VERIFIED DIRECT TESTIMONY

OF

ADRIEN M. MCKENZIE, CFA

ON BEHALF OF
INDIANAPOLIS POWER & LIGHT COMPANY
D/B/A AES Indiana

Cause No. 46258

INCLUDING AES INDIANA ATTACHMENTS AMM-1 THROUGH AMM-11

May 30, 2025

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VERIFIED DIRECT TESTIMONY OF ADRIEN M. MCKENZIE

I. INTRODUCTION

Q1. Please state your name and business address.

A1. Adrien M. McKenzie, 3907 Red River, Austin, Texas, 78751.

Q2. In what capacity are you employed?

A2. I am President of Financial Concepts and Applications, Inc. (d/b/a FINCAP, Inc.), a firm providing financial, economic, and policy consulting services to business and government.

Q3. Please describe your educational background and qualifications.

A3. A description of my background and qualifications, including a resume containing the details of my experience, is attached as AES Indiana Attachment AMM-1.

A. Overview

Q4. What is the purpose of your testimony in this case?

A4. The purpose of my testimony is to present to the Indiana Utility Regulatory Commission ("IURC") my independent assessment of the just and reasonable return on equity ("ROE") applicable to the original cost rate base of Indianapolis Power & Light Company ("AES Indiana" or "the Company"). In addition, I also examine the reasonableness of AES Indiana's common equity ratio, considering both the specific risks faced by the Company and other industry guidelines.

Q5. Please summarize the information and materials you rely on to support the opinions and conclusions contained in your testimony.

A5. To prepare my testimony, I use information from a variety of sources that would normally be relied upon by a person in my capacity. I am familiar with the organization, finances, and operations of AES Indiana from my participation in prior proceedings before the IURC. In connection with this filing, I consider and rely upon corporate disclosures, publicly available financial reports and filings, and other published information relating to AES Indiana. I also review information relating generally to

capital market conditions and specifically to investor perceptions, requirements and expectations for utilities. These sources, coupled with my experience in the fields of finance and utility regulation, have given me a working knowledge of the issues relevant to investors' required return for AES Indiana, and they form the basis of my analyses and conclusions.

Q6. How is your testimony organized?

A6. First, I summarize my conclusions and recommendations, giving special attention to the importance of financial strength and the implications of regulatory mechanisms and other risk factors. I also comment on the reasonableness of the Company's proposed capital structure.

Next, I briefly review AES Indiana's operations and finances. I then discuss current conditions in the capital markets and their implications in evaluating a just and reasonable return for the Company. I then explain the development of the proxy group of electric utilities used as the basis for my quantitative analyses. With this as a background, I discuss well-accepted quantitative analyses to estimate the current cost of equity for the proxy group of electric utilities. These include the discounted cash flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the empirical CAPM ("ECAPM"), an equity risk premium approach based on allowed ROEs, and reference to expected earned rates of return for electric utilities, which are all methods that are commonly relied on in regulatory proceedings.

Based on the results of my analyses, I evaluate a fair ROE for AES Indiana. My evaluation takes into account the specific risks for the Company's electric operations in Indiana and AES Indiana's requirements for financial strength. Further, consistent with the fact that utilities must compete for capital with firms outside their own industry, I corroborate my utility quantitative analyses by applying the DCF model to a group of low-risk non-utility firms.

B. Summary and Conclusions

Q7. What is your recommended ROE for AES Indiana?

A7. I apply the DCF, CAPM, ECAPM, risk premium, and expected earnings analyses to a proxy group of electric utilities, with the results being summarized on AES Indiana Attachment AMM-2. As shown there, based on the results of my analysis, I recommend a cost of equity range for the Company's electric operations of 10.2% to 11.2%. It is my conclusion that the 10.7% midpoint of this range represents a just and reasonable cost of equity that is adequate to compensate the Company's investors, while maintaining the Company's financial integrity and ability to attract capital on reasonable terms.

As my testimony documents, the electric utilities in my proxy group operate under a wide variety of regulatory mechanisms, including decoupling and infrastructure cost trackers. Similarly, the vast majority of these proxy firms operate in regulatory jurisdictions that allow for future test years, formula rates, and multi-year rate plans. As a result, there is no basis to distinguish AES Indiana's investment risks from the proxy group used as the basis of my analyses.

My ROE recommendation does not consider the very recent dislocations in capital markets attributable to the potential impact of an ongoing trade war on global commerce and economic growth. While investors are clearly demanding significantly higher returns to compensate for the unprecedented risks associated with the global threat to economic growth and financial stability posed by the Trump administration's tariff policies, the high degree of uncertainty and extreme short-term volatility greatly complicates any ability to account for this heightened risk in evaluating the cost of equity for the Company at this time. Thus, I may revise my analyses and ROE recommendations for AES Indiana as additional information becomes available and there is greater clarity over the implications of the trade conflict on investors' long-term risk perceptions and required returns.

II. RETURN ON EQUITY FOR AES INDIANA

Q8. What is the purpose of this section?

A8. This section presents my conclusions regarding the fair ROE applicable to AES Indiana's jurisdictional electric utility operations. I also describe the relationship between ROE and preservation of a utility's financial integrity and the ability to attract capital. Finally, I discuss the reasonableness of the Company's capital structure request in this case.

A. Importance of Financial Strength

Q9. What is the role of the ROE in setting a utility's rates?

A9. The ROE is the cost of attracting and retaining common equity investment in the utility's physical plant and assets. This investment is necessary to finance the asset base needed to provide utility service. Investors commit capital only if they expect to earn a return on their investment commensurate with returns available from alternative investments with comparable risks. Moreover, a just and reasonable ROE is integral in meeting sound regulatory economics and the standards established by the U.S. Supreme Court. The *Bluefield* case set the standard against which just and reasonable rates are measured:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties. . . . The return should be reasonable, sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise money necessary for the proper discharge of its public duties.[1]

The *Hope* case expanded on the guidelines for a reasonable ROE, reemphasizing the Court's findings in *Bluefield* and establishing that the rate-setting process must produce

[1] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923) (*Bluefield*).

an end-result that allows the utility a reasonable opportunity to cover its capital costs. The Court stated:

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. . . . By that standard, the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain credit and attract capital.[2]

In summary, the Supreme Court's findings in *Hope* and *Bluefield* established that a just and reasonable ROE must be sufficient to 1) fairly compensate the utility's investors, 2) enable the utility to offer a return adequate to attract new capital on reasonable terms, and 3) maintain the utility's financial integrity. These standards should allow the utility to fulfill its obligation to provide reliable service while meeting the needs of customers through necessary system replacement and expansion, but the Supreme Court's requirements can only be met if the utility has a reasonable opportunity to actually earn its allowed ROE.

While the *Hope* and *Bluefield* decisions did not establish a particular method to be followed in fixing rates (or in determining the allowed ROE),[3] these and subsequent cases enshrined the importance of an end result that meets the opportunity cost standard of finance. Under this doctrine, the required return is established by investors in the capital markets based on expected returns available from comparable risk investments. Coupled with modern financial theory, which has led to the development of formal risk-return models (*e.g.*, DCF and CAPM), practical application of the *Bluefield* and *Hope* standards involves the independent, case-by-case consideration of capital market data

[2] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) (*Hope*).

[3] *Id.* at 602 (finding, "the Commission was not bound to the use of any single formula or combination of formulae in determining rates." and, "[I]t is not theory but the impact of the rate order which counts.)

in order to evaluate an ROE that will produce a balanced and fair end result for investors and customers.

Q10. Throughout your testimony you refer repeatedly to the concepts of "financial strength," "financial integrity" and "financial flexibility." Would you briefly describe what you mean by these terms?

A10. These terms are generally synonymous and refer to the utility's ability to attract and retain the capital that is necessary to provide service at reasonable cost, consistent with the Supreme Court standards. AES Indiana's plans call for a continuation of capital investments to preserve and enhance service for its customers. The Company must generate adequate cash flow from operations, together with access to capital from external sources, to fund these requirements and for repayment of maturing debt.

Rating agencies and potential debt investors tend to place significant emphasis on maintaining strong financial metrics and credit ratings that support access to debt capital markets under reasonable terms. This emphasis on financial metrics and credit ratings is shared by equity investors who also focus on cash flows, capital structure and liquidity, much like debt investors.

Q11. What part does regulation play in ensuring that AES Indiana has access to capital under reasonable terms and on a sustainable basis?

A11. Regulatory signals are a major driver of investors' risk assessment for utilities. Investors recognize that constructive regulation is a key ingredient in supporting utility credit ratings and financial integrity. Security analysts study commission orders and regulatory policy statements to advise investors about where to put their money. As Moody's Investors Service ("Moody's") recently noted, "The regulatory framework is important because it provides the basis for decisions that affect utilities, including rate-setting as well as consistency and predictability of regulatory decision-making."[4] Similarly, S&P

[4] Moody's Investors Service, *Rating Methodology, Regulated Electric and Gas Utilities* (Aug. 6, 2024).

Global Ratings ("S&P") has observed that "Regulatory advantage is the most heavily weighted factor when S&P Global Ratings analyzes a regulated utility's business risk profile."[5] The Value Line Investment Survey ("Value Line") summarizes these sentiments:

> As we often point out, the most important factor in any utility's success, whether it provides electricity, gas, or water, is the regulatory climate in which it operates. Harsh regulatory conditions can make it nearly impossible for the best run utilities to earn a reasonable return on their investment.[6]

In addition, the ROE set by regulators impacts investor confidence in not only the jurisdictional utility, but also in the ultimate parent company that is the entity that actually issues common stock.

Q12. Do customers benefit by enhancing the utility's financial flexibility?

A12. Yes. Providing an ROE sufficient to maintain the Company's ability to attract capital under reasonable terms, even in times of financial and market stress, is not only consistent with the economic requirements embodied in the U.S. Supreme Court's *Hope* and *Bluefield* decisions, but it is also in customers' best interests. Customers enjoy the benefits that come from ensuring that the utility has the financial wherewithal to take whatever actions are required to provide safe and reliable service.

B. Conclusions and Recommendations

Q13. What are your findings regarding the fair ROE for AES Indiana?

A13. Considering the economic requirements necessary to support continuous access to capital under reasonable terms and the results of my analysis, I recommend a 10.7% ROE for AES Indiana's electric utility operations, which is consistent with the case-specific evidence presented in my testimony. The bases for my conclusion are summarized below:

[5] S&P Global Ratings, *Assessing U.S. Investors-Owned Utility Regulatory Environments*, RatingsExpress (Aug. 10, 2016).

[6] Value Line Investment Survey, *Water Utility Industry* (Jan. 13, 2017) at p. 1780.

- In order to reflect the risks and prospects associated with AES Indiana's electric utility operations, my analyses focus on a proxy group of twenty-three other electric utilities.
- Because investors' required ROE is unobservable and no single method should be viewed in isolation, I apply the DCF, CAPM, ECAPM, and risk premium methods to estimate a just and reasonable ROE for AES Indiana, as well as referencing the expected earnings approach.
- As summarized on AES Indiana Attachment AMM-2, considering the results of these analyses, and giving less weight to extremes at the high and low ends of the range, I conclude that the cost of equity for a regulated electric utility is in the 10.2% to 11.2% range.
- My ROE recommendation for AES Indiana's electric operations is the midpoint of this range, or 10.7%.[7]

Q14. What did the DCF results for your select group of non-utility firms indicate with respect to your evaluation?

A14. As shown on page 3 of AES Indiana Attachment AMM-11, average DCF estimates for a low-risk group of firms in the competitive sector of the economy ranged from 10.8% to 11.0%. While I did not base my recommendations on these results, they confirm that an ROE of 10.7% falls in a reasonable range to maintain AES Indiana's financial integrity, provide a return commensurate with investments of comparable risk, and support the Company's ability to attract capital.

III. FUNDAMENTAL ANALYSES

Q15. What is the purpose of this section?

A15. This section briefly reviews the operations and finances of AES Indiana. As a predicate to my quantitative analyses, it examines conditions in the capital markets and the general economy. An understanding of the fundamental factors driving the risks and prospects of electric utilities is essential in developing an informed opinion of investors' expectations and requirements that are the basis of a fair rate of return.

[7] This ROE does not consider issuance costs associated with the sale of common stock. Flotation costs are legitimate business expenses and the lack of an upward adjustment to account for them further supports the reasonableness of my ROE recommendation.

A. AES Indiana

Q16. Briefly describe AES Indiana and its utility operations.

A16. AES Indiana is engaged primarily in the generation, transmission, and distribution of electric energy to approximately 531,000 customers in the city of Indianapolis and neighboring areas within the state of Indiana. AES Indiana's service area covers about 528 square miles with a population of approximately 968,000. AES Indiana is a wholly-owned subsidiary of IPALCO Enterprises, Inc. ("IPALCO"). IPALCO is owned by The AES Corporation ("AES") and CDP Infrastructure Fund GP, a wholly-owned subsidiary of La Caisse de depot et placement du Quebec ("CDPQ").

AES Indiana owns and operates four generating stations, all within the state of Indiana (Eagle Valley, Georgetown, Harding Street, and Petersburg). The Company retired Petersburg Unit 1 (230 MW) in 2021 and Petersburg Unit 2 (415 MW) in May 2023. In 2024, AES Indiana received IURC approval to convert the remaining two coal units at Petersburg to operate on natural gas and this project is currently underway. The Company has also acquired a number of solar and wind generation facilities, as well as battery energy storage systems. In addition to Company-owned generation, AES Indiana helps meet its customers' energy needs with long-term contracts for the purchase of 300 MW of wind-generated electricity and 96 MW of solar-generated electricity. AES Indiana's 2022 Integrated Resource Plan contemplates the addition of up to 1,300 MW of wind, solar, and battery energy storage resources by 2027.[8]

During 2024, residential customers accounted for approximately 42% of the Company's total revenues, with 15% coming from small commercial and industrial customers, and 37% from large commercial and industrial consumers. Wholesale customers accounted for 2% of AES Indiana's total revenues during 2024, with the

[8] AES Indiana initiated its 2025 Integrated Resource Plan process with external stakeholders in January, 2025.

remaining 4% attributable to other sources. At year-end 2024, AES Indiana had total assets of $7.1 billion, and total revenues of approximately $1.6 billion.[9]

Q17. What credit ratings have been assigned to AES Indiana?

A17. Moody's has assigned the Company an issuer rating of Baa1 and has placed AES Indiana under "Negative" outlook, warning investors of the potential for a future downgrade to the Company's credit standing. Meanwhile, S&P has assigned AES Indiana an issuer rating of BBB, with Fitch Ratings, Inc. ("Fitch") rating the Company at BBB+.

Q18. Has AES Indiana made significant capital investments in its system?

A18. Yes. As documented in Company's testimony, including the testimony of AES Indiana witnesses Peters, Ellis, and Holtsclaw, since the rate base cut-off date in its last rate case, AES Indiana has made significant new investments to replace and modernize its utility infrastructure, comply with environmental mandates and to otherwise meet customer demand and provide adequate and reliable service. In 2021, 2022, and 2023 AES Indiana received equity capital contributions of $275 million, $253 million, and $225 million respectively, from AES and CDPQ on a proportional share basis to fund replacement of electric utility infrastructure.

Q19. Does AES Indiana anticipate the need for capital going forward?

A19. Yes. The Company must undertake investments for necessary maintenance and expansion of its electric utility system as it continues to provide safe and reliable service to its customers. For 2025 to 2027, AES Indiana is estimating total capital expenditures of approximately $2.8 billion.[10] In addition, the Company remains obligated to repay maturing long-term debt. Continued support for AES Indiana's financial integrity and flexibility will be instrumental in attracting the capital necessary to fund these projects in an effective manner.

[9] The AES Corporation, Fiscal Year 2024 Form 10-K Report.

[10] IPALCO Enterprises, Inc., Form 10-K Report for Fiscal Year Ended December 31, 2024, at 52.

B. Outlook for Capital Costs

Q20. Please summarize recent economic and capital market conditions.

A20. Following the economic contraction stemming from the COVID-19 pandemic in 2020, U.S. real GDP improved significantly in 2021, with GDP growing at a pace of 5.7%.[11] Economic growth was more subdued in subsequent years, falling in a range of 2.5% to 2.9% between 2022 and 2024.[12] Meanwhile, indicators of employment have been weakening somewhat, with the national unemployment rate being 4.0% in January 2025.[13]

The underlying risk and price pressures associated with the COVID-19 pandemic were overshadowed by a dramatic increase in uncertainty following Russia's invasion of Ukraine in February 2022. 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 benchmark of 2%. CPI inflation peaked in June 2022 at 9.1%, its highest level since November 1981. Since then, CPI inflation moderated significantly, but remained at 3.0% in January 2025,[14] which exceeds the 2.9% applicable to the twelve months ending December 2024, as well as the Federal Reserve's 2.0% target. The so-called "core" price index, which excludes more volatile energy and food costs, rose at an annual rate of 3.3% in January 2025.[15] PCE inflation rose 2.6% in December 2024, or 2.8% after excluding more volatile food and energy costs.[16]

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[11] U.S. Dep't of Commerce, Bureau of Economic Analysis, https://www.bea.gov/news/2022/gross-domestic-product-fourth-quarter-and-year-2021-second-estimate (last visited Mar. 12, 2025).

[12] U.S. Dep't of Commerce, Bureau of Economic Analysis, https://www.bea.gov/data/gdp/gross-domestic-product (last visited Mar. 12, 2025).

[13] News Release, U.S. Dep't of Labor, Bureau of Labor Statistics, *The Employment Situation—January 2025* (Feb. 7, 2025), https://www.bls.gov/news.release/archives/empsit_02072025.htm (last visited Feb. 14, 2025).

[14] News Release, U.S. Dep't of Labor, Bureau of Labor Statistics, *Consumer Price Index—January 2025* (Feb. 12, 2025), https://www.bls.gov/news.release/archives/cpi_02122025.htm (last visited Feb. 14, 2025).

[15] *Id.*

[16] News Release, Bureau of Economic Analysis, *Personal Income and Outlays, December 2024*, BEA 25-03 (Jan. 31, 2025), https://www.bea.gov/news/2025/personal-income-and-outlays-december-2024 (last visited Feb. 14, 2025).

Q21. Have these developments impacted the risks faced by utilities and their investors?

A21. Yes. S&P revised its outlook for the utility sector to "negative" in February 2024, noting that:

> Credit quality for North American investor-owned regulated utilities has weakened over the past four years, with downgrades outpacing upgrades by more than three times. We expect downgrades to again surpass upgrades in 2024 for the fifth consecutive year.[17]

More recently, S&P affirmed their negative outlook, citing to rising wildfire risks, as well as weakening financial measures due to "record-breaking capital spending" and cash flow deficits, and noting "the industry's high percentage of companies … that operate with only minimal financial cushion from their downgrade threshold."[18]

Meanwhile, Moody's cautioned that widening cash flow deficits in the utility industry were placing increasing negative pressure on financial credit metrics, concluding that credit pressure "will likely continue to lead to negative rating actions if not sufficiently mitigated."[19]

Q22. Do trends in bond yields indicate that the cost of equity has increased relative to the recent past?

A22. Yes. While the cost of equity is unobservable, the yields on long-term bonds provide a widely referenced benchmark for the direction of capital costs, including required returns on common stocks. Table AMM-1 below compares interest rate benchmarks in December 2024 with those required during 2021.

[17] S&P Global Ratings, *Rising Risks: Outlook For North American Investor-Owned Regulated Utilities Weakens,* Criteria Corporates (Feb. 14, 2024).

[18] S&P Global Ratings, *Regulated Utilities: Credit risks are rising*, Industry Credit Outlook Update – North America (Jul. 18, 2024).

[19] Moody's Investors Service, *Electric and Gas Utilities – US,* Sector In-Depth (Oct. 21, 2024).

TABLE AMM-1
CAPITAL MARKET BENCHMARKS

Series	2021	Dec. 2024	Change (bps)
10-Year Treasury Bonds	1.44%	4.39%	295
30-Year Treasury Bonds	2.05%	4.58%	253
Baa Utility Bonds	3.35%	5.77%	242
Prime Loan Rate	3.25%	8.13%	488
Federal Funds Rate	0.13%	5.02%	489

Source: https://fred.stlouisfed.org; Moody's Credit Trends.

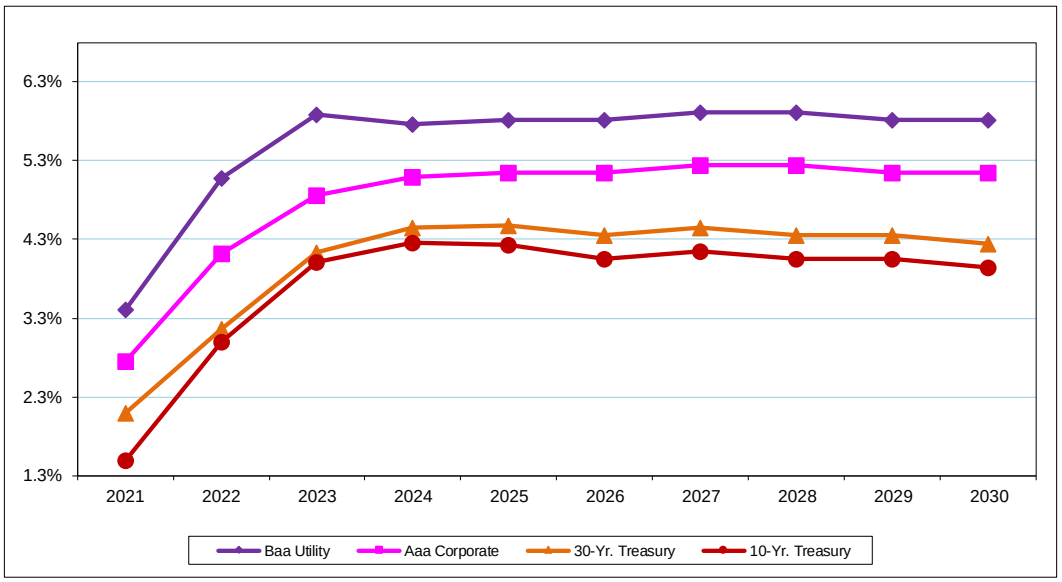
As shown above, trends in bond yields since 2021 document a substantial increase in the returns on long-term capital demanded by investors. With respect to utility bond yields—which are the most relevant indicator in gauging the implications for the Company's common equity investors—average yields in December 2024 are more than 240 basis points above the levels prevailing during 2021.[20]

Q23. Do investors anticipate that these higher bond yields will be sustained?

A23. Yes. As illustrated in Figure AMM-1 below, the most recent long-term consensus projections from top economists published by Blue Chip document that long-term bond yields are expected to remain elevated when compared to recent historical levels.

[20] Moody's Investors Service, *Credit Trends.*

FIGURE AMM-1
INTEREST RATE TRENDS



Source: Moody's Investors Service; https://fred.stlouisfed.org/; Wolters Kluwer, Blue Chip Financial Forecasts (Nov. 27, 2024).

This evidence shows that long-term capital costs—including the ROE—have increased substantially since 2021, and that investors expect these higher capital costs to be sustained at least through 2030.

Q24. What do these trends indicate regarding a fair ROE for AES Indiana?

A24. The upward move in interest rates suggests that long-term capital costs—including the cost of equity—have increased significantly in recent years. Exposure to higher interest rates, inflation, and capital expenditure requirements also reinforce the importance of buttressing AES Indiana's credit standing. Considering the potential for financial market instability, competition with other investment alternatives, and investors' sensitivity to risk exposures in the utility industry, credit strength is a key ingredient in maintaining access to capital at reasonable cost.

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 AES Indiana's risks will weaken its financial integrity and undermine its ability to attract necessary capital.

Q25. What are the implications of more recent capital market conditions?

A25. Since the first quarter of 2025, when my analyses were prepared, an escalating global tariffs conflict has led to extreme volatility in the capital markets as investors revise their risk perceptions and return requirements to reflect the potential for severe disruptions to global commerce and economic growth. President Trump's imposition announcement in early April 2025 of far-reaching import tariffs on nearly all U.S. trading partners was followed shortly after by a 90-day reprieve on certain "reciprocal" tariffs. As of April 30, 2025, goods from China face a levy of 145%, with the Chinese retaliating by raising tariffs on U.S. products to 125%, creating an effective trade embargo between the world's two largest economies. The result has been one of the most volatile periods on record in the equity markets, with major stock market indices whipsawed as investors struggle to decipher the impact of rapidly changing trade policies on economic growth and corporate profits.

The greater uncertainty faced by equity investors is confirmed by reference to the VIX,[21] with Reuters reporting that this index of volatility "spiked above 60—a level usually seen during meltdowns such as 2020 or the 2008 financial crisis."[22] Similarly, the MOVE index, which is a market-based measure of uncertainty about interest rates, rose to levels rarely seen since the 2008-2009 financial crisis.[23] The debt markets have also been shaken by the threat to global trade and finance, with uncharacteristic selling in U.S. Treasury bonds further unsettling investors. Oscillating trade war developments

[21] The VIX, which is commonly referred to as Wall Street's "fear gauge," is one of the most widely recognized measures of expectations of near-term volatility and market sentiment referenced by the investment community.

[22] Tom Westbrook and Dhara Ranasinghe, *Ten trading days that shook financial markets*, Reuters (Apr. 11, 2025). https://www.reuters.com/markets/wealth/global-markets-tariffs-ticktock-pix-2025-04-11/ (last visited Apr. 11, 2025).

[23] Yahoo! Finance, *ICE BofAML MOVE Index (^MOVE)*, https://finance.yahoo.com/quote/%5EMOVE/ (last visited April 11, 2025).

have also precipitated a dramatic drop in consumer confidence, with the University of Michigan consumer sentiment index plunging 11% from March 2025 and year-ahead inflation expectations surging from 5.0% in March 2025 to 6.5% in April 2025.[24]

While the ongoing volatility in capital markets is evidence of the greater risks now faced by investors, the high degree of uncertainty posed by these developments further complicates an evaluation of investors' cost of capital for AES Indiana.

IV. COMPARABLE RISK PROXY GROUP

Q26. What is the purpose of this section of your testimony?

A26. This section explains the basis of the proxy group of publicly traded companies I use to estimate the cost of equity.

Q27. What key principles underpin the evaluation of a proxy group?

A27. The United States Supreme Court's *Hope* and *Bluefield* decisions establish a standard of comparison between a subject utility and other companies based on comparable risk. The generally accepted approach is to select a group of companies that are of similar risk to the subject utility, and then to perform various quantitative analyses based on this proxy group to estimate investors' required returns. The results of these analyses are then used to evaluate a range of reasonableness and develop a final recommendation for the ROE attributable to the subject utility.

Q28. As an initial matter, does the fact that AES Indiana is a wholly owned subsidiary alter these fundamental standards?

A28. No. While the Company has no publicly traded common stock and IPALCO is AES Indiana's only shareholder, this does not change the standards governing the determination of a just and reasonable ROE for the Company. Ultimately, the common equity required to support AES Indiana's utility operations must be raised in the capital markets, where investors consider the Company's ability to offer a rate of return that is

[24] University of Michigan, *Surveys of Consumers* (Apr. 2025). http://www.sca.isr.umich.edu/ (last visited Apr. 11, 2025).

competitive with other risk-comparable alternatives. AES Indiana must compete with other investment opportunities and unless there is a reasonable expectation that investors will have the opportunity to earn returns that compensate for the underlying risks, capital will be allocated elsewhere, the Company's financial integrity will weaken, and investors will demand a higher rate of return.

A. Determination of the Proxy Group

Q29. How do you implement quantitative methods to estimate the cost of common equity for AES Indiana?

A29. Application of quantitative methods to estimate the cost of common equity requires observable capital market data, such as stock prices and beta values. 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 error. The accepted approach to increase confidence in the results is to apply quantitative methods to a proxy group of publicly traded companies that investors regard as risk-comparable. The results of the analysis on the sample of companies are relied upon to establish a range of reasonableness for the cost of equity for the specific utility at issue.

Q30. How do you identify the proxy group of electric utilities relied on for your analyses?

A30. To reflect the risks and prospects associated with AES Indiana's jurisdictional electric operations, I begin with those companies included in the Electric Utility industry groups compiled by Value Line. Value Line is one of the most widely available sources of investment advisory information, and its industry groups provide an objective source to identify publicly traded firms that investors would regard to be similar in operations. I then apply the following criteria to identify a proxy group of utilities:

1. Issuer credit ratings from Moody's and S&P within one notch of the Company's current ratings. For Moody's, this resulted in a ratings range of Baa2, Baa1, and A3; for S&P the range is BBB-, BBB, and BBB+.

2. No cuts in common dividend payments during the past six months and no announcement of a dividend cut since that time.

3. No ongoing involvement in a major merger or acquisition that would distort quantitative results.

These criteria result in a proxy group composed of twenty-three companies, which I refer to as the "Utility Group."

B. Regulatory Mechanisms

Q31. Would investors consider the implications of regulatory mechanisms in evaluating a utility's relative risks?

A31. Yes. In response to increasing sensitivity over fluctuations in costs and the importance of advancing other public interest goals such as reliability, energy conservation, and safety, utilities and their regulators have sought to mitigate cost recovery uncertainty and align the interest of utilities and their customers. As a result, decoupling mechanisms, cost trackers, and future test years have been increasingly prevalent in the utility industry, along with alternatives to traditional ratemaking such as formula rates and multi-year rate plans. S&P Global Market Intelligence, *RRA Regulatory Focus* ("RRA") concluded in its most recent review of adjustment clauses that:

> More recently and with greater frequency, commissions have approved mechanisms that permit the costs associated with the construction of new generation or delivery infrastructure to be used, effectively including these items in rate base without the need for a full rate case. In some instances, these mechanisms may even provide the utilities a cash return on construction work in progress.
>
> . . . [C]ertain types of adjustment clauses are more prevalent than others. For example, those that address electric fuel and gas commodity charges are in place in all jurisdictions. Also, about two-thirds of all utilities have riders in place to recover costs related to energy efficiency programs, and roughly half of the utilities have some type of decoupling mechanism in place.[25]

[25] S&P Global Market Intelligence, *Adjustment Clause: A state-by-state overview*, RRA Regulatory Focus (Jul. 18, 2022).

Q32. What regulatory mechanisms have been approved for AES Indiana?

A32. The Company's rates include rate adjustment mechanisms that reflect some but not all of the Company's cost of providing retail electric service, such as changes in fuel costs, power purchase costs (including wind and solar), demand-side management costs, costs incurred to comply with environmental laws and regulations, and changes in wholesale transmission costs.[26]

The Transmission, Distribution, and Storage System Improvement Charge ("TDSIC") provides for cost recovery outside a base rate proceeding for new or replacement electric transmission, distribution, and storage projects that a public utility undertakes for the purposes of safety, reliability, system modernization, or economic development. Provisions of the TDSIC statute require that requests for recovery include a plan of at least five years and not more than seven for eligible investments. Once a plan is approved by the IURC, 80% of eligible costs can be recovered using a periodic rate adjustment mechanism, referred to as a TDSIC mechanism. The remaining 20% of recoverable costs are deferred for future recovery in the public utility's next base rate case. The TDSIC mechanism is capped at an annual increase of two percent of total retail revenues.

In addition, AES Indiana is requesting approval of tracking mechanisms for property taxes and property insurance expenses in this proceeding. Consistent with other Indiana-jurisdictional utilities, the Company is also adopting a forward-looking test-year for purposes of establishing revenue requirements.

Q33. Do the regulatory mechanisms approved for AES Indiana set it apart from other firms operating in the utility industry?

A33. No. A broad array of adjustment mechanisms is also available to the companies in my proxy group of electric utilities. As documented on AES Indiana Attachment AMM-3,

[26] The Company is a member of the Midcontinent Independent System Operator, Inc. (MISO), a regional transmission organization.

the companies in my Utility Group operate under a wide variety of cost adjustment mechanisms. These encompass future test years, multi-year rate plans, revenue decoupling and adjustment clauses designed to address rising capital investment outside of a traditional rate case, increasing costs of environmental compliance measures, as well as riders to address the costs of energy conservation programs and transmission-related charges.

Q34. What do these characteristics imply with respect to the Company's risks relative to other utilities in general?

A34. Regulatory adjustment mechanisms have important implications for a utility's financial health and relative risk. Investors recognize that the use of adjustment mechanisms and future test years is widely prevalent in the utility industry and consider the relative impact of these provisions in forming their expectations and risk perceptions for the firms in the Utility Group. While the Company's existing and proposed regulatory clauses would be regarded as supportive, in contrast to many of the specific operating companies associated with the firms in the Utility Group, AES Indiana does not operate under a revenue decoupling mechanism. As Moody's noted, "From a credit perspective, the absence of a decoupling mechanism in Indiana is a weakness because it exposes the utility's cash flow to sales volatility."[27] Thus, the Company's continued exposure to the uncertainties of revenue variability and regulatory lag would imply a greater level of risk than is faced by other utilities, including the firms in the Utility Group.[28]

Q35. The IURC recently cited the "risk mitigation associated with various regulatory mechanisms and ratemaking components," and concluded that, "The effect of

[27] Moody's Investors Service, *Indianapolis Power & Light Company*, Credit Opinion (Jul. 3, 2024).

[28] I reference corporate credit ratings in evaluating a risk-comparable proxy group, but these indicators are focused on the risk of default associated with a utility's outstanding debt securities. While debtholders are also concerned about the stability and sufficiency of a utility's cash flows, the implications of attrition and earnings variability are especially relevant to equity investors, who are only entitled to the residual earnings once all other claimants have been paid.

these tracking mechanisms is to reduce the uncertainty of the earnings that an investor can expect." Do you agree with this conclusion?[29]

A35. Yes. I agree with the IURC that the regulatory mechanisms approved for AES Indiana, along with the use of a future test year, help to mitigate the potential for regulatory lag and earnings attrition. As I noted earlier, such provisions are viewed positively by the investment community and are important tools in supporting the Company's credit standing and financial integrity.

Q36. Does this conclusion imply that investors require a lower ROE for AES Indiana compared to the utilities in the proxy group?

A36. No. In evaluating a fair ROE, the issue is not whether a utility operates under a particular regulatory mechanism or ratemaking provision. Rather, the proper focus is on how the overall investment risks of the utility compare to those of the proxy group used to estimate the ROE. As discussed above, because regulatory mechanisms are widely prevalent, the impact of these provisions on investors' required returns is already factored into cost of equity estimates for the proxy utilities. As a result, there is no basis to suggest that the ROE for AES Indiana should be lower than for the proxy group, particularly in light of the higher risk implied by AES Indiana's lack of revenue decoupling.

Q37. Is this view consistent with the position taken by other regulatory agencies?

A37. Yes. The Washington Utilities and Transportation Commission recognized that the impact of regulatory mechanisms is already accounted for in ROE analyses based on a proxy group:

[29] Duke Energy Indiana, LLC, Cause No. 46038, Final Order (Han. 29, 2025) at 38.

> Circumstances in the industry today and modern regulatory practice . . . have led to a proliferation of risk reducing mechanisms being in place for utilities throughout the United States. . . **The effects of these risk mitigating factors was by 2013, and is today, built into the data experts draw from the samples of companies they select as proxies.**[30]

The Staff of the Kansas State Corporation Commission also concluded that no ROE adjustment was justified when approving certain tariff riders because the impact of similar mechanisms is factored into the proxy group analysis:

> Those mechanisms differ from company to company and jurisdiction to jurisdiction. Regardless of their nuances, the intent is the same; reduce cash-flow volatility year to year and place recent capital expenditures in rates as quickly as possible. Investors are aware of these mechanisms and their benefits are a factor when investors value those stocks. Thus, any risk reduction associated with these mechanisms is captured in the market data (stock prices) used in Staff's analysis.[31]

More recently, the North Carolina Utilities Commission ("NCUC") concluded that approval of a multi-year rate plan ("MYP") did not warrant a downward adjustment to the ROE, noting that it "is persuaded by the evidence that similar types of mechanisms are prevalent across the industry as well as within the proxy group."[32] As the NCUC concluded, "it is critical that the utility be in a position to access capital on reasonable terms and the Commission concludes that the availability of the [MYP] makes [the utility] competitive in terms of its ability to access capital on reasonable terms."[33] Similarly, the District of Columbia Public Service Commission determined that approval of a decoupling mechanism did not warrant a reduction in the utility's ROE because "the effects of decoupling mechanisms are reflected in the market data . . ."[34]

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[30] *Wash. Utils. & Transp. Comm'n v. Puget Sound Energy, Inc.*, Dockets UE-130130 and UG-130138 consolidated) et al., Order 15.14 at 69, ¶ 155 (June 29, 2015). Internal citations omitted (Emphasis added).

[31] *Direct Testimony Prepared by Adam H. Gatewood*, State Corporation Commission of the State of Kansas, Docket No. 12-ATMG-564-RTS, pp. 8-9 (June 8, 2012). This proceeding was ultimately resolved through a stipulated settlement.

[32] North Carolina Utilities Commission, Docket No. E-2, Sub 1300, *Order Accepting Stipulations, Granding Partial Rate Increase, and Requiring Public Notice* (Aug. 18, 2023) at 169.

[33] *Id*.

[34] Formal Case No. 1156, Order No. 20755 (Jun. 8, 2021) at P 240.

These observations are equally true of the proxy group results presented in my testimony, and the specific risk characteristics of AES Indiana do not support a downward adjustment to its ROE relative to the Utility Group.

Q38. Do utilities such as AES Indiana continue to face weather-related risks?

A38. Yes. Moody's expects that the risk of severe weather events is expected to worsen over the next 10 to 20 years, with stronger storms fueled by climate change posing an increasing risk to the electric grid.[35] Similarly, S&P also noted that, "Physical risks such as exposure to wildfires, storms, extreme temperature events, and hurricanes, remains a considerable risk for the industry, and concluded that "over the past three years the U.S. experienced its highest level of damages ever from physical risks."[36] As S&P summarized with respect to weather-related risk:

> Not only do the frequency of these disasters appear to be increasing, but their costs are rising. The natural disasters that have occurred over the past decade have wiped out billions of dollars of assets over a relatively short period. [37]

While the Major Storm Damage Restoration Reserve is supportive of the Company's financial integrity, AES Indiana must have the financial integrity to quickly deploy all resources necessary to restore service after significant weather events. Given the Company's lack of control over the timing of such events, it is crucial to ensure that AES Indiana can meet weather-related challenges even when capital and energy market conditions are unfavorable.

[35] Moody's Investors Service, *As extreme weather events and net-zero efforts rise, ABS will lower utility credit risk*, Sector In-Depth (Nov. 9, 2022).

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

[37] S&P Global Ratings, *Can U.S. Utilities Weather The Storm?*, RatingsDirect (Nov. 18, 2018).

C. Capital Structure

Q39. What is the role of capital structure in setting a utility's rate of return?

A39. Capital structure reflects the mix of debt and equity capital used to finance a utility's assets. The proportions of the total capitalization attributable to each source of capital are typically used to weight the costs of investor-supplied capital in calculating an overall rate of return.

Q40. How do companies determine an appropriate capital structure for their operations?

A40. There are many considerations in the capital structure decision. In general, the goal is to employ the mix of capital that minimizes the weighted average cost of capital. Given the interplay between costs of debt and equity, the impact of taxes, bankruptcy costs, and the level of business risks, determining a firm's optimal capital structure is an imprecise exercise. In practice, capital structure decisions must be made by combining managements' judgment, numerical analysis, and considering investors' risk perceptions.

It is generally accepted that the norms established by comparable firms provide a valid benchmark to evaluate a reasonable capital structure for a utility. The capital structure maintained by other utilities should reflect their efforts to finance themselves in a way that minimizes capital costs while preserving their financial integrity and ability to attract capital. Moreover, these industry capital structures should also incorporate the requirements of investors (both debt and equity), as well as the influence of regulators.

Q41. Is an evaluation of a utility's capital structure relevant in assessing its return on equity?

A41. Yes. Other things equal, a higher debt ratio and lower common equity ratio, translates into increased financial risk for all investors. A greater amount of debt means more investors have a senior claim on available cash flow, thereby reducing the certainty that

each will receive their contractual payments. This increases the risks to which lenders are exposed, and they require correspondingly higher rates of interest. From a common shareholder's standpoint, a higher debt ratio means that there are proportionately more investors ahead of them, thereby increasing the uncertainty as to the amount of cash flow that will remain.

Q42. What common equity ratio is implicit in AES Indiana's capital structure?

A42. The capital structure used to compute the overall rate of return for AES Indiana includes 46.48% common equity, which is equivalent to an equity ratio of approximately 50% after excluding cost-free items and tax credit balances.[38]

Q43. What are the relevant industry benchmarks to consider in evaluating AES Indiana's capital structure?

A43. Because this proceeding focuses on the ROE for the regulated utility operations of AES Indiana, the capital structures of the proxy companies' regulated utility operating companies provide a consistent basis of comparison. Pages 1 and 2 of AES Indiana Attachment AMM-4 display capital structure data for the most recent fiscal year-end for the group of electric utility operating companies owned by the firms in the Utility Group used to estimate the cost of equity. As shown there, common equity ratios for these utilities ranged from 37.4% to 63.0% and averaged 51.2%. Thirty-seven of these fifty-eight operating companies maintained common equity ratios that exceed the 50% test year end ratio for AES Indiana.

Q44. Do ongoing economic and capital market uncertainties also influence the appropriate capital structure for AES Indiana?

A44. Yes. Financial flexibility plays a crucial role in ensuring the wherewithal of a utility to meet funding needs. Utilities with higher financial leverage may be foreclosed from or

[38] The test year end equity ratio is approximately 50% based on AES Indiana's long-term sources of investor-supplied financing—long-term debt and common equity—which are the appropriate basis for industry comparisons. As shown on AES Indiana Financial Exhibit AESI-CC, Schedule CC2, common equity represents 46.48% of AES Indiana's ratemaking capital structure.

have limited access to additional borrowing, especially during times of financial market stress. As Moody's observed:

> Utilities are among the largest debt issuers in the corporate universe and typically require consistent access to capital markets to assure adequate sources of funding and to maintain financial flexibility. During times of distress and when capital markets are exceedingly volatile and tight, liquidity becomes critically important because access to capital markets may be difficult.[39]

More recently, S&P concluded that "[c]onsistent access to the capital markets could become more challenging" for electric utilities,[40] noting that, "[r]ising interest rates, decreasing equity prices, and inflation could obstruct access [to] the capital markets, potentially pressuring credit quality."[41] As a result, the Company's capital structure must maintain adequate equity to preserve the flexibility necessary to maintain continuous access to capital even during times of unfavorable energy or financial market conditions.

Q45. Does AES Indiana's capital structure fall within the range of equity ratios maintained by the companies in the Utility Group?

A45. Yes. Page 3 of AES Indiana Attachment AMM-4 presents the sources of long-term capital (long-term debt and common equity) used by the publicly traded firms in the Utility Group. As shown on this page, for the most recently available annual period, common equity ratios for the Utility Group ranged between 30.2% and 63.9% and averaged 42.5%. Thus, while the Company's common equity ratio exceeds the average, it falls well within the range of capital structures maintained by the companies in the Utility Group.

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[39] Moody's Investors Service, *FAQ on credit implications of the coronavirus outbreak*, Sector Comment (Mar. 26, 2020).

[40] S&P Global Ratings, *Industry Top Trends Update, Regulated Utilities, Credit quality has weakened and credit risks are rising*, North American Corporate Credit Mid-Year Outlook 2022 (Jul 14, 2022).

[41] *Id.*

Q46. How do these historical capitalization ratios compare with investors' forward-looking expectations for the Utility Group?

A46. Also shown on page 3 of AES Indiana Attachment AMM-4, Value Line expects common equity ratios for the Utility Group to range between 30.0% and 57.5% over its three-to-five year forecast horizon.

Q47. What other factors do investors consider in their assessment of a company's capital structure?

A47. Utilities, including AES Indiana, are facing significant capital investment plans. Coupled with the potential for turmoil in capital markets, this warrants a stronger balance sheet to deal with an uncertain environment. As S&P recently noted, "We expect rising capital spending and increasing cash flow deficits that are not sufficiently funded in a credit-supportive manner will continue to pressure the industry's financial performance."[42] With respect to AES Indiana specifically, S&P highlighted its expectation that the Company's significant capital expenditure plan would be "counterbalanced by credit-supportive funding."[43] Similarly, in explaining its "Negative" outlook for AES Indiana's credit standing, Moody's warned that higher debt would result in further deterioration in the Company's financial metrics.[44] In addition, the investment community also considers the impact of other considerations, such as operating leases and asset retirement obligations, in its evaluation of a utility's financial standing.

A conservative financial profile, in the form of a reasonable common equity ratio, is consistent with the need to accommodate these uncertainties and maintain continuous access to capital under reasonable terms that is required to fund operations

[42] S&P Global Ratings, *North American Regulated Utilities*, Industry Credit Outlook 2025 (Jan. 14, 2025).

[43] S&P Global Ratings, *Indianapolis Power & Light Co.* (Jul. 17, 2024).

[44] Moody's Investors Service, *Indianapolis Power & Light Company*, Credit Opinion (Jul. 3, 2024).

and necessary system investment, even during times of adverse capital market conditions.

Q48. What does this evidence suggest with respect to AES Indiana's proposed capital structure?

A48. AES Indiana's ratemaking capital reflects the need to address the funding of ongoing capital expenditures and support the Company's financial integrity and access to capital on reasonable terms. This mix of external financing falls within the range maintained by other operating electric utilities and is reasonable considering the importance of maintaining AES Indiana's financial strength and credit standing. Based on this evidence, I conclude that the Company's capital structure represents a reasonable mix of capital sources from which to calculate AES Indiana's overall rate of return.

V. CAPITAL MARKET ESTIMATES AND ANALYSES

Q49. What is the purpose of this section of your testimony?

A49. This section presents capital market estimates of the cost of equity. First, I address the concept of the cost of common equity, along with the risk-return tradeoff principle fundamental to capital markets. Next, I describe the quantitative analyses I conducted to estimate the cost of common equity for the Utility Group.

A. Economic Principles Underlying the Cost of Equity

Q50. What fundamental economic principle underlies the cost of equity concept?

A50. The concept of the cost of equity is based on the tenet that investors are risk averse. In capital markets where relatively risk-free assets are available (e.g., U.S. Treasury securities), investors will hold riskier assets only if they are offered an additional return, or risk premium, above the rate of return on a risk-free asset. Because all assets compete for investor funds, riskier assets must yield a higher expected rate of return than safer assets to induce investors to invest and hold them.

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

$$k_i = Rf + RP_i$$

where: R_f = Risk-free rate of return, and
RP_i = Risk premium required to hold riskier asset i.

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

Q51. Is there evidence that the risk-return tradeoff principle actually operates in the capital markets?

A51. Yes. The risk-return tradeoff can be documented in segments of the capital markets where required rates of return can be directly inferred from market data and where generally accepted measures of risk exist. Bond yields, for example, reflect investors' expected rates of return, and bond ratings measure the risk of individual bond issues. Comparing the observed yields on government securities, which are considered free of default risk, to the yields on bonds of various rating categories demonstrates that the risk-return tradeoff does, in fact, exist.

Q52. Does the risk-return tradeoff observed with fixed income securities extend to common stocks and other assets?

A52. It is widely accepted that the risk-return tradeoff evidenced with long-term debt extends to all assets. Documenting the risk-return tradeoff for assets other than fixed income securities, however, is complicated by two factors. First, there is no standard measure of risk applicable to all assets. Second, for most assets—including common stock—required rates of return cannot be observed. Yet there is every reason to believe that investors demonstrate risk aversion in deciding whether or not to hold common stocks and other assets, just as when choosing among fixed-income securities.

Q53. Is this risk-return tradeoff limited to differences between firms?

A53. No. The risk-return tradeoff principle applies not only to investments in different firms, but also to different securities issued by the same firm. The securities issued by a utility vary considerably in risk because they have different characteristics and priorities. As noted earlier, the last investors in line are common shareholders. They share in the net earnings, if any, that remain after all other claimants have been paid. As a result, the rate of return that investors require from a utility's common stock, the most junior and riskiest of its securities, must be considerably higher than the yield offered by the utility's senior, long-term debt.

Q54. What are the challenges in determining a just and reasonable ROE for a utility?

A54. The actual return investors require is not directly observable. Different methodologies have been developed to estimate investors' expected return on capital, but these theoretical tools produce a range of estimates, based on different assumptions and inputs. The DCF method, which is frequently referenced and relied on by regulators, is only one theoretical approach to evaluate the return investors require. There are a number of other accepted methodologies for estimating the cost of capital and the ranges produced by these approaches can vary widely.

Q55. Is it customary to consider the results of multiple methods when evaluating a just and reasonable ROE?

A55. Yes. In my experience, financial analysts and regulators routinely consider the results of alternative approaches in evaluating a fair ROE. No single method can be regarded as failsafe, with all approaches having advantages and shortcomings. As the Federal Energy Regulatory Commission ("FERC") 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."[45] Similarly, a publication of the Society of Utility and Regulatory Financial Analysts concluded 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.[46]

As this treatise observed, "no single model is so inherently precise that it can be relied on solely to the exclusion of other theoretically sound models."[47] 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.[48]

Thus, while the DCF model is a recognized approach, it is not without shortcomings and does not otherwise eliminate the need to ensure that the "end result" is fair. The IURC has recognized this principle:

[45] *Northwest Pipeline Co.*, Opinion No. 396-C, 81 FERC ¶ 61,036 at 4 (1997).

[46] David C. Parcell, *The Cost of Capital – A Practitioner's Guide*, Society of Utility and Regulatory Financial Analysts (2010) at 84.

[47] *Id*.

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

> There are three principal reasons for our unwillingness to place a great deal of weight on the results of any DCF analysis. One is. . . the failure of the DCF model to conform to empirical reality. The second is the undeniable fact that rarely if ever do two expert witnesses agree on the terms of a DCF equation for the same utility – for example, as we shall see in more detail below, projections of future dividend cash flow and anticipated price appreciation of the stock can vary widely. And, the third reason is that the unadjusted DCF result is almost always well below what any informed financial analyst would regard as defensible, and therefore requires an upward adjustment based largely on the expert witness' judgment. In these circumstances, we find it difficult to regard the results of a DCF computation as any more than suggestive.[49]

More recently, FERC has also recognized the potential for any application of the DCF model to produce unreliable results.[50]

As this discussion indicates, consideration of the results of alternative approaches reduces the potential for error associated with any single method. Just as investors inform their decisions through the use of a variety of methodologies, my evaluation of a fair ROE for the Company considered the results of multiple financial models.

Q56. What does this discussion imply with respect to estimating the ROE for a utility?

A56. Although the ROE cannot be observed directly, it is a function of the returns available from other alternatives and the risks of the investment. Because it is not readily observable, the ROE for a particular utility must be estimated by analyzing information about capital market conditions generally, assessing the relative risks of the company specifically, and employing alternative quantitative methods that focus on investors' required rates of return. These methods typically attempt to infer investors' required rates of return from stock prices, interest rates, or other capital market data.

[49] *Ind. Michigan Power Co.*, Cause No. 38728, 116 PUR4th, 1, 17-18 (IURC 8/24/1990).

[50] *Coakley Mass. Attorney Gen. v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at P 41 (2014), *vacated & remanded sub nom. Emera Me. v. FERC*, 854 F.3d 9 (D.C. Cir. 2017).

B. Discounted Cash Flow Analysis

Q57. How is the DCF model used to estimate the cost of common equity?

A57. DCF models are based on the assumption that the price of a share of common stock is equal to the present value of the expected cash flows (i.e., future dividends and stock price) that will be received while holding the stock, discounted at investors' required rate of return. Rather than developing annual estimates of cash flows into perpetuity, the DCF model can be simplified to a "constant growth" form:[51]

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

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

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 price appreciation.

Q58. What steps are required to apply the constant growth DCF model?

A58. The first step is to determine the expected dividend yield (D_1/P_0) for the firm in question. This is usually calculated based on an estimate of dividends to be paid in the coming year divided by the current price of the stock. The second, and more controversial step is to estimate investors' long-term growth expectations (g) for the firm. The final step is to add the firm's dividend yield and estimated growth rate to arrive at an estimate of its cost of common equity.

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

Q59. How do you determine the dividend yields for the utilities in the Utility Group?

A59. I rely on Value Line's estimates of dividends to be paid by each of these utilities over the next twelve months as D_1. This annual dividend is then divided by a 30-day average stock price for each utility to arrive at the expected dividend yield. The expected dividends, stock prices, and resulting dividend yields for the firms in the Utility Group are presented on page 1 of AES Indiana Attachment AMM-5. As shown there, dividend yields for the firms in the Utility Group range from 2.4% to 5.1% and averaged 3.8%.

Q60. What is the next step in applying the constant growth DCF model?

A60. The next step is to evaluate long-term growth expectations, or "g", for the firm in question. In constant growth DCF theory, earnings, dividends, book value, and market price are all assumed to grow in lockstep, and the growth horizon of the DCF model is infinite. But implementation of the DCF model is more than just a theoretical exercise; it is an attempt to replicate the mechanism investors used to arrive at observable stock prices. A variety of techniques can be used to derive growth rates, but the only "*g*" that matters in applying the DCF model is the value that investors expect.

Q61. What are investors most likely to consider in developing their long-term growth expectations?

A61. In the case of utilities, dividend growth rates are not likely to provide a meaningful guide to investors' current growth expectations. Utility dividend policies reflect the need to accommodate business risks and investment requirements in the industry, as well as potential uncertainties in the capital markets. As a result, dividend growth in the utility industry generally lags growth in earnings as utilities conserve financial resources.

A measure that plays a pivotal role in determining investors' long-term growth expectations is future trends in earnings per share ("EPS"), which provide the source for future dividends and ultimately support share prices. The importance of earnings in evaluating investors' expectations and requirements is well accepted in the investment community, and surveys of analytical techniques relied on by professional analysts

indicate that growth in earnings is far more influential than trends in dividends per share ("DPS").

The availability of projected EPS growth rates also is key to investors relying on this measure as compared to future trends in DPS. Apart from Value Line, investment advisory services do not generally publish comprehensive DPS growth projections, and this scarcity of dividend growth rates relative to the abundance of earnings forecasts attests to their relative influence. The fact that securities analysts focus on EPS growth, and that DPS growth rates are not routinely published, indicates that projected EPS growth rates are likely to provide a superior indicator of the future long-term growth expected by investors.

Q62. Do the growth rate projections of security analysts also consider historical trends?

A62. Yes. Professional security analysts study historical trends extensively in developing their projections of future earnings. To the extent there is any useful information in historical patterns, that information is incorporated into analysts' growth forecasts.

Q63. What growth rates are security analysts currently projecting for the firms in the proxy group?

A63. The earnings growth projections for each of the firms in the Utility Group reported by Value Line, IBES,[52] and Zacks Investment Research, Inc. ("Zacks") are displayed on page 2 of AES Indiana Attachment AMM-5.

Q64. How else are investors' expectations of future long-term growth prospects sometimes estimated when applying the constant growth DCF model?

A64. In constant growth theory, growth in book equity will be equal to the product of the earnings retention ratio (one minus the dividend payout ratio) and the earned rate of return on book equity. Furthermore, if the earned rate of return and the payout ratio are constant over time, growth in earnings and dividends will be equal to growth in book

[52] Formerly Institutional Brokers Estimate System, IBES growth rates are now compiled and published by LSEG.

value. Despite the fact that these conditions are never met in practice, this "sustainable growth" approach may provide a rough guide for evaluating a firm's growth prospects and is frequently proposed in regulatory proceedings.

The sustainable growth rate is calculated by the formula, g = br+sv, where "b" is the expected retention ratio, "r" is the expected earned return on equity, "s" is the percent of common equity expected to be issued annually as new common stock, and "v" is the equity accretion rate. Under DCF theory, the "sv" factor is a component of the growth rate designed to capture the impact of issuing new common stock at a price above, or below, book value. The sustainable, "br+sv" growth rates for each firm in the proxy group are summarized on page 2 of AES Indiana Attachment AMM-5, with the underlying details being presented on AES Indiana Attachment AMM-6.

The sustainable growth rate analysis shown on AES Indiana Attachment AMM-6 incorporates an "adjustment factor" because Value Line's reported returns are based on year-end book values. Since earnings is a flow over the year while book value is determined at a given point in time, the measurement of earnings and book value are distinct concepts. It is this fundamental difference between a flow (earnings) and point estimate (book value) that makes it necessary to adjust to mid-year in calculating the ROE. Given that book value will increase or decrease over the year, using year-end book value (as Value Line does) understates or overstates the average investment that corresponds to the flow of earnings. To address this concern, earnings must be matched with a corresponding representative measure of book value, or the resulting ROE will be distorted. The adjustment factor determined in AES Indiana Attachment AMM-6 is solely a means of converting Value Line's end-of-period values to an average return over the year, and the formula for this adjustment is supported in recognized textbooks and has been adopted by other regulators.[53]

[53] *See*, Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 305-306; *Bangor Hydro-Electric Co. et al*., 122 FERC ¶ 61,265 at n.12 (2008).

Q65. Are there significant shortcomings associated with the "br+sv" growth rate?

A65. Yes. First, in order to calculate the sustainable growth rate, it is necessary to develop estimates of investors' expectations for four separate variables; namely, "b", "r", "s", and "v." Given the inherent difficulty in forecasting each parameter and the difficulty of estimating the expectations of investors, the potential for measurement error is significantly increased when using four variables, as opposed to referencing a direct projection for EPS growth. Second, empirical research in the finance literature indicates that sustainable growth rates are not as significantly correlated to measures of value, such as share prices, as are analysts' EPS growth forecasts.[54] The "sustainable growth" approach is included for completeness, but evidence indicates that analysts' forecasts provide a superior and more direct guide to investors' growth expectations. Accordingly, I give less weight to cost of equity estimates based on br+sv growth rates in evaluating the results of the DCF model.

Q66. What cost of common equity estimates are implied for the Utility Group using the DCF model?

A66. After combining the dividend yields and respective growth projections for each utility, the resulting cost of common equity estimates are shown on page 3 of AES Indiana Attachment AMM-5.

Q67. In evaluating the results of the constant growth DCF model, is it appropriate to eliminate illogical estimates?

A67. Yes. It is essential that the cost of equity estimates produced by quantitative methods pass fundamental tests of reasonableness and economic logic. Accordingly, DCF estimates that are implausibly low or high should be eliminated.

[54] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 307.

Q68. How do you evaluate DCF estimates at the low end of the range?

A68. I base my evaluation of DCF estimates at the low end of the range on the fundamental risk-return tradeoff, which holds that investors will assume more risk only if they expect to earn a higher rate of return to compensate them for the greater uncertainly. Because common stocks lack the protections associated with an investment in long-term bonds, a utility's common stock imposes far greater risks on investors. As a result, the rate of return that investors require from a utility's common stock is considerably higher than the yield offered by senior, long-term debt. Consistent with this principle, DCF results that are not sufficiently higher than the yield available on less risky utility bonds must be eliminated.

Q69. Have similar tests been applied by regulators?

A69. Yes. FERC has noted that adjustments are justified where applications of the DCF approach and other methods produce illogical results. FERC evaluates low-end DCF results against observable yields on long-term public utility debt and has recognized that it is appropriate to eliminate estimates that do not sufficiently exceed this threshold.[55] FERC's current practice is to exclude low-end cost of estimates that fall below the six-month average yield on Baa-rated utility bonds, plus 20% of the CAPM market risk premium.[56] In addition, FERC also excludes estimates that are "irrationally or anomalously high."[57]

Q70. Do you exclude any estimates at the low or high end of the range of DCF results?

A70. Yes. As highlighted on page 3 of AES Indiana Attachment AMM-5, I remove three DCF cost of equity estimates ranging from 3.7% to 7.3%. Based on my professional experience and the risk-return tradeoff principle that is fundamental to finance, it is

[55] *See, e.g., Southern California Edison Co*., 131 FERC ¶ 61,020 at P 55 (2010).

[56] Based on the six-month average yield at December 2024 of 5.67% and the 8.0% market risk premium shown on AES Indiana Attachment AMM-7, this implies a current low-end threshold of approximately 7.3%.

[57] *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc*., 171 FERC ¶ 61,154 at P 152 (2020).

inconceivable that investors are not requiring a substantially higher rate of return for holding common stock. As a result, these values provide little guidance as to the returns investors require from utility common stocks and should be excluded.

Also highlighted on page 3 of AES Indiana Attachment AMM-5, I eliminate four high-end DCF estimates ranging from 16.8% to 26.0%. The upper end of the remaining DCF results for the Utility Group is set by a cost of equity estimate of 14.2%. While a 14.2% cost of equity estimate may exceed the majority of the remaining values, the low-end DCF estimates of 7.8% retained in my DCF study are assuredly far below investors' required rate of return. Taken together and considered along with the balance of the results, the remaining values provide a reasonable basis on which to frame the range of plausible DCF estimates and evaluate investors' required rate of return.

Q71. What cost of equity estimates are implied by your DCF results for the Utility Group?

A71. As shown on page 3 of AES Indiana Attachment AMM-5 and summarized in Table AMM-2, below, after eliminating illogical values, application of the constant growth DCF model resulted in the following ROE estimates:

TABLE AMM-2
DCF RESULTS – UTILITY GROUP

Growth Rate	Average	Midpoint
Value Line	9.5%	9.7%
IBES	10.4%	11.0%
Zacks	10.3%	10.1%
br + sv	8.9%	9.2%

C. Capital Asset Pricing Model

Q72. Please describe the CAPM.

A72. 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 firm's stock price to follow changes in the market. A stock that tends to respond less to market movements has a beta of less than 1.0, while stocks that tend to move more than the market have betas greater than 1.0. The CAPM is mathematically expressed as:

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

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

Under the CAPM formula above, a stock's required return is a function of the risk-free rate (R_f), plus a risk premium that is scaled to reflect the relative volatility of a firm's stock price, as measured by beta (β). 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.

Q73. Why is the CAPM approach relevant when evaluating the cost of equity for AES Indiana?

A73. The CAPM approach (which also forms the foundation of the ECAPM) generally is considered to be the most widely referenced method for estimating the cost of equity among academicians and professional practitioners, with the pioneering researchers of this method receiving the Nobel Prize in 1990. Because this is the dominant model for estimating the cost of equity outside the regulatory sphere, the CAPM (and ECAPM) provides important insight into investors' required rate of return for utility stocks.

Q74. How do you apply the CAPM to estimate the ROE?

A74. As shown in AES Indiana Attachment AMM-7, I apply the CAPM to the Utility Group using a forward-looking estimate for investors' required rate of return from common

stocks is presented. 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.

The dividend yield for each firm is obtained from Value Line, and the growth rate is equal to the average of the earnings growth projections for each firm published by IBES, Value Line, and Zacks, with each firm's dividend yield and growth rate being weighted by its proportionate share of total market value. After removing companies with growth rates that were negative or greater than 20%, the weighted average of the projections for the individual firms implies an average growth rate of 10.8%. Combining this average growth rate with a year-ahead dividend yield of 1.6% results in a current cost of common equity estimate for the market as a whole (R_m) of 12.4%. Subtracting a 4.4% risk-free rate based on the average yield on 30-year Treasury bonds for the six-months ending December 2024 produces a market equity risk premium of 8.0%.

Q75. What is the source of the beta values you use to apply the CAPM?

A75. I rely on the beta values reported by Value Line, which in my experience is the most widely referenced source for beta in regulatory proceedings. 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.[58]

Q76. What else should be considered when applying the CAPM?

A76. Financial research indicates that the CAPM does not fully account for observed differences in rates of return attributable to firm size. Accordingly, a modification is required to account for this size effect. As explained by Morningstar:

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

> 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.[59]

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, researchers have developed size premiums that need to be added to account for the level of a firm's market capitalization in determining the CAPM cost of equity.[60] Accordingly, my CAPM analysis also incorporates an adjustment to recognize the impact of size distinctions, as measured by the market capitalization for the firms in the Utility Group.

Q77. What is the basis for the size adjustment?

A77. 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

[59] Morningstar, *2015 Ibbotson SBBI Classic Yearbook*, at 99.

[60] Originally compiled by Ibbotson Associates and published in their annual yearbook entitled, *Stocks, Bonds, Bills and Inflation*, these size premia are now developed by Kroll and presented in its *Cost of Capital Navigator*.

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."[61]

Q78. Is this size adjustment related to the relative size of AES Indiana as compared with the proxy group?

A78. No. I am not proposing to apply a general size risk premium in evaluating a just and reasonable ROE for the Company and my recommendation does not include any adjustment related to the relative size of AES Indiana. Rather, this size adjustment is specific to the CAPM and merely corrects for an observed inability of the beta measure to fully reflect the risks perceived by investors for the firms in the proxy group. As FERC has recognized, "[t]his type of size adjustment is a generally accepted approach to CAPM analyses."[62]

Q79. What is the implied ROE for the Utility Group using the CAPM approach?

A79. As shown on AES Indiana Attachment AMM-7, after adjusting for the impact of firm size, the CAPM approach implies an average ROE for the Utility Group of 12.1%, or 12.5% after adjusting for the impact of firm size.

D. Empirical Capital Asset Pricing Model

Q80. How does the ECAPM approach differ from traditional applications of the CAPM?

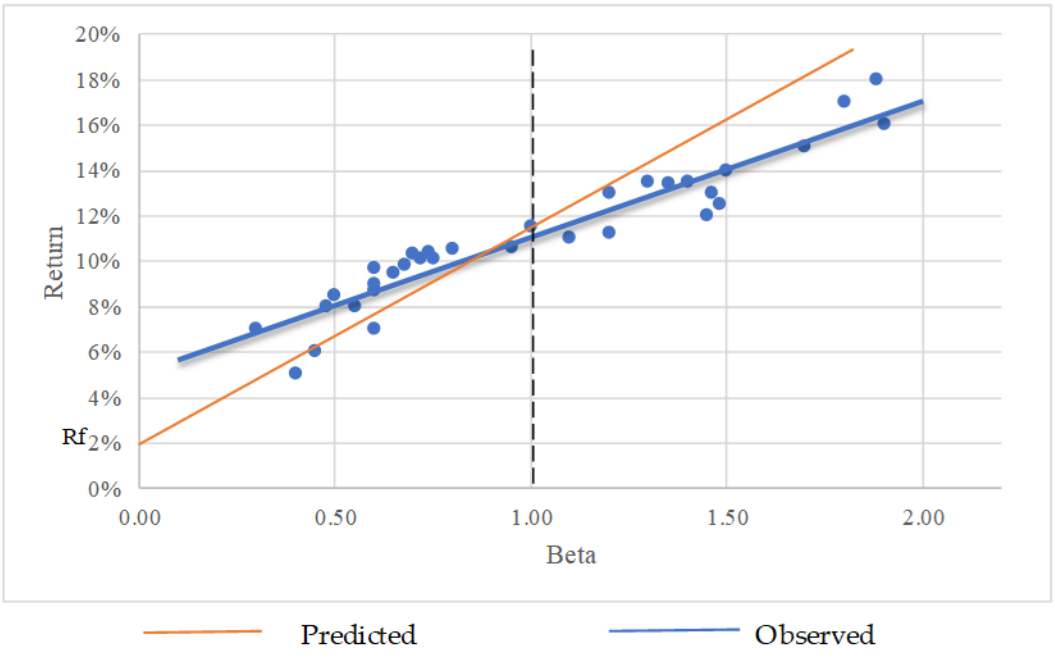
A80. Empirical tests of the CAPM have shown that low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted. In other words, the CAPM tends to overstate the actual sensitivity of the cost of capital

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

[62] *Coakley Mass. Attorney Gen. v. Bangor Hydro-Elec. Co.,* Opinion No. 531-B, 150 FERC ¶ 61,165 at P 117 (2015), *vacated & remanded sub nom. Emera Me. v. FERC*, 854 F.3d 9 (D.C. Cir. 2017).

to beta, with low-beta stocks tending to have higher returns and high-beta stocks tending to have lower risk returns than predicted by the CAPM. This is illustrated graphically in the figure below:

FIGURE AMM-3
CAPM – PREDICTED VS. OBSERVED RETURNS



Because the betas of utility stocks, including those in the Utility Group, are generally less than 1.0, this implies that cost of equity estimates based on the traditional CAPM would understate the cost of equity. This empirical finding is supported by studies reported in the finance literature, as summarized in *New Regulatory Finance*:

> As discussed in the previous section, several finance scholars have developed refined and expanded versions of the standard CAPM by relaxing the constraints imposed on the CAPM, such as dividend yield, size, and skewness effects. These enhanced CAPMs typically produce a risk-return relationship that is flatter than the CAPM prediction in keeping with the actual observed risk-return relationship. The ECAPM makes use of these empirical relationships.[63]

[63] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 189.

Based on a review of the empirical evidence, *New Regulatory Finance* concluded the expected return on a security is represented by the following formula:

$$R_j = R_f + 0.25(R_m - R_f) + 0.75[\beta_j(R_m - R_f)]$$

Like the CAPM formula presented earlier, the ECAPM represents a stock's required return as a function of the risk-free rate (R_f), plus a risk premium. In the formula above, this risk premium is composed of two parts: (1) the market risk premium (R_m - R_f) weighted by a factor of 25%, and (2) a company-specific risk premium based on the stock's relative volatility [$\beta_j(R_m - R_f)$] weighted by 75%. This ECAPM equation, and its associated weighting factors, recognizes the observed relationship between standard CAPM estimates and the cost of capital documented in the financial research, and corrects for the understated returns that would otherwise be produced for low beta stocks.

Q81. What cost of equity estimate is indicated by the ECAPM?

A81. My application of the ECAPM is based on the same forward-looking market rate of return, risk-free rates, and beta values discussed earlier in connection with the CAPM. As shown on AES Indiana Attachment AMM-8, applying the forward-looking ECAPM approach to the firms in the Utility Group results in an average cost of equity estimate of 12.1%, or 12.6% after incorporating the size adjustment.

E. Utility Risk Premium

Q82. Briefly describe the risk premium method.

A82. The risk premium method 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. Like the DCF model, the risk premium method is capital market oriented. However, unlike DCF models, which

indirectly impute the cost of equity, risk premium methods directly estimate investors' required rate of return by adding an equity risk premium to observable bond yields.

Q83. Is the risk premium approach a widely accepted method for estimating the cost of equity?

A83. Yes. The risk premium approach is based on the fundamental risk-return principle that is central to finance, which holds that investors will require a premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and regulatory proceedings, and provides an important tool in estimating a fair ROE for AES Indiana.

Q84. How do you implement the risk premium method?

A84. Estimates of equity risk premiums for utilities are based on surveys of previously authorized ROEs. Authorized ROEs presumably reflect regulatory commissions' best estimates of the cost of equity, however determined, at the time they issued their final order. Such ROEs should represent a balanced and impartial outcome that considers the need to maintain a utility's financial integrity and ability to attract capital. Moreover, allowed returns are an important consideration for investors and have the potential to influence other observable investment parameters, including credit ratings and borrowing costs. Thus, when considered in the context of a complete and rigorous analysis, this data provides a logical and frequently referenced basis for estimating equity risk premiums for regulated utilities.

Q85. How do you calculate the equity risk premiums based on allowed returns?

A85. The ROEs authorized for electric utilities by regulatory commissions across the U.S. are compiled by S&P Global Market Intelligence and published in its *RRA Regulatory Focus* report. On page 2 of AES Indiana Attachment AMM-9, the average yield on public utility bonds is subtracted from the average allowed ROE for electric utilities to

calculate equity risk premiums for each year between 1974 and 2024.[64] As shown there, over this period these equity risk premiums for electric utilities average 3.90%, and the yields on public utility bonds average 7.74%.

Q86. Is there any capital market relationship that must be considered when implementing the risk premium method?

A86. Yes. The magnitude of equity risk premiums is not constant and equity risk premiums tend to move inversely with interest rates. In other words, when interest rate levels are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums widen. The implication of this inverse relationship is that the cost of equity does not move as much as, or in lockstep with, interest rates. Accordingly, for a 1% increase or decrease in interest rates, the cost of equity may only rise or fall some fraction of 1%. When implementing the risk premium method, adjustments are required to incorporate this inverse relationship if the current interest rate is different from the average interest rate represented in the data set.

Current bond yields are lower than those prevailing over the risk premium study period. Given that equity risk premiums move inversely with interest rates, these lower bond yields also imply an increase in the equity risk premium. In other words, higher required equity risk premiums offset the impact of declining interest rates on the ROE.

Q87. Is this inverse relationship confirmed by published financial research?

A87. Yes. There is considerable empirical evidence that when interest rates are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums are greater. This inverse relationship between equity risk premiums and interest rates has been widely reported in the financial literature. As summarized by *New Regulatory Finance*:

[64] My analysis encompasses the entire period for which published data is available.

> Published studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and Lakonishok (1983), Morin (2005), and McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates – rising when rates fell and declining when rates rose.[65]

Other regulators have also recognized that, while the cost of equity trends in the same direction as interest rates, these variables do not move in lock-step.[66] This relationship is illustrated in the figure on page 3 of AES Indiana Attachment AMM-9.

Q88. What ROE is implied by the risk premium method using surveys of allowed returns?

A88. Based on the regression output between the interest rates and equity risk premiums displayed on page 3 of AES Indiana Attachment AMM-9, the equity risk premium for electric utilities increases by approximately 42 basis points for each percentage point drop in the yield on average public utility bonds. As illustrated on page 1 of AES Indiana Attachment AMM-9 with an average yield on public utility bonds for the six-months ending December 2024 of 5.50%, this implies a current equity risk premium of 4.84% for electric utilities. Adding this equity risk premium to the average yield on Baa-rated utility bonds implies a current ROE of 10.51%.

F. Expected Earnings Approach

Q89. What other analysis do you conduct to estimate the ROE?

A89. I also evaluate the ROE using the expected earnings method. Reference to rates of return available from alternative investments of comparable risk can provide an important benchmark in assessing the return necessary to assure confidence in the financial integrity of a firm and its ability to attract capital. This expected earnings approach is consistent with the economic underpinnings for a just and reasonable rate of return

[65] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 128.

[66] *See, e.g.*, California Public Utilities Commission, Decision 08-05-035 (May 29, 2008); Entergy Mississippi Formula Rate Plan FRP-7, https://cdn.entergy-mississippi.com/userfiles/content/price/tariffs/eml_frp.pdf (last visited Mar. 10, 2025); *Coakley Mass. Attorney Gen. v. Bangor Hydro-Elec. Co.*, 147 FERC ¶ 61,234 at P 147 (2014), *vacated & remanded sub nom. Emera Me. v. FERC*, 854 F.3d 9 (D.C. Cir. 2017).

established by the U.S. Supreme Court in *Bluefield* and *Hope*. 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.

Q90. What economic premise underlies the expected earnings approach?

A90. The expected earnings approach is based on the widely accepted principle that investors compare each investment alternative with the next best opportunity. If the utility is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the capital on reasonable terms. For existing investors, denying the utility an opportunity to earn what is available from other similar risk alternatives prevents them from earning their opportunity cost of capital. This outcome would violate the *Hope* and *Bluefield* standards and undermine the utility's access to capital on reasonable terms.

Q91. How is the expected earnings approach typically implemented?

A91. The traditional comparable earnings test identifies a group of companies that are believed to be comparable in risk to the utility. The actual earnings of those companies on the book value of their investment are then compared to the allowed return of the utility. While the traditional comparable earnings test is implemented using historical data taken from the accounting records, it is also common to use projections of returns on book investment, such as those published by recognized investment advisory publications (*e.g.*, Value Line). Because these projected returns on book value equity are analogous to the forward-looking allowed ROE on a utility's rate base, this measure of opportunity costs results in a direct, "apples to apples" comparison.

Q92. What other consideration supports reference to expected returns on book value?

A92. Regulators do not set the returns that investors earn in the capital markets, which are a function of dividend payments and fluctuations in common stock prices—both of which are outside their control. Regulators can only establish the allowed ROE, which is applied to the book value of a utility's investment in rate base, as determined from its

accounting records. This is analogous to the expected earnings approach, which measures the return that investors expect the utility to earn on book value. As a result, the expected earnings approach provides a meaningful guide to ensure that the allowed ROE is similar to what other utilities of comparable risk will earn on invested capital. This expected earnings 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 that is independent of fluctuating stock prices, market-to-book ratios, debates over DCF growth rates, or the limitations inherent in any theoretical model of investor behavior.

Q93. What ROE is indicated for AES Indiana based on the expected earnings approach?

A93. For the firms in the Utility Group, the year-end returns on common equity projected by Value Line over its forecast horizon are shown on AES Indiana Attachment AMM-10. As I explained earlier in my discussion of the br+sv growth rates used in applying the DCF model, Value Line's returns on common equity are calculated using year-end equity balances, which understates the average return earned over the year.[67] Accordingly, these year-end values were converted to average returns using the same adjustment factor discussed earlier and developed on AES Indiana Attachment AMM-6. As shown on AES Indiana Attachment AMM-10, Value Line's projections for the Utility Group suggest an average ROE of 10.8%.

VI. NON-UTILITY BENCHMARK

Q94. What is the purpose of this section of your testimony?

A94. This section presents the results of my DCF analysis for a group of low-risk firms in the competitive sector, which I refer to as the "Non-Utility Group." This analysis is not

[67] For example, to compute the annual return on a passbook savings account with a beginning balance of $1,000 and an ending balance of $5,000, the interest income would be divided by the average balance of $3,000. Using the $5,000 balance at the end of the year would understate the actual return.

directly considered to arrive at my recommended ROE range of reasonableness; however, it is my opinion that this is a relevant consideration in evaluating a fair ROE for the Company.

Q95. Do utilities have to compete with non-regulated firms for capital?

A95. Yes. The cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives. Utilities must compete for capital, not just against firms in their own industry, but with other investment opportunities of comparable risk. 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.

Q96. Is it consistent with the *Bluefield* and *Hope* cases to consider investors' required ROE for non-utility companies?

A96. Yes. The cost of equity capital in the competitive sector of the economy underpins utility ROEs because regulation purports to serve as a substitute for the actions of competitive markets. The U.S. 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:

> By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.[68]

As in the *Bluefield* decision, there is nothing to restrict "other enterprises" solely to the utility industry.

[68] *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 391 (1944) (Hope).

Q97. What criteria do you apply to develop the Non-Utility Group?

A97. 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.

Q98. How do you evaluate the risks of the Non-Utility Group relative to your proxy group of electric utilities?

A98. My evaluation of relative risk considers four published benchmarks that are widely relied on by investors—Value Line's Safety Rank, Financial Strength Rating, and beta values, along with credit ratings from S&P and Moody's. Value Line's primary risk 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.

Q99. How do the overall risks of your Non-Utility Group compare to the proxy group of electric utilities?

A99. Table AMM-3 compares the Non-Utility Group to the Utility Group across the four key indices of investment risk discussed above.

TABLE AMM-3
COMPARISON OF RISK INDICATORS

	Credit Rating		Value Line		
			Safety	Financial	
	Moody's	S&P	Rank	Strength	Beta
Non-Utility Group	A2	A	1	A+	0.80
Utility Group	Baa2	BBB+	2	A	0.96

As shown above, the risk indicators for the Non-Utility Group suggest less risk than for the Utility 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 Coca-Cola, Home Depot, Procter & Gamble, and Walmart, have long corporate histories, well-established track records, and conservative risk profiles. Many of these companies pay dividends on a par with utilities, with the average dividend yield for the group at 2.1%.[69] 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.

Q100. What are the results of your DCF analysis for the Non-Utility Group?

A100. I apply the DCF model to the Non-Utility Group using the same analysts' EPS growth projections described earlier for the Utility Group, with the results being presented on

[69] AES Indiana Attachment AMM-11 at page 1.

page 3 of AES Indiana Attachment AMM-11. As summarized in Table AMM-4, below, after eliminating illogical values, application of the constant growth DCF model results in the following cost of equity estimates:

TABLE AMM-4
DCF RESULTS – NON-UTILITY GROUP

Growth Rate	Average	Midpoint
Value Line	11.0%	11.6%
IBES	10.8%	11.4%
Zacks	10.8%	11.4%

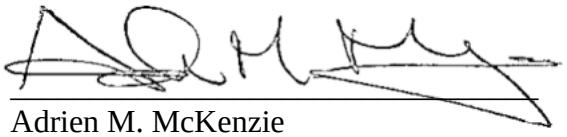
As discussed earlier, reference to the Non-Utility Group is consistent with established regulatory principles. Required returns for utilities should be in line with those of non-utility firms of comparable risk operating under the constraints of free competition. Because the actual cost of equity is unobservable, and DCF results inherently incorporate a degree of error, cost of equity estimates for the Non-Utility Group provide an important benchmark in evaluating a fair ROE for AES Indiana.

Q101. Does this conclude your direct testimony?

A101. Yes, it does.

VERIFICATION

I, Adrien M. McKenzie, President of Financial Concepts and Applications, Inc. (d/b/a FINCAP, Inc.), affirm under penalties for perjury that the foregoing representations are true to the best of my knowledge, information, and belief.



Adrien M. McKenzie
Dated: May 30, 2025

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, Florida, 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 has 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 common 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

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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, Florida, 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.

SUMMARY OF RESULTS

Method	Result		
DCF			
Value Line	9.5%		
IBES	10.4%		
Zacks	10.3%		
Internal br + sv	8.9%		
CAPM	12.1%	--	12.5%
ECAPM	12.1%	--	12.6%
Utility Risk Premium	10.5%		
Expected Earnings	10.8%		

ROE Recommendation			
Cost of Equity			
Range	**10.2%**	--	**11.2%**
Recommendation	**10.7%**		

UTILITY GROUP

		Type of Cost Recovery Mechanism (a)										Other Regulatory Mechanisms (a)		
	Company	Fuel/ Purch Power	Bad Debt	Pension	Environ-mental	Energy Efficiency/ Conservation	Other (b)	Gener-ation	Distri-bution	Trans-mission	Renewables	Decoupling/ Multi-Yr Plans/ Formula Rates	Earn Sharing/ Perf-Based Rates	Future Test Year
1	Ameren Corp.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
2	American Electric Power	✓	✓	--	✓	✓	✓	--	✓	✓	✓	--	✓	✓
3	Avista Corp.	✓	--	--	--	✓	✓	--	--	✓	✓	✓	--	--
4	Black Hills Corp.	✓	--	--	✓	✓	✓	--	--	✓	✓	--	--	--
5	CenterPoint Energy	✓	✓	✓	✓	✓	✓	--	✓	✓	✓	✓	✓	--
6	CMS Energy Corp.	✓	--	✓	--	✓	✓	--	--	--	--	--	✓	✓
7	Dominion Energy	✓	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	DTE Energy Co.	✓	--	--	--	✓	✓	--	--	--	✓	--	✓	✓
9	Duke Energy Corp.	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	Edison International	✓	--	✓	✓	✓	✓	--	--	--	--	✓	--	✓
11	Entergy Corp.	✓	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	Evergy Inc.	✓	✓	--	--	✓	✓	✓	✓	✓	--	--	--	--
13	Eversource Energy	✓	--	✓	✓	✓	✓	--	✓	✓	✓	✓	✓	--
14	Exelon Corp.	D	✓	✓	✓	✓	✓	--	✓	✓	✓	✓	✓	✓
15	IDACORP, Inc.	✓	--	--	--	✓	✓	--	--	--	--	✓	✓	✓
16	NorthWestern Corp.	✓	--	--	--	--	✓	✓	--	--	--	--	--	--
17	OGE Energy Corp.	✓	--	✓	--	✓	✓	--	--	✓	--	✓	✓	--
18	Otter Tail Corp.	✓	--	--	--	✓	✓	✓	--	✓	✓	✓	✓	✓
19	Pinnacle West Capital	✓	--	--	✓	✓	✓	✓	--	✓	✓	✓	--	--
20	Portland General Elec.	✓	--	--	✓	--	✓	--	--	✓	✓	--	--	✓
21	Public Service Enterprise Grp.	D	✓	✓	✓	✓	✓	--	✓	✓	✓	✓	--	✓
22	Sempra Energy	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	✓	--	✓
23	Xcel Energy Inc.	✓	--	✓	--	✓	✓	✓	✓	✓	✓	✓	--	✓
	Total	21	8	11	14	21	23	10	12	18	17	16	12	15

Notes

(a) From most recent SEC Form 10-K Reports and Investor Presentations (as provided on each company's website under Investor Relations).
Data from S&P Global Market Intelligence, *RRA State Regulatory Evaluations Quarterly Update* (Dec. 2024) also used to supplement the Future Test Year findings.

(b) 3 pages 5-6.

D - Delivery-only utility.

UTILITY GROUP OPERATING COS.

			Type of Cost Recovery Mechanism (a)										Other Regulatory Mechanisms (a)		
	Company	State	Fuel/ Purch Power	Bad Debt	Pension	Environ-mental	Energy Efficiency/ Conservation	Other (b)	Gener-ation	Distri-bution	Trans-mission	Renewables	Decoupling/ Multi-Yr Plans/ Formula Rates	Earn Sharing/ Perf-Based Rates	Future Test Year
1	**AMEREN CORP.**														
	Ameren Illinois Co.	IL	D	✓	--	✓	✓	--	--	--	✓	✓	✓	✓	✓
	Union Electric Co.	MO	✓	--	✓	--	✓	✓	✓	✓	--	✓	--	--	--
2	**AMERICAN ELECTRIC POWER**														
	Southwestern Electric Power Co.	AR	✓	--	--	✓	✓	✓	--	✓	✓	✓	✓	--	✓
	Indiana Michigan Power Co.	IN	✓	--	--	✓	✓	--	--	✓	✓	✓	--	--	✓
	Kentucky Power Co.	KY	✓	--	--	✓	✓	✓	--	--	--	--	--	--	--
	Southwestern Electric Power Co.	LA	✓	--	--	--	✓	✓	--	✓	✓	✓	✓	--	--
	Indiana Michigan Power Co.	MI	✓	--	--	--	✓	--	--	✓	✓	✓	--	--	✓
	Ohio Power Co.	OH	D	✓	--	--	--	✓	--	✓	✓	✓	✓	--	✓
	Public Service Co. of Oklahoma	OK	✓	--	--	--	✓	--	--	--	--	✓	--	--	--
	Kingsport Power Co.	TN	✓	--	--	✓	--	✓	--	✓	✓	--	--	--	✓
	AEP Texas Inc.	TX	D	--	--	--	✓	--	--	✓	✓	✓	✓	--	--
	Southwestern Electric Power Co.	TX	✓	--	--	--	✓	--	--	✓	✓	--	--	--	--
	Appalachian Power Co.	VA	✓	--	--	✓	✓	--	--	✓	✓	✓	--	--	--
	Appalachian Pwr. Co./Wheeling Pwr. Co.	WV	✓	--	--	✓	✓	✓	--	✓	✓	✓	--	--	--
3	**AVISTA CORP.**														
	Alaska Electric Light & Power Co.	AK	✓	--	--	--	--	--	--	--	--	--	--	--	--
	Avista Corp.	ID	✓	--	--	--	--	✓	--	--	--	--	✓	--	--
	Avista Corp.	WA	✓	--	--	--	✓	✓	--	--	--	--	✓	--	--
4	**BLACK HILLS CORP.**														
	Colorado Electric	CO	✓	--	--	--	✓	✓	--	--	✓	✓	--	--	--
	South Dakota Electric	SD	✓	--	--	✓	--	--	--	--	✓	--	--	--	--
	Wyoming Electric	WY	✓	--	--	--	✓	--	--	--	✓	--	--	--	--
5	**CENTERPOINT ENERGY**														
	Southern Indiana Gas & Electric Co.	IN	✓	--	--	✓	✓	--	--	✓	✓	✓	✓	✓	--
	CenterPoint Energy Houston Electric LLC	TX	D	✓	✓	--	✓	✓	--	✓	✓	--	--	--	--
6	**CMS ENERGY**														
	Consumers Energy Co.	MI	✓	--	✓	--	✓	✓	--	--	--	--	--	✓	✓
7	**DOMINION ENERGY**														
	Virginia Electric & Power Co.	NC	✓	--	--	✓	✓	--	--	--	--	--	✓	✓	--
	Dominion Energy South Carolina	SC	✓	--	✓	✓	✓	✓	✓	--	--	--	✓		--
	Virginia Electric & Power Co.	VA	✓	--	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	**DTE ENERGY CO.**														
	DTE Electric Co.	MI	✓	--	--	--	✓	✓	--	--	--	✓	--	✓	✓
9	**DUKE ENERGY**														
	Duke Energy Florida LLC	FL	✓	--	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Duke Energy Indiana LLC	IN	✓	--	--	✓	✓	--	✓	✓	✓	✓	--	--	✓
	Duke Energy Kentucky Inc.	KY	✓	--	--	✓	✓	--	--	--	--	--	--	--	✓
	Duke Energy Carolinas LLC	NC	✓	--	--	--	✓	--	--	--	--	--	✓	✓	--
	Duke Energy Progress LLC	NC	✓	--	--	--	✓	--	--	--	--	--	✓	✓	--
	Duke Energy Ohio Inc.	OH	D	✓	--	--	✓	✓	--	✓	✓	--	✓	--	✓
	Duke Energy Progress LLC	SC	✓	--	--	--	✓	--	--	--	--	--	✓	--	--
	Duke Energy Carolinas LLC	SC	✓	--	--	--	✓	--	--	--	--	--	✓	--	--

UTILITY GROUP OPERATING COS.

			Type of Cost Recovery Mechanism (a)										Other Regulatory Mechanisms (a)		
	Company	State	Fuel/ Purch Power	Bad Debt	Pension	Environ-mental	Energy Efficiency/ Conservation	Other (b)	Gener-ation	Distri-bution	Trans-mission	Renewables	Decoupling/ Multi-Yr Plans/ Formula Rates	Earn Sharing/ Perf-Based Rates	Future Test Year
10	**EDISON INTERNATIONAL**														
	Southern California Edison Co.	CA	✓	--	✓	✓	✓	✓	--	--	--	--	✓	--	✓
11	**ENTERGY CORP.**														
	Entergy Arkansas LLC	AR	✓	--	✓	--	✓	--	✓	--	✓	--	✓	--	✓
	Entergy New Orleans LLC	LA	✓	--	✓	✓	✓	--	✓	✓	✓	--	✓	--	✓
	Entergy Louisiana LLC	LA	✓	--	✓	✓	--	✓	✓	✓	✓	✓	✓	--	--
	Entergy Mississippi LLC	MS	✓	--	✓	--	--	✓	✓	✓	✓	--	✓	✓	✓
	Entergy Texas Inc.	TX	✓	--	✓	--	--	✓	✓	✓	✓	--	--	--	--
12	**EVERGY, INC.**														
	Evergy Kansas Central Inc.	KS	✓	--	--	--	✓	✓	✓	✓	✓	--	--	--	--
	Evergy Kansas South Inc.	KS	✓	--	--	--	✓	--	✓	✓	--	--	--	--	--
	Evergy Metro Inc.	KS	✓	--	--	--	✓	✓	✓	✓	✓	--	--	--	--
	Evergy Metro Inc.	MO	✓	--	--	--	✓	✓	--	--	✓	--	--	--	--
	Evergy Missouri West Inc.	MO	✓	--	--	--	✓	✓	--	--	--	--	--	--	--
13	**EVERSOURCE ENERGY**														
	Connecticut Light and Power Co.	CT	D	--	--	✓	✓	✓	--	✓	✓	✓	✓	--	--
	NSTAR Electric Co.	MA	D	--	✓	--	✓	✓	--	✓	✓	✓	✓	✓	--
	Public Service Co. of New Hampshire	NH	✓	--	--	✓	✓	✓	--	✓	✓	--	--	--	--
14	**EXELON CORP.**														
	Delmarva Power & Light Co.	DE	D	--	--	--	✓	✓	--	✓	✓	✓	--	--	✓
	Potomac Electric Power Co.	DC	D	--	--	--	✓	✓	--	✓	✓	--	✓	--	✓
	Commonwealth Edison Co.	IL	D	✓	✓	✓	✓	✓	--	✓	✓	✓	✓	✓	✓
	Baltimore Gas & Electric Co.	MD	D	--	--	--	✓	✓	--	--	✓	--	✓	--	✓
	Delmarva Power & Light Co.	MD	D	--	--	--	✓	--	--	--	✓	--	✓	--	✓
	Potomac Electric Power Co.	MD	D	--	--	--	✓	✓	--	--	✓	--	✓	--	✓
	Atlantic City Electric Co.	NJ	D	✓	--	--	✓	✓	--	✓	✓	--	✓	--	--
	PECO Energy Co.	PA	D	--	--	--	✓	--	--	✓	✓	--	--	--	✓
15	**IDACORP**														
	Idaho Power Co.	ID	✓	--	--	--	✓	✓	--	--	--	--	✓	✓	--
	Idaho Power Co.	OR	✓	--	--	--	✓	--	--	--	--	--	--	--	✓
16	**NORTHWESTERN ENERGY GROUP**														
	NorthWestern Energy	MT	✓	--	--	--	--	✓	--	--	--	--	--	--	--
	NorthWestern Energy	SD	✓	--	--	--	--	✓	✓	--	--	--	--	--	--
17	**OGE ENERGY CORP.**														
	Oklahoma Gas & Electric Co.	AR	✓	--	--	--	--	--	--	--	✓	--	✓	--	--
	Oklahoma Gas & Electric Co.	OK	✓	--	✓	--	✓	✓	--	--	✓	--	✓	✓	--
18	**OTTER TAIL CORP.**														
	Otter Tail Power Co.	MN	✓	--	--	--	✓	✓	✓	--	✓	✓	✓	--	✓
	Otter Tail Power Co.	ND	✓	--	--	--	--	✓	✓	--	✓	✓	--	✓	✓
	Otter Tail Power Corp.	SD	✓	--	--	--	✓	--	✓	--	✓	--	--	✓	--
19	**PINNACLE WEST CAPITAL**														
	Arizona Public Service Co.	AZ	✓	--	--	✓	✓	✓	✓	--	✓	✓	✓	--	--
20	**PORTLAND GENERAL ELECTRIC**														
	Portland General Electric Co.	OR	✓	--	--	✓	--	✓	--	--	✓	✓	--	--	✓
21	**PUBLIC SERVICE ENTERPRISE GRP**														
	Public Service Electric & Gas Co.	NJ	D	✓	✓	✓	✓	✓	--	✓	✓	✓	✓	--	✓

UTILITY GROUP OPERATING COS.

			Type of Cost Recovery Mechanism (a)										Other Regulatory Mechanisms (a)		
	Company	**State**	**Fuel/ Purch Power**	**Bad Debt**	**Pension**	**Environ-mental**	**Energy Efficiency/ Conservation**	**Other (b)**	**Gener-ation**	**Distri-bution**	**Trans-mission**	**Renewables**	**Decoupling/ Multi-Yr Plans/ Formula Rates**	**Earn Sharing/ Perf-Based Rates**	**Future Test Year**
22	**SEMPRA ENERGY**														
	San Diego Gas & Electric Co.	CA	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	✓	--	✓
	Oncor Electric Delivery Co.	TX	D	--	--	--	--	--	--	✓	✓	--	--	--	--
23	**XCEL ENERGY, INC.**														
	Public Service Co. of Colorado	CO	✓	--	✓	--	✓	✓	--	✓	✓	✓	✓	--	✓
	Northern States Power Co. - Minnesota	MN	✓	--	✓	--	✓	✓	--	✓	✓	✓	✓	--	✓
	Southwestern Public Service Co.	NM	✓	--	✓	--	✓	✓	--	✓	--	✓	--	--	✓
	Northern States Power Co. - Minnesota	ND	✓	--	--	--	--	--	--	--	✓	✓	✓	--	✓
	Northern States Power Co. - Minnesota	SD	✓	--	--	--	--	--	✓	--	--	--	✓	--	--
	Southwestern Public Service Co.	TX	✓	--	✓	--	✓	✓	✓	✓	✓	--	--	--	--
	Northern States Power Co. - Wisconsin	WI	✓	--	✓	--	✓	--	--	--	--	--	✓	--	✓
	Total	78	61	8	19	25	62	48	21	39	53	32	42	16	35

Notes

(a) From most recent SEC Form 10-K Reports and Investor Presentations (as provided on each company's website under Investor Relations).
Data from S&P Global Market Intelligence, *RRA State Regulatory Evaluations Quarterly Update* (Dec. 2024) also used to supplement the Future Test Year findings.

(b) See AES Indiana Attachment AMM-3 pages 5-6.

D - Delivery-only utility.

NOTE (b) - OTHER RECOVERY MECHANISMS

	Company	State	Description
1	**AMEREN CORP.**		
	Union Electric Co.	MO	Ad valorem tax
2	**AMERICAN ELECTRIC POWER**		
	Southwestern Electric Power Co.	AR	Vegetation management
	Kentucky Power Co.	KY	Decommissioning rider
	Southwestern Electric Power Co.	LA	Vegetation management
	Ohio Power Co.	OH	Vegetation management
	Kingsport Power Co.	TN	Vegetation management
	Appalachian Pwr. Co./Wheeling Pwr. Co.	WV	Vegetation management
3	**AVISTA CORP.**		
	Avista Corp.	ID	Wildfire resiliency, insurance
	Avista Corp.	WA	Wildfire resiliency, insurance
4	**BLACK HILLS CORP.**		
	Colorado Electric	CO	EV program, energy assistance benefit charge
5	**CENTERPOINT ENERGY**		
	CenterPoint Energy Houston Electric LLC	TX	Temporary emergency electric energy facilities, system restoration cost
6	**CMS ENERGY**		
	Consumers Energy Co.	MI	Decommissioning cost
7	**DOMINION ENERGY**		
	Dominion Energy South Carolina	SC	Relicensing/decommissioning
	Virginia Electric & Power Co.	VA	Coastal Virginia Offshore Wind project, relicensing/decommissioning
8	**DTE ENERGY CO.**		
	DTE Electric Co.	MI	Decommissioning cost
9	**DUKE ENERGY**		
	Duke Energy Florida LLC	FL	Storm damage
	Duke Energy Ohio Inc.	OH	Storm damage
10	**EDISON INTERNATIONAL**		
	Southern California Edison Co.	CA	Inflationary price increases, nuclear decommissioning, wildfire related costs, public purpose programs, wildfire liability insurance
11	**ENTERGY CORP.**		
	Entergy Louisiana LLC	LA	Resilience plan, tax adjustment mechanism
	Entergy Mississippi LLC	MS	Storm damage, ad valorem tax, vegetation
	Entergy Texas Inc.	TX	Rate case expenses, advanced metering system
12	**EVERGY, INC.**		
	Evergy Kansas Central Inc.	KS	Ad valorem tax
	Evergy Metro Inc.	KS	Ad valorem tax
	Evergy Metro Inc.	MO	Ad valorem tax
	Evergy Missouri West Inc.	MO	Ad valorem tax
13	**EVERSOURCE ENERGY**		
	Connecticut Light and Power Co.	CT	System benefits
	NSTAR Electric Co.	MA	Low income customer discounts, vegetation management, storm restoration, advanced metering infrastructure, EV infrastructure
	Public Service Co. of New Hampshire	NH	System benefits, vegetation management, ad valorem tax, storm costs, pole plant adjustment mechanism
14	**EXELON CORP.**		
	Delmarva Power & Light Co.	DE	Storm damage
	Potomac Electric Power Co.	DC	Storm damage
	Commonwealth Edison Co.	IL	Storm damage
	Baltimore Gas & Electric Co.	MD	Storm damage
	Potomac Electric Power Co.	MD	Storm damage
	Atlantic City Electric Co.	NJ	Storm damage, societal benefits
15	**IDACORP**		
	Idaho Power Co.	ID	Accumulated Deferred ITC annual utilization
16	**NORTHWESTERN ENERGY GROUP**		
	NorthWestern Energy	MT	Ad valorem tax
	NorthWestern Energy	SD	Ad valorem tax
17	**OGE ENERGY CORP.**		
	Oklahoma Gas & Electric Co.	OK	ITC rider
18	**OTTER TAIL CORP.**		
	Otter Tail Power Co.	MN	Advanced metering initiative
	Otter Tail Power Co.	ND	Advanced metering initiative
19	**PINNACLE WEST CAPITAL**		
	Arizona Public Service Co.	AZ	Tax expense adjustor, Four Corners Court Resolution Surcharge (federally mandated emissions controls)
20	**PORTLAND GENERAL ELECTRIC**		
	Portland General Electric Co.	OR	Wildfire automatic adjustment clause, storm costs
21	**PUBLIC SERVICE ENTERPRISE GRP**		
	Public Service Electric & Gas Co.	NJ	Storm costs, electric vehicle program
22	**SEMPRA ENERGY**		
	San Diego Gas & Electric Co.	CA	Insurance premiums, wildfire mitigation, advanced metering initiative
23	**XCEL ENERGY, INC.**		
	Public Service Co. of Colorado	CO	Ad valorem tax, Comanche Units 1&2 retirement costs, transportation electrification
	Northern States Power Co. - Minnesota	MN	Ad valorem tax
	Southwestern Public Service Co.	NM	transportation electrification
	Southwestern Public Service Co.	TX	Advanced metering initiative, rate case expenses

ELECTRIC GROUP OPERATING SUBSIDIARIES

	Operating Company	Debt	Preferred	Common Equity
1	**AMEREN CORP.**			
	Ameren Illinois Co.	44.2%	0.4%	55.4%
	Union Electric Co.	49.2%	0.5%	50.3%
2	**AMERICAN ELEC PWR**			
	AEP Texas, Inc.	56.9%	0.0%	43.1%
	Appalachian Power Co.	49.6%	0.0%	50.4%
	Indiana Michigan Power Co.	50.7%	0.0%	49.3%
	Kentucky Power Co.	55.1%	0.0%	44.9%
	Kingsport Power Co.	47.0%	0.0%	53.0%
	Ohio Power Co.	48.9%	0.0%	51.1%
	Public Service Co. of Oklahoma	51.5%	0.0%	48.5%
	Southwestern Electric Pwr Co.	50.5%	0.0%	49.5%
	Wheeling Power Co.	55.3%	0.0%	44.7%
3	**AVISTA CORP.**			
	Avista Corp.	50.0%	0.0%	50.0%
	Alaska Electric Light & Power	37.0%	0.0%	63.0%
4	**BLACK HILLS CORP.**			
	Black Hills Power (South Dakota Elec.)	47.2%	0.0%	52.8%
	Cheyenne Light Fuel & Power (Wyo Elec.)	53.8%	0.0%	46.2%
	Black Hills/Colorado Electric Utility Co	50.0%	0.0%	50.0%
5	**CENTERPOINT ENERGY**			
	Centerpoint Energy Houston Electric	53.8%	0.0%	46.2%
6	**CMS ENERGY**			
	Consumers Energy Co.	51.6%	0.2%	48.3%
7	**DOMINION ENERGY**			
	Virginia Electric & Power	45.0%	0.0%	55.0%
	Dominion Energy South Carolina	46.9%	0.0%	53.1%
8	**DTE ENERGY CO.**			
	DTE Electric Co.	50.9%	0.0%	49.1%
9	**DUKE ENERGY**			
	Duke Energy Carolinas	49.5%	0.0%	50.5%
	Duke Energy Florida	48.5%	0.0%	51.5%
	Duke Energy Indiana	46.5%	0.0%	53.5%
	Duke Energy Ohio	43.3%	0.0%	56.7%
	Duke Energy Progress	51.1%	0.0%	48.9%
	Duke Energy Kentucky	45.7%	0.0%	54.3%
10	**EDISON INTERNATIONAL**			
	Southern California Edison Co.	58.4%	4.2%	37.4%
11	**ENTERGY CORP.**			
	Entergy Arkansas Inc.	53.4%	0.0%	46.6%
	Entergy Louisiana LLC	46.0%	0.0%	54.0%
	Entergy Mississippi Inc.	50.2%	0.0%	49.8%
	Entergy New Orleans Inc.	51.3%	0.0%	48.7%
	Entergy Texas Inc.	51.5%	0.6%	47.9%

ELECTRIC GROUP OPERATING SUBSIDIARIES

	Operating Company	Debt	Preferred	Common Equity
12	**EVERGY, INC.**			
	Evergy Metro	48.8%	0.0%	51.2%
	Evergy Kansas Central	46.4%	0.0%	53.6%
13	**EVERSOURCE ENERGY**			
	Connecticut Light & Power	43.3%	1.0%	55.7%
	NSTAR Electric Co.	42.3%	0.4%	57.4%
	Public Service Co. of New Hampshire	43.2%	0.0%	56.8%
14	**EXELON CORP.**			
	Delmarva Power and Light	50.1%	0.0%	49.9%
	Baltimore Gas & Electric Co.	47.8%	0.0%	52.2%
	Commonwealth Edison Co.	45.1%	0.0%	54.9%
	PECO Energy Co.	49.8%	0.0%	50.2%
	Potomac Electric Power Co.	46.4%	0.0%	53.6%
	Atlantic City Electric Co.	49.6%	0.0%	50.4%
15	**IDACORP**			
	Idaho Power Co.	49.9%	0.0%	50.1%
16	**NORTHWESTERN ENERGY GRP.**			
	NorthWestern Corp.	50.3%	0.0%	49.7%
	NorthWestern Energy Public Svc Corp.	48.3%	0.0%	51.7%
17	**OGE ENERGY CORP.**			
	Oklahoma G&E	46.6%	0.0%	53.4%
18	**OTTER TAIL CORP.**			
	Otter Tail Power Co.	45.0%	0.0%	55.0%
19	**PINNACLE WEST CAPITAL**			
	Arizona Public Service Co.	47.2%	0.0%	52.8%
20	**PORTLAND GENERAL ELECTRIC**			
	Portland General Electric	54.4%	0.0%	45.6%
21	**PUB SV ENTERPRISE GRP**			
	Pub Service Electric & Gas Co.	44.8%	0.0%	55.2%
22	**SEMPRA ENERGY**			
	San Diego Gas & Electric	48.8%	0.0%	51.2%
	Oncor Electric Delivery	47.7%	0.0%	52.3%
23	**XCEL ENERGY, INC.**			
	Northern States Power Co. (MN)	46.6%	0.0%	53.4%
	Northern States Power Co. (WI)	46.8%	0.0%	53.2%
	Public Service Co. of Colorado	44.8%	0.0%	55.2%
	Southwestern Public Service Co.	45.8%	0.0%	54.2%
	Minimum	**37.0%**	**0.0%**	**37.4%**
	Maximum	**58.4%**	**4.2%**	**63.0%**
	Average	**48.6%**	**0.1%**	**51.2%**

(a) Data from most recent SEC Form 10-K Reports and FERC Form 1 Reports.

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		At Year-end 2024 (a)			Value Line Projected (b)		
	Company	**Debt**	**Preferred**	**Common Equity**	**Debt**	**Preferred**	**Common Equity**
1	Ameren Corp.	58.9%	0.0%	41.1%	51.0%	0.5%	48.5%
2	American Elec Pwr	61.2%	0.0%	38.8%	57.5%	0.0%	42.5%
3	Avista Corp.	50.7%	0.0%	49.3%	46.5%	0.0%	53.5%
4	Black Hills Corp.	54.2%	0.0%	45.8%	55.5%	0.0%	44.5%
5	CenterPoint Energy	65.7%	0.0%	34.3%	61.0%	0.0%	39.0%
6	CMS Energy Corp.	65.4%	0.9%	33.8%	62.5%	1.0%	36.5%
7	Dominion Energy	56.5%	1.4%	42.1%	55.0%	2.0%	43.0%
8	DTE Energy Co.	65.3%	0.0%	34.7%	61.0%	0.0%	39.0%
9	Duke Energy Corp.	61.2%	0.7%	38.1%	61.0%	1.5%	37.5%
10	Edison International	66.7%	3.1%	30.2%	63.5%	6.5%	30.0%
11	Entergy Corp.	64.5%	0.5%	35.0%	61.0%	0.0%	39.0%
12	Evergy Inc.	55.5%	0.0%	44.5%	53.5%	0.0%	46.5%
13	Eversource Energy	64.1%	0.0%	35.9%	61.5%	0.5%	38.0%
14	Exelon Corp.	62.5%	0.0%	37.5%	64.5%	0.0%	35.5%
15	IDACORP, Inc.	47.9%	0.0%	52.1%	49.5%	0.0%	50.5%
16	NorthWestern Energy Grp.	51.2%	0.0%	48.8%	50.5%	0.0%	49.5%
17	OGE Energy Corp.	52.1%	0.0%	47.9%	50.0%	0.0%	50.0%
18	Otter Tail Corp.	36.1%	0.0%	63.9%	42.5%	0.0%	57.5%
19	Pinnacle West Capital	56.4%	0.0%	43.6%	52.0%	0.0%	48.0%
20	Portland General Elec.	56.0%	0.0%	44.0%	54.0%	0.0%	46.0%
21	Pub Sv Enterprise Grp.	56.7%	0.0%	43.3%	56.0%	0.0%	44.0%
22	Sempra Energy	47.2%	1.3%	51.5%	55.0%	1.0%	44.0%
23	Xcel Energy Inc.	59.3%	0.0%	40.7%	61.0%	0.0%	39.0%
	Minimum	**36.1%**	**0.0%**	**30.2%**	**42.5%**	**0.0%**	**30.0%**
	Maximum	**66.7%**	**3.1%**	**63.9%**	**64.5%**	**6.5%**	**57.5%**
	Average	**57.2%**	**0.3%**	**42.5%**	**55.9%**	**0.6%**	**43.5%**

(a) SEC Form 10-K Reports.

(b) The Value Line Investment Survey (Nov. 8 and Dec. 6, 2024, Jan. 17, 2025).

DIVIDEND YIELD

	Company	(a) Price	(b) Dividends	Yield
1	Ameren Corp.	$ 91.24	$ 2.68	2.9%
2	American Elec Pwr	$ 95.01	$ 3.60	3.8%
3	Avista Corp.	$ 37.41	$ 1.90	5.1%
4	Black Hills Corp.	$ 61.25	$ 2.70	4.4%
5	CenterPoint Energy	$ 31.94	$ 0.84	2.6%
6	CMS Energy Corp.	$ 67.75	$ 2.06	3.0%
7	Dominion Energy	$ 55.70	$ 2.67	4.8%
8	DTE Energy Co.	$ 121.92	$ 4.36	3.6%
9	Duke Energy Corp.	$ 111.39	$ 4.18	3.8%
10	Edison International	$ 83.07	$ 3.36	4.0%
11	Entergy Corp.	$ 75.54	$ 2.40	3.2%
12	Evergy Inc.	$ 62.75	$ 2.61	4.2%
13	Eversource Energy	$ 60.20	$ 2.99	5.0%
14	Exelon Corp.	$ 37.89	$ 1.52	4.0%
15	IDACORP, Inc.	$ 114.12	$ 3.44	3.0%
16	NorthWestern Energy Grp.	$ 53.67	$ 2.64	4.9%
17	OGE Energy Corp.	$ 42.37	$ 1.69	4.0%
18	Otter Tail Corp.	$ 77.85	$ 1.87	2.4%
19	Pinnacle West Capital	$ 89.26	$ 3.61	4.0%
20	Portland General Elec.	$ 45.65	$ 2.08	4.6%
21	Pub Sv Enterprise Grp.	$ 88.44	$ 2.52	2.8%
22	Sempra Energy	$ 90.04	$ 2.58	2.9%
23	Xcel Energy Inc.	$ 69.38	$ 2.30	3.3%
	Average			**3.8%**

(a) Average of closing prices for 30 trading days ended Dec. 31, 2024.

(b) The Value Line Investment Survey, Summary & Index (Jan. 17, 2025).

GROWTH RATES

		(a)	(b)	(c)	(d)
		Earnings Growth			br+sv
	Company	V Line	IBES	Zacks	Growth
1	Ameren Corp.	6.5%	n/a	6.6%	6.9%
2	American Elec Pwr	6.5%	6.3%	6.0%	5.6%
3	Avista Corp.	5.5%	5.4%	5.4%	3.0%
4	Black Hills Corp.	4.0%	3.4%	3.4%	4.1%
5	CenterPoint Energy	6.5%	7.2%	7.1%	5.2%
6	CMS Energy Corp.	6.0%	7.6%	7.5%	5.8%
7	Dominion Energy	3.0%	21.2%	13.6%	4.7%
8	DTE Energy Co.	4.5%	10.6%	8.0%	6.5%
9	Duke Energy Corp.	5.0%	6.7%	6.3%	4.8%
10	Edison International	6.5%	8.4%	8.5%	6.5%
11	Entergy Corp.	0.5%	7.4%	8.4%	4.6%
12	Evergy Inc.	7.5%	6.2%	5.7%	3.6%
13	Eversource Energy	6.0%	n/a	5.5%	5.1%
14	Exelon Corp.	n/a	5.4%	5.7%	4.0%
15	IDACORP, Inc.	6.0%	n/a	8.3%	6.0%
16	NorthWestern Energy Grp.	4.5%	5.6%	6.1%	3.1%
17	OGE Energy Corp.	6.5%	5.3%	5.2%	3.3%
18	Otter Tail Corp.	4.5%	n/a	n/a	6.5%
19	Pinnacle West Capital	4.0%	5.9%	5.6%	4.3%
20	Portland General Elec.	5.5%	12.6%	12.3%	5.6%
21	Pub Sv Enterprise Grp.	6.5%	7.8%	7.8%	5.5%
22	Sempra Energy	6.0%	n/a	7.7%	6.2%
23	Xcel Energy Inc.	6.5%	6.8%	6.9%	5.7%

(a) The Value Line Investment Survey (Nov. 8 and Dec. 6, 2024, Jan. 17, 2025).
(b) LSEG Stock Reports Plus, as provided by fidelity.com (retrieved Jan. 23, 2025)
(c) www.zacks.com (retrieved Jan. 23, 2025).
(d) See AES Indiana Attachment AMM-6.

COST OF EQUITY ESTIMATES

	Company	(a) V Line	(a) IBES	(a) Zacks	(a) br+sv Growth
1	Ameren Corp.	9.4%	n/a	9.5%	9.9%
2	American Elec Pwr	10.3%	10.1%	9.8%	9.4%
3	Avista Corp.	10.6%	10.5%	10.4%	8.1%
4	Black Hills Corp.	8.4%	7.8%	7.8%	8.5%
5	CenterPoint Energy	9.1%	9.8%	9.7%	7.8%
6	CMS Energy Corp.	9.0%	10.6%	10.6%	8.9%
7	Dominion Energy	7.8%	26.0%	18.4%	9.5%
8	DTE Energy Co.	8.1%	14.2%	11.6%	10.1%
9	Duke Energy Corp.	8.8%	10.5%	10.1%	8.6%
10	Edison International	10.5%	12.4%	12.5%	10.6%
11	Entergy Corp.	3.7%	10.6%	11.6%	7.8%
12	Evergy Inc.	11.7%	10.4%	9.8%	7.8%
13	Eversource Energy	11.0%	n/a	10.5%	10.0%
14	Exelon Corp.	n/a	9.4%	9.7%	8.0%
15	IDACORP, Inc.	9.0%	n/a	11.3%	9.0%
16	NorthWestern Energy Grp.	9.4%	10.5%	11.1%	8.1%
17	OGE Energy Corp.	10.5%	9.3%	9.2%	7.3%
18	Otter Tail Corp.	6.9%	n/a	n/a	8.9%
19	Pinnacle West Capital	8.0%	9.9%	9.6%	8.4%
20	Portland General Elec.	10.1%	17.2%	16.8%	10.1%
21	Pub Sv Enterprise Grp.	9.3%	10.6%	10.6%	8.3%
22	Sempra Energy	8.9%	n/a	10.5%	9.0%
23	Xcel Energy Inc.	9.8%	10.1%	10.2%	9.1%
	Average (b)	**9.5%**	**10.4%**	**10.3%**	**8.9%**

(a) Sum of dividend yield (AES Indiana Attachment AMM-5, p. 1) and respective growth rate (AES Indiana A

(b) Excludes highlighted values.

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		(a)	(a)	(a)	(b)	(c)	(d)	(e)		(f)	(g)		
		2028					Adjustment			"sv" Factor			
	Company	EPS	DPS	BVPS	b	r	Factor	Adjusted r	br	s	v	sv	br + sv
1	Ameren Corp.	$6.00	$3.30	$52.65	45.0%	11.4%	1.0274	11.7%	5.3%	0.0299	0.5613	1.68%	6.9%
2	American Elec Pwr	$7.05	$4.16	$62.55	41.0%	11.3%	1.0201	11.5%	4.7%	0.0181	0.5094	0.92%	5.6%
3	Avista Corp.	$2.95	$2.20	$35.25	25.4%	8.4%	1.0187	8.5%	2.2%	0.0255	0.3286	0.84%	3.0%
4	Black Hills Corp.	$4.80	$3.00	$56.00	37.5%	8.6%	1.0292	8.8%	3.3%	0.0329	0.2533	0.83%	4.1%
5	CenterPoint Energy	$1.90	$1.01	$20.00	46.8%	9.5%	1.0304	9.8%	4.6%	0.0128	0.4667	0.60%	5.2%
6	CMS Energy Corp.	$4.00	$2.50	$30.00	37.5%	13.3%	1.0216	13.6%	5.1%	0.0119	0.6250	0.74%	5.8%
7	Dominion Energy	$4.05	$2.67	$36.35	34.1%	11.1%	1.0253	11.4%	3.9%	0.0176	0.4408	0.77%	4.7%
8	DTE Energy Co.	$8.90	$4.83	$63.10	45.7%	14.1%	1.0229	14.4%	6.6%	(0.0009)	0.6056	-0.05%	6.5%
9	Duke Energy Corp.	$7.60	$4.30	$70.00	43.4%	10.9%	1.0096	11.0%	4.8%	0.0019	0.4615	0.09%	4.8%
10	Edison International	$6.75	$4.00	$48.60	40.7%	13.9%	1.0357	14.4%	5.9%	0.0123	0.5371	0.66%	6.5%
11	Entergy Corp.	$8.05	$5.20	$84.65	35.4%	9.5%	1.0300	9.8%	3.5%	0.0268	0.4162	1.11%	4.6%
12	Evergy Inc.	$4.75	$3.05	$47.50	35.8%	10.0%	1.0124	10.1%	3.6%	0.0004	0.4242	0.02%	3.6%
13	Eversource Energy	$5.75	$3.60	$51.25	37.4%	11.2%	1.0277	11.5%	4.3%	0.0161	0.4605	0.74%	5.1%
14	Exelon Corp.	$3.10	$1.95	$29.75	37.1%	10.4%	1.0111	10.5%	3.9%	0.0021	0.4333	0.09%	4.0%
15	IDACORP, Inc.	$7.10	$4.20	$71.50	40.8%	9.9%	1.0264	10.2%	4.2%	0.0385	0.4704	1.81%	6.0%
16	NorthWestern Energy Grp	$4.25	$2.76	$51.85	35.1%	8.2%	1.0174	8.3%	2.9%	0.0111	0.2023	0.22%	3.1%
17	OGE Energy Corp.	$2.70	$1.85	$26.25	31.5%	10.3%	1.0126	10.4%	3.3%	(0.0001)	0.3000	0.00%	3.3%
18	Otter Tail Corp.	$4.25	$2.20	$34.25	48.2%	12.4%	1.0144	12.6%	6.1%	0.0082	0.5433	0.45%	6.5%
19	Pinnacle West Capital	$6.00	$3.80	$69.95	36.7%	8.6%	1.0353	8.9%	3.3%	0.0302	0.3493	1.05%	4.3%
20	Portland General Elec.	$3.85	$2.46	$41.00	36.1%	9.4%	1.0398	9.8%	3.5%	0.0551	0.3692	2.03%	5.6%
21	Pub Sv Enterprise Grp.	$5.10	$3.08	$40.50	39.6%	12.6%	1.0275	12.9%	5.1%	0.0064	0.5622	0.36%	5.5%
22	Sempra Energy	$6.30	$3.26	$59.50	48.3%	10.6%	1.0359	11.0%	5.3%	0.0193	0.4591	0.88%	6.2%
23	Xcel Energy Inc.	$4.55	$2.74	$41.90	39.8%	10.9%	1.0352	11.2%	4.5%	0.0268	0.4763	1.28%	5.7%

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		(a)	(a)	(h)	(a)	(a)	(h)	(i)	(a)	(a)		(j)	(a)	(a)	(i)
		2023			2028			Chg	2028				Common Shares		
	Company	Eq Ratio	Tot Cap	Com Eq	Eq Ratio	Tot Cap	Com Eq	Equity	High	Low	Avg.	M/B	2023	2028	Growth
1	Ameren Corp.	43.8%	$24,847	$10,883	48.5%	$29,500	$14,308	5.6%	$130.0	$110.0	$120.0	2.279	267.00	285.00	1.31%
2	American Elec Pwr	42.0%	$62,837	$26,392	42.5%	$75,900	$32,258	4.1%	$140.0	$115.0	$127.5	2.038	526.18	550.00	0.89%
3	Avista Corp.	48.8%	$5,091	$2,485	53.5%	$5,600	$2,996	3.8%	$65.0	$40.0	$52.5	1.489	78.08	85.00	1.71%
4	Black Hills Corp.	45.8%	$7,017	$3,214	44.5%	$9,675	$4,305	6.0%	$85.0	$65.0	$75.0	1.339	68.20	77.00	2.46%
5	CenterPoint Energy	35.5%	$27,226	$9,665	39.0%	$33,600	$13,104	6.3%	$45.0	$30.0	$37.5	1.875	631.23	653.00	0.68%
6	CMS Energy Corp.	33.1%	$22,114	$7,320	36.5%	$24,900	$9,089	4.4%	$90.0	$70.0	$80.0	2.667	294.40	301.00	0.44%
7	Dominion Energy	42.4%	$60,777	$25,769	43.0%	$77,150	$33,175	5.2%	$75.0	$55.0	$65.0	1.788	838.00	880.00	0.98%
8	DTE Energy Co.	38.0%	$26,282	$9,987	39.0%	$32,200	$12,558	4.7%	$185.0	$135.0	$160.0	2.536	206.36	206.00	-0.03%
9	Duke Energy Corp.	40.4%	$121,564	$49,112	37.5%	$144,100	$54,038	1.9%	$150.0	$110.0	$130.0	1.857	771.00	775.00	0.10%
10	Edison International	28.7%	$48,260	$13,851	30.0%	$66,000	$19,800	7.4%	$120.0	$90.0	$105.0	2.160	383.93	395.00	0.57%
11	Entergy Corp.	38.6%	$37,851	$14,610	39.0%	$50,555	$19,716	6.2%	$160.0	$130.0	$145.0	1.713	212.85	230.00	1.56%
12	Evergy Inc.	48.0%	$20,019	$9,609	46.5%	$23,400	$10,881	2.5%	$95.0	$70.0	$82.5	1.737	229.73	230.00	0.02%
13	Eversource Energy	37.0%	$38,285	$14,165	38.0%	$49,200	$18,696	5.7%	$110.0	$80.0	$95.0	1.854	349.54	365.00	0.87%
14	Exelon Corp.	39.1%	$65,837	$25,742	35.5%	$81,000	$28,755	2.2%	$60.0	$45.0	$52.5	1.765	999.00	1005.00	0.12%
15	IDACORP, Inc.	51.2%	$5,683	$2,910	50.5%	$7,500	$3,788	5.4%	$150.0	$120.0	$135.0	1.888	50.62	56.00	2.04%
16	NorthWestern Energy Grp	50.9%	$5,475	$2,787	49.5%	$6,700	$3,317	3.5%	$75.0	$55.0	$65.0	1.254	61.25	64.00	0.88%
17	OGE Energy Corp.	49.6%	$9,238	$4,582	50.0%	$10,400	$5,200	2.6%	$45.0	$30.0	$37.5	1.429	200.30	200.20	-0.01%
18	Otter Tail Corp.	58.5%	$2,148	$1,257	57.5%	$2,525	$1,452	2.9%	$85.0	$65.0	$75.0	2.190	41.71	42.50	0.38%
19	Pinnacle West Capital	45.0%	$13,718	$6,173	48.0%	$18,300	$8,784	7.3%	$125.0	$90.0	$107.5	1.537	113.42	125.00	1.96%
20	Portland General Elec.	44.2%	$7,513	$3,321	46.0%	$10,750	$4,945	8.3%	$75.0	$55.0	$65.0	1.585	101.16	120.00	3.47%
21	Pub Sv Enterprise Grp.	46.5%	$33,261	$15,466	44.0%	$46,300	$20,372	5.7%	$100.0	$85.0	$92.5	2.284	498.00	505.00	0.28%
22	Sempra Energy	49.2%	$56,454	$27,775	44.0%	$90,400	$39,776	7.4%	$125.0	$95.0	$110.0	1.849	631.43	665.00	1.04%
23	Xcel Energy Inc.	41.4%	$42,529	$17,607	39.0%	$64,225	$25,048	7.3%	$90.0	$70.0	$80.0	1.909	554.94	595.00	1.40%

(a) The Value Line Investment Survey (Nov. 8 and Dec. 6, 2024, Jan. 17, 2025).
(b) "b" is the retention ratio, computed as (EPS-DPS)/EPS.
(c) "r" is the rate of return on book equity, computed as EPS/BVPS.
(d) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).
(e) Product of average year-end "r" for 2028 and Adjustment Factor.
(f) Product of change in common shares outstanding and M/B Ratio.
(g) Computed as 1 - B/M Ratio.
(h) Product of total capital and equity ratio.
(i) Five-year rate of change.
(j) Average of High and Low expected market prices divided by 2028 BVPS.

UTILITY GROUP

		(a)	(b)		(c)		(d)		(e)	(f)	
		Market Return (R_m)									
	Company	**Div Yield**	**Proj. Growth**	**$R_{(m)}$**	**Risk-Free Rate**	**Risk Premium**	**Beta**	**Unadjusted CAPM**	**Market Cap**	**Size Adjustment**	**Adjusted CAPM**
1	Ameren Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	0.90	11.6%	$22,000	0.33%	11.9%
2	American Elec Pwr	1.6%	10.8%	12.4%	4.4%	8.0%	0.80	10.8%	$52,700	-0.01%	10.8%
3	Avista Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	0.95	12.0%	$2,900	1.00%	13.0%
4	Black Hills Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	1.05	12.8%	$4,100	0.74%	13.5%
5	CenterPoint Energy	1.6%	10.8%	12.4%	4.4%	8.0%	1.15	13.6%	$21,200	0.33%	13.9%
6	CMS Energy Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	0.85	11.2%	$20,800	0.33%	11.5%
7	Dominion Energy	1.6%	10.8%	12.4%	4.4%	8.0%	0.90	11.6%	$50,400	-0.01%	11.6%
8	DTE Energy Co.	1.6%	10.8%	12.4%	4.4%	8.0%	1.00	12.4%	$25,800	0.33%	12.7%
9	Duke Energy Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	0.90	11.6%	$90,400	-0.01%	11.6%
10	Edison International	1.6%	10.8%	12.4%	4.4%	8.0%	1.05	12.8%	$32,700	0.33%	13.1%
11	Entergy Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	1.00	12.4%	$32,700	0.33%	12.7%
12	Evergy Inc.	1.6%	10.8%	12.4%	4.4%	8.0%	0.95	12.0%	$13,600	0.49%	12.5%
13	Eversource Energy	1.6%	10.8%	12.4%	4.4%	8.0%	0.95	12.0%	$23,800	0.33%	12.3%
14	Exelon Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	n/a	n/a	$40,300	0.33%	n/a
15	IDACORP, Inc.	1.6%	10.8%	12.4%	4.4%	8.0%	0.85	11.2%	$5,400	0.74%	11.9%
16	NorthWestern Energy Grp.	1.6%	10.8%	12.4%	4.4%	8.0%	1.00	12.4%	$3,400	1.00%	13.4%
17	OGE Energy Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	1.10	13.2%	$8,000	0.50%	13.7%
18	Otter Tail Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	0.95	12.0%	$3,800	1.00%	13.0%
19	Pinnacle West Capital	1.6%	10.8%	12.4%	4.4%	8.0%	0.95	12.0%	$9,900	0.50%	12.5%
20	Portland General Elec.	1.6%	10.8%	12.4%	4.4%	8.0%	0.95	12.0%	$4,800	0.74%	12.7%
21	Pub Sv Enterprise Grp.	1.6%	10.8%	12.4%	4.4%	8.0%	0.95	12.0%	$45,000	0.33%	12.3%
22	Sempra Energy	1.6%	10.8%	12.4%	4.4%	8.0%	1.00	12.4%	$51,600	-0.01%	12.4%
23	Xcel Energy Inc.	1.6%	10.8%	12.4%	4.4%	8.0%	0.85	11.2%	$35,100	0.33%	11.5%
	Average							**12.1%**			**12.5%**

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from www.valueline.com (retrieved Dec. 31, 2024).

(b) Average of weighted average earnings growth rates from IBES, Value Line, and Zacks for dividend-paying stocks in the S&P 500 based on data from LSEG, as provided by fidelity.com (retrieved Dec. 31, 2024)., www.valueline.com (retrieved Dec. 31, 2024)., and www.zacks.com (retrieved Dec. 31, 2024). Eliminated growth rates that were greater than 20%, as well as all negative values.

(c) Average yield on 30-year Treasury bonds for six-months ending Dec. 2024 based on data from Moody's Investors Service.

(d) The Value Line Investment Survey, Summary & Index (Jan. 17, 2025).

(e) The Value Line Investment Survey (Nov. 8 and Dec. 6, 2024, Jan. 17, 2025).

(f) Kroll, 2024 CRSP Deciles Size Premium, Cost of Capital Navigator (2025).

UTILITY GROUP

		(a)	(b)		(c)		(d)		(e)	(d)				(f)	(g)	
		Market Return (R_m)														
		Div	**Proj.**	**Cost of**	**Risk-Free**	**Risk**	**Unadjusted RP**		**Beta Adjusted RP**				**Unadjusted**	**Market**	**Size**	**ECAPM**
	Company	**Yield**	**Growth**	**Equity**	**Rate**	**Premium**	**Weight**	***RP*** [1]	**Beta**	**Weight**	***RP*** [2]	**Total RP**	**K_e**	**Cap**	**Adjustment**	**Result**
1	Ameren Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.90	75%	5.4%	7.4%	11.8%	$22,000	0.33%	12.1%
2	American Elec Pwr	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.80	75%	4.8%	6.8%	11.2%	$52,700	-0.01%	11.2%
3	Avista Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.95	75%	5.7%	7.7%	12.1%	$2,900	1.00%	13.1%
4	Black Hills Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	1.05	75%	6.3%	8.3%	12.7%	$4,100	0.74%	13.4%
5	CenterPoint Energy	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	1.15	75%	6.9%	8.9%	13.3%	$21,200	0.33%	13.6%
6	CMS Energy Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.85	75%	5.1%	7.1%	11.5%	$20,800	0.33%	11.8%
7	Dominion Energy	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.90	75%	5.4%	7.4%	11.8%	$50,400	-0.01%	11.8%
8	DTE Energy Co.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	1.00	75%	6.0%	8.0%	12.4%	$25,800	0.33%	12.7%
9	Duke Energy Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.90	75%	5.4%	7.4%	11.8%	$90,400	-0.01%	11.8%
10	Edison International	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	1.05	75%	6.3%	8.3%	12.7%	$32,700	0.33%	13.0%
11	Entergy Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	1.00	75%	6.0%	8.0%	12.4%	$32,700	0.33%	12.7%
12	Evergy Inc.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.95	75%	5.7%	7.7%	12.1%	$13,600	0.49%	12.6%
13	Eversource Energy	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.95	75%	5.7%	7.7%	12.1%	$23,800	0.33%	12.4%
14	Exelon Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	n/a	75%	n/a	n/a	n/a	$40,300	0.33%	n/a
15	IDACORP, Inc.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.85	75%	5.1%	7.1%	11.5%	$5,400	0.74%	12.2%
16	NorthWestern Energy Grp	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	1.00	75%	6.0%	8.0%	12.4%	$3,400	1.00%	13.4%
17	OGE Energy Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	1.10	75%	6.6%	8.6%	13.0%	$8,000	0.50%	13.5%
18	Otter Tail Corp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.95	75%	5.7%	7.7%	12.1%	$3,800	1.00%	13.1%
19	Pinnacle West Capital	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.95	75%	5.7%	7.7%	12.1%	$9,900	0.50%	12.6%
20	Portland General Elec.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.95	75%	5.7%	7.7%	12.1%	$4,800	0.74%	12.8%
21	Pub Sv Enterprise Grp.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.95	75%	5.7%	7.7%	12.1%	$45,000	0.33%	12.4%
22	Sempra Energy	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	1.00	75%	6.0%	8.0%	12.4%	$51,600	-0.01%	12.4%
23	Xcel Energy Inc.	1.6%	10.8%	12.4%	4.4%	8.0%	25%	2.0%	0.85	75%	5.1%	7.1%	11.5%	$35,100	0.33%	11.8%
	Average (h)												**12.1%**			**12.6%**

(a) Weighted average for dividend-paying stocks in the S&P 500 based on data from LSEG, as provided by fidelity.com (retrieved Dec. 31, 2024).
(b) Average of weighted average earnings growth rates from IBES, Value Line, and Zacks for dividend-paying stocks in the S&P 500 based on data from LSEG, as provided by fidelity.com (retrieved Dec. 31, 2024)., www.valueline.com (retrieved Dec. 31, 2024)., and www.zacks.com (retrieved Dec. 31, 2024). Eliminated growth rates that were greater than 20%, as well as all negative values.
(c) Average yield on 30-year Treasury bonds for six-months ending based on data from https://fred.stlouisfed.org/.
(d) Roger A. Morin, *New Regulatory Finance* , Pub. Util. Reports, Inc. (2006) at 190.
(e) The Value Line Investment Survey, Summary & Index (Jan. 17, 2025).
(f) The Value Line Investment Survey (Nov. 8 and Dec. 6, 2024, Jan. 17, 2025).
(g) Kroll, 2024 CRSP Deciles Size Premium, Cost of Capital Navigator (2025).
(h) Excludes highlighted values.

COST OF EQUITY ESTIMATE

Current Equity Risk Premium	
(a) Avg. Yield over Study Period	7.74%
(b) Average Utility Bond Yield	5.50%
Change in Bond Yield	-2.24%
(c) Risk Premium/Interest Rate Relationship	-0.4212
Adjustment to Average Risk Premium	0.94%
(a) Average Risk Premium over Study Period	3.90%
Adjusted Risk Premium	**4.84%**

Implied Cost of Equity	
(b) Baa Utility Bond Yield	5.67%
Adjusted Equity Risk Premium	4.84%
Risk Premium Cost of Equity	**10.51%**

(a) AES Indiana Attachment AMM-9, page 2.
(b) Average bond yield on all utility bonds and 'Baa' subset for six-months ending Dec. 2024 based on data from Moody's Investors Service at www.credittrends.com.
(c) AES Indiana Attachment AMM-9, page 3.

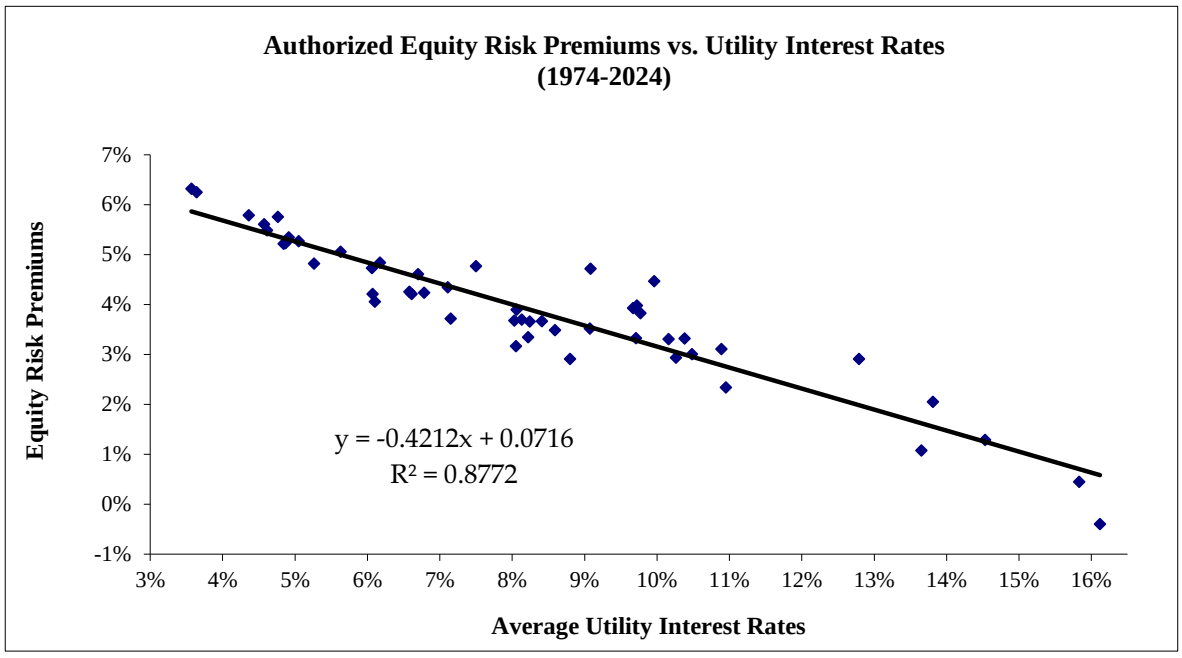
AUTHORIZED RETURNS

Year	(a) Allowed ROE	(b) Average Utility Bond Yield	Risk Premium
1974	13.10%	9.27%	3.83%
1975	13.20%	9.88%	3.32%
1976	13.10%	9.17%	3.93%
1977	13.30%	8.58%	4.72%
1978	13.20%	9.22%	3.98%
1979	13.50%	10.39%	3.11%
1980	14.23%	13.15%	1.08%
1981	15.22%	15.62%	-0.40%
1982	15.78%	15.33%	0.45%
1983	15.36%	13.31%	2.05%
1984	15.32%	14.03%	1.29%
1985	15.20%	12.29%	2.91%
1986	13.93%	9.46%	4.47%
1987	12.99%	9.98%	3.01%
1988	12.79%	10.45%	2.34%
1989	12.97%	9.66%	3.31%
1990	12.70%	9.76%	2.94%
1991	12.54%	9.21%	3.33%
1992	12.09%	8.57%	3.52%
1993	11.46%	7.56%	3.90%
1994	11.21%	8.30%	2.91%
1995	11.58%	7.91%	3.67%
1996	11.40%	7.74%	3.66%
1997	11.33%	7.63%	3.70%
1998	11.77%	7.00%	4.77%
1999	10.72%	7.55%	3.17%
2000	11.58%	8.09%	3.49%
2001	11.07%	7.72%	3.35%
2002	11.21%	7.53%	3.68%
2003	10.96%	6.61%	4.35%
2004	10.81%	6.20%	4.61%
2005	10.51%	5.67%	4.84%
2006	10.34%	6.08%	4.26%
2007	10.32%	6.11%	4.21%
2008	10.37%	6.65%	3.72%
2009	10.52%	6.28%	4.24%
2010	10.29%	5.56%	4.73%
2011	10.19%	5.13%	5.06%
2012	10.02%	4.26%	5.76%
2013	9.82%	4.55%	5.27%
2014	9.76%	4.41%	5.35%
2015	9.60%	4.37%	5.23%
2016	9.60%	4.11%	5.49%
2017	9.68%	4.07%	5.61%
2018	9.56%	4.34%	5.22%
2019	9.65%	3.86%	5.79%
2020	9.39%	3.07%	6.32%
2021	9.39%	3.14%	6.25%
2022	9.58%	4.76%	4.82%
2023	9.66%	5.60%	4.06%
2024	9.78%	5.57%	4.21%
Average	**11.64%**	**7.74%**	**3.90%**

(a) S&P Global Market Intelligence, *Major Rate Case Decisions*, RRA Regulatory Focus; *UtilityScope Regulatory Service*, Argus. Data for "general" rate cases (excluding limited-issue rider cases) beginning in 2006 (the first year such data presented by RRA).

(b) Moody's Investors Service.

REGRESSION RESULTS



EXPECTED EARNINGS APPROACH

UTILITY GROUP

	Company	(a) Expected Return on Common Equity	(b) Adjustment Factor	(c) Adjusted Return on Common Equity
1	Ameren Corp.	10.0%	1.0274	10.3%
2	American Elec Pwr	11.0%	1.0201	11.2%
3	Avista Corp.	8.5%	1.0187	8.7%
4	Black Hills Corp.	8.5%	1.0292	8.7%
5	CenterPoint Energy	9.5%	1.0304	9.8%
6	CMS Energy Corp.	13.5%	1.0216	13.8%
7	Dominion Energy	11.0%	1.0253	11.3%
8	DTE Energy Co.	12.5%	1.0229	12.8%
9	Duke Energy Corp.	9.0%	1.0096	9.1%
10	Edison International	14.0%	1.0357	14.5%
11	Entergy Corp.	9.5%	1.0300	9.8%
12	Evergy Inc.	10.0%	1.0124	10.1%
13	Eversource Energy	11.0%	1.0277	11.3%
14	Exelon Corp.	10.0%	1.0111	10.1%
15	IDACORP, Inc.	9.0%	1.0264	9.2%
16	NorthWestern Energy Grp.	8.0%	1.0174	8.1%
17	OGE Energy Corp.	13.0%	1.0126	13.2%
18	Otter Tail Corp.	11.5%	1.0144	11.7%
19	Pinnacle West Capital	8.5%	1.0353	8.8%
20	Portland General Elec.	9.5%	1.0398	9.9%
21	Pub Sv Enterprise Grp.	12.5%	1.0275	12.8%
22	Sempra Energy	10.5%	1.0359	10.9%
23	Xcel Energy Inc.	11.0%	1.0352	11.4%
	Average (d)	**10.5%**		**10.8%**

(a) The Value Line Investment Survey (Nov. 8 and Dec. 6, 2024, Jan. 17, 2025).
(b) Adjustment to convert year-end return to an average rate of return from AES Indiana Attachment AMM-6.
(c) (a) x (b).
(d) Excludes highlighted values.

			(a)	(b)	
	Company	**Industry Group**	**Price**	**Dividends**	**Yield**
1	Abbott Labs.	Med Supp Non-Invasive	$115.37	$ 2.20	1.9%
2	AbbVie Inc.	Drug	$175.85	$ 6.20	3.5%
3	Air Products & Chem.	Chemical (Diversified)	$314.50	$ 7.08	2.3%
4	Alphabet Inc.	Internet	$183.50	$ 0.84	0.5%
5	Amdocs Ltd.	IT Services	$86.36	$ 1.92	2.2%
6	Amgen	Biotechnology	$273.70	$ 9.30	3.4%
7	Apple Inc.	Computers/Peripherals	$243.99	$ 1.00	0.4%
8	AptarGroup	Packaging & Container	$166.78	$ 1.80	1.1%
9	Becton, Dickinson	Med Supp Invasive	$224.35	$ 3.96	1.8%
10	Bristol-Myers Squibb	Drug	$57.81	$ 2.28	3.9%
11	Brown & Brown	Financial Svcs. (Div.)	$106.95	$ 0.60	0.6%
12	Brown-Forman 'B'	Beverage	$41.83	$ 0.96	2.3%
13	Church & Dwight	Household Products	$107.94	$ 1.14	1.1%
14	Cisco Systems	Telecom. Equipment	$58.81	$ 1.60	2.7%
15	CME Group	Brokers & Exchanges	$235.54	$ 4.60	2.0%
16	Coca-Cola	Beverage	$63.03	$ 2.02	3.2%
17	Colgate-Palmolive	Household Products	$93.78	$ 2.00	2.1%
18	Comcast Corp.	Cable TV	$40.62	$ 1.24	3.1%
19	Conagra Brands	Food Processing	$27.50	$ 1.44	5.2%
20	Costco Wholesale	Retail Store	$964.38	$ 4.92	0.5%
21	Danaher Corp.	Med Supp Non-Invasive	$233.38	$ 1.17	0.5%
22	Electronic Arts	Entertainment Tech	$159.32	$ 0.80	0.5%
23	Gallagher (Arthur J.)	Financial Svcs. (Div.)	$293.71	$ 2.50	0.9%
24	Gen'l Mills	Food Processing	$64.91	$ 2.46	3.8%
25	Gilead Sciences	Drug	$91.81	$ 3.08	3.4%
26	Hershey Co.	Food Processing	$175.31	$ 5.72	3.3%
27	Home Depot	Retail Building Supply	$411.82	$ 9.00	2.2%
28	Hormel Foods	Food Processing	$31.80	$ 1.13	3.6%
29	IDEX Corp.	Machinery	$223.03	$ 2.90	1.3%
30	Int'l Business Mach.	Computer Software	$225.50	$ 6.71	3.0%
31	Johnson & Johnson	Drug	$149.33	$ 5.11	3.4%
32	Kimberly-Clark	Household Products	$134.39	$ 4.88	3.6%
33	Lilly (Eli)	Drug	$782.16	$ 5.20	0.7%
34	Lockheed Martin	Aerospace/Defense	$508.07	$ 13.20	2.6%
35	Marsh & McLennan	Financial Svcs. (Div.)	$220.35	$ 3.26	1.5%
36	McDonald's Corp.	Restaurant	$294.26	$ 7.08	2.4%
37	McKesson Corp.	Med Supp Non-Invasive	$596.17	$ 2.84	0.5%
38	Merck & Co.	Drug	$100.26	$ 3.08	3.1%
39	Microsoft Corp.	Computer Software	$433.32	$ 3.41	0.8%
40	Mondelez Int'l	Food Processing	$62.39	$ 1.88	3.0%
41	NewMarket Corp.	Chemical (Specialty)	$536.46	$ 10.00	1.9%
42	Northrop Grumman	Aerospace/Defense	$480.29	$ 8.65	1.8%
43	PepsiCo, Inc.	Beverage	$157.59	$ 5.50	3.5%
44	Procter & Gamble	Household Products	$172.39	$ 4.03	2.3%
45	Progressive Corp.	Insurance (Prop/Cas.)	$252.30	$ 0.40	0.2%
46	Republic Services	Environmental	$210.27	$ 2.32	1.1%
47	Roper Tech.	Computer Software	$545.63	$ 3.32	0.6%
48	Smucker (J.M.)	Food Processing	$113.68	$ 4.32	3.8%
49	Texas Instruments	Semiconductor	$194.07	$ 5.44	2.8%
50	Thermo Fisher Sci.	Med Supp Non-Invasive	$523.22	$ 1.56	0.3%
51	Travelers Cos.	Insurance (Prop/Cas.)	$252.00	$ 4.20	1.7%
52	UnitedHealth Group	Medical Services	$551.86	$ 8.40	1.5%
53	Verizon Communic.	Telecom. Services	$41.88	$ 2.71	6.5%
54	Walmart Inc.	Retail Store	$92.10	$ 0.83	0.9%
55	Waste Management	Environmental	$215.63	$ 3.00	1.4%
					2.1%

(a) Average of closing prices for 30 trading days ended Dec. 31, 2024.
(b) The Value Line Investment Survey, *Summary & Index* (Jan. 3, 2025).

		(a)	(b)	(c)
		Earnings Growth		
	Company	**V Line**	**IBES**	**Zacks**
1	Abbott Labs.	6.30%	8.30%	9.10%
2	AbbVie Inc.	15.70%	7.40%	8.30%
3	Air Products & Chem.	17.00%	6.30%	7.79%
4	Alphabet Inc.	11.25%	21.90%	17.83%
5	Amdocs Ltd.	6.45%	8.00%	9.69%
6	Amgen	23.00%	4.50%	4.81%
7	Apple Inc.	10.00%	14.20%	13.74%
8	AptarGroup	7.75%	10.80%	10.79%
9	Becton, Dickinson	18.00%	8.90%	9.57%
10	Bristol-Myers Squibb	3.50%	-5.10%	4.00%
11	Brown & Brown	5.00%	10.40%	11.62%
12	Brown-Forman 'B'	4.00%	0.11%	4.53%
13	Church & Dwight	4.60%	9.00%	8.68%
14	Cisco Systems	4.60%	4.00%	4.52%
15	CME Group	11.20%	5.10%	4.85%
16	Coca-Cola	3.75%	5.60%	6.16%
17	Colgate-Palmolive	4.75%	8.40%	7.48%
18	Comcast Corp.	5.65%	7.50%	6.21%
19	Conagra Brands	3.00%	0.19%	6.00%
20	Costco Wholesale	22.50%	10.30%	9.30%
21	Danaher Corp.	9.00%	6.00%	6.68%
22	Electronic Arts	7.50%	12.90%	13.11%
23	Gallagher (Arthur J.)	11.00%	10.70%	n/a
24	Gen'l Mills	5.35%	2.50%	3.62%
25	Gilead Sciences	5.00%	6.40%	9.41%
26	Hershey Co.	12.00%	-1.80%	4.61%
27	Home Depot	21.65%	3.70%	6.28%
28	Hormel Foods	2.25%	7.80%	6.41%
29	IDEX Corp.	10.80%	12.00%	12.00%
30	Int'l Business Mach.	13.00%	3.80%	4.40%
31	Johnson & Johnson	11.75%	3.50%	5.85%
32	Kimberly-Clark	9.30%	6.70%	6.11%
33	Lilly (Eli)	34.00%	65.20%	20.00%
34	Lockheed Martin	46.00%	4.10%	4.55%
35	Marsh & McLennan	11.50%	9.70%	9.57%
36	McDonald's Corp.	16.90%	4.50%	6.39%
37	McKesson Corp.	46.00%	14.80%	14.14%
38	Merck & Co.	12.00%	93.10%	9.00%
39	Microsoft Corp.	20.25%	14.00%	14.58%
40	Mondelez Int'l	4.50%	4.50%	5.59%
41	NewMarket Corp.	44.30%	n/a	n/a
42	Northrop Grumman	38.00%	8.40%	19.11%
43	PepsiCo, Inc.	10.50%	6.20%	6.46%
44	Procter & Gamble	7.85%	6.60%	6.71%
45	Progressive Corp.	17.00%	40.40%	27.36%
46	Republic Services	9.05%	9.00%	10.15%
47	Roper Tech.	25.50%	8.50%	10.50%
48	Smucker (J.M.)	11.00%	4.10%	3.32%
49	Texas Instruments	9.75%	-3.40%	9.00%
50	Thermo Fisher Sci.	24.55%	5.90%	6.49%
51	Travelers Cos.	26.20%	16.40%	11.20%
52	UnitedHealth Group	42.00%	11.40%	12.34%
53	Verizon Communic.	5.25%	1.30%	2.53%
54	Walmart Inc.	3.75%	10.70%	8.52%
55	Waste Management	9.50%	12.40%	12.35%

(a) www.valueline.com (retrieved Jan. 3, 2025).

(b) LSEG Stock Reports Plus, as provided by fidelity.com (retrieved Jan. 3, 2025).

(c) www.zacks.com (retrieved Jan. 3, 2025).

DCF COST OF EQUITY ESTIMATES

		(a)	(b)	(c)
	Company	**V Line**	**IBES**	**Zacks**
1	Abbott Labs.	8.2%	10.2%	11.0%
2	AbbVie Inc.	19.2%	10.9%	11.8%
3	Air Products & Chem.	19.3%	8.6%	10.0%
4	Alphabet Inc.	11.7%	22.4%	18.3%
5	Amdocs Ltd.	8.7%	10.2%	11.9%
6	Amgen	26.4%	7.9%	8.2%
7	Apple Inc.	10.4%	14.6%	14.1%
8	AptarGroup	8.8%	11.9%	11.9%
9	Becton, Dickinson	19.8%	10.7%	11.3%
10	Bristol-Myers Squibb	7.4%	-1.2%	7.9%
11	Brown & Brown	5.6%	11.0%	12.2%
12	Brown-Forman 'B'	6.3%	2.4%	6.8%
13	Church & Dwight	5.7%	10.1%	9.7%
14	Cisco Systems	7.3%	6.7%	7.2%
15	CME Group	13.2%	7.1%	6.8%
16	Coca-Cola	7.0%	8.8%	9.4%
17	Colgate-Palmolive	6.9%	10.5%	9.6%
18	Comcast Corp.	8.7%	10.6%	9.3%
19	Conagra Brands	8.2%	5.4%	11.2%
20	Costco Wholesale	23.0%	10.8%	9.8%
21	Danaher Corp.	9.5%	6.5%	7.2%
22	Electronic Arts	8.0%	13.4%	13.6%
23	Gallagher (Arthur J.)	11.9%	11.6%	n/a
24	Gen'l Mills	9.1%	6.3%	7.4%
25	Gilead Sciences	8.4%	9.8%	12.8%
26	Hershey Co.	15.3%	1.5%	7.9%
27	Home Depot	23.8%	5.9%	8.5%
28	Hormel Foods	5.8%	11.4%	10.0%
29	IDEX Corp.	12.1%	13.3%	13.3%
30	Int'l Business Mach.	16.0%	6.8%	7.4%
31	Johnson & Johnson	15.2%	6.9%	9.3%
32	Kimberly-Clark	12.9%	10.3%	9.7%
33	Lilly (Eli)	34.7%	65.9%	20.7%
34	Lockheed Martin	48.6%	6.7%	7.1%
35	Marsh & McLennan	13.0%	11.2%	11.0%
36	McDonald's Corp.	19.3%	6.9%	8.8%
37	McKesson Corp.	46.5%	15.3%	14.6%
38	Merck & Co.	15.1%	96.2%	12.1%
39	Microsoft Corp.	21.0%	14.8%	15.4%
40	Mondelez Int'l	7.5%	7.5%	8.6%
41	NewMarket Corp.	46.2%	n/a	n/a
42	Northrop Grumman	39.8%	10.2%	20.9%
43	PepsiCo, Inc.	14.0%	9.7%	10.0%
44	Procter & Gamble	10.2%	8.9%	9.0%
45	Progressive Corp.	17.2%	40.6%	27.5%
46	Republic Services	10.2%	10.1%	11.3%
47	Roper Tech.	26.1%	9.1%	11.1%
48	Smucker (J.M.)	14.8%	7.9%	7.1%
49	Texas Instruments	12.6%	-0.6%	11.8%
50	Thermo Fisher Sci.	24.8%	6.2%	6.8%
51	Travelers Cos.	27.9%	18.1%	12.9%
52	UnitedHealth Group	43.5%	12.9%	13.9%
53	Verizon Communic.	11.7%	7.8%	9.0%
54	Walmart Inc.	4.7%	11.6%	9.4%
55	Waste Management	10.9%	13.8%	13.7%
	Average (b)	**11.0%**	**10.8%**	**10.8%**

(a) Sum of dividend yield (p. 1) and respective growth rate (p. 2).
(b) Excludes highlighted figures.