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**MISSOURI PUBLIC SERVICE COMMISSION**  
**FINANCIAL AND BUSINESS ANALYSIS DIVISION**  
**FINANCIAL ANALYSIS DEPARTMENT**

**DIRECT TESTIMONY**  
**OF**  
**SEOUNG JOUN WON, PhD**

**Evergy Metro, Inc., d/b/a Evergy Missouri Metro**  
**Case No. ER-2022-0129**

**Evergy Missouri West, Inc., d/b/a Evergy Missouri West**  
**Case No. ER-2022-0130**

*Jefferson City, Missouri*  
*June 2022*

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1 of my educational background and occupational experience appears in Appendix 1, attached to  
2 this Direct Testimony.

3 Q. Have you previously filed testimony before the Commission?

4 A. Yes, I have appeared previously before the Commission. I have testified on rate  
5 of return, cost of capital, capital structure, finance issuance, feasibility analysis, valuation  
6 analysis on merger and acquisitions etc. Please refer to Appendix 1, attached to this Direct  
7 Testimony, for a list of my testimony, recommendations, or memorandums previously filed  
8 with the Commission and the associated issues.

9 Q. On behalf of whom are you testifying in this proceeding?

10 A. I am testifying in this Direct Testimony before the Commission on behalf of the  
11 Missouri Public Service Commission Staff (“Staff”).

12 Q. What is the purpose of your direct testimony?

13 A. In this testimony, Staff presents evidence and provides a recommendation  
14 regarding the appropriate rate of return (“ROR”) to be used in establishing the electric service  
15 rates of Evergy Metro, Inc., d/b/a Evergy Missouri Metro (“Evergy Metro” or “EMM”) and  
16 Evergy Missouri West, Inc., d/b/a Evergy Missouri West (“Evergy West” or “EMW”),  
17 subsidiaries of Evergy, Inc. (“Evergy Inc.” or “Evergy”).

18 Staff’s analyses and conclusions are supported by the data presented in  
19 Schedules SJW-d1 through SJW-d17 contained within Confidential Appendix 2. Staff’s  
20 workpapers will be provided to the parties at the time of the filing of this Direct Testimony.  
21 Staff will make any additional source documents of specific interest available upon the request  
22 of any party to this case or the Commission.

1 **I. EXECUTIVE SUMMARY**

2 Q. Please provide the summary of your methodology and findings concerning the  
3 ROR that should be utilized in setting rates for Evergy Metro’s and Evergy West’s electric  
4 utility operations in this proceeding.

5 A. Staff estimated the market-based cost of common equity (“COE”) for Evergy  
6 Metro and Evergy West using a comparative COE analysis. Staff’s analysis takes into account  
7 changes in economic and capital market conditions over time by employing two widely-used  
8 and well-respected COE estimation methodologies: the discounted cash flow model (“DCF”)  
9 and the capital asset pricing model (“CAPM”).<sup>1</sup> The comparative COE analysis method  
10 allowed Staff to calculate the change in authorized return on equity (“ROE”) based on the  
11 change in its COE estimate from period to period by using the Commission’s most recent  
12 decision.<sup>2</sup> The Commission’s most recent, fully-litigated electric rate case is The Empire  
13 District Electric Company’s rate case, Case No. ER-2019-0374, (“2019 Empire rate case”).<sup>3</sup>  
14 By using the decision made by the Commission in the 2019 Empire rate case as a benchmark,  
15 Staff calculated a reasonable range of authorized ROE and recommended a just and reasonable  
16 ROE for Evergy Metro and Evergy West.<sup>4</sup>

17 Staff also considered the current economic and financial market conditions when  
18 recommending an ROE. The current utility COE estimates are unusually and unsustainably  
19 high due to the effects of the coronavirus pandemic (“COVID-19”). When COVID-19 hit in

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<sup>1</sup> *Ass’n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 (2019).

<sup>2</sup> The most recent Evergy Metro and Evergy West general rate case, Cases No. ER-2018-0145 and ER-2018-0146, was settled with no authorized ROE.

<sup>3</sup> *Amended Report and Order* issued July 23, 2020, in Case No. ER-2019-0374.

<sup>4</sup> COE is the return required by investors; ROE is the return set by a regulatory utility commission. Although some experts contend that COE and ROE are synonymous, Staff’s position is that they need not be. Observed utility COEs have been generally significantly lower than ROEs in recent years.

1 2020, it caused massive volatility in the economy and financial market.<sup>5</sup> Gross domestic  
2 product (“GDP”) fell sharply, followed by an equally sharp recovery through 2021.<sup>6</sup> The  
3 recovery from the COVID-19 pandemic is spurring fears of higher inflation and, consequently,  
4 higher market risk.<sup>7</sup> Inflation fears can increase market risk for utilities as investors believe  
5 that regulators will not adjust revenues fast enough to compensate for rising input costs.<sup>8</sup> Staff  
6 agrees with the Federal Reserve (“Fed”) that the current risk assessment could project a higher  
7 inflation than will actually happen in the future. The risks include (1) ongoing supply  
8 bottlenecks and rising energy and commodity prices, both of which were exacerbated by the  
9 Russian invasion of Ukraine; (2) recent COVID-19 related lockdowns in China that had the  
10 potential to further disrupt supply chains; and (3) the possibility that longer-run inflation  
11 expectations might become unanchored.<sup>9</sup>

12 Q. Please summarize the result of your comparative COE analysis and  
13 recommended ROR.

14 A. In the *Amended Report and Order* in Case No. ER-2019-0374, the Commission  
15 found that a 9.25% ROE was fair and reasonable for purposes of calculating the revenue  
16 requirement for The Empire District Electric Company (“Empire”).<sup>10</sup> For the current rate cases,  
17 Staff recommends that the Commission set Evergy Metro and Evergy West’s authorized ROE  
18 at 9.62%, the midpoint of a reasonable range of 9.37% and 9.87%.<sup>11</sup> Staff considered the

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<sup>5</sup> Federal Reserve Economic Data, retrieved March 23, 2022, <https://fred.stlouisfed.org/series/VIXCLS>.

<sup>6</sup> Bureau of Economic Analysis, U.S. Department of Commerce, retrieved May 25, 2022,  
<https://www.bea.gov/news/2022/gross-domestic-product-first-quarter-2022-advance-estimate>.

<sup>7</sup> S&P Global, Markets in Motion, retrieved March 23, 2022,  
<https://www.spglobal.com/en/research-insights/featured/inflation>.

<sup>8</sup> Hartford Funds, Insight, Which Equity Sectors Can Combat Higher Inflation?, retrieved March 23, 2022,  
<https://www.hartfordfunds.com/dam/en/docs/pub/whitepapers/WP597.pdf>.

<sup>9</sup> Federal Reserve issues Federal Open Market Committee (FOMC) statement, published April 6, 2022, and,  
retrieved April 23, 2022, <https://www.federalreserve.gov/monetarypolicy/fomcminutes20220316.htm>.

<sup>10</sup> On page 38, *Amended Report and Order* issued July 23, 2020, in Case No. ER-2019-0374.

<sup>11</sup> Schedule SJW-d16, Won’s Direct Testimony.

1 current high inflation rate and the expected rise in interest rates in making these  
2 recommendations. Staff's recommended authorized ROE takes into consideration that electric  
3 utilities' COE estimates rose by approximately 37 basis points since the period of the 2019  
4 Empire rate case.<sup>12</sup> Staff's recommendation of a 9.62% authorized ROE will fairly compensate  
5 Evergy Metro and Evergy West for its current market COE and balance the interests of all  
6 stakeholders, particularly considering that the current market COE estimates for Evergy Metro  
7 and Evergy West are presently in the range of 7.40% to 8.96% (see Schedule SJW-d13).

8 Staff also recommends that the Commission use Evergy' Inc.'s, Evergy Metro's and  
9 Evergy West's target capital structure of 50.00% common equity and 50.00% long-term debt  
10 for purposes of setting ROR in this proceeding.<sup>13</sup> Consistent with Staff's capital structure  
11 recommendation, Staff also recommends at this time that the Commission use Evergy Metro's  
12 and Evergy West's proposed embedded cost of debt of 3.92% and 3.79%, resulting in the  
13 overall midpoint ROR of 6.77% and 6.70%, taken from the calculated range of 6.65% to 6.90%  
14 and 6.58% to 6.83%, respectively (see Schedule SJW-d16).

15 Q. Please explain how your direct testimony is organized.

16 A. Staff's testimony is organized into five sections. First, Staff discusses the  
17 applicable regulatory principles concerning cost of capital and ROR analysis that supports the  
18 just and reasonable rates for Evergy Metro and Evergy West's electric utility service. Second,  
19 Staff reviews the current economic environment and capital market conditions. Third, Staff  
20 presents the corporate analysis of Evergy Metro and Evergy West including Evergy Inc. and its  
21 parent companies' business profile and credit ratings. Fourth, Staff explains its cost of capital

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<sup>12</sup> Schedule SJW-d15, Won's Direct Testimony.

<sup>13</sup> Staff Data Request No. 0120, Case Nos. ER-2022-0129 and ER-2022-0130.

1 and ROR analysis using Evergy Metro and Evergy West's capital structure. Fifth, Staff  
2 concludes with a presentation of Staff's recommended ROE, cost of debt and capital structure  
3 for Evergy Metro and Evergy West's allowed ROR for ratemaking purpose.

## 4 **II. REGULATORY PRINCIPLES**

5 Q. Please describe the regulatory principles that guide the determination of a just  
6 and reasonable ROR for a regulated utility.

7 A. The determination of a fair ROR is guided by principles of economic and  
8 financial theory and by certain minimum Constitutional standards. Investor-owned public  
9 utilities, such as Evergy Metro and Evergy West, are private property that the state may not  
10 confiscate without appropriate compensation. The United States Supreme Court has described  
11 the minimum characteristics of a constitutionally-acceptable ROR in two frequently-cited  
12 cases: *Bluefield Water Works & Improvement Co. v. Public Service Commission of West*  
13 *Virginia*, and *Federal Power Commission v. Hope Electric Co.*<sup>14</sup>

14 From these two decisions, Staff derives and applies the following principles to guide it  
15 in recommending a just and reasonable ROR:

- 16 1. A return consistent with returns of investments of comparable risk;
- 17 2. A return that allows the utility to attract capital; and
- 18 3. A return sufficient to assure confidence in the utility's financial integrity.

19 Embodied in these three principles is the economic theory of the opportunity cost  
20 of investment. The opportunity cost of investment is the return that investors forego in order

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<sup>14</sup> *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679, 43 S.Ct. 675, 67 L.Ed. 1176 (1923); *Federal Power Commission v. Hope Electric Co.*, 320 U.S. 591, 64 S.Ct. 281, 88 L.Ed. 333 (1943).



1 to invest in similar risk investment opportunities that vary depending on market and  
2 business conditions.

3 Methodologies of financial analysis have advanced greatly since the *Bluefield* and *Hope*  
4 decisions.<sup>15</sup> Additionally, today's utilities compete for capital in a global market rather than a  
5 local market. Nonetheless, the parameters defined in those cases are readily met using current  
6 methods and theory. The principle of commensurate return is based on the concept of risk.  
7 Financial theory holds that the return an investor may expect is reflective of the degree of risk  
8 inherent in the investment; risk being a measure of the likelihood that an investment will not  
9 perform as expected by that investor. Any line of business carries with it its own risks and it  
10 follows, therefore, that the return Evergy Metro and Evergy West's shareholders may expect is  
11 equal to that required by shareholders of comparable-risk utility companies.

12 Q. How do you estimate a just and reasonable authorized ROE regarding  
13 commensurate return and comparable-risk?

14 A. Staff employed a comparative COE analysis for authorized ROE estimation.  
15 COE is a market-determined, minimum return investors are willing to accept for their  
16 investment in a company compared to returns on other available investments. Using market  
17 data, COE can be directly estimated. An authorized ROE, on the other hand, is a  
18 Commission-determined return granted to monopoly industries, allowing them the opportunity  
19 to earn just and reasonable compensation for their investments in the rate base. Stock market  
20 data cannot directly determine an authorized ROE. However, Staff can estimate a just and  
21 reasonable authorized ROE anticipated by the financial market by using changes in estimated

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<sup>15</sup> Neither the Discounted Cash Flow ("DCF") nor the Capital Asset Pricing Model ("CAPM") methods were in use when those decisions were issued.

1 COEs over different periods of time, that are measured for a comparable group of companies  
2 having similar risks.

3 Q. What are your conclusions regarding the regulatory principles that guide the  
4 determination of a just and reasonable ROE in this proceeding?

5 A. Staff relied primarily on the analysis of a comparable group of companies to  
6 estimate the COE for Evergy Metro and Evergy West, applying this comparable-company  
7 approach through the use of both the DCF method and the CAPM analysis. Properly used and  
8 applied in appropriate circumstances, both the DCF and the CAPM can provide accurate  
9 estimates of utilities' COE. It is a well-accepted economic theory that a company that earns its  
10 cost of capital will be able to attract capital and maintain its financial integrity. Therefore,  
11 Staff's recommendation of authorized ROE based on the COE derived from the comparison of  
12 peer companies, is consistent with the principles set forth in *Bluefield* and *Hope*.

13 **III. MARKET CONDITIONS**

14 Q. Why is consideration of economic and capital market conditions important for  
15 ROE analysis?

16 A. Determining whether a cost of capital estimate is just and reasonable requires a  
17 good understanding of current economic and capital market conditions, with the former having  
18 a significant impact on the latter. In the comparative COE analysis, input values for COE  
19 estimate models change from the former time-period to the latter time-period to reflect the  
20 current economic and capital market conditions. With this in mind, Staff emphasizes that an  
21 estimate of a utility's COE and authorized ROE recommendations should pass the "common  
22 sense" test when considering the broader current economic and capital market conditions.

1           **1.       Economic Condition**

2           Q.       Please summarize the current economic conditions regarding COE.

3           A.       After recovering from the COVID-19 pandemic recession in 2021, economic  
4 activity edged down the first quarter 2022 although household spending and business fixed  
5 investment remained strong. The unemployment rate has declined, but inflation remains  
6 elevated reflecting supply and demand imbalances related to the pandemic as well as higher  
7 energy prices. The invasion of Ukraine by Russia is creating upward pressure on inflation.  
8 COVID-19 related lockdowns in China are creating supply chain disruptions. The impact of  
9 these issues for the U.S. economy are highly uncertain.<sup>16</sup> Effective May 5, 2022, the Fed  
10 increased the federal funds target range to 0.75% to 1.00%.<sup>17</sup> Fed anticipates that ongoing  
11 increases to the target range will be appropriate in the future.<sup>18</sup>

12           The price investors are willing to pay for a share of stock includes the expectation of  
13 high inflation and potential increases to the federal funds rate and has already been factored in  
14 since the beginning of 2021.<sup>19</sup> This means that lower real returns from investments are already  
15 reflected in the current financial market. Therefore, high inflation rates do not necessarily mean  
16 higher cost of capital than presently reflected.

17           Q.       Please explain the current economic conditions using economic indicators.

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<sup>16</sup> Federal Reserve issues Federal Open Market Committee (FOMC) Statement, published May 4, 2022 and retrieved May 6, 2022, <https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504a.htm>.

<sup>17</sup> Federal Reserve issues Implementation Note issued May 4, 2022 and retrieved May 6, 2022, <https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504a1.htm#:~:text=%22Effective%20May%205%2C%202022%2C%20the%20Federal%20Open%20Market,a%20target%20range%20of%203%2F4%20to%201%20percent>.

<sup>18</sup> Federal Reserve issues Federal Open Market Committee (FOMC) Statement, published May 4, 2022 and retrieved May 6, 2022, <https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504a.htm>.

<sup>19</sup> Forbes, Jonathan Ponciano, Here's The Biggest Risk For The Stock Market This Year, According To Morgan Stanley Experts, Published January 4, 2021, retrieved November 22, 2021, <https://www.forbes.com/sites/jonathanponciano/2021/01/04/biggest-risk-for-stock-market-this-year/?sh=31bfd21f80e>.

1           A       Since 2020, the economy experienced enormous volatility. Real GDP fell by  
2 32.9% (on an annual basis) in the second quarter of 2020, after a 5% decline in the first quarter,  
3 and then the third and fourth quarters of 2020 saw real GDP increase by 33.4% and 4.3%,  
4 respectively.<sup>20</sup> Subsequently, the first, second, third and fourth quarters of 2021 had real GDP  
5 growths of 6.3%, 6.7%, 2.3%, and 6.9%, respectively. Real GDP decreased at an annual rate  
6 of negative 1.4% in the first quarter of 2022.<sup>21</sup> The Congressional Budget Office (“CBO”)  
7 projects a real GDP growth rate of 3.1% and 2.2% for 2022 and 2023, respectively.<sup>22</sup> The Fed  
8 projects a long-term real GDP growth rate of 1.6% to 2.2%.<sup>23</sup> The U.S. Energy Information  
9 Administration (“EIA”) projects a long-term real GDP growth rate of 2.2%.<sup>24</sup> In May 2022,  
10 the CBO projected a nominal GDP growth rate of 3.90%, up from the 3.80% it previously  
11 projected in February 2021.<sup>25</sup>

12           Regarding Covid-19, there has been an increased availability of vaccines, increased  
13 vaccination rates, and the Fed has given assurances that indicators of economic activity and  
14 employment have continued to strengthen.<sup>26</sup> During economic recovery, utilities tend to  
15 underperform the broader market which, consequently, pushes COE for utilities higher.  
16 Compounded by the current fears of inflation, the share prices of utility equities are currently

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<sup>20</sup> Bureau of Economic Analysis, retrieved in November 19, 2021,

<https://www.bea.gov/news/2021/gross-domestic-product-first-quarter-2021-advance-estimate>.

<sup>21</sup> Bureau of Economic Analysis, Gross Domestic Product, First Quarter 2022, retrieved April 30, 2022,  
<https://www.bea.gov/news/glance>.

<sup>22</sup> Congressional Budget Office, An Update to the Budget and Economic Outlook: 2022 to 2032,  
<https://www.cbo.gov/system/files/2022-05/57950-Outlook.pdf>.

<sup>23</sup> FOMC, Summary of Economic Projections, published March 16, 2022,  
<https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20220316.pdf>.

<sup>24</sup> Energy Information Administration, retrieved in April 23, 2022.  
<https://www.eia.gov/outlooks/aeo/data/browser/#/?id=18-AEO2022&sourcekey=0>.

<sup>25</sup> Congressional Budget Office, An Update to the Budget and Economic Outlook: 2022 to 2032,  
<https://www.cbo.gov/system/files/2022-05/57950-Outlook.pdf>.

<sup>26</sup> Federal Reserve, Press Release, March 16, 2022,  
<https://www.federalreserve.gov/monetarypolicy/files/monetary20220316a1.pdf>.

1 depressed and COEs are elevated. All else the same, high inflation expectations lead to higher  
2 interest rates. The Fed still expects inflation to slow down to 2.7% and 2.3% in 2023 and 2024,  
3 respectively, above the Fed's long-term target of 2.0%.<sup>27</sup>

4 With COVID-19 causing widespread economic shutdown and pushing interest rates  
5 higher, the Fed intervened in March 2020 to cut the federal discount rate to a range of 0% to  
6 0.25%.<sup>28</sup> On May 4, 2022, to fight against the worst inflation in 40 years, the Fed increased the  
7 target range for the federal funds rate at 0.75% to 1.00% and anticipates that ongoing increases  
8 in the target range will be appropriate.<sup>29</sup> The Fed already started to reduce the monthly pace of  
9 its net asset purchases due to the progress of the economy.<sup>30</sup> The aggregate effect of the Fed's  
10 actions was an incline in 30-year Treasury yields from 1.69% on December 3, 2021 to a high  
11 of 3.23% on May 6, 2022.<sup>31</sup>

12 Figure 1 compares 30-year Treasury yields and the U.S. inflation rate from January 2019  
13 through March 2022. The effects of COVID-19, such as high inflation fears, have increased  
14 market risk and, consequently, pushed utilities' COE higher. As the Fed signals that it is about  
15 to start scaling back on the COVID-19 economic measures through tapering, it is expected that

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<sup>27</sup> FOMC, Summary of Economic Projections, published March 16, 2022,  
<https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20220316.pdf>.

<sup>28</sup> Reuters, Federal Reserve statement - lowering federal funds rate to 0 to .25%, published March 15, 2021,  
<https://www.reuters.com/article/us-health-coronavirus-central-banks-fed-idUSKBN2121A0>.

<sup>29</sup> Federal Reserve issues Federal Open Market Committee (FOMC) Statement, published May 4, 2022 and  
retrieved May 6, 2022,  
<https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504a.htm#:~:text=May%2004%2C%202022%20Federal%20Reserve%20issues%20FOMC%20statement,household%20spending%20and%20business%20fixed%20investment%20remained%20strong>.

<sup>30</sup> Federal Reserve issues FOMC statement, published in December 15, 2021, retrieved in December 25, 2021,  
<https://www.federalreserve.gov/newsevents/pressreleases/monetary20211215a.htm>.

<sup>31</sup> Federal Reserve Economic Data, Market Yield on U.S. Treasury Securities at 30-Year Constant Maturity,  
<https://fred.stlouisfed.org/series/DGS30>.

1 interest rates will begin to rise.<sup>32</sup> With interest rates expected to rise, it is reasonable to expect  
2 utilities' COEs to remain elevated:

3 **Figure 1. 30-year Treasury yield and Inflation Rate 2019-2022<sup>33</sup>**



4  
5 The Fed has a dual mandate: maximum employment and stable prices.<sup>34</sup> The current  
6 unemployment rate (3.6%) nearly reached the pre-pandemic level (3.5%) of February 2020.<sup>35</sup>  
7 In the Federal Open Market Committee (“FOMC”) meeting held on December 14-15, 2021, the  
8 Fed’s growth forecast indicated policy makers expected the U.S. economy to grow by 4% in  
9 2022 and unemployment to fall to 3.5% by year-end 2022.<sup>36</sup> Currently, the overall global and

<sup>32</sup> Tapering is a financial policy through central bank activities aiming at interest rates and at controlling investor perceptions of the future direction of interest rates. Tapering involves the slowing of asset purchases, which leads to the reversal of quantitative easing (“QE”) policies implemented by a central bank.

<sup>33</sup> Won’ Direct Workpaper.

<sup>34</sup> Fed, What economic goals does the Federal Reserve seek to achieve through its monetary policy?  
<https://www.federalreserve.gov/faqs/what-economic-goals-does-federal-reserve-seek-to-achieve-through-monetary-policy.htm>.

<sup>35</sup> Bureau of Labor Statistics, Unemployment Situation March 2022, retrieved April, 23, 2022,  
<https://www.bls.gov/news.release/pdf/empsit.pdf>.

<sup>36</sup> Fed, Summary of Economic Projections, Published December 15, 2021,  
<https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20211215.pdf>.

1 U.S. economic conditions indicate a higher COE than the 2019 Empire rate case because of  
2 expected rising interest rates in 2022.

3 **2. Capital Market Condition**

4 **2.1 Utility Debt Markets**

5 Q. Please explain the current utility debt market conditions.

6 A. The utility debt market has not been stable in terms of bond yield changes.  
7 Average public utility bond yields fell from a high of 4.48% in January 2019, to a low of 3.16%  
8 in February 2020 (see Schedule SJW-d4-1). This downward trend in public utility bond yields  
9 reversed when yields rose sharply by 43 basis points to 3.59% in March 2020 along with a  
10 subsequent sharp decline in the GDP. Public utility bond yields started to fall again in April  
11 2020 after the Fed cut the federal funds rate to 0.00% from 0.25%, and ramped up Treasury  
12 bond-buying activity.<sup>37</sup> Effective May 5, 2022, the Fed decided to raise the target range for the  
13 federal funds rate at 0.75% to 1.00%.<sup>38</sup> The average public utility bond yield had fallen to  
14 2.76% by August 2020 and rebounded to 4.02% by March 2022 (see Schedule SJW-d4-1). The  
15 changes in public utility bond yields mirrored the changes in the 30-Year Treasury bond yields.  
16 With a few exceptions, 30-Year Treasury bond yields have historically been positively  
17 correlated with public utility bond yields (see Schedule SJW-d4-3). The biggest factor currently  
18 driving interest rates is the fear of higher inflation.

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<sup>37</sup> Brookings, The Hutchins Center Explains, <https://www.brookings.edu/series/the-hutchins-center-explains/>.

<sup>38</sup> Federal Reserve issues Implementation Note issued May 4, 2022 and retrieved May 6, 2022, <https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504a1.htm#:~:text=%22Effective%20May%205%2C%202022%2C%20the%20Federal%20Open%20Market,a%20target%20range%20of%203%2F4%20to%201%20percent.>

1 Q. Have the utility debt market conditions changed since the Commission last  
2 ordered an authorized ROE in the 2019 Empire rate case?

3 A. Yes. Since the Commission last ordered an authorized ROE of 9.25% in the  
4 2019 Empire rate case,<sup>39</sup> the 30-Year Treasury bond yield remained virtually the same, 2.26%  
5 in Q4 2019 to 2.25% in Q1 2022.<sup>40</sup> Average public utility bond yields increased from 3.46%  
6 in Q4 2019 to 3.58% in Q1 2022.<sup>41</sup> The average Baa public utility bond yields increased from  
7 3.92% in Q4 2019 to 3.95% in Q1 2022.<sup>42</sup>

8 Q. Are the changed utility debt market conditions reflected in Staff's COE analysis  
9 in this case?

10 A. Yes. Staff's comparative COE analysis covers the two periods Q4 2019 and  
11 Q1 2022. Q4 2019 is the measurement period used to derive the last ordered authorized ROE  
12 from the Commission in Case No. ER-2019-0374 for Empire. Staff compared average utility  
13 bond yields for the three-month period October, November and December 2019 to the  
14 three-month period January, February, and March 2022. The three-month average utility bond  
15 yield was 3.46% in the Empire rate case compared to 3.58% in the current rate case, an increase  
16 of 12 basis points (see Schedule SJW-d4-1).

17 Q. Is there a correlation between utility debt yields and stock prices?

18 A. Although utilities' COE is not perfectly correlated to changes in utility debt  
19 yields, it is widely recognized in the investment community that regulated utility stocks are a  
20 close alternative to bond investments and, therefore, the two values are highly correlated over

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<sup>39</sup> On page 38, *Amended Report and Order* issued July 23, 2020, in Case No. ER-2019-0374.

<sup>40</sup> Schedule SJW-d4-2, Won' Direct Testimony.

<sup>41</sup> Schedule SJW-d4-1, Won' Direct Testimony.

<sup>42</sup> Schedule SJW-d4-5, Won' Direct Testimony.



1 time. In general, as interest rates increase, utility stock prices decrease, pushing COE up as  
2 investors substitute stock for debt in search for higher yields.<sup>43</sup>

3 Q. Please explain how the current utility debt market conditions affect COE  
4 estimation.

5 A. Usually, in the past, interest rates were the main driver of COE change. Lower  
6 interest rates would normally mean lower COEs, all other things being equal. Currently, we  
7 see higher COE based upon higher expected interest rates. Staff compared interest rates during  
8 the 2019 Empire rate case period (October, November and December 2019) to the current  
9 Evergy Metro and Evergy West rate case period (January, February and March 2022)  
10 and noticed that interest rates, as measured by the Mergent public utility yields, increased by  
11 about 0.19%.<sup>44</sup>

12 The combined net result of the increase in interest rates and the changes in overall  
13 market conditions is an increase in COE since the 2019 Empire rate case. Also, Staff's COE  
14 estimates of the electric proxy group have increased since the 2019 Empire rate case. The  
15 current COE as estimated by the DCF model rose by 37 basis points over the earlier data point.<sup>45</sup>

## 16 2.2 Utility Equity Markets

17 Q. Please explain the current utility equity market conditions.

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<sup>43</sup> Forbes Advisor, How To Invest When Interest Rates Are Low, Updated: Apr 15, 2022 and retrieved May 7, 2022

<https://www.forbes.com/advisor/investing/low-interest-rates/#:~:text=While%20bond%20prices%20are%20directly%20affected%20by%20interest,mean%20companies%20may%20borrow%20less%20to%20fund%20growth.>

<sup>44</sup> Mergent Bond Record. Average Baa yields for Q4 2019 and Q1 2022. The Baa yields for Q4 2019 were 3.72%, 3.76%, and 3.73%. The Baa yields for Q1 2022 were 3.57%, 3.95%, and 4.28%. The average Baa yield for Q4 2019 was 3.74%. The average Baa yield for Q1 2022 was 3.93%. (3.93% - 3.74% = 0.19%).

<sup>45</sup> Schedule SJW-d15, Won' Direct Testimony.



1           The average of Staff’s electric utility proxy group’s stock price is currently similar to  
2 that when Staff presented testimony for the 2019 Empire rate case.<sup>47</sup> Similar stock prices, all  
3 else the same, means similar COE. But Staff also analyzed other variables that affect change  
4 in COE: dividend yields and expected growth rates. Higher dividend yields, all else the same,  
5 means higher COE. Staff compared dividend yields from the measurement period (October,  
6 November, and December 2019) in the 2019 Empire rate case to the dividend yields of the  
7 current period (January, February, and March 2022). Average dividend yields of Staff’s electric  
8 utility proxy group were 2.97% during Q4 2019 compared to 3.49% in the current period of  
9 Q1 2022 an increase of 52 basis points.<sup>48</sup> Earnings per share (“EPS”) growth rates for Staff’s  
10 proxy group increased from 4.73% to 5.03% during the period of Q4 2019 and Q1 2022,  
11 respectively.<sup>49</sup> Higher estimated growth rates, all else the same, signal a higher required return  
12 to investors.

13           Q.     Please explain how the current utility equity market conditions affect COE  
14 estimation.

15           A.     The combined effect of the utility sector’s unusual decline in 2020 and the  
16 subsequent sluggish recovery is that the utilities have not recovered fully from the COVID-19  
17 recession. Average stock prices for Staff’s proxy group of companies is at \$73.03, as of  
18 Q1 2022, compared to the average pre-COVID-19 recession high of about \$74.17 reached in  
19 Q4 2019.<sup>50</sup> Declining stock prices, all else remaining the same, means increasing COE.<sup>51</sup> The  
20 principal reason for stock prices to decline is adverse perception about the stock’s risk and/or

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<sup>47</sup> Wall Street Journal; Average Monthly Highest and Lowest.

<sup>48</sup> The Value Line Investment Survey: Ratings & Reports.

<sup>49</sup> Schedule SJW-d11, Won’ Direct Testimony.

<sup>50</sup> Schedule SJW-d12, Won’ Direct Testimony.

<sup>51</sup> In the DCF COE model, declining stock prices, all else the same, leads to higher dividend yields. Dividend yields are a component of COE.

1 risk in the economy. Currently, the utility sector faces two major risks that have the potential  
2 to keep stock prices depressed and COE elevated: fears of high inflation and increasing interest  
3 rates.<sup>52</sup> Consequently, the current economic climate justifies increasing COE estimates  
4 compared to 2019 Empire rate case. The net effect of the changes in stock prices, dividend  
5 yields, and growth rates indicates DCF COE estimate increased by up to 37 basis points since  
6 Staff conducted its analysis for the 2019 Empire rate case.<sup>53</sup>

#### 7 **IV. CORPORATE ANALYSIS**

8 Q. Please provide the corporate profile of Evergy Inc.

9 A. According to its 10-K reported to the SEC, Evergy Inc. operates as a public  
10 utility holding company. Evergy Inc. operates primarily through the following wholly owned  
11 direct subsidiaries: Evergy Metro, Evergy West, Evergy Kansas Central, Inc., Evergy Kansas  
12 South, Inc., and Evergy Transmission Company, LLC. Collectively, the Evergy companies  
13 have approximately 15,400 MWs of owned generating capacity and renewable power purchase  
14 agreements and engage in the generation, transmission, distribution and sale of electricity to  
15 approximately 1.6 million customers in the states of Kansas and Missouri. Evergy Inc. serves  
16 approximately 1,640,800 customers located in Kansas and Missouri. Customers include  
17 approximately 1,433,500 residences; 199,400 commercial firms; and 7,900 industrials,  
18 municipalities and other electric utilities. Evergy Inc. was incorporated in 2017.

19 Q. Please provide the corporate profile of Evergy Metro.

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<sup>52</sup> Whether inflation fears materialize or not, current utility stock prices are fluctuating on the fear that inflation will be higher.

<sup>53</sup> Schedule SJW-d13, Won' Direct Testimony.

1           A.     According to its 10-K reported to the SEC, Evergy Metro engages in the  
2 generation, transmission, distribution, and sale of electricity in the states of Missouri and  
3 Kansas. Evergy Metro generates electricity through coal, hydroelectric, landfill gas, uranium,  
4 natural gas and oil sources as well as solar, wind, and other renewable sources. It serves  
5 approximately 571,500 customers, including 505,000 residences; 64,600 commercial firms; and  
6 1,900 industrials, municipalities, and other electric utilities. Evergy Metro owns 47% of Wolf  
7 Creek Generating Station (“Wolf Creek”), which purchases uranium and has it processed for  
8 use as fuel in its reactor. The owners of Wolf Creek have on hand, or under contract, all of the  
9 uranium, uranium enrichment and conversion services needed to operate Wolf Creek through  
10 the first quarter of 2030 along with contracts for all of the uranium fabrication services required  
11 to operate Wolf Creek through the third quarter of 2045. Evergy Metro was formerly known  
12 as Kansas City Power & Light Company. Evergy Metro was incorporated in 1922 and is  
13 headquartered in Kansas City, Missouri.

14           Q.     Please provide the corporate profile of Evergy West.

15           A.     According to its 10-K reported to the SEC, Evergy West operates as an  
16 integrated electric and natural gas utility headquartered in Kansas City, Missouri. The electric  
17 utilities segment generates, transmits and distributes electricity to 400,804 customers in  
18 Missouri and Colorado. Its electric generating facilities and purchased power contracts supply  
19 electricity principally to its own distribution systems. Evergy West also sells excess power to  
20 other utilities and marketing companies. Evergy West’s electric utilities include 1,849 MWs  
21 of generation and 15,190 pole miles of electric transmission and distribution lines. The  
22 company was founded in 1917 as Missouri Public Service Company, and changed its name to  
23 UtiliCorp United, Inc. in 1985. The company’s name changed to Aquila, Inc. in 2002,

1 KCP&L Greater Missouri Operations Company in 2008 and subsequently to Evergy Missouri  
2 West, Inc., a subsidiary of Evergy Inc., in October 2019.

3 Q. What is the credit rating for Evergy, Evergy Metro and Evergy West?

4 A. Evergy is currently rated by Moody's and Standard & Poor's ("S&P"). The  
5 corporate credit ratings assigned to Evergy by Moody's and S&P are 'Baa2' and 'A-',  
6 respectively.<sup>54</sup> Moody's and S&P currently rate Evergy Metro. The corporate credit ratings  
7 assigned to Evergy Metro by Moody's and S&P are 'Baa1' and 'A', respectively.<sup>55</sup> Moody's  
8 and S&P currently rate Evergy West. The corporate credit ratings assigned to Evergy West by  
9 Moody's and S&P are 'Baa2' and 'A-', respectively.<sup>56</sup>

10 Q. What is the implication of credit ratings to Evergy Inc., Evergy Metro and  
11 Evergy West for their estimated COE and authorized ROE?

12 A. The electric utilities have average bond ratings of 'Baa1' and 'BBB+' provided  
13 by Moody's and S&P, respectively.<sup>57</sup> For instance, Empire has bond ratings of 'Baa1' and  
14 'BBB' provided by Moody's and S&P, respectively.<sup>58</sup> Overall agency ratings of Evergy Metro  
15 and Evergy West are higher than the average electric utilities in the U.S. This means Evergy  
16 Metro and Evergy West are perceived as having lower credit risks than the average electric  
17 utilities in the US. Considering the fundamental financial principle of a higher risk requiring a  
18 higher return, investors require a lower COE for a company with a higher credit rating.<sup>59</sup> This  
19 comparison of bond ratings indicates that Evergy Metro and Evergy West's authorized ROE

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<sup>54</sup> S&P Rating Report – Evergy, Inc.

<sup>55</sup> S&P Rating Report - Evergy Metro, Inc.

<sup>56</sup> S&P Rating Report - Evergy Missouri West, Inc.

<sup>57</sup> S&P Capital IQ Pro.

<sup>58</sup> S&P Rating Report - The Empire District Electric Company.

<sup>59</sup> Arditti, F. D. (1967). Risk and the required return on equity. *The Journal of Finance*, 22(1), 19-36.

1 should be within a reasonable range compared to the average authorized ROE of electric utility  
2 companies in the U.S.

3 **V. CAPITAL STRUCTURE**

4 Q. What factors did Staff consider to determine its capital structure for Evergy  
5 Metro and Evergy West?

6 A. Staff considered two major factors to determine its capital structure for  
7 Evergy Metro and Evergy West. First, Staff reviewed the financial relationship  
8 between Evergy Inc., Evergy Metro, and Evergy West. Second, in response to Staff Data  
9 Request No. 0120, Evergy, Inc. states that it intends to maintain specific targeted capital  
10 structures for Evergy Inc., Evergy Metro, and Evergy West.

11 Q. Please explain the financial relationship between Evergy Inc., Evergy Metro,  
12 and Evergy West.

13 A. Evergy Metro and Evergy West are wholly owned operating subsidiaries of  
14 Evergy Inc. Evergy Metro and Evergy West have separate credit ratings issued by Moody's  
15 and S&P.<sup>60</sup> Evergy Metro and Evergy West's stand-alone capital structure support their  
16 individual credit ratings.<sup>61</sup> Evergy, Inc. provides all equity and partial debt financing to  
17 Evergy Metro and Evergy West.<sup>62</sup> Evergy Inc.'s assets secure none of Evergy Metro or  
18 Evergy West's debt.<sup>63</sup> Evergy Metro and Evergy West receive or provide short-term advances  
19 from or to Evergy Inc. through its regulated money-pool.<sup>64</sup> None of Evergy Metro or

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<sup>60</sup> Staff's Data Request Nos. 0018 and 0130f for ER-2022-0129 & ER-2022-0130.

<sup>61</sup> Staff's Data Request No. 0129 for ER-2022-0129 & ER-2022-0130.

<sup>62</sup> Staff's Data Request Nos. 0126 and 0134 for ER-2022-0129 & ER-2022-0130.

<sup>63</sup> Staff's Data Request No. 0134 for ER-2022-0129 & ER-2022-0130.

<sup>64</sup> Staff's Data Request No. 0129 for ER-2022-0129 & ER-2022-0130.

1 Evergy West's assets secure Evergy Inc.'s debts nor do they secure each other's debts.<sup>65</sup> The  
2 management of Evergy Inc. are also included in the ultimate financial decision makers for  
3 Evergy Metro and Evergy West.<sup>66</sup>

4 Q. Has Evergy, Inc. indicated to Staff that they would target specific capital  
5 structures in the future for Evergy Metro and Evergy West?

6 A. Yes. Evergy, Inc.'s response to Staff Data Request No. 0120 says Evergy Inc.  
7 would target specific capital structures of 50% equity and 50% debt for Evergy Inc.,  
8 Evergy Metro, and Evergy West.<sup>67</sup>

9 Q. What is the actual capital structure of Evergy Inc., Evergy Metro and  
10 Evergy West?

11 A. The average of actual capital structures as of March 31, 2022 for Evergy Inc.,  
12 Evergy Metro and Evergy West show approximately 50% equity and 50% debt (see Schedule  
13 SJW-d6). Table 2 below shows the average capital structures of Evergy Inc., Evergy Metro,  
14 and Evergy West for 2020 through 2021. As seen in Table 1, the average capital structures for  
15 2020 through 2021 were approximately 50% equity and 50% debt for Evergy Inc., Evergy  
16 Metro, and Evergy West.<sup>68</sup>

17 **Table 1. Comparison Average Capital Structure 2020 - 2021**

	<u>Evergy Inc.</u>	<u>Evergy Metro</u>	<u>Evergy West</u>
Common Equity	49.21%	49.47%	49.97%
Long-Term Debt	50.79%	50.53%	50.03%
Total	100.00%	100.00%	100.00%

18  
<sup>65</sup> Staff's Data Request No. 0134 for ER-2022-0129 & ER-2022-0130.

<sup>66</sup> Staff's Data Request No. 0118 for ER-2022-0129 & ER-2022-0130.

<sup>67</sup> Staff's Data Request No. 0120 for ER-2022-0129 & ER-2022-0130.

<sup>68</sup> Schedule SJW-d5-2, Won' Direct Testimony.



1 Q. What is Staff's recommended capital structure for Evergy Metro and Evergy  
2 West in this proceeding?

3 A. Considering Evergy Inc. is targeting a specific capital structure, and the actual  
4 capital structures after approval of the merger represent that commitment, Staff recommends a  
5 capital structure of 50% equity and 50% debt for Evergy Metro and Evergy West. Staff's capital  
6 structure recommendation is subject to change depending on updated information and true-up  
7 data. Staff will keep monitoring Evergy's, Evergy Metro's and Evergy West's updated capital  
8 structure and cost of debt through the end of the true-up period and will make its final  
9 recommendation at that time.

10 **VI. RATE OF RETURN**

11 Q. Please summarize the procedure that Staff used in its ROR analysis.

12 A. In order to arrive at Staff's recommended ROR, Staff employed the comparative  
13 COE analysis. Staff specifically examined and evaluated: (1) the estimated COEs in the current  
14 Evergy Metro and Evergy West rate cases and the 2019 Empire rate case; (2) the authorized  
15 ROE approved by the Commission in the 2019 Empire rate case; (3) the current embedded cost  
16 of debt; and (4) the allowed ROR for the purpose of rate making in this proceeding. For this  
17 procedure, Staff started with the selection of an electric proxy group.

18 **1. Proxy Group**

19 Q. How did you select the electric proxy group for Staff's comparative COE  
20 analysis?



1           **2.       Cost of Common Equity**

2           Q.       Please explain how Staff conducted its comparative COE analysis.

3           A.       Staff conducted its COE analysis for Evergy Metro and Evergy West by  
4 comparing the change in the COE analysis between the fourth quarter of 2019 (the reference  
5 time period of the 2019 Empire rate case) and the first quarter of 2022 using the same proxy  
6 group of electric utility companies as shown in Table 2. The analysis Staff used to determine  
7 Evergy Metro and Evergy West's COE consisted of Staff's DCF COE analysis and CAPM  
8 COE analysis. These two analyses are widely accepted in the financial industry as a means to  
9 determine a fair and reasonable rate of return for regulated utility companies.<sup>69</sup>

10           Staff determined that the DCF COE comparative analysis is the most just and reasonable  
11 analysis to use in this case to recommend an ROE to the Commission for Evergy Metro and  
12 Evergy West. Staff estimated COE for each time period and COE change over time using its  
13 DCF COE comparative analysis. Staff then compared the result of its DCF COE analysis to  
14 the result of its CAPM COE analysis for testing reasonableness. Staff also used the result of a  
15 bond yield plus risk premium method as a check of reasonableness of its DCF COE estimates.  
16 Staff then compared the result of its current DCF COE estimate to the 2019 Empire rate case  
17 DCF COE estimate. Comparing these DCF COE estimates allowed Staff to recommend a range  
18 of authorized ROE.

19           Q.       Please explain the DCF model used for Staff's COE analysis.

20           A.       The DCF model used for Staff's COE comparative analysis is a widely used  
21 model by investors to evaluate stable-growth investment opportunities, such as regulated utility  
22 companies. The premise of the DCF model is that an investment in common stock is worth the

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<sup>69</sup> *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 (2019).

1 present value of the infinite stream of dividends discounted at a market rate commensurate with  
2 the investment's risk. Using the following formula of the DCF model, investors determine a  
3 common stock price:

$$P = D / (k - g),$$

4  
5 where  $P$  is the common stock price,  
6  $D$  is the current dividend,  
7  $k$  is investors' required return from the stock, and  
8  $g$  is the expected growth rate in dividends.

9 Staff uses an adjusted dividend yield  $(1 + .5g)D$  to account for the fact that the  
10 dividends are paid on a quarterly basis.<sup>70</sup> For the growth rate, Staff used the average of analysts'  
11 projected earnings per share ("EPS"), dividends per share ("DPS"), and book value per share  
12 ("BVPS") and the projected nominal GDP growth rate (see Schedule SJW-d11).<sup>71</sup>

13 It is important that the growth rate used in Staff's constant-growth DCF model reflect  
14 the long-term investment horizon assumption implied in the constant-growth DCF model.  
15 Federal Energy Regulatory Commission ("FERC") also agreed as much when it ruled,  
16 in Opinion 569, that exclusive use of short-term analysts' growth rates in the constant-  
17 growth DCF was inappropriate.<sup>72</sup> The formulation of the COE using the constant-growth DCF  
18 formula is:

$$k = (1 + .5g)D / P + g.$$

20 Q. What is the result of the comparative COE analysis using the DCF model?

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<sup>70</sup> *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 (2019).

<sup>71</sup> *Entergy Arkansas, Inc.*, Opinion No. 575, 175 FERC ¶ 61,136 (2021).

<sup>72</sup> *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 (2019).

1           A.     For the current rate case, the DCF COE for the proxy group is in the range of  
2 7.40% to 8.96%, with a proxy group average of 8.18% (see Schedule SJW-d13). For the 2019  
3 Empire rate case, Staff recalculated COE using the DCF model and using the same proxy group  
4 of electric utility companies in Table 2. The 2019 recalculation resulted in a DCF COE in the  
5 range of 6.79% to 8.82%, with a proxy group average of 7.80% (see Schedule SJW-d13). Based  
6 on a comparative DCF analysis, the COE estimate has increased by approximately 37 basis  
7 points from the last 2019 Empire rate case.

8           Q.     Please explain the CAPM analysis Staff used for testing the reasonableness of  
9 its COE analysis.

10          A.     The CAPM is built on the premise that the variance in returns over time is the  
11 appropriate measure of risk, but only the non-diversifiable variance (systematic risk) is  
12 rewarded. Systematic risks, also called market risks, are unanticipated events that affect almost  
13 all assets to some degree because the effects are economy wide. Systematic risk in an asset,  
14 relative to the average, is measured by the beta of that asset.<sup>73</sup> Unsystematic risks, also called  
15 asset-specific risks, are unanticipated events that affect single assets or small groups of assets.  
16 Because unsystematic risks can be freely eliminated by diversification, the appropriate reward  
17 for bearing risk depends on the level of systematic risk.

18          The CAPM shows that the expected return for a particular asset depends on the pure  
19 time value of money (measured by the risk free rate), the amount of the reward for bearing  
20 systematic risk (measured by the market risk premium (“MRP”)), and the amount of systematic  
21 risk incurred by the asset (measured by beta). Specifically, the CAPM methodology estimates

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<sup>73</sup> Beta is a measure of the volatility—or systematic risk—of a security or portfolio compared to the market as a whole. (Investopedia, retrieved November 5, 2020).

1 the cost of equity by taking the risk-free rate and adding the MRP multiplied by beta.<sup>74</sup>

2 The MRP is calculated by subtracting the risk-free rate from the expected market return.

3 The general form of the CAPM is as follows:

$$k = R_f + \beta(R_m - R_f)$$

4 where,  $k$  is the expected return on equity for a security,

5  $R_f$  is the risk-free rate,

6  $R_m$  is the expected market return,

7  $\beta$  is beta, and

8  $R_m - R_f$  is the MRP.

9  
10 For the risk-free rate, Staff used the average yield on 30-year U.S. Treasury bonds for  
11 the three-month period ending March 31, 2022, which was 2.25%. For Staff's CAPM analysis,  
12 it relied on betas provided by Value Line.<sup>75</sup> For the MRP estimate, Staff relied on four sets of  
13 data. The first data set is the long-term geometric mean of historical return differences between  
14 large company stocks and long-term government bonds from 1926-2021, resulting in an MRP  
15 estimate of 4.61%.<sup>76</sup> The second data set is the long-term arithmetic mean of historical return  
16 differences between large company stocks and long-term government bonds from 1926-2021,  
17 resulting in an MRP estimate of 6.03%.<sup>77</sup> The third data set is the long-term geometric mean  
18 of historical return differences between S&P 500 and long-term government bonds from  
19 1928-2021, resulting in an MRP estimate of 5.13%.<sup>78</sup> The fourth data set is the long-term

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<sup>74</sup> Roger A. Morin, *New Regulatory Finance* (Public Utilities Reports, Inc. 2006).

<sup>75</sup> Value Line, <https://valueline.com/?msclkid=4ed36370d16911eca58154b129389016>.

<sup>76</sup> Duff & Phelps, the Stocks, Bonds, Bills, and Inflation (SBBI®) Monthly Dataset.

<sup>77</sup> Ibid.

<sup>78</sup> Risk Premium, Damodaran Online, Stern School of Business, NYU.

1 arithmetic mean of historical return differences between S&P 500 and long-term government  
2 bonds from 1928-2021, resulting in an MRP estimate of 6.71%.<sup>79</sup>

3 Q. What is the result of the CAPM COE analysis?

4 A. The proxy group CAPM analysis resulted in a CAPM COE within the range of  
5 5.83% to 8.62% for the current rate case (see Schedule SJW-d14) that supports Staff's DCF  
6 COE estimate of 8.18%.

7 **3. Other Test of Reasonableness**

8 Q. Did Staff test the reasonableness of its COE estimates using any other methods?

9 A. Yes. Staff used the bond yield-plus risk premium method to test the  
10 reasonableness of its COE estimates. The bond yield-plus risk premium method, called the  
11 "rule of thumb" test of reasonableness in the CFA study guide, estimates the COE by simply  
12 adding an equity risk premium to the yield-to-maturity ("YTM") of the subject company's  
13 long-term debt.<sup>80</sup> Based on general U.S. capital-market experience and regulated utilities,  
14 the equity risk premium is approximately in the range of 3.5% to 5.5%.<sup>81</sup> For the three  
15 months ended through March 31, 2022, "A" rated and "Baa" rated long-term utility bonds had  
16 average yields of 3.66% and 3.93%, respectively.<sup>82</sup> Adding the 3.5% to 5.5% risk premium,  
17 the "rule of thumb" indicates a cost of common equity between 7.16% and 9.43%. To the extent  
18 that the bond yield-plus risk premium COE estimate range of 7.16% to 9.43% overlaps Staff's  
19 DCF COE estimate range of 7.40% to 8.96%, the bond yield-plus risk premium COE estimate  
20 supports the reasonableness of Staff's COE estimate of 8.18%.

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<sup>79</sup> Ibid.

<sup>80</sup> Stowe, J. D., Robinson, T. R., Pinto, J. E., & McLeavey, D. W. (2002) Analysis of Equity Investment: Valuation. Association for Investment Management and Research.

<sup>81</sup> Roger A. Morin, New Regulatory Finance (Public Utilities Reports, Inc. 2006).

<sup>82</sup> Mergent Bond Record.

1           **4.     Return on Equity**

2           Q.     Please, explain Staff’s methodology to determine the recommendation of its  
3 authorized ROE in this proceeding.

4           A.     In the 2019 Empire rate case, the Commission authorized an ROE of 9.25%.<sup>83</sup>  
5 Based on the result of Staff’s DCF analysis for the 2019 Empire rate case, the COE was 7.80%  
6 within a range of 6.79% to 8.82%. With the same proxy group, Staff’s DCF analysis in the  
7 current Evergy Metro and Evergy West rate cases result in a COE of 8.18% with a range of  
8 7.40% to 8.96%.<sup>84</sup> The difference between the two COEs is an increase of approximately  
9 37 basis points since the 2019 Empire rate case. If there is no significant change in the  
10 Commission’s perspectives on the relationship between the COE estimate and the authorized  
11 ROE, it is reasonable to conclude that the current ROE should be approximately 37 basis points  
12 higher than the authorized ROE of 9.25% in the 2019 Empire rate case.

13           To recommend a just and reasonable ROE, Staff considered Evergy Metro and Evergy  
14 West’s unique risk profiles and the current financial and economic market conditions.  
15 The current U.S. inflation rate is at its highest level in 40 years.<sup>85</sup> The Fed previously  
16 forecasted that a higher inflation rate reflected “transitory” factors but not anymore.<sup>86</sup>  
17 To combat inflation, the Fed started to increase interest rates as Fed Chair Powell announced  
18 interest rate increases in 2022.<sup>87</sup> Considering all of the above information that Staff has  
19 reviewed, Staff recommends the Commission authorize an ROE of 9.62% for Evergy Metro  
20 and Evergy West in this proceeding.

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<sup>83</sup> On page 38, *Amended Report and Order* issued July 23, 2020, in Case No. ER-2019-0374.

<sup>84</sup> Schedule SJW-d15, Won’s Direct Testimony.

<sup>85</sup> BBC News, <https://news.yahoo.com/us-price-rises-hit-highest-140929152.html>.

<sup>86</sup> Federal Reserve, Press Release, March 16, 2022, <https://www.federalreserve.gov/monetarypolicy/files/monetary20220316a1.pdf>.

<sup>87</sup> Transcript of Chair Powell’s Press Conference, December 15, 2021.



1 Q. Do you have any supporting evidence that the Commission can consider to  
2 determine the reasonableness of Staff’s ROE recommendation?

3 A. Yes. Staff recognizes that the Commission may be interested in recent  
4 authorized ROEs for other electric utility companies in the U.S. as a test of reasonableness of  
5 Staff’s recommendation of authorized ROE. Table 3 presents information compiled and  
6 published by the Regulatory Research Associates (“RRA”) which details the average fully  
7 litigated and settled authorized ROE’s from Commissions around the U.S. in the years 2010 -  
8 2022 along with the number of cases considered:<sup>88</sup>

9 **Table 3: Authorized ROE’s from Commissions in the U.S. (2010-2022)**

Year	<u>Fully Litigated</u>		<u>Electric Utility Settled</u>		<u>Electric Total</u>	
	ROE (%)	Case (No.)	ROE (%)	Case (No.)	ROE (%)	Case (No.)
2010	10.35	27	10.39	34	10.37	61
2011	10.39	26	10.12	16	10.29	42
2012	10.28	29	10.06	29	10.17	58
2013	9.85	17	10.12	32	10.03	49
2014	10.05	21	9.73	17	9.91	38
2015	9.66	16	10.04	15	9.84	31
2016	9.74	25	9.80	17	9.77	42
2017	9.73	24	9.75	29	9.74	53
2018	9.63	22	9.57	26	9.60	48
2019	9.58	27	9.76	20	9.66	47
2020	9.43	32	9.46	23	9.44	55
2021	9.28	27	9.57	25	9.42	52
2022	9.36	8	9.34	4	9.35	12

10  
11 In 2022 to date, the average authorized ROE of electric utilities for fully litigated and  
12 settled cases is 9.36% and 9.34%, respectively, for an overall average of 9.35%. Considering  
13 the current trend of inclined interest rates, Staff’s recommended authorized ROE of 9.62% is

<sup>88</sup> S&P Capital IQ Pro: Regulatory Research Association, retrieved May 11, 2022.

1 generally consistent with ROEs recently authorized for other utilities around the country. It is  
2 Staff's position in order for Evergy Metro and Evergy West to be competitive on the capital  
3 market; they need to have the opportunity to earn an ROE that is reasonably consistent with  
4 ROEs awarded to other utilities around the country.

5 **5. Embedded Costs of Debt**

6 Q. What embedded cost of debt should the Commission authorize for Evergy Metro  
7 and Evergy West in this proceeding?

8 A. The embedded cost of debt the Commission should authorize for Evergy Metro  
9 and Evergy West in this proceeding is Evergy Metro and Evergy West's projected embedded  
10 cost of debt, as of May 31, 2022, of 3.92% and 3.79%, respectively.<sup>89</sup> Staff will update its  
11 embedded cost of debt throughout this proceeding through the true-up period, as actual  
12 information becomes available.

13 **VII. CONCLUSION**

14 Q. What is the conclusion of your direct testimony?

15 A. Considering the current financial and economic markets, Evergy Metro and  
16 Evergy West's risk profiles and Staff's comparative COE analysis supports a just and  
17 reasonable ROE of 9.62%, the mid-point in a range of 9.37% to 9.87% for both Evergy Metro  
18 and Evergy West. Because of the rapidly changing economic outlook, Staff will update its ROE  
19 if there are significant changes in the economic outlook that necessitate an update.

20 Staff's recommended ROE of 9.62% for Evergy Metro and Evergy West and embedded  
21 costs of debt of 3.92% and 3.79% applied to a target capital structure of 50.00% long-term debt

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<sup>89</sup> Table 1, Kirkland B. Andrews's Direct Testimony, ER-2022-0129 & ER-2022-0130.

Direct Testimony of  
Seoung Joun Won, PhD

1 and 50.00% common equity, results in an allowed ROR of 6.77% and 6.70%, respectively  
2 (see Schedule SJW-d16). Staff will continue to monitor Evergy Inc., Evergy Metro and Evergy  
3 West's capital structure and cost of debt through the true-up period and will make its final  
4 recommendation at that time.

5 Q. Does this conclude your direct testimony?

6 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 ) Case No. ER-2022-0129  
Implement a General Rate Increase for Electric )  
Service )

In the Matter of Evergy Missouri West, Inc. )  
d/b/a Evergy Missouri West's Request for ) Case No. ER-2022-0130  
Authority to Implement a General Rate )  
Increase for Electric Service )

**AFFIDAVIT OF SEOUNG JOUN WON, PhD**

STATE OF MISSOURI )  
) ss.  
COUNTY OF COLE )

COMES NOW SEOUNG JOUN WON, PhD and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Direct Testimony of Seoung Joun Won, PhD*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

  
\_\_\_\_\_  
SEOUNG JOUN WON, PhD

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 6<sup>th</sup> day of June 2022.

D. SUZIE MANKIN  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for Cole County  
My Commission Expires: April 04, 2025  
Commission Number: 12412070

  
\_\_\_\_\_  
Notary Public