COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Certain Regulatory And Accounting Treatments; and (4) All Other Required Approvals And Relief	))))))	Case No. 2025-00257

REBUTTAL TESTIMONY OF

ADRIEN M. MCKENZIE, CFA

ON BEHALF OF KENTUCKY POWER COMPANY

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LIST OF EXHIBITS

Exhibit No.	Description
AMM-13	Implied Cost of Equity—Commission Approved ROEs
AMM-14	Implied Cost of Equity—National Authorized ROEs
AMM-15	Expected Earnings Approach

I. INTRODUCTION

Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

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

Q2. ARE YOU THE SAME ADRIEN M. MCKENZIE THAT PREVIOUSLY SUBMITTED PRE-FILED DIRECT TESTIMONY IN THIS CASE?

A2. Yes, I am.

Q3. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A3. My purpose is to respond to the testimony of Mr. Richard Baudino, submitted on behalf of the Kentucky Office of the Attorney General and Kentucky Industrial Utility Customers, Inc. ("OAG-KIUC"), concerning the fair rate of return on equity ("ROE") that Kentucky Power Company ("Kentucky Power" or the "Company") should be authorized to earn on its investment in providing electric service. I also address the ROE comments of Roger D. Colton, made on behalf of Joint Intervenors Appalachian Citizens Law Center, Kentuckians for the Commonwealth, Kentucky Solar Energy Society, and Mountain Association ("JI").

Q4. ARE YOU SPONSORING ANY EXHIBITS?

A4. Yes. I am sponsoring the following exhibits:

- Exhibit AMM-13 Implied Cost of Equity—Commission Approved ROEs
- Exhibit AMM-14 Implied Cost of Equity—National Authorized ROEs
- Exhibit AMM-15 Expected Earnings Approach

A. Overview and Summary

Q5. WHAT ROE IS MR. BAUDINO RECOMMENDING FOR KENTUCKY POWER?

A5. Mr. Baudino recommends a 9.50% ROE for the Company, based on a recommended range of 8.90% to 10.00%.[1]

Q6. WHAT ARE THE PRINCIPAL CONCLUSIONS OF YOUR REBUTTAL TESTIMONY?

A6. Mr. Baudino's ROE recommendation falls below a fair and reasonable level for Kentucky Power's utility operations. My rebuttal testimony demonstrates that:

- Mr. Baudino's recommended ROE violates economic logic, especially in light of the recent increase in capital costs.
- The ROE recommendation of OAG-KIUC fails to meet regulatory standards.
- Kentucky Power must be granted an opportunity to earn a return that is competitive with other utilities and reflects a significant increase in long-term capital costs. Consideration of current interest rates and allowed ROEs for other electric utilities demonstrates that Mr. Baudino's ROE recommendation is far too low.
    - Capital market trends support the conclusion that the cost of equity is higher than the 9.75% established for Kentucky Power in 2024.
    - While Kentucky Power's allowed ROE increased as of the Company's last rate case, it does not yet fully reflect the higher capital cost environment that has prevailed since 2021.
    - Adjusting national average allowed ROEs to account for the recent rise in bond yields implies a cost of equity for Kentucky Power of 10.26%.
- Numerous flaws undermine Mr. Baudino's ROE analyses, including:

[1] Baudino Direct at 33.

- Reliance on a range of backward-looking data that fails to reflect investors' expectations and current capital market conditions.
- Application of financial models in a manner that is inconsistent with their underlying assumptions.
- Failure to evaluate model inputs and exclude illogical results.
- Applications of the CAPM that fail to capture a realistic appraisal of investors' forward-looking expectations and ignore the implications of firm size, which biases the resulting cost of equity estimates downward.

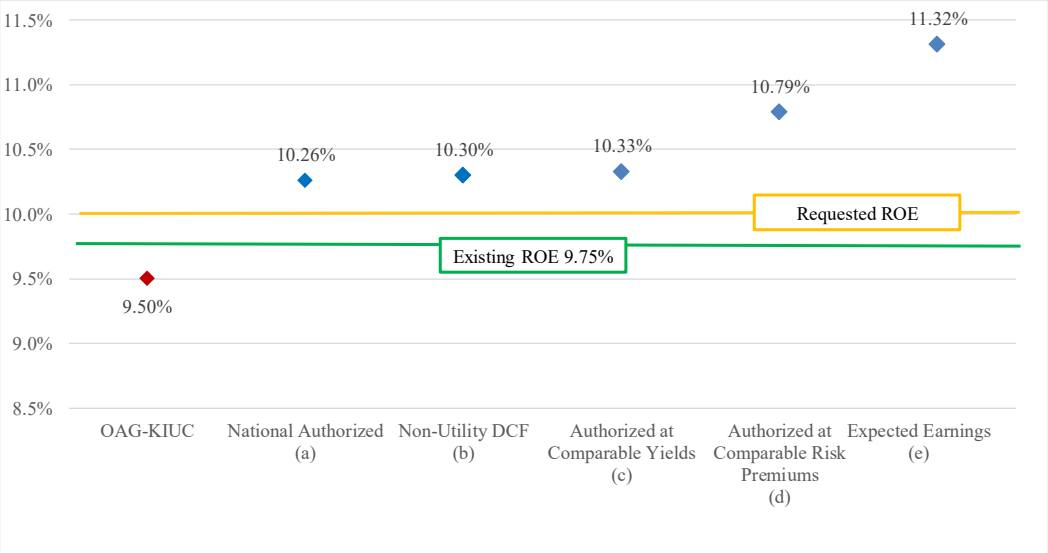
- There is no basis to assume that investors reference long-term forecasts of Gross Domestic Product ("GDP") in developing their expectations for utilities and Mr. Baudino's reference to this data should be rejected.
- Mr. Baudino's failure to incorporate a flotation cost adjustment contradicts the findings of the financial literature and the economic requirements underlying a fair rate of return on equity.

Finally, OAG-KIUC's criticisms of my size adjustment, market return calculation, expected earnings approach, and non-utility DCF analysis are without merit. Taken as a whole, these shortcomings ensure that Mr. Baudino's 9.50% ROE recommendation falls below a fair and reasonable level for the Company's utility operations.

Q7. CAN YOU SUMMARIZE HOW MR. BAUDINO'S ROE RECOMMENDATION STACKS UP AGAINST COMPARABLE BENCHMARKS?

A7. Yes. Figure AMM-R1 below compares OAG-KIUC's ROE recommendation to the benchmarks supported in my rebuttal testimony.

FIGURE AMM-R1
ROE BENCHMARK COMPARISON



(a) Average of national allowed ROEs for 2020-2025Q3 adjusted for current interest rates from Exhibit AMM-14.
(b) Average Non-Utility DCF ROE from McKenzie Direct at Exhibit AMM-12.
(c) Average authorized ROE under comparable capital market conditions from Figure AMM-R7.
(d) Average authorized ROE at comparable equity risk premiums from Figure AMM-R8.
(e) Expected earned rates of return for AG-KIUC's proxy group from Exhibit AMM-15.

As illustrated above, Mr. Baudino's 9.50% ROE recommendation falls 69 basis points below national average authorized ROEs, once adjusted for current interest rates, and 85 basis points below the ROEs that were being authorized under similar capital market conditions. These benchmarks, which are discussed subsequently in detail, demonstrate illustrate that OAG-KIUC's ROE recommendation violates the economic and regulatory standards underlying a fair ROE, while confirming that the 10.00% ROE requested by Kentucky Power is conservative.

B. Mr. Baudino's ROE Recommendation Violates Economic Logic

Q8. WHAT IS THE BASIC CONCEPTUAL FRAMEWORK UNDERLYING THE COST OF CAPITAL?

A8. The cost of equity is an "opportunity cost," meaning that investors look at other options they have in the capital markets in order to determine the cost they require

to invest in common equity, including electric utilities like Kentucky Power. When the returns available from other opportunities—like utility bonds—move higher, investors naturally demand a higher return for common stocks as well. The cost of equity is higher than the yield on utility bonds because the risks of common stocks are much higher than bonds, but the cost of equity and the cost of long-term debt move in the same direction.[2]

Q9. ARE THERE AVAILABLE BENCHMARKS FOR GENERAL CHANGES IN CAPITAL COSTS?

A9. Yes. Yields on 30-year Treasury bonds are generally accepted as a guide to the risk-free rate. While yields on long-term Treasury bonds can be impacted by monetary policy (e.g., quantitative easing) or a flight to safety in times of turmoil, they provide an observable benchmark for underlying trends in capital costs. Similarly, utility bonds are actively traded in the debt markets and the resulting yields offer a touchstone for the direction and magnitude of the return utilities must offer to attract capital. Although not specific to long-term capital costs, the target range for the Federal Funds rate established by the Federal Reserve is also widely followed by investors as a metric for monetary policies and underlying capital market conditions.

Q10. DOES MR. BAUDINO AGREE THAT BOND YIELD AVERAGES AND THE FEDERAL FUNDS RATE ARE RELEVANT INDICATORS IN EVALUATING THE COST OF CAPITAL?

A10. Yes. For example, Mr. Baudino references Treasury yields, utility bond yields and the Federal Funds rate extensively in his testimony.[3] Mr. Baudino also lists "current level of interest rates" as among "Certain key factors in the economy

[2] This is no different than the interest rates on car loans or home mortgages, which generally move in the same direction as market yields on other financial instruments, such as Treasury bonds.
[3] Baudino Direct at 6-9, 11, 26, 30, 40, 47-48, Figure 1, Exhibit RAB-4.

[that] are important influences on the current investor required ROE."[4] In addition, Mr. Baudino has the following discussion in his testimony:

> **Q. Does the level of interest rates affect the allowed ROE for regulated utilities?**
>
> A. Generally, yes. The common stock of regulated utilities tends to be interest rate sensitive. This means that the cost of equity for regulated utilities tends to rise and fall with changes in interest rates. For example, as interest rates rise, the cost of equity will also rise, and vice versa when interest rates fall.[5]

Q11. HOW HAVE THESE KEY INDICATORS OF CAPITAL COSTS TRENDED IN RECENT YEARS?

A11. Figure AMM-R2 below illustrates the changes in key capital cost indicators that have taken place since 2021.

FIGURE AMM-R2
KEY CAPITAL COST INDICATORS

	2021	November 2025	Change (bp)
Bond Yields			
10-Yr. Treasury Yield	1.44%	4.09%	265
30-Yr. Treasury Yield	2.05%	4.70%	265
Baa Utility Bond Yield	3.35%	5.83%	248
Average	**2.28%**	**4.87%**	**259**
Federal Funds Rate	**0.13%**	**3.88%**	**375**

Sources: https://fred.stlouisfed.org/; Moody's Investors Service; https://www.federalreserve.gov/monetarypolicy.htm.

As shown above, key interest rate benchmarks cited by OAG-KIUC witness Baudino indicate that investors' required return on debt securities has increased on the order of 248 to 265 basis points, while the midpoint of the

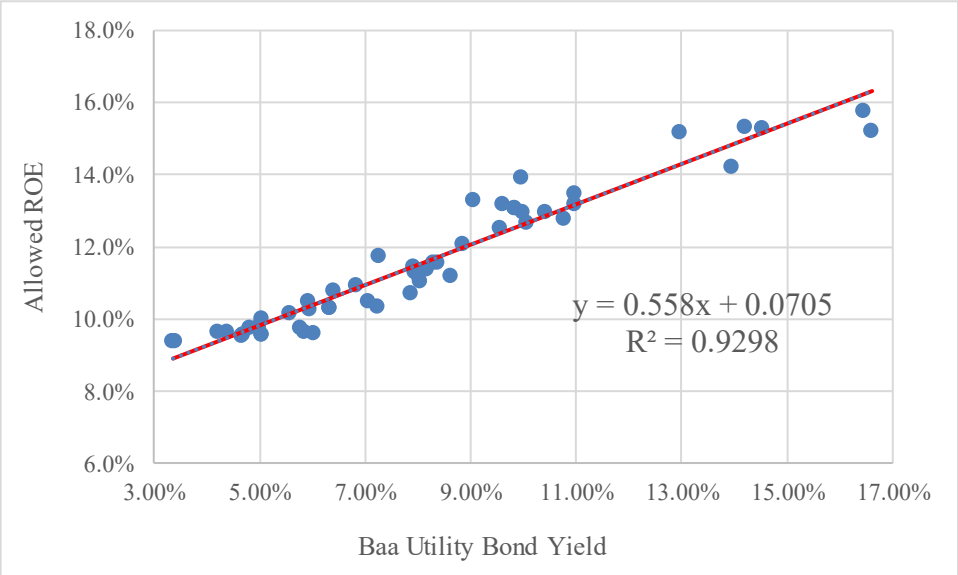
[4] *Id.* at 5.
[5] *Id.*

Federal Reserve's target range for the federal funds rate has increased by 375 basis points.

Q12. DO AUTHORIZED ROES EXHIBIT A STRONG POSITIVE RELATIONSHIP WITH BOND YIELDS?

A12. Yes. This relationship is confirmed by the data underlying my risk premium study, which shows a positive relationship between allowed ROEs and average utility bond yields from 1974 to 2024.[6] The allowed ROE and utility bond yield data from Exhibit AMM-9 to my direct testimony, updated to reflect 2025, is displayed below.

FIGURE AMM-R3
ALLOWED ROES AND UTILITY BOND YIELDS (1974 – Q3 2025)



Source: Exhibit AMM-9 at 2; S&P Global Market Intelligence, *Major Rate Case Decisions* , RRA Regulatory Focus (Nov. 11, 2025); Moody's Credittrends.

[6] McKenzie Direct at Exhibit AMM-9.

As the data displayed above indicates, on average allowed ROEs for electric utilities increase approximately 56 basis points with each 100 basis point increase in Baa utility bond yields.[7]

Q13. ARE NATIONAL AUTHORIZED ROES FROM 2022 TO 2025 SIGNIFICANTLY LOWER THAN IN PRIOR YEARS, AFTER CONTROLLING FOR CAPITAL COSTS?

A13. Yes. This finding is confirmed and measured by adding a dummy variable for years 2022 to 2025 to the equation illustrated in Figure AMM-R3, with allowed ROE as the dependent variable and average utility bond yields as the other independent variable.[8] This regression specification captures the effect on allowed ROEs of the period 2022 to 2025, and resulted in the following coefficient estimates:

$$\text{Allowed ROE} = 0.072 + 0.546(\text{Average Utility Bond Yield}) - 0.0063(2022 \text{ to } 2025)$$

The coefficient of –0.0063 associated with the dummy variable demonstrates that national authorized ROEs from the 2022 to 2025 time period are approximately 63 basis points lower than in the previous period, after controlling for changes in utility bond yields. As before, both coefficient estimates are statistically significant at a level exceeding 99%, and the higher regression R-Square value of 0.94 shows that allowed ROEs from 1974 to 2025 are even better explained when the post-2021 period is accounted for. These

[7] This relationship is statistically significant at a level exceeding 99%, indicating very high statistical reliability, and the regression R-Square value of 0.93 reveals that almost all of the movement in allowed ROEs over this time period is explained by changing bond yields.

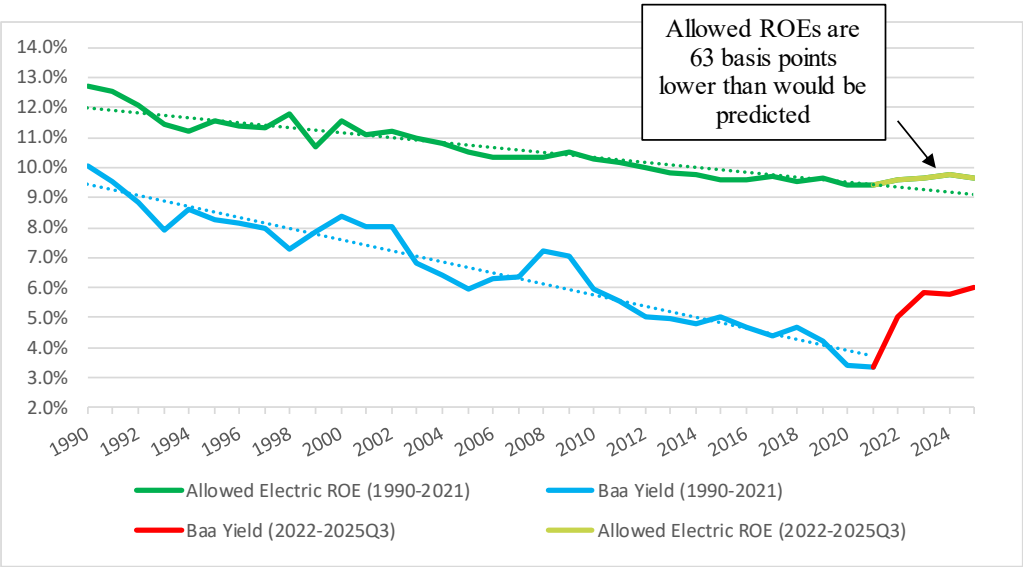
[8] In regression analysis, a "dummy variable" is a simple binary variable that captures the effect of the presence or absence of a particular attribute. In the present case, the dummy variable captures the effect of being in the 2022 to 2025 time period, or not.

regression results demonstrate that authorized ROEs have been lower since 2021 after controlling for capital costs, and by a substantial margin.

Q14. CAN YOU ILLUSTRATE THE DISCONNECT BETWEEN RECENTLY ALLOWED ROES FOR ELECTRIC UTILITIES AND UNDERLYING CAPITAL COSTS?

A14. Yes. The disconnect between recently allowed ROEs and the upward trend in capital costs documented in Figure AMM-R2 is illustrated in the figure below.

FIGURE AMM-R4
TRENDS IN AUTHORIZED ELECTRIC ROES AND BOND YIELDS



Source: Allowed ROEs from Exhibit AMM-9, page 2, updated to reflect data through Q3 2025. Baa utility bond yields from Moody's Investors Service.

As shown above, national authorized ROEs for electric utilities (green line) declined steadily from 1990 until 2021, in line with falling interest rates (blue line), but by a lesser degree. This is consistent with the regression evidence, which shows that allowed ROEs mirror approximately 56% of the movement in utility bond yields. As discussed in my direct testimony and in greater detail

below,[9] financial research also supports the conclusion that equity risk premiums and interest rates are inversely related, which is apparent in the figure above.

As the chart above demonstrates, the upward shift in capital costs that began in 2022 has been swift and dramatic. While it took 22 years for interest rates to fall by one-half,[10] the Baa utility bond yield almost doubled in just 22 months.[11] Figure AMM-4R also clearly shows that allowed ROEs have made only a slight move upward since 2021, and do not currently reflect the sharp increase in utility bond yields that has occurred since early 2022.

Q15. HAVE ROES APPROVED FOR ELECTRIC UTILITIES IN KENTUCKY KEPT PACE WITH THE INCREASE IN CAPITAL COSTS THAT BEGAN IN 2022?

A15. No. This can be seen in Exhibit AMM-13, which shows that approved ROEs have not kept pace with observable changes in capital costs. Specifically, Duke Energy Kentucky, Inc.'s ROE increased only 50 basis points over a period during which average Baa utility bond yields increased 210 basis points.[12] Similarly, the ROE approved for Kentucky Power increased only 45 basis points despite the fact that Baa utility yields increased 282 basis points.

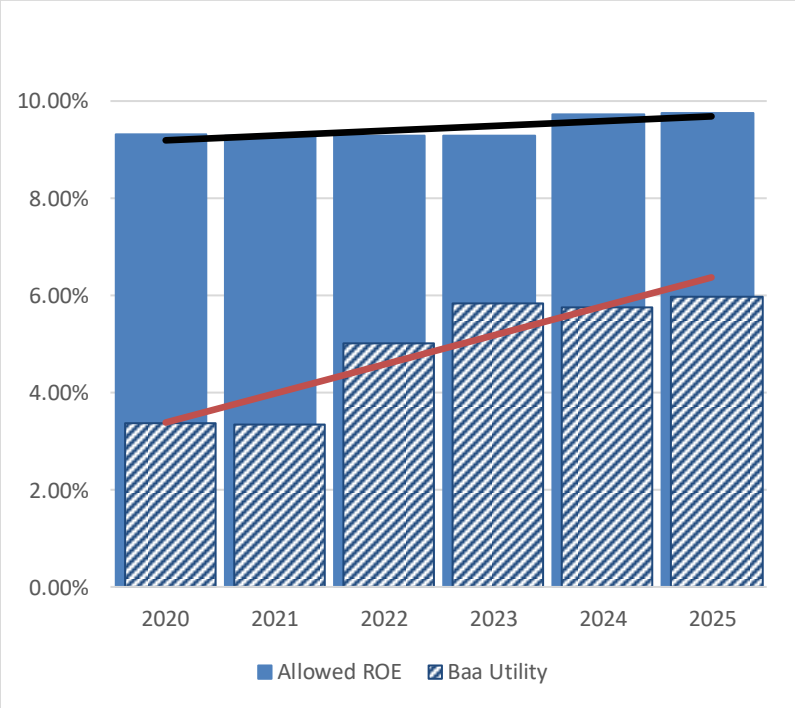
This exhibit shows that ROEs have increased an average of 48 basis points over periods when utility bond yields have increased 246 basis points, on average. This evidence suggests that ROEs awarded in Kentucky have moved approximately 20 basis points higher with each 100 basis point increase in bond

[9] McKenzie Direct at 47-48.
[10] In 1990 the average yield on Baa utility bonds was 10.06%. It wasn't until 2012 that the average yield fell below 5.03%.
[11] During December 2021, the yield on Baa utility bonds averaged 3.27%. Over the six months ending December 2023, monthly average bond yields ranged from 5.68% to 6.61%.
[12] In Case No. 2024-00354, the Commission increased the allowed ROE for Duke Energy Kentucky, Inc. a further 5 basis points to 9.80%. Considering that credit ratings for Duke Energy Kentucky, Inc. indicate less risk than for Kentucky Power (Baa1/BBB+ versus Baa3/BBB), this provides additional confirmation that the direction and magnitude of Mr. Baudino's ROE recommendation in this case are both misguided.

yields,[13] which is notably less than the 56 basis point change in allowed ROEs predicted by my regression analyses, as discussed previously. In light of this evidence, the data presented in Exhibit AMM-13 clearly shows that recently approved ROEs for Kentucky electric utilities do not fully reflect today's higher capital costs.

A more detailed annual depiction of Kentucky Power's allowed ROE and Baa utility bond yield trends is displayed in the figure below.

FIGURE AMM-R5
KENTUCKY POWER ALLOWED ROE AND BOND YIELD TRENDS



Note: 2025 reflects data through November.
Source: Moody's Investors Service; https://fred.stlouisfed.org/.

As noted earlier, when bond yields move higher, investors naturally demand a higher return for common stocks as well. As shown above, Baa utility yields have trended sharply upward since 2021, while Kentucky Power's allowed

[13] 48 ÷ 246 = 0.1951.

ROE has increased by a modest 45 basis points.[14] This evidence confirms that the Company's currently allowed ROE does not yet fully reflect the higher returns now required by investors.

Q16. WHAT OTHER EVIDENCE HIGHLIGHTS THE DISPARITY BETWEEN INTEREST RATE TRENDS AND KENTUCKY POWER'S AWARDED ROE?

A16. If Kentucky Power's recently awarded ROE in January 2024 followed the decades-long relationship with interest rates confirmed by my regression analysis, it would have been significantly higher. For example, Exhibit AMM-13 shows that Baa bond yields jumped 282 basis points between the Company's last two rate cases. Since allowed ROEs change approximately 56 basis points with each 100 basis point change in interest rates, a 282 basis point increase in interest rates could be expected result in an increase to the allowed ROE of approximately 158 basis points, or from 9.30% to 10.88%.[15] While I am not recommending that Kentucky Power's ROE be awarded solely on the basis of a regression analysis of long-term ROE and interest rate trends, this benchmark calculation confirms the downward bias inherent in Mr. Baudino's recommendation and that the Company's currently allowed 9.75% ROE does not fully reflect changes in underlying capital costs, as measured by interest rates.

Q17. HAS THE INVESTMENT COMMUNITY TAKEN NOTE OF THE DISPARITY BETWEEN INTEREST RATES AND RECENTLY ALLOWED ROES?

A17. Yes. As S&P Global Market Intelligence noted:

> The first nine months of 2024 saw a slight uptick in the average authorized ROEs for electric and gas utilities, influenced by the higher-interest-rate environment. However, the effect of interest

[14] Kentucky Power's allowed ROE was increased from 9.30% to 9.75% on January 19, 2024.
[15] 282 × 0.56 = 157.92. 9.30% + 1.58% = 10.88%.

> rate increases on authorized returns has not been proportional, as regulators are slower to adjust ROEs upward than downward. Additionally, affordability concerns persist as regulators navigate customer rate hikes due to significant but necessary capital investment in the energy transition amid inflationary pressures.[16]

Value Line noted that historical allowed ROEs are "based on a historically low and now out-of-date cost of capital,"[17] and more recently highlighted the likely cause of this disconnect:

> Another difficulty is the level of authorized return on equity (ROE) that's set by politically motivated regulators. Commissioners are often looking back to a time of historically low interest rates and using that period to set present returns.[18]

Similarly, a Wall Street Journal article highlighted the cost pressures faced by utilities and noted that, "Investors should exercise caution when picking up utility stocks."[19] As the article observed, "[h]igher interest rates haven't only increased debt-financing costs for utility companies but also raised the cost of capital that they are expected to deliver." Meanwhile, Value Line recently advised electric utility investors that, "we recommend that new commitments only be made on individual stocks when the midpoint of our annual total return projection is at or above 11%."[20]

Q18. WHAT CONCLUSIONS ARE SUPPORTED BY THIS EVIDENCE?

A18. The cost of capital—both debt and equity—has increased significantly and that allowed ROEs have failed to keep pace. Nonetheless, S&P Global Market Intelligence recently reported that authorized ROEs for all vertically integrated electric utilities averaged 9.84% during 2024, and 9.79% for the twelve months

[16] S&P Global Market Intelligence, *Major energy rate case decisions in the US – January-September 2024*, Regulatory Focus (Oct. 30, 2024).
[17] The Value Line Investment Survey, *Electric Utility (East) Industry* (May 10, 2024).
[18] The Value Line Investment Survey, *Electric Utility (East) Industry* (Feb. 7, 2025).
[19] Jinjoo Lee, *Utilities Get an Inflation Shock,* Wall Street Journal (Jan. 3, 2024). https://www.wsj.com/finance/investing/utilities-get-an-inflation-shock-cb821c4e (last visited Dec. 15, 2025).
[20] The Value Line Investment Survey, *Electric Utility (East) Industry* (Nov. 7, 2025).

ended September 30, 2025.[21] In considering utilities with comparable risks, investors will always seek to provide capital to the opportunity with the highest expected return. If a utility is unable to offer a return similar to that available from other investment opportunities of equivalent risks, investors will become unwilling to supply the utility with capital on reasonable terms. These recent authorized returns for other electric utilities demonstrate that Mr. Baudino's 9.5% ROE recommendation is insufficient.

Q19. DOES MR. BAUDINO RECOGNIZE THE UPWARD TREND IN CAPITAL COSTS?

A19. Yes. Figure 1 to Mr. Baudino's testimony clearly shows that 30-year Treasury yields and utility bond yields have trended sharply upwards since 2021, and both of these interest rates are close to their highest levels over the 11-year period shown in his figure. Beyond that, Mr. Baudino's testimony notes that while the Federal Funds rate stood at "nearly 0% through 2021," its current level is in a range of 3.75% to 4.00%.[22]

Q20. HAS THERE BEEN ANY CHANGE IN THE RISKS OF UTILITIES OR KENTUCKY POWER THAT MIGHT OFFSET THIS CLEAR UPWARD MOVE IN THE COST OF CAPITAL?

A20. No. My direct testimony documented the increasing challenges faced by electric utilities,[23] with S&P revising its outlook on 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."[24] S&P affirmed this negative

[21] S&P Global Market Intelligence, *Major energy rate case decisions in US*, RRA Regulatory Focus (Nov. 6, 2025).
[22] Baudino Direct at 7-8.
[23] McKenzie Direct at 15-20.
[24] S&P Global Ratings, *Rising Risks: Outlook For North American Investor-Owned Regulated Utilities Weakens*, Comments (Feb. 14, 2024).

outlook in July 2024, citing rising physical risks, as well as weakening financial measures due to record-breaking capital spending and cash flow deficits.[25] In 2025, S&P confirmed the financial challenges associated with funding heightened investment in the utility sector, noting that, "[a] high percentage of companies are operating with only minimal financial cushion from our downgrade threshold," and noted that these pressures "led to downgrades outpacing upgrades for the fifth consecutive year."[26]

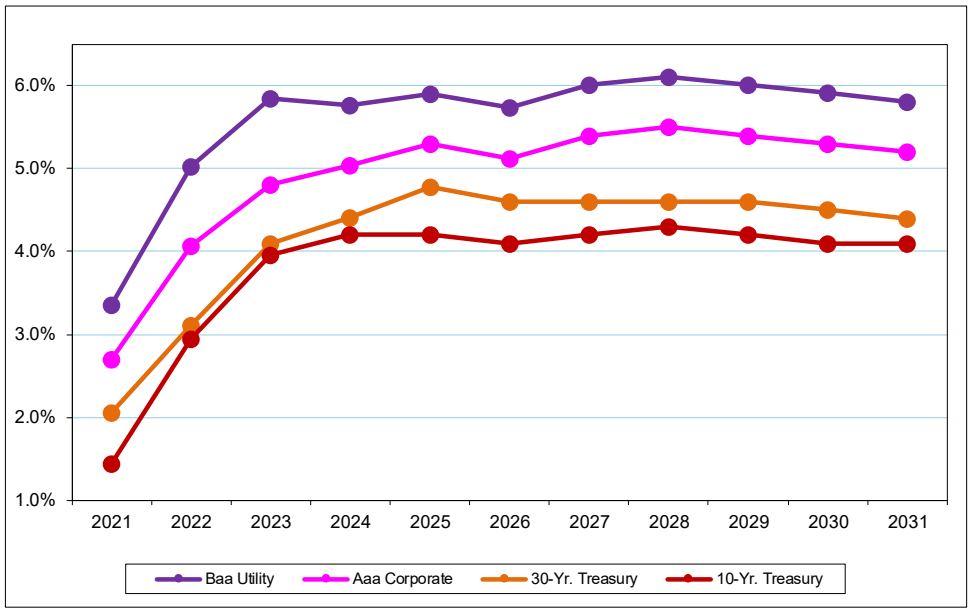
Meanwhile, Moody's cautioned that widening cash flow deficits in the utility industry were placing increasing negative pressure on financial credit metrics, concluding that credit pressure "will likely continue to lead to negative rating actions if not sufficiently mitigated."[27] In its most recent annual review of the utility industry, Moody's noted that a continuation of supportive regulation would be required to offset ongoing pressure from still-high interest rates and other negative pressures on utilities' credit standing.[28] There is no evidence that the significant increase in capital costs since 2021 has been mitigated by declining risk in the utility industry generally, or for Kentucky Power specifically.

Q21. DO INVESTORS EXPECT BOND YIELDS TO FALL OVER THE NEAR TERM?

A21. No. As illustrated in Figure AMM-R6 below, the most recent long-term consensus projections from top economists published by Blue Chip document that bond yields are expected to remain elevated when compared to recent historical levels.

[25] S&P Global Ratings, *Regulated Utilities: Credit risks are rising*, Industry Credit Outlook Update – North America (Jul. 18, 2024).
[26] S&P Global Ratings, *North American Regulated Utilities, Capex and climate change pressures credit quality*, Industry Credit Outlook 2025 (Jan. 14, 2025).
[27] Moody's Investors Service, *Electric and Gas Utilities – US,* Sector In-Depth (Oct. 21, 2024).
[28] Moody's Ratings, *Electric and Gas Utilities – US*, Outlook (Oct. 31, 2025).

FIGURE AMM-R6
HISTORIC AND PROJECTED INTEREST RATES



Source: Moody's Investors Service; https://fred.stlouisfed.org/; Wolters Kluwer, Blue Chip Financial Forecasts (Dec. 1, 2025).

The data displayed above are consistent with Mr. Baudino's observation that 10-year Treasury yields are only expected to soften slightly from 4.4% in 2025 to 4.1% in 2026.[29] This evidence shows that long-term capital costs—including the ROE—have increased substantially, and that investors can reasonably expect capital costs to be sustained at least through 2031. OAG-KIUC's ROE recommendation fails to account for these realities.

Q22. THE FEDERAL RESERVE LOWERED THE TARGET RANGE FOR THE FEDERAL FUNDS RATE SEVERAL TIMES IN 2024 AND 2025. DOES THIS CHANGE YOUR CONCLUSION THAT KENTUCKY POWER'S COST OF EQUITY IS SIGNIFICANTLY HIGHER THAN MR. BAUDINO'S 9.50% RECOMMENDATION?

A22. No. Bond yields embody the market's expectations of future events, including Federal Reserve monetary policy and inflation trends. For example, a

[29] Baudino Direct at 11.

Reuters.com article on the day of the Federal Reserve's September 2024 rate action confirmed that it, along with future cuts to the federal funds rate, were anticipated:

> The U.S. central bank on Wednesday kicked off an anticipated series of interest rate cuts with a larger-than-usual half-percentage-point reduction that Federal Reserve Chair Jerome Powell said was meant to show policymakers' commitment to sustaining a low unemployment rate now that inflation has eased.[30]

In response to the more recent September 2025 rate cut, Guy Lebas, who is Chief Fixed Income Strategist at Janney Capital Management, observed, "This was about as close to expectations as humanly possible (and) basically what was baked into markets ahead of time."[31] Similarly, Uto Shinohara, Senior Investment Strategist at Mesirow Currency Management, confirmed that "the Fed delivered a widely expected rate cut" in October 2025,"[32] while Business Insider characterized the December move as "in alignment with expectations."[33] Consistent with market participants, the recent forecasts of leading economists reflected in Figure AMM-R6 also consider expectations for future changes in Federal Reserve monetary policies.

Long-term interest rates and capital cost are also influenced by a host of considerations beyond the Federal Funds rate, which is an overnight lending rate between banks. For example, Moody's noted the potential for higher broad-based tariffs on imports and deficit-financed tax cuts to "result in some combination of

[30] Reuters.com, *Fed unveils oversized rate cut as it gains 'greater confidence' about inflation* (Sep. 18, 2024), https://www.reuters.com/markets/rates-bonds/with-feds-rate-cut-hand-debate-swirls-over-how-big-move-2024-09-18/ (last visited Dec. 15, 2025) (emphasis added).
[31] Reuters.com, *Instant View: Analysts react after Fed cuts interest rates by quarter of a percentage point* (Sep. 17, 2025), https://www.reuters.com/business/view-fed-lowers-rates-by-quarter-point-powell-says-was-risk-management-cut-2025-09-17/ (last visited Dec. 15, 2025).
[32] Reuters.com, *Instant View: Fed delivers expected rate cut; Powell says December rate cut not assured* (Oct. 29, 2025), https://www.reuters.com/business/view-fed-delivers-expected-rate-cut-nods-limits-data-during-shutdown-2025-10-29/ (last visited Dec. 15, 2025).
[33] Business Insider, *Fed meeting recap: Central bank cuts rates for a 3rd time—and shows its biggest split in years* (Dec. 10, 2025). https://www.businessinsider.com/fed-rate-cut-decision-december-meeting-live-updates-2025-12?utm (last visited Dec. 15, 2025).

higher inflation and interest rates."[34] There is no indication that cuts in the Federal Funds rate have erased the significant increase in key interest rate benchmarks documented in Figure AMM-R2.

Q23. WHAT DOES THIS EVIDENCE INDICATE REGARDING MR. BAUDINO'S ROE RECOMMENDATION?

A23. Despite benchmark evidence that Kentucky Power's ROE should be higher in the current environment of elevated capital costs, Mr. Baudino is recommending *a decrease* to the Company's authorized ROE. This recommendation is out of line with the increase in capital costs I have documented above. A 25 basis point cut to Kentucky Power's ROE would be contrary to economic logic, and would violate the long-term relationship between ROEs and bond yields, as laid out above. Given the sharp upward shift in capital costs since 2021, it stands to reason that a just and reasonable ROE for the Company is now significantly higher than 9.75%, and not 25 basis points lower as Mr. Baudino is recommending.

While the cost of equity does not move one-for-one in lockstep with interest rates, all available evidence indicates that utility ROEs exhibit a strong positive correlation with bond yields. Mr. Baudino's recommendation is unmoored from fundamental principles of finance and violates the basic, common-sense relationship between interest rates and the cost of equity. The Commission should reject Mr. Baudino's ROE recommendation.

[34] Moody's Investors Service, *Trump Take Two (Take Two)*, Economic View (Nov. 19, 2024).

C. Mr. Baudino's ROE Fails to Meet Regulatory Standards

Q24. DOES MR. BAUDINO CITE ALLOWED ROES FOR OTHER UTILITIES IN THEIR EVALUATION OF AN ROE FOR KENTUCKY POWER?

A24. Yes. OAG-KIUC witness Baudino cites average allowed ROEs for vertically integrated electric utilities in 2024 and 2025.[35] He also discusses allowed ROEs from 1974 to 2024, making specific reference to average allowed ROEs in 1992, 2003, 2024 and 2025.[36] This evidence clearly indicates that Mr. Baudino believes that allowed ROEs for other utilities are relevant to an evaluation of a fair ROE for Kentucky Power.

Q25. DO THE HISTORICAL ALLOWED ROES REFERENCED BY MR. BAUDINO PROVIDE A DIRECT GUIDE AS TO A FAIR ROE FOR KENTUCKY POWER UNDER CURRENT CAPITAL MARKET CONDITIONS?

A25. No. Prior ROE findings must be viewed in the context of the capital market conditions that existed at the time those cases were before the respective regulators. As noted earlier, when bond yields move higher, investors naturally demand a higher return for common stocks as well. Looking backwards to historical allowed ROEs that were established when long-term bond yields were significantly lower ignores accepted financial principles. ROEs awarded since 2022 should be viewed with caution since, as has been established, they don't fully reflect the higher capital cost environment of the last several years.

[35] Baudino Direct at 12-13.
[36] *Id.* at 39-40.

Q26. AFTER ADJUSTING FOR CURRENT FINANCIAL MARKET CONDITIONS, WHAT DOES A COMPARISON WITH RECENT STATE-APPROVED ROES INDICATE WITH RESPECT TO MR. BAUDINO'S ROE RECOMMENDATION?

A26. His 9.50% ROE recommendation significantly understates Kentucky Power's cost of equity in today's capital markets. This is shown on Exhibit AMM-14. There I subtract the average Baa utility bond yield corresponding to the average allowed ROEs for electric utilities reported by S&P Global Market Intelligence in their RRA Regulatory Focus ("RRA") report from 2020 to Q3 2025 to compute the implied risk premium. As discussed earlier, the equity risk premium expands as interest rates decline and contracts as interest rates rise. Accordingly, I adjust the historical risk premium downward to reflect the fact that interest rates are now higher than those corresponding to the average allowed ROE.

As shown on Exhibit AMM-14, adjusting historical average allowed ROEs to reflect current capital market conditions results in an implied cost of equity of 10.26% for vertically integrated electric utilities. This confirms that OAG-KIUC's ROE recommendation is insufficient.

Q27. BAA UTILITY BOND YIELDS AVERAGED 5.83% IN NOVEMBER 2025. WHAT ROES WERE AUTHORIZED HISTORICALLY WHEN UTILITY BOND YIELDS WERE AT PRESENT LEVELS?

A27. As shown in Figure AMM-R7 below, Baa utility bonds averaged 5.82% for the years 2005, 2010 and 2011, and the average authorized ROE for electric utilities was 10.33% over these same years.

FIGURE AMM-R7
ELECTRIC ROES AND UTILITY BOND YIELDS

Year	Authorized Electric ROE	Average Baa Utility Bond Yield
2005	10.51%	5.92%
2010	10.29%	5.96%
2011	10.19%	5.57%
Average	**10.33%**	**5.82%**

Source: Exhibit AMM-9 at 2; Moody's Investors Service.

This evidence further demonstrates that Mr. Baudino's ROE recommendation is understated.

Q28. THE RISK PREMIUM BETWEEN ALLOWED ROES AND BAA UTILITY BOND YIELDS AVERAGED 3.68% IN THE FIRST THREE QUARTERS OF 2025.[37] WHAT ROES WERE BEING AUTHORIZED HISTORICALLY WHEN RISK PREMIUMS WERE THIS NARROW?

A28. As documented below in Figure AMM-R8, the equity risk premium between allowed ROEs and Baa rated utility bond yields averaged 3.66% over the period 1999 to 2008. During these same years, allowed ROEs for electric utilities averaged 10.79%.

[37] The average authorized ROE for vertically integrated electric utilities was 9.70% in the first three quarters of 2025, while the average yield on Baa rated utility bonds was 6.02%, which implies an equity risk premium of 3.68%.

FIGURE AMM-R8
ELECTRIC ROES AND EQUITY RISK PREMIUMS

Year	Authorized Electric ROE	Average Baa Utility Bond Yield	Risk Premium
1999	10.72%	7.88%	2.84%
2000	11.58%	8.36%	3.22%
2001	11.07%	8.03%	3.04%
2002	11.21%	8.02%	3.19%
2003	10.96%	6.84%	4.12%
2004	10.81%	6.40%	4.41%
2005	10.51%	5.92%	4.59%
2006	10.34%	6.32%	4.02%
2007	10.32%	6.33%	3.99%
2008	10.37%	7.23%	3.14%
Average	**10.79%**	**7.13%**	**3.66%**

Source: Exhibit AMM-9 at 2; Moody's Investors Service.

This evidence reinforces my earlier conclusion that recently allowed ROEs do not align with historical trends in capital costs. It also shows Mr. Baudino's ROE recommendation to be unreasonably low.

Q29. WHAT OTHER BENCHMARK INDICATES THAT OAG-KIUC'S ROE RECOMMENDATION IS TOO LOW?

A29. Expected earned rates of return for other utilities provide another useful benchmark of reasonableness. The expected earnings approach is predicated on the comparable earnings test, which was developed as a direct result of the Supreme Court decisions in *Bluefield*[38] and *Hope*[39]. This test recognizes that investors compare the allowed ROE with returns available from other alternatives of comparable risk.[40]

[38] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923) ("*Bluefield*").
[39] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*").
[40] I refer to the comparable earnings and expected earnings methods interchangeably in this testimony. While comparable earnings methods tend to rely on historical data and expected earnings methods rely on projected data, the underlying principles are similar in both approaches.

Importantly, the expected earnings approach explicitly recognizes that regulators do not set the returns that investors earn in the capital markets. Regulators can only establish the allowed return on the value of a utility's investment, as reflected on its accounting records. As a result, the expected earnings approach provides a direct guide to ensure that the allowed ROE is similar to what other utilities of comparable risk will earn on invested capital. This opportunity cost test does not require theoretical models to indirectly infer investors' perceptions from stock prices or other market data. As long as the proxy companies are similar in risk, their expected earned returns on invested capital provide a direct benchmark for investors' opportunity costs 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.

Q30. HAS THE EXPECTED EARNINGS APPROACH BEEN RECOGNIZED AS A VALID ROE BENCHMARK?

A30. Yes. This method predominated before the DCF model became fashionable with academic experts, and it has long been referenced and relied on in regulatory proceedings.[41] For example, in approving an ROE for electric utility operations, the North Carolina Utilities Commission concluded that:

> In prior cases, the Commission has given significant weight to the results of the Expected Earnings methodology, which stands separate and apart from the market-based methodologies (e.g., the DCF or CAPM) also used by ROE experts. The Commission chooses to do so again in this case.[42]

[41] *See, e.g.,* Nat'l Ass'n of Regulatory Util. Comm'rs, *Utility Regulatory Policy in the U.S. and Canada, 1995-1996* (Dec. 1996).

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

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

> Many commissions consider the results of a comparable earnings analysis when establishing an authorized ROE. This approach assumes that a given investment should earn a return similar to that of investments with similar risk characteristics.[43]

A textbook prepared for the Society of Utility and Regulatory Financial Analysts points out that the comparable earnings method is firmly anchored in the regulatory tradition of the *Bluefield* and *Hope* cases, as well as sound regulatory economics.[44] Similarly, *New Regulatory Finance* concludes that, "because the investment base for ratemaking purposes is expressed in book value terms, a rate of return on book value, as is the case with Comparable Earnings, is highly meaningful."[45]

Q31. WHAT ROE IS IMPLIED BY THE EXPECTED EARNINGS APPROACH FOR MR. BAUDINO'S PROXY GROUP?

A31. As shown on Exhibit AMM-15, reference to expected earnings implies an annual average cost of equity for the utilities in Mr. Baudino's proxy group of 11.3%, once adjusted to a mid-year basis. This ROE value provides another indication that OAG-KIUC's recommendation is understated.

[43] S&P Global Market Intelligence, *Frequently Asked Questions*, RRA Regulatory Focus (Jul. 15, 2020).
[44] *Id*.
[45] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 395.

Q32. WHAT DO THESE BENCHMARKS YOU DISCUSS IMPLY WITH RESPECT TO MR. BAUDINO'S ROE RECOMMENDATION?

A32. Consideration of economic and regulatory principles and alternative benchmarks demonstrate that Mr. Baudino's ROE recommendation of 9.50% is well below a reasonable estimate of Kentucky Power's cost of equity.

II. RESPONSE TO OAG-KIUC WITNESS BAUDINO'S ROE ANALYSES

Q33. HOW DOES MR. BAUDINO ARRIVE AT HIS RECOMMENDED COST OF EQUITY?

A33. Mr. Baudino's "Method 1" application of the DCF model produces cost of equity estimates in a range of 8.39% to 11.10%, with an average of 9.84%, and his DCF "Method 2" results in an ROE range of 9.08% to 10.95%, with an average of 9.96%.[46] Mr. Baudino's alternative applications of the CAPM approach result in ROE estimates ranging from 7.86% to 10.13%.[47] Ultimately, Mr. Baudino lands on a cost of equity range of 8.90% to 10.00% and recommends an ROE for Kentucky Power of 9.50%.[48]

Q34. WHAT IS YOUR ASSESSMENT OF MR. BAUDINO'S ROE TESTIMONY AND RECOMMENDATION?

A34. Mr. Baudino's recommendation is too low. Several specific factors detract from his analysis. First and foremost, Mr. Baudino fails to apply sufficient checks of reasonableness to test his DCF results. His CAPM approach is significantly flawed and he ignores other accepted benchmarks, such as the utility risk premium, expected earnings, and ECAPM methodologies. Had Mr. Baudino employed these other approaches, he would have seen that his recommendation is not reasonable.

[46] Baudino Direct at 21.
[47] *Id.* at 32.
[48] *Id.* at 33.

A. Discounted Cash Flow Model

Q35. WHAT ARE THE SPECIFIC SHORTCOMINGS THAT YOU HAVE IDENTIFIED IN MR. BAUDINO'S DCF ANALYSIS?

A35. While Mr. Baudino's application of the DCF model is straightforward, there are two problems with his approach. First, he includes growth rates in dividends per share ("DPS"), which are not likely to provide a meaningful guide to investors' current growth expectations. Second, Mr. Baudino averages all the individual growth rates for this proxy group firms and computes a single DCF estimate for each growth rate source. This approach masks the presence of extreme data and biases his results downward.

Q36. WHY DO YOU TAKE ISSUE WITH MR. BAUDINO'S REFERENCE TO DPS GROWTH RATES?

A36. As documented in my direct testimony,[49] future trends in earnings per share ("EPS"), which provide the source for future dividends and ultimately support share prices, play the pivotal role in determining investors' long-term growth expectations. The continued success of investment services such as IBES, Value Line, and Zacks, and the fact that projected growth rates from such sources are widely referenced, provides strong evidence that investors give considerable weight to analysts' earnings projections in forming their expectations for future growth. 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 EPS is far more influential than trends in DPS.[50] As explained in *New Regulatory Finance*:

[49] McKenzie Direct at 42-43.

[50] Stanley B. Block, *A Study of Financial Analysts: Practice and Theory*, Financial Analysts Journal (July/August 1999).

> Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns. Financial analysts exert a strong influence on the expectations of many investors who do not possess the resources to make their own forecasts, that is, they are a cause of *g* [growth].[51]

The availability of projected EPS growth rates is also key to investors relying upon 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 EPS forecasts attests to their relative influence. As observed in *New Regulatory Finance*:

> The sheer volume of earnings forecasts available from the investment community relative to the scarcity of dividend forecasts attests to their importance. The fact that these investment information providers focus on growth in earnings rather than growth in dividends indicates that the investment community regards earnings growth as a superior indicator of future long-term growth. Surveys of analytical techniques actually used by analysts reveal the dominance of earnings and conclude that earnings are considered far more important than dividends.[52]

In fact, Mr. Baudino admits that "Value Line is the only source of which I am aware that forecasts dividend growth."[53]

While I do not rely solely on EPS projections in applying the DCF model,[54] my evaluation clearly supports greater reliance on EPS growth rate projections than other alternatives.

[51] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 298.
[52] *Id.* at 302-303.
[53] Baudino Direct at 20.
[54] As discussed in my direct testimony, I also examined the "br+sv", sustainable growth rates for the companies in my proxy groups. McKenzie Direct at 43-45.

Q37. WHAT IS THE SECOND SHORTCOMING ASSOCIATED WITH MR. BAUDINO'S DCF ANALYSIS?

A37. I disagree with Mr. Baudino's decision to average all individual dividend yields and growth rates across the proxy group companies and then compute a single DCF estimate for each growth rate source. Each growth rate represents a stand-alone estimate of investors' future expectations, and each dividend yield / growth rate combination should be evaluated on its own merits. The fact that averaging all of the growth rates from a given source might produce a DCF estimate that could be considered reasonable does not remove the need to evaluate each underlying growth rate separately.

For example, consider a proxy group containing utilities with dividend yields of 3.5% and three hypothetical growth estimates of 0.0%, 6.5%, and 14.0%. Under Mr. Baudino's method, the DCF estimate would be computed by calculating the 6.8% average of the three individual growth rates and then adding that to the average dividend yield of 3.5%, resulting in a cost of equity estimate of 10.3%. The problem with this method is that it disguises the fact that two of the underlying growth rates—0.0% and 14.0%—do not provide a meaningful guide to investors' expectations. Rather than averaging the good with the bad, each implied cost of equity estimate (in this example, 3.5%, 10.0%, and 17.5%) should be evaluated on a stand-alone basis.[55] Mr. Baudino simply calculates the average of the individual growth rates from a given source (as well as the average of the dividend yields) with no consideration for the reasonableness of the underlying data and the individual ROE estimates that flow from those data. Because Mr. Baudino's approach overlooks this essential step, his DCF analysis included individual dividend yield / growth rate combinations that do not reflect investors'

[55] The implied cost of equity estimates are calculated as the sum of the dividend yield (3.5%) and the respective growth rates (0.0%, 6.5%, and 14.0%).

expectations. In the case of Mr. Baudino's DCF application, this produced results that are biased downward.

Q38. CAN YOU SHOW THE DOWNWARD BIAS IN MR. BAUDINO'S "METHOD 1" CONSTANT GROWTH DCF ANALYSIS?

A38. Yes. For example, the figure below shows dividend yields and growth rates for several utilities from Mr. Baudino's DCF analysis.

FIGURE AMM-R9
DIVIDEND YIELDS AND GROWTH RATES FOR SELECT UTILITIES

Utility	Growth Rate Source	Growth Rate	D0	D1	DCF ROE
Dominion Energy	Value Line DPS	0.00%	4.57%	4.57%	**4.57%**
DTE Energy	Value Line DPS	3.00%	3.18%	3.28%	**6.28%**
Entergy Corp.	Value Line EPS	3.00%	2.74%	2.82%	**5.82%**
Pinnacle West Capital	Value Line DPS	1.50%	3.96%	4.02%	**5.52%**
Pinnacle West Capital	Zacks EPS	2.10%	3.96%	4.04%	**6.14%**

Source: Exhibit RAB-2, Exhibit RAB-3.

As shown above, combining these individual utilities' respective dividend yields and growth rates consistent with Mr. Baudino's DCF calculation[56] results in individual cost of equity estimates ranging from 4.57% to 6.28%. These implied costs of equity are less than any meaningful threshold. Mr. Baudino's standard should have been applied to stand-alone DCF estimates, and these illogical outcomes should have been removed from Mr. Baudino's constant growth DCF analysis.

[56] Mr. Baudino starts with D_0, grows it by the growth rate to estimate D_1, and then adds the growth rate to D_1 to generate his "Method 1" DCF ROE. Baudino Direct at Exhibit RAB-3.

Q39. HAS MR. BAUDINO PREVIOUSLY RECOGNIZED THAT COST OF EQUITY ESTIMATES OF THIS MAGNITUDE SHOULD BE IGNORED?

A39. Yes. In Kentucky Power's last rate proceeding, Mr. Baudino testified that "results . . . near and below 8.0%" were "far too conservative given the current economic conditions of rising interest rates and inflation."[57]

Q40. MR. BAUDINO'S DCF "METHOD 2" UTILIZES MEDIAN GROWTH RATES TO FORMULATE DCF RESULTS.[58] DOES A REFERENCE TO THE MEDIAN IMPROVE HIS DCF ANALYSIS?

A40. No. The median is simply the observation with an equal number of data values above and below. For odd-numbered samples, the median relies on only a single number, *e.g.*, the fifth number in a nine-number set. I believe that each growth rate represents a stand-alone estimate of investors' future expectations, and each value should be evaluated on its own merits. The median does not really consider the individual growth rate estimates at all—it is simply a number that splits the distribution of observations into two equal halves. The fact that a median of individual growth rate estimates might produce a DCF estimate that could be considered reasonable does not justify ignoring the individual analysts' projections or critically evaluating the ROE results.

[57] Case No. 2023-00159, *Direct Testimony and Exhibits of Richard A. Baudino* (Oct. 2, 2023) at 20-21.
[58] Baudino Direct at 21.

B. Capital Asset Pricing Model

Q41. MR. BAUDINO CRITICIZES THE CAPM BECAUSE "A CONSIDERABLE AMOUNT OF JUDGMENT MUST BE EMPLOYED IN DETERMINING THE MARKET RETURN AND EXPECTED RISK PREMIUM ELEMENTS OF THE CAPM EQUATION."[59] IS THIS A FAIR CRITICISM?

A41. No. Analytical methodologies such as the DCF model are inherently abstractions of reality. The theory supporting Mr. Baudino's constant growth DCF analysis also requires numerous assumptions, most of which differ considerably from the situation that confronts actual investors in the capital markets.[60] The CAPM approach is no different than the DCF model in these important aspects and is a valuable tool in the ROE estimation process.

As explained in *New Regulatory Finance*, "[r]eliance on any single method or preset formula is inappropriate when dealing with investor expectations because of possible measurement difficulties and vagaries in individual companies' market data."[61] The Commission clearly can and should consider additional relevant ROE benchmarks. As *New Regulatory Finance* further explained:

> . . . by relying solely on the DCF model at a time when the fundamental assumptions underlying the DCF model are tenuous, a regulatory body greatly limits its flexibility and increases the risk of authorizing unreasonable rates of return. The same is true for any one specific model.[62]

[59] *Id.* at 24.
[60] These requirements include a flat yield curve; a constant growth rate; a constant P/E ratio; a constant dividend payout ratio; no stock issuances or purchases; dividends, earnings, book value, and stock price all grow at the same rate; and all of these conditions hold to infinity.
[61] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 428.
[62] *Id.* at 28.

The CAPM and other methods are relied on by investors in making their investment decisions and, contrary to Mr. Baudino's position, their importance should not be minimized in the regulatory process.[63]

Q42. HOW DOES MR. BAUDINO APPLY THE CAPM MODEL?

A42. Mr. Baudino uses a risk-free rate of 4.83% and an average proxy group beta value of 0.73, which he applies to one forward-looking market risk premium ("MRP") and three historical MRPs, as well as four MRPs he selected from other sources.[64] Mr. Baudino's assortment of CAPM applications generate ROE estimates ranging from 7.86% to 10.13%.[65]

Q43. WHAT IS THE PRIMARY FLAW ASSOCIATED WITH MR. BAUDINO'S THREE HISTORICAL CAPM ANALYSES?[66]

A43. Mr. Baudino's analysis of historical returns extending back to 1926 is backward-looking, whereas the CAPM is a forward-looking model based on expectations of the future. As a result, to produce a meaningful estimate of investors' required rate of return, the CAPM must be applied using data that reflects the expectations of actual investors in the market.

Mr. Baudino recognizes that, "ROE analysis is a forward-looking process,"[67] and that, "A historical MRP calculated over a long period of time may not reflect current investor expectations and requirements."[68] Mr. Baudino also highlights Dr. Aswath Damodaran's observation on the shortcomings of using historical MRPs, who states, "it is surprising that the flaws in the [historical risk

[63] Financial research suggests that the CAPM may be more closely aligned with the factors driving investors' decisions. Jonathan B. Berk and Jules H. van Binsberg, "How Do Investors Compute the Discount Rate? They Use the CAPM," *Financial Analysts Journal*, Vo. 73, No. 2 (Second Quarter 2017).
[64] Baudino Direct at Exhibit RAB-4.
[65] *Id.* at 32.
[66] Exhibit RAB-4 at 2.
[67] Baudino Direct at 19.
[68] *Id.* at 28.

premium] approach have not drawn more attention."[69] Morningstar has also recognized the primacy of current expectations:

> The cost of capital is always an expectational or forward-looking concept. While the past performance of an investment and other historical information can be good guides and are often used to estimate the required rate of return on capital, the expectations of future events are the only factors that actually determine cost of capital.[70]

FERC determined that CAPM methodologies based on historical data were suspect because whatever historical relationships existed between debt and equity securities may no longer hold.[71] Similarly, the Indiana Utility Regulatory Commission has previously concluded that:

> Relying on historic market returns introduces some highly questionable assumptions, which must be taken on faith. Specificlaly [sic], one must assume that marketplace returns experienced historically are what investors were expecting to receive and continue to guide investor expectations today. It also assumes that asset relationships prevailing over the past 62 years continue today unchanged.[72]

Mr. Baudino's historical approaches are inconsistent with the assumptions of the CAPM and ignore the returns investors are currently requiring in the capital markets, with the resulting estimates falling short of investors' current required rate of return.

Q44. ARE THERE SHORTCOMINGS WITH THE IESE SURVEY, KPMG, KROLL AND DAMODARAN SOURCES CITED BY MR. BAUDINO?

A44. Yes. To begin with, the 5.50% MRP from the *IESE Business School Survey* is the result of a mass solicitation to more than 14,000 email addresses, out of which

[69] *Id.* at 28, citing *Equity Risk Premiums (ERP): Determinants, Estimation, and Implications – The 2022 Edition, Updated: March 23, 2022,* Aswath Damodaran, Stern School of Business.
[70] Morningstar, Ibbotson SBBI, *2013 Valuation Yearbook* at 21 (emphasis added).
[71] *See Orange & Rockland Utils., Inc.*, 40 FERC ¶ 63,053 at 65,208-09 (1987), *aff'd*, Opinion No. 314, 44 FERC ¶ 61,253 at 65,208 (2008).
[72] Indiana Utility Regulatory Commission, *Indiana Michigan Power Co.*, Cause No. 38728 (Aug. 24, 1990).

approximately 1,550 responses were received.[73] While many of the responses were undoubtedly from informed professionals, there is no ability to verify the experience or familiarity of the respondents with the subject matter. In addition, the wording of the surveys is imprecise and open to interpretation. For example, the survey relied on by Mr. Baudino simply asks, "The Market Risk Premium that I am using in 2025 for USA is _____%,"[74] which is entirely unclear. Respondents have no idea whether they are being asked for a risk premium during 2025, or over some other time period; nor is the basis on which the risk premium is calculated even specified. It should also be mentioned that these survey responses are now at least six months old, and so they cannot be a reflection of current capital market sentiment.

While Mr. Baudino characterizes the *IESE Business School* publication as "a comprehensive survey of finance and economics professors, analysts, and managers of companies,"[75] published comments of respondents from recent iterations of this study, which are curiously absent from the most recent version, cast significant doubt on their credibility and the reliability of the results. For example:

- I do not use MRP or a RF for three reasons: 1) I am retired; 2) I do not accept their validity; and, 3) the "new normal" makes no economic or financial sense.

- "The subject who is truly loyal to the Chief Magistrate will neither advise nor submit to arbitrary measures." Junius

[73] Pablo Fernandez, Diego Garcia de la Garza and Lucia F. Acin, Survey: Market Risk Premium and Risk-Free Rate used for 54 Countries in 2025 (May 20, 2025) at 2, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5260463 (last visited Nov. 21, 2025). While the paper was purportedly based on 1,547 email responses, it reports having received 1,079 data points concerning the equity risk premium for the United States.
[74] *Id.* at 10. The paper indicates that the survey was sent in April 2025.
[75] Baudino Direct at 30.

- Interest rates are artificially well below historic levels. Thus, bonds and equities values are artificially inflated.

- I use the US Equity premium of Damodaran to avoid explanations or justifications to clients.[76]

These responses undermine any confidence in the veracity of the *IESE Business School Survey* and its usefulness in this case.

Next, while the KPMG source discusses various ways in which a current MRP may be estimated, including by historical observation,[77] it offers no specific insight into how it calculated the 5.25% value that Mr. Baudino uses in his CAPM analysis. In this regard, KPMG's MRP methodology is essentially a "black box" calculation, which makes it unreliable.

Similar to KPMG, the Kroll publication relied on by Mr. Baudino for his 5.00% MRP is also opaque and does not provide any specific guidance as to the basis of this statistic, but prior editions have cited "financial literature and various empirical studies,"[78] as well as listing "Historical Real GDP Growth" and "Damodaran Implied ERP Model" as two of the factors it considered in its risk premium recommendation.[79]

Finally, the 4.18% MRP sourced Damodaran, which is based on the calculations of a single finance professor at New York University, does not make economic sense and contradicts Mr Baudino's own testimony. Combining an MRP of 4.18% with Mr. Baudino's 4.83% risk-free rate results in an indicated

[76] Pablo Fernandez, Diego Garcia de la Garza and Lucia F. Acin, Survey: Market Risk Premium and Risk-Free Rate used for 96 Countries in 2024 (Mar. 11, 2024) at Exhibit 2, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4754347 (last visited Nov. 21, 2025).
[77] KPMG Corporate Finance & Valuations (NL), *Equity Market Risk Premium – Research Study* (Jun. 30, 2025) at 5, https://indialogue.io/clients/reports/public/5d9da61986db2894649a7ef2/5d9da63386db2894649a7ef5 (last visited Nov. 21, 2025).
[78] Duff & Phelps, *Duff & Phelps Decreases U.S. Equity Risk Premium Recommendation to 5.0%, Effective February 28, 2013*, Client Alert (Mar. 20, 2013).
[79] Duff & Phelps, *Duff & Phelps U.S. Equity Risk Premium Recommendation Decreased from 5.5% to 5.0%, Effective September 5, 2017*, Client Alert (Oct. 30, 2017).

cost of equity *for the market as a whole* of 9.01%. This return *on the market* is far below the preponderance of ROEs authorized for electric and gas utilities in recent history, and less than Mr. Baudino's 9.50% ROE recommendation for Kentucky Power in this case.

The theory underlying the CAPM holds that beta is the only relevant measure of investment risk and the market is assumed to have a beta of 1.0. Given that the average beta for the firms in Mr. Baudino's proxy group is 0.73,[80] this indicates that investors' required return on the market as a whole should exceed the cost of equity for electric utilities. It follows that a market rate of return that does not significantly exceed Mr. Baudino's own downward-biased ROE recommendation has no relation to the current expectations of real-world investors. The Damodaran MRP considered by Mr. Baudino violates the risk-return tradeoff that is fundamental to financial theory, and it illustrates the inability to rely on his CAPM results.

In addition, the approach Damodaran uses to derive a market risk premium assumes that the growth rate for all competitive firms will fall to a constant long-term rate after five years. Further, Damodaran inexplicably assumes that this long term rate of growth will equal the current yield on U.S. Treasury bonds.[81] There is no logical link between investors' long-term growth expectations for common stocks and the Treasury bond yield, and the notion that investors expect growth for every company in the economy to collapse to a constant rate over the next five years is unsupported and illogical.

Q45. MR. BAUDINO SUGGESTS THAT A "MAJOR PROBLEM" WITH YOUR CAPM ANALYSIS IS YOUR FOCUS ON THE DIVIDEND PAYING

[80] Exhibit RAB-4.
[81] Aswath Damodaran, *Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2025 Edition* (Updated: March 5, 2025) at 103.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5168609 (last visited Dec. 15, 2025).

FIRMS IN THE S&P 500 AS THE BASIS FOR YOUR MRP.[82] IS THERE ANY MERIT TO HIS POSITION?

A45. No. As Mr. Baudino recognizes, under the constant growth form of the DCF model, investors' required rate of return is computed as the sum of the dividend yield over the coming year plus investors' long-term growth expectations.[83] Because the dividend yield is a key component in applying the DCF model, its usefulness is hampered for firms that do not pay common dividends. As FERC has concluded:

> The DCF analysis must be limited to the dividend-paying members of the S&P 500, rather than using all companies in the S&P 500, because a DCF analysis can only be performed on companies that pay common dividends.[84]

Q46. WHAT ABOUT MR. BAUDINO'S CONTENTION THAT THE PROJECTED GROWTH RATE SUPPORTING YOUR MRP IS "UNSUSTAINABLY HIGH?"[85]

A46. In my direct testimony, I estimated the current MRP by first applying the DCF model to estimate investors' current required rate of return for the dividend-paying firms in the S&P 500 and then subtracting the yield on government bonds. Mr. Baudino contends that my CAPM analysis is flawed because the growth rate used in my MRP calculation "vastly exceeds … both the historical capital appreciation for the S&P 500 as well as historical and projected GDP growth rates."[86] Mr. Baudino's reference to capital appreciation "for the historical period 1926 to 2022"[87] is yet another attempt to look backward, which is at odds with the

[82] *Id.* at 42.
[83] *Id.* at 20-21
[84] *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 at P 260 (2019)("Opinion No. 569"), *vacated & remanded sub nom. MISO Transmission Owners v. FERC*, 45 F.4th 248 (D.C. Cir. 2022).
[85] Baudino Direct at 42.
[86] *Id.*
[87] *Id*. at 43.

assumptions of the CAPM model. Investors' expectations of growth for the market are not constrained by or limited to an assessment of historical data, as Mr. Baudino wrongly contends.

Similarly, Mr. Baudino's assertion that long-term growth in GDP should serve as a ceiling for investors' expectations is misguided. There are several reasons why GDP growth is not relevant in the DCF model:

- Practical application of the DCF model does not require a long-term growth estimate—it requires a growth estimate that matches investors' expectations.
- Evidence supports the conclusion that investors do not reference long-term GDP growth in evaluating expectations for individual common stocks, including those in the electric utility industry.
- The theoretical proposition that growth rates for all firms converge to overall growth in the economy does not guide investors' views, and growth rates for individual stocks can and do exceed GDP growth.

In short, there is no evidence that investors assume all firms will trend toward a long-term GDP growth rate in forming their expectations for common stocks.

Q47. THE DCF MODEL ASSUMES AN INFINITE STREAM OF CASH FLOWS. WHY WOULDN'T A TRANSITION TO GDP GROWTH MAKE SENSE?

A47. This confuses DCF theory with its practical application in the real world. While the notion of long-term growth should presumably relate to the specific firm or industry, there are no long-term growth projections available for the companies in the broader market. Applying the DCF model using data that is inconsistent with the information available to investors and how they use it prioritizes an unsupported, theoretical assumption about GDP growth over investor behavior. The only relevant growth rate is the growth rate used by investors. Investors do

not have clarity to see far into the future, and there is little to no evidence to suggest that investors view growth in GDP as a limit on earnings growth over their forecast horizon.

Q48. ARE LONG-TERM GDP GROWTH RATES COMMONLY REFERENCED AS A DIRECT GUIDE TO FUTURE EXPECTATIONS FOR SPECIFIC FIRMS?

A48. No. Investors consider overall trends in economic activity in evaluating their expectations for a particular industry or firm. But there is no evidence to support the idea that investment advisory services view GDP growth as a direct guide to long-term expectations for a particular firm—much less for every firm in a specific industry or the entire market.

On the contrary, the financial media typically refers to three-to-five year EPS growth forecasts for individual companies and rarely mentions long-term GDP forecasts. For example, Value Line reports are routinely relied on as a reliable source of investment data and analysis.[88] But despite Mr. Baudino's suggestion that GDP has a fundamental role in shaping investors' expectations, Value Line does not even mention trends in GDP in its evaluation growth rates for individual firms. Value Line's purpose is to inform investors of the pertinent factors that could affect future expectations specific to each of the common stocks it covers. If the long-term trajectory of GDP growth was relevant in investors' evaluation of common stocks, Value Line and other securities analysts would highlight this in their analyses.

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

Q49. HOW MUCH CONFIDENCE WOULD INVESTORS GIVE TO LONG-TERM GDP PROJECTIONS?

A49. Very little. Investors understand the complexities and inherent inaccuracies involved in forecasting, and the longer the forecast horizon the greater the doubt as to the meaningfulness of the data. For example, the Congressional Budget Office ("CBO") states that "economic projections are subject to a high degree of uncertainty,"[89] and that "uncertainty grows over time because changes in factors that affect the budget become increasingly difficult to anticipate over longer time horizon."[90] As the CBO makes clear, long-term economic projections "are subject to significant uncertainty because, compounded over many years, even small changes … could greatly affect outcomes later in the projection period."[91]

Q50. ARE THERE ACADEMIC STUDIES THAT RECOGNIZE THE SHORTCOMINGS OF ADOPTING A GENERIC LONG-TERM GROWTH RATE, SUCH AS GDP GROWTH?

A50. Yes. Professor Myron J. Gordon, who pioneered the application of the DCF approach, concluded that reference to a generic long-term growth rate, such as Mr. Baudino advocates, was unsupported.[92] More specifically, Dr. Gordon concluded that any assumption of a single time horizon for a transition to a generic long-term growth rate was highly questionable and failed to reduce error in DCF estimates.

Instead, Dr. Gordon specifically recognized that, "it is the growth that investors expect that should be used" in applying the DCF model, and he concluded: "A number of considerations suggest that investors may, in fact, use

[89] Congressional Budget Office, *The Long-Term Budget Outlook: 2025 to 2055,* https://www.cbo.gov/system/files/2025-03/61187-Long-Term-Outlook-2025.pdf at 14 (last visited Dec. 15, 2025).
[90] *Id*. at 9.
[91] *Id*. at 15.
[92] Myron J. Gordon, *The Cost of Capital to a Public Utility*, MSU Public Utilities Studies (1974) at 100-01.

earnings growth as a measure of expected future growth."[93] Similarly, a subsequent paper co-authored by Professor Gordon concluded that:

> Analysts do not predict earnings beyond five years, which suggests that any consensus of opinion among investors probably deteriorates quickly after five years.[94]

Dr. Gordon further concluded that "the consensus among investors is that the future has a finite horizon of approximately seven years."[95] Meanwhile, a study reported in the *Journal of Investing* determined that there is no correlation between stock market returns or earnings growth and GDP, suggesting that investors' expectations built into observable share prices are driven by valuation measures, and not expected economic growth.[96] In other words, reference to long-term forecasts of GDP growth in applying the DCF model is inconsistent with investor behavior.

Q51. HAS THE FORWARD-LOOKING CAPM APPROACH PRESENTED IN YOUR DIRECT TESTIMONY BEEN RELIED ON BY REGULATORS AND IN THE FINANCIAL LITERATURE?

A51. Yes. The original basis for my CAPM approach was the methods used by the Staff at the Illinois Commerce Commission, which adopted forward-looking market rate of return estimates to apply the CAPM. For example, one staff witness described an approach analogous to that used in my direct testimony.

> Q. How was the expected rate of return on the market portfolio estimated?
>
> A. The expected rate of return on the market was estimated by conducting a DCF analysis on the firms composing the S&P

[93] *Id.* at 89.
[94] Joseph R. Gordon and Myron T. Gordon, *The Finite Horizon Expected Return Model*, Financial Analysts Journal (May-Jun. 1997) at 52-61.
[95] *Id*.
[96] Joachim Klement, *What's Growth Got to Do with It? Equity Returns and Economic Growth*, Journal of Investing, Vol. 24, No. 2 (Summer 2015): 74:78.

> 500 Index ('S&P 500'). … Firms not paying a dividend as of July 1, 2010, or for which neither Zacks nor Reuters growth rates were available were eliminated from the analysis. The resulting company-specific estimates of the expected rate of return on common equity were then weighted using market value data from Zacks on July 2, 2010. The estimated weighted averaged expected rate of return for the remaining 367 firms composing 80.21% of the market capitalization of the S&P 500, equals 12.74 percent.[97]

FERC has also adopted a forward-looking CAPM approach directly comparable to the methodology applied in my direct testimony.[98]

Similarly, research reported in the financial literature has used the DCF approach based on analysts' EPS growth rates to estimate a forward-looking rate of return for the S&P 500. For instance, *Harris and Marston* notes that "a 'market' required rate of return is calculated using each dividend paying stock in the S&P 500 index for which data are available."[99] In describing this process, the authors state:

> This expectational approach employs the dividend growth model (hereafter referred to as the discounted cash flow or DCF model) in which a consensus measure of financial analysts' forecasts (FAF) of earnings is used as a proxy for investor expectations.
>
> * * *
>
> For each month, a "market" required rate of return is calculated using each dividend paying stock in the S&P 500 index for which data are available. The DCF model in Equation (2) is applied to each stock and the results weighted by market value of equity to produce the market required return.[100]

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[97] *Direct Testimony of Michael McNally*, Illinois Commerce Commission, Docket No. 10-0467, filed October 26, 2010, at 27-29. The Illinois Commerce Commission relied on this CAPM approach in arriving at the authorized ROE in this proceeding. Illinois Commerce Commission, Docket No. 10-0467, Order (May 24, 2011) at 153.

[98] *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569-A, 171 FERC ¶ 61,154 at P 260 (2020), *vacated & remanded sub nom. MISO Transmission Owners v. FERC*, 45 F.4th 248 (D.C. Cir. 2022).

[99] Robert S. Harris and Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Fin. Mgmt. (Summer 1992) ("*Harris and Marston*").

[100] *Id.*

Estimating investors' required rate of return by reference to current, forward-looking data, as I have done, is consistent with the theory underlying the CAPM methodology, peer-reviewed financial literature, and the practice of regulators.

Q52. MR. BAUDINO PRESENTS A QUOTE FROM PRATT AND GRABOWSKI REGARDING GROWTH RATES.[101] DOES THIS QUOTE CALL INTO QUESTION THE 10.3% GROWTH RATE UNDERLYING YOUR MRP?

A52. No. The quotation presented by Mr. Baudino simply says that a perpetual growth rate should not exceed 6% or 7%. True enough, companies cannot grow faster than the overall economy forever, just as trees do not grow to the stratosphere. But this broad axiom does not justify the artificial growth rate ceiling suggested by Mr. Baudino.

Just as companies do not grow forever, investors do not hold stocks forever and cannot see into the far distant future. As noted earlier, investors realize that projections become increasingly tenuous as the forecast horizon expands. And to the extent that professional security analysts feel that trends in GDP affect a company's growth expectations in the time frame relevant to investors, it is already incorporated into their published EPS growth forecasts. In addition, companies differ in the degree to which growth is impacted by the national economy. These inherent differences are obviously reflected in security analysts' growth projections for individual companies, which are indicative of the expectations that underlie stock prices. Growth estimates within the DCF framework can and do exceed long-term GDP, within Mr. Baudino's DCF application as well as my own.[102]

[101] Baudino Direct at 34.

[102] Sixty-one of the sixty-eight individual earnings growth rates that Mr. Baudino relies on in his own DCF analysis exceed his assumed 4.0% long run GDP growth figure. Exhibit RAB-3 at 1.

Q53. DOES THE FINANCE TEXTBOOK CITED BY MR. BAUDINO CONFIRM THE REASONABLENESS OF THE 7.8% RISK PREMIUM USED IN YOUR CAPM AND ECAPM ANALYSES?

A53. Yes. As Mr. Baudino explains:

> Finally, I note that in the authoritative corporate finance textbook by Brealey, Myers, Allen and Edmans, the authors stated: "We have no official position on the issue, but we believe that a range of 5 to 8 percent is reasonable for the risk premium in the United States."[103]

Obviously, my 7.2% MRP is within the range this reference source considers reasonable. On the other hand, the 4.18% MRP from Damodaran that Mr. Baudino relied on falls outside this range.

Q54. DID MR. BAUDINO CHANGE HIS BETA METHODOLOGY IN THIS CASE?

A54. Yes. In Case No. 2023-00159, Mr. Baudino sourced all of his beta values from Value Line,[104] which is consistent with my CAPM approach. In the present case, Mr. Baudino averages the average Value Line beta for his proxy group with the average "adjusted S&P Capital IQ" beta.[105]

Q55. WHAT EFFECT DID MR. BAUDINO'S NEW BETA METHODOLOGY HAVE ON HIS CAPM ROE ESTIMATES?

A55. It lowered them. Mr. Baudino's adjusted S&P Capital IQ betas have a lower average value than the Value Line betas, and so incorporating this new beta source had the effect of lowering Mr. Baudino's CAPM ROEs. Put differently, if

[103] Baudino Direct at 45, quoting Richard A. Brealey, Stewart C. Myers, Franklin Allen and Alex Edmans, *Principles of Corporate Finance*, page 189; McGraw-Hill/Irwin, 14th Edition, 2023.
[104] In the Matter of Electronic Application of Kentucky Power Company for (1) A General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) A Securitization Financing Order; and (5) All Other Required Approvals and Relief, Case No. 2023-00159, *Direct Testimony and Exhibits of Richard A. Baudino* (Oct. 2, 2023), Exhibit RAB-4 at 1.
[105] Exhibit RAB-4 at 1.

Mr. Baudino had remained consistent with his previous testimony, his CAPM cost of equity estimates would have been higher.

Q56. DO YOU BELIEVE VALUE LINE BETAS ARE PREFERRABLE TO THE S&P BETAS INCORPORATED BY MR. BAUDINO?

A56. Yes. There are several reasons why Value Line betas are a superior input choice in the CAPM model, as compared to the S&P betas incorporated by Mr. Baudino. First, cost of equity analysis necessitates the use of data inputs that are most likely to be used by investors. As *New Regulatory Finance* observed in discussing the relative merits of alternative sources for beta, "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."[106] It follows that Value Line is also the most widely used source of betas.

Second, the methodology used to calculate Value Line betas is completely transparent, and accordingly it is known to investors. Value Line computes their beta values using weekly stock returns relative to weekly returns for the NYSE Composite Index dating back five years, and they are also adjusted for the observed tendency of betas to move towards the market mean ("Blume adjustment").[107] In contrast, Mr. Baudino provides no indication as to how S&P calculates their betas, although they are presumably based on price movements for the S&P 500 Index over a five-year period. Beyond that, it is unclear if S&P uses daily, weekly or monthly returns, or to what extent other assumptions influence their beta calculations.

It is reasonable to infer that the methodology used by S&P to calculate their betas differs significantly from Value Line's methodology, as the S&P betas

[106] See, *e.g.*, Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 71.
[107] See, *e.g.,* Marshall E. Blume, *Betas and Their Regression Tendencies*, Journal of Finance, Vol 30, No. 3 (Jun. 1975), pp. 785-795.

utilized by Mr. Baudino are substantially lower than Value Line's betas. But investors don't know what leads S&P betas to be significantly lower, at least in the case of electric utilities. The notable lack of transparency associated with the methodology S&P uses to calculate beta undermines the relevance of this data as a guide to investors' risk perceptions. In addition, the S&P beta values used by Mr. Baudino reflect his own calculations of a Blume adjustment and are not published values available to investors. As a result, these beta values are unlikely to inform investors' decision making.

Value Line, on the other hand, offers a widely published and accepted guide to investors risk perceptions that provides the assurance of a consistent and transparent methodology that is immune to selective changes in assumptions. In addition, because the NYSE Composite Index used by Value Line contains over 2,000 common stocks, it provides a superior benchmark for a stock's risk relative to the market as a whole than does the S&P 500. This evidence supports continued reference to Value Line's published beta values in applying the CAPM approach, and Mr. Baudino is misguided to alter his prior practice of sole reliance on Value Line betas.

Q57. DO THE ARGUMENTS ADVANCED BY MR. BAUDINO UNDERMINE THE NEED FOR A SIZE ADJUSTMENT AS PART OF THE CAPM AND ECAPM ANALYSES?

A57. No. A size adjustment is necessary to account for the portion of the return to small stocks that is not accounted for by beta. As discussed in my direct testimony,[108] empirical findings demonstrate that beta does not fully account for the higher returns of smaller companies and specific size adjustments have been quantified to adjust CAPM results to account for this size premium. Mr. Baudino

[108] McKenzie Direct at 49-51.

simply observes that the average beta associated with lower size deciles is greater than the average for his proxy group.[109] While I do not dispute the observation, it has no relevance to Kroll's findings regarding the impact of firm size. The fact that the average beta for smaller size deciles is greater than 1.00 says nothing about the range of individual beta values underlying this average.

Moreover, the size premiums are beta adjusted, meaning that the risk impact of beta values (whether higher or lower than Mr. Baudino's proxy group average) have been removed. While the size premiums reported by Kroll were not estimated on an industry-by-industry basis, this provides no basis to ignore this relationship in estimating the cost of equity for utilities. Utilities are included in the companies used by Kroll to quantify the size premium, and firm size has important practical implications with respect to the risks faced by investors in the utility industry. Duff & Phelps, which formerly published the Kroll data on size adjustments, concluded that:

> Despite many criticisms of the size effect, it continues to be observed in data sources. Further, observation of the size effect is consistent with a modification of the pure CAPM. Studies have shown the limitations of beta as a sole measure of risk. The size premium is an empirically derived correction to the pure CAPM.[110]

Q58. MR. BAUDINO ARGUES THAT A CAPM/ECAPM SIZE ADJUSTMENT DOES NOT APPLY BECAUSE REGULATED COMPANIES "ON AVERAGE ARE QUITE DIFFERENT FROM THE GROUP OF COMPANIES INCLUDED IN THE KROLL RESEARCH ON SIZE PREMIUMS."[111] IS THIS A VALID CRITICISM?

A58. No. There is no credible basis to conclude that CAPM or ECAPM estimates for utilities are immune from the well-documented relationship between smaller size

[109] Baudino Direct at 45.
[110] Duff & Phelps, *2016 Valuation Handbook, Guide to Cost of Capital*, John Wiley & Sons (2016) at 4-27.
[111] Baudino Direct at 46.

and higher realized rates of return. The size adjustment required in applying the CAPM and ECAPM 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. Of course, there are any number of specific factors that distinguish a utility's risks from other firms in the non-regulated sector, just as there are important distinctions between the circumstances faced by airlines and drug manufacturers. But under the assumptions of modern capital market theory on which the CAPM rests, these considerations are reduced to a single risk measure—beta—which captures stock price volatility relative to the market.

Within the CAPM paradigm, the degree of regulation, the nature of competition in the industry, the competence of management, and every other firm-specific consideration is boiled down to a single question; namely, how much does the stock's price fluctuate in relation to the market as a whole? Beta is the measure of that variability, and research demonstrates that beta does not fully account for the impact of firm size. Duff & Phelps concluded that:

> Examination of market evidence shows that within the context of the CAPM, beta does not fully explain the difference between small company returns and large company returns. In other words, the *actual* (historical) excess return smaller companies earn tends to be greater than the excess return *predicted* by the CAPM for these companies. This 'premium over CAPM' is commonly known as a 'beta-adjusted size premium' or simply "size premium."[112]

Contradicting the incorrect inference Mr. Baudino draws regarding the relative risk of utilities, Duff & Phelps noted that the published size premia "have been adjusted to remove the portion of excess return that is attributable to beta,

[112] Duff & Phelps, *2016 Valuation Handbook, Guide to Cost of Capital*, John Wiley & Sons (2016) at 8-1. Duff & Phelps now publishes the study of historical returns formerly compiled by Morningstar, and previously published by Ibbotson Associates.

leaving only the size effect's contribution to excess return."[113] In other words, the impact of risk differences between utilities and non-regulated firms is already accounted for and there is no justification to remove the size adjustment on this basis. Confirming these findings, *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."[114]

Q59. MR. BAUDINO CONTENDS THAT THE COMMISSION HAS REJECTED THE SIZE ADJUSTMENT IN THE PAST.[115] WHAT IS YOUR RESPONSE?

A59. The Commission's position on this issue is contrary to the evidence presented in my testimony, as well as the conclusions of other regulators. FERC has observed that "[t]his type of size adjustment is a generally accepted approach to CAPM analyses,"[116] and includes the size adjustment in the CAPM under its ROE methodology for electric utilities and natural gas and oil pipelines.[117] Contradicting Mr. Baudino's position on this issue, FERC concluded that, "[We] disagreed with intervenors that the utility industry is unique, and that the size premium adjustment would therefore be inapplicable, as the size premium adjustments are supported by a robust data set."[118] More recently, FERC affirmed its practice of including a size adjustment, concluding that "the size adjustment is

[113] Duff & Phelps, *2017 Valuation Handbook, U.S. Guide to Cost of Capital*, John Wiley & Sons (2017) at 2-10.
[114] Roger A. Morin, *New Regulatory Finance,* Pub. Utils. Reports, Inc. (2006) at 187.
[115] Baudino Direct at 46.
[116] *Coakley Mass. Attorney Gen. v. Bangor Hydro-Electric 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).
[117] *Ass'n. of Bus. Advocating Tariff Equity, et al.,* Opinion No. 569-A, 171 FERC ¶ 61,154 (2020); *Policy Statement on Determining Return on Equity for Natural Gas and Oil Pipelines*, 171 FERC ¶ 61,155 (2020).
[118] *Ass'n. of Bus. Advocating Tariff Equity, et al.,* Opinion No. 569-A, 171 FERC ¶ 61,154 at P 63 (2020), *vacated & remanded sub nom.*, *MISO Transmission Owners v. FERC*, 45 F.4th 248 (D.C. Cir. 2022).

necessary to correct for the CAPM's inability to fully account for the impact of firm size when determining the cost of equity."[119]

Q60. WHAT IS THE AVERAGE SIZE ADJUSTMENT FOR MR. BAUDINO'S PROXY GROUP?

A60. The average size adjustment corresponding to the utilities in Mr. Baudino's proxy group is 39 basis points. Mr. Baudino's CAPM results should be increased accordingly.

C. Other ROE Issues

Q61. MR. BAUDINO ARGUES YOUR DCF ANALYSIS IS FLAWED BECAUSE YOU "APPLIED A TEST FOR EXCLUDING ROE RESULTS THAT … WERE TOO LOW BUT ALSO INCLUDED ROE RESULTS THAT ARE STILL VERY HIGH."[120] IS THIS A VALID ARGUMENT?

A61. No. I evaluate low-end outliers against the observable returns available from long-term bonds. But the number of results that fail this test of reasonableness says nothing about the validity of estimates at the upper end of the range, and there is no basis to discard a corresponding number of values from the top of the range. While upper end cost of equity estimates on the order of 12.5% to 13.1% from my Exhibit AMM-5, page 3 may exceed expectations for most utilities, I retained low-end estimates in the 7.6% to 7.7% range, which are far below investors' required rate of return. Taken together and considered along with the balance of the DCF estimates, the values I retain in my DCF analysis, which range from 7.7% to 13.1%, provide a reasonable basis on which to evaluate

[119] *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569-B, 173 FERC ¶ 61,159 at P 100 (2020), *vacated & remanded sub nom.*, *MISO Transmission Owners v. FERC*, 45 F.4th 248 (D.C. Cir. 2022).
[120] Baudino Direct at 39.

investors' required rate of return. Mr. Baudino's suggestion that I retained DCF ROEs that were "too high"[121] is unjustified.

Q62. DOES MR. BAUDINO ADVANCE ANY CREDIBLE CRITICISM OF THE RISK PREMIUM APPROACH?

A62. No. Mr. Baudino contends that the risk premium method is "imprecise."[122] Of course, this observation applies equally to every model of investor behavior that is used to estimate required returns, including the DCF and CAPM approaches that formed the foundation of Mr. Baudino's recommendation. I also note that Mr. Baudino cites to Pratt and Grabowski, who state that, "alternative measures of risk have been proposed and tested" in response to one of the limitations of the CAPM model, which measures risk solely through beta.[123] Pratt and Grabowski's focus here on one of the limitations of the CAPM supports my adoption of the risk premium approach.

Meanwhile, Mr. Baudino's claim that the DCF is "far more reliable and accurate than the bond yield plus risk premium approach"[124] is unsubstantiated. As I explained earlier, while the DCF model is a recognized approach to estimating the cost of equity, it is not without shortcomings and does not otherwise eliminate the need to examine the results of other methods.

In the recognized treatise, *Principles of Public Utility Rates*, Bonbright noted that "[t]he risk premium approach is probably the second most popular approach to estimating the cost of equity."[125] Similarly, the risk premium approach is cited as one of the preeminent cost of capital methodologies by the primary reference text prepared for the Society of Utility and Regulatory

[121] *Id.* at 39.
[122] *Id.* at 47.
[123] *Id.* at 24.
[124] *Id.* at 47.
[125] James C. Bonbright, Albert L. Danielsen, and David R. Kamerschen, *Principles of Public Utility Rates*, Pub. Utils. Reports, Inc. (1988) at 322.

Financial Analysts,[126] as well as by *New Regulatory Finance.*[127] This method is routinely referenced by the investment community, by academics, and in regulatory proceedings, and provides an important tool in estimating a fair ROE.

Q63. MR. BAUDINO CLAIMS THAT A RISK PREMIUM APPROACH "CAN ONLY PROVIDE VERY GENERAL GUIDANCE" BECAUSE "RISK PREMIUMS CAN CHANGE SUBSTANTIALLY OVER TIME."[128] IS THIS A VALID CRITICISM OF YOUR ANALYSIS?

A63. No. As I discuss and demonstrate in my direct testimony,[129] my risk premium model controls for the well documented inverse relationship between the utility risk premium and interest rates. In fact, Mr. Baudino later uses this empirical relationship in order to estimate an ROE for 2024.[130] Mr. Baudino's warning against the use of a risk premium model is without merit.

Moreover, absence of change is not a sound criteria to judge the ability of any financial model to account for investors' expectations and requirements. Financial markets and stock valuations are in constant flux as investors respond to new information. Contradicting Mr. Baudino's unsupported view that the DCF method yields "far more reliable and accurate results," the Indiana Utility Regulatory Commission noted that:

> 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 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

[126] David C. Parcell, *The Cost of Capital – A Practitioner's Guide*, Society of Utility and Regulatory Financial Analysts (2010) at 164.
[127] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 28, 107-130. Opinion No. 569 cited Professor Eugene Brigham, who also recognized that the Risk Premium method is typically used when estimating a company's cost of equity. Opinion No. 569 at P 218.
[128] Baudino Direct at 47.
[129] McKenzie Direct at 55-56 and Exhibit AMM-9.
[130] Baudino Direct at 47-48 and Table 3.

> 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 analysis would regard as defensible, and therefore require an upward adjustment based largely on the expert witness's judgment. In these circumstances, we find it difficult to regard the results of a DCF computation as any more than suggestive.[131]

Q64. MR. BAUDINO SUGGESTS THAT YOUR RISK PREMIUM APPROACH IS "HIGHLY INACCURATE" BECAUSE IT FAILS TO DUPLICATE THE ACTUAL AVERAGE AUTHORIZED ROE IN A SINGLE YEAR.[132] DOES HIS ARGUMENT MAKE SENSE?

A64. No. Mr. Baudino's example illustrates two important points, neither of which are problematic. First, the fundamental nature of any linear regression equation is that it minimizes the distance between the predictive equation and the underlying data. In other words, it minimizes error, but does not eliminate it. Some predicted values will naturally be above the individual data points, while others will fall below. On average though, the predicted values will be equal to the observed data. This is illustrated in the figure below, which compares the predicted ROEs to the average authorized ROEs in each year over my risk premium study period.

[131] *Ind. Michigan Power Co.*, Cause No. 38728, 116 PUR4th, 1, 17-18 (IURC 8/24/1990).
[132] Baudino Direct at 47-48 and Table 3.

FIGURE AMM-R10
ALLOWED ROE V. PREDICTED ROE

Year	Allowed ROE	Predicted ROE	Difference	Year	Allowed ROE	Predicted ROE	Difference
1974	13.10%	12.53%	-0.57%	2000	11.58%	11.84%	0.26%
1975	13.20%	12.88%	-0.32%	2001	11.07%	11.63%	0.56%
1976	13.10%	12.47%	-0.63%	2002	11.21%	11.52%	0.31%
1977	13.30%	12.13%	-1.17%	2003	10.96%	10.99%	0.03%
1978	13.20%	12.50%	-0.70%	2004	10.81%	10.75%	-0.06%
1979	13.50%	13.17%	-0.33%	2005	10.51%	10.44%	-0.07%
1980	14.23%	14.77%	0.54%	2006	10.34%	10.68%	0.34%
1981	15.22%	16.20%	0.98%	2007	10.32%	10.70%	0.38%
1982	15.78%	16.03%	0.25%	2008	10.37%	11.01%	0.64%
1983	15.36%	14.86%	-0.50%	2009	10.52%	10.79%	0.27%
1984	15.32%	15.28%	-0.04%	2010	10.29%	10.38%	0.09%
1985	15.20%	14.27%	-0.93%	2011	10.19%	10.13%	-0.06%
1986	13.93%	12.64%	-1.29%	2012	10.02%	9.63%	-0.39%
1987	12.99%	12.94%	-0.05%	2013	9.82%	9.79%	-0.03%
1988	12.79%	13.21%	0.42%	2014	9.76%	9.71%	-0.05%
1989	12.97%	12.75%	-0.22%	2015	9.60%	9.69%	0.09%
1990	12.70%	12.81%	0.11%	2016	9.60%	9.54%	-0.06%
1991	12.54%	12.49%	-0.05%	2017	9.68%	9.52%	-0.16%
1992	12.09%	12.12%	0.03%	2018	9.56%	9.67%	0.11%
1993	11.46%	11.54%	0.08%	2019	9.65%	9.39%	-0.26%
1994	11.21%	11.96%	0.75%	2020	9.39%	8.94%	-0.45%
1995	11.58%	11.74%	0.16%	2021	9.39%	8.98%	-0.41%
1996	11.40%	11.64%	0.24%	2022	9.58%	9.92%	0.34%
1997	11.33%	11.58%	0.25%	2023	9.66%	10.40%	0.74%
1998	11.77%	11.21%	-0.56%	2024	9.78%	10.38%	0.60%
1999	10.72%	11.53%	0.81%	**Average**	**11.64%**	**11.64%**	**0.00%**

As shown above, in some years (*e.g.*, the 2024 value singled out by Mr. Baudino), the predicted ROE exceeds the actual average, while in others (*e.g.*, 2019-2021) the predicted value falls below the average authorized ROE. What Mr. Baudino is effectively telling this Commission is that regression analysis has no value as a predictive tool because it does not replicate each observation with perfect accuracy. Mr. Baudino has not cited any textbook, treatise or published literature to support his misguided interpretation of linear regression and the Commission should reject this nonsensical argument.

Second, Mr. Baudino's observation that my risk premium model, which is based on the long run relationship between allowed ROEs and risk premiums from 1974 to 2024, predicts a higher allowed ROE for 2024 than what was actually achieved underscores my previous point that recent allowed ROEs (e.g. 2022 to 2024 from the figure above) do not fully reflect the increase in capital costs that has occurred since 2021. Mr. Baudino's criticisms of my risk premium approach are without merit.

Q65. MR. BAUDINO ARGUES THAT YOUR RISK PREMIUM ANALYSIS "ASSUMES THAT INVESTOR REQUIRED ROES ARE DETERMINISTICALLY BASED ON AVERAGE COMMISSION-ALLOWED ROES AND THE RISK PREMIUM RELATIONSHIP POSITED BY MR. MCKENZIE'S REGRESSION ANALYSIS."[133] IS THIS ACCURATE?

A65. No. Mr. Baudino implies that the risk premium method is based on the assumption that interest rates are the only factors affecting investors' expected return requirements. This is not accurate. Under the assumptions of the risk premium method, investors' return requirements, and the multitude of factors that affect them, are captured in the allowed ROEs that form the basis of the underlying risk premiums. Meanwhile, the purpose of the regression analysis is to adjust these risk premiums to reflect the implications of prevailing capital market conditions contemporaneous with the analysis.

In other words, the risk premium is a function of both the cost of equity and bond yields, with the regression analysis is designed to discover systematic movements in the risk premium, which is a widely recognized parameter in finance. Moreover, there are no statistical infirmities associated with the inverse

[133] *Id.* at 47.

relationship documented in this analysis, as indicated by the high R-squared value and other measures of goodness of fit.[134]

Q66. MR. BAUDINO CLAIMS, "THE ECAPM ADJUSTMENT ALSO SUGGESTS THAT PUBLISHED BETAS BY SUCH SOURCES AS VALUE LINE ARE INCORRECT AND THAT INVESTORS SHOULD NOT RELY ON THEM."[135] IS THAT A FAIR CHARACTERIZATION OF YOUR ECAPM ANALYSIS?

A66. No. As I explain in my direct testimony,[136] the ECAPM model accounts for a documented empirical result whereby low beta stocks tend to earn higher returns than the traditional CAPM would predict, and high beta stocks tend to earn a lower return. Value Line is recognized as being the most widely available source of investment information to investors, and there are many citations to textbooks and other sources supporting its usefulness as a guide to investors' expectations.[137] The refinement of the ECAPM does not contradict this fact or otherwise undermine the relevance of Value Line betas. As S&P Global Market Intelligence observed, "The empirical CAPM, or ECAPM, is a variant of the CAPM model that adjusts for the CAPM's tendency to underestimate returns for companies that have beta coefficients less than one and over-estimate returns for high-Beta stocks."[138]

[134] The R-squared associated with the regression was 0.88, indicating that 88% of variation in equity risks premiums is explained by changes in bond yields, while the regression coefficient and the overall regression are statistically significant at levels exceeding 99%.
[135] Baudino Direct at 41.
[136] McKenzie Direct at 51-53.
[137] *See, e.g.*, Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 71 ("Value Line is the largest and most widely circulated independent investment advisory service, and influences the expectations of a large number of institutional and individual investors.").
[138] S&P Global Market Intelligence, *The rate case process: establishing a fair return for regulated utilities*, RRA Regulatory Focus (Jun. 29, 2020).

Q67. OAG-KIUC CHARACTERIZES YOUR EXPECTED EARNINGS APPROACH AS "HIGHLY SPECULATIVE."[139] HOW DO YOU RESPOND?

A67. Mr. Baudino's criticism appears to be centered around his claim that, "Using Value Line's projected returns for a time period several years into the future is highly speculative."[140] Considering that Mr. Baudino relies on Value Line projections over the same time horizon for two of the four growth measures incorporated in his DCF study, his criticism is perplexing, to say the least. Mr. Baudino's suggestion that GDP growth projections out to the year 2035 might provide a reliable limit on investors' growth expectations, while Value Line's 3-5 year forecasts should be regarding as "speculative," only reinforces the internal contradictions in his testimony.

Q68. MR. BAUDINO CONTENDS THAT THE ADJUSTMENT INCORPORATED INTO YOUR EXPECTED EARNINGS ANALYSIS IS "UNNECESSARY AND INCORRECT."[141] WHY HAVE YOU INCLUDED THE ADJUSTMENT FACTOR?

A68. The adjustment factor incorporated in applying the expected earnings approach is required because Value Line's reported returns are based on end-of-year 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

[139] Baudino direct at 49.
[140] *Id.* at 41-42.
[141] *Id.* at 49.

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 need for this adjustment has been recognized in the financial literature.[142] Similarly, FERC has also cited the necessity to adjust year-end data from Value Line to reflect average values when computing earned rates of return,[143] and accepted the exact same adjustment formula I used to apply the expected earnings approach

Q69. HOW DO YOU RESPOND TO MR. BAUDINO'S DISCUSSION OF YOUR NON-UTILITY ANALYSIS?

A69. Mr. Baudino makes the statement that utilities "have protected markets, e.g. service territories, and may increase the prices they charge in the face of falling demand or loss of customers."[144] Based on this, Mr. Baudino summarily concludes, "Obviously, the non-utility companies face risks that a lower risk electric company like KPC does not face."[145] In fact, however, investors are quite aware that utilities are not guaranteed recovery of reasonable and necessary costs incurred to provide service and that there are many instances in which utilities are unable to increase rates to fully recoup reasonable and necessary costs, resulting in an inability to earn the allowed ROE—and potentially even bankruptcy. The simple observation that a firm operates in non-utility businesses says nothing at all about the overall investment risks perceived by investors, which is the very basis for a fair rate of return.

The cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives, which include

[142] Roger A. Morin, *New Regulatory Finance,* Pub. Utils. Reports, Inc. (2006) at 305-06.
[143] *See, e.g., Bangor Hydro-Elec. Co.*, 122 FERC ¶ 61,265 at P 18 (2008).
[144] Baudino Direct at 51.
[145] *Id.*

all other securities available in the stock, bond, or money markets. Consistent with this view, Mr. Baudino notes the Supreme Court's economic standards and concluded that the fair rate of return on equity should be "comparable to the returns of other firms with similar risk structures."[146] The total capital invested in utility stocks is only the tip of the iceberg of total common stock investment and there are many other "investments of comparable risk" available to investors beyond those in the utility industry.

It is true that utilities are largely sheltered from competition, but they undertake other obligations and lose the ability to set their own prices and decide when to exit a market. The Supreme Court has recognized that it is the degree of risk, not the nature of the business, which is relevant in evaluating an allowed ROE for a utility.[147]

Q70. DOES MR. BAUDINO SUPPORT HIS INFERENCE THAT NON-UTILITY COMPANIES ARE OBVIOUSLY RISKIER THAN UTILITIES WITH ANY OBJECTIVE EVIDENCE?

A70. No, Mr. Baudino presents no objective evidence to support this claim. Indeed, investors rely on objective evidence such as credit ratings and beta values to make accurate inferences about risk, which is in part how I selected the companies in my low-risk Non-Utility group. For example, the average S&P and Moody's credit ratings for the Non-Utility Group referenced in my direct testimony are *higher* than for the Utility Group or the Company.[148] These agencies' assessment of lower risk is confirmed by the review of Value Line's Financial Strength measure, while Value Line's Safety Rank and Beta values indicate comparable risk as compared to the Company.[149] Taken together, the objective risk indicators

[146] *Id.* at 4.
[147] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).
[148] McKenzie Direct at Figure AMM-11.
[149] McKenzie Direct at 65.

documented in my direct testimony, which consider the impact of competition and market share, demonstrate that my Non-Utility Group would be considered *less risky* in the minds of investors than Kentucky Power or the common stocks of the proxy group of utilities.

Q71. MR. BAUDINO SAYS THAT AN ADJUSTMENT TO ACCOUNT FOR FLOTATION COSTS IS NOT NECESSARY SINCE "FLOTATION COSTS ARE ALREADY ACCOUNTED FOR IN CURRENT STOCK PRICES."[150] IS THIS A VALID ASSUMPTION?

A71. No. As discussed at length in my direct testimony,[151] flotation cost adjustments are supported by recognized regulatory textbooks and based on research reported in the academic literature, and the fact that investors are aware of issuance costs provides no basis to ignore a flotation cost adjustment. *New Regulatory Finance* dismisses Mr. Baudino's argument, pointing out that:

> The simple fact of the matter is that whatever stock price is set by the market, the company issuing stock will always net an amount less than the stock price due to the presence of intermediation and flotation costs. As a result, the company must earn slightly more on its reduced rate base in order to produce a return equal to that required by shareholders.[152]

III. RESPONSE TO JI WITNESS COLTON'S ROE COMMENTS

Q72. PLEASE SUMMARIZE MR. COLTON'S ROE COMMENTS.

A72. Mr. Colton proposes various performance targets for the Company related to its low-income customers, and recommends that Kentucky Power be penalized the dollar equivalent of 15 basis points for failure to achieve one of his suggested performance goals, or 25 basis points if the Company does not achieve multiple of his performance targets.[153] Mr. Colton further claims that consumer issues such

[150] Baudino Direct at 50.
[151] McKenzie Direct at 59-63.
[152] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 334-335.
[153] Colton Direct at 6-7, 105-110.

as affordability "are important drivers of the just and reasonable ROE determination," citing to several Supreme Court decisions.[154]

Q73. WOULD MR. COLTON'S PROPOSED PERFORMANCE TARGET SANCTIONS INCREASE KENTUCKY POWER'S RISK IN THE EYES OF INVESTORS?

A73. Yes. Mr. Colton's proposed performance targets and their associated 15 to 25 basis point ROE sanctions present only downside risk for the Company. While Mr. Colton claims that his proposal would lessen the risk of increasing nonpayment, reduce the rate of disconnections, and reduce dollar levels of collections in arrears,[155] he misses the point that the Company is already incentivized to consider these factors in terms of its rate design and collections policy. Adding substantial penalties in the way that Mr. Colton proposes would increase existing risks associated with economic weakness in the Company's service territory and create additional uncertainty regarding Kentucky Power's ability to actually earn its authorized ROE. Mr. Colton's suggested penalty regime is risk enhancing, and not risk reducing as he claims.

Q74. DO THE CASES CITED BY MR. COLTON JUSTIFY CONSIDERATION OF AFFORDABILITY IN THE WAY THAT HE SUGGESTS?

A74. No. Mr. Colton references *FPC v. Natural Gas Pipeline Co.* along with *Commonwealth ex rel. Stephens v. S. Cent. Bell Tel. Co.* in his plea for the Commission to consider affordability along with investor interests in deciding the appropriate ROE for Kentucky Power.[156] *FPC v. Natural Gas Pipeline Co.* does not mention "affordability." Instead, the Court held that the Federal Power Commission was not bound by a single formula for setting rates, and that rates not

[154] *Id.* at 16-17.
[155] *Id.* at 110.
[156] *Id.* at 16-17.

be "confiscatory" in terms of being too high or too low as compared to "just and reasonable" levels. Similarly, *Commonwealth ex rel. Stephens v. S. Cent. Bell Tel. Co.* also does not discuss affordability in the sense of customers' ability to pay, but rather focuses on whether a public utility's rates are unconstitutional because they are too low. Mr. Colton's reference to these decisions does not justify a detour into considerations of affordability, as he maintains.

Q75. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL TESTIMONY?

A75. Yes, it does.

COMMISSION APPROVED ROES

		Duke Energy Kentucky, Inc.		
		2019-00271	**2022-00372**	**Change (bp)**
1	Filed Date	8/1/2019	11/1/2022	
1	Order Date	4/27/2020	10/12/2023	
1	Approved ROE	9.25%	9.75%	**50**
2	Average Baa UtilityYield	3.71%	5.81%	**210**

		Kentucky Power Co.		
		2020-00174	**2023-00159**	**Change (bp)**
1	Filed Date	7/15/2020	5/23/2023	
1	Order Date	1/13/2021	1/19/2024	
1	Approved ROE	9.30%	9.75%	**45**
2	Average Baa UtilityYield	3.14%	5.96%	**282**

1 Commission orders in the respective proceedings.

2 Average yield on Baa utility bonds over the duration of the proceeding from Moody's Credit Trends.

NATIONAL AUTHORIZED ROES

1	Allowed ROE (2020 - Q3 2025)	9.70%
2	Average Baa Utility Yield (2020 - Q3 2025)	4.85%
3	Implied Risk Premium	4.84%
4	Nov. 2025 Baa Utility Yield	5.83%
5	Change in Bond Yield	0.98%
6	Risk Premium/Interest Rate Relationship	-0.4212
7	Adjustment to Risk Premium	-0.41%
8	Adjusted Risk Premium	4.43%
9	**Adjusted ROE**	**10.26%**

1 Allowed ROE for vertically integrated electric utilities from S&P Global Market Intelligence, *Major energy rate case decisions in the US* (Nov. 6, 2025).
2 Moody's Credit Trends.
3 (1) - (2).
4 Moody's Credit Trends.
5 (4) - (2).
6 Exhibit AMM-9 at 3.
7 (5) x (6).
8 (3) + (7).
9 (4) + (8).

BAUDINO PROXY GROUP

		(a)	(b)	(c)
	Company	**Expected Return on Common Equity**	**Mid-Year Adjustment Factor**	**Adjusted Return on Common Equity**
1	Alliant Energy	12.0%	1.0156	12.2%
2	Ameren Corp.	10.0%	1.0217	10.2%
3	Avista Corp.	9.0%	1.0174	9.2%
4	CenterPoint Energy	10.5%	1.0283	10.8%
5	CMS Energy Corp.	15.5%	1.0191	15.8%
6	Dominion Energy	11.5%	1.0229	11.8%
7	DTE Energy Co.	12.5%	1.0114	12.6%
8	Duke Energy Corp.	10.5%	1.0187	10.7%
9	Entergy Corp.	9.5%	1.0302	9.8%
10	Evergy Inc.	10.0%	1.0054	10.1%
11	Eversource Energy	11.5%	1.0267	11.8%
12	FirstEnergy Corp.	12.5%	1.0242	12.8%
13	IDACORP, Inc.	10.0%	1.0207	10.2%
14	Otter Tail Corp.	11.5%	1.0081	11.6%
15	Pinnacle West Capital	9.0%	1.0263	9.2%
16	Pub Sv Enterprise Grp.	12.5%	1.0282	12.9%
17	Sempra	10.5%	1.0288	10.8%
	Average (d)	11.1%		**11.3%**

(a) The Value Line Investment Survey (Sep. 5, Oct. 17 and Nov. 7, 2025).
(b) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).
(c) (a) x (b).
(d) Excludes highlighted values.

VERIFICATION

The undersigned, Adrien M. McKenzie, being duly sworn, deposes and says he is the President of FINCAP, Incorporated, that he has personal knowledge of the matters set forth in the foregoing testimony and the information contained therein is true and correct to the best of his information, knowledge, and belief after reasonable inquiry.

Adrien M. McKenzie

STATE OF TEXAS)
) Case No. 2025-00257
COUNTY OF TRAVIS)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Adrien M. McKenzie, on DECEMBER 11, 2025.

Notary Public

My Commission Expires 2/25/2027

Notary ID Number 131906507