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Witness:	Ann E. Bulkley
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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. ER-2022-0129

DIRECT TESTIMONY

OF

ANN E. BULKLEY

ON BEHALF OF

EVERGY MISSOURI METRO

Kansas City, Missouri

January 2022

TABLE OF CONTENTS

DIRECT TESTIMONY

OF

ANN E. BULKLEY

File No. ER-2022-0129

I. INTRODUCTION

Q: Please state your name and business address.

A: My name is Ann E. Bulkley. My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752. I am employed by Concentric Energy Advisors, Inc. ("Concentric") as a Senior Vice President.

Q: On whose behalf are you submitting this Prepared Direct Testimony?

A: I am submitting this testimony before the Missouri Public Service Commission ("Commission") on behalf of Evergy Metro, Inc. d/b/a Evergy Missouri Metro ("Evergy Missouri Metro" or the "Company"), a wholly-owned subsidiary of Evergy, Inc. ("Evergy").

Q: Please describe your education and experience.

A: I hold a Bachelor's degree in Economics and Finance from Simmons College and a Master's degree in Economics from Boston University, with more than 25 years of experience consulting to the energy industry. I have advised numerous energy and utility clients on a wide range of financial and economic issues with primary concentrations in valuation and utility rate matters. Many of these assignments have included the determination of the cost of capital for valuation and ratemaking purposes. I have included

my resume and a summary of testimony that I have filed in other proceedings as Attachment A.

Q: Please describe Concentric's activities in energy and utility engagements.

A: Concentric provides financial and economic advisory services to many and various energy and utility clients across North America. Our regulatory, economic, and market analysis services include utility ratemaking and regulatory advisory services; energy market assessments; market entry and exit analysis; corporate and business unit strategy development; demand forecasting; resource planning; and energy contract negotiations. Our financial advisory activities include buy- and sell-side merger, acquisition, and divestiture assignments; due diligence and valuation assignments; project and corporate finance services; and transaction support services. In addition, we provide litigation support services on a wide range of financial and economic issues on behalf of clients throughout North America.

Q: Please describe the purpose of your testimony.

A: The purpose of my testimony is to present evidence and provide a recommendation regarding the appropriate Return on Equity ("ROE")[1] and overall rate of return to be used for ratemaking purposes. The overall rate of return incorporates the testimony of Company witness Kirkland B. Andrews, who provides evidence to support the Company's capital structure and cost of debt. I also address the appropriateness of the Company's proposed capital structure, as supported by Mr. Andrews.

[1] Throughout my Direct Testimony, I interchangeably use the terms "ROE" and "cost of equity".

Q: Was your testimony, including associated schedules, prepared by you or under your control and direction?

A: Yes. My analyses and recommendations are supported by the data presented in Schedule AEB-1 through Schedule AEB-15, which were prepared by me or under my direction.

Q: How is the remainder of your testimony organized?

A: Section II provides a summary of my analyses and conclusions. Section III reviews the regulatory guidelines pertinent to the development of the cost of capital. Section IV discusses current and projected capital market conditions and the effect of those conditions on Evergy Missouri Metro's cost of equity. Section V explains my selection of a proxy group of electric utilities. Section VI describes my analyses and the analytical basis for the recommendation of the appropriate ROE for Evergy Missouri Metro. Section VII provides a discussion of specific regulatory, business, and financial risks that have a direct bearing on the ROE to be authorized for the Company in this case. Section VIII assesses the proposed capital structure, cost of debt and overall rate of return of Evergy Missouri Metro. Section IX presents my conclusions and recommendations for the market cost of equity.

II. SUMMARY OF ANALYSES AND CONCLUSIONS

Q: Please provide a brief overview of the analyses that led to your ROE recommendation.

A: As discussed in more detail in Section VI, in developing my ROE recommendation, I applied the Constant Growth form of the Discounted Cash Flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the Empirical Capital Asset Pricing Model ("ECAPM"), and the Risk Premium Approach. I also considered several additional risk factors that affect the Company's required ROE, including: (1) the Company's capital

expenditure requirements; (2) Evergy Missouri Metro's planned investments in renewable generation assets compared to its current generation portfolio; and (3) the regulatory environment in which the Company operates. While I did not make any specific adjustments to my ROE estimates for any of these factors, I did take them into consideration in aggregate when determining where the Company's Cost of Equity falls within the range of analytical results. Additionally, I considered the Company's proposed capital structure as compared to the capital structures of the proxy companies.[2] Finally, I considered the Company's long-term cost of debt by comparing the cost of each of Evergy Missouri Metro's long-term debt issuances to the market at the time of issuance.

Q: Please summarize the key factors considered in your analyses and upon which you base your recommended ROE.

A: In developing my recommended ROE for Evergy Missouri Metro, I considered the following:

- The *Hope* and *Bluefield* decisions[3] that established the standards for determining a fair and reasonable allowed ROE, including consistency of the allowed return with the returns of other businesses having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result lead to just and reasonable rates.
- The effect of current and projected capital market conditions on investors' return requirements.

[2] The selection and purpose of developing a group of comparable companies will be discussed in detail in Section V of my Direct Testimony.

[3] Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944); Bluefield Waterworks & Improvement Co. v. Public Service Commission of West Virginia, 262 U.S. 679 (1923).

- The results of several analytical approaches that provide estimates of the Company's cost of equity.
- The Company's regulatory, business, and financial risks relative to the proxy group of comparable companies, and the implications of those risks.

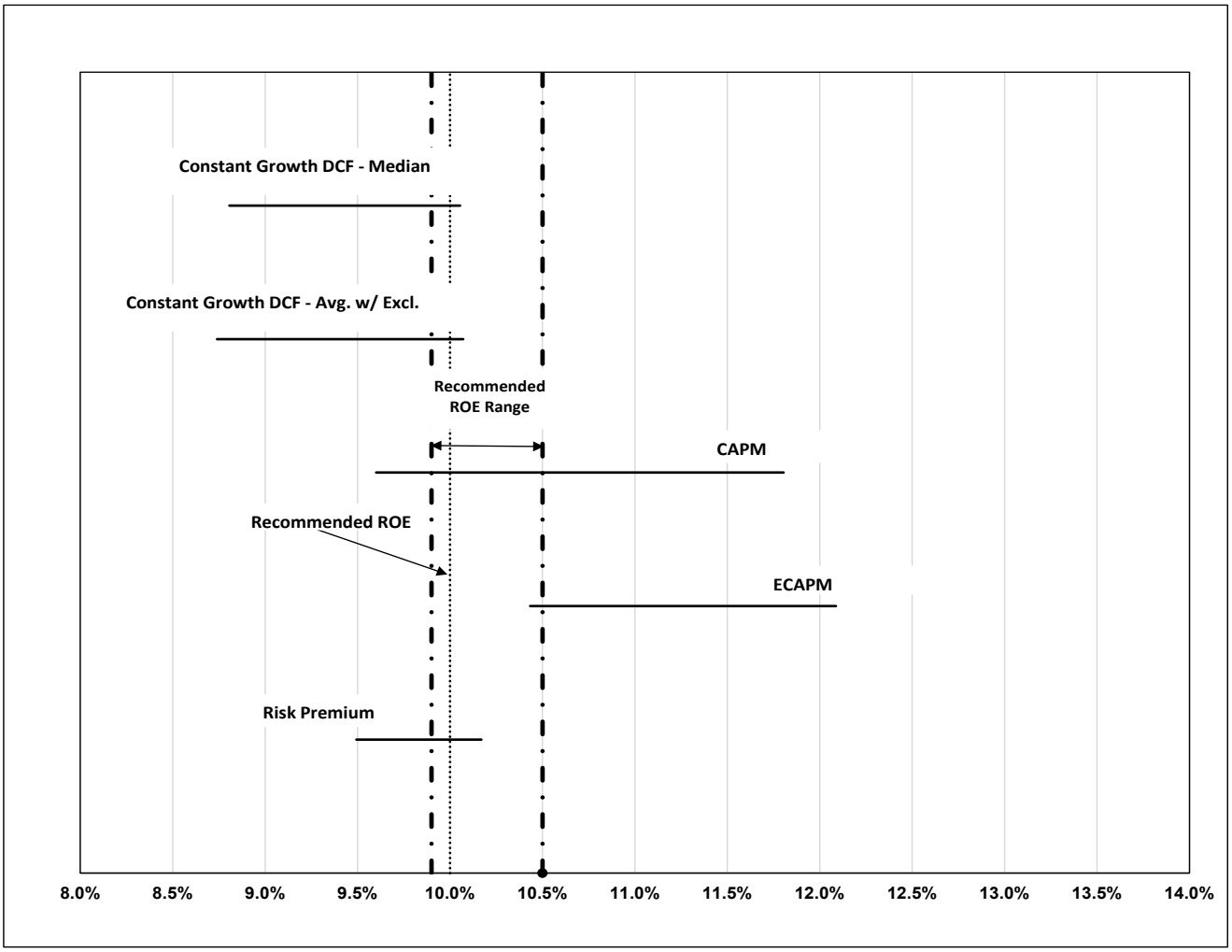
Q: Please explain how you considered those factors.

A: After considering these factors and the results of my analyses, I relied on the range of results produced by the Constant Growth DCF model, the CAPM and ECAPM, and a Risk Premium analysis. As shown in Figure 1, these ROE estimation models produce a wide range of results. My conclusion as to where, within that range of results, Evergy Missouri Metro's cost of equity falls is based on my assessment of market conditions, and the Company's business and financial risk relative to the proxy group. Although the companies in my proxy group are generally comparable to Evergy Missouri Metro, each company is unique, and no two companies have the exact same business and financial risk profiles. Accordingly, I considered the Company's business and financial risk in the aggregate in comparison to that of the proxy group companies when determining where the Company's ROE falls within the reasonable range of analytical results to account for any residual differences in risk.

Q: Please summarize the results of the ROE estimation models that you considered to establish the range of ROEs for Evergy Missouri Metro.

A: Figure 1 summarizes the range of results produced by the Constant Growth DCF, CAPM, ECAPM, and Bond Yield Plus Risk Premium analysis.

Figure 1: Summary of Cost of Equity Analytical Results[4]



As shown in Figure 1 (and in Schedule AEB-1), the range of results produced by the ROE estimation models is wide. While it is common to consider multiple models to estimate the cost of equity, it is particularly important when the range of results varies considerably across methodologies. As a result, my ROE recommendation considers the range of results of the Constant Growth DCF model, as well as the results of the CAPM, ECAPM, and Bond Yield Plus Risk Premium analyses. My ROE recommendation also considers Evergy

[4] Constant Growth DCF analysis - Average w/ Exclusions represents the DCF results excluding the results for individual companies that did not meet the minimum threshold of 7 percent.

Missouri Metro's company-specific risk factors and current and prospective capital market conditions.

Q: What is your recommended ROE for Evergy Missouri Metro?

A: Based on the analytical results presented in Figure 1, as well as the level of regulatory, business, and financial risk faced by Evergy Missouri Metro relative to the proxy group, I believe a range from 9.90 to 10.50 percent is reasonable. This recommendation reflects the range of results for the proxy group companies, the relative risk of Evergy Missouri Metro as compared to the proxy group, and current capital market conditions. Within that range, the Company is requesting an ROE of 10.00 percent, which is reasonable.

Q: Please summarize the analysis you conducted in determining that Evergy Missouri Metro's requested capital structure is reasonable and appropriate.

A: Based on the analysis presented in Section VIII of my testimony, I conclude that Evergy Missouri Metro's proposed 51.19 percent common equity is reasonable. To determine if Evergy Missouri Metro's requested capital structure was reasonable, I reviewed the capital structures of the utility subsidiaries of the proxy companies. As shown in Schedule AEB-14, the results of that analysis demonstrate that the average equity ratios for the utility operating companies of the proxy group range from 46.97 percent to 60.85 percent, with an average of 52.86 percent. Comparing the recommended equity ratio to the proxy group demonstrates that the Company's requested equity ratio is below the average equity ratio for the utility operating subsidiaries of the proxy group companies. Further, the Company's proposed equity ratio is reasonable considering the negative effect of the Tax Cuts and Jobs Act of 2017 and COVID-19 on the cash flows and credit metrics of regulated utilities.

Q: Please summarize the analysis you conducted in determining that Evergy Missouri Metro's requested long-term cost of debt rate was reasonable and appropriate.

A: As will be discussed in more detail in Section VIII, I compared the cost of each long-term debt issuance for Evergy Missouri Metro to the market at the time of issuance. I compared the embedded cost of long-term debt to the Moody's Investors Service ("Moody's") Baa and A-rated utility bond indexes as the estimate of the market. That analysis indicates that the Company's embedded cost of long-term debt is reasonable.

III. REGULATORY GUIDELINES

Q: Please describe the guiding principles to be used in establishing the cost of capital for a regulated utility.

A: The United States Supreme Court's precedent-setting *Hope and Bluefield* cases established the standards for determining the fairness or reasonableness of a utility's allowed ROE. Among the standards established by the Court in those cases are: (1) consistency with other businesses having similar or comparable risks; (2) adequacy of the return to support credit quality and access to capital; and (3) the principle that the result reached, as opposed to the methodology employed, is the controlling factor in arriving at just and reasonable rates.[5]

Q: Has the Missouri Public Service Commission ("Commission") provided similar guidance in establishing the appropriate return on common equity?

A: Yes. The Commission follows the precedents of the *Hope* and *Bluefield* cases and acknowledges that utility investors are entitled to a fair and reasonable return. This position was set forth by the Commission as follows:

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[5] *Hope*, 320 U.S. 591 (1944); *Bluefield*, 262 U.S. 679 (1923).

> The standard for rates is "just and reasonable," a standard founded on constitutional provisions, as the United States Supreme Court has explained. But the Commission must also consider the customers. Balancing the interests of investor and consumer is not reducible to a single formula, and making pragmatic adjustments is part of the Commission's duty. Thus, the law requires a just and reasonable end, but does not specify a means. The Commission is charged with approving rate schedules that are as "just and reasonable" to consumers as they are to the utility.[6]

Based on these standards, the authorized ROE should provide the Company with a fair and reasonable return and should provide access to capital on reasonable terms in a variety of market conditions.

Q: Why is it important for a utility to be allowed the opportunity to earn an ROE that is adequate to attract capital at reasonable terms?

A: An ROE that is adequate to attract capital at reasonable terms enables the Company to continue to provide safe, reliable electric service while maintaining its financial integrity. That return should be commensurate with returns expected elsewhere in the market for investments of equivalent risk. If it is not, debt and equity investors will seek alternative investment opportunities for which the expected return reflects the perceived risks, thereby inhibiting the Company's ability to attract capital at reasonable cost.

Q: Is a utility's ability to attract capital also affected by the ROEs that are authorized for other utilities?

A: Yes. Evergy Missouri Metro competes directly for capital with other investments of similar risk, which include other vertically integrated electric utilities. The ROE awarded to a

[6] In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service, File No. ER-2012-0174 , Report and Order at 11 (Jan. 9, 2013).

utility sends an important signal to investors regarding whether there is regulatory support for financial integrity, dividends, growth, and fair compensation for business and financial risk. The cost of capital represents an opportunity cost to investors. If higher returns are available for other investments of comparable risk, investors have an incentive to direct their capital to those investments. Thus, an authorized ROE that is not commensurate with authorized ROEs for other vertically integrated electric utilities can inhibit Evergy Missouri Metro's ability to attract capital for investment in Missouri. Such capital investment is clearly a goal of Missouri, given the enactment of S.S. 564 in 2018 (Plant in Service Accounting) and H.B. 734 in 2021 (Electric Utility Financing & Securitization).

Q: What are your conclusions regarding regulatory guidelines?

A: The ratemaking process is premised on the principle that a utility must have the opportunity to recover the return of, and the market-required return on, its invested capital. Because utility operations are capital-intensive, regulatory decisions should enable the utility to attract capital at reasonable terms under a variety of economic and financial market conditions; doing so balances the long-term interests of the utility and its customers.

The financial community carefully monitors the current and expected financial condition of utility companies and the regulatory frameworks in which they operate. In that respect, the regulatory framework is one of the most important factors in both debt and equity investors' assessments of risk. The Commission's order in this proceeding, therefore, should establish rates that provide the Company with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms under a variety of economic and financial market conditions; (2) sufficient to ensure good financial management and firm integrity; and (3) commensurate with returns on investments in enterprises with similar

risk. Providing Evergy Missouri Metro the opportunity to earn its market-based cost of capital supports the financial integrity of the Company, which is in the interest of both customers and shareholders.

Q: Does the fact that the Company is owned by Evergy, a publicly-traded company, affect your analysis?

A: No, it does not. In this proceeding, consistent with stand-alone ratemaking principles, it is appropriate to establish the cost of equity for Evergy Missouri Metro, not its publicly-traded parent Evergy. More importantly however, it is appropriate to establish a return on equity and capital structure that provide Evergy Missouri Metro the ability to attract capital on reasonable terms, on a stand-alone basis, and within the Evergy system.

IV. CAPITAL MARKET CONDITIONS

Q: Why is it important to analyze capital market conditions?

A: The ROE estimation models rely on market data that are either specific to the proxy group, in the case of the DCF model, or to the expectations of market risk, in the case of the CAPM. The results of the ROE estimation models can be affected by prevailing market conditions at the time the analysis is performed. While the ROE that is established in a rate proceeding is intended to be forward-looking, the analyst uses current and projected market data, specifically stock prices, dividends, growth rates and interest rates in the ROE estimation models to estimate the required return for the subject company.

As discussed in the remainder of this section, analysts and regulatory commissions have concluded that current market conditions have affected the results of the ROE estimation models. As a result, it is important to consider the effect of these conditions on the ROE

estimation models when determining the appropriate range and recommended ROE for a future period. If investors do not expect current market conditions to be sustained in the future, it is possible that the ROE estimation models will not provide an accurate estimate of investors' required return during that rate period. Therefore, it is very important to consider projected market data to estimate the return for that forward-looking period.

Q: What factors are affecting the cost of equity for regulated utilities in the current and prospective capital markets?

A: The cost of equity for regulated utility companies is being affected by several factors in the current and prospective capital markets, including: (1) the dramatic shifts in market conditions during 2020, the economic recovery in 2021 and the expectations for 2022, and the effect of these changes on the assumptions used in the ROE estimation models; and (2) effects of Federal tax reform on utility cash flows. In this section, I discuss each of these factors and how it affects the models used to estimate the cost of equity for regulated utilities.

A. Economic Recovery and Performance of the Utility Sector

Q: Do recent economic projections indicate the expectation for a continued economic recovery in 2022?

A: Yes. The Federal Open Market Committee ("FOMC") is composed of twelve members including the Board of Governors of the Federal Reserve system and presidents of the Federal Reserve Banks. The FOMC reviews economic and financial conditions, determines the appropriate stance for monetary policy and assess the risks to its long-run goals of price stability and economic growth. The FOMC issued its Summary of Economic Projections

in December 2021, where the FOMC's median projection for GDP growth from Q4 2021 to Q4 2022 is 4.0 percent.[7] The Congressional Budget Office ("CBO") issued an update to its outlook on economic conditions on July 1, 2021. In that report, the CBO projected strong GDP growth for 2021 and beyond and significant strength in overall economic conditions including:

- Real GDP growth of 7.4 percent in 2021 and 3.1 percent in 2022, which is a significant change from the negative 2.4 percent growth rate in 2020;
- Inflation indicators at or above the 2.0 percent threshold in 2021 and continuing through 2031;
- Labor force expected to be restored to pre-pandemic levels in 2022; and
- Interest rates on federal borrowing increasing through 2031.[8]

These trends indicate strong economic recovery over the next year, with robust consumer spending expected.

Q: Please summarize the monetary policy actions of the Federal Reserve in response to COVID-19.

A: In response to the COVID-19 pandemic, the Federal Reserve has:

- Decreased the Federal Funds rate twice in March 2020, resulting in a target range of 0.00 percent to 0.25 percent;
- Increased its holdings of both Treasury and mortgaged-back securities;
- Started expansive programs to support credit to large employers – the Primary Market Corporate Credit Facility to provide liquidity for new issuances of corporate

[7] Federal Open Market Committee, Summary of Economic Projections at 2 (Sept. 22, 2021).

[8] Congressional Budget Office, An Update to the Budget and Economic Outlook 2021 to 2031, July 2021.

bonds; and the Secondary Market Corporate Credit Facility to provide liquidity for outstanding corporate debt issuances; and

- Supported the flow of credit to consumers and businesses through the Term Asset-Backed Securities Loan Facility.

In addition, Congress also passed the Coronavirus Aid, Relief, and Economic Security ("CARES") Act in March 2020, the Consolidated Appropriations Act, 2021 in December 2020 and the American Rescue Plan Act in March 2021, which included $2.2. trillion, $900 billion and $1.9 trillion, respectively, in fiscal stimulus aimed at also mitigating the economic effects of COVID-19. These expansive monetary and fiscal programs mitigated the economic effects of the COVID-19 pandemic and are currently providing additional support as the economy recovers from the COVID-19 recession.

Q: Are there indications the Federal Reserve is normalizing monetary policy?

A: Yes. Most recently at the December 15, 2021 meeting, in response to inflation exceeding the Federal Reserve's target of 2 percent for a sustained period of time, the Federal Reserve decided to increase the pace of its taper of bond purchases. Beginning in January, the Federal Reserve will reduce asset purchases of Treasuries by $20 billion and mortgage-backed securities by $10 billion on a monthly basis.[9] This change is double the initial plan outlined at the November 2, 2021 meeting which called for reducing asset purchases of Treasuries by $10 billion and mortgage-backed securities by $5 billion on a monthly.[10] Moreover, the Federal Reserve's FOMC is now forecasting three increases in the federal

[9] Federal Reserve, Press Release, (Dec. 15, 2021).

[10] Federal Reserve, Press Release, (Nov. 3, 2021).

funds rate by the end of 2022[11] which is a substantial increase from the one increase that was forecasted by the FOMC at the September 22, 2021 meeting.[12]

Q: Why has the Federal Reserve decided to normalize monetary policy?

A: The Federal Reserve has accelerated plans to normalize monetary policy in response to increasing inflation. While the Federal Reserve initially viewed inflation as transitory, it has been higher and more persistent than the target levels and is expected to continue in 2022.

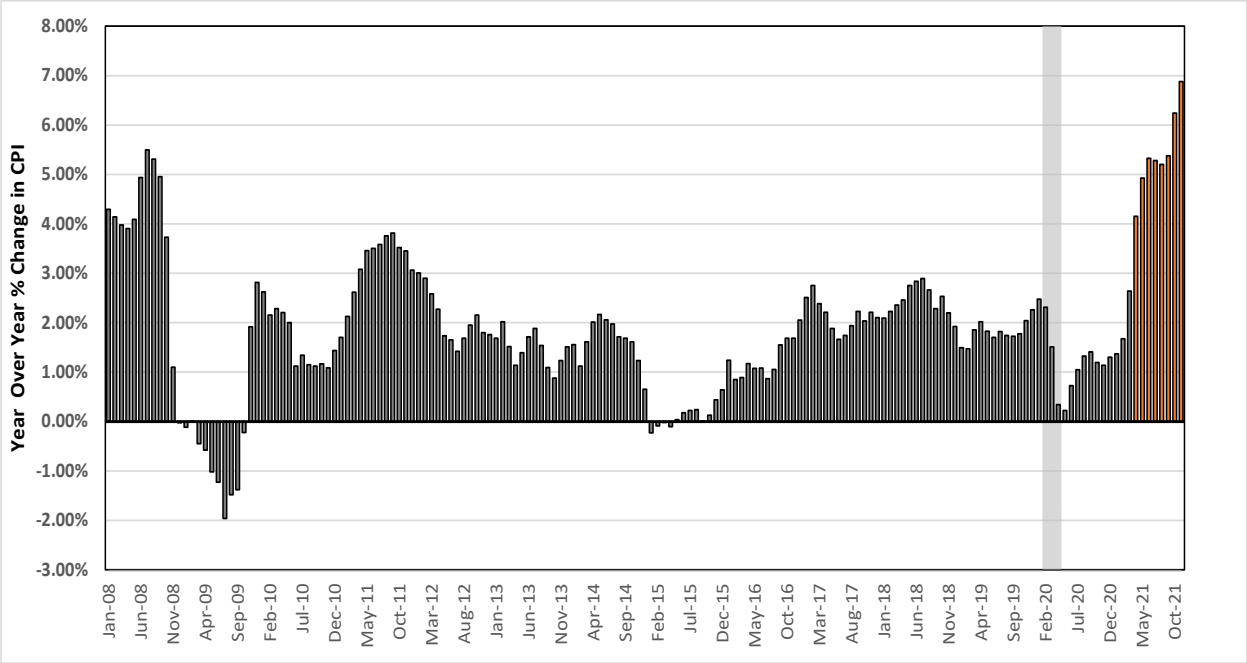
Q: Is the increase in inflation in 2021 significant?

A: Yes. As shown in Figure 2, the year over year ("YOY") change in the Consumer Price Index ("CPI") published by the Bureau of Labor statistics has increased steadily in 2021 rising from 1.37 percent in January to 6.88 percent in November. The 6.88 percent YOY change in the CPI in November 2021 is significantly greater than any level seen since January 2008.

[11] Federal Reserve, Summary of Economic Projections, (Dec. 15, 2021).

[12] Federal Reserve, Summary of Economic Projections, (Sept. 22, 2021).

Figure 2: Consumer Price Index – YOY Percent Change – January 2015 – November 2021[13]



Q: What are investors' expectations for inflation over the near-term?

A: Investors expect inflation to persist into 2022. For example, Goldman Sachs forecasts consumer price inflation excluding food and energy costs to still be above 4 percent when the Federal Reserve ends their tapering of bond purchases in 2022.[14] Similarly, respondents to the recent CNBC Fed Survey, indicated the CPI is expected to rise 3.5 percent in 2022 which is an increase from the September Survey of 3.00 percent.[15] Finally, Kiplinger recently noted the following regarding inflation expectations over the near-term:

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[13] Source: Bureau of Labor Statistics (Nov. 10, 2021), shaded area indicates the COVID-19 pandemic recession.

[14] Kennedy, Simon. "Goldman Now Sees Fed Hiking Rates in July as Inflation Lingers." Bloomberg.com, Bloomberg, 30 Oct. 2021, https://www.bloomberg.com/news/articles/2021-10-30/goldman-now-sees-fed-hiking-rates-in-july-as-inflation-lingers.

[15] Liesman, Steve. "Investors Expect a Faster Pace for Fed Rate Hikes, CNBC Survey Shows." CNBC, CNBC, 2 Nov. 2021, https://www.cnbc.com/2021/11/02/investors-expect-a-faster-pace-for-fed-rate-hikes-cnbc-survey-shows.html.

> Inflation at the end of next year should be about 2.7%, down from 6.6% at the end of 2021. It's expected that an easing of supply chain shortages next year will bring some price relief, especially to sky-high motor vehicle prices. But, these shortages are expected to only gradually resolve during 2022. Also, worker shortages may last longer than expected, keeping wage growth high and forcing businesses to pass some of those costs on to consumers. So, inflation should remain higher than its 1.7% average over the past ten years.[16]

According to Kiplinger, the higher levels of inflation will likely result in the Federal Reserve increasing the federal funds rate in 2022 instead of 2023 as originally planned.[17]

Q: What effect will inflation have on long-term interest rates?

A: Inflation and the Federal Reserve's normalization of monetary policy will likely result in increases in long-term interest rates. Specifically, inflation reduces the purchasing power of the future interest payments an investor expects to receive over the duration of the bond. This risk increases the longer the duration of the bond. As a result, if investors expect increased levels of inflation, they will require higher yields to compensate for the increased risk of inflation which means interest rates will increase.

Q: What have equity analysts said about long-term government bond yields over the near term?

A: Several equity analysts have noted that they expect economic conditions to continue to improve and thus the yields on long-term government bonds to continue to increase through the end of 2022. As shown in Figure 3, according to six different equity analysts, the yield on the 10-year Treasury Bond is expected to range from 1.75 percent to 2.50 percent in

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[16] Payne, David, "Inflation hits 30-year High," Kiplinger, November 11, 2021.

[17] *Ibid*.

2022 which is 17 to 92 basis points greater than the current 30-day average yield on the 10-year Treasury Bond as of November 30, 2021, of 1.58 percent. Specifically, Morgan Stanley recently noted the following regarding the expectation for long-term government bond yields in 2022:

> Continued strong growth in 2022, alongside receding but above-target inflation, keeps the Fed patient, yet gradually moving toward rate hikes, and keeps Treasury yields moving higher.[18]

Figure 3: Equity Analysts Forecast of the 10-year Treasury Yield[19]

Bank	10-year U.S. Treasury Yield	
	30-day Average as of November 30, 2021	2022 Forecast
Barclays	1.58%	1.75%
Morgan Stanley	1.58%	2.10%
Goldman Sachs	1.58%	2.00%
JP Morgan	1.58%	2.10%
Wells Fargo Investment Institute	1.58%	2.00% - 2.50%
Amundi	1.58%	1.80% - 2.00%

Q: Have you considered any additional indicators which may imply long-term interest rates are expected to increase?

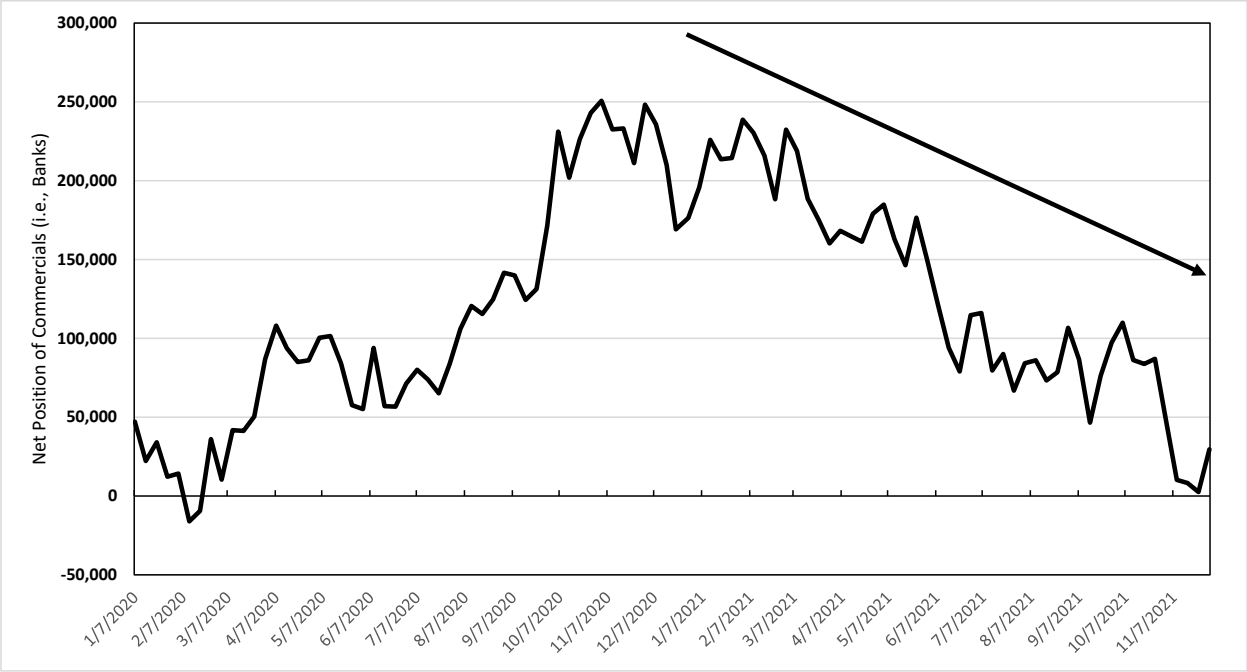
A: Yes, I have. I considered the net position of commercials (i.e., banks) in U.S. Treasury Bond futures contracts as reported in the Commitment of Traders ("COT") Report produced by the Commodity Futures Trading Commission ("CFTC"). A net position is

[18] "Factbox: Wall Street Forecasts for the U.S. Dollar and 10-Year Treasury Yield in 2022." Reuters, Thomson Reuters, 18 Nov. 2021, https://www.reuters.com/markets/us/wall-street-forecasts-us-dollar-10-year-treasury-yield-2022-2021-11-18/.

[19] "Factbox: Wall Street Forecasts for the U.S. Dollar and 10-Year Treasury Yield in 2022." Reuters, Thomson Reuters, 18 Nov. 2021, https://www.reuters.com/markets/us/wall-street-forecasts-us-dollar-10-year-treasury-yield-2022-2021-11-18/.

defined as the total number of long positions in a futures contract minus the total number of short positions in a futures contract. A long position means that an investor agrees to purchase an asset in the future at a specified price today and therefore profits if the price of the underlying asset increases. Conversely, short position is when an investor agrees to sell an asset at a time in the future at a specified price today and profits if the price of the asset declines. Therefore, if banks are increasing the number of short positions and thus have a declining net position, the banks are assuming that the price of the asset will decline. As shown in Figure 4, the net position of banks in U.S. Treasury Bonds has been decreasing since the end of 2020. Therefore, banks are forecasting a decrease in the price of long-term government bonds and thus the yields (which are inversely related to the price) to increase over the near-term.

Figure 4: Commitment of Traders Report – Net Position of Commercials (i.e., Banks) in U.S. Treasury Bond Futures Contracts[20]



Q: Are utility share prices correlated to changes in the yields on long-term government bonds?

A: Yes, interest rates and utility share prices are inversely correlated which means, for example, that an increase in interest rates will result in a decline in the share prices of utilities. For example, Goldman Sachs and Deutsche Bank recently examined the sensitivity of share prices of different industries to changes in interest rates over the past five years. Both Goldman Sachs and Deutsche Bank found that utilities had one of the strongest negative relationships with bond yields (i.e., increases in bond yields resulted in the decline of utility share prices).[21] Charles Schwab also recently noted the inverse

[20] Commitment of Traders Report, as of November 30, 2021 - https://www.cftc.gov/MarketReports/CommitmentsofTraders/HistoricalCompressed/index.htm

[21] Lee, Justina. "Wall Street Is Rethinking the Treasury Threat to Big Tech Stocks." Bloomberg.com, 11 Mar. 2021, www.bloomberg.com/news/articles/2021-03-11/wall-street-is-rethinking-the-treasury-threat-to-big-tech-stocks.

relationship between interest rates and utility share prices and concluded that the utility sector tends to underperform during periods of economic growth when interest rates are higher.[22]

Q: How do equity analysts expect the utilities sector to perform in an increasing interest rate environment?

A: Equity analysts project that utilities are expected to continue to underperform the broader market as interest rates increase. For example, in a recent article, Barron's conducted its Big Money poll of professional investors regarding the outlook for the next twelve months. Approximately 60 percent of respondents projected the yield on the 10-year Treasury Bond will be 2.00 percent or greater at the end of the next twelve months which is an increase from the current 30-day average 10-year Treasury Bond yield as of November 30, 2021 of 1.58 percent.[23] Furthermore, the professional investors surveyed by Barron's selected the utility sector as the sector which will perform the worst over the next twelve months indicating they are projecting that utilities will underperform the broader market in 2022. Other equity analysts concur with this conclusion. Fidelity recently recommended underweighting the utility sector and noted that "[w]eak fundamentals and high valuations could be headwinds for utilities and real estate, especially if rates increase."[24] In its 2022 Outlook, Well Fargo classified the utility sector as "most unfavorable" as economic growth continues to rebound and interest rates increase.[25] Finally, Charles Schwab has classified

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[22] Charles Schwab, Schwab Sector Views: Too Early for Defensive Positioning, August 19, 2021.

[23] Jasinski, Nicholas. Stocks Are Still the Place to Be, Our Exclusive Big Money Poll Finds. Barron's, 16 Oct. 2021, https://www.barrons.com/articles/stock-market-covid-economy-outlook-51634312012?mod=hpsubnav&tesla=y.

[24] Fidelity, "Q4 2021 sector scorecard," October 27, 2021.

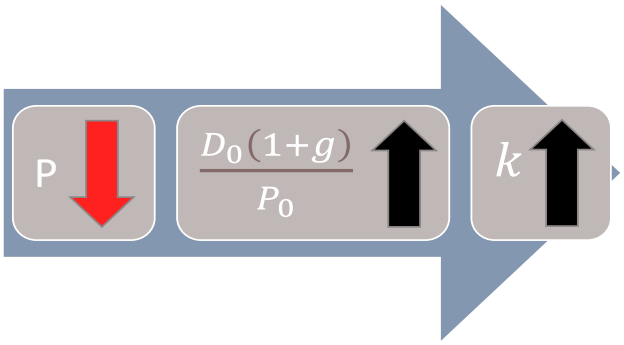
[25] Well Fargo Investment Institute, 2022 Outlook, December 2021.

the utilities sector overall as "Underperform," noting negatives for the sector that include "interest rates are expected to recover from recent decline" and "economic recovery makes the sector less attractive, relative to other sectors".[26]

Q: What is the significance of the inverse relationship between interest rates and utility share prices in the current market?

A: As discussed above, the economy is currently in the recovery phase of the business cycle, which is characterized by improving economic growth, increasing inflation, and increasing interest rates. If the utility sector underperforms over the near term as expected, and prices of utility stocks decline, then the DCF model, which relies on historical averages of share prices, is likely to understate the cost of equity. For example, Figure 5 below summarizes the effect of a decline in share price on the dividend yield and thus the cost of equity estimated by the Constant Growth DCF model.

Figure 5: The Effect of a decline in Stock Prices on the Constant Growth DCF model



A decline in stock prices will increase the dividend yields and thus the estimate of the ROE produced by the Constant Growth DCF model. Therefore, this expected change in market conditions supports the Commission giving greater consideration to the range of ROE

[26] Charles Schwab, "Utilities Sector Rating: Underperform," November 18, 2021.

results produced by the mean-high DCF results since the mean DCF results would likely understate the cost of equity during the period that the Company's rates will be in effect. Moreover, prospective market conditions also warrant greater consideration of other ROE estimation models such as the CAPM, ECAPM and Risk Premium, which may better reflect expected market conditions. For example, two out of three inputs to the CAPM (*i.e.*, the market risk premium and risk-free rate) are forward-looking.

B. Conclusion

Q: What are your conclusions regarding the effect of current market conditions on the cost of equity for the Company?

A: Over the near-term, investors expect economic growth to continue to rebound and thus inflation and interest rates to increase. Because the share prices of utilities are inversely related to interest rates, an increase in long-term government bond yields will likely result in a decline in utility share prices which is the reason a number of equity analysts expect the utility sector to underperform over the near-term. The expected underperformance of utilities means that DCF models which rely on recent historical share prices are likely underestimating investors' required return over the period that rates will be in effect. This change in market conditions also supports the use of other ROE estimation models such as the CAPM, ECAPM, and Risk Premium which may better reflect expected market conditions.

V. PROXY GROUP SELECTION

Q: Please provide a brief profile of Evergy Missouri Metro.

A: Evergy Missouri Metro is a wholly owned subsidiary of Evergy, Inc. The Company provides regulated retail electric service to approximately 565,800 customers in western Missouri and eastern Kansas.[27] In Missouri, Evergy Missouri Metro supplies electricity to approximately 300,000 customers.[28] As of December 31, 2020, the Company's net utility electric plant in Missouri was approximately $3.41 billion.[29] In addition, the Company had total electric revenues of $932.69 million in 2020.[30] Evergy Missouri Metro is currently rated A/Negative by Standard & Poor's and Baa1/Stable by Moody's.[31]

Q: Why have you used a group of proxy companies to estimate the cost of equity for Evergy Missouri Metro?

A: In this proceeding, we focus on estimating the cost of equity for an electric utility company that is not itself publicly traded. Because the cost of equity is a market-based concept and because Evergy Missouri Metro's operations do not make up the entirety of a publicly traded entity, it is necessary to establish a group of companies that is both publicly traded and comparable to the Company in certain fundamental business and financial respects to serve as its "proxy" in the ROE estimation process.

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[27] Evergy, Inc., 2020 Form 10-K, at 15.

[28] Evergy Metro, Inc. 2020 Annual Report to the Missouri Public Service Commission at 3b.

[29] *Id.* at 110.

[30] *Id.* at 300.

[31] Source: S&P Capital IQ Pro, (Nov. 21, 2021).

Even if Evergy Missouri Metro was a publicly traded entity, it is possible that transitory events could bias its market value over a given period. A significant benefit of using a proxy group is that it moderates the effects of unusual events that may be associated with any one company. The proxy companies used in my analyses all possess a set of operating and risk characteristics that are substantially comparable to the Company, and thus provide a reasonable basis to derive and estimate the appropriate ROE for Evergy Missouri Metro.

Q: How did you select the companies included in your proxy group?

A: I began with the group of 36 companies that Value Line classifies as Electric Utilities and applied the following screening criteria to select companies that:

- Pay consistent quarterly cash dividends, because companies that do not pay a dividend cannot be analyzed using the Constant Growth DCF model;
- Have investment grade long-term issuer ratings from S&P and/or Moody's;
- Are covered by at least two utility industry analysts;
- Have positive long-term earnings growth forecasts from at least two utility industry equity analysts;
- Own regulated generation assets that are included in rate base;
- Have more than 5 percent of owned regulated generation capacity come from regulated coal-fired power plants;
- Derive more than 40 percent of its megawatt-hour sales from its owned generation facilities.
- Derive more than 60 percent of their total operating income from regulated operations;
- Derive more than 60 percent of their total regulated operating income from regulated electric operations; and

- Were not parties to a merger or transformative transaction during the analytical periods relied on.

Q: Did you include Evergy, Inc. in your analysis?

A: No. In order to avoid the circular logic that otherwise would occur, it is my practice to exclude the subject company, or its parent holding company, from the proxy group.

Q: Did you exclude any other companies from the proxy group?

A: Yes. Similar to the reason that I exclude transformative transactions; because the stock price can be affected by one-time events, I also excluded Pinnacle West Capital Corporation from the proxy group. The stock price of Pinnacle West Capital Corporation decreased approximately 24 percent over a two-month period from October through November 2021 resulting from a negative regulatory decision for its largest operating company, Arizona Public Service Company. Therefore, I have excluded this company from the proxy group.

Q: What is the composition of your proxy group?

A: The screening criteria discussed above are shown in Schedule AEB-2 and resulted in a proxy group consisting of the companies shown in Figure 6 below.

Figure 6: Proxy Group

Company	Ticker
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Avista Corporation	AVA
Duke Energy Corporation	DUK
Entergy Corporation	ETR
IDACORP, Inc.	IDA
MGE Energy, Inc.	MGEE
NextEra Energy, Inc.	NEE
NorthWestern Corporation	NWE
Otter Tail Corporation	OTTR
Portland General Electric Company	POR
Southern Company	SO
Xcel Energy Inc.	XEL

VI. COST OF EQUITY ESTIMATION

Q: Please briefly discuss the ROE in the context of the regulated rate of return ("ROR").

A: The ROE is the cost rate applied to the equity capital in the ROR. The ROR for a regulated utility is the weighted average cost of capital, in which the cost rates of the individual sources of capital are weighted by their respective book values. While the costs of debt and preferred stock can be directly observed, the cost of equity is market-based and, therefore, must be estimated based on observable market data.

Q: How is the required ROE determined?

A: The required ROE is estimated by using one or more analytical techniques that rely on market-based data to quantify investor expectations regarding equity returns, adjusted for certain incremental costs and risks. Informed judgment is then applied to determine where the company's cost of equity falls within the range of results. The key consideration in determining the cost of equity is to ensure that the methodologies employed reasonably reflect investors' views of the financial markets in general, as well as the subject company (in the context of the proxy group), in particular.

Q: What methods did you use to determine Evergy Missouri Metro's ROE?

A: I considered the results of the Constant Growth DCF model, the CAPM, the ECAPM, and a Bond Yield Plus Risk Premium analysis. As discussed in more detail below, a reasonable ROE estimate appropriately considers alternative methodologies and the reasonableness of their individual and collective results.

A. Importance of Multiple Analytical Approaches

Q: Why is it important to use more than one analytical approach?

A: Because the cost of equity is not directly observable, it must be estimated based on both quantitative and qualitative information. When faced with the task of estimating the cost of equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed. Several models have been developed to estimate the cost of equity, and I use multiple approaches to estimate the cost of equity. As a practical matter, however, all the models available for estimating the cost of equity are subject to limiting assumptions or other methodological constraints. Consequently, many well-

regarded finance texts recommend using multiple approaches when estimating the cost of equity. For example, Copeland, Koller, and Murrin[32] suggest using the CAPM and Arbitrage Pricing Theory model, while Brigham and Gapenski[33] recommend the CAPM, DCF, and Bond Yield Plus Risk Premium approaches**.**

Q: Do current market conditions increase the importance of using more than one analytical approach?

A: Yes. Low interest rates and the effects of the investor "flight to quality" can be seen in high utility share valuations, relative to historical levels and relative to the broader market. Higher utility stock valuations produce lower dividend yields and result in lower cost of equity estimates from a DCF analysis. Low interest rates also affect the CAPM in two ways: (1) the risk-free rate is lower, and (2) because the market risk premium is a function of interest rates; (i.e., it is the return on the broad stock market less the risk-free interest rate), the risk premium should move higher when interest rates are lower. Therefore, it is important to use multiple analytical approaches to moderate the impact that the current low interest rate environment is having on the ROE estimates for the proxy group and, where possible, consider using projected market data in the models to estimate the return for the forward-looking period.

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[32] Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd Ed. (New York: McKinsey & Company, Inc., 2000), at 214.

[33] Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed. (Orlando: Dryden Press, 1994), at 341.

Q: Has the Commission recognized that it is important to consider the results of multiple ROE estimation models?

A: Yes. In its order for Spire Missouri in File Nos. GR-2017-0215 and GR-2017-0216, the Commission authorized an ROE of 9.80 percent which the Commission noted was near the mid-point of the recommendations of the ROE witnesses, consistent with national average authorized ROEs, and reflective of the growing economy and the expectation of increases in interest rates.[34] Specifically, the Commission stated that:

> [i]n order to set a fair rate of return for Spire, the Commission must determine the weighted cost of each component of the utility's capital structure. One component at issue in this case is the estimated cost of common equity, or the return on equity. Based on the competent and substantial evidence in the record, on its analysis of the expert testimony offered by the parties, and on its balancing of the interests of the company's ratepayers and shareholders, as fully explained in its findings of fact and conclusions of law, the Commission finds that 9.8 percent is a fair and reasonable return on equity for Spire Missouri. That rate is nearly the midpoint of all the experts' recommendations and is consistent with the national average, the growing economy, and the anticipated increasing interest rates. The Commission finds that this rate of return will allow Spire Missouri to compete in the capital market for the funds needed to maintain its financial health.[35]

Thus, the Commission has recognized the importance of considering: (1) the results of each model presented in the rate case including the DCF, CAPM and Risk Premium analyses; (2) capital market conditions since changes in market conditions can affect the model results and; (3) the returns awarded to comparable utilities in other jurisdictions across the U.S.

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[34] *In the Matter of Laclede Gas Company's Request to increase its Revenues for Gas Service*, File No. GR-2017-0215 and File No. GR-2017-0216, Report and Order (Feb. 21, 2018), at 34.

[35] *Ibid*.

Q: Are you aware of any other regulatory commissions that have recognized the importance of considering the results of multiple models?

A: Yes, several regulatory commissions consider the results of multiple ROE estimation methodologies such as the DCF, CAPM, ECAPM and Risk Premium in determining the authorized ROE, including the Minnesota Public Utilities Commission ("Minnesota PUC")[36], the Michigan PSC[37], the Iowa Utilities Board ("IUB")[38], the Washington Utilities and Transportation Commission ("Washington UTC"),[39] and the New Jersey Board of Public Utilities ("NJBPU").[40] For example, the Washington UTC has repeatedly emphasized that it "places value on each of the methodologies used to calculate the cost of equity and does not find it appropriate to select a single method as being the most accurate or instructive."[41] The Washington UTC has also explained that "[f]inancial circumstances are constantly shifting and changing, and we welcome a robust and diverse record of evidence based on a variety of analytics and cost of capital methodologies."[42]

Additionally, in its recent order for DTE Gas Company ("DTE Gas") in Case No. U-18999, the Michigan PSC considered the results of each of the models presented by the ROE witnesses which included the DCF, CAPM, ECAPM and Risk Premium in the

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[36] Docket No. G011/GR-17-563, Findings of Fact, Conclusions and Order, at 27; Docket No. E015/GR-16-664, Findings of Fact, Conclusions and Order, at 60-61

[37] Michigan Public Service Commission Order, DTE Gas Company, Case No. U-18999, at 45-47 (Sept. 13, 2018).

[38] Iowa Utilities Board, Iowa-American Water Company, RPU-2016-0002, Final Decision and Order issued, at 35 (Feb. 27, 2017).

[39] *Wash. Utils. & Transp. Comm'n v. PacifiCorp*, Docket UE-130043, Order 05, n. 89 (Dec. 4, 2013); *Wash. Utils. & Transp. Comm'n v. PacifiCorp*, Docket UE-100749, Order 06, ¶ 91 (March 25, 2011).

[40] NJBPU Docket No. ER12111052, OAL Docket No. PUC16310-12, In the Matter of the Verified Petition of Jersey Central Power & Light Company for Review and Approval of Increases and Other Adjustments to its Rates and Charges for Electric Service "2012 Base Rate Filing", Order Adopting Initial Decision with Modifications and Clarifications, at 71 (March 18, 2015).

[41] *Wash. Utils. & Transp. Comm'n v. PacifiCorp*, Docket UE-130043, Order 05, n. 89 (Dec. 4, 2013).

[42] *Wash. Utils. & Transp. Comm'n v. PacifiCorp*, Docket UE-100749, Order 06, ¶ 91 (March 25, 2011).

determination of the authorized ROE.[43] The Commission also considered authorized ROEs in other states, increased volatility in capital markets and the company-specific business risks of DTE Gas.

Q: What are your conclusions about the results of the DCF and CAPM models?

A: Recent market data that is used as the basis for the assumptions for both models have been affected by market conditions. As a result, relying exclusively on historical assumptions in these models, without considering whether these assumptions are consistent with investors' future expectations, will underestimate the cost of equity that investors would require over the period that the rates in this case are to be in effect. In this instance, relying on the historically low dividend yields that are not expected to continue over the period that the new rates will be in effect will underestimate the ROE for Evergy Missouri Metro. Furthermore, as discussed in Section IV above, long-term interest rates have increased since August 2020 and this trend is expected to continue over the near-term as the economy enters the recovery phase of the business cycle. Therefore, the use of current averages of Treasury bond yields as the estimate of the risk-free rate in the CAPM is not appropriate since recent market conditions are not expected to continue over the long-term. Instead, analysts should rely on projected yields of Treasury Bonds in the CAPM. The projected Treasury Bond yields results in CAPM estimates that are more reflective of the market conditions that investors expect during the period that the Company's rates will be in effect.

[43] Michigan Public Service Commission Order, DTE Gas Company, Case No. U-18999, at 45-47 (Sept. 13, 2018).

B. Constant Growth DCF Model

Q: Please describe the DCF approach.

A: The DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its most general form, the DCF model is expressed as follows:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \cdots + \frac{D_\infty}{(1+k)^\infty} \qquad [1]$$

Where P_0 represents the current stock price, $D_1 \ldots D\infty$ are all expected future dividends, and k is the discount rate, or required ROE. Equation [1] is a standard present value calculation that can be simplified and rearranged into the following form:

$$k = \frac{D_0(1+g)}{P_0} + g \qquad [2]$$

Equation [2] is often referred to as the Constant Growth DCF model in which the first term is the expected dividend yield and the second term is the expected long-term growth rate.

Q: What assumptions are required for the Constant Growth DCF model?

A: The Constant Growth DCF model requires the following four assumptions: (1) a constant growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings ratio; and (4) a discount rate greater than the expected growth rate. To the extent that any of these assumptions are violated, considered judgment and/or specific adjustments should be applied to the results.

Q: What market data did you use to calculate the dividend yield in your Constant Growth DCF model?

A: The dividend yield in my Constant Growth DCF model is based on the proxy companies' current annualized dividend and average closing stock prices over the 30-, 90-, and 180-trading days ended September 30, 2021.

Q: Why did you use 30-, 90-, and 180-day averaging periods?

A: In my Constant Growth DCF model, I use an average of recent trading days to calculate the term P_0 in the DCF model to ensure that the ROE is not skewed by anomalous events that may affect stock prices on any given trading day. The averaging period should also be reasonably representative of expected capital market conditions over the long term. However, the averaging periods that I use rely on historical data that are not consistent with the forward-looking market expectations. Therefore, the results of my Constant Growth DCF model using historical data may underestimate the forward-looking cost of equity. As a result, I place more weight on the mean to mean-high results produced by my Constant Growth DCF model.

Q: Did you make any adjustments to the dividend yield to account for periodic growth in dividends?

A: Yes, I did. Because utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is reasonable to apply one-half of the expected annual dividend growth rate for purposes of calculating the expected dividend yield component of the DCF model. This adjustment ensures that the expected

first-year dividend yield is, on average, representative of the coming twelve-month period, and does not overstate the aggregated dividends to be paid during that time.

Q: Why is it important to select appropriate measures of long-term growth in applying the DCF model?

A: In its Constant Growth form, the DCF model (*i.e.*, Equation [2]) assumes a single growth estimate in perpetuity. To reduce the long-term growth rate to a single measure, one must assume that the payout ratio remains constant and that earnings per share, dividends per share and book value per share all grow at the same constant rate. Over the long run, however, dividend growth can only be sustained by earnings growth. Therefore, it is important to incorporate a variety of sources of long-term earnings growth rates into the Constant Growth DCF model.

Q: Which sources of long-term earnings growth rates did you use?

A: My Constant Growth DCF model incorporates three sources of long-term earnings growth rates: (1) Zacks Investment Research; (2) Yahoo! Finance; and (3) Value Line Investment Survey.

Q: How did you calculate the range of results for the Constant Growth DCF Models?

A: I calculated the low result for my DCF model using the minimum growth rate (*i.e.*, the lowest of the Value Line, Yahoo! Finance, and Zacks earnings growth rates) for each of the proxy group companies. Thus, the low result reflects the minimum DCF result for the proxy group. I used a similar approach to calculate the high results, using the highest growth rate for each proxy group company. The mean results were calculated using the average growth rates from all sources.

Q: Did you review the DCF results for individual companies in your proxy group?

A: Yes, I did. It is important to review the DCF results of the individual companies included in the proxy to ensure that the DCF results of each company provide a sufficient return increment above the long-term debt costs to compensate investors for the added risk of an equity investment.

Q: How did you determine the low-end threshold that would be used to evaluate the DCF results for the individual companies in your proxy group?

A: The average credit rating for the companies in my proxy group is BBB+ from S&P and Baa1 from Moody's. The average yield on Moody's Baa-rated utility bonds for the 30 trading days ending September 30, 2021, was 3.19 percent.[44] Therefore, for example, a 7.00 percent DCF result would only provide a risk premium of 381 basis points above Baa-rated utility bonds. As a result, I have determined that a Constant Growth DCF result lower than 7.00 percent would not provide equity investors a sufficient risk premium above long-term debt costs.

Q: How did you address the DCF results for individual companies in your proxy group that were below 7 percent?

A: I developed two approaches to account for the DCF results for individual companies in my proxy group that were below 7 percent. In the first approach, I excluded the DCF results that were below 7 percent and then calculated the mean DCF result for the proxy group. Since the mean can be affected by outlier results, it is important to exclude the individual

[44] The yield on the Moody's Baa-rated utility bonds was obtained from Bloomberg Professional (Oct. 5, 2021). The Moody's Baa-rated utility bond index includes bonds with credit ratings of Baa1, Baa2 and Baa3. There is currently not an index that is composed entirely of Baa1 bonds.

results for companies that would not provide a sufficient return requirement above long-term debt costs. In the second approach, I relied on the median DCF result for the proxy group as opposed to the mean and did not exclude any DCF results for individual companies. In general, the median is not affected to a large degree by the presence of outliers and thus can be applied when it is determined that a data may include outliers.

Q: What were the results of your Constant Growth DCF analyses?

A: Figure 7 (see also Schedule AEB-3) summarizes the results of my DCF analyses. As shown in Figure 7, the median and mean DCF results range from 9.36 percent to 9.58 percent, and the median high and mean high results are in the range of 10.03 percent to 10.13 percent. While I also summarize the low DCF results, given the expected underperformance of utility stocks and thus the likelihood that the DCF model is understating the cost of equity, I do not believe it is appropriate to consider the low DCF results at this time.

Figure 7: Constant Growth Discounted Cash Flow Results

Constant Growth DCF - Median			
	Median Low	**Median**	**Median High**
30-Day Average	8.83%	9.58%	10.03%
90-Day Average	8.78%	9.36%	10.03%
180-Day Average	8.81%	9.38%	10.10%
Constant Growth DCF - Average w/ Exclusions			
	Mean Low	**Mean**	**Mean High**
30-Day Average	8.66%	9.49%	10.03%
90-Day Average	8.67%	9.50%	10.05%
180-Day Average	8.89%	9.58%	10.13%

Q: What are your conclusions about the results of the DCF models?

A: As discussed previously, one primary assumption of the Constant Growth DCF model is a constant P/E ratio. That assumption is heavily influenced by the market price of utility stocks. Since utility stocks are expected to underperform the broader market over the near-term as interest rates increases, it is important to consider the results of the DCF models with caution. This means that the results of the current DCF models are below where they would otherwise be under more normal market conditions. Therefore, while I have given weight to the results of the Constant Growth DCF model, my recommendation also gives weight to the results of other ROE estimation models.

C. CAPM Analysis

Q: Please briefly describe the CAPM.

A: The CAPM is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium to compensate investors for the non-diversifiable, systematic risk of that security. Systematic risk is the risk inherent in the entire market or market segment—which cannot be diversified away using a portfolio of assets. Unsystematic risk is the risk of a specific company that can, theoretically, be mitigated through portfolio diversification.

The CAPM is defined by four components, each of which must theoretically be a forward-looking estimate:

$$K_e = r_f + \beta(r_m - r_f) \quad [3]$$

Where:

K_e = the required market ROE;

β = Beta coefficient of an individual security;

r_f = the risk-free rate of return; and

r_m = the required return on the market.

In this specification, the term $(r_m - r_f)$ represents the market risk premium. According to the theory underlying the CAPM, because unsystematic risk can be diversified away, investors should only be concerned with systematic or non-diversifiable risk. Systematic risk is measured by Beta. Beta is a measure of the volatility of a security as compared to the market as a whole. Beta is defined as:

$$\beta = \frac{Covariance(r_e, r_m)}{Variance(r_m)} \quad [4]$$

The variance of the market return (i.e., Variance (rm)) is a measure of the uncertainty of the general market, and the covariance between the return on a specific security and the general market (i.e., Covariance (re, rm)) reflects the extent to which the return on that security will respond to a given change in the general market return. Thus, Beta represents the risk of the security relative to the general market.

Q: What risk-free rate did you use in your CAPM analysis?

A: I relied on three sources for my estimate of the risk-free rate: (1) the current 30-day average yield on 30-year U.S. Treasury bonds, which is 1.93 percent;[45] (2) the average projected 30-year U.S. Treasury bond yield for the first quarter of 2022 through the first quarter of 2023, which is 2.50 percent;[46] and (3) the average projected 30-year U.S. Treasury bond yield for 2023 through 2027, which is 3.50 percent.[47]

Q: Would you place more weight on one of these scenarios?

A: Yes. Based on current market conditions, I place more weight on the results of the projected yields on the 30-year Treasury bonds. As discussed previously, the estimation of the cost of equity in this case should be forward-looking because it is the return that investors would receive over the future rate period. Therefore, the inputs and assumptions used in the CAPM analysis should reflect the expectations of the market at that time. While I have included the results of a CAPM analysis that relies on the current average risk-free rate, this analysis fails to take into consideration the effect of the market's expectations for interest rate increases on the cost of equity.

Q: What Beta coefficients did you use in your CAPM analysis?

A: As shown on Schedule AEB-4, I used the Beta coefficients for the proxy group companies as reported by Bloomberg and Value Line. The Beta coefficients reported by Bloomberg were calculated using ten years of weekly returns relative to the S&P 500 Index. Value

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[45] Bloomberg Professional as of September 30, 2021.

[46] Blue Chip Financial Forecasts, Vol. 40, No. 10, at 2 (Oct. 1, 2021).

[47] Blue Chip Financial Forecasts, Vol. 40, No. 6, at 14 (June 1, 2021).

Line's calculation is based on five years of weekly returns relative to the New York Stock Exchange Composite Index.

Additionally, as shown in Schedule AEB-4, I also considered an additional CAPM analysis which relies on the long-term average utility Beta coefficient for the companies in my proxy group. As shown in Schedule AEB-5, the long-term average utility Beta coefficient was calculated as an average of the Value Line Beta coefficients for the companies in my proxy group from 2011 through 2020.

Q: How did you estimate the market risk premium in the CAPM?

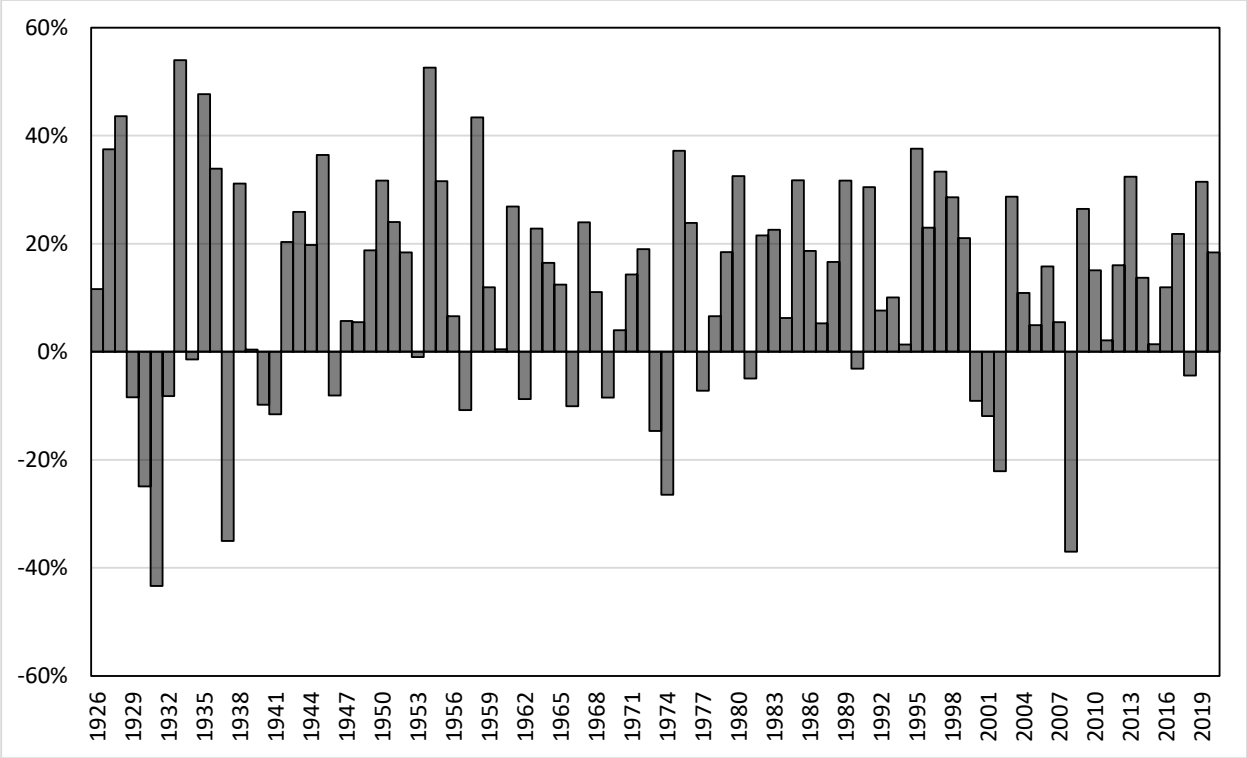
A: I estimated the Market Risk Premium ("MRP") as the difference between the implied expected equity market return and the risk-free rate. As shown in Schedule AEB-6, the expected return on the S&P 500 Index is calculated using the Constant Growth DCF model discussed earlier in my testimony for the companies in the S&P 500 Index. In my calculation of the market return, I included companies in the S&P 500 that: 1) had ether a dividend yield or Value Line long-term earnings projections; and 2) had a Value Line long-term earnings growth rate that was greater than 0 percent and less than or equal to 20 percent. Based on an estimated market capitalization-weighted dividend yield of 1.56 percent and a weighted long-term growth rate of 11.29 percent, the estimated required market return for the S&P 500 Index is 12.94 percent.

Q: How does the current expected market return of 12.94 percent compare to observed historical market returns?

A: Given the range of annual equity returns that have been observed over the past century (shown in Figure 8), a current expected return of 12.94 percent is not unreasonable. In 49

out of the past 95 years (or roughly 52 percent of observations), the realized equity return was at least 12.94 percent or greater**.**

Figure 8: Realized U.S. equity market returns (1926-2020) [48]



Q: Did you consider another form of the CAPM in your analysis?

A: Yes. I have also considered the results of an ECAPM or alternatively referred to as the Zero-Beta CAPM[49] in estimating the cost of equity for Evergy Missouri Metro. The ECAPM calculates the product of the adjusted Beta coefficient and the market risk premium and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the market risk premium, without any effect from the Beta

[48] Depicts total annual returns on large company stocks, as reported in the 2021 Duff and Phelps SBBI Yearbook**.**

[49] *See* Roger A. Morin, New Regulatory Finance at 189, Public Utilities Reports, Inc. (2006).

coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ECAPM result, as noted in Equation [5] below:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \qquad [5]$$

Where:

k_e = the required market ROE;

β = Adjusted Beta coefficient of an individual security;

rf = the risk-free rate of return; and

r_m = the required return on the market as a whole.

In essence, the Empirical form of the CAPM addresses the tendency of the "traditional" CAPM to underestimate the cost of equity for companies with low Beta coefficients such as regulated utilities. In that regard, the ECAPM is not redundant to the use of adjusted Betas; rather, it recognizes the results of academic research indicating that the risk-return relationship is different (in essence, flatter) than estimated by the CAPM, and that the CAPM underestimates the "alpha," or the constant return term.[50]

As with the CAPM, my application of the ECAPM uses the forward-looking market risk premium estimates, the three yields on 30-year Treasury securities noted earlier as the risk-free rate, and the Bloomberg, Value Line, and long-term average Beta coefficients.

[50] *Id.*, at 191.

Q: What are the results of your CAPM analyses?

A: As shown in Figure 9 (see also Schedule AEB-4), my traditional CAPM analysis produces a range of returns from 9.60 percent to 11.80 percent. The ECAPM analysis results range from 10.43 percent to 12.09 percent.

Figure 9: CAPM Results

	Current Risk-Free Rate (1.93%)	Q1 2022 – Q1 2023 Projected Risk-Free Rate (2.50%)	2023-2027 Projected Risk-Free Rate (3.50%)
CAPM			
Value Line Beta	11.62%	11.68%	11.80%
Bloomberg Beta	10.76%	10.87%	11.07%
Long-term Avg. Beta	9.60%	9.77%	10.08%
ECAPM			
Value Line Beta	11.95%	12.00%	12.09%
Bloomberg Beta	11.30%	11.39%	11.53%
Long-term Avg. Beta	10.43%	10.56%	10.79%

D. Bond Yield Plus Risk Premium Analysis

Q: Please describe the Bond Yield Plus Risk Premium approach.

A: In general terms, this approach is based on the fundamental principle that equity investors bear the residual risk associated with equity ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders have greater risk than returns to bondholders, equity investors must be compensated to bear that risk. Risk premium approaches, therefore, estimate the cost of equity as the sum of the equity risk premium and the yield on a particular class of bonds. In my analysis, I used actual authorized returns for electric utility companies as the historical measure of the cost of equity to determine the risk premium.

Q: Are there other considerations that should be addressed in conducting this analysis?

A: Yes, there are. It is important to recognize both academic literature and market evidence indicating that the equity risk premium (as used in this approach) is inversely related to the level of interest rates. That is, as interest rates increase, the equity risk premium decreases, and vice versa. Consequently, it is important to develop an analysis that: (1) reflects the inverse relationship between interest rates and the equity risk premium; and (2) relies on recent and expected market conditions. Such an analysis can be developed based on a regression of the risk premium as a function of U.S. Treasury bond yields. If we let authorized ROEs for electric utilities serve as the measure of required equity returns and define the yield on the long-term U.S. Treasury bond as the relevant measure of interest rates, the risk premium simply would be the difference between those two points.[51]

Q: Is the Bond Yield Plus Risk Premium analysis relevant to investors?

A: Yes, it is. Investors are aware of ROE awards in other jurisdictions, and they consider those awards as a benchmark for a reasonable level of equity returns for utilities of comparable risk operating in other jurisdictions. Because my Bond Yield Plus Risk Premium analysis is based on authorized ROEs for utility companies relative to corresponding Treasury yields, it provides relevant information to assess the return expectations of investors.

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[51] *See* S. Keith Berry, Interest Rate Risk and Utility Risk Premia during 1982-93, Managerial and Decision Economics, Vol. 19, No. 2 (March, 1998), in which the author used a methodology similar to the regression approach described below, including using allowed ROEs as the relevant data source, and came to similar conclusions regarding the inverse relationship between risk premia and interest rates. *See also* Robert S. Harris, Using Analysts' Growth Forecasts to Estimate Shareholders Required Rates of Return at 66, Financial Management (Spring 1986).

Q: What did your Bond Yield Plus Risk Premium analysis reveal?

A: As shown in Figure 10 below, from 1992 through September 2021, there was a strong negative relationship between risk premia and interest rates. To estimate that relationship, I conducted a regression analysis using the following equation:

$$RP = a + b(T) \quad [6]$$

Where:

RP = Risk Premium (difference between allowed ROEs and the yield on 30-year U.S. Treasury bonds)

a = intercept term

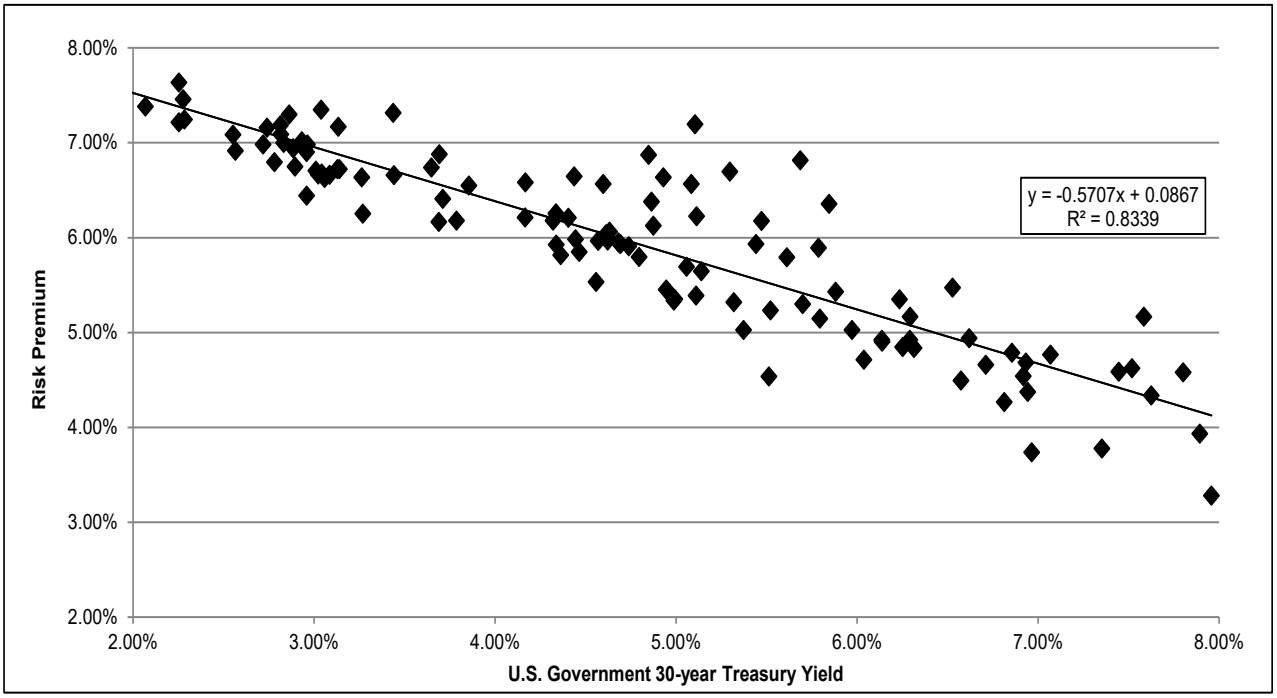
b = slope term

T = 30-year U.S. Treasury bond yield

Data regarding allowed ROEs were derived from 666 vertically integrated electric utility rate cases from 1992 through September 2021 as reported by Regulatory Research Associates ("RRA").[52] This equation's coefficients were statistically significant at the 99.00 percent level.

[52] My analysis began with a total of 1,321 electric utility cases, which were screened to eliminate limited issue rider cases, transmission cases, distribution only cases, and cases that did not specify an authorized ROE. After applying those screening criteria, the analysis was based on data for 666 cases.

Figure 6: Risk Premium Results



As shown on Schedule AEB-7, based on the current 30-day average of the 30-year U.S. Treasury bond yield (i.e., 1.93 percent), the risk premium would be 7.57 percent, resulting in an estimated ROE of 9.49 percent. Based on the near-term (Q1 2022 – Q1 2023) projections of the 30-year U.S. Treasury bond yield (i.e., 2.50 percent), the risk premium would be 7.24 percent, resulting in an estimated ROE of 9.74 percent. Based on longer-term (2023 – 2027) projections of the 30-year U.S. Treasury bond yield (i.e., 3.50 percent), the risk premium would be 6.67 percent, resulting in an estimated ROE of 10.17 percent.

Q: How did the results of the Bond Yield Risk Premium inform your recommended ROE for Evergy Missouri Metro?

A: I have considered the results of the Bond Yield Risk Premium analysis in setting my recommended ROE for Evergy Missouri Metro. As noted above, investors consider the ROE award of a company when assessing the risk of that company as compared to utilities

of comparable risk operating in other jurisdictions. The Risk Premium analysis considers this comparison by estimating the return expectations of investors based on the current and past ROE awards of electric utilities across the U.S.

VII. REGULATORY AND BUSINESS RISKS

Q: Do the DCF, CAPM and ECAPM results for the proxy group, taken alone, provide an appropriate estimate of the cost of equity for Evergy Missouri Metro?

A: No. These results provide only a range of the appropriate estimate of the Company's cost of equity. There are several additional factors that must be taken into consideration when determining where the Company's cost of equity falls within the range of results. These factors, which are discussed below, should be considered with respect to their overall effect on the Company's risk profile.

A. Capital Expenditures and Plant-in-Service Accounting

Q: Please summarize the Company's capital expenditure requirements.

A: The Company's current projections for 2022 through 2026 include approximately $1.84 billion in capital investments for the period.[53] Based on the Company's net utility plant of approximately $3.41 billion as of December 31, 2020[54], the $1.84 billion of anticipated capital expenditures are approximately 53.82 percent of Evergy Missouri Metro's net utility plant as of December 31, 2020.

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[53] Data provided by Evergy Metro.

[54] *Ibid*.

Q: How is the Company's risk profile affected by its substantial capital expenditure requirements?

A: As with any utility faced with substantial capital expenditure requirements, the Company's risk profile may be adversely affected in two significant and related ways: (1) the heightened level of investment increases the risk of under-recovery or delayed recovery of the invested capital; and (2) an inadequate return would put downward pressure on key credit metrics.

Q: Do credit rating agencies recognize the risks associated with elevated levels of capital expenditures?

A: Yes, they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. To that point, S&P explains the importance of regulatory support for a significant amount of capital projects:

> When applicable, a jurisdiction's willingness to support large capital projects with cash during construction is an important aspect of our analysis. This is especially true when the project represents a major addition to rate base and entails long lead times and technological risks that make it susceptible to construction delays. Broad support for all capital spending is the most credit-sustaining. Support for only specific types of capital spending, such as specific environmental projects or system integrity plans, is less so, but still favorable for creditors. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were extraordinary measures for use in unusual circumstances, but when construction costs are rising, cash flow support could be crucial to maintain credit quality through the spending program. Even more favorable are those jurisdictions that present an opportunity for a higher return on capital projects as an incentive to investors.[55]

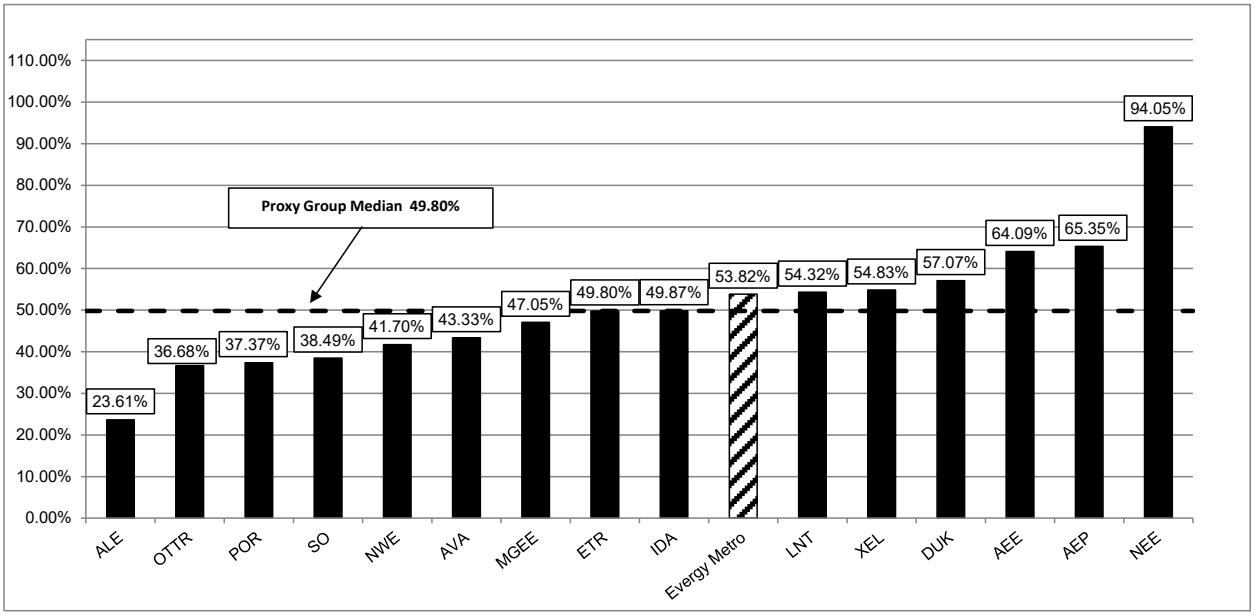
[55] S&P Global Ratings, "Assessing U.S. Investor-Owned Utility Regulatory Environments," at 7 (Aug. 10, 2016).

Therefore, to the extent that Evergy Missouri Metro's rates do not continue to permit the recovery its capital investments on a regular basis, the Company would face increased recovery risk and thus increased pressure on its credit metrics.

Q: How do Evergy Missouri Metro's capital expenditure requirements compare to those of the proxy group companies?

A: As shown in Schedule AEB-8, I calculated the ratio of expected capital expenditures to net utility plant for Evergy Missouri Metro and each of the companies in the proxy group by dividing each company's projected capital expenditures for the period from 2022-2026 by its total net utility plant as of December 31, 2020. As shown in Schedule AEB-8 (see also Figure 11 below), Evergy Missouri Metro's ratio of capital expenditures as a percentage of net utility plant is 53.82 percent, which is approximately 8 percent higher than the median for the proxy group companies of 49.80 percent. This result indicates a risk level for Evergy Missouri Metro that is slightly greater than the proxy group companies.

Figure 7: Comparison of Capital Expenditures – Proxy Group Companies



Q: Does Evergy Missouri Metro have cost recovery mechanisms in place to recover the costs associated with its capital expenditures plan between rate cases?

A: Yes. Evergy Missouri Metro has implemented Plant-In Service Accounting ("PISA") which was established in 2018 when Senate Bill 564 became law and provides for the deferral of 85 percent of the depreciation and return on capital investment between rate cases. Specifically, Senate Bill 564 provides that utilities who elect to use PISA shall:

> [D]efer to a regulatory asset eighty-five percent of all depreciation expense and return associated with all qualifying electric plan recorded to plant-in-service on the utility's books… In each general rate proceeding concluded after the effective date of this section, the balance of the regulatory asset as of the rate base cutoff date shall be included in the electrical corporation's rate base without any offset, reduction, or adjustment based upon consideration of any other factor…[56]

Section 393.1400 of the Missouri Revised Statutes provides that companies electing the use of PISA are required to submit a five-year capital investment plan setting forth the

[56] See Section 393.1400.2(1) and related provisions of the Missouri Revised Statutes.

categories of capital expenditures that will be pursued. This statute limits the capital expenditures under PISA to certain types of investments (excluding new coal-fired, nuclear and natural gas units), and requires 25 percent of the plan to be grid modernization investment. The statute also establishes an expiration date on the deferrals of December 31, 2023, after which time regulatory approval for continuance through December 31, 2028, is required.

Q: Does the implementation of PISA reduce Evergy Missouri Metro's cost of equity?

A: No, it does not. It is important to recognize that while the PISA has provided for some cost recovery, there is a cap on the compound annual growth in rates of 3 percent as compared to what rates were as of December 6, 2018 through the end of 2023 (and through 2028 but only if PISA treatment is extended). It is important to recognize that the estimation of the cost of equity includes a comparative analysis of the risks and returns of the subject company and the proxy group of publicly traded utilities that are relied on in the ROE estimation models, including their utility operating subsidiaries. Therefore, the threshold question is not whether PISA reduces the risk of Evergy Missouri Metro, but rather whether Evergy Missouri Metro's risk is reduced below that of the proxy group.

As shown in Schedule AEB-9, there are a number of cost recovery mechanisms in place for the proxy companies, including forecasted test year, year-end rate base, revenue decoupling and/or formula-based rates, capital cost recovery mechanisms, fuel/purchased power mechanisms, and/or construction work in progress ("CWIP") in rate base. Many of these mechanisms are not available to Evergy Missouri Metro. Thus, the use of PISA does not reduce the Company's regulatory risk, relative to its peers. Rather, the implementation of PISA moves the Company closer to the risk profile of the operating utilities of the proxy

group companies. Notably, Missouri law prohibits any charge that is based on the costs of construction in progress on any existing or new facility, or any other cost associated with any property before it is fully operational, and used for service.[57] By contrast, the CWIP mechanism eliminates regulatory lag for many of the proxy companies.

Q: How does PISA compare with the capital investment trackers that have been implemented by the proxy companies?

A: As shown in Schedule AEB-9, 40 out of 80 (or approximately 50 percent) of the operating companies held by the proxy group recover costs through some form of capital tracking mechanisms and approximately 67.50 percent of the proxy group can earn a return on CWIP. However, as discussed previously, Evergy Missouri Metro's capital cost recovery mechanism currently expires in 2023, and even if extended, permanently expires in 2028, and remains available only so long as Evergy Missouri Metro's overall rates do not escalate (as compared to 2017 levels) at a rate in excess of 3 percent compounding annually. Furthermore, if Evergy Missouri Metro were to exceed the rate cap, the Company would lose recovery of the investments above the cap.

Q: Is regulatory lag eliminated by the PISA mechanism?

A: Not entirely. As noted previously, PISA is applied to only 85 percent of the depreciation and return for certain qualified investment. While it does allow deferral or return on 85% of the eligible investment, the utility's net income is negatively impacted between rate cases because the equity portion of that return cannot be included in the utility's reported earnings. Moreover, the remaining 15 percent of the investment is not included in the

[57] Section 393.135.

recovery mechanism and therefore does not begin depreciation or earn a return until the next rate proceeding. Further, while PISA provides a process for including new projects in rate base, PISA does not provide the ability to put CWIP into rate base. PISA provides for the deferral of depreciation expense however the expense is not included in rates until there is a general rate case. Therefore, while PISA provides an incentive to invest in capital, on a cash basis, the investment is not recovered until the next rate proceeding. PISA only provides a process for getting completed projects into rate base. Therefore, this mechanism does not provide cash flow relief similar to other jurisdictions where CWIP can be placed into rate base. Finally, PISA is a program that is set to expire in December 2023. Therefore, the Company has no assurance that the investment that is recovered through this mechanism will continue beyond that date.

Q: What are your conclusions regarding the effect of the Company's capital spending requirements on its risk profile and cost of capital?

A: The Company's capital expenditure requirements as a percentage of net utility plant are significant and will continue over the next few years. Additionally, while Evergy Missouri Metro does have the PISA to recover qualifying capital costs, the mechanism does not provide for timely recovery of all of Evergy Missouri Metro's capital expenditures. Moreover, a number of the operating subsidiaries of the proxy group have a capital tracking mechanism and/or are able to include CWIP in rate base. As a result, the Company has slightly greater risk relative to the proxy group companies which warrants an authorized ROE above the proxy group mean.

B. Regulatory Risk

Q: Please explain how the regulatory environment affects investors' risk assessments.

A: The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility service, the subject utility must have the opportunity to recover the return of, and the market-required return on, invested capital. Regulatory authorities recognize that because utility operations are capital intensive, their decisions should enable the utility to attract capital at reasonable terms; doing so balances the long-term interests of investors and customers. Utilities must finance their operations and require the opportunity to earn a reasonable return on their invested capital to maintain their financial profiles. Evergy Missouri Metro is no exception. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' risk assessments.

From the perspective of debt investors, the authorized return should enable the utility to generate the cash flow needed to meet its near-term financial obligations, make the capital investments needed to maintain and expand its systems, and maintain the necessary levels of liquidity to fund unexpected events. This financial liquidity must be derived not only from internally generated funds, but also by efficient access to capital markets. Moreover, because fixed income investors have many investment alternatives, even within a given market sector, the utility's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions.

Equity investors require that the authorized return be adequate to provide a risk-comparable return on the equity portion of the utility's capital investments. Because equity investors are the residual claimants on the utility's cash flows (which is to say that the equity return

is subordinate to interest payments), they are particularly concerned with the strength of regulatory support and its effect on future cash flows.

Q: Please explain how credit rating agencies consider regulatory risk in establishing a company's credit rating.

A: Both S&P and Moody's consider the overall regulatory framework in establishing credit ratings. Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity, and key financial metrics. Of these criteria, regulatory framework, and the ability to recover costs and earn returns are each given a broad rating factor of 25.00 percent. Therefore, Moody's assigns regulatory risk a 50.00 percent weighting in the overall assessment of business and financial risk for regulated utilities.[58] S&P also identifies the regulatory framework as an important factor in credit ratings for regulated utilities, stating: "One significant aspect of regulatory risk that influences credit quality is the regulatory environment in the jurisdictions in which a utility operates."[59] S&P identifies four specific factors that it uses to assess the credit implications of the regulatory jurisdictions of investor-owned regulated utilities: (1) regulatory stability; (2) tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[60]

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[58] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, at 4 (June 23, 2017).

[59] Standard & Poor's Global Ratings, Ratings Direct, U.S. and Canadian Regulatory Jurisdictions Support Utilities' Credit Quality—But Some More So Than Others, at 2 (June 25, 2018).

[60] *Id*., at 1.

Q: How does the regulatory environment in which a utility operates affect its access to and cost of capital?

A: The regulatory environment can significantly affect both the access to, and cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. As noted by Moody's, "[f]or rate regulated utilities, which typically operate as a monopoly, the regulatory environment and how the utility adapts to that environment are the most important credit considerations."[61] Moody's further highlighted the relevance of a stable and predictable regulatory environment to a utility's credit quality, noting: "[b]roadly speaking, the Regulatory Framework is the foundation for how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation."[62]

Q: Have you conducted any analysis of the regulatory framework in Missouri relative to the jurisdictions in which the companies in your proxy group operate?

A: Yes. I have evaluated the regulatory framework in Missouri considering three factors which are important to ensuring Evergy Missouri Metro maintains access to capital at reasonable terms. As I will discuss in more detail below, the three factors are: (1) cost recovery mechanisms which allow a utility to recover costs in a timely manner between rate cases and provide the utility the opportunity to earn its authorized return; (2) rate design which if not based on cost causation can result in a significant amount of fixed costs being

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[61] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, at 6 (June 23, 2017).

[62] *Ibid*.

recovered through the volumetric charge thus increasing cost recovery risk; and (3) comparable return standard because an awarded ROE that is significantly below the ROEs awarded to other utilities with comparable risks can affect the ability of a utility to attract capital at reasonable terms.

1. Cost Recovery Mechanisms

Q: Have you conducted any analysis to compare the cost recovery mechanisms of Evergy Missouri Metro to the cost recovery mechanisms approved in the jurisdictions in which the companies in your proxy group operate?

A: Yes. I selected six mechanisms that are important to provide a regulated utility an opportunity to earn its authorized ROE. These are: (1) test year convention (i.e., forecast vs. historical); (2) method for determining rate base (i.e., average vs. year-end); (3) use of revenue decoupling mechanisms or formula-based rates that mitigate volumetric risk; (4) prevalence of capital cost recovery between rate cases, and CWIP allowances in rate base; (5) fuel cost recovery and (6) recovery of property taxes. The results of this cost recovery assessment are shown in Schedule AEB-9 and are summarized below.

(1) Test year convention: Evergy Missouri Metro uses a historical test year with limited "known and measurable" changes through a true-up period. By contrast, 42 out of 80 (52.50 percent) of the operating companies held by the proxy group provide service in jurisdictions that use either a fully or partially forecasted test year. Forecast test years have been relied on for several years and produce cost estimates that are more reflective of future costs which result in more accurate recovery of incurred costs and mitigates the regulatory lag associated with historical

test years. As Lowry, Hovde, Getachew, and Makos explain in their 2010 report, "Forward Test Years for US Electric Utilities":

> This report provides an in depth discussion of the test year issue. It includes the results of empirical research which explores why the unit costs of electric IOUs are rising and shows that utilities operating under forward test years realize higher returns on capital and have credit ratings that are materially better than those of utilities operating under historical test years. The research suggests that shifting to a future test year is a prime strategy for rebuilding utility credit ratings as insurance against an uncertain future.[63]

(2) Rate Base: The Company's rate base is determined using the year-end rate base method which is consistent with the proxy group since 34 out of 80 (42.50 percent) of the operating companies provide service in jurisdictions where rate base is determined using the year-end method.

(3) Non-Volumetric Rate Design: Evergy Missouri Metro does have partial protection against volumetric risk in Missouri through a Demand Side Investment Mechanism ("DSIM") Rider, however this charge only allows the Company to recover the costs associated with the effect of energy efficiency on sales and does not address other volumetric risk. Comparing to the proxy group companies, 44 out of 80 (55.00 percent) of the operating companies held by the proxy group have non-volumetric rate design through either straight fixed variable rate design, revenue decoupling mechanisms or formula rate plans that allow them to break the link between customer usage and revenues.

[63] M.N. Lowry, D. Hovde, L. Getachew, and M. Makos, Forward Test Years for US Electric Utilities, at 1, prepared for Edison Electric Institute, August 2010,.

(4) Capital Cost Recovery/CWIP in Rate Base: Evergy Missouri Metro has a capital tracking mechanism (i.e., PISA) to recover capital investment costs between rate cases. However, as discussed previously, Evergy Missouri Metro's capital cost recovery mechanism is set to expire in 2023 and is only available as long as overall rates stay at or below the 3% cap. Comparing to the proxy group companies, 65 of 80 (81.25 percent) of the operating companies held by the proxy group have some form of capital cost recovery mechanism and/or are allowed to include CWIP in rate base.[64] The inclusion of CWIP in rate base reduces regulatory lag associated with new construction, which can be very important particularly when a company is undertaking a large capital investment plan, such as Evergy Missouri Metro's capital expenditures plan.

(5) Fuel Adjustment Clause: Evergy Missouri Metro's fuel adjustment clause allows the Company to defer and recover 95 percent of the difference between the actual net energy costs and net base energy costs.[65] As shown in Schedule AEB-9, FAC mechanisms are prevalent in the proxy group. In fact, 90.00 percent of the operating companies in the proxy group are allowed to directly recover fuel costs and purchased power costs from customers, without a sharing band.

(6) Property Tax Rider: While Evergy Missouri Metro does not currently have a property tax rider, the Company is requesting a property tax tracker which would allow Evergy Missouri Metro to defer for future recovery changes in property taxes

[64] Wisconsin's PSC typically authorizes a premium to allow for a rate of return equivalent to a certain CWIP level in rate base.

[65] Evergy Metro Tariff, Fuel Adjustment Clause, Revised Sheet 50.10.

as compared to the base levels approved in a general rate case. As discussed in the Direct Testimony of Michael Adams, there are at least 11 jurisdictions (Arizona, Arkansas, Colorado, Kansas, Minnesota, Montana, New Hampshire, Oregon, Pennsylvania, South Dakota, and Washington) which have approved property tax riders similar to the mechanism proposed by Evergy Missouri Metro and three other jurisdictions (Alabama, Indiana and Massachusetts) which have approved broader cost recovery mechanisms that include the recovery of property tax expenses.[66]

Q: Does the continuation of the FAC change the business risk of Evergy Missouri Metro?

A: No, it does not. In accordance with the Commission's FAC Rule at 20 CSR 4240-20.090(2)(A)14, the Company is required to explain the continuation of the rate adjustment mechanism ("RAM"), which in this case is the FAC, changes the business risk of Evergy Missouri Metro. The continuation of the FAC will not change Evergy Missouri Metro's business risk and will allow the Company to continue to pass through increases or decreases in net energy costs to customers without the need for a time-consuming and costly rate proceeding. Furthermore, as discussed previously, for the purposes of determining the ROE, the risk of the Company is considered in comparison to the proxy group. Since FAC mechanisms are prevalent in the proxy group, the continuation of the FAC for Evergy Missouri Metro makes the Company more comparable to the proxy group. To the extent that the FAC were eliminated, or materially restructured to recover less of the fuel costs, Evergy Missouri Metro would have significantly greater risk than the proxy

[66] Direct Testimony of Michael Adams, at 16-23.

group and would likely require an upward adjustment to the ROE to reflect this incremental risk.

Q: Have you considered how Evergy Missouri Metro compares to the proxy group on overall cost adjustment mechanisms?

A: Yes. As shown in Schedule AEB-9, the proxy group companies have implemented a number of adjustment mechanisms to mitigate the issue of regulatory lag, including forecasted test years, year-end rate base, decoupling mechanisms, formula-based rates, capital cost recovery mechanisms, fuel adjustment clauses, and CWIP allowances within rate base that specifically address the regulatory lag that may be unique to a given jurisdiction. However, Moody's recently noted that aside from the implementation of PISA, the Missouri regulatory environment has been challenging due to regulatory lag. Moody's noted that Missouri regulation authorizes limited interim base rate recovery mechanisms, and requires the use of a historical test year which continues to create regulatory lag.[67] While Evergy Missouri Metro has access to some regulatory mechanisms also available to operating companies within the proxy group, these mechanisms are limited. Further, Evergy Missouri Metro lacks a comprehensive forward-looking mechanism or set of mechanisms, such as including CWIP in rate base, that would remedy the regulatory lag it faces.

[67] Moody's Investors Service, Credit Opinion, Evergy Metro, Inc., p. 4 (April 29, 2021).

2. Rate Design

Q: Can a Company's rate design increase volumetric risk?

A: Yes. The majority of an electric utility's cost are fixed costs that are incurred to construct and maintain the distribution system. As such, most of a utility's costs do not vary with energy consumption. However, rates are often structured to recover a large portion of a utility's fixed costs on a variable basis. This is particularly true for the residential customer class. Since a customer's usage varies from year to year, the more fixed costs that are recovered on a variable basis, the higher the volatility of annual cost recovery for the company. Therefore, cost recovery for utilities that have higher fixed customer charges are less susceptible to fluctuations in usage and are more likely to recover their costs to serve customers.

Furthermore, the design of an energy (or variable) charge can also directly affect the volatility of fixed cost recovery. For example, for the residential rate class, an energy charge can be designed as an inclining, declining or flat block rate structure. A block rate structure is considered: (a) inclining if the energy charge increases as the amount of energy consumed increases; (b) flat if the energy charge is the same for all levels of energy usage; and (c) declining if the energy charges decrease as the amount of energy consumed decreases. A utility with an inclining block rate design would be more susceptible to variability in earnings associated with year-to-year fluctuations in usage since a larger portion of fixed costs would be recovered from the higher usage blocks.

Evergy Missouri Metro's residential rate class has a customer charge of $11.47 which is low, as discussed below. The residential rate class also has an inclining block rate structure for the energy charge in the summer season which is important because the Company

usually has its highest revenue during the year in the third quarter due to the demand for energy created by the summer air conditioning load; thus, the Company faces increased volumetric risk associated with the residential rate class.

Q: Have you developed any analysis to evaluate the effect of rate design on the volumetric risk of Evergy Missouri Metro?

A: Yes. It is important to review the size of the customer charges and structure of the energy charges when assessing the volumetric risk of Evergy Missouri Metro as compared to the proxy group. Therefore, for the residential rate class, I have compared the level of the customer charge and the design of the energy charge (i.e., inclining, declining and flat) of Evergy Missouri Metro and the operating subsidiaries of the companies in the proxy group. As shown in Schedule AEB-10, Evergy Missouri Metro has a residential customer charge of $11.47 while the average customer charge for the utility operating companies of the proxy group is between $4.20 to $33.03 with a mean of $11.96. Moreover, approximately 78.48 percent of the operating subsidiaries held by the proxy group companies have either a flat or declining block rate structure for the residential energy charge. Therefore, Evergy Missouri Metro has greater volumetric risk compared to the proxy group as a result of the Company's residential rate design.

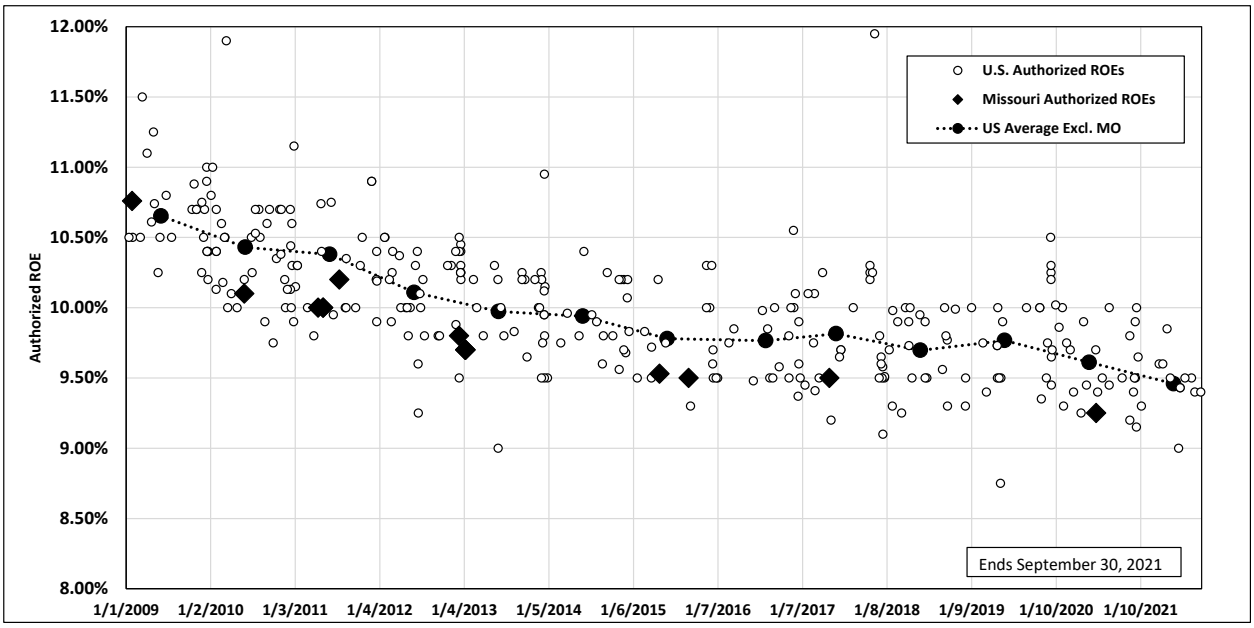
3. Authorized ROEs

Q: How do recent returns in Missouri compare to the authorized returns in other jurisdictions?

A: Figure 13 below shows the authorized returns for vertically integrated electric utilities in other jurisdictions since January 2009, and the returns authorized in Missouri for electric

utilities. While partially the result of settlement agreements approved by the Commission, as shown in Figure 12, the authorized returns for electric utilities in Missouri have been below the average authorized ROE for vertically integrated electric utilities in other jurisdictions since 2010.

Figure 8: Comparison of Missouri and U.S. Authorized Electric Returns[68]



Q: Should the Commission be concerned about authorizing equity returns that are at the low end of the range established by other state regulatory jurisdictions?

A: Yes, for several reasons. Evergy Missouri Metro must compete for discretionary capital within the Company's own corporate structure, which must in turn compete for capital with other utilities and businesses. Placing Evergy Missouri Metro at the low end of recently authorized ROEs across state regulatory jurisdictions, coupled with the relatively high

[68] S&P Capital IQ Pro. Includes only vertically integrated electric utility ROEs between January 1, 2009, and September 30, 2021. The chart excludes the authorized returns in Vermont since they are established based on a formulaic approach that is directly linked to interest rates and therefore is affected by market conditions and monetary policy.

regulatory risk faced in Missouri over the longer term can negatively impact the Company's access to capital.

Further, as noted in Sections IV and VI, the economy is in the expansion phase of the business cycle; thus, interest rates are expected to increase, and utilities are expected to underperform over the near-term. If utility stocks underperform over the near-term, then utility dividend yields will increase resulting in higher estimates of the ROE results produced by the DCF model. Therefore, the results of the DCF model will underestimate investors' expected ROE over the time-period in which Evergy Missouri Metro's rates will be in effect. As a result, it is important that the Commission consider, the results of alternative methods such as the forward looking CAPM, ECAPM, and Bond Yield Plus Risk Premium, and the returns that have been authorized for other electric utilities across the U.S.

Q: Do credit rating agencies consider the authorized ROE in the overall risk assessment of a utility?

A: Yes, they do. Therefore, to the extent that the returns in a jurisdiction are lower than the returns that have been authorized more broadly, credit rating agencies will consider this in the overall risk assessment of the regulatory jurisdiction in which the company operates. For example, Moody's downgraded ALLETE, Inc. from A3 to Baa1 primarily based on the less than favorable outcome in Minnesota Power's last fully litigated rate case in Minnesota which included what Moody's noted was a below average authorized ROE of 9.25 percent.[69] In addition, FitchRatings downgraded CenterPoint Energy Houston

[69] Moody's Investors Service, Credit Opinion: ALLETE, Inc. Update following downgrade at 3 (April 3, 2019).

Electric's ("CEHE") Long-Term Issuer Default rating from A- to BBB+ and revised the rating outlook from Stable to Negative following an unfavorable outcome in a recent rate case in Texas.[70] Finally, FitchRatings recently downgraded and maintained a negative outlook for Arizona Public Service Company ("APS") and its parent, Pinnacle West Capital Corporation, following the hearings conducted by the Arizona Corporation Commission ("ACC") in October 2021 regarding APS' current rate case proceeding.[71] While the ACC had not issued a final order in APS' rate case at the time, FitchRatings noted that the developments at the hearing in October indicate a likely credit negative outcome that will negatively affect the financial metrics of both APS and Pinnacle West Capital Corporation. It is also important to note that Moody's recently placed both APS and Pinnacle West Capital Corporation on review for downgrade following the ACC hearing in October.[72]

Q: How should the Commission use the information regarding authorized ROEs in other jurisdictions in determining the ROE for Evergy Missouri Metro?

A: As discussed above, the companies in the proxy group operate in multiple jurisdictions across the U.S. Since Evergy Missouri Metro must compete directly for capital with investments of similar risk, it is appropriate to review the authorized ROEs in other jurisdictions. The comparison is important because investors are considering the

[70] FitchRatings, Fitch Downgrades CenterPoint Energy Houston Electric to BBB+; Affirms CNP; Outlooks Negative (Feb. 19, 2020).

[71] FitchRatings, "Fitch Downgrades Pinnacle West Capital & Arizona Public Service to 'BBB+'; Outlooks Remain Negative" (Oct. 12, 2021).

[72] Moody's Investors Service, "Rating Actions: Moody's places Pinnacle West and Arizona Public Service ratings on review for downgrade," (Oct. 12, 2021).

authorized returns across the U.S. and are likely to invest equity in those utilities with the highest returns.

Furthermore, investors are also likely to consider business and financial risks for a company like Evergy Missouri Metro which faces increased risk as a result of its capital expenditure plan and limited cost recovery mechanisms. Therefore, authorizing an ROE for Evergy Missouri Metro that is equivalent to the average authorized ROE for other vertically integrated electric utilities is not sufficient to compensate investors for the added risk of Evergy Missouri Metro. As such, it is important that the Commission consider, as I have in my recommendation, the additional risk of Evergy Missouri Metro and place the authorized ROE for Evergy Missouri Metro toward the high end of authorized ROEs for other vertically integrated electric utilities.

Q: Have you developed any additional analyses to evaluate the regulatory environment in Missouri as compared to the jurisdictions in which the companies in your proxy group operate?

A: Yes. I have conducted two additional analyses to compare the regulatory framework of Missouri to the jurisdictions in which the companies in the proxy group operate. Specifically, I considered two different rankings: (1) the Regulatory Research Associates ("RRA") ranking of regulatory jurisdictions; and (2) S&P's ranking of the credit supportiveness of regulatory jurisdictions.

Q: Please explain how you used the RRA ratings to compare the regulatory jurisdictions of the proxy group companies with the Company's regulatory jurisdiction.

A: RRA develops their ranking based on their assessment of how investors perceive the regulatory risk associated with ownership of utility securities in that jurisdiction, specifically reflecting their assessment of the probable level and quality of earnings to be realized by a state's utilities as a result of regulatory, legislative, and court actions. RRA assigns a ranking for each regulatory jurisdiction between "Above Average/1" to "Below Average/3," with nine total rankings between these categories. I applied a numeric ranking system to the RRA rankings with "Above Average/1" assigned the highest ranking ("1") and "Below Average/3" assigned the lowest ranking ("9"). As shown in Schedule AEB-11, the Missouri regulatory environment is ranked as "Average/3," while the proxy group is ranked between "Average/1" and "Average/2".

Q: How did you conduct your analysis of the S&P credit supportiveness ranking?

A: S&P classifies the regulatory jurisdictions into five categories ranging from "Credit Supportive" to "Most Credit Supportive" based on the level of credit supportiveness. Similar to the RRA regulatory ranking analysis discussed above, I assigned a numerical ranking to each jurisdiction ranked by S&P, from most credit supportive ("1") to credit supportive ("5"). As shown in Schedule AEB-12, the proxy group is ranked between very credit supportive and highly credit supportive while the Missouri regulatory jurisdiction is only ranked as very credit supportive. Thus, similar to the results using the RRA regulatory rankings, Missouri is perceived as being below the average for the proxy group.

Q: What are your conclusions regarding the perceived risks related to the Missouri regulatory environment?

A: Both Moody's and S&P have identified the supportiveness of the regulatory environment as an important consideration in developing their overall credit ratings for regulated utilities. Considering the available regulatory adjustment mechanisms, many of the companies in the proxy group have cost recovery mechanisms that provide stronger financial support than those that Evergy Missouri Metro is permitted to implement. Additionally, authorized ROEs in Missouri have been below the average authorized ROEs for vertically integrated electric utilities across the U.S. Both the RRA jurisdictional ranking and the S&P credit supportiveness ranking for Missouri indicates greater risk than the average for the proxy group. Therefore, the average ROE for the proxy group actually understates the return on equity that an investor would require in Missouri because the risks of timely and full cost recovery are greater for Evergy Missouri Metro in Missouri than for the proxy group. For that reason, I conclude that the authorized ROE for Evergy Missouri Metro should be higher than the proxy group mean.

C. Generation Ownership

Q: How does the business risk of vertically integrated electric utilities compare to the business risk of other regulated utilities?

A: According to Moody's, generation ownership causes vertically integrated electric utilities to have higher business risk than either electric transmission and distribution companies, or natural gas distribution or transportation companies.[73] As a result of this higher business

[73] Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, at 21-22 (June 23, 2017).

risk, integrated electric utilities typically require a higher ROE or percentage of equity in the capital structure than other electric or gas utilities.

Q: Are there other risk factors specific to vertically integrated electric utilities that the credit rating agencies consider when determining the credit rating of a company that owns generation?

A: Yes. As discussed above, Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity and key financial metrics. The third factor of diversification, which Moody's assigns a 10.00 percent weighting in the overall assessments of a company's business risk, considers the fuel source diversity of a utility with generation. Moody's notes:

> For utilities with electric generation, fuel source diversity can mitigate the impact (to the utility and to its rate-payers) of changes in commodity prices, hydrology and water flow, and environmental or other regulations affecting plant operations and economics. We have observed that utilities' regulatory environments are most likely to become unfavorable during periods of rapid rate increases (which are more important than absolute rate levels) and that fuel diversity leads to more stable rates over time.
>
> For that reason, fuel diversity can be important even if fuel and purchased power expenses are an automatic pass-through to the utility's ratepayers. Changes in environmental, safety and other regulations have caused vulnerabilities for certain technologies and fuel sources during the past five years. These vulnerabilities have varied widely in different countries and have changed over time.[74]

[74] *Id.,* at 16.

Q: Has Missouri enacted legislative requirements related to renewable energy?

A: Yes. In 2008 the voters of Missouri approved a mandatory renewable portfolio standard ("RPS") which became Section 393.1030. The RPS requires electric utilities to generate or purchase 15 percent of their electricity sales with power generated from renewable energy sources by 2021. As discussed previously, S.B.564 became law in 2018, allowing Plant in Service Accounting treatment for "qualifying electric plant" that included renewable resources. In addition, in July 2021 House Bill ("HB") 734 was signed into law which contained provisions that allow electric utilities to securitize their investment in coal generation facilities that has yet to be recovered from customers after the generation facility has been retired as well as in renewable generating facilities that qualify as "replacement resources". Thus, a major effect of the legislation is to accelerate the transition in Missouri from coal generation to renewable generation such as wind and solar.[75]

Q: Is Evergy subject to legislative mandates regarding renewable generation in other jurisdictions?

A: Yes. In May 2009 Kansas enacted the Renewable Energy Standards Act ("RESRA") which required investor-owned electric utilities and electric cooperatives to either generate or purchase 20 percent of their peak demand from renewable energy sources by the year 2020.[76] It is important to note that the legislation was mandatory at the time enacted; however, the approval of Senate Bill ("SB") 91 in May 2015 adjusted the RPS from mandatory to voluntary. Additionally, similar to Missouri, Senate Substitute for House

[75] See §§ 393.1700, 393.1705, and 393.1715.

[76] Kan. Stat. Ann. §66-1256 through 66-1262.

Bill 2072 was signed into law in April 2021 which allows securitization of coal generation plant costs after the retirement of the plants to accelerate the transition in Kansas from coal to renewable generation.[77]

Q: What are the fuel sources that Evergy currently relies primarily on for its generation portfolio?

A: As of December 2020, Evergy's total generation capacity consisted of 37 percent coal, 30 percent natural gas and oil, 25 percent wind, 7 percent nuclear and less than 1 percent solar, landfill gas and hydroelectric.[78] Further, Evergy's total generation (MWh) is 47.6 percent coal, 2.00 percent natural gas and oil, 25.6 percent nuclear and 25.1 percent renewable resources.[79].

Q: Is Evergy's generation portfolio currently in a state of transition?

A: Yes. As described in the 2021 Integrated Resource Plan ("IRP"), Evergy is taking near term actions to retire fossil fuel generation units and invest in new renewable generation. Specifically, Evergy expects to retire approximately 1,200 MWs of fossil fuel generation (i.e., coal, oil and natural gas) and add approximately 3,200 MWs of renewable generation (i.e., solar and wind) over the next ten years.[80] In fact, Evergy projects that it will retire nearly all remaining coal generation by 2040 with the goal of net-zero carbon emissions by 2045.

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77 Carpenter, Tim, "Kansas opts for bonding to help consumers with energy price shocks, transition from coal," Kansas Reflector, April 19, 2021.

78 Evergy, "Evergy 2021 Integrated Resource Plan Overview", at 4 (April 2021).

79 Evergy, Evergy Kansas and Evergy Metro 2021 Integrated Resource Plan, at 18 (May 2021).

80 Evergy, "Evergy 2021 Integrated Resource Plan Overview", at 4 (April 2021).

Q: How does Evergy's generation investment plan affect its business risk?

A: The Company's 2021 IRP includes significant investment in adding new wind and solar generation. This significant investment in renewable energy will require continued access to capital markets, which highlights the importance of granting Evergy Missouri Metro an allowed ROE and equity ratio that is sufficient to attract capital at reasonable terms.

Q: What are your conclusions regarding the perceived risks related to the fuel mix of Evergy's generation portfolio?

A: Evergy generates a significant percentage of its electricity using coal-fired generation. As renewable resources have become more economic, Evergy has planned to reduce customer costs by making sizable future capital expenditures to become less dependent on coal-fired generation. While the Company intends to improve fuel diversity over the long run, the plans will require continued access to capital markets to finance the new investments. The Company's existing generation portfolio and proposed generation investment plans increase the overall risk profile as compared with the proxy group.

VIII. CAPITAL STRUCTURE, COST OF DEBT, OVERALL RATE OF RETURN

A. Capital Structure

Q: Is the capital structure of the Company an important consideration in the determination of the appropriate ROE?

A: Yes, it is. Assuming other factors equal, a higher debt ratio increases the risk to investors. For debt holders, higher debt ratios result in a greater portion of the available cash flow being required to meet debt service, thereby increasing the risk associated with the payments on debt. The result of increased risk is a higher interest rate. The incremental

risk of a higher debt ratio is more significant for common equity shareholders, who are the residual claimants on the cash flow of the Company. Therefore, the greater the debt service requirement, the less cash flow is available for common equity holders.

Q: What is Evergy Missouri Metro's proposed capital structure?

A: As shown in Schedule AEB-13, the Company proposes to establish a projected capital structure as of the recommended true-up date of May 31, 2022, of 51.19 percent common equity and 48.81 percent long-term debt.

Q: Did you conduct any analysis to determine if the requested equity ratio was reasonable?

A: Yes, I did. I reviewed the Company's proposed capital structure and the capital structures of the utility operating subsidiaries of the proxy companies. Because the ROE is set based on the return that is derived from the risk-comparable proxy group, it is reasonable to look to the proxy group average capital structure to benchmark the equity ratio for the Company.

Q: Please discuss your analysis of the capital structures of the proxy group companies.

A: I calculated the mean proportions of common equity, long-term debt, and preferred equity over the most recent eight quarters[81] for each of the companies in my proxy group at the operating subsidiary level. My analysis of the capital structures of the companies in the proxy group is provided in Schedule AEB-14. As shown in that Schedule, the mean equity ratio for the proxy group at the operating utility company level is 52.86 percent. The

[81] The source data for this analysis is the operating company data provided in FERC Form 1 reports. Due to the timing of those filings, my average capital structure analysis uses the quarterly capital structures reported for the proxy group companies for the period from the third quarter of 2019 through the second quarter of 2021.

average equity ratios for the utility operating companies held by the proxy group range from a low of 46.97 percent to a high of 60.85 percent. Evergy Missouri Metro's proposed equity ratio of 51.19 percent is well within the range of equity ratios for the utility operating subsidiaries of the proxy group companies and is therefore reasonable.

Q: Are there other factors to be considered in setting the Company's capital structure?

A: Yes. The credit rating agencies' response to the Tax Cuts and Jobs Act of 2017 ("TCJA") must also be considered when determining the equity ratio. All three rating agencies have noted that the TCJA has negative implications for utility cash flows. S&P and FitchRatings have specifically identified increasing the equity ratio as one approach to ensure that utilities have sufficient cash flows following the tax cuts and the loss of bonus depreciation. Furthermore, Moody's downwardly revised the rating outlook for the entire utilities sector in June 2018 and has continued to downgrade the ratings of utilities based in part on the negative effects of the TCJA on cash flows.

Additionally, it is also important to consider the negative effects of COVID-19 on the credit metrics of utilities. In April 2020, Standard & Poor's downwardly revised the outlook on the entire North American utilities sector. It noted that COVID-19 would create incremental pressure on credit metrics and that a recession would lead to an increasing number of credit rating downgrades and negative outlooks.[82]

Finally, S&P has continued to maintain a negative outlook for the utility industry in 2021, noting that so far in 2021 downgrades have outpaced upgrades with the median rating of the industry approaching the BBB category which would be the first time that has ever

[82] Standard & Poor's Ratings Direct, COVID-19: The Outlook for North American Regulated Utilities Turns Negative, April 2, 2020.

occurred.[83] S&P expects continued pressure on cash flows over the near-term as utilities continue to increase leverage to fund capital expenditure plans necessary to reduce greenhouse gas emissions and to improve safety and reliability.[84] The continued concerns of credit ratings agencies over the negative effects of the TCJA, COVID-19 and increased capital expenditures underscores the importance of maintaining adequate cash flow metrics for the industry—and for Evergy Missouri Metro, in the context of this proceeding.

Q: Is there a relationship between the equity ratio and the authorized ROE?

A: Yes. The equity ratio is the primary indicator of financial risk for a regulated utility such as Evergy Missouri Metro. To the extent the equity ratio is reduced, it is necessary to increase the authorized ROE to compensate investors for the greater financial risk associated with a lower equity ratio.

Q: Will the capital structure and ROE authorized in these proceedings affect the Company's access to capital at reasonable rates?

A: Yes. The level of earnings authorized by the Commission directly affects the Company's ability to fund its operations with internally generated funds. Both bond investors and rating agencies expect a significant portion of ongoing capital investments to be financed with internally generated funds.

It also is important to realize that because a utility's investment horizon is very long, investors require the assurance of a sufficiently high return to satisfy the long-run financing requirements of the assets placed into service. Those assurances, which often are measured

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[83] S&P Global Ratings, "North American Regulated Utilities' Credit Quality Begins the Year on A Downward Path," April 7, 2021.

[84] Ibid.

by the relationship between internally generated cash flows and debt (or interest expense), depend quite heavily on the capital structure. As a consequence, both the ROE and capital structure are very important to debt and equity investors. Furthermore, considering the capital market conditions discussed in Section IV, the authorized ROE and capital structure take on even greater significance.

Q: What is your conclusion regarding an appropriate equity ratio for Evergy Missouri Metro?

A: Considering the actual capital structures of the proxy group operating companies, I believe that Evergy Missouri Metro's proposed common equity ratio of 51.19 percent is reasonable. The proposed equity ratio is below the average equity ratio established by the capital structures of the utility operating subsidiaries of the proxy companies. In addition, based on the cash flow concerns raised by credit rating agencies as a result of the TCJA, COVID-19 and increased capital expenditures, this proposal is reasonable.

B. Cost of Long-term Debt

Q: What is Evergy Missouri Metro's proposed cost of long-term debt?

A: As shown in Schedule AEB-13, the Company's cost of long-term debt is 3.92 percent.

Q: Have you evaluated the Company's proposed cost of long-term debt?

A: Yes, I have reviewed the embedded cost of long-term debt for Evergy Missouri Metro. My analysis evaluated the cost at the time of issuance for each of the issuances listed in Schedule AEB-13 in comparison with the market at that time. I compared the Moody's Baa and A-rated utility bond indexes to the embedded long-term debt costs. As shown in Schedule AEB-15, this analysis demonstrates that the embedded cost of debt is reasonable.

C. Overall Rate of Return

Q: Based on the Company's proposed capital structure, long-term debt cost and your recommended ROE, what is the recommended overall Rate of Return?

A: As shown in Figure 13 below, the recommended overall rate of return is 7.03 percent.

Figure 9: Overall Rate of Return

	Ratio	Cost Rate	Weighted Cost Rate
Long-Term Debt	48.81%	3.92%	1.91 %
Common Equity	51.19%	10.00%	5.12 %
Overall Rate of Return	100.00%		7.03 %

IX. CONCLUSIONS AND RECOMMENDATION

Q: What is your conclusion regarding a fair ROE for Evergy Missouri Metro?

A: Figure 14 below provides a summary of my analytical results. Based these results and the qualitative analyses presented in my Direct Testimony, a reasonable range of ROE results for Evergy Missouri Metro is from 9.90 percent to 10.50 percent and the Company's requested rate of return on common equity of 10.00 percent is reasonable taking into consideration Evergy Missouri Metro's company-specific risks relative to the proxy group, as discussed in my Direct Testimony. This ROE would enable the company to maintain its financial integrity and therefore its ability to attract capital at reasonable terms under a variety of economic and financial market conditions, while continuing to provide safe, reliable and affordable electric service to customers in Missouri.

Figure 10: Summary of Analytical Results

Constant Growth DCF - Median			
	Median Low	Median	Median High
30-Day Average	8.83%	9.58%	10.03%
90-Day Average	8.78%	9.36%	10.03%
180-Day Average	8.81%	9.38%	10.10%
Constant Growth DCF - Average w/ exclusions[85]			
	Mean Low	Mean	Mean High
30-Day Average	8.66%	9.49%	10.03%
90-Day Average	8.67%	9.50%	10.05%
180-Day Average	8.89%	9.58%	10.13%
CAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.62%	11.68%	11.80%
Bloomberg Beta	10.76%	10.87%	11.07%
Long-term Avg. Beta	9.60%	9.77%	10.08%
ECAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.95%	12.00%	12.09%
Bloomberg Beta	11.30%	11.39%	11.53%
Long-term Avg. Beta	10.43%	10.56%	10.79%
Treasury Yield Plus Risk Premium			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Results	9.49%	9.74%	10.17%

[85] Constant Growth DCF analysis - Average w/ Exclusions represents the DCF results excluding the results for individual companies that did not meet the minimum threshold of 7 percent.

Q: What is your conclusion with respect to Evergy Missouri Metro's proposed capital structure?

A: My conclusion is that Evergy Missouri Metro's proposal to establish a capital structure consisting of 51.19 percent common equity and 48.81 percent long-term debt is reasonable. This conclusion is supported by comparing this proposal to the capital structures of the companies in the proxy group and taking into consideration the effect of increased capital expenditures, and COVID-19 on cash flows.

Q: Does this conclude your Direct Testimony?

A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request for Authority to Implement A General Rate Increase for Electric Service	))))	Case No. ER-2022-0129

AFFIDAVIT OF ANN E. BULKLEY

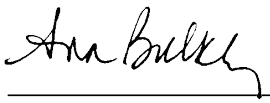
COMMONWEALTH OF MASSACHUSETTS)
) ss
COUNTY OF MIDDLESEX)

Ann E. Bulkley, being first duly sworn on his oath, states:

1. My name is Ann E. Bulkley and I am employed by Concentric Energy Advisors, Inc. as Senior Vice President.

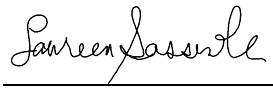
2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Evergy Missouri Metro consisting of eighty one (81) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.



Ann E. Bulkley

Subscribed and sworn before me this 31 day of December 2021.



Notary Public

My commission expires: October 19, 2023

CONCENTRIC ENERGY ADVISORS

ANN E. BULKLEY
Senior Vice President

Ms. Bulkley has more than two decades of management and economic consulting experience in the energy industry. Ms. Bulkley has extensive state and federal regulatory experience on both electric and natural gas issues including rate of return, cost of equity and capital structure issues. Ms. Bulkley has provided expert testimony on the cost of capital in nearly 100 regulatory proceedings before 32 state regulatory commissions and the Federal Energy Regulatory Commission. In addition to her regulatory experience, Ms. Bulkley has provided valuation and appraisal services for a variety of purposes including the sale or acquisition of utility assets, regulated ratemaking, ad valorem tax disputes, and other litigation purposes. In addition, Ms. Bulkley has experience in the areas of contract and business unit valuation, strategic alliances, market restructuring and regulatory and litigation support. Prior to joining Concentric, Ms. Bulkley held senior expertise-based consulting positions at several firms, including Reed Consulting Group and Navigant Consulting, Inc. where she specialized in valuation. Ms. Bulkley holds an M.A. in economics from Boston University and a B.A. in economics and finance from Simmons College. Ms. Bulkley is a Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.

REPRESENTATIVE PROJECT EXPERIENCE

Regulatory Analysis and Ratemaking

Ms. Bulkley has provided a range of advisory services relating to regulatory policy analysis and many aspects of utility ratemaking. Specific services have included: cost of capital and return on equity testimony, cost of service and rate design analysis and testimony, development of ratemaking strategies; development of merchant function exit strategies; analysis and program development to address residual energy supply and/or provider of last resort obligations; stranded costs assessment and recovery; performance-based ratemaking analysis and design; and many aspects of traditional utility ratemaking (e.g., rate design, rate base valuation).

Cost of Capital

Ms. Bulkley has provided expert testimony on the cost of capital and capital structure in nearly 100 regulatory proceedings before state and federal regulatory commissions in the United States.

Ratemaking

Ms. Bulkley has assisted several clients with analysis to support investor-owned and municipal utility clients in the preparation of rate cases. Sample engagements include:

- Assisted several investor-owned and municipal clients on cost allocation and rate design issues including the development of expert testimony supporting recommended rate alternatives.

Worked with Canadian regulatory staff to establish filing requirements for a rate review of a newly regulated electric utility. Analyzed and evaluated rate application. Attended hearings and conducted

investigation of rate application for regulatory staff. Prepared, supported and defended recommendations for revenue requirements and rates for the company. Developed rates for gas utility for transportation program and ancillary services.

Valuation

Ms. Bulkley has provided valuation services to utility clients, unregulated generators and private equity clients for a variety of purposes including ratemaking, fair value, ad valorem tax, litigation and damages, and acquisition. Ms. Bulkley's appraisal practices are consistent with the national standards established by the Uniform Standards of Professional Appraisal Practice.

Representative projects/clients have included:

- Prepared appraisals of electric utility transmission and distribution assets for ad valorem tax purposes.
- Prepared appraisals of several hydroelectric generating facilities for ad valorem tax purposes.
- Conducted appraisals of fossil fuel generating facilities for ad valorem tax purposes.
- Conducted appraisals of generating assets for the purposes of unwinding sale-leaseback agreements.
- Confidential Utility Client: Prepared valuation of fossil and nuclear generation assets for financing purposes for regulated utility client.
- Prepared a valuation of a portfolio of generation assets for a large energy utility to be used for strategic planning purposes. Valuation approach included an income approach, a real options analysis and a risk analysis.
- Assisted clients in the restructuring of NUG contracts through the valuation of the underlying assets. Performed analysis to determine the option value of a plant in a competitively priced electricity market following the settlement of the NUG contract.
- Prepared market valuations of several purchase power contracts for large electric utilities in the sale of purchase power contracts. Assignment included an assessment of the regional power market, analysis of the underlying purchase power contracts, a traditional discounted cash flow valuation approach, as well as a risk analysis. Analyzed bids from potential acquirers using income and risk analysis approached. Prepared an assessment of the credit issues and value at risk for the selling utility.
- Prepared appraisal of a portfolio of generating facilities for a large electric utility to be used for financing purposes.
- Prepared fair value rate base analyses for Northern Indiana Public Service Company for several electric rate proceedings. Valuation approaches used in this project included income, cost and comparable sales approaches.

- Prepared an appraisal of a fleet of fossil generating assets for a large electric utility to establish the value of assets transferred from utility property.
- Conducted due diligence on an electric transmission and distribution system as part of a buy-side due diligence team.
- Provided analytical support for and prepared appraisal reports of generation assets to be used in ad valorem tax disputes.
- Provided analytical support and prepared testimony regarding the valuation of electric distribution system assets in five communities in a condemnation proceeding.
- Prepared Feasibility Reports analyzing the expected net benefits resulting from municipal ownership of investor-owned utility operations.
- Prepared independent analyses of proposal for the proposed government condemnation of the investor-owned utilities in the State of Maine and the formation of a Public Power District.
- Valued purchase power agreements in the transfer of assets to a deregulated electric market.

Strategic and Financial Advisory Services

Ms. Bulkley has assisted several clients across North America with analytically based strategic planning, due diligence and financial advisory services.

Representative projects include:

- Preparation of feasibility studies for bond issuances for municipal and district steam clients.
- Assisted in the development of a generation strategy for an electric utility. Analyzed various NERC regions to identify potential market entry points. Evaluated potential competitors and alliance partners. Assisted in the development of gas and electric price forecasts. Developed a framework for the implementation of a risk management program.
- Assisted clients in identifying potential joint venture opportunities and alliance partners. Contacted interviewed and evaluated potential alliance candidates based on company-established criteria for several LDCs and marketing companies. Worked with several LDCs and unregulated marketing companies to establish alliances to enter into the retail energy market. Prepared testimony in support of several merger cases and participated in the regulatory process to obtain approval for these mergers.
- Assisted clients in several buy-side due diligence efforts, providing regulatory insight and developing valuation recommendations for acquisitions of both electric and gas properties.

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present)
Senior Vice President
Vice President
Assistant Vice President
Project Manager

Navigant Consulting, Inc. (1995 – 2002)
Project Manager

Cahners Publishing Company (1995)
Economist

EDUCATION

Boston University
M.A., Economics, 1995

Simmons College
B.A., Economics and Finance, 1991

CERTIFICATIONS

Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arizona Corporation Commission				
Southwest Gas Corporation	12/21	Southwest Gas Corporation	Docket No. G-01551A-21-0368	Return on Equity
Arizona Public Service Company	10/19	Arizona Public Service Company	Docket No. E-01345A-19-0236	Return on Equity
Tucson Electric Power Company	04/19	Tucson Electric Power Company	Docket No. E-01933A-19-0028	Return on Equity
Tucson Electric Power Company	11/15	Tucson Electric Power Company	Docket No. E-01933A-15-0322	Return on Equity
UNS Electric	05/15	UNS Electric	Docket No. E-04204A-15-0142	Return on Equity
UNS Electric	12/12	UNS Electric	Docket No. E-04204A-12-0504	Return on Equity
Arkansas Public Service Commission				
Oklahoma Gas and Electric Co	10/21	Oklahoma Gas and Electric Co	Docket No. D-18-046-FR	Return on Equity
Arkansas Oklahoma Gas Corporation	10/13	Arkansas Oklahoma Gas Corporation	Docket No. 13-078-U	Return on Equity
California Public Utilities Commission				
San Jose Water Company	05/21	San Jose Water Company	A2105004	Return on Equity
Colorado Public Utilities Commission				
Public Service Company of Colorado	07/21	Public Service Company of Colorado	21AL-0317E	Return on Equity
Public Service Company of Colorado	02/20	Public Service Company of Colorado	20AL-0049G	Return on Equity
Public Service Company of Colorado	05/19	Public Service Company of Colorado	19AL-0268E	Return on Equity
Public Service Company of Colorado	01/19	Public Service Company of Colorado	19AL-0063ST	Return on Equity
Atmos Energy Corporation	05/15	Atmos Energy Corporation	Docket No. 15AL-0299G	Return on Equity
Atmos Energy Corporation	04/14	Atmos Energy Corporation	Docket No. 14AL-0300G	Return on Equity
Atmos Energy Corporation	05/13	Atmos Energy Corporation	Docket No. 13AL-0496G	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Connecticut Public Utilities Regulatory Authority				
United Illuminating	05/21	United Illuminating	Docket No. 17-12-03RE11	Return on Equity
Connecticut Water Company	01/21	Connecticut Water Company	Docket No. 20-12-30	Return on Equity
Connecticut Natural Gas Corporation	06/18	Connecticut Natural Gas Corporation	Docket No. 18-05-16	Return on Equity
Yankee Gas Services Co. d/b/a Eversource Energy	06/18	Yankee Gas Services Co. d/b/a Eversource Energy	Docket No. 18-05-10	Return on Equity
The Southern Connecticut Gas Company	06/17	The Southern Connecticut Gas Company	Docket No. 17-05-42	Return on Equity
The United Illuminating Company	07/16	The United Illuminating Company	Docket No. 16-06-04	Return on Equity
Federal Energy Regulatory Commission				
Florida Gas Transmission	02/21	Florida Gas Transmission	Docket No. RP21-441	Return on Equity
TransCanyon	01/21	TransCanyon	Docket No. ER21-1065	Return on Equity
Duke Energy	12/20	Duke Energy	Docket No. EL21-9-000	Return on Equity
Wisconsin Electric Power Company	08/20	Wisconsin Electric Power Company	Docket No. EL20-57-000	Return on Equity
Panhandle Eastern Pipe Line Company, LP	10/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-78-000 RP19-78-001	Return on Equity
Panhandle Eastern Pipe Line Company, LP	08/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-1523	Return on Equity
Sea Robin Pipeline Company LLC	11/18	Sea Robin Pipeline Company LLC	Docket# RP19-352-000	Return on Equity
Tallgrass Interstate Gas Transmission	10/15	Tallgrass Interstate Gas Transmission	RP16-137	Return on Equity
Idaho Public Utilities Commission				
PacifiCorp d/b/a Rocky Mountain Power	05/21	PacifiCorp d/b/a Rocky Mountain Power	Case No. PAC-E-21-07	Return on Equity
Illinois Commerce Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
North Shore Gas Company	02/21	North Shore Gas Company	No. 20-0810	Return on Equity
Indiana Utility Regulatory Commission				
Indiana Michigan Power Co.	07/21	Indiana Michigan Power Co.	IURC Cause No. 45576	Return on Equity
Indiana Gas Company Inc.	12/20	Indiana Gas Company Inc.	IURC Cause No. 45468	Return on Equity
Southern Indiana Gas and Electric Company	10/20	Southern Indiana Gas and Electric Company	IURC Cause No. 45447	Return on Equity
Indiana and Michigan American Water Company	09/18	Indiana and Michigan American Water Company	IURC Cause No. 45142	Return on Equity
Indianapolis Power and Light Company	12/17	Indianapolis Power and Light Company	Cause No. 45029	Fair Value
Northern Indiana Public Service Company	09/17	Northern Indiana Public Service Company	Cause No. 44988	Fair Value
Indianapolis Power and Light Company	12/16	Indianapolis Power and Light Company	Cause No.44893	Fair Value
Northern Indiana Public Service Company	10/15	Northern Indiana Public Service Company	Cause No. 44688	Fair Value
Indianapolis Power and Light Company	09/15	Indianapolis Power and Light Company	Cause No. 44576 Cause No. 44602	Fair Value
Kokomo Gas and Fuel Company	09/10	Kokomo Gas and Fuel Company	Cause No. 43942	Fair Value
Northern Indiana Fuel and Light Company, Inc.	09/10	Northern Indiana Fuel and Light Company, Inc.	Cause No. 43943	Fair Value
Iowa Department of Commerce Utilities Board				
Iowa-American Water Company	08/20	Iowa-American Water Company	Docket No. RPU-2020-0001	Return on Equity
Kansas Corporation Commission				
Atmos Energy Corporation	08/15	Atmos Energy Corporation	Docket No. 16-ATMG-079-RTS	Return on Equity
Kentucky Public Service Commission				
Kentucky American Water Company	11/18	Kentucky American Water Company	Docket No. 2018-00358	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Maine Public Utilities Commission				
Central Maine Power	10/18	Central Maine Power	Docket No. 2018-194	Return on Equity
Maryland Public Service Commission				
Maryland American Water Company	06/18	Maryland American Water Company	Case No. 9487	Return on Equity
Massachusetts Appellate Tax Board				
Hopkinton LNG Corporation	03/20	Hopkinton LNG Corporation	Docket No.	Valuation of LNG Facility
FirstLight Hydro Generating Company	06/17	FirstLight Hydro Generating Company	Docket No. F-325471 Docket No. F-325472 Docket No. F-325473 Docket No. F-325474	Valuation of Electric Generation Assets
Massachusetts Department of Public Utilities				
National Grid USA	11/20	Boston Gas Company	DPU 20-120	Return on Equity
Berkshire Gas Company	05/18	Berkshire Gas Company	DPU 18-40	Return on Equity
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Michigan Public Service Commission				
Michigan Gas Utilities Corporation	03/21	Michigan Gas Utilities Corporation	Case No. U-20718	Return on Equity
Wisconsin Electric Power Company	12/11	Wisconsin Electric Power Company	Case No. U-16830	Return on Equity
Michigan Tax Tribunal				
New Covert Generating Co., LLC.	03/18	The Township of New Covert Michigan	MTT Docket No. 000248TT and 16-001888-TT	Valuation of Electric Generation Assets
Covert Township	07/14	New Covert Generating Co., LLC.	Docket No. 399578	Valuation of Electric Generation Assets
Minnesota Public Utilities Commission				
CenterPoint Energy Resources	11/21	CenterPoint Energy Resources	D-G-008/GR-21-435	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Allete, Inc. d/b/a Minnesota Power	11/21	Allete, Inc. d/b/a Minnesota Power	D-E-015/GR-21-630	Return on Equity
Otter Tail Power Company	11/20	Otter Tail Power Company	E017/GR-20-719	Return on Equity
Allete, Inc. d/b/a Minnesota Power	11/19	Allete, Inc. d/b/a Minnesota Power	E015/GR-19-442	Return on Equity
CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	10/19	CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	G-008/GR-19-524	Return on Equity
Great Plains Natural Gas Co.	09/19	Great Plains Natural Gas Co.	Docket No. G004/GR-19-511	Return on Equity
Minnesota Energy Resources Corporation	10/17	Minnesota Energy Resources Corporation	Docket No. G011/GR-17-563	Return on Equity
Missouri Public Service Commission				
Ameren Missouri	03/21	Ameren Missouri	Docket No. ER-2021-0240 Docket No. GR-2021-0241	Return on Equity
Missouri American Water Company	06/20	Missouri American Water Company	Case No. WR-2020-0344 Case No. SR-2020-0345	Return on Equity
Missouri American Water Company	06/17	Missouri American Water Company	Case No. WR-17-0285 Case No. SR-17-0286	Return on Equity
Montana Public Service Commission				
Montana-Dakota Utilities Co.	06/20	Montana-Dakota Utilities Co.	D2020.06.076	Return on Equity
Montana-Dakota Utilities Co.	09/18	Montana-Dakota Utilities Co.	D2018.9.60	Return on Equity
New Hampshire - Board of Tax and Land Appeals				
Public Service Company of New Hampshire d/b/a Eversource Energy	11/19 12/19	Public Service Company of New Hampshire d/b/a Eversource Energy	Master Docket No. 28873-14-15-16-17PT	Valuation of Utility Property and Generating Assets

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
New Hampshire Public Utilities Commission				
Public Service Company of New Hampshire	05/19	Public Service Company of New Hampshire	DE-19-057	Return on Equity
New Hampshire-Merrimack County Superior Court				
Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	04/18	Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	220-2012-CV-1100	Valuation of Utility Property
New Hampshire-Rockingham Superior Court				
Eversource Energy	05/18	Public Service Commission of New Hampshire	218-2016-CV-00899 218-2017-CV-00917	Valuation of Utility Property
New Jersey Board of Public Utilities				
Public Service Electric and Gas Company	10/20	Public Service Electric and Gas Company	EO18101115	Return on Equity
New Jersey American Water Company, Inc.	12/19	New Jersey American Water Company, Inc.	WR19121516	Return on Equity
Public Service Electric and Gas Company	04/19	Public Service Electric and Gas Company	EO18060629 GO18060630	Return on Equity
Public Service Electric and Gas Company	02/18	Public Service Electric and Gas Company	GR17070776	Return on Equity
Public Service Electric and Gas Company	01/18	Public Service Electric and Gas Company	ER18010029 GR18010030	Return on Equity
New Mexico Public Regulation Commission				
Southwestern Public Service Company	07/19	Southwestern Public Service Company	19-00170-UT	Return on Equity
Southwestern Public Service Company	10/17	Southwestern Public Service Company	Case No. 17-00255-UT	Return on Equity
Southwestern Public Service Company	12/16	Southwestern Public Service Company	Case No. 16-00269-UT	Return on Equity
Southwestern Public Service Company	10/15	Southwestern Public Service Company	Case No. 15-00296-UT	Return on Equity
Southwestern Public Service Company	06/15	Southwestern Public Service Company	Case No. 15-00139-UT	Return on Equity
New York State Department of Public Service				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Corning Natural Gas Corporation	07/21	Corning Natural Gas Corporation	Case No. 21-G-0394	Return on Equity
Central Hudson Gas and Electric Corporation	08/20	Central Hudson Gas and Electric Corporation	Electric 20-E-0428 Gas 20-G-0429	Return on Equity
Niagara Mohawk Power Corporation	07/20	National Grid USA	Case No. 20-E-0380 20-G-0381	Return on Equity
Corning Natural Gas Corporation	02/20	Corning Natural Gas Corporation	Case No. 20-G-0101	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/19	New York State Electric and Gas Company Rochester Gas and Electric	19-E-0378 19-G-0379 19-E-0380 19-G-0381	Return on Equity
Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	04/19	Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	19-G-0309 19-G-0310	Return on Equity
Central Hudson Gas and Electric Corporation	07/17	Central Hudson Gas and Electric Corporation	Electric 17-E-0459 Gas 17-G-0460	Return on Equity
Niagara Mohawk Power Corporation	04/17	National Grid USA	Case No. 17-E-0238 17-G-0239	Return on Equity
Corning Natural Gas Corporation	06/16	Corning Natural Gas Corporation	Case No. 16-G-0369	Return on Equity
National Fuel Gas Company	04/16	National Fuel Gas Company	Case No. 16-G-0257	Return on Equity
KeySpan Energy Delivery	01/16	KeySpan Energy Delivery	Case No. 15-G-0058 Case No. 15-G-0059	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/15	New York State Electric and Gas Company Rochester Gas and Electric	Case No. 15-E-0283 Case No. 15-G-0284 Case No. 15-E-0285 Case No. 15-G-0286	Return on Equity
North Dakota Public Service Commission				
Montana-Dakota Utilities Co.	08/20	Montana-Dakota Utilities Co.	C-PU-20-379	Return on Equity
Northern States Power Company	12/12	Northern States Power Company	C-PU-12-813	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Northern States Power Company	12/10	Northern States Power Company	C-PU-10-657	Return on Equity
Oklahoma Corporation Commission				
Arkansas Oklahoma Gas Corporation	01/13	Arkansas Oklahoma Gas Corporation	Cause No. PUD 201200236	Return on Equity
Oregon Public Service Commission				
PacifiCorp d/b/a Pacific Power & Light	02/20	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-374	Return on Equity
Pennsylvania Public Utility Commission				
American Water Works Company Inc.	04/20	Pennsylvania-American Water Company	Docket No. R-2020-3019369 (water) Docket No. R-2020-3019371 (wastewater)	Return on Equity
American Water Works Company Inc.	04/17	Pennsylvania-American Water Company	Docket No. R-2017-2595853	Return on Equity
South Dakota Public Utilities Commission				
Northern States Power Company	06/14	Northern States Power Company	Docket No. EL14-058	Return on Equity
Texas Public Utility Commission				
Southwestern Public Service Commission	08/19	Southwestern Public Service Commission	Docket No. D-49831	Return on Equity
Southwestern Public Service Company	01/14	Southwestern Public Service Company	Docket No. 42004	Return on Equity
Utah Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	05/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20-035-04	Return on Equity
Virginia State Corporation Commission				
Virginia American Water Company, Inc.	11/21	Virginia American Water Company, Inc.	Docket No. PUR-2021-00255	Return on Equity
Virginia American Water Company, Inc.	11/18	Virginia American Water Company, Inc.	Docket No. PUR-2018-00175	Return on Equity
Washington Utilities Transportation Commission				
Cascade Natural Gas Corporation	06/20	Cascade Natural Gas Corporation	Docket No. UG-200568	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
PacifiCorp d/b/a Pacific Power & Light	12/19	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-191024	Return on Equity
Cascade Natural Gas Corporation	04/19	Cascade Natural Gas Corporation	Docket No. UG-190210	Return on Equity
West Virginia Public Service Commission				
West Virginia American Water Company	04/21	West Virginia American Water Company	Case No. 21-02369-W-42T	Return on Equity
West Virginia American Water Company	04/18	West Virginia American Water Company	Case No. 18-0573-W-42T Case No. 18-0576-S-42T	Return on Equity
Wisconsin Public Service Commission				
Wisconsin Electric Power Company and Wisconsin Gas LLC	03/19	Wisconsin Electric Power Company and Wisconsin Gas LLC	Docket No. 05-UR-109	Return on Equity
Wisconsin Public Service Corp.	03/19	Wisconsin Public Service Corp.	6690-UR-126	Return on Equity
Wyoming Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	03/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20000-578-ER-20	Return on Equity
Montana-Dakota Utilities Co.	05/19	Montana-Dakota Utilities Co.	30013-351-GR-19	Return on Equity