Exhibit No.: _____
Issue(s): Rate of Return/Capital Structure
Witness/Type of Exhibit: Murray/Direct
Sponsoring Party: Public Counsel
Case No.: ER-2024-0319

DIRECT TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

UNION ELECTRIC COMPANY
D/B/A AMEREN MISSOURI

CASE NO. ER-2024-0319

** _____ **
Denotes Confidential Information that has been redacted.

The information that is redacted in Public Counsel witness David Murray's direct testimony is redacted because another party has identified that information to be confidential in response to a discovery request. Rule 20 CSR 4240-2.135(5)(A).

December 3, 2024

PUBLIC

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OF

DAVID MURRAY

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

FILE NO. ER-2024-0319

Q. Please state your name and business address.

A. My name is David Murray, and my business address is P.O. Box 2230, Jefferson City, Missouri 65102.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Office of the Public Counsel ("OPC") as a Utility Regulatory Manager.

Q. On whose behalf are you testifying?

A. I am testifying on the behalf of the OPC.

Q. What is the purpose of your testimony?

A. To recommend a fair and reasonable rate of return ("ROR") for purposes of setting Ameren Missouri's revenue requirement for its regulated electric utility operations.

Q. What experience, knowledge and education qualify you to sponsor ROR testimony in this case?

A. Please see the attached Schedule DM-D-1 for my qualifications as well as a summary of the cases in which I have sponsored testimony on ROR and other financial issues.

Q. What aspects of ROR will you address?

A. I will address a fair and reasonable allowed return on common equity ("ROE") and a fair and reasonable capital structure.

Q. What is your main conclusion after analyzing Ameren Missouri's specific financial situation as well as the current state of capital markets?

A. Ameren Missouri's allowed ROE should be set at 9.50%, based on my recommended authorized ROE range of 9.00% to 9.50%. My recommended range reflects the following considerations:

- The electric utility industry's COE is in the range of 7.5% to 8.5%;
- The electric utility industry's current price-to-earnings ratios are trading similar to 2015 levels, when the Commission deemed 9.5% authorized ROEs as fair and reasonable for Ameren Missouri and Evergy Metro ("Metro"); and
- Under the Commission's typical zone of reasonableness ("ZOR") standard, a recommended ROE of 8.68% to 10.68% is generally considered reasonable.

My recommended ROE should be applied to a common equity ratio of 42%, which is the mid-point of Ameren Corp's recent actual consolidated common equity ratios of approximately 41% to 43%, after excluding short-term debt. A 42% common equity ratio is also generally consistent with Ameren Corp's typical targeted common equity ratio.

Q. Before you discuss the details supporting your analysis, would you summarize the rationales for your conclusions?

A. Yes. Although capital structure and the allowed ROE are interrelated as to the ultimate impact on Ameren Missouri's revenue requirement, I will first briefly explain my rationale for each component, separately.

I recommend the Commission set Ameren Missouri's allowed ROE for its electric utility operations at 9.50% based on a range of 9.00% to 9.50%. During most of 2020 to 2022, utility stocks had not traded consistent with their typical negative correlation to changes in long-term bond yields. However, since the end of 2022, utility stock valuation levels resumed their typical negative correlation to interest rates with utilities significantly underperforming the S&P 500 through mid-2024. However, for the period July since July

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1, 2024 through November 22, 2024, electric utility stocks in general and Ameren Corp's stock specifically, have increased significantly, outperforming the S&P 500 by 10.95 percentage points and 23.56 percentage points, respectively. These events explain my lower cost of equity estimates compared to my estimates in the recent Evergy Missouri West ("EMW") rate case, Case No. ER-2024-0189, in which my COE estimates were based on average stock prices for the five-months ending, May 31, 2024. Based on my application of several cost of equity methods and corroborating information from investors, I estimate the COE for regulated electric utilities to be in the approximate range of 7.5% to 8.5%, which is about 0.75% higher than my estimate of 7% to 7.5% in Ameren Missouri's 2022 rate case.

I further recommend that the Commission set Ameren Missouri's authorized common equity ratio at 42% rather than the approximate 52% ratio Ameren Corp targets for Ameren Missouri. Since Ameren Missouri's 2019 rate case, Ameren Corp has consistently increased the amount and proportion of holding company debt compared to its consolidated debt levels. Ameren Corp's utilization of more holding company debt allows it to minimize the dilution of earnings to individual common equity shares from anticipated increased aggregate earnings from its investment in its subsidiaries, including Ameren Missouri. Ameren Corp's ability to minimize dilution by employing such a strategy would be more costly to ratepayers if they are required to pay for a higher-cost capital structure than Ameren Corp deems optimal for its consolidated capital structure. Ameren Missouri's targeted 52% equity ratio for ratemaking purposes is similar to ratemaking targets for Missouri's other large electric utilities, such as EMW, Metro, and The Empire District Electric Company d/b/a Liberty Utilities ("Empire"). Considering investors' sentiments that the Missouri regulatory and legislative environment is becoming more investor friendly, the business risk for utility investments in Missouri is lower. Specifically, as it relates to electric utility companies in Missouri, their business risk declined after they became eligible to elect the investor-friendly ratemaking mechanism referred to as plant in service accounting ("PISA"), which became effective on August 28, 2018.[1] Missouri's

[1] SB 564 resulted in the creation/modification of several sections of Chapter 393 with the primary new subsection being Section 393.1400, RSMo.

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electric utilities' ability to elect PISA (without specific Commission authority) was extended to 2028 through an amendment to the PISA law in 2023. Additionally, electric utilities now have express legal authority to recover energy transition costs and qualified extraordinary costs by securitizing such costs (providing an immediate lump sum recovery of such costs via selling rights to a stream of cash flows to purchasers of the securitized bonds). Ameren Missouri has taken advantage of both mechanisms. Ameren Missouri's reduced business risk allows for greater debt capacity (*i.e.* financial risk), but instead of Ameren Corp allowing Ameren Missouri to use more debt in its capital structure, it is issuing more holding company debt.

FAIR RETURN ON COMMON EQUITY

Q. What is the most often cited basis for determining a fair and reasonable ROE for purposes of setting utility rates?

A. The following principles of the *Hope*[2] and *Bluefield*[3] Supreme Court of the United States cases are often cited as criteria in setting a fair and reasonable ROE for purposes of utility ratemaking:

1. Comparable returns for similar risk;
2. Financial integrity/maintain credit; and
3. Capital attraction.

The *Hope* (1943) and *Bluefield* (1923) principles were established well before the advent of modern cost of equity methods, such as the discounted cash flow ("DCF") method and the Capital Asset Pricing Model ("CAPM"). Therefore, while setting ROEs based on the COE has generally been considered consistent with the *Hope* and *Bluefield* principles, other factors, such as other jurisdictions' authorized ROEs have been cited by this Commission as a relevant factor it should consider. The authorized ROE is a regulatory ratemaking concept that quantifies the amount of net income allowed in the revenue requirement. The COE is a market-based concept that quantifies an investors' required return on his/her

[2] *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1943).
[3] *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923).

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common equity investment. Because ROEs have generally been set in the 9% range, while an overwhelming amount of evidence demonstrates that investors' required returns (*i.e.* COE) on utility equity investments have typically been much lower, I correctly differentiate between allowed ROEs and the COE in my analysis and recommendation.

Q. How did you determine the approach you would take to estimate a fair and reasonable allowed ROE for purposes of this case?

A. I reconciled the principles established in *Hope* and *Bluefield* with modern financial models used to estimate the COE.

Considering these principles, I first estimate Ameren Missouri's current COE and then compare my current COE estimates to those I estimated in recent rate cases to determine if there has been a fundamental change in the cost of capital. My analysis also includes consideration of other recently authorized ROEs with specific consideration given to Ameren Illinois' 8.72% authorized ROE in December 2023 for its electric utility operations.[4]

Q. Based on your analysis, what is your estimate of Ameren Missouri's COE?

A. Ameren Missouri's COE is in the range of 7.5% to 8.5%.

Q. Based on your analysis and awareness of capital market conditions, investor expectations and recent average allowed ROEs for electric utilities, what do you consider to be a fair and reasonable allowed ROE for Ameren Missouri's electric utility operations?

A. I consider 9.00% to 9.50% to be a reasonable range with my point recommendation at 9.50%. My recommended allowed ROE is within the range of the Commission's typically defined ZOR range of 100 basis points above and below recent average authorized ROEs, which are approximately 9.68%[5] (*i.e.* 8.68% to 10.68%). After considering my COE estimates, the Commission's authorized ROE of approximately 9.5% for Missouri's electric utilities for rate cases decided in 2015, and authorized ROEs for Ameren Corp's

[4] Docket No. D-23-0082.
[5] RRA Major Rate Case Decisions Quarterly Updates, October 30, 2024.

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Illinois electric utility operations, I recommend the Commission authorize Ameren Missouri a 9.5% ROE for purposes of setting its authorized ROR.

Q. Was an ROE and capital structure specified in Ameren Missouri's last rate case, Case No. ER-2022-0337?

A. No.

Q. How did you inform yourself for determining the best methods and approaches to use to estimate Ameren Missouri's COE?

A. I reviewed equity investment research reports covering Ameren Corp and the utility industry since at least October 31, 2023. Additionally, I generally considered the information I had reviewed in past Ameren Missouri rate cases. This information provided me insight as to the types of methods/models typically used by investors to determine fair prices to pay for utility stocks. Consequently, I decided the best approach to estimate Ameren Missouri's COE was to perform a COE analysis on its parent company, Ameren Corp, in conjunction with a COE analysis on a proxy group of electric utility companies.

Q. What models did you use to estimate Ameren Missouri's COE?

A. I used a multi-stage discounted cash flow ("DCF") method, with specific emphasis on consensus analysts' estimated dividends and the modeled growth of dividends. A DCF method that focuses on dividends as the proxy for cash flow is more precisely defined as the dividend discount model ("DDM"). I also applied the Capital Asset Pricing Model ("CAPM") to both Ameren Corp and the proxy groups. Finally, I performed simple and logical reasonableness checks of my COE estimates. These reasonableness checks recognize the basic characteristics of utility stocks, mainly that the investment community perceives them as yield/income investments, which implies the COE should not be much higher than their own bond yields. One such reasonableness check is a straight-forward bond-yield-plus-risk-premium ("BYPRP") method included in the Chartered Financial Analyst ("CFA") Program curriculum.[6]

[6] 2021 CFA Program – Level II Refresher Reading, Equity Valuation, p. 35.

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Q. Was your approach substantially the same as you employed in Ameren Missouri's 2022 rate case, as well as other recent cases involving Missouri's electric and gas utility companies?

A. Yes.

Q. Can you describe current capital market conditions as it relates to the electric utility industry in general and Ameren Corp specifically before you discuss the details of how you specifically estimated Ameren Missouri's COE?

A. Yes. This information should help provide some context as to the current state of utility capital markets. Considering the rapid and steep increase in interest rates from 2022 to 2023, which caused utility debt costs to increase dramatically since 2020 to 2021, it is important to understand the context of authorized ROEs versus the COE over a longer period than just the last couple of years. It is for this reason that I will analyze and compare utility stock valuations and interest rates for most of the period since the financial crises and recession around 2008/2009.

Q. What ROE had you recently recommended the Commission authorize for its large electric utilities?

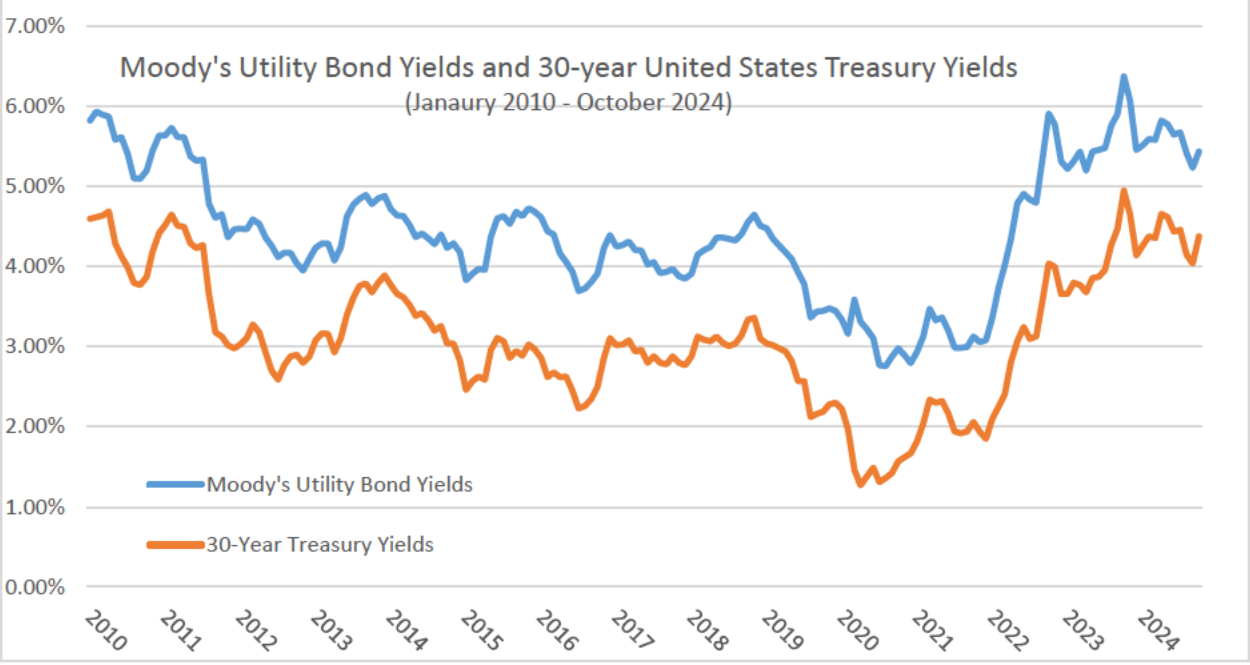
A. I had consistently recommended the Commission reduce its electric utility authorized ROE from around 9.5% to as low as 9.0% in electric utility rate cases since as recently as 2022. The Commission's last authorized ROE for Ameren Missouri was 9.53% in the 2014 rate case, Case No. ER-2014-0258. The Commission's last litigated authorized ROE for a Missouri electric utility was 9.25% for Empire in Case No. ER-2019-0374. In electric utility rate cases prior to 2024, I had recommended the Commission further reduce authorized ROEs to 9.0%. Although the COE has varied over much of the period since 2014, it had exhibited a declining trend until 2022. Therefore, I had consistently urged the Commission to lower the authorized ROE for Missouri's electric utilities by at least 25 basis points to recognize the systemic decline in the cost of capital over the period.

Q. Can you describe and illustrate recent and long-term changes in long-term bond yields?

A. Yes, long-term bond yields have increased dramatically over the last couple of years after declining to historically low levels during the Covid-19 pandemic (2020 – 2021). In fact, during the Fall of 2023, investment grade utility bond yields and long-term United States Treasury ("UST") bond yields increased to their highest levels since 2010.

Some considered the early stages of lower long-term interest rates in the first half of the past decade to be anomalous because of the Federal Reserve Bank's ("Fed") quantitative easing ("QE") programs[7] through October 2014. However, for the last half of the past decade, long-term interest rates continued an overall declining trend, until they reached all-time lows in 2020 and 2021. However, as I previously described, long-term rates have since increased dramatically, peaking in October 2023.

The below graph shows long-term bond yields since January 1, 2010.



[7] QE involved three rounds of the Fed's direct intervention in bond markets beyond just lowering the Fed Funds rate. The Fed's QE programs had the express intent of reducing long-term interest rates.

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As can be seen in the graph, average utility long-term bond yields had dropped to modern all-time lows in the latter half of 2020 - levels not experienced since the late 1940s and early 1950s. However, the average yield on the Moody's Public Utility Bond index had approximately doubled between early 2022 and October 2023, before declining to around 5.25% to 5.5%. After dropping to an all-time low yield of 1.27% in April 2020, 30-year United States Treasury ("UST") bonds increased to approximately 5% in October 2023 before declining to approximately 4% to 4.25% in recent months.

Although more simplistic COE methods may imply that the COE for utilities whipsawed along with bond yields, utility valuation levels over this period do not support this notion. As I will explain in more detail later in my testimony, the post Covid-19 economic and capital market conditions have been atypical. This is likely a consequence of both the Fed's and U.S. Congress's massive interventions through monetary and fiscal policies during the Covid-19 pandemic.

Q. Why is it typically important to evaluate trends in long-term interest rates when evaluating the utility industry's COE?

A. The investment community typically regards utility stocks as bond proxies/pseudo bonds, meaning that if long-term bond yields decline, then this typically causes regulated utility stock prices to increase. ** _____ _____ **[8] Although investors' total returns in utility stock investments do include some capital gains, because of the slow, steady growth in earnings, utility companies have typically distributed approximately 2/3 of their earnings as dividends to shareholders, causing utility stocks to be characterized as yield investments. Therefore, changes in utility stock valuation levels have historically had a strong inverse correlation to changes in bond yields, *i.e.* as bond yields decline, utility stock prices increase.

[8] Ameren Corp Dividend Policy Considerations, Finance Committee, February 2021, pp. 3-21.

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Q. From April 2020 through August 2022, did utility stock valuations and bond yields provide traditional and consistent signals about utilities' cost of capital?

A. No. Following drastic and significant intervention by the Fed in monetary policy and the UST in fiscal policy, in reaction to Covid-19 and its associated mitigation measures, the yield-to-maturity ("YTM") on utility and corporate bonds traded at 70-to-80-year lows. However, at the same time, broader utility stocks (mainly local natural gas distribution companies ("LDC") and electric utility stocks) underperformed the S&P 500. The same atypical trading pattern occurred as long-term bond yields began a dramatic increase in 2022. Utility stocks significantly outperformed the S&P 500 on a relative basis, despite long-term yields increasing through much of 2022. The increase in yields caused the S&P 500 to contract significantly, while causing only a slight decline in utility stock prices, allowing them to maintain similar P/E ratios as before the rapid increase in long-term interest rates.

Consequently, while the utility industry's debt costs fluctuated along with the macro changes in interest rates, the same was not true for the utility industry's cost of equity. For example, as I will discuss later in my testimony, use of the CAPM with standard assumptions, implied that the utility industry's COE fluctuated along with long-term bond yields since 2020, but such indications were not corroborated by utility equity market valuations.

Q. What about since August 2022?

A. Starting around mid-September 2022, electric utility P/E ratios resumed their more typical inverse correlation with long-term yields, as illustrated in the following chart:

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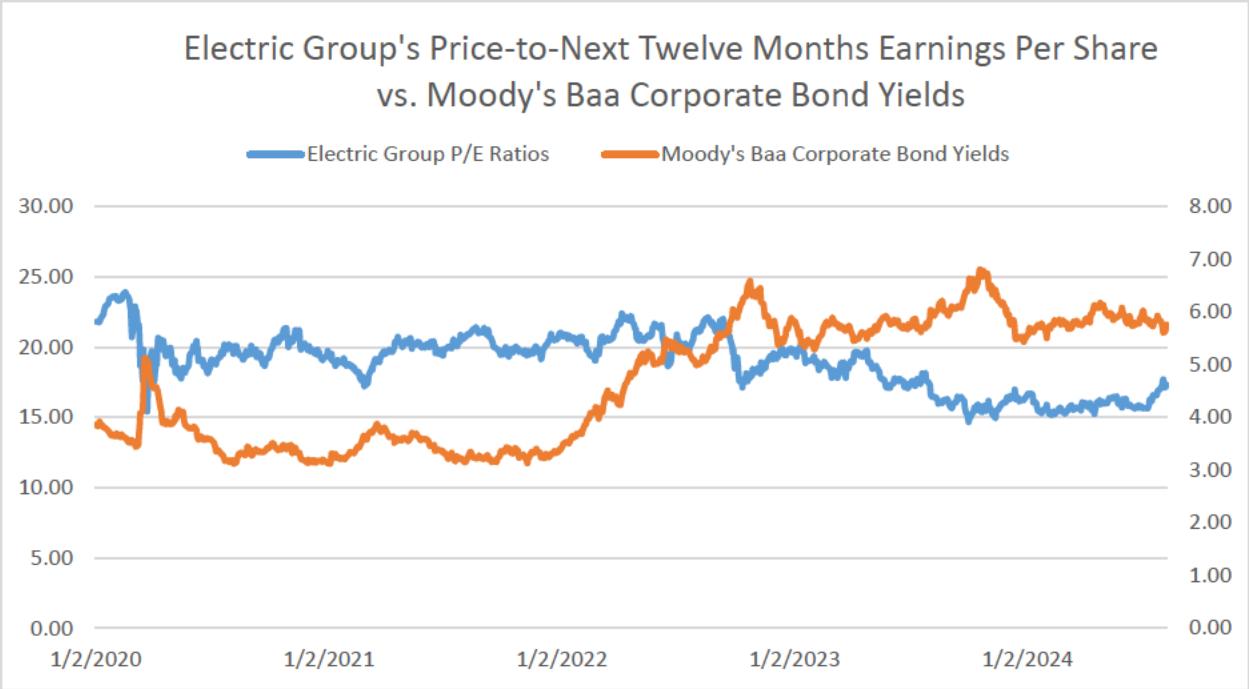

During the all-time low bond yield environment, the utility industry was able to take advantage of these extremely low debt capital costs. For example, on October 9, 2020, Ameren Missouri issued 30-year, $550 million bonds at an annual coupon rate of only 2.625%. However, during this period, utility equity valuation levels did not increase in response to the decline in bond yields, which implied investors did not expect extremely low interest rates to be sustained. Similarly, as bond yields increased significantly in 2022, utility equity valuation levels did not contract as typically expected – perhaps because investors understood that the extremely low cost of debt during 2020 to 2021 was not likely sustainable. To illustrate the significant increase in utility bond yields, Ameren Missouri issued 30-year, $500 million bonds on March 13, 2023, at a coupon of 5.45%, or slightly over double the cost from just two and a half years prior.

Q. What are recent implied yields on Ameren Missouri's long-term debt?

A. As of November 12, 2024, Ameren Missouri's 5.45%, 30-year first mortgage bond traded at a yield-to-maturity ("YTM") of approximately 5.51% and Ameren Missouri's 2.625%, 30-year first mortgage bond traded at a YTM of approximately 5.4%. Therefore, the cost of long-term debt capital has not changed significantly since 2023.

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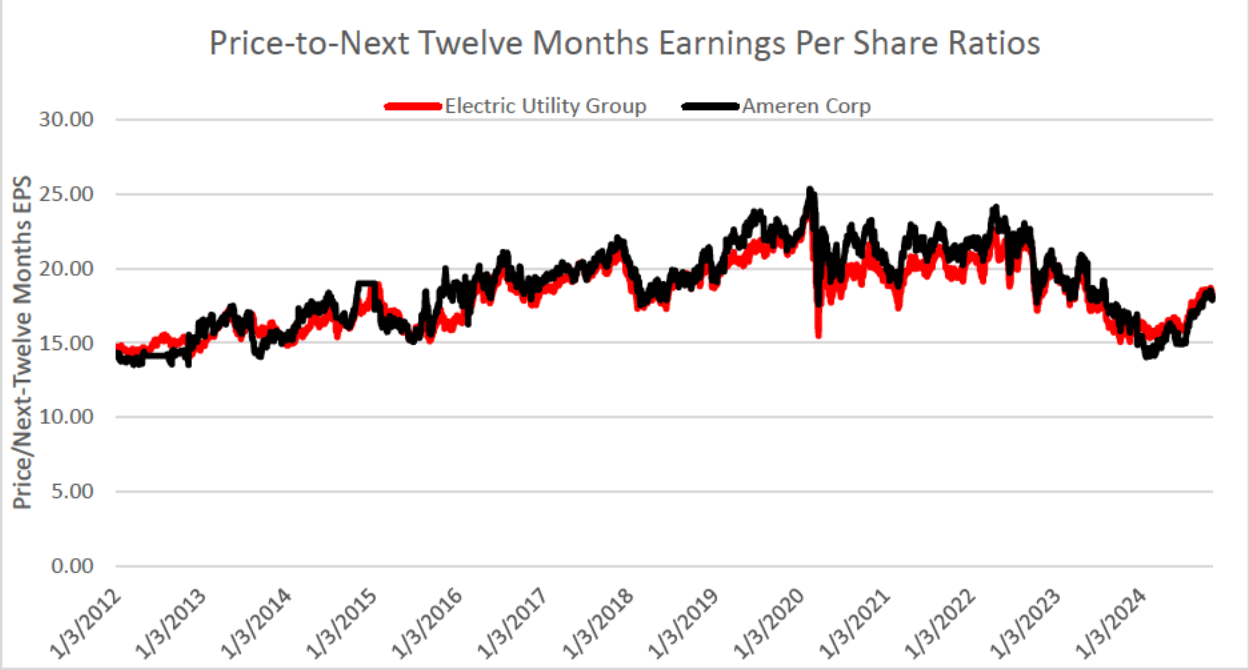
Q. Would you graphically illustrate Ameren Corp's P/E ratios to those of an electric utility industry proxy group[9] from 2012 to the present?

A. Yes. See the below graph:

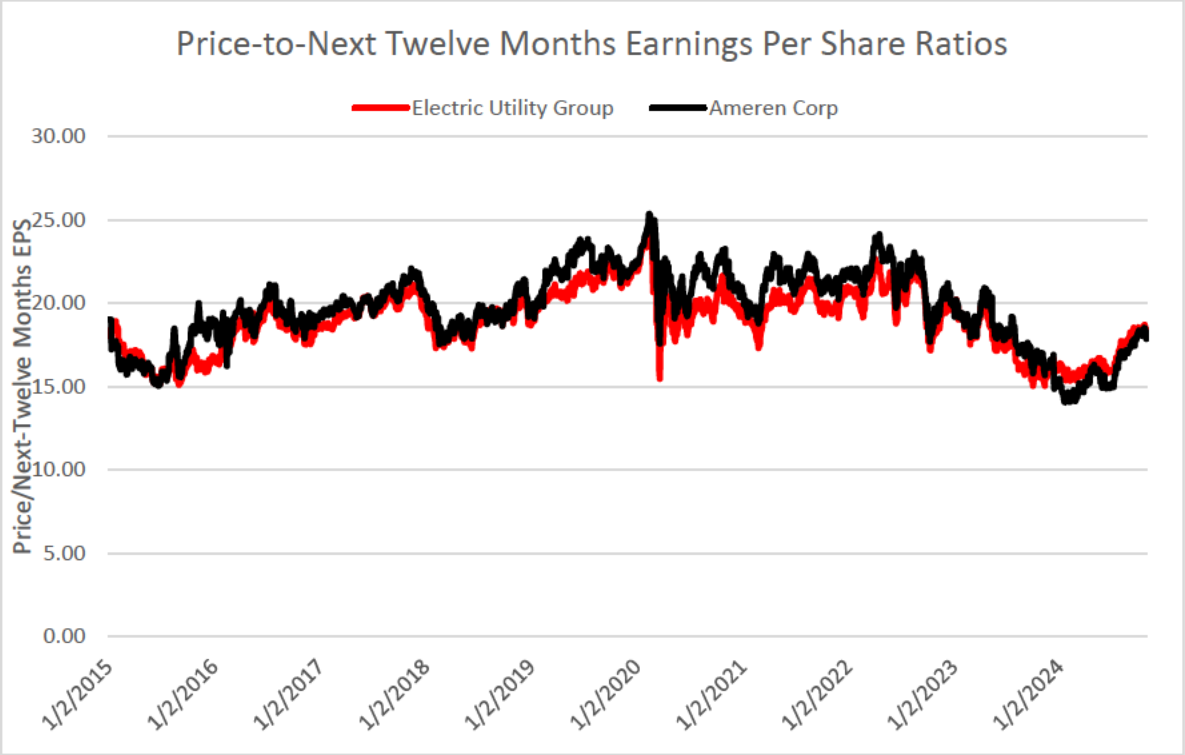


As can be seen in the above graph, for the most part, Ameren Corp's P/E ratio has typically traded in line with, or at times a premium, to those of other electric utility companies. However, the Illinois Commerce Commission's ("ICC") unexpected lower rate increase and initial rejection of Ameren Illinois' multi-year grid plan in December 2023 caused Ameren Corp's P/E ratio to decline below that of the industry's P/E ratio at the end of 2023 into early 2024.

[9] Unless otherwise specified, the proxy group I use to represent the electric utility industry are the following companies: Alliant Energy Corporation, American Electric Power Company, CMS Energy Corporation, DTE Energy Company, IDACORP, OGE Energy Corp, Pinnacle West Capital Corporation, Portland General Electric Company, The Southern Company, WEC Energy Group, and Xcel Energy Inc. These companies met screening criteria I used in Ameren Missouri's 2012 or 2014 rate cases, Case Nos. ER-2012-0166 and ER-2014-0258, respectively.

Q. Would you similarly illustrate a comparison of the electric utility industry's P/E ratios to those of Ameren Corp since 2015, when the Commission first deemed a 9.5% ROE fair and reasonable for Missouri's electric utility companies?

A. Yes. The chart follows:



As is evident from the above chart, during 2015, the electric utility industry generally traded at a P/E ratio in the 15x to 17x range with a brief period at the beginning of 2015 at close to 19x. Ameren Corp's P/E ratio traded in-line with the electric utility industry except for at the end of 2015, when it traded at 19x. Prior to the market disruptions coinciding with the onset of the Covid-19 pandemic, both Ameren Corp's and the electric utility industry's P/E ratios hit all-time highs of ~25x and ~24x, respectively. At that time, which was consistent with the period of Ameren Missouri's 2019 rate case, Case No. ER-2019-0355, I estimated Ameren Missouri's COE to be as low as in the 5.5% to 6.5% range, which is logically consistent with the extremely high valuation ratios of that time.

Subsequent to the acute capital market instability at the onset of Covid-19, which was quickly addressed by the Fed and the UST, the electric utility industry's and Ameren

Corp's P/E ratios stabilized during the remainder of 2020. Although long-term interest rates (as measured by long-term corporate bond yields and UST bonds) plummeted from the spring of 2020 through the end of 2021, Ameren Corp's and the electric utility industry's P/E ratios did not expand as is typical when long-term bond yields decline.

Q. What are utility equity investors' reactions to the recent interest rate environment?

A. Based solely on interpreting/evaluating utility stock price changes as compared to that of the broader market, stronger economic conditions and optimism about potential productivity benefits from artificial intelligence have been causing the S&P 500, especially constituents in the information technology sector, to significantly outperform the utilities sector. Until 2022, most utility equity analysts had projected that low interest rates justified a continued reduction of authorized ROEs. However, given the fact that long-term bond yields have remained higher since late 2022, now investors expect regulators to at least hold the line on awarded ROEs.

Q. Why would investors expect utility commissions to hold the line on authorized ROEs if the cost of capital has increased?

A. Because investors recognize that utility commissions did not reduce authorized ROEs as much as was justified when the cost of capital was declining. Barclays recently indicated the following about authorized returns while the cost of capital was declining from 2010 to the early 2020s:

> **High Returns Unlikely as ROEs Sticky While Rates Were at Decade Lows**
>
> Simplistically, from 2010 to early 2020s long term risk free yields have only declined, while utility ROEs remained steady at an average 9.8% authorized rate on the electric side. Utilities were arguably over-earning during this timeframe in our view. We believe over a long term (10yr+) time horizon there should be a case for higher ROEs if risk free yields remain elevated or move higher, but we see it unlikely that regulated ROEs return to 12%+ levels anytime soon. This likely leads to an extended CoC [cost of capital] crunch for the utility industry, which will pressure management teams' abilities to raise capex budgets materially in the five-year

> window. Please see our additional work below highlighting the CoC crunch.[10]

Q. What COE have equity analysts been using to estimate a fair price to pay for Ameren Corp's stock in today's higher-interest rate environment?

A. Wells Fargo applies a 7.5% COE to Ameren Corp's estimated dividends in its muti-stage dividend discount model ("DDM") analysis (a DDM is the same model as the DCF in utility ROR analysis).[11] Morningstar also applied a COE of 7.5% for purposes of its fair value estimate for Ameren Corp's stock.[12]

Q. Can utilities still create value for their shareholders at a narrower spread between the COE and allowed ROEs?

A. Yes. Even at a narrower spread, as long as a company has the opportunity to earn more than its cost of capital, it will create value above the initial book value investment (*i.e.* investment in rate base for utility companies). The ratemaking principle of setting an authorized ROE at or near parity with the COE is that utility companies will only invest in projects that are expected to be economically efficient based on the merits of the projects rather than simply being authorized a return higher than the cost of capital (or a jurisdiction that authorizes a higher return than another jurisdiction). Morningstar's discounted cash flow analysis recognizes this principle should at least hold over the long-term. Specifically, as it relates to estimating growth in cash flows in the perpetuity stage, Morningstar states the following:

> Once a company's marginal ROIC [Return on Invested Capital] hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.[13]

[10] Nicholas Campanella, et. al., "U.S. Power & Utilities: Initiating Coverage: Down but Not Out," Barclays, August 22, 2023, p. 23.
[11] Neil Kalton, et. al., "Takeaways from Investor Meetings—Reiterate Overweight," Wells Fargo, September 20, 2024.
[12] Andrew Bischof, "Ameren Earnings: Transmission Opportunities in Midwest Could Prove Meaningful in Long Term," Morningstar, November 7, 2024.
[13] *Id.*

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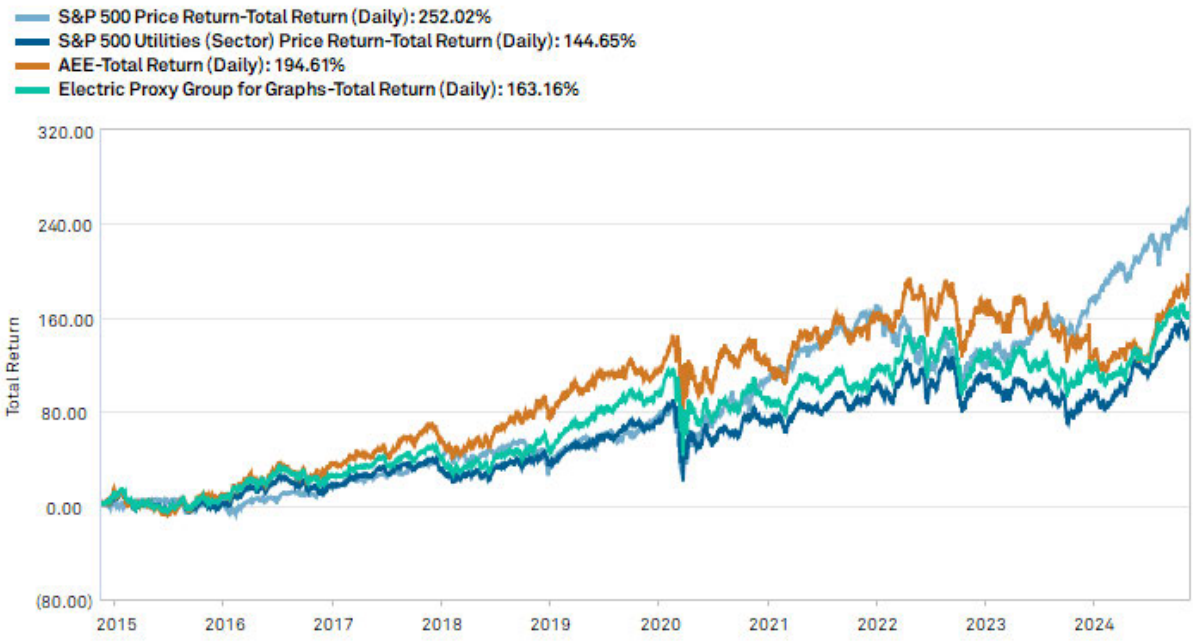
Q. Would you show how Ameren Corp's shareholder returns have compared to the S&P 500, the utilities in the S&P 500, and a representative electric utility proxy group for the last ten years?

A. Yes. See the below chart:



The key takeaways from the above chart is the fact that until the pandemic, Ameren Corp and the electric utility industry achieved higher total returns than the S&P 500 despite the fact that they typically do not achieve as high a proportion of their total returns from capital gains as compared to growth stocks. Utilities' high total returns over this period were largely due to the sustained long-term decline in interest rates over this period, which also caused higher capital gains for bond investments. Being that bond coupons are typically fixed, this clearly demonstrated that yield investments achieved capital gains mainly due to a decline in long-term yields. However, post the pandemic, and, more importantly, post the response of the Federal Reserve and the U.S. Congress to support the economy during the pandemic, aggressive stimulus measures caused the S&P 500 to significantly outperform the electric utility industry. This is largely attributed to the Fed providing a tremendous amount of capital market support, which caused negative real bond yields during much of this period. This had the impact of reducing the discount rates (*i.e.* COE)

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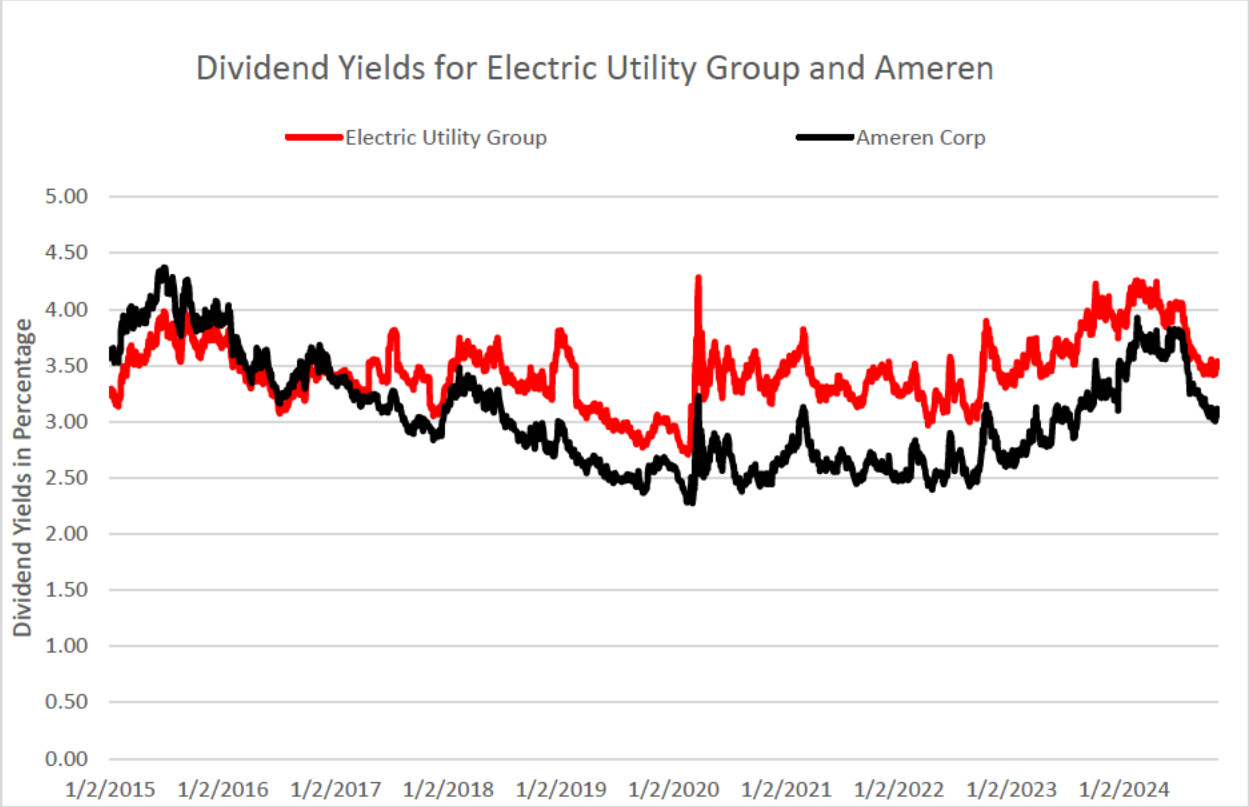
for the broader markets, which made potential future profits worth more in present value terms. However, becoming concerned about sustained inflationary pressures, the Fed began to aggressively tighten monetary policy, which caused investors to fear a recession in 2023. This explained utility stocks' stronger performance relative to the S&P 500 for much of 2022, despite increases in long-term bond yields.

Q. Would you show the changes to the electric utility industry's and Ameren Corp's dividend yields since the Commission authorized Ameren Missouri a 9.53% ROE in 2015?

A. Yes. This chart shows the continuous changes since January 2, 2015.



As illustrated, Ameren Corp's dividend yield was approximately 3.5% to slightly over 4% during 2015. From the onset of Covid-19 to mid-2023, Ameren Corp's dividend yield has traded in the range of 2.5% to 3%. During the fall of 2023 into early 2024, when long-term bond yields increased, Ameren Corp's dividend yield increased to the 3.5% to 4%

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range. However, since mid-2024, Ameren Corp's dividend yield steadily declined to around 3% by the end of October 2024.

Assuming investors' expectations for Ameren Corp's earnings per share ("EPS") growth, dividends per share ("DPS") growth, and dividend payout ratio remained fairly constant over this period, it would imply that Ameren Corp's COE is lower than it was in 2015 when the Commission authorized Ameren Missouri a 9.53% ROE. However, in 2015 Ameren Corp had a slightly higher dividend payout ratio of around 63% and a less proven growth track record because it had just divested its non-regulated operations in 2013. Therefore, it is also important to observe the changes over time of a broader group of regulated electric utility companies.

In early 2015, the electric utility proxy group's dividend yields started in the low 3% area, but then increased to the high 3% area by the end of 2015. Immediately before the onset of Covid-19, electric utility dividend yields were at all-time lows, which was consistent with all-time highs in electric utility P/E ratios. However, subsequent to the early stages of the Covid-19 pandemic, the decline in the electric utility industry's COE has not been as pronounced. From the spring of 2021 through the fall of 2022, electric utility dividend yields traded in a range of 3% to 3.5%, as compared to consistently higher than 3.5% for much of 2015. Consistent with the increase in Ameren Corp's dividend yield during the fall of 2023 into early 2024, the electric utility proxy group's dividend yields also increased, but even higher to above 4%. However, since mid-2024, the electric utility proxy group's dividend yields have declined to levels similar to those in early 2015. This information on its own supports maintaining Ameren Missouri's previously authorized ROE of approximately 9.5%.

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COST OF EQUITY METHODS

Q. Having provided context on recent changes in the utility capital market generally and with regard to Ameren Corp specifically, would you explain how you approached estimating Ameren Missouri's COE in this case?

A. Yes. I performed a multi-stage DCF analysis and a CAPM analysis on Ameren Corp and a proxy group of electric utility companies. Then, I tested the reasonableness of my estimates by using simple reasonableness checks, such as the BYPRP method discussed in the CFA Program curriculum.

INVESTOR INSIGHT

Q. How did you inform yourself as to reasonable and rational inputs for your COE approaches?

A. The objective of a ROR witness is to emulate investors' approaches to analyzing and making investment decisions as it relates to investing in utility stocks. Therefore, I have made it a priority to review, analyze, and understand how equity research analysts estimate fair prices for utility stocks. My analysis has allowed me to test the theory of cost-of-capital estimation in utility ROR testimony, as it compares to practice. I have discovered investment analysts use multi-stage DCF approaches to estimate fundamental values of utility stocks, and/or they use relative valuation techniques that compare a company's P/E ratios to averages for the industry and/or potentially a more tailored subset of peer companies.

In my experience, professional equity ("Wall Street") analysts project long-term compound annual growth rates ("CAGR") in EPS to determine whether a company's P/E ratio deserves a premium or a discount to its peers. Wall Street analysts DO NOT use these estimated long-term CAGRs in EPS for purposes of projecting a perpetual dividend growth rate, as some ROR witnesses suggest. When performing an absolute valuation analysis, such as a DCF/DDM, Wall Street analysts assume rational perpetual growth rates in the 2.5% to 3.3% range for electric utility companies. Finally, as I discussed earlier in my testimony, they estimate electric utilities' COE to be approximately 7.50%.

Q. Is it important to analyze the information these equity research firms rely on to determine a fair and reasonable ROE for Ameren Missouri?

A. Yes.

Q. Why?

A. Analyzing this information is important because these Wall Street analysts are the very individuals that underlie various consensus estimates widely considered by investors. ROR witnesses recognize the influence Wall Street analysts have on utility stock prices by the very fact that they use their consensus financial metric forecasts for purposes of estimating the COE.

Q. What equity research firms cover Ameren Corp's stock?

A. According to Ameren Corp's website, the following firms cover its stock: Argus Research Corporation, Bank of America ("BofA"), Barclays, BMO Capital Markets, Evercore ISI, Goldman Sachs, Guggenheim, JP Morgan, KeyBanc Capital Markets ("KeyBanc"), Mizuho, Morgan Stanley, Morningstar Equity Research, UBS, Value Line, Wells Fargo Securities, and Wolfe Research ("Wolfe").[14]

Q. Did you review any of these firms' research for purposes of performing your cost of equity analysis and preparing your testimony?

A. Yes. I mainly relied on reports Ameren Missouri made available for review in response to Staff Data Request No. 0121. However, over my career I have established relationships with some firms/analysts who have distributed this material to me directly through their email distribution lists. These relationships were borne from my role as a regulator in which many of these analysts seek information related to Missouri's general and specific regulatory issues. I have also interacted with these analysts through my participation in organizations, such as the Society of Utility and Regulatory Analysts ("SURFA").

[14] https://www.amereninvestors.com/company-info/analyst-coverage/default.aspx.

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MULTI-STAGE DCF/DDM

Q. How did you approach the multi-stage DCF/DDM analysis you performed on Ameren Corp?

A. Schedule DM-D-2 attached to my testimony illustrates the primary logic and assumptions I used in my multi-stage approach. For the first stage, I used consensus analysts' estimates for dividend per share ("DPS") through 2028. Ameren Corp's consensus dividend payout ratio is projected to be 57.40% in 2028. Ameren Corp's current guidance on its dividend payout ratio is in the range of 55% to 65%.[15] I then modeled an equal percentage change in the annual payout ratio from this period until the terminal year, which is when I assumed that Ameren Corp would converge to a dividend payout ratio necessary to ensure it retains sufficient earnings to sustain the assumed perpetual growth rate of 2.5% to 3.5%. Consequently, both Ameren Corp's DPS and EPS annual growth rates gradually declined to my assumed perpetual sustainable growth rate in the range of 2.5% to 3.5%. Based on a terminal expected ROE of 9.50%, this results in terminal dividend payout ratios in the range of 63.16% (3.5% perpetual growth rate) to 73.68% (2.5% perpetual growth rate).

Q. What is your basis for an assumed terminal ROE of 9.5%?

A. In recent rate cases, I had assumed a terminal ROE of 9.25%, which was generally consistent with terminal ROE assumptions used by Wells Fargo (9.0%) and Evercore ISI (9.25%). However, due to recent increases in long-term bond yields, and the fact that average authorized ROEs generally did not decline to 9% to 9.25% when the cost of capital was at all-time lows, I decided a 9.5% terminal ROE is a more reasonable assumption at this time.

Q. How did you determine the stock price you assumed as the initial cash outflow?

A. I decided to evaluate six-months of average stock prices as well as three-months of average stock prices.

[15] Durgesh Chopra, et. al., "Q3 Highlights," Evercore ISI, November 8, 2024.

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Q. How long of a period do you typically use for purposes of the assumed stock prices?

A. I typically use from three months to six months of stock prices. In previous Ameren Missouri rate cases, I had used three months of stock prices. However, due to the fact that Ameren Corp and the electric utility industry's stock prices started to increase rapidly after July 1, 2024, using this shorter period implies a significant decrease in the electric utility industry's COE in only a few months.

Q. Will Ameren Corp's and the electric utility industry's stock prices remain at their more recent higher levels as compared to earlier this year?

A. I do not know. However, I will continue to monitor the stock prices as this case progresses to inform the Commission of whether it appears that the electric utility industry's COE remains more similar to recent lower levels or if they will increase back to around 8.5% as I recently estimated in the 2024 EMW rate case, Case No. ER-2024-0189.

Q. What does industry data suggest is a sustainable growth rate for a predominately regulated electric utility company, such as Ameren Missouri?

A. I reviewed past actual historical industry growth rate data from the Moody's electric utility index,[16] a sample group of electric utility companies in which data was available from Value Line,[17] and commentary/analysis available from institutional investors/analysts.[18] This information supports a perpetual growth rate in the range of 2.5% to 3.5%. A perpetual growth rate within this range is also consistent with the "sustainable growth model," which estimates EPS growth by multiplying an average long-term industry retention rate by an expected book ROE. Assuming the utility industry reverts to its long-term earnings retention rate of approximately 30% and allowed ROEs are maintained around 9.5%, this supports a 2.85% perpetual growth rate if investment opportunities are available (9.5% allowed ROE multiplied by 30%).

[16] Staff Cost of Service Report, Case No. ER-2011-0028, p. 18.
[17] *Id.*
[18] Discussed throughout this testimony.

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Q. Is this industry data consistent with **_____ **

A. Yes. In fact, one of the sources I relied on for purposes of estimating the perpetual growth rate is from **_____ **[19]

Q. How does this compare to perpetual growth rates used by equity analysts to estimate fair prices for utility stocks?

A. This is consistent with the perpetual growth rates used for purposes of estimating utility stock prices. For example, Evercore ISI uses a perpetual growth rate of 2.5% to 3.5% in its 3-stage DDM analyses of electric utility stocks.[20] Wells Fargo uses an average perpetual growth rate of around 3%.[21]

Q. Does Ameren Corp's history include periods which provide insight as to a sustainable/perpetual growth rate?

A. Yes. For the period 2010/2011 through Ameren Missouri's election of plant in service accounting ("PISA") on September 1, 2018, Ameren Corp limited its investment in Ameren Missouri to maintenance-level capital expenditures.

Q. What was the CAGR in Ameren Missouri's rate base over this approximate period?

A. Ameren Missouri's CAGR in its rate base was in the range of 2.2% to 3% from 2010/2011 to December 31, 2019. [22] This further supports a rational expected terminal growth rate when the utility industry is maintaining systems to ensure safe and reliable service.

[19] Ameren Dividend Policy Considerations, Ameren Finance Committee, October 2017, p. 5-10.
[20] Durgesh Chopra, et. al., "A Look at US Electricity Consumption Forecast," Evercore ISI, June 9, 2024.
[21] Neil Kalton, Sarah Akers, and Jonathan Reeder, "DDM Analysis Supports Sector Valuation & Quality/Growth Trade," August 19, 2019, Wells Fargo.
[22] Case No. ER-2019-0335, Laura Moore Direct Testimony, July 3, 2019, p. 18.

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Q. Has Ameren Corp recently changed its planned investment growth in its Illinois jurisdiction?

A. Yes. Before the ICC's decisions on Ameren Illinois' electric utility rate case in December 2023, and its natural gas distribution utility rate case in November 2023, Ameren Corp had planned to target a 5-year CAGR of 7.4% for its Ameren Illinois electric utility rate base and a 5-year CAGR of 6.7% for its Ameren Illinois natural gas distribution rate base.[23] After the ICC decisions, Ameren Corp is now only targeting a 5-year CAGR of 2.3% for its Ameren Illinois electric utility rate base and a 5-year CAGR of 3.3% for its Ameren Illinois natural gas distribution rate base.[24] Again, these maintenance-level capital expenditure growth rates provide insight as to a sustainable growth rate.

Q. What cost of equity did you estimate for Ameren Corp using the multi-stage DCF/DDM approach?

A. Using Ameren Corp's most recent 6-month average stock price of approximately $79 and discounting prospective dividends by reasonable growth rates in the intermediate future as well as perpetually, the implied COE for Ameren Corp is approximately 8.1% to 8.2% (*see* Schedule DM-D-2). This is approximately 50 to 90 basis points higher than my Ameren Corp company-specific COE estimates of 7.3% to 7.6% in Ameren Missouri's 2022 rate case.

Using Ameren Corp's most recent 3-month average stock price of approximately $84.70, Ameren Corp's implied COE indicates an implied COE of 7.7% to 7.9%.

[23] "Transforming For Our Future: Third Quarter 2023 Earnings," November 9, 2023, p. 15.
[24] "Powering a Reliable, Sustainable Tomorrow: Third Quarter 2024 Earnings," November 7, 2024, p. 13.

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PROXY GROUP COST OF EQUITY

Q. Should you compare your estimate of Ameren Corp's company-specific COE to the COE of a proxy group of other regulated electric utilities?

A. Yes. Investors frequently evaluate the attractiveness of a utility company's share price by comparing it to the average of a peer proxy group, whether it's based on a broader utility index or a custom proxy group.

Q. How did you approach selecting a custom proxy group for purposes of comparing Ameren Corp's COE versus its peers?

A. I decided to analyze a broad proxy group of utilities classified as "regulated" and "mostly regulated" utilities by the Edison Electric Institute ("EEI").[25] A complete list of these companies are listed on page 1 of Schedule DM-D-3. Although I estimated a COE based on this broad electric proxy group, I also reviewed the companies EEI classifies as "regulated," but even these companies typically have non-regulated operations that contribute to volatility in earnings and/or cash flows. Therefore, I reviewed the various business segments of each of these companies to determine which generally have had less than 10% of their operations exposed to competitive and international markets, which amounted to 17 companies.[26] I also analyzed a subset of the EEI companies I have consistently followed in electric rate cases since 2012, which I also used as the electric utility industry proxy for the charts included in my testimony.[27]

Q. Did you perform a multi-stage DCF analyses on these companies?

A. Yes. I applied the same principles as I did when applying the multi-stage DCF to Ameren Corp. For the first stage (October 31, 2024 through June 30, 2028) I used Wall Street analysts' consensus DPS estimates to the extent they were available. For the second stage

[25] EEI classifies companies as "Regulated" if at least 80% of their assets are dedicated to regulated utility operations.
[26] Consists of the following companies: Alliant Energy Corporation, Ameren Corporation, American Electric Power Company, Avista Corporation, Black Hills Corporation, CenterPoint Energy, CMS Energy Corporation, Duke Energy Corporation, Evergy Inc., Eversource Energy, IDACORP, NorthWestern Energy Group, Pinnacle West Capital Corporation, Portland General Electric Company, PPL Corporation, WEC Energy Group, and Excel Energy Inc.
[27] *Id.*

(June 30, 2028 through June 30, 2038), I allowed for a gradual decline from Wall Street analysts' projected 5-year CAGR in EPS to a sustainable perpetual growth rate of 3% starting on June 30, 2038. In order to estimate investors' anticipated annual DPS over the second stage, I determined consensus analysts' estimated dividend payout ratios as of 2028. I then allowed the dividend payout ratios to gradually converge to a sustainable payout ratio of 68.42% starting in 2038, which assumes reinvestment of retained earnings achieve a 9.5% book ROE. This payout ratio is consistent with the constant/sustainable-growth DCF theory that requires DPS, EPS and book value per share ("BVPS") to grow in perpetuity at the same rate.

As it relates to my assumed timing of investors' receipt of dividends, I assumed investors receive the entire annual DPS estimate at the middle of the year. This discounting convention mitigates the potential under- or over-estimating of the COE based on either end-of-year or beginning-of-year discounting conventions.

Using a 6-month average of electric utility stock prices, my industry COE estimate based on application of the multi-stage DCF to the proxy group indicates a COE in the range of approximately 8.2% to 8.4%, which is approximately 30 to 70 basis points higher than my COE estimates of 7.65% to 7.9% in Ameren Missouri's 2022 rate case (*see* Schedule DM-D-3, p. 1).

Q. How would using the three-month period ending October 31, 2024 impact your multi-stage DCF COE estimates?

A. It would lower my COE estimates to the range of 7.9% to 8.1%.

Q. How do your current multi-stage COE estimates for the electric utility industry compare to your multi-stage DCF COE estimates for the electric utility industry during the 2014/2015 period in which the Commission first deemed a 9.5% authorized ROE to be fair and reasonable for Missouri's electric utilities?

A. My multi-stage DCF COE estimates in Ameren Missouri's 2014 rate case, Case No. ER-2014-0258, were 7.5% to 7.65%. Using a six-month average of recent stock prices implies a 70 basis points higher COE than in the 2014/2015 period.

Q. Have you changed anything in your multi-stage DCF approach since Ameren Missouri's 2014 rate case that may cause slight differences in your electric utility industry COE estimates?

A. Yes. I refined my multi-stage approach starting in 2019 due to the fact that I gained access to more detailed analysts' estimates. I determined that I could use these estimates to more closely align the variables in the model with the assumptions underlying the constant-growth stage – the terminal stage of the model.

Q. Using the same multi-stage DCF approach you used prior to 2019, what do the results imply about the changes in the electric utility industry's COE since 2015?

A. Using six months of average stock prices implies a COE increase of approximately 35 to 60 basis points where using three months of average stock prices implies a 0 to 35 basis point increase (*see* Schedules DM-D-4).

CAPM

Q. Did you use any other models to estimate Ameren Corp's and the electric utility proxies' cost of equity?

A. Yes. In my experience, many Wall Street analysts use the CAPM to determine a discount rate, *i.e.* the COE, to apply to expected cash flows to the equity investor. The CAPM shows the potential impact of changes in interest rates on the cost of capital. Although COE estimates can be manipulated with the CAPM by using unreasonable market risk premium estimates, fortunately there are a variety of authoritative sources that provide equity risk premium estimates that can form the basis for a consensus view of reasonable risk premiums based on current capital market conditions.

Q. What is the underlying theory that supports the use of the CAPM to estimate the cost of equity for utilities?

A. The CAPM is based on capital market theory in which it is recognized that although the total risk of a company and/or industry consists of market ("systematic") risk and asset/business-specific ("unsystematic") risk, investors are only compensated for

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systematic risk because holding a diversified portfolio allows the investor to avoid unsystematic risk. Systematic risks are unanticipated events in the economy, such as economic growth, changes in interest rates, demographic changes, etc., that affect almost all assets to some degree. The required risk premium for incurring the market risk as it relates to the investment/portfolio is determined by adjusting the market risk premium by the beta of the stock or portfolio. The adjusted risk premium is then added to a risk-free rate to determine the cost of equity. The CAPM is typically expressed in equation form as follows:

$$K_e = Rf + \beta\,(RP_m)$$

Where:
K_e = the cost of equity for a security;
Rf = the risk-free rate;
β = beta; and
RP_m = market risk premium.

For purposes of my CAPM analysis, I relied on Kroll's recommended equity risk premium of 5.0% provided as of June 6, 2024[28] and a range of realized historical equity risk premiums of 5.14% (geometric historical mean for 1926 through 2023) to 6.56% (arithmetic historical annual mean for the period 1926 through 2023) derived from data provided by Ibbotson Associates' Stocks, Bonds, Bills and Inflation database.

Although each of these equity risk premium estimates use various methods and risk-free rates to arrive at their final estimates, I do not consider any estimate outside these to be consistent with the investment community's "consensus." I specifically used a market risk premium range of 5% to 6% to estimate the COE for the electric utility industry. One of the primary drivers of using a higher market risk premium versus a lower market risk premium is due to whether this market risk premium is applied to a normalized risk-free rate or a current risk-free rate (higher market risk premiums applied to lower current low risk-free rates). Long-term expected nominal market returns for the S&P 500 are as low

[28] https://www.kroll.com/-/media/kroll-images/pdfs/kroll-lowers-its-recommended-us-equity-risk-premium-effective-june-5-2024.pdf

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as 7%.[29] Therefore, market risk premiums in the 5.0% to 6.0% range may actually be excessive for purposes of a CAPM analysis.

Q. What does the beta represent in a CAPM analysis?

A. Beta is statistically defined as the covariance of the returns on an asset (in this case an individual stock or group of stocks) with the return on the S&P 500 divided by the variance of the returns on the S&P 500. This statistical measure is intended to provide investors with insight regarding expected volatility of a security (or portfolio of securities) as it relates to market volatility. A beta of less than one implies less expected volatility than the market with the trade-off of a lower expected return than the market. The reverse is expected for a beta greater than one.

Q. Are stock betas calculated based on historical market prices and relationships?

A. Yes. For example, Value Line's published betas are based on five years of historical weekly returns of a stock or portfolio of stocks as compared to the weekly returns of the market.

Q. Have utility stock betas exhibited a wide range of values since the onset of the Covid-19 pandemic?

A. Yes. During Empire's and Ameren Missouri's 2019 rate cases, electric utility 5-year stock betas had declined to quite low levels of around 0.55. At the time I sponsored testimony for the Empire and Ameren Missouri 2021 utility rate cases, electric utility 5-year stock betas had increased to around 0.80. Electric utility 5-year stock betas are currently approximately 0.92 for the broad EEI proxy group and around 0.88 for more pure-play regulated electric utilities. Specifically, Ameren Corp currently has a five-year historical beta of 0.85.

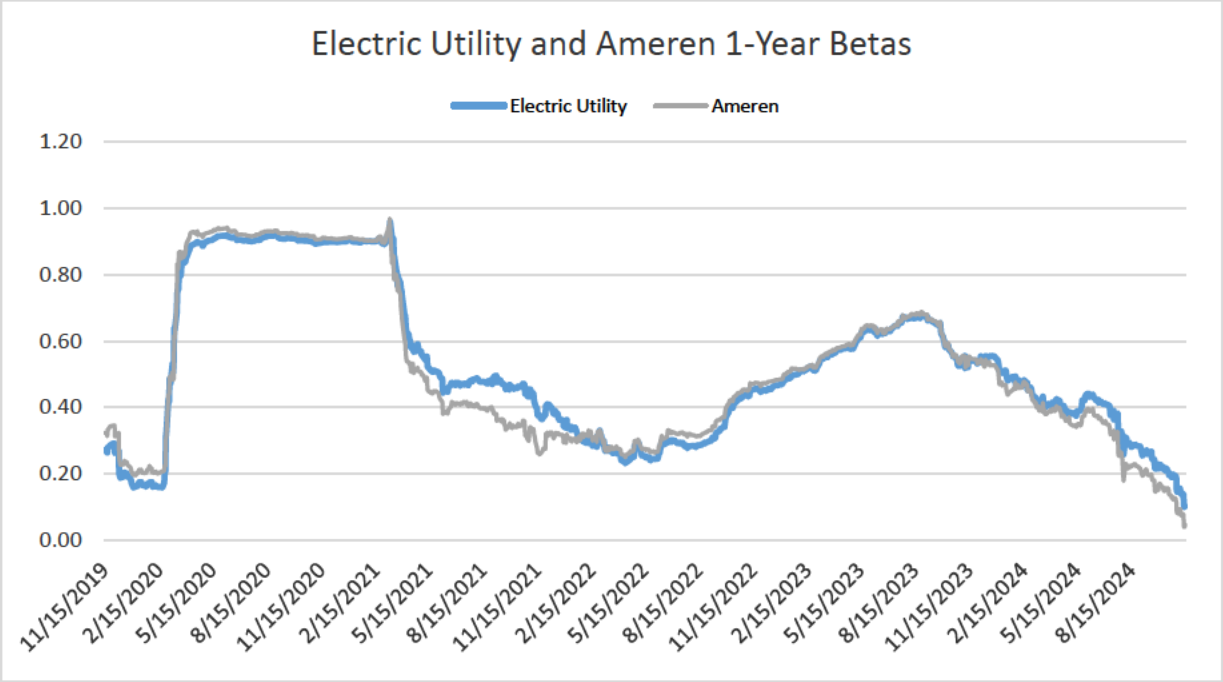
[29] First Quarter 2024 Survey of Professional Forecasters, Philadelphia Federal Reserve Board (Feb. 9, 2024), https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/spf-q1-2024 and John Bilton et al., *2024 Long-Term Capital Market Assumptions: Time-tested projections to build stronger portfolios,* J.P.Morgan (October 17, 2023), https://am.jpmorgan.com/us/en/asset-management/adv/insights/portfolio-insights/ltcma/

Q. What was the primary cause of the increase in utility stock betas?

A. The spike in utility stock betas occurred when the market plummeted at the onset of the pandemic in March 2020. It is quite common for all securities, both higher-risk and lower-risk securities, to move in tandem during significant market corrections. Because betas measure the relative volatility of a company or a portfolio as it relates to the market, if all securities rapidly decline at the same time, this causes all betas to converge toward one.

Q. How much have electric utility one-year raw betas changed over the last few years due to the market contraction at the onset of the pandemic?

A. Please see the following chart for one-year raw betas since late-2019:



Q. How do you interpret the one-year raw beta data shown in the chart?

A. The steep increase in Ameren Corp's and the electric utility industry's one-year betas coincided with the markets' synchronized contraction at the onset of market fears related to the Covid-19 pandemic in late March 2020. Ameren Corp's and the electric utility industry's betas did not return to more typical levels until this data dropped off the one-year beta calculations a year later.

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The significant drop in one-year betas since mid-2024 indicates that Ameren Corp and the electric utility industry's stock prices have been changing inversely to that of the S&P 500.

Q. Did you determine longer-term electric utility betas which exclude the abnormal situation that occurred during the broad market decline at the onset of the Covid-19 pandemic?

A. Yes. I determined the electric utility betas based on data for the last four years, which captures the market dynamics of the period impacted by monetary and fiscal policies in response to Covid-19, but excludes the market swoon in March 2020. These betas are much more in line with typical historical adjusted betas of around 0.7 for the electric utility industry.

Q. Based on your CAPM analysis using four-year betas, what is the estimated COE for Ameren Corp and the proxy groups?

A. My CAPM COE analysis indicates that Ameren Corp and the electric utility industry currently have a COE generally in the 7.4% to 8.4% range based on market risk premium estimates in the 5% to 6% range. (*see* Schedule DM-D-5).

SIMPLE TESTS OF REASONABLENESS

Q. Are there any other reasonableness tests to show your COE estimates are rational and logical?

A. Yes. First, as I indicated earlier in my testimony, a simple rule of thumb the Chartered Financial Analyst ("CFA") suggests in its curriculum is to estimate the COE by adding a 3% to 4% risk premium to a company's bond yield to provide a fairly simple, but objective cost of equity. Being that the investment community views utility stocks as bond surrogates/substitutes, it is logical and reasonable to not add a risk premium any higher than 3% to the bond. Simply adding a 3% risk premium to recent YTMs of Ameren Missouri's long-term bonds of around 5.5% implies a COE of approximately 8.5%.

Second, one just needs to think about the basic characteristics of utility stocks, which is that investors typically view them as yield investments. An analysis performed by Alliance

Bernstein (an equity research firm) showed that between 1974 to 2010, approximately 68% of returns from utility stocks were from the income received through dividends, with the remaining from capital gains.[30] However, with some electric utility companies targeting lower dividend payout ratios, at least in the near-term, in order to fund higher capital expenditure programs related to grid modernization and generation projects, it is reasonable to expect a larger share of returns may be in the form of capital gains. But a fundamental change in the basic characteristics of electric utility stocks is highly unlikely. Even if assuming electric utility stocks generated 50% of returns from capital gains over the long-term, this translates into a 7.3% to 8.4% required return based on the current average electric utility dividend yield of approximately 3.65% to 4.2%, depending on the proxy group analyzed. If Ameren Corp investors were able to achieve 50% of their total return from capital gains over the long-term, this implies a total return of approximately 6.75% to 7.25% based on Ameren Corp's dividend yield range of 3.37% to 3.60% based on six- and three-month averages of stock prices.

RECOMMENDED AUTHORIZED ROE

Q. Based on your analysis and understanding of Ameren Corp's COE, the electric utility industry's COE, investor expectations on allowed ROEs, average electric utility authorized ROEs, and Ameren Corp's authorized returns for its Illinois electric utility operations, what would be a fair and reasonable allowed ROE range in this case?

A. 9.00% to 9.50% with 9.5% being my point ROE recommendation to set Ameren Missouri's authorized ROR.

Q. Considering you estimate Ameren Missouri's COE to be in the 7.5% to 8.5% range, why do you consider a 9.5% authorized ROE reasonable?

A. While it certainly may be a worthwhile debate to quantify the amount of "premium," if any, over the COE that is fair and reasonable to allow a utility, the Commission has

[30] Hugh Wynne, Francois D. Broquin, and Saurabh Singh, "U.S. Utilities: Our Dividend Growth Model Identified Utilities Poised to Pay More," May 20, 2011, Bernstein Research.

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repeatedly communicated in its orders that it needs to consider average authorized ROEs in setting a fair and reasonable ROE for its Missouri utilities. As it relates to this instant case, I believe the fact that although the cost of capital has increased over the last couple of years, an authorized ROE of 9.5% still allows Ameren Missouri to create shareholder value simply by investing in rate base because a 9.5% ROE is higher than the Company's COE.

CAPITAL STRUCTURE

Q. Will you briefly explain capital structure?

A. Capital structure represents how a company finances its assets. The typical capital structure consists of common equity, long-term debt, and short-term debt. Some utilities' capital structures may also include a small portion of preferred stock, but this has become rare in recent years. Although short-term debt is a typical component of a utility company's capital structure, if the balances of short-term debt are fairly consistent or below construction work in progress ("CWIP") balances, then it is fair to exclude short-term debt from the rate making capital structure. This is due to the expectation that the short-term debt and its corresponding rates are used to calculate the allowance for funds used during construction ("AFUDC") capitalization rate.

Q. What capital structure do you recommend for purposes of setting Ameren Missouri's ROR?

A. I recommend a capital structure that consists of approximately 42% common equity, 0.60% preferred stock and 57.40% long-term debt. While not exactly the same as Ameren Corp's consolidated capital structure as of March 31, 2024, this is in line with Ameren Corp's recent targeted consolidated capital structure.

Q. What is the basis for your capital structure recommendation?

A. My recommended capital structure is consistent with Ameren Corp's consolidated capital structure, net of short-term debt. This capital structure best represents the amount of debt capacity Ameren Corp considers reasonable and appropriate for its regulated utility assets,

including those of Ameren Missouri. Use of this capital structure ensures that Ameren Missouri's ratepayers receive credit for the additional debt capacity associated with Ameren Missouri's reduced business risk profile due to PISA and the ability to recover stranded assets and extraordinary costs through securitization. It is clear that Ameren Corp's strategy for managing its regulated utility subsidiary capital structures is primarily for purposes of ratemaking. Ameren Corp has targeted a common equity ratio of around 52% for Ameren Missouri since at least 2012 and plans to continue targeting this common equity ratio for ratemaking for the foreseeable future. This static 52% common equity ratio regardless of changes in business risk and/or economic conditions, contradicts one of the primary purposes of managing a company's capital structure – to achieve the lowest reasonable cost without jeopardizing financial stability. As I discuss later, Ameren Missouri's lower business risk has afforded Ameren Corp the ability to carry a higher proportion of debt in its capital structure, but instead of sharing the lower cost of this additional debt capacity with Ameren Missouri and its customers, Ameren Corp is misappropriating this debt capacity by leveraging shareholder returns at the holding company level.

Q. What is the basis for your conclusion that Ameren Corp targets common equity ratios for ratemaking purposes?

A. My conclusion is based on Ameren Corp's past financial management of its subsidiaries and Ameren Corp's projected equity ratios for the next few years. The Federal Energy Regulatory Commission ("FERC") authorized a 60.16% equity ratio at Ameren Transmission Company of Illinois ("ATXI"). The Illinois Commerce Commission ("ICC") authorized a 50% common equity ratio for Ameren Illinois' electric utility and natural gas utility operations. The Missouri Public Service Commission authorized an approximate 52% equity ratio for Ameren Missouri in its last litigated electric rate case in 2014, Case No. ER-2014-0258.[31] ** _____
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[31] Ameren Corp's 2023 SEC Form 10-K Filing, p. 8.

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_____ **[32] In other words, Ameren Missouri's equity balance does not represent the most efficient amount of equity for Ameren Missouri. Its equity balance is based on Ameren Corp's desire for an equity ratio that allows it to attempt to charge higher rates to Ameren Missouri customers.

Q. What capital structure has Ameren Corp managed for purposes of taking advantage of debt capacity afforded by Ameren Corp's low-risk regulated utility subsidiaries?

A. Ameren Corp has managed its consolidated capital structure for purposes of taking advantage of its regulated utilities' debt capacity. Ameren Corp has been steadily increasing the amount of holding company debt it uses to invest in its subsidiaries.

As of the updated test year in Ameren Missouri's 2019 rate case, Case No. ER-2019-0335, Ameren Corp had $700 million of holding company debt outstanding (8.39% of total consolidated debt).

As of the December 31, 2020, test year in its 2021 rate case, Case No. ER-2021-0240, Ameren Corp had $1.6 billion of holding company debt outstanding (14.63% of total consolidated debt).

As of the updated test year of June 30, 2022, in Ameren Missouri's 2022 rate case, Case No. ER-2022-0337, Ameren Corp had $2.55 billion of outstanding holding company long-term debt, which represents 18.95% of total consolidated debt.

As of March 31, 2024, Ameren Corp had $3.85 billion of outstanding holding company long-term debt, which represents 23.39% of total consolidated long-term debt.

It is clear that Ameren Corp dynamically manages its consolidated capital structure to take advantage of the debt capacity provided by its regulated utility subsidiaries, but targets a static 52% equity ratio at Ameren Missouri for ratemaking purposes. Ameren Missouri should not be allowed an equity ratio that its own parent company deems to be cost inefficient. This is especially egregious since Ameren Missouri's ratepayers incur the risk associated with Ameren Missouri's ability to defer investment costs using PISA.

[32] "Powering a Reliable, Sustainable Tomorrow," Ameren Rating Agency Update, April 2024, p. 51.

Q. Do you have other evidence that Ameren Missouri should have a lower common equity ratio than the 52% it has constantly targeted over the last twelve years?

A. Yes, Ameren Missouri's business risk declined due to the Missouri Legislature's passage of Senate Bill ("SB") 564, which became law in 2018, and Ameren Missouri's decision to elect PISA in September 2018. A fundamental consideration in determining how much financial risk, *i.e*. additional debt, an asset/business can support is the level of business risk inherent in that asset/business. Consequently, because Ameren Missouri's business risk declined, it can carry more leverage, *i.e*. debt, in its capital structure. Despite operating with less risk, Ameren Corp has not adjusted its targeted capital structure for Ameren Missouri to reflect the lower cost of capital that Ameren Missouri's customers support by being charged for the recovery of depreciation and a ROR on plant that goes into service between general rate cases. Based on Ameren Corp's continued management of Ameren Missouri's capital structure to a 52% common equity ratio, it is evident that Ameren Corp is trying to reward shareholders with the financial benefits enabled by SB 564, rather than passing the reduced cost of capital through to ratepayers by adjusting its equity ratio. The Commission can ensure ratepayers realize the benefits of the lower risk they support by authorizing Ameren Missouri's ROR based on a lower common equity ratio. This can most objectively be accomplished by authorizing a common equity ratio for Ameren Missouri that is consistent with Ameren Corp's on a consolidated basis. In addition, by using Ameren Corp's common equity ratio for purposes of setting Ameren Missouri's revenue requirement, Ameren Corp will be incentivized to manage its consolidated capital structure to a more conservative level, which will provide it financial flexibility during uncertain business and market conditions.

Q. Do you have other information which supports your position that Ameren Missouri's business risk is lower due to its ability to recover a return on and of investments between rate cases through PISA?

A. First, the very fact that Ameren Corp has committed to investing significant amounts of capital in Ameren Missouri's system shows that Ameren Corp has confidence that it will receive timely recovery of and on its investments that are subject to PISA.

Second, on March 29, 2019, Moody's lowered Ameren Corp's Funds from Operations ("FFO")/debt[33] threshold to 17% from 19%, which means that Ameren Corp can incur more leverage as it compares to cash flow and still maintain its current credit rating of Baa1 (functional equivalent of S&P's BBB+). One of the primary reasons Moody's cited for allowing Ameren Corp a lower FFO/debt threshold (*i.e.* use of more leverage) was "improved regulatory construct in Missouri facilitating meaningful rate base growth and reducing regulatory lag [PISA]."[34] Ameren Corp's management said,** [redacted] ** This additional debt capacity should be reflected in Ameren Missouri's authorized capital structure because Ameren Missouri's customers are providing the cash flows that make this lower business risk possible. Considering the anticipated sizeable increase in Ameren Missouri's rate base over the next several years, it is just and reasonable to ensure ratepayers are charged a ROR based on the additional debt capacity they afford to Ameren Corp. Recognizing the reduced cost of capital through Ameren Corp's ability to utilize more debt in its capital structure allows Ameren Missouri's ratepayers to receive credit for Ameren Corp's reduced risk profile afforded by Ameren Missouri's election of PISA.

Third, as I discussed previously, before the ICC's December 2023 decision on Ameren Illinois' electric utility rate case, Ameren Corp had been viewed as a premium utility by investors because of the anticipated growth in its investment and investors' confidence in the probability of the recovery of a return of and on this investment. As a result of the ICC's decision on Ameren Illinois' multi-year rate plan, Ameren Corp reallocated intended capital spend for its Illinois electric utility systems to its Missouri electric utility systems

[33] FFO/Debt (as generally referenced by most evaluating credit worthiness) is the credit metric that receives the most weight by both Standard & Poor's (S&P) and Moody's. This metric provides insight as to how much sustainable cash flow the operations generate as it relates to the amount of fixed obligations, which includes traditional debt, but also other obligations such as capital leases. The higher the ratio, the less financial risk implied by the ratio. Moody's more specifically defines FFO/debt as "Cash flow from Operations – Pre Working Capital to Debt". However, I will generally refer to each as FFO/debt.
[34] "Update to Credit Analysis," Moody's Investor Service, March 29, 2019, p. 2 (Schedule DM-D-18).
[35] Ameren Corp's Finance Committee Meeting, February 7, 2019, p. 24.

and ATXI. Ameren Corp has communicated that its decision to do so is due to Missouri's more "constructive" regulatory environment for investors as compared to Illinois.

Q. Why does Ameren Corp's current consolidated capital structure have a much lower equity ratio than Ameren Missouri's capital structure?

A. Primarily because of Ameren Corp's increased use of holding company debt to fund its investments. As I have already explained, Ameren Corp continues to issue more holding company debt on an absolute and relative basis. As of the updated test year, June 30, 2019, in Ameren Missouri's 2019 rate case, Ameren Corp had $700 million of holding company debt outstanding. As of March 31, 2024, the end of the test year in this case, Ameren Corp had $3.85 billion of holding company debt outstanding. As a proportion of consolidated debt, Ameren Corp has approximately tripled its percentage of holding company debt.

Q. Do you have any examples of how Ameren Corp has managed its subsidiaries' capital structures to target common equity ratios for ratemaking?

A. Yes. Although Ameren Corp's management of Ameren Missouri's capital structure is my primary focus, because Ameren Corp's management, through Ameren Services ("AMS"), is ultimately managing all of its subsidiaries for the benefit of Ameren Corp shareholders, it is important to evaluate and understand Ameren Corp's decisions as it relates to all of its subsidiaries.

Ameren Corp's management of Ameren Transmission Company of Illinois' ("ATXI") capital structure provides the most glaring example of how Ameren Corp manages its subsidiaries' capital structures to its benefit for ratemaking purposes. ATXI's rates are based on a FERC-authorized common equity ratio of 60.16%. Because ATXI was a new company with no financial experience and no significant assets until around 2014 to 2015, it completely relied on Ameren Corp for its capital needs until 2017.

Ameren Corp has provided steady incremental financing to ATXI since 2010. Ameren Corp relies on its shared credit facilities with Ameren Missouri and Ameren Illinois in order to access commercial paper for financing needs at the holding company level. Ameren Corp used this short-term debt capital to finance both its equity and debt

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investments in ATXI.[36] While it appears a majority of Ameren Corp's commercial paper financing was used for purposes of investing in ATXI's assets, which were classified as equity infusions into ATXI, it is also possible some of the commercial paper was issued to finance other Ameren Corp capital needs. For example, Ameren Corp used commercial paper to repay $425 million of long-term debt due in May 2014. In order to reduce the amount of short-term debt carried at the holding company due to the aforementioned financing needs, Ameren Corp issued $700 million of long-term debt. However, during much of this period in which Ameren Corp was funding these investments with external capital, it was also receiving significant dividends from Ameren Missouri. Being that there is no way to trace the capital once Ameren Corp receives it and redeploys it, it becomes a futile effort to try and disaggregate the various forms of capital for each subsidiary. Fortunately, this is not necessary for purposes of determining how much debt the subsidiaries support because the consolidated capital structure provides this transparency.

After Ameren Corp financed ATXI's investments through short-term and long-term debt, ATXI issued $450 million of third-party debt on June 22, 2017. The proceeds from this debt were used to refund $425 million of the $500 million of debt financing Ameren Corp had provided to ATXI. None of the proceeds were used to return any portion of the equity financing Ameren Corp had infused into ATXI. It is important to emphasize that ATXI's equity and debt capital had been funded from the same source, Ameren Corp's commercial paper. After the aforementioned transactions were completed, ATXI still had a per books common equity ratio of around 55%, which was close to the 56% targeted at the time for FERC ratemaking purposes, despite being financed by debt.

Ameren Corp had also managed Ameren Illinois' capital structure for ratemaking purposes. Ameren Illinois, Staff of the Illinois Commerce Commission ("ICC") and an intervening industrial party extensively litigated over several cases from 2011 to 2013 whether Ameren Illinois's authorized ROR should be based on Ameren Illinois' per books capital structure, which showed a common equity ratios in the range of 52% to 54%[37], or if it should be

[36] Ameren Missouri response to OPC DR No. 3033 in Case No. ER-2019-0335.
[37] Docket Nos. D-11-0279, D-12-0293 and D-13-0301.

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adjusted to a lower level in order to recognize the reduced business risk afforded by the Illinois' Grid Modernization Act.

After many years of litigation, the parties eventually agreed to deem a common equity ratio of "up to and including 50% of the total capital" as reasonable for purposes of setting rates for Ameren Illinois. This agreement was codified into law by the 2016 Illinois Legislature's passage of the Future Energy Jobs Act ("FEJA") as an amendment to the 2011 Illinois Energy Infrastructure Modernization Act. Until recently, Ameren Corp had managed Ameren Illinois' actual adjusted year-end common equity ratio to within 25 basis points (0.25%) of the 50% determined reasonable for ratemaking in Illinois. The adjusted year-end common equity ratio has not varied by more than 15 basis points (0.15%) over this period. However, in Ameren Illinois' final two annual rate dockets, Docket Nos. D-21-0365 and D-22-0297, under its formula rate plan, Ameren Illinois requested higher ratemaking common equity ratios, claiming that its reduced formula ROEs and lower cash flows due to the reduction of the corporate income tax rate starting in 2018, required it to manage to a higher common equity ratio. In Case No. D-21-0365, the ICC applied a 7.36% ROE to a 51% common equity ratio for purposes of setting 2022 rates. In Case No. D-22-0297, the ICC applied a 7.85% ROE to a 50% common equity ratio for purposes of setting 2023 rates.

Q. Is the ROR for Ameren Illinois' electric utility operations still set based on the formula prescribed in FEJA?

A. No. Beginning January 1, 2024, Ameren Illinois' authorized ROR was determined based on the traditional approach of parties filing cost of capital/rate of return testimony for purposes of setting Ameren Illinois' rates. Instead of annual formula rates, Ameren Illinois's electric utility operations now operate under a multi-year rate plan, which sets a capital plan and rates for the next four years. For purposes of Ameren Illinois inaugural multi-year rate plan, the ICC authorized an 8.72% ROE applied to a 50% common equity ratio.

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Q. How has Ameren Corp managed Ameren Missouri's capital structure for ratemaking?

A. Ameren Missouri manages to its 52% targeted common equity ratio by means of its equity infusions, its dividend payments, and its debt financings. Ameren Missouri's common equity ratios for rate cases since 2010 have been in the range of 51.26% to 52.30%, with all cases but the 2010 rate case being within the range of 51.75% to 52.30%.

Despite Ameren Missouri's reduced business risk profile due to favorable legislative initiatives such as the legislation allowing PISA in 2018 and securitization in 2021, Ameren Missouri's common equity ratio has not changed. Allowing Ameren Missouri's capital structure to be more leveraged would reduce Ameren Missouri's cost of capital and, therefore, the ROR ratepayers are charged in its revenue requirement. Of course, being that Ameren Corp historically had needed to raise debt capital for investment in its other subsidiaries, as well as support its dividend payments to its shareholders, Ameren Corp has a financial incentive to maintain a higher common equity ratio at Ameren Missouri because this generates more cash flow to service Ameren Corp's holding company debt. It is not fair to Ameren Missouri's ratepayers for Ameren Corp to use Ameren Missouri's debt capacity for the benefit of Ameren Corp's shareholders.

Q. What shows that Ameren Missouri's capital flows are not managed as if it were a stand-alone entity?

A. If Ameren Missouri's capital structure were being managed for its own benefit, then one would expect that it would have a carefully managed dividend payment policy, similar to how Ameren Corp manages its dividend payments to a targeted payout ratio in the range of 55% to 65%. However, over the most recent five years, Ameren Missouri's dividend payout ratios have been as follows: 100.23% in 2019, 15.03% in 2020, 4.61% in 2021, 8.14% in 2022 and 1.64% in 2023. If Ameren Missouri were financially managed as a stand-alone entity, it would have its own formal dividend policy. Ameren Missouri shouldered the burden of dividends ultimately paid to Ameren Corp shareholders through 2018 because Ameren Corp had only been minimally reinvesting in Ameren Missouri until

it elected PISA in September 2018,[38] whereas, at the same time, it had been investing significant amounts of capital in ATXI and Ameren Illinois. Over the last five years, Ameren Illinois has had a dividend payout ratio that has ranged from 0% to 6.73%. ATXI has required much less investment since 2017, which is the last year in which ATXI did not distribute a dividend to Ameren Corp. Over the last five years, ATXI's dividend payout ratios have been as low as 18.03% in 2019 and as high as 130.26% in 2023. If Ameren Corp's subsidiaries were stand-alone entities, then it would be impossible for their cash flows to be managed in this fashion because the shareholders of each entity would expect a consistent and steady dividend.

Q. Are there other ways Ameren Corp manages its subsidiaries' common equity ratios?

A. Yes. First, the subsidiaries do not have the capability to manage their own capital needs. AMS provides this function for all of Ameren Corp's subsidiaries and has total operational control of all Ameren Corp entities, except for Ameren Missouri and Ameren Illinois.

AMS uses short-term debt, *i.e*. commercial paper, at Ameren Corp to make capital infusions in its subsidiaries. Being that Ameren Missouri has a finite amount of cash it can provide to Ameren Corp via dividends, at times Ameren Corp has not received enough dividends from its subsidiaries to fully fund the dividends it pays to its shareholders. Consequently, it has had to raise other capital to fund this deficiency.

Ameren Corp freely admits that it issues short-term debt and long-term debt at the holding company level to invest in its Ameren Illinois and ATXI subsidiaries.[39] However, Ameren Corp indicates it is a matter of policy not to do the same for Ameren Missouri because it wants to ensure that Ameren Missouri's equity is supported by Ameren Corp's third-party equity issuances.[40] This has been Ameren Corp's basis for maintaining that Ameren Missouri's equity ratio is legitimate for ratemaking purposes.

[38] Case No. EO-2019-0044.
[39] See Ameren Missouri's response to DR No. 3033 in Case No. ER-2019-0335.
[40] *Id.*

Q. Why do you consider Ameren Corp's long-term equity ratio to be the most appropriate for setting Ameren Missouri's allowed ROR?

A. Ameren Corp allocates capital to its rate regulated subsidiaries to target and achieve ratemaking common equity ratios. The most objective and practical measure of the capital structure that captures the debt capacity of Ameren Corp's regulated utility assets, is that of the Ameren Corp on a consolidated basis. Consequently, I recommend Ameren Missouri's common equity ratio be set no higher than Ameren Corp's typical common equity ratio of approximately 42%, net of short-term debt.

Q. Do Ameren Corp's financial projections anticipate a similar common equity ratio over the next several years?

A. Yes. Ameren Corp expects its consolidated common equity ratio to be around ** _____ _____ **[41]

Q. Do you recommend short-term debt be included in Ameren Missouri's ratemaking capital structure for this case?

A. No. Due to Ameren Missouri's consistent and significant monthly CWIP balances of over $1 billion, it is clear that Ameren Corp and Ameren Missouri are issuing short-term debt as a bridge before refinancing investment in plant with long-term capital.

Q. Are Ameren Missouri's ratepayers receiving full credit for the proportion of short-term debt needed because of the significant CWIP balances?

A. No. As I discussed above, instead of Ameren Corp relying on its subsidiaries for dividend payments to its third-party shareholders, it is issuing holding company short-term debt to fund dividends. The creation and use of a holding company for such purposes distorts the intent of ratemaking elements such as AFUDC. Based on Ameren Missouri's 13-month average short-term debt balance compared to its 13-month average CWIP balance, Ameren Missouri's ratepayers are only receiving 25% weighting for short-term debt in the AFUDC formula. A more accurate reflection of the proportion of short-term debt supporting CWIP

[41] "Powering a Reliable, Sustainable Tomorrow," Ameren Rating Agency Update, April 2024, p. 51.

is to compare Ameren Corp's short-term debt balances to its CWIP balances. Ameren Corp's proportion of short-term debt to CWIP average 52.1% over the same period.

Q. How do you recommend Ameren Missouri's ratepayers receive credit for the expectation that short-term debt should be used as bridge financing for CWIP?

A. I recommend the Commission order Ameren Missouri to apply a short-term debt rate to all CWIP, except for Castle Bluff, which is governed by a specific agreement executed in Case No. EA-2024-0237. Most of Ameren Missouri's projects are relatively short-term so the capitalization rate should be based on a short-term cost of capital. The rationale for including long-term capital costs in the AFUDC is due to potential multi-year projects in which companies may be required to refinance short-term debt with long-term capital before the project is complete.

Q. How can the Commission determine an equitable, market-tested and objective capital structure that more closely captures the amount of debt capacity consistent with Ameren Missouri's low business risk?

A. The Commission can more closely capture debt capacity consistent with Ameren Missouri's low business risk by using Ameren Corp's consolidated capital structure as a proxy. While this capital structure includes capital that is used for investment in all of Ameren Corp's assets, this should not be the focus for determining the proper balance of capital as it relates to each of Ameren Corp's subsidiaries. For example, while FERC has decided to allow ATXI a common equity ratio of 60.1% for purposes of setting its allowed ROR, Ameren Corp understands that these assets can support a much higher amount of leverage because of the low business risk associated with these assets. Consequently, Ameren Corp initially issued all holding company debt for purposes of funding its investment in ATXI. In 2017, ATXI issued $450 million of third-party debt, which was used to refund the affiliate loans Ameren Corp made to ATXI. Ameren Corp's strategic financing decisions primarily concentrate on the amount of leverage Ameren Corp can carry on a consolidated basis. This capital structure most accurately reflects the debt capacity afforded by Ameren Missouri's assets.

SUMMARY AND CONCLUSIONS

Q. Would you summarize your main conclusions and views as it relates to a Commission-authorized Ameren Missouri ROR in this case?

A. Yes. Ameren Missouri's allowed ROE of 9.53% was set during a period in which electric utilities traded at similar P/E levels as today. While Ameren Missouri's overall business risk is lower now than it was in 2015, justifying a lower authorized ROE, I recommend the Commission recognize Ameren Missouri's lower business risk by authorizing a lower common equity ratio for ratemaking. If the Commission does not set Ameren Missouri's authorized ROR based on a lower authorized common equity ratio, then it should authorize a lower ROE than it did in 2015.

Despite Ameren Missouri's lower business risk, its common equity ratio has remained static at 52%. Ameren Corp has not managed Ameren Missouri's capital structure to allow ratepayers to benefit from the lower cost of capital made possible by being charged for plant placed in service between rate cases through the PISA mechanism. The Commission should lower Ameren Missouri's allowed equity ratio to ensure ratepayers receive the benefit of a lower capital cost during Ameren Missouri's period of rapidly increasing rate base prompted by SB 564.

Q. Does this conclude your testimony?

A. Yes.

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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust Its Revenues for Electric Service	)))	Case No. ER-2024-0319

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

David Murray, of lawful age and being first duly sworn, deposes and states:

1. My name is David Murray. I am a Utility Regulatory Manager for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my direct testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

David Murray
Utility Regulatory Manager

Subscribed and sworn to me this 2nd day of December 2024.

TIFFANY HILDEBRAND
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES AUGUST 8, 2027
COLE COUNTY
COMMISSION #15637121

Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2027.