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Issue(s):	Rate of Return (ROR)/
	Capital Structure
Witness/Type of Exhibit:	Murray/Direct
Sponsoring Party:	Public Counsel
Case No.:	ER-2022-0337

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-2022-0337

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

January 13, 2023

PUBLIC

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DIRECT TESTIMONY

OF

DAVID MURRAY

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

FILE NO. ER-2022-0337

1	Q.	Please state your name and business address.
2	A.	My name is David Murray and my business address is P.O. Box 2230, Jefferson City,
3		Missouri 65102.
4	Q.	By whom are you employed and in what capacity?
5	A.	I am employed by the Missouri Office of the Public Counsel ("OPC") as a Utility
6		Regulatory Manager.
7	Q.	On whose behalf are you testifying?
8	A.	I am testifying on the behalf of the OPC.
9	Q.	What it the purpose of your testimony?
10	A.	To recommend a fair and reasonable rate of return ("ROR") for purposes of setting Ameren
11		Missouri's revenue requirement for its regulated electric utility operations.
12	Q.	What experience, knowledge and education qualify you to sponsor ROR testimony in
13		this case?
14	A.	Please see the attached Schedule DM-D-1 for my qualifications as well as a summary of
15	12.	the cases in which I have sponsored testimony on ROR and other financial issues.
		Will the Charles and the Charl
16	Q.	What aspects of ROR will you address?
17	A.	I will address a fair and reasonable allowed return on common equity ("ROE") and a fair
18		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 no higher than 9.25%, which is consistent with the Commission's authorized ROE of 9.25% for The Empire District Electric Company ("Empire") in Case No. ER-2019-0374. As I will explain later in my testimony, despite debt costs reaching all-time lows during the latter part of 2020 and into 2021, and then increasing rapidly and dramatically in 2022, the electric utility industry's stock valuation levels have remained fairly consistent since Empire's rate case. Ameren Missouri's authorized common equity ratio should be more consistent with Ameren Corp.'s actual consolidated common equity ratios, which have been approximately 42% to 43%, after excluding short-term debt.

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 that the Commission set Ameren Missouri's allowed ROE for its electric utility operations at 9.25% based on my determination of a reasonable ROE range of 8.4% to 9.25%. Although utility industry capital market conditions indicate an increase in the cost of common equity ("COE") since the Commission set Empire's ROE at 9.25%, the same does not hold true since the Commission set Ameren Missouri's ROE at 9.53% in 2015 in Case No. ER-2014-0258. While Ameren Missouri's authorized ROE has never been reduced since 2015, its sister company, Ameren Illinois, has experienced regular reductions to its annual authorized ROE from the low 9% range in 2015 to the 7% range in recent years. These reductions were due to the fact that Ameren Illinois' electric utility authorized ROEs were set annually via a prescribed ROE formula (average monthly yields on 30-year United States Treasury bonds for a calendar year plus a 580 basis point risk

premium). However, recent increases in interest rates will cause Ameren Illinois' electric

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utility authorized ROE to be closer to 9%. Considering Ameren Missouri's business risk profile has declined since 2015, macro conditions have become more supportive of higher valuation levels for electric utility stocks since 2015, and Ameren Illinois has had a consistently declining authorized ROE since 2015, a 9.25% authorized ROE for Ameren Missouri's electric utility operations is fair and reasonable.

I recommend that the Commission set Ameren Missouri's authorized common equity ratio at 43% rather than the 52% ratio Ameren Corporation ("Ameren Corp") has been targeting for Ameren Missouri over the last several rate cases. Ameren Missouri's business risk profile declined after Missouri passed Senate Bill ("SB") 564, which allowed Ameren Missouri to elect, in September 2018, an investor-friendly ratemaking mechanism referred to as plant in service accounting ("PISA") for its electric utility operations.¹ Ameren Missouri's reduced business risk profile allows for greater debt capacity, as Moody's directly acknowledged in response to the availability of the PISA mechanism when it relaxed the benchmark credit metrics it requires for Ameren Corp to maintain its current credit rating. This greater debt capacity allows for a lower cost of capital. However, Ameren Corp is attempting to retain this lower cost of capital for its shareholders rather than providing this savings to Ameren Missouri and its ratepayers. That is, Ameren Corp is managing Ameren Missouri's capital structure for purposes of maintaining a higher ROR for ratemaking rather than achieving a lower cost of capital. Ameren Corp has been and continues to misappropriate Ameren Missouri's higher debt capacity to Ameren Corp. The Commission can rectify this attempted unfair transfer of Ameren Missouri's debt capacity to Ameren Corp by authorizing Ameren Missouri a common equity ratio consistent with Ameren Corp's on a consolidated basis.

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

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 investors' required return on their 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.

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).

- 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 the modern financial models used to estimate the COE.

Considering these principles, I first estimated Ameren Missouri's current COE using modern financial models/methods. Then I compared Ameren Missouri's current COE to historical COE estimates as well as to my recent COE estimates for water, electric and natural gas utility industries in Missouri American Water Company's ("MAWC") rate case, Case No. WR-2022-0303, Evergy's rate cases for Evergy Metro and Evergy Missouri West, Case Nos. ER-2022-0129 and ER-2022-0130, respectively, and Spire Missouri's rate case, Case No. GR-2022-0179. Finally, I considered the Commission's "zone of reasonableness standard" for purposes of setting an allowed ROE, with the starting point for this zone of reasonableness being a recent industry average allowed ROE.

- 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% to 7.5%.
- 16 Q. How does your COE estimate for Ameren Missouri compare to your most recent COE estimates for MAWC, Spire Missouri and Evergy's Missouri electric utilities?
 - A. It is higher than my estimates for MAWC, but similar to my estimates for Evergy Metro, Evergy Missouri West and Spire Missouri. I estimated a COE of 6.0% to 6.5% for MAWC as of November 2022; a COE of 7.25% to 7.5% for Spire Missouri as of August 2022; and a COE of 7% to 7.5% for Evergy Metro and Evergy Missouri West as of June 2022.

⁴ State ex rel. Missouri Gas Energy v. Public Service Commission, 186 S.W.3d 376, 383 (Mo App. W.D. 2005)

- 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. 8.40% to 9.25%. 8.4% is approximately the lowest ROE that the Commission would consider under its "zone of reasonableness" standard (average authorized ROE of approximately 9.4% less 100 basis points), while 9.25% would appropriately reduce Ameren Missouri's current authorized ROE of 9.53% for its electric utility operations, which the Commission set approximately eight years ago in Case No. ER-2014-0258.5 After considering my COE estimates in this case compared to other recent Missouri utility rate cases, the Commission's authorized ROE for Empire, and the authorized ROEs for Ameren Illinois' electric utility operations, I consider a 9.25% authorized ROE to be fair and reasonable if applied to my recommended common equity ratio of 43%.
- Q. How did you inform yourself for determining the best methods and approaches to use to estimate Ameren Missouri's COE for this case?
- A. For purposes of this case, I reviewed Ameren Corp's Board of Directors ("BOD") strategic financing and investment considerations since June 2021. I also reviewed equity investment research reports covering Ameren Corp and the utility industry since at least January 1, 2022. Additionally, I generally considered the information I had reviewed for purposes of Ameren Missouri's 2019 and 2021 rate cases, Case Nos. ER-2019-0355 and ER-2021-0320, respectively. 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.

⁵ The Commission approved a Non-Unanimous Stipulation and Agreement in Case No. ER-2019-0335 in which parties specified an ROE range of 9.4% to 9.8% without specifying the capital structure to which it would be applied. Rate of return parameters were not addressed in Ameren Missouri's Case Nos. ER-2016-0179 and ER-2021-0240. Rate of return has not been litigated in an Ameren Missouri rate case as a separate issue since Case No. ER-2014-0258.

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"), 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").6

Q. What specific COE models did you use?

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. When the DCF method is applied to dividends as the proxy for cash flow, it is more specifically 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 to test the reasonableness of my COE estimates. These reasonableness checks recognize the basic characteristics of utility stocks, mainly being that they are perceived as yield/income investments by the investment community. One such reasonableness check is a straight-forward bond-yield-plus-risk-premium ("BYPRP") method, a method which is included in the Chartered Financial Analyst ("CFA") Program curriculum.

Q. Is it important to analyze capital market conditions over time as it relates to the electric utility industry and Ameren Corp?

A. Yes. This information should help provide context as to the current state of utility capital markets as it relates to historical periods. At times, I focus on shorter periods, such as since 2015, because this is the last time in which the Commission decided a fair and reasonable authorized ROE for Ameren Missouri.

⁶ https://www.amereninvestors.com/company-info/analyst-coverage/default.aspx.

- Q. What allowed ROE did you recommend in Ameren Missouri's 2019 and 2021 rate cases?
 - A. I recommended an allowed ROE of 9.25% in its 2019 rate case, Case No. ER-2019-0335, and a 9% allowed ROE in its 2021 rate case, Case No. ER-2021-0240.
 - Q. Were your recommended allowed ROEs consistent with your COE estimates in those cases?
 - A. No. In Ameren Missouri's 2019 rate case, I estimated Ameren Missouri's COE to be in the range of 5.5% to 6.5%. In Ameren Missouri's 2021 rate case I estimated Ameren Missouri's COE to be in the range of 6.5% to 7.0%.
 - Q. Why did you recommend authorized ROEs higher than your COE estimates?
 - A. Because despite fairly straightforward evidence of significant declines in the utility industry's cost of capital, utility regulatory ratemaking bodies have been hesitant to reduce authorized ROEs at the same pace. Therefore, my goal has been to provide evidence to attempt to convince this Commission that utility stock valuation levels support at least incremental reductions to prior authorized ROEs.
 - Q. Have long-term bond yields increased recently?
 - A. Yes, they increased dramatically in 2022. Both investment-grade utility bond yields and long-term United States Treasury ("UST") bonds have almost doubled since the end of 2021. This dramatic increase followed a period of historically low bond yields in 2020 and 2021.
 - The below graph shows long-term bond yields since January 1, 2010. While the early stages of lower long-term interest rates in the first half of the past decade were considered by some as potentially anomalous because of the Federal Reserve Bank's ("Fed") quantitative easing ("QE") programs⁷ through October 2014, for the last half of the past

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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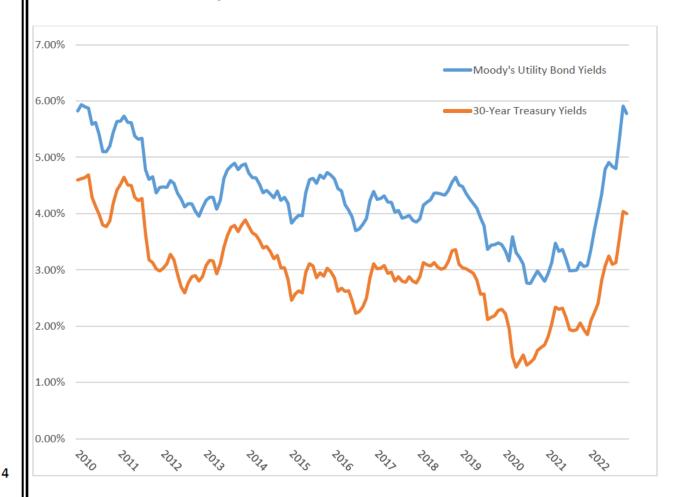
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decade, long-term interest rates continued an overall declining trend, until they reached alltime lows in 2020 and 2021. However, as can be seen in the chart below, long-term rates increased dramatically in 2022.



2020—levels not experienced since the late 1940s and early 1950s. However, the average yield on the Moody's Public Utility Bond index and 30-year UST bonds have approximately doubled since the beginning of 2022. Analyzing bond yields over the last few months might cause one to conclude that the utility industry's COE has increased dramatically, just as analyzing bond yields during much of 2020 and 2021 might have caused one to conclude that the utility industry's COE had decreased dramatically.

Average utility long-term bond yields dropped to modern all-time lows in the latter half of

However, post onset of Covid-19, capital markets have not traded consistent with underlying fundamentals. Much of this appears to be driven by the Fed's and UST's (as

A.

authorized by the United States Congress) massive interventions through monetary and fiscal policies, respectively.

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. **

*** 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.

Q. Since April 2020, have utility stock valuations and bond yields traded consistent with historical patterns?

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, 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. Electric utility stocks significantly outperformed the S&P 500 on a relative basis, despite the fact that long-term yields increased through much of 2022. The increase in yields caused the S&P 500 to contract significantly, while causing only a slight decline in electric utility stock prices, allowing them to maintain similar P/E ratios as before the rapid increase in long-term interest rates. However, as I will discuss later, electric utility stocks finally resumed their more typical trading patterns with long-term yields starting in mid-September 2022.

Consequently, while the utility industry's debt costs have fluctuated along with the macro changes in interest rates over the last few years, the same has not typically held true for the

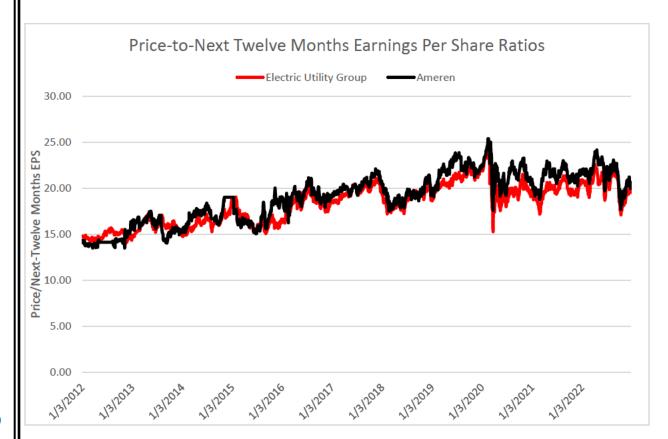
⁸ Ameren Corp Dividend Policy Considerations, Finance Committee, February 2021, p. 3-21.

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electric utility industry's cost of equity. For example, as I will discuss later in my analysis using the CAPM, the cost of equity indications using the CAPM imply that the utility industry's COE has also fluctuated significantly since 2020, but such indications are not consistent with current utility equity market valuations. Current utility equity market conditions imply that investors currently require a lower equity risk premium to invest in utility stocks as compared to bonds.

- Q. Would you illustrate graphically a comparison of Ameren Corp's P/E ratios to those of an electric utility industry proxy group⁹ from 2012 to the present?
- A. Yes. See the below graph:

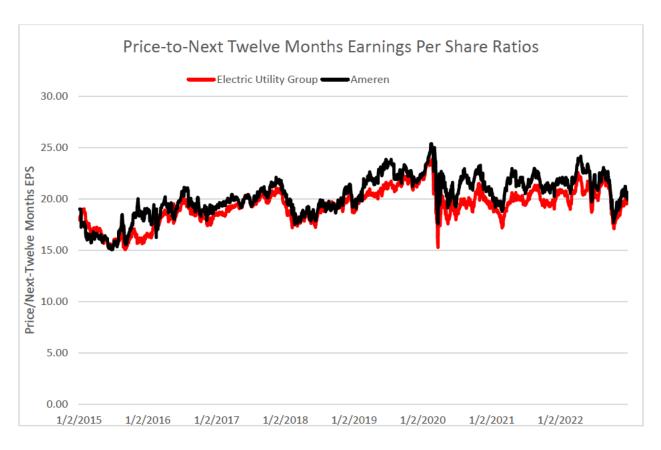


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⁹ Unless otherwise specified, the proxy group I use to represent the electric utility industry are the following companies: Alliant Energy Corporation, American Electric Power Company, CMS Energy Corporation, DTE Energy Company, IDACORP, OGE Energy 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.

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.

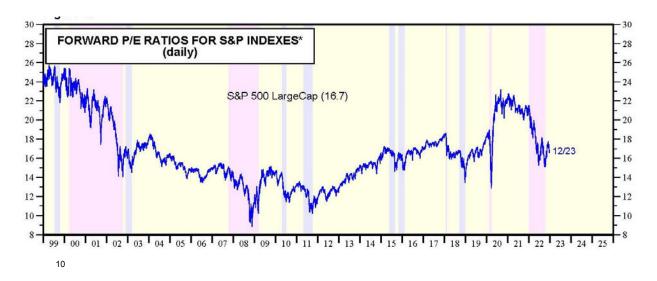
- Q. Would you similarly illustrate a comparison of the electric utility industry's P/E ratios to those of Ameren Corp since 2015, when the Commission first deemed a 9.5% ROE fair and reasonable for Missouri's electric utility companies?
- A. Yes. The chart follows:



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'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 this 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 Federal Reserve ("Fed") and the UST, the electric utility industry's and Ameren Corp's P/E ratios both 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. However, the same was not true for the broader markets. The actions taken by the Fed and the UST caused the S&P 500 to trade at levels much higher than before the pandemic. This is illustrated in the following chart:

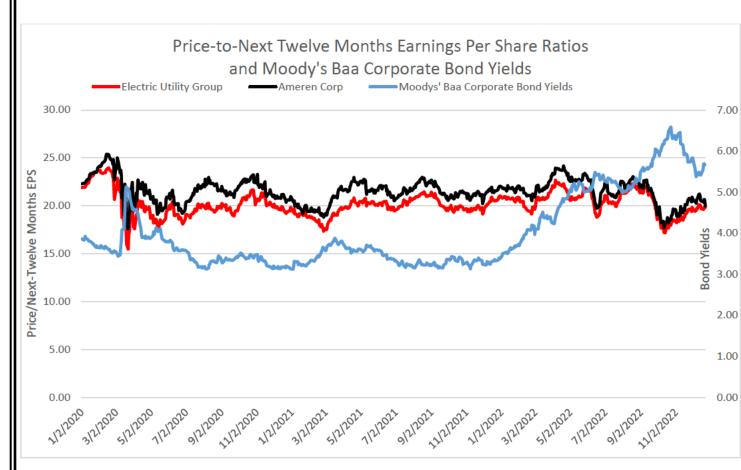


Market conditions have been atypical over the period since the disruptions associated with the onset of Covid-19. The fact that the S&P 500 P/E ratios soared after long-term bond yields declined to historical lows, but the electric utility industry's P/E ratios did not, is at odds with past historical relationships. This certainly seems to support the market commentary at that time which suggested that industries, such as the technology industry, with expected profitability/cash returns well into the future, were achieving higher

¹⁰ Dr. Edward Yardeni, "Stock Market Briefing: Selected P/E Ratios," Yardeni Research Inc., December 27, 2022, p. 3.

valuation levels because lower discount rates (*i.e.* COE) caused expected distant cash flows to investors to be valued higher in present value terms.

- Q. Have Ameren Corp's and the electric utility industry's P/E ratios been inversely correlated with long-term interest rates since April 1, 2020?
- A. No. The following chart plots Ameren Corp's and the electric utility industry's P/E ratios relative to Moody's Baa corporate bond yields since January 1, 2020 (I provided data starting in January 1, 2020 to show inverse correlation prior to Covid-19 disruptions in capital markets and subsequent Fed and UST interventions):



Immediately prior to the capital market disruptions caused by fears related to Covid-19, and potential Covid-19 mitigation measures, long-term 'Baa' corporate bond yields had achieved modern all-time lows of around 3.5%. Consistent with the electric utility industry's P/E ratio's strong inverse correlation to long-term bond yields, P/E ratios

reached modern all-time highs. However, after several aggressive interventions taken by the Fed and the UST, long-term bond yields dropped to even lower levels than in the period prior to Covid-19. Under typical capital market conditions, this would justify electric utility's P/E ratios trading even higher than prior to Covid-19, but because of the Fed and US Congress' extraordinary support for debt capital markets, these historical relationships did not hold true. In fact, as shown in the previous chart related to S&P 500 P/E ratios, the broader market's stock valuations benefited more from the monetary and fiscal policies that allowed for extremely cheap corporate debt. Investors considered the Fed and UST's intervention in capital markets to be more beneficial to growth companies, especially for those growth companies not expected to realize the potential profits from high growth until the distant future, because the Fed's and UST's policies were extremely accommodative for economic growth—higher growth with lower discount rates (*i.e.* cost of equity) has a much more dramatic effect on the perceived value of these stocks.

For the period April 1, 2020, through September 15, 2022, P/E ratios for the electric utility industry and Ameren Corp exhibited positive correlations with long-term bond yields of ~40% and ~28%, respectively. As can be seen in the above graph, during the dramatic and rapid increase in long-term corporate bond yields for the first 9 months of 2022, the electric utility industry's and Ameren Corp's P/E ratios remained above 20x, with Ameren Corp's P/E ratio reaching almost 24x and the electric utility industry's P/E ratio reaching almost 23x in the spring of 2022, which was the start of the Fed's aggressive and rapid tightening of monetary policy. Consequently, electric utility stocks performed the opposite of typical historical long-term patterns.

Q. What caused these atypical trading patterns?

A. Most likely the opportunity cost of not investing in growth stocks caused less demand for utility stocks in light of expectations that the Fed's and UST's extremely accommodative policies would benefit growth companies. Therefore, lower interest rates created higher valuation levels for cyclical-growth stocks as compared to defensive yield investments, such as electric utility companies. However, after inflation became investor's predominant concern, this caused bond yields to increase dramatically, but because utility companies

are typically allowed to pass through higher costs to ratepayers, protecting their margins, this supported utility stock prices. However, fixed-income bonds' coupons are typically not protected from inflation erosion, which subjects these securities to much more risk in a volatile and uncertain inflationary environment. In fact, the last time utility stocks outperformed broader markets during a rising interest rate environment was 1981, which coincided with the last period of significant inflationary pressures.¹¹

- Q. Has the strong negative correlation of electric utility P/E ratios to long-term yields returned since September 15, 2022?
- A. Yes. Over this period, both the electric utility industry's and Ameren Corp's P/E ratios have had a negative correlation of approximately 80% with changes in 'Baa' corporate bond yields.
- Q. Do you have market commentary support for your analysis and testimony related to relatively high utility stock valuation levels, despite increasing long-term interest rates?
- A. Yes. On May 5, 2022, the Wall Street Journal ("WSJ") provided the following comments about recent trading patterns in dividend paying stocks, which includes utilities:

Investors seeking shelter from volatility are turning to a part of the markets that had largely been overlooked last year: dividend-paying stocks.

Shares of companies paying big dividends to investors have trounced practically everything else this year...

What's unusual about this year's rally in dividend-paying stocks is that it is the opposite of what market convention says happens when interest rates rise. Usually, investors say, dividend-paying stocks do poorly in a rising-rate environment because rates typically go up when the economy is growing. In boom times, investors tend to forgo the steady cash payments of bondlike stocks in favor of companies that have the potential to deliver bigger profits later.

This time, a different dynamic is at play. Interest rates have risen swiftly, not because investors are betting on an economic surge but because accelerating

¹¹ Steve Fleishman, et. al., "Utilities defy rates w/best year this century; DUTY 2023 intro," Wolfe Research, January 3, 2023, p. 1.

 inflation is forcing the Federal Reserve to act quickly to rein in price pressures. Some investors worry the Fed's increases could cause a recession.

That has drawn investors into shares of big dividend payers, which promise to deliver a steady stream of cash in the near term.

A bonus? Many dividend payers are in industries like utilities, telecommunications and consumer staples, which consumers tend to rely on year round, regardless of the economic environment.

That has made them especially attractive to investors who are worried the Fed won't be able to combat inflation without significantly raising unemployment. 12

Between the spring of 2020 (the onset of the Covid-19 pandemic) until the end of 2021 and early 2022, utilities had been trading at a discount relative to the S&P 500, as compared to the premium they traded to the S&P 500 for most of the past decade prior to the Covid-19 pandemic. In response to the Covid-19 pandemic, the Fed (*i.e.* monetary policy) and the UST (*i.e.* fiscal policy, as authorized by US Congress) initiated aggressive policies to counteract economic and market concerns that may be caused by Covid-19 and the measures instituted to mitigate its spread. The rapid increase in S&P 500 valuation ratios relative to the utility industry's valuation ratios suggested that the aggressive monetary and fiscal policy increased investors' optimism and risk appetite. However, this quickly changed as a result of inflationary concerns, which caused the Fed to communicate its intent to transition to tighter monetary policy, and even potentially restrictive conditions, in order to gain control of inflationary pressures caused by an imbalance in consumer demand and the supply of goods and services.

Q. Can you provide market commentary specific to the utility industry?

A. Yes. A WSJ article published on May 16, 2022, provides further insight into the state of utility capital markets as they related to past absolute performance and relative performance to the S&P 500:

Rising interest rates and inflation are typically a circuit breaker for richly valued utility stocks, but these are unusual times.

¹² Akane Otani, "Investors Find Safety in Overlooked Stocks That Pay Dividends," Wall Street Journal, May 6, 2022, pages B1 and B11.

The sector is the second-best performing one in the U.S. behind energy year to date, trouncing the S& P 500 by 15 percentage points through Friday. That leaves utility stocks trading at almost 20 times forward 12-month earnings on average—close to a high and nearly a fifth richer than the S& P 500. The last time utilities fetched such a premium was during the market panic in March 2020. The staid sector typically traded at a slight discount to the broader index over the past decade...

...Still, the sector's rally is something of an anomaly given the macroeconomic environment. Utility stocks tend not to take well to rising interest rates for two reasons: First, utilities have large debt burdens, with those in the S& P 500 on average carrying net debt that is more than five times earnings before interest, taxes, depreciation and amortization, according to S& P Global Market Intelligence. Second, they are a bond substitute. When interest rates rise, utilities' dividend yields start looking less attractive compared with Treasurys. At one point during the early-2020 recession, the dividend yield on utility stocks was nearly 4 percentage points higher than the yield on 10-year Treasury notes. That edge is now 0.17 percentage point.

In addition, high inflation tends to be bad news for utilities. When inflation starts pushing up overall costs for households, it becomes harder to persuade utility regulators to grant higher rates. Regulators are typically either appointed by governors or elected, so they aren't immune to the sentiments now prompting politicians to blame companies—ranging from oil producers to supermarket chains— for causing consumer pain...

...With investors seemingly finding new worries around every corner lately, the forces holding the rest of the market back can make utilities look like a hidden jewel one moment and a lump of expensive coal in the next. In a softening stock market, these power lines are starting to look stretched. ¹³

Although the COE has increased for the broader markets, because electric utility stocks P/E ratios continue to trade at around 20x, this information supports my position that the absolute level of the utility industry's COE has not changed much relative to bond yields, meaning utility equity risk premiums over current higher bond yields are lower than they were when bond yields were lower. My multi-stage DCF analysis corroborates this view. Because a DCF analysis directly incorporates utility stock prices, it is generally

¹³ Jinjoo Lee, "Utility Stocks Keep Their Spark – Sector isn't cheapest place to park money, but there are few alternatives," Wall Street Journal, May 16, 2022, p. B11.

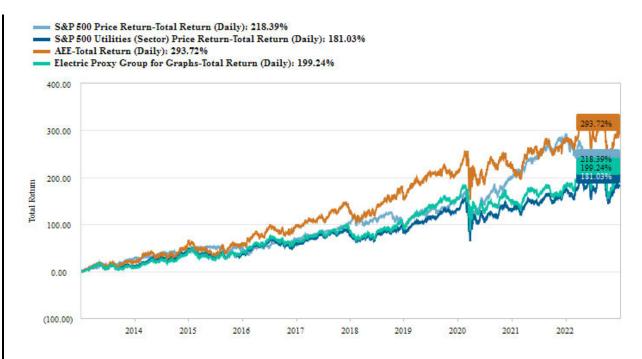
the most reliable method to determine company-specific or industry-specific risk premiums (assuming reasonable growth rate assumptions).

- Q. How did utility stocks perform relative to the S&P 500 for the entire 2022 calendar year?
- A. Utilities outperformed the S&P 500 by approximately 1,800 basis points (18%) in 2022. Wolfe Research indicated the following about utilities outperformance in 2022 despite rising long-term rates:

Utilities outperform as defensive trade trumps rising rates – After 3 straight years of underperformance, utilities re-awakened in 2022 beating the market by 1800bps. This was their best relative year since the tech bubble burst in 2000 (see here [link in original]). The sector shook off the 237bps spike in LT interest rates and only fell 1.4% on the year. This is very rare – utilities average over 1600bps underperformance in years when rates rise over 100bps (see here [link in original]); the only other year out of 11 that they outperformed was 1981. That year also saw high inflation and Fed tightening that preceded a severe recession in 1982. Utilities ended 2022 at a modest premium valuation vs the market. We plan to host our Year Ahead outlook call on 1/11. (Emphasis in original).¹⁴

- 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 the electric utility proxy group for the last ten years?
- A. Yes. See the below chart:

¹⁴ Steve Fleishman, et. al., "Utilities defy rates w/best year this century; DUTY 2023 intro," Wolfe Research, January 3, 2023, p. 1.



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Ameren Corp's (trading ticker is "AEE") total return has outperformed that of its utility peers and the S&P 500. The total returns shown in the chart above convert into the following compound annual returns for Ameren Corp, Electric Proxy Group, S&P 500 and the S&P 500 Utilities, respectively: 14.69%, 11.58%, 12.28% and 10.89%.

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.

A comparison of average electric utility dividend yields since 2015 is less conclusive about potential changes in the electric utility industry's COE since 2015. Consistent with all-time high P/E ratios immediately before capital market disruptions at the beginning of the Covid-19 pandemic, electric utility dividend yields were at all-time lows. This data implies that the electric utility industry's COE was likely around 100 basis points lower in early 2020, then in 2015. However, subsequent to the early stages of the Covid-19 pandemic,

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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 were bound in the range of 3% to 3.5%, as compared to consistently higher than 3.5% for much of 2015. This information on its own still supports lowering Ameren Missouri's previously authorized ROE of 9.53% by 25 basis points.

Understanding that Ameren Corp's dividend yield has declined not only due to higher growth expectations, but also less business risk due to favorable legislative developments in Missouri, it supports an even more aggressive reduction to Ameren Missouri's authorized ROE to 9%.

- Q. In Ameren Missouri's 2021 rate case, you showed the low yields on American Missouri's long-term bonds. How have the yields on Ameren Missouri's bonds changed since then?
 - They have increased significantly. In August of 2021, Ameren Missouri's 30-year bonds were trading at a yield-to-maturity ("YTM") of approximately 2.7%. These same bonds have recently been trading at a YTM in the range of approximately 5% to 5.25%, after peaking at approximately 5.75% to 6% in October 2022. As I will discuss later in my testimony, applying the simple rule of thumb of adding a 3% equity risk premium to a company's own bond yields implies that Ameren Missouri has a COE of around 8% to 8.25%. However, Ameren Corp's P/E ratio is much higher than a decade ago when bond yields last traded this high, implying that investors in Ameren Corp's stock are not requiring much of an equity risk premium. This may be due to investors' perceptions that, while bond yields have become more attractive, Ameren Missouri's stock's defensive characteristics and ability to pass inflationary costs on to ratepayers through rate cases, currently outweighs the attractiveness of higher bond yields.

The below graph shows changes to Ameren Missouri's bond yields and Ameren Corp's P/E ratios since January 1, 2020:



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Ameren Corp's P/E ratios did not decline as long-term yields started to rise in early 2022. In fact, Ameren Corp's P/E ratios initially increased to around 24x in early 2022 before they settled at around 22x for the next few months until mid-September 2022 when Ameren Corp's P/E ratios declined rapidly from around 22x to around 18x in less than 30 days, as long-term rates continued to increase. Not until long-term yields declined from their peak in October 2022, did Ameren Corp's P/E ratios increase again to approximately 20x.

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Q. When is the last time corporate bonds traded at YTMs of around 6%?

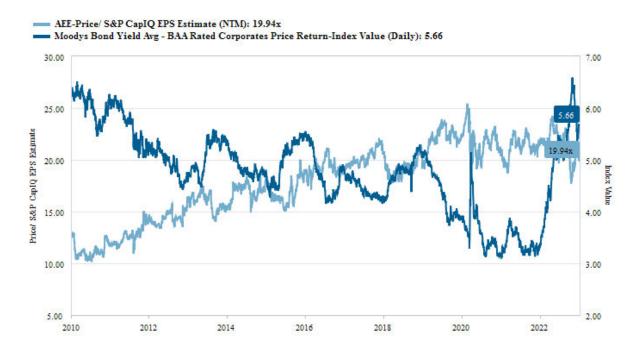
11 A. In 2010.

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Q. What was Ameren Corp's P/E ratio then?

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A. Around 10.5x to 11.5x, which is about half of its current level. See the below chart:



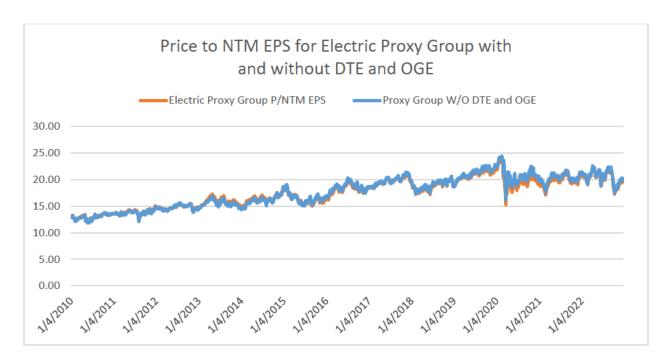
Q. Were there factors other than interest rates impacting Ameren Corp's P/E ratio in 2010?

A. Yes. Ameren Corp's business risk was higher at the time due to its significant exposure to non-regulated operations. Ameren Corp owned non-regulated generation assets, which it eventually sold to Dynegy on December 2, 2013, with consideration being Dynegy's assumption of Ameren Energy Generating Company's \$825 million of outstanding debt (*i.e.* no equity value). Additionally, Ameren Corp had a lower growth profile at the time due to much lower projected rate base growth at Ameren Missouri because Ameren Corp was only minimally investing in its Missouri electric utility assets.

Q. What were the electric utility industry's P/E ratios in 2010?

A. Around 12x to 13x. These P/E ratios are based on a proxy group of companies I have consistently used and analyzed in electric utility rate cases for the last ten years. Therefore, they have consistently met screens that ensure their business risks are fairly consistent over time with that of rate-regulated electric utility operations. However, there are a few, such as DTE Energy and OGE, which despite passing my past screening *criteria*, have experienced more stock price volatility during some periods due to their exposure to non-

regulated operations such as gas midstream and energy market trading operations. Therefore, I show the P/E ratios with and without these companies to ensure comparability over time.



As shown in the above chart, electric utility P/E ratios are currently around 20x, a much higher level than the last time bonds traded at YTM's of around 6%. This demonstrates that recent increases in long-term bond yields have not resulted in similar increases to the electric utility industry's COE. This fact, at the very least, supports not increasing authorized ROEs above recent decisions, which have generally averaged around 9.4%. However, because of Ameren Missouri's reduced business-risk profile due to its ability to elect PISA ratemaking treatment, which it did in September 2018, Ameren Missouri's authorized ROE should be set at no higher than 9.25%, especially if the Commission does not reduce Ameren Missouri's allowed ratemaking common equity ratio to recognize the additional debt capacity created by Ameren Missouri's lower business risk. As I will explain in the capital structure section of my testimony, Ameren Corp continues to misappropriate this debt capacity to the holding company for the benefit of shareholders, but at the expense of ratepayers.

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- 0. Would you summarize your interpretation of the signals capital market conditions are providing as it relates to the cost of capital to the electric utilities as an industry and specifically to Ameren Missouri?
 - Yes. It is simple to observe the increase in the cost of debt capital for Ameren Missouri and the electric utility industry. The cost of debt has been directly influenced by the Fed's tightening of monetary policy. The Fed is tightening monetary policy in an attempt to dampen inflationary pressures. Long-term fixed-rate bond valuations are directly impacted by inflationary pressures because inflation erodes the value of the historical coupons set during a lower interest-rate environment. To the extent investors fear further increases in inflation, this causes more concern about the potential future erosion of value of fixed-rate coupon bonds. While utility stocks have bond-like characteristics, at least investors are compensated by the ability of utility companies to pass higher costs (due to inflation) through to ratepayers through cost-of-service ratemaking. This characteristic has caused investors to value utility stocks at a higher relative premium to fixed-rate bonds than usual. Consequently, the equity risk premium required to invest in utility stocks is currently less than under typical capital market conditions.

COST OF EQUITY METHODS

- Q. Having provided context on recent changes in the utility capital market generally and with regard to Ameren Corp and Ameren Missouri specifically, would you explain how you approached estimating Ameren Missouri's COE in this case?
- A. Yes. I performed a company-specific COE analysis on Ameren Corp as well as a proxy group COE analysis. I used a multi-stage DCF approach and a CAPM. I then tested the reasonableness of my estimates by using simple, straightforward sanity checks, such as the bond-yield-plus-risk-premium ("BYPRP") method discussed in the CFA curriculum.

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INVESTOR INSIGHT

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

Being that the objective of a ROR witness is to emulate investors' approaches to analyzing and making investments in utility stocks, I have prioritized reviewing and analyzing how equity research analysts determine a utility stock price estimate in practice. This has allowed me to test the theory of cost-of-capital estimation found in utility ROR testimony as it compares to how utility stocks are actually valued. I have discovered professional equity analysts typically use a combination of valuation approaches. Investment firms may use absolute/intrinsic valuation techniques, such as a multi-stage DCF approach to estimate fundamental values of utility stocks and/or they use relative valuation techniques that compare a company's P/E ratios to an average for the industry. In my experience, professional equity analysts project long-term compound-annual-growth-rate ("CAGR") in EPS to determine whether a company's P/E ratio deserves a premium or a discount to its peers. Professional equity analysts do not use their estimates of long-term CAGRs in EPS as a proxy for a perpetual dividend growth rate, as some ROR witnesses suggest. Investment analysts use perpetual growth rates for the electric utility industry in the range of 2.5% to 3.3% range for electric utility companies. Finally, and most relevant to the task at hand, they estimate utilities' COE to be in the 5-6% range. 15

Q. Why is it important to analyze this information to determine a fair and reasonable allowed ROE for Ameren Missouri?

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 estimates for purposes of estimating the COE.

¹⁵ Durgesh Chopra, et. al, "Q3 Earnings Scorecard," November 13, 2022, Evercore ISI. Sarah Akers, and Jonathan Reeder, "DDM Analysis Supports Sector Valuation & Quality/Growth Trade," August 19, 2019, Wells Fargo.

Direct Testimony of David Murray File No. ER-2022-0337

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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. 0189. 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").

MULTI-STAGE DCF/DDM

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

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 2026. Ameren Corp's consensus dividend payout ratio is projected to be 57.12% in 2026. Ameren Corp's current guidance on its dividend payout ratio is in the range of 55% to 70%. Being that Ameren Corp plans to be in a high capital expenditure cycle through at least the next ten years, I assumed Ameren Corp would retain more capital and therefore target a dividend payout ratio of 57.12% until 2034. Over this period I assumed Ameren Corp's DPS would grow in line with Ameren Corp's projected EPS, which I modeled to gradually decline from 2027 to 2037, when I modeled it to grow perpetually at a rate in the range of 2.5% to 3.5%, with 3% being the base case. This perpetual growth rate range is consistent with the **

Ameren Corp's EPS growth transitions to a sustainable growth rate by 2037, I appropriately increased Ameren Corp's dividend payout ratio to consider the fact that it

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would not need to retain as much earnings for reinvestment. For my base case scenario, this caused Ameren Corp's DPS to grow at a CAGR of 9.35% for the period 2034 through 2037, as compared to a 3.40% CAGR in EPS for the same period.

Q. Do you have additional support for your assumed growth rates?

A. Yes. Through recent investment communications and actions, Ameren Corp has signaled that it plans to increase its dividend in line with its long-term CAGR in EPS guidance of 6% to 8% for the period 2022 through 2026.¹⁷ Ameren Corp has also communicated to investors that it plans to increase rate base at a CAGR of approximately 7% through 2026 by investing \$17.3 billion.¹⁸ For the longer period 2022 through 2031, Ameren Corp anticipates a potential investment pipeline of \$48+ billion.¹⁹ But these ramped up investment programs are finite and will eventually return to a maintenance level of capital investment, similar to how Ameren Corp treated its investment in Ameren Missouri before it was granted statutory authority to use PISA. Once the Company achieves this steady state, then it should gravitate toward a dividend payout ratio that ensures it will have sufficient internal equity capital to fund its investments. Using the maintenance level of capital expenditures Ameren Corp made in Ameren Missouri as a proxy, a targeted dividend payout ratio of approximately 67.57% is consistent with this level of investment.

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

A. I reviewed past actual historical industry growth rate data from the Moody's electric utility index,²⁰ a sample group of electric utility companies in which data was available from Value Line,²¹ and commentary/analysis available from institutional investors/analysts.²² This information supports a perpetual growth rate in the range of 2.5% to 3.5%. A

¹⁷ Ameren Investor Presentation, "Transforming for Our Future," EEI Financial Conference, November 14-15, 2022, p. 5.

¹⁸ *Id.*, p. 11.

¹⁹ *Id.*, p. 5.

²⁰ Staff Cost of Service Report, Case No. ER-2011-0028, p. 18.

²¹ Id.

²² Discussed throughout this testimony.

	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 eventually
	lowered to compress the spread between the COE and the allowed ROE, this would support
	a 2.78% perpetual growth rate if investment opportunities are available (9.25% allowed ROE multiplied by 30%).
٠.	Is this industry data consistent with **
	**
١.	Yes. In fact, one of the sources I relied on for purposes of estimating the perpetual growth
	rate is from **
	**
Q.	How does this compare to perpetual growth rates used by equity analysts to estimate
	fair prices for utility stocks?
١.	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% in its 3-stage
	DDM analyses of electric utility stocks. ²⁴ Wells Fargo uses an average perpetual growth
	rate of around 3%. ²⁵
Q.	How do these growth rates compare to Ameren Missouri's earnings and rate base
	growth over the period in which Ameren Corp was limiting its investment in Ameren
	Missouri to a level intended only to ensure it maintained safe and reliable service?
.•	Based on Ameren Missouri's rate base through the true-up period, December 31, 2019, in
	its 2019 general rate case, ²⁶ Ameren Missouri's CAGR in its rate base was in the range of
²³ Ame	eren Dividend Policy Considerations, Ameren Finance Committee, October 2017, p. 5-10.
²⁵ <i>Id</i> .	e No. ER-2019-0335, Laura Moore Direct Testimony, July 3, 2019, p. 18.

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2.2% to 3% since the 2010 to 2011 time period. This further supports a rational expected terminal growth rate when the utility industry is maintaining its system to ensure safe and reliable service.

Using Ameren Corp's most recent 3-month average stock price of approximately \$84 and

discounting prospective dividends by reasonable growth rates in the intermediate future as

well as perpetually, the implied COE for Ameren Corp is approximately 7.3% to 7.6% (see

Schedule DM-D-2). Given that this COE estimate assumes Ameren Corp can achieve

CAGR in DPS of over 6.0% to 7.25% for approximately the next 14 years, I consider this

COE estimate to be higher than likely. Additionally, the average stock price of \$84

captures Ameren Corp's recent 52-week low stock price of around \$75, despite the fact

that it has recently been trading around \$90. Use of this stock price implies Ameren Corp's

COE is approximately 25 to 30 basis points lower than the 7.3% to 7.6% I estimated using

4 5 Q. What cost of equity did you estimate for Ameren Corp using the multi-stage discounted cash flow approach?

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PROXY GROUP COST OF EQUITY

characteristics similar to those of Ameren Corp?

the \$84 stock price.

17 18 Q. Should you compare your estimate of Ameren Corp's company-specific COE to an estimate of the COE of a group of other regulated electric utility peers with

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A. Yes.

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Q. Why?

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A. 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 on a custom proxy group.

Q. How did you approach selecting the custom proxy group that you used for purposes of comparing Ameren Corp's COE to that of 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"). ²⁷ 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 less than 10% of their operations exposed to competitive and international markets, which was 19 companies. I also separately analyzed the group of companies I used in my charts throughout my testimony.

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 (January 1, 2023 through December 31, 2026) I used Wall Street analysts' consensus DPS estimates to the extent they were available. For the second stage (December 31, 2026 through December 31, 2037), 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 in 2037. In order to estimate investors' anticipated annual DPS over the second stage, I determined consensus analysts' estimated dividend payout ratios as of 2026. I then allowed the dividend payout ratios to gradually converge to a sustainable payout ratio of 67.57% starting in 2037. 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. This payout ratio is consistent with the proportion of earnings utility companies should retain to sustain a 3% growth rate at a 9.25% book ROE.

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

²⁷ EEI classifies companies as "Regulated" if at least 80% of their assets are dedicated to regulated utility operations.

convention mitigates the potential under or over-estimating of the COE based on either end-of-year or beginning-of-year discounting conventions.

My industry COE estimate based on application of the multi-stage DCF to the proxy group indicates a COE in the range of around 7.65% to 7.9%, with the more narrowly refined proxies being in the range of 7.65% to 7.75% (see Schedule DM-D-3, p. 1).

Q. How does this COE estimate compare to your electric utility industry COE estimate in Ameren Missouri's 2021 rate case?

A. It is approximately 50 basis points higher. The main driver of the increased COE estimates in this case is due to the electric utility industry's significant decline in stock prices through mid-October 2022, which partially recovered by early December 2022. Using stock prices just for December, which reflects the period in which electric utility P/E ratios returned to the 20x level they had been typically trading at, implies a COE similar to the range I estimated for the electric utility industry in Ameren Missouri's 2021 rate case.

<u>CAPM</u>

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

A. Yes, I used the Capital Asset Pricing Model ("CAPM"). The CAPM shows the specific impact of interest rates on the cost of capital. Although CAPM COE estimates can be manipulated by using unreasonable market risk premium estimates, there are a variety of authoritative sources that provide market risk premium estimates that can form the basis for a consensus view on a reasonable market risk premium 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 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, previously Duff & Phelps, recommended market risk premium of 6% provided as of October 18, 2022, ²⁸ and a range of realized historical market risk premiums of 4.92% (geometric historical mean for 1926 through 2021) to 6.37% (arithmetic historical annual mean for the period 1926 through 2021) derived from data provided by Ibbotson Associates' Stocks, Bonds, Bills and Inflation database. These estimates are generally consistent with market risk premium estimates I have typically observed in practical investment analysis, which includes Wall Street analysts' estimates of utility companies' COE and various financial advisor/investment bank presentations made to utilities for purposes of valuing utility assets. Therefore, I consider these estimates to be consistent with the investment community's "consensus."

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

²⁸https://www.kroll.com/-/media/cost-of-capital/kroll-us-erp-rf-table-2022.pdf

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. Did utility stock betas increase subsequent to the market disruptions at the onset of the Covid-19 pandemic?

A. Yes. At the time I drafted testimony for the Empire and Ameren Missouri 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 in Ameren Missouri's 2021 rate case, electric utility 5-year stock betas had increased to around 0.80. Electric utility 5-year stock betas are currently approximately 0.81 for the broad EEI proxy group, 0.76 for Ameren Corp and within the range of 0.76 to 0.81 for regulated proxy subsets within the broader EEI proxy group.

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 relative 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 couple of years, since the market contraction at the onset of the pandemic?

A. As can be seen in the following chart, electric utility raw betas were in the 0.2 to 0.25 range before they increased to approximately 0.9 when all stocks moved together at the onset of the pandemic. Electric utility raw betas had begun to return to levels prior to the pandemic until mid-September, when electric utility stocks contracted more than the S&P 500. This caused the raw 1-year betas to increase to approximately 0.5.

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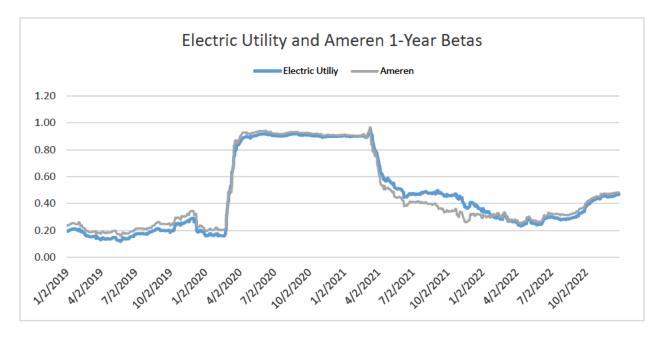
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- Q. What beta do you consider appropriate for estimating a baseline COE for the electric utility industry during current market conditions?
- A. In the range of 0.75 to 0.80 based on the data I provide in Schedule DM-D-4.
- Q. Based on your CAPM analysis, what do you estimate COE to be for Ameren Corp and the proxy groups?
- 7 A. My CAPM COE is in the range of 8.5% and 8.8% as shown on Schedule DM-D-4.
 - Q. How do your current CAPM COE estimates compare to your CAPM COE estimates in Ameren Missouri's 2021 rate case?
 - A. My current CAPM COE estimates of 8.5% to 8.8% are over 200 basis points higher than my CAPM COE estimates of approximately 6.5% to 6.9% in Ameren Missouri's 2021 rate case, Case Number ER-2021-0240.
 - Q. Why is there an over 200 basis points increase in CAPM COE since 2021?
 - A. Because the CAPM uses interest rates as a direct input in estimating the COE. Because the average betas for the electric utility industry are currently fairly similar to those in the

2021 rate case, the higher implied COE estimates are almost entirely attributed to higher long-term risk-free rates.

SIMPLE TESTS OF REASONABLENESS

Q. Are there any simple reasonableness tests for your COE estimates?

A. Yes. A simple rule of thumb contained in the Chartered Financial Analyst ("CFA") Program curriculum is to estimate the COE by adding 3% to 4% as a risk premium to a company's own bond yield. This provides 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 the YTM on Ameren Missouri's publicly-traded bonds provides a reasonableness check on more detailed COE estimates. As shown in the chart on page 24 of this testimony, American Missouri's long-term bonds have recently been trading at a YTM of approximately 5% to 5.25%. Using 3% as the risk premium suggests that Ameren Missouri's COE is roughly 8% to 8.25%, which is even higher than my CAPM results. The "rule of thumb" results imply that Ameren Missouri's COE has increased by 225 to 250 basis points since the 2021 rate case.

- Q. Is there a simple way to test whether investors in utility stocks are requiring a typical equity risk premium given the rapid and dramatic increase in bond yields due to inflationary concerns?
- A. Yes. The basic characteristics of electric utility stocks have not changed much over time.

 Investors still view electric utility stocks as predominately yield investments. **

 ** This analysis shows that between 1974 to 2010, approximately 68% of returns from utility stocks were from the income received through dividends, with the remaining income from capital gains. ²⁹ Even assuming that Ameren Corp had sustainable

²⁹ Hugh Wynne, François D. Broquin, and Saurabh Singh, "U.S. Utilities: Our Dividend Growth Model Identified Utilities Poised to Pay More," May 20, 2011, Bernstein Research.

1		investment opportunities to allow it to generate 50% of returns from capital gains, this	
2	would translate into a 6.0% required return based on Ameren Corp's current dividend y		
3	of approximately 3%. **		
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9		RECOMMENDED AUTHORIZED ROE	
10	Q.	Based on your analysis and understanding of Ameren Corp's COE, the electric utility	
11		industry's COE, investor expectations on allowed ROEs, average electric utility	
12		authorized ROEs and Ameren Missouri's affiliate's allowed ROR for its electric	
13		utility operations, what would be a fair and reasonable allowed ROE range in this	
14		case?	
15	A.	8.4% to 9.25%. I recommend a 9.25% authorized ROE in this case compared to the 9% I	
16		recommended in Ameren Missouri's 2021 rate case due to contractions in electric utility	
17		stock prices from mid-September through October of 2022. While electric utility stock	
18		prices had largely recovered by the end of 2022 to again reach the 20x P/E ratios they had	
19		been typically trading at for the last two years, it is too early to conclude that they will	
20		maintain this level. If over the course of this rate case, electric utility stock valuation levels	
21		seem to be maintaining the recent 20x P/E level, then I will likely revise my recommended	
22		authorized ROE to 9%, consistent with my recommendation in Ameren Missouri's 2021	
23		rate case.	

³⁰ Ameren Corporation Finance Committee, 4-37, October 13, 2011.

CAPITAL STRUCTURE

Q. What is 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 consistent component of a utility company's capital structure, if the balances of short-term debt are fairly consistent or below its construction work-in-progress ("CWIP") balances, then it is fair to exclude short-term debt from the ratemaking 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 rate of return (ROR)?

A. I recommend a capital structure that consists of approximately 43% common equity, 0.69% preferred stock and 56.31% long-term debt. While not exactly the same as Ameren Corp's consolidated capital structure as of June 30, 2022, this is in line with Ameren Corp's recent targeted consolidated capital structure.

Q. Why do you recommend this capital structure?

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 Ameren Missouri. Use of this capital structure ensures that Ameren Missouri receives credit for the additional debt capacity it has provided to Ameren Corp for historical investments as well as under its current lower business risk profile with its assurance of recovery of return on and of investments between rate cases through PISA. 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 for the past twelve years, 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. Ameren Corp has been authorized a 60.1% equity ratio at Ameren Transmission Company of Illinois ("ATXI"), a 50% equity ratio for Ameren Illinois' electric utility operations, a 52% equity ratio for Ameren Illinois' natural gas distribution operations and an approximate 52% equity ratio for Ameren Missouri's last litigated electric rate case in 2014, Case No. ER-2014-0258.

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.

³¹ "Transforming For Our Future," Ameren Rating Agency Update, April 2022, p. 48.

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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?

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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 June 30, 2022, Ameren Corp had \$2.55 billion of outstanding holding company debt, which represents 18.95% of total consolidated debt. It is clear that Ameren Corp has dynamically managed 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 are now incurring the risk associated with Ameren Missouri's ability to defer investment costs using PISA.

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?

Yes, Ameren Missouri's business risk declined due to the Missouri Legislature passage of SB 564, which became law in 2018, and Ameren Missouri's decision to elect plant-inservice accounting (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 through the certainty of funding of investments subject to

PISA. 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 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")/debt³² 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

³² 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.

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reducing regulatory lag [PISA]."³³ Ameren Corp's management said,** 1 2 3 **This 4 additional debt capacity should be reflected in Ameren Missouri's authorized capital 5 structure because Ameren Missouri's customers are providing the cash flows that make 6 this lower business risk possible. Considering the anticipated sizeable increase in Ameren 7 Missouri's rate base over the next several years, it is just and reasonable to ensure 8 9 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 10 more debt in its capital structure allows Ameren Missouri's ratepayers to receive credit for 11 Ameren Corp's reduced risk profile afforded by the legislative opportunity to receive a 12 return on and of plant placed in service between rate cases. 13 Third, as I discussed previously, Ameren Corp is now viewed as a premium utility by 14 investors because of the anticipated growth in its investment and investors' confidence in 15 the probability of the recovery of a return of and on this investment. This is illustrated by 16 the fact that Ameren Corp's price-to-earnings (P/E) ratios have been trading at a premium 17 to an average for its peers. These market signals are clear indications that Ameren Missouri 18 has both a reduced business risk profile through legislative support for increased 19 investment as well as higher expected growth in earnings and dividends as a result of this 20 increased investment. 21 Q. Why does Ameren Corp's current consolidated capital structure have a much lower 22 equity ratio than Ameren Missouri's capital structure? 23 Primarily because of Ameren Corp's increased use of holding company debt to fund its A. 24 25 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 last rate case, Ameren had \$700 million of holding company debt

³³ "Update to Credit Analysis," Moody's Investor Service, March 29, 2019, p. 2 (Schedule DM-D-18).

³⁴ Ameren Corp's Finance Committee Meeting, February 7, 2019, p. 24.

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outstanding. As of June 30, 2022, Ameren Corp had \$2.55 billion of holding company debt outstanding. As a proportion of consolidated debt, Ameren Corp has more than doubled 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 60.1%. 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 investments in ATXI.³⁵ 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

³⁵ Ameren Missouri response to OPC DR No. 3033 in Case No. ER-2019-0335.

much of this period in which Ameren Corp was funding these investments with external capital, it was also receiving a significant amount of dividends from Ameren Missouri. Being that there is no way to trace the capital once Ameren Corp receives it and redeploys it as it deems consistent with its organizational objectives, 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 also manages 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 over whether Ameren Illinois's authorized ROR should be based on Ameren Illinois's per books capital structure, which showed a common equity ratios in the range of 52% to 54%³⁶, or if it should be adjusted to a lower level in order to recognize the reduced business risk afforded by the Illinois' Grid Modernization Act. The ICC Staff first determined Ameren Illinois's common equity ratio on a stand-alone basis after making adjustments to remove goodwill from Ameren Illinois's common equity balance. After going through this exercise, ICC Staff still determined that Ameren Illinois' common equity ratio was still unreasonable for

³⁶ Docket Nos. D-11-0279, D-12-0293 and D-13-0301.

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the reduced business risk associated with the certainty of formula ratemaking the Grid Modernization Act allows.

The ICC Staff then recommended a common equity ratio for Ameren Illinois consistent with Ameren Corp on a consolidated basis. 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 has 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' last two annual rate dockets, Docket Nos. D-21-0365 and D-22-0297, Ameren Illinois requested higher 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. 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

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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?

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 70%. However, over the most recent five years, Ameren Missouri has had a dividend payout ratio that has ranged from a low of 4.61% in 2021 to a high of 111.04% in 2017. 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 2018,³⁷ whereas, at the same time, it had been investing significant amounts of capital in ATXI and Ameren Illinois. Ameren Illinois distributed \$110 million of dividends in 2016 and \$9 million of dividends in 2020. ATXI has required much less investment since 2017, which is the last year in which ATXI did not distribute a dividend to Ameren Corp. ATXI had a dividend payout ratio of 97.22% in 2018, 18.03% in 2019, 32.78% in 2020, and 109.31% in 2021. 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 payout ratio.

³⁷ Case No. EO-2019-0044.

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 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.³⁸ 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.³⁹ This has been Ameren Corp's basis for maintaining that Ameren Missouri's equity ratio is legitimate for ratemaking purposes. Although Ameren Corp made a strategic financing decision to issue third-party equity to partially finance its purchase of the High Prairie and Atchison wind projects ("the wind projects"), Ameren Corp financing needs were just as significant in the years leading up to the purchase of the wind projects, and it could have issued equity to third-party equity investors then, but did not. There have been several periods in which Ameren Corp's short-term debt balances have been approximately \$1 billion, which would have warranted issuing common equity to reduce the amount of leverage at Ameren Corp.

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 rated regulated affiliates to target and achieve ratemaking common equity ratios. The most objective and practical measure of the capital

³⁸ See Ameren Missouri's response to DR No. 3033 in Case No. ER-2019-0335.

³⁹ *Id*

structure that captures the debt capacity of Ameren Corp's regulated utility assets, is that 1 2 of the Ameren Corp on a consolidated basis. Consequently, this is why I am recommending 3 Ameren Missouri's common equity ratio be set no higher than Ameren Corp's, which is currently approximately 43%, net of short-term debt. 4 5 Q. Do Ameren Corp's financial projections anticipate a similar common equity ratio 6 over the next several years? 7 A. Yes. Ameren Corp expects its consolidated common equity ratio to be around **_____ 8 **40 Because short-term debt costs are used for purposes of capitalizing construction work in progress ("CWIP") through 9 the AFUDC capitalization rate, it is appropriate to exclude short-term debt from the capital 10 structure used for ratemaking as long as short-term debt balances do not exceed CWIP 11 12 balances. If short-term debt were to exceed CWIP balances, then inclusion of short-term debt in the authorized capital structure should be considered because this implies short-13 term debt supports rate base. 14 Q. How much short-term debt has Ameren Corp been carrying on its balance sheet in 15 recent quarters? 16 17 A. Ameren Corp's short-term debt balances for quarterly-ended periods March 31, 2022, June 30, 2022 and September 30, 2022 was \$1.101 billion, \$1.021 billion and \$1.221 billion, 18 19 respectively. How much CWIP did Ameren Corp have outstanding over this period? 20 Q. I don't know. This detail is not provided in Ameren's quarterly balance sheets. The last 21 A. 22 balance Ameren Corp provided in its balance sheet was for the year-end, December 31, 2021, which was \$1.269 billion. 23

⁴⁰ Transforming For Our Future," Ameren Rating Agency Update, April 2022, p. 48.

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1 Q. What does the comparison of Ameren Corp's short-term debt balances to Ameren 2 Corp's CWIP balances imply about appropriate AFUDC rates charged for CWIP? 3 A. That the AFUDC rate for Ameren Corp's regulated utility subsidiaries, at least for 2022, 4 should be based primarily on short-term debt costs. Q. What does your comparison of Ameren Missouri's balances of short-term debt and 5 6 **CWIP** indicate about the potential AFUDC rates for CWIP? 7 That the AFUDC rate may be weighted more heavily (~72%) to long-term capital costs.⁴¹ A. Q. Have you verified that Ameren Missouri is in fact applying an AFUDC rate to CWIP 8 9 that is based primarily on Ameren Missouri's long-term capital costs? A. No. At the time I prepared this testimony, I had not verified such. I will do so before I file 10 11 rebuttal testimony in this case. 12 Q. How do you recommend Ameren Missouri's AFUDC rate be determined? A. I recommend the Commission order Ameren Missouri to apply a short-term debt rate to all 13 CWIP. Most of Ameren Missouri's projects are relatively short-term so the capitalization 14 rate should be based on a short-term cost of capital. The rationale for including long-term 15 capital costs in the AFUDC is due to potential multi-year projects in which companies may 16 17 be required to refinance short-term debt with long-term capital before the project is complete. 18 Q. 19 How can the Commission determine an equitable, market-tested and objective capital 20 structure that more closely captures the amount of debt capacity consistent with 21 Ameren Missouri's low business risk?

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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

⁴¹ Darryl T. Sagel Direct, Schedule DTS-D3.

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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.

OVERALL RATE OF RETURN

- Q. Should the Commission take anything else into consideration when deciding a fair and reasonable rate of return for Ameren Missouri?
 - Yes. Ameren Corp's past capital allocation strategies demonstrate that it diverts significant amounts of capital to its jurisdictions providing more favorable ratemaking treatment. Before Missouri passed SB 564, Ameren Corp believed it could create more value for its shareholders by allocating most of its capital to Ameren Illinois and ATXI. At least for Ameren Illinois's electric utility operations, this higher value would likely have been a function of lower business risk since Ameren Illinois has been able to earn its allowed ROR through formula rates. SB 564 allowed electric utilities to either elect PISA or request revenue decoupling. As previously discussed, Ameren Missouri elected PISA. This mechanism eliminates all but a minimal amount of regulatory lag as it relates to Ameren Missouri's capital investments. Under GAAP, Ameren Missouri will be able to flow through the debt portion (about 5%) of its deferred ROR directly to earnings as the plant goes into service. Although the equity portion will still accrue and eventually be charged to ratepayers through a higher rate base, Ameren Corp is not allowed to book it in current earnings.

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Ideally, Ameren Corp would be indifferent between its investments in Ameren Illinois' electric utility operations and Ameren Missouri's electric utility operations assuming regulatory ratemaking parity. Under such an ideal scenario, Ameren would invest in the most economically efficient projects. However, as it relates to the period before Ameren Missouri was able to elect PISA, Ameren Corp demonstrated that this was not how it approached its investment decisions, at least as it relates to its electric utility investments. As long as this doesn't cause overinvestment and a strategy of achieving shareholder returns by simply growing rate base without consideration of need for investments, then this policy may be palatable. However, there are means by which regulators can discourage such strategies when a company has assets in several jurisdictions, such as Ameren Corp. One of those means is to take into consideration the allowed ROR in the other jurisdiction. It is noteworthy that Ameren Corp has made significant amounts of capital investment in Illinois even though its allowed ROE for its electric utility operations in Illinois have ranged from 7.36% to 9.25% since 2014 with a 50% allowed common equity ratio, with its most recent authorized ROE being 7.85%.

Q. Is there any evidence that shows that Ameren Illinois's and Ameren Missouri's cost of capital are fairly similar?

Yes. I reviewed current over-the-counter trades for both Ameren Illinois's and Ameren Missouri's longer maturity bonds. Ameren Illinois' and Ameren Missouri's bonds maturing in 2049 and 2052 have traded at a recent YTM range of 5.0% to 5.2% with no systematic difference between the two. These similar yields substantially support using the same cost of capital, *i.e.* discount rates, for purposes of determining the net present values ("NPV") of projects being considered for Ameren Illinois or Ameren Missouri. Therefore, if one jurisdiction sets its authorized ROR at a level higher than parity compared to the other jurisdiction, then given two comparable projects, Ameren Corp naturally will invest in the jurisdiction that authorizes a higher ROR because it will create more value for Ameren Corp shareholders. It is this very conflict that underlies the principle of authorizing a ROR based on the market cost of capital because, otherwise, jurisdictions will be bidding against each other. Awarding RORs based on a desire to compete with

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other states will create a perverse incentive for utility projects to be pursued based on earnings alone, not economics, system need and/or customer need. If the economics of potential projects, not just the awarded ROR, support the possibility of achieving a ROR higher than the cost of capital, then the company will pursue such projects.

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Can you illustrate what you mean with an example?

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- Q.
 - Yes. Ameren Missouri currently has an authorized ROE of 9.53% with an approximate 52% equity ratio. Ameren Illinois currently has an authorized ROE of 7.85% with a 50% equity ratio. Both companies have a current market cost of 30-year debt of approximately 5.1%. Therefore, I will assume the same cost of debt for each company's revenue requirement. Through a simple example of investing \$1 billion in rate base, I will show how much additional value Ameren Corp will earn for its shareholders by investing in an Ameren Missouri project as compared to an Ameren Illinois project.
 - For simplicity, I assumed that the additional \$1 billion investment is made at one time rather than periodically. I also assumed the project would have a depreciation life of 30 years. Ameren Missouri's authorized ROR using a 52% equity ratio, a 9.53% allowed ROE and a 5.1% cost of debt is 6.78%. Ameren Illinois's authorized ROR using a 50% equity ratio, a 7.85% allowed ROE and a 5.1% cost of debt is 5.83%. Ameren Corp would create approximately \$86 million of additional shareholder wealth if it invested the \$1 billion in Ameren Missouri projects as compared to Ameren Illinois projects.
- Q. What if you change your example so that Ameren Missouri's allowed ROE is applied to your recommended capital structure consisting of 43% common equity?
- A. A \$1 billion investment in Ameren Missouri rather Ameren Illinois would still generate an additional approximate \$39.5 million of additional shareholder wealth.
- Q. What if you change your example so that your recommended ROE of 9.25% applied to a 43% common equity ratio?
- This would create \$28.7 million of additional shareholder value compared to an investment in Ameren Illinois.

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- 1 Q. Does the Ameren Illinois formula ratemaking plan allow for the ROE to be adjusted if actual interest rates are higher than those used to set the formula rates?

A. Yes. Because of recent increases in interest rates, Ameren Corp has increased its 2022 earning guidance related to its Ameren Illinois electric utility operations. Based on average monthly 30-year UST bond yields in 2022, Ameren Illinois would be allowed to adjust the allowed ROE level to approximately 8.9%.

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Q. What impact would an 8.9% ROE for Ameren Illinois have on the two scenarios you reviewed—a 9.53% ROE and 9.25% ROE applied to a 43% common equity ratio?

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A. A 9.53% ROE applied to a 43% equity ratio would create approximately \$8.2 million less shareholder wealth and a 9.25% ROE applied to a 43% equity ratio would create approximately \$19 million less shareholder wealth.

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Q. Why do you think your recommended 9.25% ROE strikes a fair balance?

increase to the electric utility industry's COE during early Fall of 2022.

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the electric utility industry's COE was higher. Second, it recognizes that Ameren Missouri's business risk has declined since 2015. Third, it puts Ameren Missouri at closer parity to Ameren Illinois's electric utility current ROR authorizations. Finally, the increase

First, it appropriately reduces Ameren Missouri's 9.53% ROE which was awarded when

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to 9.25% from my 9% recommendation in the 2021 rate case recognizes an implied

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SUMMARY AND CONCLUSIONS

20 21 Q. Would you summarize your main conclusions and views as it relates to a Commissionauthorized Ameren Missouri ROR in this case?

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Yes. Ameren Missouri's allowed ROE of 9.53% was set during tighter macroeconomic A. conditions for Ameren Missouri, as well as at a time when Ameren Missouri could not avail itself of the investor-friendly PISA ratemaking mechanism. It is fair and reasonable to lower Ameren Missouri's authorized ROE to reflect these changes.

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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.

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-2022-0337		
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 hered	of 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.			
	Clain Morray David Murray Utility Regulatory Manager		
Subscribed and sworn to me this 10 th day of January 2023.			
TIFFANY HILDEBRAND My Commission Expires August 8, 2023 Cole County Commission #15637121	Fiffany Hildebrand Notary Public		

My Commission expires August 8, 2023.