	5.83	5.83	0.0002	0.000015	0.000009
191	Jacobs Solutions Inc	J	0.78%	11.50%	16.78	16.78	0.0006	0.000005	0.000075
192	J.B. Hunt Transport Services Inc.	JBHT	1.00%	9.00%	17.73	17.73	0.0007	0.000007	0.000062
193	Johnson Controls International Plc	JCI	3.02%	11.50%	33.35	33.35	0.0013	0.000039	0.000148
194	Henry (Jack) & Associates Inc	JKHY	1.48%	6.50%	10.26	10.26	0.0004	0.000006	0.000026
195	Johnson & Johnson	JNJ	3.25%	5.00%	357.10	357.10	0.0138	0.000448	0.000690
196	Juniper Networks Inc	JNPR	3.38%	10.50%	8.58	8.58	0.0003	0.000011	0.000035
197	JPMorgan Chase & Co	JPM	3.02%	8.50%	404.12	404.12	0.0156	0.000471	0.001327
198	Keurig Dr Pepper Inc	KDP	2.93%	12.00%	42.41	42.41	0.0016	0.000048	0.000197
199	KeyCorp	KEY	8.02%	-0.50%	9.57	--	--	--	--
200	The Kraft Heinz Co	KHC	5.09%	4.00%	38.64	38.64	0.0015	0.000076	0.000060
201	Kimco Realty Corp	KIM	5.35%	11.00%	11.12	11.12	0.0004	0.000023	0.000047
202	KLA Corp	KLAC	1.11%	13.50%	63.85	63.85	0.0025	0.000027	0.000333
203	Kimberly-Clark Corp	KMB	3.97%	7.00%	40.43	40.43	0.0016	0.000062	0.000109
204	Kinder Morgan Inc.	KMI	6.98%	17.50%	36.01	36.01	0.0014	0.000097	0.000243
205	Coca-Cola Co (The)	KO	3.36%	7.50%	244.23	244.23	0.0094	0.000317	0.000707
206	Kroger Co. (The)	KR	2.56%	6.00%	32.64	32.64	0.0013	0.000032	0.000076
207	Kenvue Inc	KVUE	4.30%	n/a	35.62	--	--	--	--
208	Loews Corp	L	0.39%	19.50%	14.43	14.43	0.0006	0.000002	0.000109
209	Leidos Holdings Inc	LDOS	1.46%	7.00%	13.61	13.61	0.0005	0.000008	0.000037
210	Lennar Corp	LEN	1.45%	3.50%	30.33	30.33	0.0012	0.000017	0.000041
211	Laboratory Corp of America Holdings	LH	1.44%	-2.50%	16.96	--	--	--	--
212	L3Harris Technologies Inc	LHX	2.56%	19.50%	34.01	34.01	0.0013	0.000034	0.000256

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	Company	Ticker	(a) Dividend Yield	(b) Value Line Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
213	Linde Plc	LIN	1.33%	8.50%	185.31	185.31	0.0072	0.000096	0.000608
214	LKQ Corporation	LKQ	2.50%	8.00%	11.75	11.75	0.0005	0.000011	0.000036
215	Eli Lilly and Co	LLY	0.82%	19.00%	525.84	525.84	0.0203	0.000166	0.003858
216	Lockheed Martin Corp	LMT	2.77%	7.00%	112.80	112.80	0.0044	0.000121	0.000305
217	Alliant Energy Corporation	LNT	3.71%	6.50%	12.33	12.33	0.0005	0.000018	0.000031
218	Lowe's Cos Inc	LOW	2.31%	8.00%	109.98	109.98	0.0042	0.000098	0.000340
219	Lam Research Corp	LRCX	1.36%	4.00%	77.52	77.52	0.0030	0.000041	0.000120
220	Southwest Airlines Co.	LUV	3.33%	n/a	13.24	--	--	--	--
221	Lamb Weston Holdings Inc	LW	1.31%	15.00%	13.01	13.01	0.0005	0.000007	0.000075
222	LyondellBasell Industries NV	LYB	5.54%	2.00%	29.27	29.27	0.0011	0.000063	0.000023
223	Mastercard Inc	MA	0.65%	16.00%	352.93	352.93	0.0136	0.000089	0.002181
224	Mid-America Apartment Communities Inc	MAA	4.74%	-12.50%	13.79	--	--	--	--
225	Marriott International Inc	MAR	1.10%	23.00%	56.24	--	--	--	--
226	Masco Corporation	MAS	2.28%	6.50%	11.69	11.69	0.0005	0.000010	0.000029
227	McDonald's Corp	MCD	2.55%	10.50%	191.06	191.06	0.0074	0.000188	0.000775
228	Microchip Technology Inc	MCHP	2.55%	10.00%	38.81	38.81	0.0015	0.000038	0.000150
229	McKesson Corp	MCK	0.54%	9.00%	61.43	61.43	0.0024	0.000013	0.000214
230	Moody's Corp.	MCO	1.00%	6.00%	56.36	56.36	0.0022	0.000022	0.000131
231	Mondelez International Inc	MDLZ	2.57%	11.50%	90.07	90.07	0.0035	0.000089	0.000400
232	Medtronic PLC	MDT	4.01%	7.50%	93.88	93.88	0.0036	0.000145	0.000272
233	Metlife Inc.	MET	3.47%	8.50%	45.13	45.13	0.0017	0.000060	0.000148
234	MGM Resorts International	MGM	0.03%	n/a	12.25	--	--	--	--
235	McCormick & Co Inc	MKC	2.44%	4.50%	16.06	16.06	0.0006	0.000015	0.000028
236	MarketAxess Holdings Inc	MKTX	1.35%	9.50%	8.10	8.10	0.0003	0.000004	0.000030
237	Martin Marietta Materials Inc.	MLM	0.73%	12.00%	25.27	25.27	0.0010	0.000007	0.000117
238	Marsh & McLennan Companies Inc	MMC	1.50%	12.00%	93.51	93.51	0.0036	0.000054	0.000433
239	3M Co	MMM	6.61%	4.50%	50.23	50.23	0.0019	0.000128	0.000087
240	Altria Group Inc	MO	9.76%	5.50%	71.05	71.05	0.0027	0.000268	0.000151
241	Mosaic Company (The)	MOS	2.46%	-1.50%	10.79	--	--	--	--
242	Marathon Petroleum Corp	MPC	1.98%	14.50%	60.48	60.48	0.0023	0.000046	0.000339
243	Monolithic Power Systems Inc	MPWR	0.91%	15.00%	21.11	21.11	0.0008	0.000007	0.000122
244	Merck & Co Inc	MRK	2.84%	8.50%	260.60	260.60	0.0101	0.000286	0.000855
245	Marathon Oil Corp	MRO	1.76%	22.50%	16.54	--	--	--	--
246	Morgan Stanley	MS	4.80%	7.50%	117.35	117.35	0.0045	0.000218	0.000340
247	MSCI Inc	MSCI	1.17%	12.50%	37.29	37.29	0.0014	0.000017	0.000180
248	Microsoft Corp	MSFT	0.91%	11.50%	2,512.92	2,512.92	0.0970	0.000884	0.011160
249	Motorola Solutions Inc	MSI	1.26%	11.00%	46.51	46.51	0.0018	0.000023	0.000198
250	M&T Bank Corp	MTB	4.75%	6.50%	18.71	18.71	0.0007	0.000034	0.000047
251	Micron Technology Inc.	MU	0.69%	9.50%	73.43	73.43	0.0028	0.000020	0.000269
252	Nasdaq Inc	NDAQ	1.77%	6.00%	24.37	24.37	0.0009	0.000017	0.000056
253	Nordson Corp	NDSN	1.28%	9.00%	12.12	12.12	0.0005	0.000006	0.000042
254	NextEra Energy Inc	NEE	3.38%	9.50%	117.98	117.98	0.0046	0.000154	0.000433
255	Newmont Corporation	NEM	4.27%	8.00%	29.78	29.78	0.0012	0.000049	0.000092
256	NiSource Inc	NI	4.05%	6.00%	10.40	10.40	0.0004	0.000016	0.000024
257	NIKE Inc	NKE	1.32%	17.00%	156.41	156.41	0.0060	0.000080	0.001027
258	Northrop Grumman Corp	NOC	1.63%	9.50%	71.09	71.09	0.0027	0.000045	0.000261
259	NRG Energy Inc	NRG	3.56%	-2.50%	9.71	--	--	--	--
260	Norfolk Southern Corp	NSC	2.83%	8.50%	43.14	43.14	0.0017	0.000047	0.000142
261	NetApp Inc	NTAP	2.89%	8.00%	15.20	15.20	0.0006	0.000017	0.000047
262	Northern Trust Corp	NTRS	4.55%	5.50%	13.64	13.64	0.0005	0.000024	0.000029
263	Nucor Corp	NUE	1.41%	1.00%	36.76	36.76	0.0014	0.000020	0.000014
264	NVIDIA Corporation	NVDA	0.04%	40.00%	1,007.27	--	--	--	--
265	News Corp	NWSA	0.97%	19.00%	7.89	7.89	0.0003	0.000003	0.000058

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	Company	Ticker	(a) Dividend Yield	(b) Value Line Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
266	NXP Semiconductors NV	NXPI	2.35%	8.50%	44.45	44.45	0.0017	0.000040	0.000146
267	Realty Income Corp.	O	6.56%	5.50%	33.58	33.58	0.0013	0.000085	0.000071
268	Old Dominion Freight Line Inc	ODFL	0.44%	9.00%	41.16	41.16	0.0016	0.000007	0.000143
269	ONEOK Inc	OKE	5.95%	12.00%	37.98	37.98	0.0015	0.000087	0.000176
270	Omnicom Group Inc	OMC	3.74%	7.00%	14.83	14.83	0.0006	0.000021	0.000040
271	Oracle Corp	ORCL	1.55%	9.50%	283.25	283.25	0.0109	0.000169	0.001039
272	Otis Worldwide Corp	OTIS	1.76%	11.00%	31.60	31.60	0.0012	0.000021	0.000134
273	Occidental Petroleum Corp	OXY	1.33%	17.00%	54.68	54.68	0.0021	0.000028	0.000359
274	Paramount Global	PARA	1.84%	-1.00%	6.64	--	--	--	--
275	Paycom Software Inc	PAYC	0.61%	19.50%	14.81	14.81	0.0006	0.000004	0.000112
276	Paychex Inc.	PAYX	3.48%	9.50%	40.11	40.11	0.0015	0.000054	0.000147
277	PACCAR Inc	PCAR	3.57%	17.00%	43.17	43.17	0.0017	0.000060	0.000283
278	Healthpeak Properties Inc	PEAK	7.72%	14.50%	8.51	8.51	0.0003	0.000025	0.000048
279	Public Service Enterprise Group Inc	PEG	3.80%	4.00%	30.77	30.77	0.0012	0.000045	0.000048
280	PepsiCo Inc	PEP	3.18%	7.00%	224.49	224.49	0.0087	0.000276	0.000607
281	Pfizer Inc	PFE	5.37%	2.00%	172.54	172.54	0.0067	0.000358	0.000133
282	Principal Financial Group Inc	PFG	3.84%	5.50%	16.36	16.36	0.0006	0.000024	0.000035
283	Procter & Gamble Co (The)	PG	2.51%	6.00%	353.60	353.60	0.0137	0.000342	0.000819
284	Progressive Corp (The)	PGR	0.25%	12.00%	92.48	92.48	0.0036	0.000009	0.000429
285	Parker-Hannifin Corp	PH	1.64%	12.00%	47.41	47.41	0.0018	0.000030	0.000220
286	PulteGroup Inc	PHM	0.90%	8.00%	15.87	15.87	0.0006	0.000005	0.000049
287	Packaging Corp Of America	PKG	3.27%	9.00%	13.76	13.76	0.0005	0.000017	0.000048
288	Prologis Inc	PLD	3.60%	2.50%	93.09	93.09	0.0036	0.000130	0.000090
289	Philip Morris International Inc	PM	5.83%	5.50%	138.41	138.41	0.0053	0.000312	0.000294
290	The PNC Financial Services Group Inc	PNC	5.42%	6.50%	45.60	45.60	0.0018	0.000095	0.000114
291	Pentair plc	PNR	1.51%	12.50%	9.61	9.61	0.0004	0.000006	0.000046
292	Pinnacle West Capital Corp	PNW	4.76%	2.50%	8.41	8.41	0.0003	0.000015	0.000008
293	Pool Corp	POOL	1.39%	5.50%	12.21	12.21	0.0005	0.000007	0.000026
294	PPG Industries Inc.	PPG	2.12%	3.00%	28.95	28.95	0.0011	0.000024	0.000034
295	PPL Corp	PPL	3.91%	8.00%	18.11	18.11	0.0007	0.000027	0.000056
296	Prudential Financial Inc	PRU	5.47%	5.00%	33.19	33.19	0.0013	0.000070	0.000064
297	Public Storage	PSA	5.03%	7.50%	41.97	41.97	0.0016	0.000081	0.000122
298	Phillips 66	PSX	3.81%	15.50%	50.79	50.79	0.0020	0.000075	0.000304
299	Quanta Services Inc.	PWR	0.19%	15.00%	24.27	24.27	0.0009	0.000002	0.000141
300	Pioneer Natural Resources Co	PXD	3.77%	8.50%	55.76	55.76	0.0022	0.000081	0.000183
301	QUALCOMM Inc.	QCOM	2.94%	5.50%	121.63	121.63	0.0047	0.000138	0.000258
302	Regency Centers Corp.	REG	4.31%	10.50%	10.91	10.91	0.0004	0.000018	0.000044
303	Regions Financial Corp	RF	6.88%	9.00%	13.64	13.64	0.0005	0.000036	0.000047
304	Robert Half Inc	RHI	2.77%	9.50%	8.01	8.01	0.0003	0.000009	0.000029
305	Raymond James Financial Inc.	RJF	1.76%	12.50%	19.93	19.93	0.0008	0.000014	0.000096
306	Ralph Lauren Corp	RL	2.67%	12.50%	7.34	7.34	0.0003	0.000008	0.000035
307	Resmed Inc	RMD	1.36%	14.00%	20.77	20.77	0.0008	0.000011	0.000112
308	Rockwell Automation Inc.	ROK	1.80%	11.00%	30.19	30.19	0.0012	0.000021	0.000128
309	ROLLINS INC	ROL	1.38%	9.50%	18.20	18.20	0.0007	0.000010	0.000067
310	Roper Technologies Inc	ROP	0.56%	8.00%	52.14	52.14	0.0020	0.000011	0.000161
311	Ross Stores Inc	ROST	1.22%	11.50%	39.27	39.27	0.0015	0.000019	0.000174
312	Republic Services Inc.	RSG	1.44%	12.50%	46.72	46.72	0.0018	0.000026	0.000226
313	RTX Corp	RTX	2.90%	14.50%	117.03	117.03	0.0045	0.000131	0.000655
314	Revvity Inc	RVTY	0.34%	-1.50%	10.28	--	--	--	--
315	SBA Communications Corp	SBAC	1.68%	22.00%	22.61	--	--	--	--
316	Starbucks Corp	SBUX	2.47%	15.50%	105.65	105.65	0.0041	0.000101	0.000632
317	Schwab (Charles) Corp	SCHW	2.09%	10.00%	94.77	94.77	0.0037	0.000077	0.000366
318	Sealed Air Corp	SEE	2.60%	7.50%	4.45	4.45	0.0002	0.000004	0.000013

S&P 500 / VALUE LINE

	Company	Ticker	(a) Dividend Yield	(b) Value Line Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
319	Sherwin-Williams Co (The)	SHW	1.02%	9.50%	60.97	60.97	0.0024	0.000024	0.000224
320	The J M Smucker Company	SJM	3.76%	5.50%	11.63	11.63	0.0004	0.000017	0.000025
321	Schlumberger Ltd	SLB	1.92%	26.00%	79.51	--	--	--	--
322	Snap-On Inc	SNA	2.74%	7.50%	13.61	13.61	0.0005	0.000014	0.000039
323	Southern Co (The)	SO	4.16%	7.00%	73.39	73.39	0.0028	0.000118	0.000198
324	Simon Property Group Inc.	SPG	7.37%	3.50%	35.96	35.96	0.0014	0.000102	0.000049
325	S&P Global Inc	SPGI	1.03%	7.50%	111.15	111.15	0.0043	0.000044	0.000322
326	Sempra	SRE	3.53%	6.50%	44.07	44.07	0.0017	0.000060	0.000111
327	Steris Plc	STE	0.99%	9.50%	20.71	20.71	0.0008	0.000008	0.000076
328	Steel Dynamics Inc	STLD	1.61%	8.00%	17.64	17.64	0.0007	0.000011	0.000055
329	State Street Corporation	STT	4.32%	7.00%	19.94	19.94	0.0008	0.000033	0.000054
330	Seagate Technology Holdings plc	STX	4.10%	7.00%	14.28	14.28	0.0006	0.000023	0.000039
331	Constellation Brands Inc	STZ	1.52%	6.50%	43.00	43.00	0.0017	0.000025	0.000108
332	Stanley Black & Decker Inc	SWK	3.82%	3.50%	13.03	13.03	0.0005	0.000019	0.000018
333	Skyworks Solutions Inc	SWKS	3.14%	3.00%	13.83	13.83	0.0005	0.000017	0.000016
334	Synchrony Financial	SYF	3.57%	4.50%	11.61	11.61	0.0004	0.000016	0.000020
335	Stryker Corp	SYK	1.16%	7.00%	102.62	102.62	0.0040	0.000046	0.000277
336	Sysco Corporation	SYY	3.01%	16.00%	33.53	33.53	0.0013	0.000039	0.000207
337	AT&T Inc	T	7.21%	1.50%	110.11	110.11	0.0043	0.000307	0.000064
338	Molson Coors Beverage Company	TAP	2.94%	41.50%	11.61	--	--	--	--
339	Bio-Techne Corp	TECH	0.59%	11.00%	8.64	8.64	0.0003	0.000002	0.000037
340	TE Connectivity Ltd	TEL	2.00%	9.00%	37.00	37.00	0.0014	0.000029	0.000129
341	Teradyne Inc	TER	0.58%	12.50%	12.82	12.82	0.0005	0.000003	0.000062
342	Truist Financial Corp	TFC	7.48%	6.00%	37.82	37.82	0.0015	0.000109	0.000088
343	Teleflex Inc	TFX	0.74%	10.50%	8.68	8.68	0.0003	0.000002	0.000035
344	Target Corp	TGT	3.97%	10.50%	51.14	51.14	0.0020	0.000078	0.000207
345	TJX Companies Inc (The)	TJX	1.51%	16.50%	100.76	100.76	0.0039	0.000059	0.000642
346	Thermo Fisher Scientific Inc	TMO	0.31%	8.50%	171.66	171.66	0.0066	0.000021	0.000563
347	Tapestry Inc	TPR	5.08%	12.50%	6.31	6.31	0.0002	0.000012	0.000030
348	Targa Resources Corp	TRGP	2.39%	n/a	18.70	--	--	--	--
349	T. Rowe Price Group Inc	TROW	5.52%	1.50%	20.22	20.22	0.0008	0.000043	0.000012
350	Travelers Companies Inc (The)	TRV	2.39%	7.50%	38.24	38.24	0.0015	0.000035	0.000111
351	Tractor Supply Co	TSCO	2.14%	11.50%	20.95	20.95	0.0008	0.000017	0.000093
352	Tyson Foods Inc.	TSN	4.14%	-12.50%	16.48	--	--	--	--
353	Trane Technologies plc	TT	1.58%	14.50%	43.47	43.47	0.0017	0.000026	0.000243
354	Texas Instruments Inc	TXN	3.66%	3.50%	128.97	128.97	0.0050	0.000182	0.000174
355	Textron Inc	TXT	0.11%	16.00%	14.90	14.90	0.0006	0.000001	0.000092
356	UDR Inc	UDR	5.53%	15.50%	10.46	10.46	0.0004	0.000022	0.000063
357	Universal Health Services Inc.	UHS	0.64%	6.00%	8.74	8.74	0.0003	0.000002	0.000020
358	Unitedhealth Group Inc	UNH	1.40%	12.00%	496.09	496.09	0.0192	0.000269	0.002299
359	Union Pacific Corp	UNP	2.50%	6.50%	126.56	126.56	0.0049	0.000122	0.000318
360	United Parcel Service Inc	UPS	4.59%	5.50%	120.69	120.69	0.0047	0.000214	0.000256
361	United Rentals Inc.	URI	1.46%	17.00%	27.54	27.54	0.0011	0.000015	0.000181
362	U.S. Bancorp	USB	6.02%	4.00%	49.64	49.64	0.0019	0.000115	0.000077
363	Visa Inc	V	0.89%	13.50%	475.75	475.75	0.0184	0.000164	0.002480
364	V.F. Corp	VFC	8.15%	2.50%	5.73	5.73	0.0002	0.000018	0.000006
365	VICI Properties Inc	VICI	5.95%	8.00%	28.86	28.86	0.0011	0.000066	0.000089
366	Valero Energy Corp	VLO	3.21%	4.00%	43.24	43.24	0.0017	0.000054	0.000067
367	Vulcan Materials Co	VMC	0.88%	9.50%	26.11	26.11	0.0010	0.000009	0.000096
368	VERISK ANALYTICS INC	VRSK	0.60%	9.00%	32.97	32.97	0.0013	0.000008	0.000115
369	Ventas Inc.	VTR	4.38%	23.50%	17.08	--	--	--	--
370	Viatris Inc	VTRS	5.84%	-1.50%	10.68	--	--	--	--
371	Verizon Communications Inc	VZ	7.57%	1.50%	147.69	147.69	0.0057	0.000432	0.000086

S&P 500 / VALUE LINE

	Company	Ticker	(a) Dividend Yield	(b) Value Line Growth	(a) Market Cap ($bil.)	Mkt. Cap.	Weight	Weighted Dividend Yield	Weighted Growth Rate
372	Westinghouse Air Brake Technologies Corp	WAB	0.64%	10.50%	18.99	18.99	0.0007	0.000005	0.000077
373	Walgreens Boots Alliance Inc	WBA	9.16%	1.00%	18.21	18.21	0.0007	0.000064	0.000007
374	WEC Energy Group Inc	WEC	3.83%	6.00%	25.67	25.67	0.0010	0.000038	0.000059
375	Welltower Inc	WELL	3.06%	12.00%	43.37	43.37	0.0017	0.000051	0.000201
376	Wells Fargo & Co	WFC	3.52%	10.50%	144.68	144.68	0.0056	0.000197	0.000587
377	Whirlpool Corp	WHR	7.17%	-0.50%	5.74	--	--	--	--
378	Waste Management Inc.	WM	1.70%	7.00%	66.19	66.19	0.0026	0.000044	0.000179
379	Williams Cos Inc. (The)	WMB	5.20%	10.50%	41.84	41.84	0.0016	0.000084	0.000170
380	Walmart Inc	WMT	1.42%	6.50%	439.83	439.83	0.0170	0.000241	0.001104
381	Berkley (W.R.) Corp	WRB	0.65%	15.00%	17.40	17.40	0.0007	0.000004	0.000101
382	WestRock Company	WRK	3.06%	8.50%	9.21	9.21	0.0004	0.000011	0.000030
383	West Pharmaceutical Services Inc.	WST	0.24%	7.00%	23.55	23.55	0.0009	0.000002	0.000064
384	Willis Towers Watson plc	WTW	1.42%	9.00%	24.36	24.36	0.0009	0.000013	0.000085
385	Weyerhaeuser Co	WY	2.65%	-2.50%	20.94	--	--	--	--
386	Wynn Resorts Ltd	WYNN	1.14%	n/a	10.00	--	--	--	--
387	Xcel Energy Inc.	XEL	3.69%	6.00%	32.71	32.71	0.0013	0.000047	0.000076
388	Exxon Mobil Corp	XOM	3.44%	7.00%	419.47	419.47	0.0162	0.000557	0.001134
389	DENTSPLY SIRONA Inc	XRAY	1.84%	10.00%	6.44	6.44	0.0002	0.000005	0.000025
390	Xylem Inc	XYL	1.41%	11.50%	22.53	22.53	0.0009	0.000012	0.000100
391	YUM BRANDS INC	YUM	2.00%	11.50%	33.87	33.87	0.0013	0.000026	0.000150
392	Zimmer Biomet Holdings Inc	ZBH	0.92%	6.50%	21.82	21.82	0.0008	0.000008	0.000055
393	Zions Bancorporation National Association	ZION	5.51%	4.00%	4.57	4.57	0.0002	0.000010	0.000007
394	Zoetis Inc	ZTS	0.96%	9.00%	72.27	72.27	0.0028	0.000027	0.000251
						25,893.91	1.0000		
	Weighted Average							**2.22%**	**9.64%**

n/a Not Available

(a) www.valueline.com (retrieved Oct. 31, 2023).

(b) EPS growth rates from Value Line (retrieved Oct. 31, 2023). Eliminated growth rates greater than 20%, as well as all negative

IMPLIED ROE

Current Equity Risk Premium				
(a)	Average Yield Over Study Period		5.34%	
(b)	Baa Utility Bond Yield		5.99%	
	Change in Bond Yield		0.65%	
(c)	Risk Premium/Interest Rate Relationship		-0.6808	
	Adjustment to Average Risk Premium		-0.44%	
(a)	Average Risk Premium over Study Period		4.89%	
	Adjusted Risk Premium		**4.45%**	
Implied Cost of Equity				
(b)	Baa Utility Bond Yield		5.99%	
	Adjusted Equity Risk Premium		4.45%	
	Risk Premium Cost of Equity		**10.44%**	
Implied Cost of Equity Range				
	Range Spread			
(d)	Two-step DCF		3.46%	
	CAPM			
(e)	IBES-based		3.27%	
(f)	Value Line-based		3.43%	
	Average		3.35%	
(g)	Expected Earnings		7.48%	
(h)	Average Range Spread		4.76%	
(i)	**Risk Premium Range**	**8.06%**	**--**	**12.82%**

(a) See Exhibit No. ORU-109, pp. 2-5.
(b) Six-month average yield for May to Oct. 2023 based on data from Moody's Investors Service, www.moodys.credittrends.com.
(c) See Exhibit No. ORU-109, p. 6.
(d) Difference between high and low estimates from Exhibit No. ORU-104, p. 1.
(e) Difference between high and low estimates from Exhibit No. ORU-105.
(f) Difference between high and low estimates from Exhibit No. ORU-107.
(g) Difference between high and low estimates from Exhibit No. ORU-110.
(h) Average of range spreads for DCF, CAPM, and Expected Earnings.
(i) Risk Premium cost of equity -/+ one-half of averge range spread.

ALLOWED ROE

Date	Docket No.	Utility	Base ROE	Baa Bond Yield	Implied Risk Premium
Feb-06	ER05-515	Baltimore Gas & Elec.	10.80%	6.07%	4.73%
Feb-06	ER05-515	Baltimore Gas & Elec.	11.30%	6.07%	5.23%
Jun-06	ER05-925	Westar Energy Inc.	10.80%	6.36%	4.44%
Feb-07	ER07-284	San Diego Gas & Elec.	11.35%	6.14%	5.21%
May-07	ER06-787	Idaho Power Co.	10.70%	6.15%	4.55%
May-07	ER06-1320	Wisconsin Elec. Pwr. Co.	11.00%	6.15%	4.85%
Sep-07	EL06-109	Duquesne Light Co.	10.90%	6.41%	4.49%
Sep-07	ER07-583	Commonwealth Edison Co.	11.00%	6.41%	4.59%
Oct-07	ER08-92	Virginia Elec. & Power Co.	10.90%	6.43%	4.47%
Nov-07	ER08-374	Atlantic Path 15	10.65%	6.44%	4.21%
Nov-07	ER08-396	Westar Energy Inc.	10.80%	6.44%	4.36%
Nov-07	ER08-413	Startrans IO, LLC	10.65%	6.44%	4.21%
Nov-07	ER08-375	So. Cal Edison	10.55%	6.44%	4.11%
Jan-08	ER08-686	Pepco Holdings, Inc.	11.30%	6.41%	4.89%
Feb-08	ER07-562	Trans-Allegheny	11.20%	6.42%	4.78%
Apr-08	ER07-1142	Arizona Public Service Co.	10.75%	6.54%	4.21%
May-08	ER08-1207	Virginia Elec. & Power Co.	10.90%	6.62%	4.28%
May-08	ER08-1233	Public Service Elec. & Gas	11.18%	6.62%	4.56%
Jun-08	ER08-1402	Duquesne Light Co.	10.90%	6.69%	4.21%
Jun-08	ER08-1423	Pepco Holdings, Inc.	10.80%	6.69%	4.11%
Jul-08	ER09-35/36	Tallgrass / Prairie Wind	10.80%	6.80%	4.00%
Sep-08	ER09-249	Public Service Elec. & Gas	11.18%	6.94%	4.24%
Sep-08	ER09-187	So. Cal Edison	10.53%	6.94%	3.59%
Sep-08	ER09-548	ITC Great Plains	10.66%	6.94%	3.72%
Sep-08	ER09-75	Pioneer Transmission	10.54%	6.94%	3.60%
Nov-08	ER08-1584	Black Hills Power Co.	10.80%	7.60%	3.20%
Dec-08	ER09-745	Baltimore Gas & Elec.	10.80%	7.80%	3.00%
Jan-09	ER07-1069	AEP - SPP Zone	10.70%	7.95%	2.75%
Jan-09	ER09-681	Green Power Express	10.78%	7.95%	2.83%
Mar-09	ER08-281	Oklahoma Gas & Elec.	10.60%	8.22%	2.38%
Apr-09	ER08-1457	PPL Elec. Utilities Corp.	11.10%	8.13%	2.97%
Apr-09	ER08-1457	PPL Elec. Utilities Corp.	11.14%	8.13%	3.01%
Apr-09	ER08-1457	PPL Elec. Utilities Corp.	11.18%	8.13%	3.05%
Apr-09	ER08-1588	Kentucky Utilities Co.	11.00%	8.13%	2.87%
Jul-09	ER08-552	Niagara Mohawk Pwr. Co.	11.00%	7.62%	3.38%
Aug-09	ER08-313	Southwestern Public Service Co.	10.77%	7.39%	3.38%
Aug-09	ER09-628	National Grid Generation LLC	10.75%	7.08%	3.67%
Sep-09	ER10-160	So. Cal Edison	10.33%	7.08%	3.25%
Mar-10	ER08-1329	AEP - PJM Zone	10.99%	6.20%	4.79%
Aug-10	ER10-230	Kansas City Power & Light Co.	10.60%	6.05%	4.55%
Aug-10	ER10-355	AEP Transcos - PJM	10.99%	6.05%	4.94%
Aug-10	ER10-355	AEP Transcos - SPP	10.70%	6.05%	4.65%
Sep-10	ER11-1952	So. Cal Edison	10.30%	5.93%	4.37%
Oct-10	EL11-13	Atlantic Grid Operations	10.09%	5.84%	4.25%

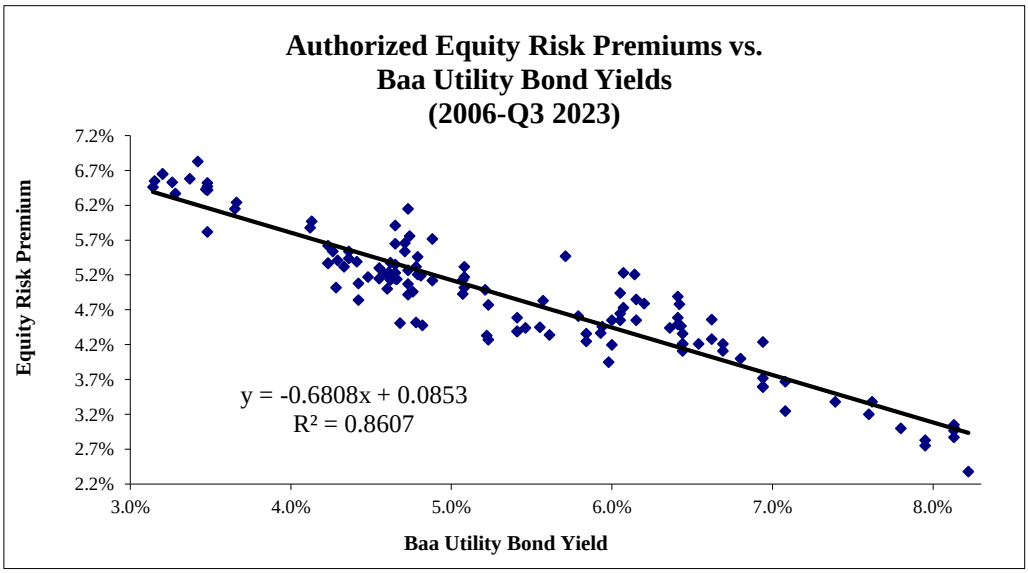
ALLOWED ROE

Date	Docket No.	Utility	Base ROE	Baa Bond Yield	Implied Risk Premium
Oct-10	ER11-2895	Duke Energy Carolinas	10.20%	5.84%	4.36%
Nov-10	ER11-2377	Northern Pass Transmission	10.40%	5.79%	4.61%
Mar-11	ER10-1377	Northern States Power Co. (MN)	10.40%	5.94%	4.46%
Apr-11	ER10-516	South Carolina Elec. & Gas	10.55%	6.00%	4.55%
Apr-11	ER10-992	Northern States Power Co.	10.20%	6.00%	4.20%
May-11	ER11-4069	RITELine	9.93%	5.98%	3.95%
Aug-11	ER12-296	PJM & PSE&G	11.18%	5.71%	5.47%
Sep-11	ER08-386	PATH	10.40%	5.57%	4.83%
Dec-11	ER11-2560	Entergy Arkansas	10.20%	5.21%	4.99%
Mar-12	ER12-2300	Public Service Co. of Colorado	10.25%	5.08%	5.17%
Mar-12	ER11-2853	Public Service Co. of Colorado	10.10%	5.08%	5.02%
Mar-12	ER11-2853	Public Service Co. of Colorado	10.40%	5.08%	5.32%
Nov-12	ER12-1378	Cleco Power LLC	10.50%	4.74%	5.76%
Jan-13	ER12-778	Puget Sound Energy	9.80%	4.65%	5.15%
Jan-13	ER12-778	Puget Sound Energy - PSANI	10.30%	4.65%	5.65%
Jan-13	ER12-2554	Transource Missouri	9.80%	4.65%	5.15%
Feb-13		PacifiCorp	9.80%	4.62%	5.18%
Feb-13	ER12-1650	Maine Public Service Co.	9.75%	4.62%	5.13%
Jul-13	ER11-3697	So. Cal Edison	9.30%	4.82%	4.48%
Jan-14	ER13-941	San Diego Gas & Electric	9.55%	5.22%	4.33%
Aug-14	ER12-1589	Public Service Co. of Colorado	9.72%	4.76%	4.96%
Sep-14	ER12-91	Duke Energy Ohio	10.88%	4.73%	6.15%
Nov-14	ER13-1508	Entergy Arkansas	10.37%	4.71%	5.66%
Jan-15	EL12-101	Niagara Mohawk Power Corp.	9.80%	4.66%	5.14%
Feb-15	ER13-685	Public Service Company of New Mexico	10.00%	4.62%	5.38%
Mar-15	ER14-1661	MidAmerican Central Calif. Transco	9.80%	4.58%	5.22%
May-15	EL14-93	Westar Energy	9.80%	4.58%	5.22%
Jun-15	EL12-39	Duke Energy Florida	10.00%	4.65%	5.35%
Jun-15	ER15-303	American Transmission Systems, Inc.	10.56%	4.65%	5.91%
Jun-15	ER15-303	American Transmission Systems, Inc.	9.88%	4.65%	5.23%
Jul-15	ER14-192	Southwestern Public Service Co.	10.00%	4.79%	5.21%
Jul-15	ER13-2428	Kentucky Utilities Co.	10.25%	4.79%	5.46%
Sep-15	ER14-2751	Xcel Energy Southwest Trans. Co. (Gen)	10.20%	5.07%	5.13%
Sep-15	ER14-2751	Xcel Energy Southwest Trans. Co. (Zn 11)	10.00%	5.07%	4.93%
Oct-15	EL15-27	Baltimore G&E / Pepco Holdings, Inc.	10.00%	5.23%	4.77%
Oct-15	ER15-572	New York Transco LLC	9.50%	5.23%	4.27%
Dec-15	ER15-2237	Kanstar Transmission, LLC	9.80%	5.41%	4.39%
Dec-15	ER15-2114	Transource West Virginia, LLC	10.00%	5.41%	4.59%
Jan-16	ER15-1809	ATX Southwest, LLC	9.90%	5.46%	4.44%
Mar-16	ER15-958	Transource Kansas, LLC	9.80%	5.41%	4.39%
Jul-16	EL16-30	Duke Energy Carolinas	10.00%	4.73%	5.27%
Jul-16	ER15-1682	TransCanyon DCR, LLC	9.80%	4.73%	5.07%
Jul-16	ER15-2069	NorthWestern Corp.	9.65%	4.73%	4.92%
Aug-16	ER15-2239	NextEra Energy Transmission West	9.70%	4.55%	5.15%

ALLOWED ROE

Date	Docket No.	Utility	Base ROE	Baa Bond Yield	Implied Risk Premium
Aug-16	ER16-453	Northeast Transmission Development	9.85%	4.55%	5.30%
Sep-16	ER15-2594	South Central MCN LLC	9.80%	4.41%	5.39%
May-17	ER15-1429	Emera Maine	9.60%	4.60%	5.00%
Jul-17	ER15-572	New York Transco, LLC	9.65%	4.48%	5.17%
Aug-17	ER17-856	Rockland Electric Co.	9.50%	4.42%	5.08%
Aug-17	ER16-2320-002	Pacific Gas & Electric Co.	9.26%	4.42%	4.84%
Sep-17	ER17-211	Mid-Atlantic Interstate Transmission	9.80%	4.36%	5.44%
Sep-17	ER17-419	Transource Pennsylvania/Maryland, LLC	9.90%	4.36%	5.54%
Nov-17	ER16-2720	NextEra Energy Trans. Southwest LLC	9.80%	4.26%	5.54%
Feb-18	ER16-2716	NextEra Energy Trans. MidAtlantic, LLC	9.60%	4.23%	5.37%
Feb-18	ER17-706	GridLiance West Transco LLC	9.60%	4.23%	5.37%
Feb-18	EL17-13	AEP East Cos.	9.85%	4.23%	5.62%
Mar-18	ER17-135	DesertLink, LLC	9.30%	4.28%	5.02%
Apr-18	ER16-2719	NextEra Energy Trans. New York LLC	9.65%	4.33%	5.32%
Sep-18	ER18-1639	Constellation Mystic Power, LLC	9.19%	4.68%	4.51%
Nov-18	ER18-1225	Southwestern Electric Power Co.	10.10%	4.78%	5.32%
Nov-18	ER19-605	Republic Transmission, LLC	9.30%	4.78%	4.52%
Feb-19	ER19-1396	AEP West Cos.	10.00%	4.88%	5.12%
Feb-19	ER19-1427	Alabama Power Co.	10.60%	4.88%	5.72%
Apr-19	EL18-58	Oklahoma G&E	10.00%	4.81%	5.19%
May-19	ER18-1953	Gulf Power Co.	10.25%	4.71%	5.54%
Jun-19	ER17-1519	PECO	9.85%	4.61%	5.24%
Aug-19	ER18-169-002	Southern California Edison	9.70%	4.29%	5.41%
Sep-19	ER19-221	San Diego Gas & Electric Co.	10.10%	4.13%	5.97%
Feb-20	ER19-697-001	Cheyenne Light, Fuel and Power	9.90%	3.66%	6.24%
Jun-20	ER19-1553	Southern California Edison Co.	9.80%	3.65%	6.15%
Sep-20	ER19-13	Pacific Gas & Electric Co.	9.95%	3.37%	6.58%
Oct-20	ER19-1756	NorthWestern Corp.	9.65%	3.28%	6.37%
Nov-20	ER20-1150	Dayton Power and Light Co.	9.85%	3.20%	6.65%
Dec-20	ER21-2198	Avista Corp.	9.60%	3.14%	6.46%
Jan-21	ER20-227	Jersey Central Power & Light Co.	9.70%	3.15%	6.55%
Feb-21	ER21-1319	Duke Energy Progress	9.85%	3.20%	6.65%
Jun-21	ER21-2450	Public Service Elec. & Gas Co.	9.90%	3.47%	6.43%
Jul-21	ER21-1065	TransCanyon Western Development, LLC	9.90%	3.48%	6.42%
Jul-21	ER21-669	Morongo Transmission LLC	9.30%	3.48%	5.82%
Jul-21	EL20-48	PPL Elec. Utilities Corp.	9.90%	3.48%	6.42%
Jul-21	EL20-48	PPL Elec. Utilities Corp.	9.95%	3.48%	6.47%
Jul-21	EL20-48	PPL Elec. Utilities Corp.	10.00%	3.48%	6.52%
Nov-21	ER19-2019	Tucson Electric Power Co.	9.79%	3.26%	6.53%
Feb-22	ER20-2878	Pacific Gas & Electric Co.	10.25%	3.42%	6.83%
May-22	ER22-2125	Duke Energy Progress	10.00%	4.12%	5.88%
Nov-22	ER22-233	Portland General Electric Co.	10.00%	5.55%	4.45%
Dec-22	ER21-253	South FirstEnergy Operating Cos.	9.95%	5.61%	4.34%
		Average	**10.23%**	**5.34%**	**4.89%**

REGRESSION RESULTS



Regression Statistics	
Multiple R	0.927755682
R Square	0.860730606
Adjusted R Square	0.859650998
Standard Error	0.003514199
Observations	131

Coefficients	
Intercept	0.085296833
X Variable 1	-0.68078475

ADJUSTMENTS TO FERC CASE SET

Date	Docket No.	Utility	Base ROE	Explanation
Added to FERC Case Set				
May-08	ER08-1233	Public Service Elec. & Gas	11.18%	Original formula rate order. Commission accepted 11.18% ROE based on applicant's DCF analysis using May 2008 study period. 124 FERC ¶ 61,303 at P 1 (2008).
Apr-09	ER08-1457	PPL Elec. Utilities Corp.	11.18%	Order authorized ROEs of 11.10%, 11.14%, and 11.18%. Opinion No. 569-B included 11.10% and 11.14% values. No basis to distinguish 11.18% or to exclude it because it applies to a future date, as do the majority of ROEs approved by the Commission.
Sep-15	ER14-2751	Xcel Energy Southwest Trans. Co. (Zn 11)	10.00%	Settlement specifies separate ROE for Zone 11 under SPP OATT. 153 FERC ¶ 63,019 (2015). Commission failed to include.
Aug-17	ER16-2320-002	Pacific Gas & Electric Co.	9.26%	Add observation corresponding to 178 FERC ¶ 61,175 (2022).
Sep-18	ER18-1639	Constellation Mystic Power, LLC	9.19%	Add observation corresponding to 177 FERC ¶ 61,106 (2021).
Apr-19	EL18-58	Oklahoma G&E	10.00%	Offer of Settlement dated 5/21/19. 167 FERC ¶ 63,048 (2019).
May-19	ER18-1953	Gulf Power Co.	10.25%	Offer of Settlement dated 6/20/19. 169 FERC ¶ 61,023 (2019).
Jun-19	ER17-1519	PECO	9.85%	Offer of Settlement dated 7/22/19. 168 FERC ¶ 63,038 (2019).
Aug-19	ER18-169-002	Southern California Edison	9.70%	Offer of Settlement dated 9/19/19. 169 FERC ¶ 63,009 (2019).
Sep-19	ER19-221	San Diego Gas & Electric Co.	10.10%	Offer of Settlement dated 10/18/19. 170 FERC ¶ 63,010 (2020).
Feb-20	ER19-697-001	Cheyenne Light, Fuel and Power	9.90%	Offer of Settlement dated 3/20/20. 171 FERC ¶ 63,012 (2020).
Jun-20	ER19-1553	Southern California Edison Co.	9.80%	Offer of Settlement dated 7/01/20. 172 FERC ¶ 63,011 (2020).
Sep-20	ER19-13	Pacific Gas & Electric Co.	9.95%	Offer of Settlement dated 10/15/20. 173 FERC ¶ 63,024 (2020).
Oct-20	ER19-1756	NorthWestern Corp.	9.65%	Offer of Settlement dated 11/16/20. 174 FERC ¶ 61,074 (2020).
Nov-20	ER20-1150	Dayton Power and Light Co.	9.85%	Offer of Settlement dated 12/10/20. 175 FERC ¶ 61,021 (2020).
Dec-20	ER21-2198	Avista Corp.	9.60%	Approved 9/30/21 based on study period ending Dec. 2020. 176 FERC ¶ 61,222 (2020).
Jan-21	ER20-227	Jersey Central Power & Light Co.	9.70%	Offer of Settlement dated 02/02/21. 175 FERC ¶ 61,023 (2020).
Feb-21	ER21-1319	Duke Energy Progress	9.85%	Offer of Settlement dated 03/10/21. 175 FERC ¶ 63,006 (2021).
Jun-21	ER21-2450	Public Service Elec. & Gas Co.	9.90%	Offer of Settlement dated 07/14/21. 177 FERC ¶ 61,115 (2021).
Jul-21	ER21-1065	TransCanyon Western Development, LLC	9.90%	Offer of Settlement dated 08/13/21. 176 FERC ¶ 63,025 (2021).
Jul-21	ER21-669	Morongo Transmission LLC	9.30%	Offer of Settlement dated 08/16/21. 178 FERC ¶ 61,062 (2021).
Jul-21	EL20-48	PPL Elec. Utilities Corp.	9.90%	Offer of Settlement dated 08/20/21. Effective 05/21/20-05/31/22. 176 FERC ¶ 63,028 (2021).
Jul-21	EL20-48	PPL Elec. Utilities Corp.	9.95%	Offer of Settlement dated 08/20/21. Effective 06/1/22-05/31/23. 176 FERC ¶ 63,028 (2021).
Jul-21	EL20-48	PPL Elec. Utilities Corp.	10.00%	Offer of Settlement dated 08/20/21. Effective 06/1/23. 176 FERC ¶ 63,028 (2021).
Nov-21	ER19-2019	Tucson Electric Power Co.	9.79%	Offer of Settlement dated 12/22/21. 178 FERC ¶ 61,229 (2022).
Feb-22	ER20-2878	Pacific Gas & Electric Co.	10.25%	Offer of Settlement dated 03/31/22. 179 FERC ¶ 61,167 (2022).
May-22	ER22-2125	Duke Energy Progress	10.00%	Offer of Settlement dated 06/16/22. 181 FERC ¶ 61,111 (2022).
Nov-22	ER22-233	Portland General Electric Co.	10.00%	Offer of Settlement dated 12/19/22. 182 FERC ¶ 63,008 (2023).
Dec-22	ER21-253	South FirstEnergy Operating Cos.	9.95%	Offer of Settlement dated 01/18/23. 182 FERC ¶ 63,016 (2023).

ADJUSTMENTS TO FERC CASE SET

Date	Docket No.	Utility	Base ROE	Explanation
Removed from FERC Case Set				
Jun-15	EL14-12	MISO Complaint I	10.02%	Vacated by Court of Appeals, No. 16-1325 (Aug. 9, 2022).
Dec-15	ER15-45	MISO Complaint II	10.05%	Remove ROE attributed to Complaint II, which was dismissed. No ROE was established or approved in that proceeding.
Jul-16	ER15-1976	East River	9.60%	Remove observation for publicly-owned entity.
Aug-16	ER16-835	NYPA	8.95%	Remove observation for publicly-owned entity.
Sep-16	ER15-1775	Basin Electric	9.60%	Remove observation for publicly-owned entity.
Jan-17	ER16-204	Tri-State	9.30%	Remove observation for publicly-owned entity.
Feb-17	ER16-209	Central Power	9.50%	Remove observation for publicly-owned entity.
Feb-17	ER16-1774	Western Farmers	8.77%	Remove observation for publicly-owned entity.
Feb-17	ER16-1546	Arkansas Electric	8.00%	Remove observation for publicly-owned entity.
Aug-17	ER17-426	Denison	9.60%	Remove observation for publicly-owned entity.
Nov-17	ER17-1610	Mountrail-Williams	9.60%	Remove observation for publicly-owned entity.
Nov-17	ER17-428	Vermillion	9.60%	Remove observation for publicly-owned entity.
Feb-19	ER19-1396	PSCo, SWPECo, AEP Oklahoma, et al.	10.00%	Remove duplicate observation previously reflected as "AEP West."
Other Corrections to DATC Case Set				
Sep-08	ER09-187	So. Cal Edison	10.53%	Remove post-record period adjustment from 10.04% authorized ROE to match ROE with study period interest rate. 139 FERC ¶ 61,042 at P 41 (2012) .

EXPECTED EARNINGS APPROACH **Exhibit No. ORU-110**

ELECTRIC GROUP

	Company	(a) Expected Return on Common Equity	(b) Adjustment Factor	(c) Adjusted Return on Common Equity	Break (B Pts)
1	NextEra Energy, Inc.	14.50%	1.0446	15.15%	41
2	Southern Company	14.50%	1.0163	14.74%	144
3	Pub Sv Enterprise Grp.	13.00%	1.0231	13.30%	9
4	WEC Energy Group	13.00%	1.0163	13.21%	8
5	OGE Energy Corp.	13.00%	1.0102	13.13%	26
6	DTE Energy Co.	12.50%	1.0299	12.87%	47
7	CMS Energy Corp.	12.00%	1.0333	12.40%	8
8	Alliant Energy	12.00%	1.0267	12.32%	99
9	Dominion Energy	11.00%	1.0298	11.33%	1
10	American Elec Pwr	11.00%	1.0289	11.32%	3
11	Sempra Energy	11.00%	1.0267	11.29%	2
12	Xcel Energy Inc.	11.00%	1.0249	11.27%	96
13	Ameren Corp.	10.00%	1.0309	10.31%	96
14	CenterPoint Energy	10.00%	1.0289	10.29%	2
15	Eversource Energy	10.00%	1.0254	10.25%	4
16	Exelon Corp.	10.00%	1.0195	10.20%	5
17	Evergy Inc.	10.00%	1.0142	10.14%	6
18	Pinnacle West Capital	9.50%	1.0206	9.70%	44
19	PPL Corp.	9.50%	1.0178	9.67%	3
20	Consolidated Edison	9.00%	1.0115	9.10%	57
21	Duke Energy Corp.	9.00%	1.0111	9.10%	0
22	Entergy Corp.	8.50%	1.0293	8.75%	35
23	Black Hills Corp.	8.00%	1.0257	8.21%	54
24	Fortis Inc.	7.50%	1.0225	7.67%	54
	Lower End			**7.67%**	
	Upper End			**15.15%**	
	Median			**10.79%**	
	Midpoint			**11.41%**	
	Median - All Values			**10.79%**	
	Low-End Test (d)			**7.48%**	
	High-End Test (e)			**21.58%**	

(a) The Value Line Investment Survey (Aug. 11, Sep. 8 and Oct. 20, 2023).
(b) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).
(c) (a) x (b).
(d) Average Baa utility bond yield for six-months ending Oct. 2023, plus 20% of average CAPM market risk premium.
(e) 200% of Median - All Values.

NON-UTILITY PROXY GROUP

			(a)	(b)	(c)	(c)	(d)
			S&P	**Moody's**	**Value Line**		
	Company	**Industry**	**Corporate Rating**	**Long-term Rating**	**Safety Rank**	**Financial Strength**	**Beta**
1	Abbott Labs.	Med Supp Non-Invasive	AA-	Aa3	1	A+	0.90
2	Air Products & Chem.	Chemical (Diversified)	A	A2	1	A++	0.90
3	Amdocs Ltd.	IT Services	BBB	Baa2	1	A	0.90
4	Amgen	Biotechnology	BBB+	Baa1	1	A++	0.70
5	Archer Daniels Midl'd	Food Processing	A	A2	1	A+	0.95
6	Becton, Dickinson	Med Supp Invasive	BBB	Baa2	1	A++	0.75
7	Bristol-Myers Squibb	Drug	A+	A2	1	A++	0.80
8	Brown & Brown	Financial Svcs. (Div.)	BBB-	Baa3	1	A	0.95
9	Brown-Forman 'B'	Beverage	A-	A1	1	A	0.85
10	Church & Dwight	Household Products	BBB+	A3	1	A+	0.60
11	Cisco Systems	Telecom. Equipment	AA-	A1	1	A++	0.90
12	Coca-Cola	Beverage	A+	A1	1	A++	0.85
13	Colgate-Palmolive	Household Products	AA-	Aa3	1	A	0.65
14	Comcast Corp.	Cable TV	A-	A3	1	A+	0.85
15	Costco Wholesale	Retail Store	A+	Aa3	1	A++	0.65
16	Danaher Corp.	Diversified Co.	A-	A3	1	A+	0.90
17	Gen'l Mills	Food Processing	BBB	Baa2	1	A+	0.55
18	Gilead Sciences	Drug	BBB+	A3	1	A	0.60
19	Hershey Co.	Food Processing	A	A1	1	A+	0.75
20	Home Depot	Retail Building Supply	A	A2	1	A++	0.95
21	Hormel Foods	Food Processing	A-	A1	1	A+	0.55
22	Intercontinental Exch.	Brokers & Exchanges	A-	A3	1	A	0.95
23	Johnson & Johnson	Med Supp Non-Invasive	AAA	Aaa	1	A++	0.75
24	Kimberly-Clark	Household Products	A	A2	1	A	0.70
25	Lilly (Eli)	Drug	A+	A1	1	A++	0.75
26	Lockheed Martin	Aerospace/Defense	A-	A2	1	A++	0.90
27	Marsh & McLennan	Financial Svcs. (Div.)	A-	A3	1	A+	0.95
28	McCormick & Co.	Food Processing	BBB	Baa2	1	A+	0.80
29	McDonald's Corp.	Restaurant	BBB+	Baa1	1	A++	0.90
30	McKesson Corp.	Med Supp Non-Invasive	BBB+	Baa1	1	A++	0.85
31	Merck & Co.	Drug	A+	A1	1	A++	0.75
32	Microsoft Corp.	Computer Software	AAA	Aaa	1	A++	0.90
33	Mondelez Int'l	Food Processing	BBB	Baa1	1	A+	0.80
34	NewMarket Corp.	Chemical (Specialty)	BBB+	Baa2	1	A	0.75
35	Northrop Grumman	Aerospace/Defense	BBB+	Baa1	1	A++	0.75
36	Oracle Corp.	Computer Software	BBB	Baa2	1	A++	0.85
37	PepsiCo, Inc.	Beverage	A+	A1	1	A++	0.75
38	Pfizer, Inc.	Drug	A+	A1	1	A++	0.80
39	Procter & Gamble	Household Products	AA-	Aa3	1	A++	0.70
40	Progressive Corp.	Insurance (Prop/Cas.)	A	A2	1	A	0.75
41	Republic Services	Environmental	BBB+	Baa1	1	A	0.85
42	Sherwin-Williams	Retail Building Supply	BBB	Baa2	1	A+	0.95
43	Smucker (J.M.)	Food Processing	BBB	Baa2	1	A+	0.60
44	Texas Instruments	Semiconductor	A+	Aa3	1	A++	0.85
45	Thermo Fisher Sci.	Precision Instrument	A-	A3	1	A	0.90
46	Travelers Cos.	Insurance (Prop/Cas.)	AA	A2	1	A+	0.95
47	Walmart Inc.	Retail Store	AA	Aa2	1	A++	0.60
48	Waste Management	Environmental	A-	Baa1	1	A	0.80
	Average		**A**	**A2**	**1**	**A+**	**0.80**

(a) www.standardandpoors.com (retrieved Nov. 7, 2023).
(b) www.moodys.com (retrieved Nov. 6, 2023).
(c) The Value Line Investment Survey (various editions as of Nov. 3, 2023).
(d) The Value Line Investment Survey, *Summary & Index* (Nov. 3, 2023).

NON-UTILITY PROXY GROUP

	Company	(a) 6-Mo. Div. Yield	(b) Adjusted Yield	(c) IBES Growth	(d) DCF Result
1	Abbott Labs.	1.97%	1.96%	-1.51%	0.45%
2	Air Products & Chem.	2.42%	2.55%	10.27%	12.82%
3	Amdocs Ltd.	1.93%	2.03%	11.10%	13.13%
4	Amgen	3.53%	3.59%	3.68%	7.27%
5	Archer Daniels Midl'd	2.34%	2.33%	-0.60%	1.73%
6	Becton, Dickinson	1.38%	1.45%	9.45%	10.90%
7	Bristol-Myers Squibb	3.73%	3.77%	2.33%	6.10%
8	Brown & Brown	0.67%	0.71%	13.22%	13.93%
9	Brown-Forman 'B'	1.30%	1.39%	13.50%	14.89%
10	Church & Dwight	1.16%	1.20%	7.10%	8.30%
11	Cisco Systems	2.99%	3.08%	6.05%	9.13%
12	Coca-Cola	3.10%	3.19%	5.75%	8.94%
13	Colgate-Palmolive	2.56%	2.66%	7.57%	10.23%
14	Comcast Corp.	2.72%	2.82%	7.72%	10.54%
15	Costco Wholesale	0.76%	0.79%	8.10%	8.89%
16	Danaher Corp.	0.50%	0.50%	-1.32%	-0.82%
17	Gen'l Mills	3.15%	3.27%	7.67%	10.94%
18	Gilead Sciences	3.87%	3.95%	4.08%	8.03%
19	Hershey Co.	1.97%	2.05%	8.90%	10.95%
20	Home Depot	2.74%	2.78%	3.11%	5.89%
21	Hormel Foods	2.84%	2.84%	-0.50%	2.34%
22	Intercontinental Exch.	1.51%	1.57%	6.99%	8.56%
23	Johnson & Johnson	2.96%	3.03%	4.90%	7.93%
24	Kimberly-Clark	3.63%	3.80%	9.71%	13.51%
25	Lilly (Eli)	0.93%	1.05%	26.75%	27.80%
26	Lockheed Martin	2.72%	2.86%	10.69%	13.55%
27	Marsh & McLennan	1.43%	1.51%	11.10%	12.61%
28	McCormick & Co.	1.91%	1.98%	8.10%	10.08%
29	McDonald's Corp.	2.16%	2.26%	9.03%	11.29%
30	McKesson Corp.	0.56%	0.59%	9.97%	10.56%
31	Merck & Co.	2.69%	2.82%	10.06%	12.88%
32	Microsoft Corp.	0.84%	0.90%	14.30%	15.20%
33	Mondelez Int'l	2.26%	2.35%	7.98%	10.33%
34	NewMarket Corp.	2.05%	2.13%	7.70%	9.83%
35	Northrop Grumman	1.66%	1.68%	1.90%	3.58%
36	Oracle Corp.	1.44%	1.51%	10.23%	11.74%
37	PepsiCo, Inc.	2.82%	2.93%	8.15%	11.08%
38	Pfizer, Inc.	4.60%	4.40%	-8.91%	-4.51%
39	Procter & Gamble	2.51%	2.60%	7.36%	9.96%
40	Progressive Corp.	0.30%	0.34%	25.70%	26.04%
41	Republic Services	1.39%	1.46%	8.89%	10.35%
42	Sherwin-Williams	0.96%	1.02%	12.68%	13.70%
43	Smucker (J.M.)	2.99%	3.09%	6.84%	9.93%
44	Texas Instruments	2.96%	3.11%	10.00%	13.11%
45	Thermo Fisher Sci.	0.27%	0.28%	5.62%	5.90%
46	Travelers Cos.	2.36%	2.54%	14.90%	17.44%
47	Walmart Inc.	1.46%	1.51%	6.95%	8.46%
48	Waste Management	1.72%	1.80%	8.46%	10.26%
	Lower End (g)				**7.93%**
	Upper End (g)				**14.89%**
	Median (g)				**10.55%**
	Midpoint				**11.41%**
	Low-End Test (h)				**7.48%**
	High-End Test (i)				**15.15%**

(a) Six-month average dividend yield for May to Oct. 2023.
(b) Six-month average yield x [1 + 0.5 x EPS Growth].
(c) www.finance.yahoo.com (retrieved Nov. 3, 2023).
(d) Sum of adjusted yield and growth rate.
(g) Excludes highlighted values.
(h) 6-mo. avg. Baa utility bonds yield for Oct. 2023, plus 20% of average CAPM risk premium.
(i) Highest cost of equity estimate for Electric Group from Exhibit No. ORU-110.

NON-UTILITY PROXY GROUP

		(a)	(b)	(e)	(d)
	Company	**6-Mo. Div. Yield**	**Adjusted Yield**	**V Line Growth**	**DCF Result**
1	Abbott Labs.	1.97%	2.04%	7.00%	9.04%
2	Air Products & Chem.	2.42%	2.52%	8.00%	10.52%
3	Amdocs Ltd.	1.93%	2.05%	13.00%	15.05%
4	Amgen	3.53%	3.67%	8.00%	11.67%
5	Archer Daniels Midl'd	2.34%	2.39%	4.50%	6.89%
6	Becton, Dickinson	1.38%	1.43%	6.00%	7.43%
7	Bristol-Myers Squibb	3.73%	3.89%	9.00%	12.89%
8	Brown & Brown	0.67%	0.69%	6.50%	7.19%
9	Brown-Forman 'B'	1.30%	1.37%	10.50%	11.87%
10	Church & Dwight	1.16%	1.18%	4.00%	5.18%
11	Cisco Systems	2.99%	3.12%	9.00%	12.12%
12	Coca-Cola	3.10%	3.24%	9.00%	12.24%
13	Colgate-Palmolive	2.56%	2.65%	6.50%	9.15%
14	Comcast Corp.	2.72%	n/a	n/a	n/a
15	Costco Wholesale	0.76%	0.79%	8.00%	8.79%
16	Danaher Corp.	0.50%	0.52%	8.00%	8.52%
17	Gen'l Mills	3.15%	3.27%	8.00%	11.27%
18	Gilead Sciences	3.87%	4.03%	8.00%	12.03%
19	Hershey Co.	1.97%	2.05%	8.00%	10.05%
20	Home Depot	2.74%	2.84%	8.00%	10.84%
21	Hormel Foods	2.84%	2.96%	8.00%	10.96%
22	Intercontinental Exch.	1.51%	1.58%	8.00%	9.58%
23	Johnson & Johnson	2.96%	3.08%	8.00%	11.08%
24	Kimberly-Clark	3.63%	3.77%	8.00%	11.77%
25	Lilly (Eli)	0.93%	0.96%	8.00%	8.96%
26	Lockheed Martin	2.72%	2.83%	8.00%	10.83%
27	Marsh & McLennan	1.43%	1.49%	8.00%	9.49%
28	McCormick & Co.	1.91%	1.98%	8.00%	9.98%
29	McDonald's Corp.	2.16%	2.25%	8.00%	10.25%
30	McKesson Corp.	0.56%	0.58%	8.00%	8.58%
31	Merck & Co.	2.69%	2.79%	8.00%	10.79%
32	Microsoft Corp.	0.84%	0.88%	11.00%	11.88%
33	Mondelez Int'l	2.26%	2.32%	5.00%	7.32%
34	NewMarket Corp.	2.05%	2.16%	10.50%	12.66%
35	Northrop Grumman	1.66%	1.75%	10.00%	11.75%
36	Oracle Corp.	1.44%	1.50%	9.50%	11.00%
37	PepsiCo, Inc.	2.82%	2.91%	6.50%	9.41%
38	Pfizer, Inc.	4.60%	4.75%	6.50%	11.25%
39	Procter & Gamble	2.51%	n/a	n/a	n/a
40	Progressive Corp.	0.30%	0.32%	12.50%	12.82%
41	Republic Services	1.39%	1.48%	11.50%	12.98%
42	Sherwin-Williams	0.96%	0.97%	4.00%	4.97%
43	Smucker (J.M.)	2.99%	3.10%	7.50%	10.60%
44	Texas Instruments	2.96%	3.12%	10.50%	13.62%
45	Thermo Fisher Sci.	0.27%	0.28%	6.50%	6.78%
46	Travelers Cos.	2.36%	2.39%	2.50%	4.89%
47	Walmart Inc.	1.46%	1.51%	6.50%	8.01%
48	Waste Management	1.72%	1.78%	6.50%	8.28%
	Lower End (g)				**8.01%**
	Upper End (g)				**15.05%**
	Median (g)				**10.90%**
	Midpoint				**11.53%**
	Low-End Test (h)				**7.48%**
	High-End Test (i)				**15.15%**

(a) Six-month average dividend yield for May to Oct. 2023.
(b) Six-month average yield x [1 + 0.5 x EPS Growth].
(c) The Value Line Investment Survey (various editions as of Nov. 3, 2023).
(d) Sum of adjusted yield and growth rate.
(g) Excludes highlighted values.
(h) 6-mo. avg. Baa utility bonds yield for Oct. 2023, plus 20% of average CAPM risk premium.
(i) Highest cost of equity estimate for Electric Group from Exhibit No. ORU-110.

NON-UTILITY PROXY GROUP

		(a)	(b)	(f)	(d)
	Company	**6-Mo. Div. Yield**	**Adjusted Yield**	**Zacks Growth**	**DCF Result**
1	Abbott Labs.	1.97%	2.02%	5.09%	7.11%
2	Air Products & Chem.	2.42%	2.55%	10.82%	13.37%
3	Amdocs Ltd.	1.93%	2.03%	11.00%	13.03%
4	Amgen	3.53%	3.62%	5.16%	8.78%
5	Archer Daniels Midl'd	2.34%	2.41%	6.39%	8.80%
6	Becton, Dickinson	1.38%	1.45%	9.70%	11.15%
7	Bristol-Myers Squibb	3.73%	3.80%	4.22%	8.02%
8	Brown & Brown	0.67%	n/a	n/a	n/a
9	Brown-Forman 'B'	1.30%	n/a	n/a	n/a
10	Church & Dwight	1.16%	1.20%	7.84%	9.04%
11	Cisco Systems	2.99%	3.08%	6.31%	9.39%
12	Coca-Cola	3.10%	3.19%	6.17%	9.36%
13	Colgate-Palmolive	2.56%	2.65%	7.03%	9.68%
14	Comcast Corp.	2.72%	2.86%	10.32%	13.18%
15	Costco Wholesale	0.76%	0.79%	8.55%	9.34%
16	Danaher Corp.	0.50%	0.53%	12.00%	12.53%
17	Gen'l Mills	3.15%	3.25%	6.64%	9.89%
18	Gilead Sciences	3.87%	4.13%	13.07%	17.20%
19	Hershey Co.	1.97%	2.05%	8.47%	10.52%
20	Home Depot	2.74%	2.86%	9.44%	12.30%
21	Hormel Foods	2.84%	2.92%	5.13%	8.05%
22	Intercontinental Exch.	1.51%	1.57%	7.34%	8.91%
23	Johnson & Johnson	2.96%	3.03%	4.90%	7.93%
24	Kimberly-Clark	3.63%	3.78%	8.26%	12.04%
25	Lilly (Eli)	0.93%	1.04%	24.13%	25.17%
26	Lockheed Martin	2.72%	2.83%	8.61%	11.44%
27	Marsh & McLennan	1.43%	1.51%	11.05%	12.56%
28	McCormick & Co.	1.91%	1.98%	7.09%	9.07%
29	McDonald's Corp.	2.16%	2.26%	8.92%	11.18%
30	McKesson Corp.	0.56%	0.59%	10.48%	11.07%
31	Merck & Co.	2.69%	2.80%	8.76%	11.56%
32	Microsoft Corp.	0.84%	0.89%	13.49%	14.38%
33	Mondelez Int'l	2.26%	2.36%	8.74%	11.10%
34	NewMarket Corp.	2.05%	n/a	n/a	n/a
35	Northrop Grumman	1.66%	1.68%	2.42%	4.10%
36	Oracle Corp.	1.44%	1.50%	8.77%	10.27%
37	PepsiCo, Inc.	2.82%	2.93%	8.29%	11.22%
38	Pfizer, Inc.	4.60%	4.83%	10.00%	14.83%
39	Procter & Gamble	2.51%	2.60%	7.52%	10.12%
40	Progressive Corp.	0.30%	0.34%	24.88%	25.22%
41	Republic Services	1.39%	1.46%	9.97%	11.43%
42	Sherwin-Williams	0.96%	1.01%	12.36%	13.37%
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44	Texas Instruments	2.96%	3.09%	9.00%	12.09%
45	Thermo Fisher Sci.	0.27%	0.28%	7.65%	7.93%
46	Travelers Cos.	2.36%	2.48%	10.16%	12.64%
47	Walmart Inc.	1.46%	1.51%	6.58%	8.09%
48	Waste Management	1.72%	1.81%	10.02%	11.83%
	Lower End (g)				**7.93%**
	Upper End (g)				**14.83%**
	Median (g)				**11.09%**
	Midpoint				**11.38%**
	Low-End Test (h)				**7.48%**
	High-End Test (i)				**15.15%**

(a) Six-month average dividend yield for May to Oct. 2023.
(b) Six-month average yield x [1 + 0.5 x EPS Growth].
(c) www.zacks.com (retrieved Nov. 7, 2023).
(d) Sum of adjusted yield and growth rate.
(g) Excludes highlighted values.
(h) 6-mo. avg. Baa utility bonds yield for Oct. 2023, plus 20% of average CAPM risk premium.
(i) Highest cost of equity estimate for Electric Group from Exhibit No. ORU-110.